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ABSTRACTS

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Association of Seedcotton and Leaf Properties with Canopy Temperature Depression in Cotton under Drought Stress in Mediterranean Environment

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Abstract

The development of cotton genotypes in seed-cotton under environmental stress conditions is considered as an important goal for cotton breeders. Canopy temperature depression (CTD) is used in plant selection for adaptation to water deficit conditions. This study was conducted to identify cotton genotypes that are resistant to drought stress by measuring of leaf properties (specific leaf area and specific leaf weight) and leaf greenness (SPAD value) in flowering (92 days after sowing, DAS) and canopy temperature depression in various times after flowering. Fifty-five cotton genotypes were grown at two different irrigation regimes (deficit water-limited and full irrigation conditions) at the Cotton Research and Application Center of Cukurova University in Adana, Turkey at 2016. The results indicated that seed-cotton yield (SCY) positively correlated with drought resistance index (DRIYield, r=0.326**) but negatively correlated with canopy temperature depression (CTD92DAS, r=-0.269*; CTD102DAS, r=-0.369**) values under the deficit irrigation conditions (DIR), but CTD (CTD92DAS, r=0.304*; CTD102DAS, r=0.298*) had positive effects under full irrigation conditions. The leaf properties and SPAD values were more strongly correlated with all traits except SCY under both irrigation regimes. Leaf traits were more correlated to DRI than SCY in screening drought tolerant genotypes. Consequently, these traits could be used as promising selection criteria to identify cotton genotypes that tolerant to drought stress and this result can be acclaimed the important source for genetic diversity of cotton in future breeding programs in Mediterranean conditions.

Keywords: Canopy temperature depression, cotton, drought stress, seed-cotton yield.

Prepartum Dietary Energy Source Affects Postnatal Performance of Goat Kids

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Abstract

Being fed mainly on pasture of fluctuated nutritive value with frequent occurrence of nutritional stress, production indices of Egyptian goats are lower than current worldwide ones. Prenatal feeding of energy substrates, necessary for gravid uterus and mammary gland metabolism, is expected to improve the metabolic status of pregnant does and growth performance of their offspring. This study aimed to characterize kids' viability, birth weight and growth rate (from birth to weaning) to different dietary energy sources supplementation starting 4 weeks prepartum. Eighty late pregnant does (40 ± 9.6 kg BW) were randomly assigned to one of four dietary treatments with 20 animals each: basal diet only (2 kg/h/d of Egyptian clover plus 1.0 kg/h/d of a commercial concentrate mix), basal diet plus 100 g of molasses and 200 g corn starch/h/d (MS), basal diet plus 300 g/head/d of corn grains (CG), or basal diet plus 300 g/h/d of barley grains (BG). Final diets supplied 80, 104, 105 and 105% of TDN, and 112, 125, 127 and 134% of CP requirements in late gestation for CO, MS, CG and BG, respectively. Kids' birth weights, rectal temperature and weaning weights were recorded at 2 h, 24 h, and at 3 months after birth, respectively, while blood samples were collected from kids within 2 h after birth, and serum levels of total protein, albumin, globulin, glucose, and vitamin A were determined. Kids' birth weight, body temperature, weaning weight, and live body weight gain were higher ($P < 0.05$) in energy-supplemented groups. Plasma concentrations of albumin, globulin, glucose, and vitamin A were also altered with energy supplementation. The highest kids' birth weight; body temperature, weaning weight, live body weight gain and albumin; and globulin, glucose and vitamin A were recorded respectively in kids born to MS-, BG-, and CG-supplemented does. Differences in kids' performance among diets might be linked to the degree of availability of glucogenic substrates and amino acid supply for placenta and in colostrum. In conclusion, the prepartum energy supply from barely or corn grains may prove useful in improving the viability and weaning weights of goat kids.

Keywords: Energy Source, Goat Kids, Late Gestation, Performance.

Mind Codes of Religious Movements (The Taliban Example)

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Abstract

Religion can be described as a system that maintains the lives of individuals, the organization of relations within the framework of ethical and cultural values, a system that affects the national values of the society and worldviews, and reveals the dynamics of society, or a feeling of keeping people alive. So it can be said that religion is one of the most important elements that distinguish people from other beings. Because of the strong relationship between religion and man, it was concluded that there were religions in the first societies together with the first man. Religion has influenced phenomenology, individuals and societies in various forms. In other words, religion influenced the people living in the societies more than they thought. In this direction, religion has taken place in the socio-cultural structure, allowing individuals to continue their institutional structures and walk on a healthy ground by influencing the mindset and mind codes of individuals.In parallel with the change, transformation and differentiation that took place in society, it was seen that some changes occurred in the other, and religion also differentiated from the functional aspect. From an anthropological point of view, he emphasized that religions could change in the process by drawing attention to the variability of social events. The phenomenon of in religion change has been expressed differently in the Islamic literature. Positive change, rehabilitation, remediation, discontinuity and evolution, and negative change are expressed by words such as trip, falsification, infertility, corrupted and subtitles. Religions, human beings "built-in nomadic" to life, "sites empires" and "from rural civilizations to industrial civilizations" And has caused various changes and differentiations over time. In this context, religions should have a social character, be in relation to social events and influence-reaction. This means that religion depends on geographical, social and cultural variables to some extent. Afghanistan has taken an important route in terms of its geographical position. Afghanistan has been the cradle of various civilizations before and after Islam. The cities like Gazna, Herat and Balkh became the centers of knowledge and culture in the Turkish-Islamic world. However, the absence of a strong and just political power in Afghanistan has led this country to civil war and unrest. In recent history Afghanistan has been the scene of the war of tutelage of powerful states. On the other side, certain Islamic countries are also part of the war of tutelage in Afghanistan.The aim of the work is to present the sociological sub-structures of religious movements and religious groups in Afghanistan with healthy, critical, objective information and explanations within scientific methods and techniques, starting from the religion-motivated Taliban movement. At the same time, this work is important in terms of understanding sociological aspects of religion and worldviews of Afghan society and especially Pashtun tribes. The presence of movements such as the Taliban, which appear in the Islamic world and are referred to from the outside, is an important problem of our time. We hope that the subject will be deeply evaluated in accordance with the scientific framework as far away from the prejudices, and will contribute to the study of sociology of religion in Afghanistan and Islamic world and will guide the work on religion-based movements that have emerged in the Islamic world.

Keywords: Afghanistan, Religious Movements, Taliban.

Milk Production of Holstein Friesian in Balochistan Pakistan

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Abstract

Balochistan is famous for it's harsh weather but Quetta is on the other extreme and Holstein Friesian cattle were kept at government livestock farm. Milk production performance was studied and it was observed that lactation milk yield averaged 4263±103 liters during average lactation period of 300±56days. Year and season of calving significantly affected both traits. Parity and linear and quadratic age factors were nonsignificant. As the overall management of cattle was concerned poor conditions were observed in context of nutrition, breeding and other practices. The major reasons are having lack of human resources, management, planning and cost of feeding materials.

Keywords: Holstein Friesian, Lactation Performance, Fixed Effects, Balochistan.

Hedging Foreign Exchange Rate Risk by Islamic and Conventional Banks in Turkey: A Comparative Study

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Abstract

Presently, world economies are facing fluctuations in foreign currency exchange rate. Hence, exposure to exchange rate risk is resulted from the absence of an effective hedging instrument for dealing with many various currencies in Islamic and conventional banking. So, the objective of study is to analyze and compare foreign exchange rate risk between Islamic and conventional banks operating in Turkey during 2017 using a qualitative research method. With this purpose, Islamic banks have been compared to conventional banks and data has been collected from the senior management of 10 selected banks through questionnaires. Based on our findings, the perceptions on exchange rate risk issue in Islamic and conventional banks, it was observed that, Islamic banks have exposing to exchange rate risk more than conventional banks. Regarding the purposes and intensity of use of different financial derivatives contracts, it was found that 70 % of the respondents using the financial derivatives for hedging, and 20 % for other purposes. We find, however, that 10% of the respondents using the financial derivatives for both Hedging and Arbitrage in Islamic and conventional banks. Furthermore we found that the currency swaps and currency forward achieved the optimum hedging contracts (40%) against exchange rate risk in conventional banks, while the currency forward has achieved the maximum value among remaining contracts in Islamic banks (60%). On one hand, options contract was the most important contract contracts in conventional banks. Concerning Intensity of use of different Islamic financial contracts, murabaha contracts were the most-used contracts. On the other hand, we found that intensity of risk of different Islamic financial contracts, the profit-sharing contracts (i.e., Musharakah and Mudarabah) achieved the high rank of risks, while fixed income contracts (i.e. ijara and murabaha) are produced the lowest risky. For intensity of use of different risk mitigation techniques, the guarantees contracts and the parallel contracts were the most used contracts in Islamic banks.

Keywords: Islamic and Conventioal Banking, Risk Management Practices, Sharia'h Compliance.

Secretion and Action of Gastrointestinal Hormones in Ruminants

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Abstract

Ghrelin, glucagon-like peptide-1 (GLP-1) and GLP-2 are gastrointestinal hormones (or gut peptides) secreted from the gut in response to nutrient ingestion, and play key roles in the regulation of feed intake, energy homeostasis and gut health and absorptive function. The characteristics of the secretion and action of these peptides are well known in non-ruminants. However, little is known regarding their secretory stimuli and physiological actions in ruminants. We conducted a series of studies to identify ghrelin and GLP-1 roles in the regulation of nutrient metabolism by ruminant liver. Ghrelin and GLP-1 were administered at target doses and durations in sheep and steer and biopsies from the liver, as a major target organ of metabolic modulations, were collected and analyzed for metabolomes by capillary electrophoresis time-of-flight mass spectrometry combined with multivariate statistics. Our data revealed that GLP-1 promotes lipolysis and fatty acids oxidation and elevates oxidative stress defense pathways while ghrelin is implicated in protein anabolism, phospholipid biosynthesis and glycolysis pathways. Also, the daily rhythm of GLP-2 secretion in response to feeding regimen and the effect of volatile fatty acids (VFA) administration on GLP-2 release were elucidated in sheep, and our data indicated that feed intake as well as intraruminal supply of butyrate and VFA mix (acetate, propionate and butyrate) enhance plasma GLP-2 levels. Moreover, GLP-1 secretion was enhanced by both oral lactose administration and exposure to blue light in calves. The conclusions of this work is that through adjusting both the nutrient composition of the diets and the lighting source, the gut hormones secretion can be modulated to optimize feed intake, gut health and performance in ruminants.

Keywords: Secretain, Ruminants,

Central Neurveous Sytem Real Time Glutamate Synaps Sensing System: Voltametry Technique

Ali Taghizadehghalehjoughi

Determination of in Vitro Herbicide Tolerance of Wheat (Triticum aestivum L.)

Arash Hossein Pour

Agricultural Sciences

The Behavior of Turkish and Foreign Walnut Cultivars in Turkey (2012-2015)

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Abstract

The present study of the behavior of 12 walnut cultivars (Kaman 1, Maraş 12, Maraş 18, Şebin, Şen 1, Şen 2, Chandler, Fernette, Fernor, Howard, Midland and Pedro) grafted onto seedling rootstocks of Juglans regia L. was carried out under the ecological conditions at Niksar, located at latitude 40035'50.85"N, longitude of 36056'37.63"E, and 426 m above sea level. The orchard was established in 2008 on 7×7 m spacing. The trial is a randomized-block type, with 4 repetitions and 3 plants for each repetition. The drip irrigation system (2,3 l /h) was used. Fertilization has been applied annually using NPK and organic manure. The standard chemical treatments have been applied for pest and diseases management. In the experiment it was investigated that cultivars being affected by damage of freeze, with characteristics of morphological, phenological and yield in 2012 - 2015 years. In the study, all of the Turkish walnut cultivars were earlier leafing than foreign walnut cultivars. The latest leafing cultivars were Fernor, Fernette, and Chandler. The cultivars with the earliest leaf falling were Maraş 12, Maraş 18, Kaman 1, Fernette, and Fernor. The cultivars with latest leaf drop were Chandler, Midland ve Pedro. For the investigated 12 cultivars nut weight was between 10.32 g (Maras 12) - 20.15 g (Sen 1), kernel weight 6.17 g (Maras 12) - 10.69 g (Sen 1), kernel percentage was between 44.92% (Pedro) - 65.54 (Şebin), shell thickness was noted between 0.85 mm (Şebin) – 1.97 mm (Fernor). The total yield (kg/tree) was between 2.29 (Maraş 12) and 23.56 (Pedro.

Keywords: Walnut, Late Leafing, Yield, Frost Damage.

Apricot Culture in the World

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Abstract

Apricots were domesticated well over 5,000 years ago in the wide area covering Iran, Turkistan, Afghanistan, Middle Asia and Western China. *Prunus armeniaca* L. is not a true native to the plains of Armenia, but it has been continuously cultivated there since at least the first century AD. It was brought to Armenia from a more eastern center of origin much earlier as evidenced by archeological excavations at pre-Christian sites. It was brought to Anatolia in Fourth Century BC from Persia during the voyages of Alexander the Great. Thus Anatolia became the second homeland for apricot. During the Roman and Persian wars in 1st century BC, it spread first to Italy, and then to Greece. Eventually it spread to Spain and England in 13th century and to France and America in 17th century. Apricot is a fruit species adapted to a wide range of geographical areas. Around 200 years ago, Loudon was first to mention that wild apricots with different shades of pink flowers had been used as ornamental purpose for centuries. Nowadays commercial production areas of apricots are still very limited with a small number of varieties, although they spread across a wide area all over the world. Looking at the statistics, the production value has been observed to show upward trend by years. This increase in production is closely related with breeding studies in different countries. Breeding programs were modified generally according to consumer's demands and also some subjects such as resistance to diseases (Sharka, Monilinia etc.) and frost damages, determination of self-(in)compatibility.

Keywords: Apricot, Origins of Apricot

Evaluation of Acute Toxicity, Sedative and Analgesic Effects of Taverniera Glabra Methanolic Extract on Mice.

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Abstract

Present study was conducted on crude methanolic extract of stem and root of Taverniera glabra. In Pakistan T. glabra is found in the region of Balochistan only. T. glabra has numerous therapeutic uses in traditional medicine and it is also used for pain relief. Current study was carried out to evaluate acute toxicity, analgesic and CNS depressant activity of the plant. Acute toxicity was carried out by oral administration of the T. glabra extract from 250 to 2000mg/kg oral dose. Analgesic activity was carried out by acetic acid induced writhing test and formalin test. Central Nervous System (CNS) depressant activity was carried out by exploratory activities (open field activity, cage crossing activity, rearing test) and forced swimming test. Oral administration of the methanolic extract of T. glabra was nontoxic at the dose of 1500mg/kg in the acute toxicity test. Exploratory behavior of mice treated with the methanolic extract of T. glabra showed sedative effects ($P<0.05$) in open field, cage crossing, traction and rearing test, particularly at the dose of 500mg as compared with standard drug Diazepam. In forced swimming test, mobility time was significantly ($P<0.05$) increased at 500mg/kg oral dose, and results were significant as compared with control. Methanolic extract of T. glabra produced significant ($P<0.05$) analgesic effects at the dose of 500mg/kg in the acetic acid induced writhing test and the formalin test. In conclusion, results show that the crude methanolic extract of T. glabra possess sedative as well as potent analgesic effects. Present pharmacological studies are the first ever studies conducted on the methanolic extract of T. glabra.

Keywords: Acute Toxicity, Mice, Taverniera Glabra.

Determination of Pomological and Chemical Properties of Some Local Pomegranate Species in Şanliurfa Region

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Abstract

Pomegranate (*Punica granatum* L.), which is generally consumed as fresh and fruit juice, is a rich source of biochemicals and antioxidants. In this study, pomological features such as fruit height (86.14-85.02) mm, fruit crust thickness (3.49-2.96 mm), calyx height (23.37-27.89 mm), calyx diameter (17.47-17.24) mm, fruit juice volume 263.33-176.66 ml, total grain yield % 11.19-12.03 and some chemical properties such as soluble solid content 14.9-14.0 and pH 2.80-2.86 of local pomegranate species growing in Şanlıurfa (İncirli karışık ağzı kapalı ve İncirli sarı kızıl nar) region have been determined. İncirli Karışık ağzı kapalı ve İncirli sarı kızıl local pomegranate species have been identified as promising in terms of rehabilitation in an advanced stage and development of pomegranate farming in the region due to having some well chemical and morphological properties.

Keywords: Pomegranate, Pomological Features, Chemical Properties.

The Importance of the Conservation Agriculture in Turkey

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Abstract

Conservation agriculture (CA) is concerned with profitable and sustainable by optimizing agricultural practices while conserving input and minimizing any impacts on natural resources. Technologies that benefit the environment can often have a negative effect on crop productivity and short-term profitability. CA is one of few practices that can enhance yield, economic returns, and food security while conserving the natural resources. The principles of the CA are zero-tillage, permanent soil cover and programing rotations or crop diversification in annual crops. However, CA practices have direct influence on climate regulation through carbon sequestration and less greenhouse gas emissions, and regulation and provision of water through soil physical, chemical and biological properties. For the last couple of decades the degradation caused by agricultural activities increased linearly as a result of unsustainable intensification of agricultural production in Turkey.

The aim of this research is to empathize the importance of the conservation farming in Turkey

Keywords: Conservation Agriculture, Conventional Agriculture, Soil Tillage, No-tillage, Turkey.

The Main Problems of Agriculture in Iğdır

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Abstract

Iğdır has a different structure from other provinces in Turkey, because of its geographical and climatic characteristics. The arid climatic conditions are dominant in Igdir. There are large farming areas in the eastern and western Igdir lownland. However, there is a problem of salinity due to wrong land management in eastern Iğdır lowland. As a result, a large part of the eastern Igdir lownland was left out of agricultural production. A similar situation began to be observed in the western Iğdır lownland. The use of traditional irrigation systems in the irrigation of agricultural lands, the use of well water into the field without resting and the use of conventional tillage methods are acceleratind this deterioration process. This leads to an increase in the workforce and a decrease in productivity. The livestock sector is another important source of the province. However, there are also problems waiting to be solved in this sector. In particular, the lack of ponds to meet the water needs of ovines is among the problems faced by producers in this sector. Veterinary services also appear to be defective. The lack of veterinary practitioners is another issue of the livestock sector. In addition, the producers incur losses due to the animals entering illegally to the province. There are not enough milk factories in the province. Milk mechanization techniques are not widely used in Iğdır. This leads to the breakdown of milk. The aim of this research is to determine the problems encountered in the agricultural activities carried out in Iğdır and to present solutions proposal.

Keywords: Agriculture, Water Management, Lownload, Livestock, Solutions.

Usage of Bee Products for Treatment of Diseases

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Abstract

Honey and bee products have been one of the most important and healthy products since human first existed. Honey, pollen, propolis and royal jelly known as delicious foods are also important trading products which have been healing many different health problems. In years people realised that honey and bee products are a way of treatment for many different type of diseases. This research focused on bee products and their effects on human health. Many research depicts the beneficial effects of bee products on human health.

Keywords: Apiteraphy, Bee products.

Research About Bees, Bee Products and Apiteraphy

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Abstract

Nowadays, natural products have been gained attention again because of their biological activity on human health. Honey, propolis, royal jelly, pollen, bee venom, beeswax are important natural product of honeybees. In recent years, especially propolis and royal jelly are used commercially besides honey. Propolis has been used as an antibiotic from ancient times. It is a mixture of oils, pollen, special resin and waxy materials which are collected from tree cones, shells and buds of plants by honey bees. Propolis has antimicrobial, antifungal, antiviral, anti-inflammatory and anesthetic effects. It also plays an important role in lots of beneficial biological activities. Therefore, it has been used as a functional food supplement or as a natural drug in apitherapy, bio cosmetic and healthy nutrition. Propolis has been processed using traditional extraction methods (alcohol extraction etc.). It is important to improve propolis production process since propolis is an imported good. In the case of developing novel process methods in order to obtain pure one, propolis will not be imported for regular use. It is necessary to develop propolis extraction and shelf-life conditions. Moreover, this product will be encapsulated with cyclodextrins just before the drying step for protecting from oxidation in order to produce new product. In recent years, demand for royal jelly is increased due to the extraordinary properties of it. Royal jelly is used in various areas such as cosmetics, food supplement and drug production. Countries which cannot produce enough amount of royal jelly, imports it. That is why it is important to determine components and quality of royal jelly. Some of the quality parameters are water, crude protein, acidity, pH, ash, total sugar, fructose, glucose, sucrose and 10-HDA content. Although the consumption of royal jelly has been rapidly increased, there is a lack of knowledge about the quality of commercial royal jelly products. Production and analyses methods need to be improved. In this review, production methods and applications of propolis and royal jelly will be discussed.

Keywords: Apiteraphy, Royal Jelly, Propolis, Value-added Product.

Fermentation Biotechnology as a Potential Process for Producing Some Active Components of Apitherapy Products

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Abstract

Microorganisms have been widely used for production of various chemicals, energy sources, enzymes, food ingredients, pharmaceuticals and bioactive compounds by using fermentation process. All those products are called value-added products. Fermentation refers to the growth of microorganisms in fermenters under aerobic or anaerobic conditions. There are also traditional fermented foods such as tarhana, bread, chesses, tempeh, mushrooms and silage. Several million tons of products are produced each year by using fermentation. Some of these value-added products has been extracted from animals and plants. However, this is not sustainable. Apitheraphy products have recently gained attention for use of human health. The amount of their active components such as melittin, decanoic acid etc. depends on the bee product produced. Therefore, most of them are now obtained from microbial sources because of rapid cultivation, use of cheap substrates, product diversity, and independence from climate conditions. This review is introduction for fermentation systems as a potential production process of some active components of apitheraphy products as well as explaining the different fermentation systems, microbial growths, and fermentation methods.

Keywords: Biotechnology, Fermentation, Apiteraphy, Value-added Product.

Innovations for Apitherapy in 2017

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Abstract

Use of apitherapy products in medicine recently increased. Studies in this area iscrease at a rapid pace. This is a descriptive study conducted in the last 8 months by reviewing published papers on apitherapy. There are 60 publications from January 2017 to today in PubMed, just about melittin, active part of the bee venom. Besides, we have 85 publications for bee pollen, 79 publications for propolis, 38 publications for royal jelly. Each publication was studied separately according to disease groups. In these studies, the effects of intracellular pathways of bee products were seen gradually resolved. The pool of data required for the envy of traditionally used honey and honey products is increasing worldwide. As one of the most important centers of beekeeping, Turkey is very fortunate and must use this potential to create therapy centers.

Keywords: Bee Products, Apitherapy, Innovation.

Regulation on Traditional and Complementary Medicine Practices in Turkey

Ferhat Sarıbek

Antalya İl Sağlık Müdür yardımcısı

Abstract

According to WHO, Traditional Medicine is the sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness. The terms "complementary medicine" or "alternative medicine" are used inter-changeably with traditional medicine in some countries. They refer to a broad set of health care practices that are not part of that country's own tradition and are not integrated into the dominant health care system. Since there was no legal legislation in our country before, traditional and complementary skills such as cupping theraphy, apiteraphy, hirudotheraphy, acupuncture, maggot therapy were practised in unsanitary conditions and mostly by non-physicians. By the regulation that was published in October 27, 2014, TCM practise methods, training, authorization and the working principles and procedures of the healthcare institutions are identified by MoH.

Keywords: Traditional Medicine, Complementary Medicine, Apiterahy, Acupuncture, Hirudoteraphy.

A General Evaluation About Sericulture in Turkey

Faik Ramazan Akyüz

A New Approach for the Reclamation of Salt-Affected Soils: Salt Harvest Technique

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Abstract

Soil degradation caused by salinization and sodification is a worldwide phenomenon. Therefore, amelioration of these problematic soils is of great importance for sustainable agriculture. Several methods have been developed for the reclamation of saline, sodic, and saline-sodic soils, however, these methods are time consuming and requires skilled engineering approaches. In order to reduce this time and complexity of engineering, new techniques should be developed. Salt harvest technique, which is named by us for the first time, can be an alternative to the traditional amelioration methods. Salt harvest technique is done by crystallization inhibitors, which results in salt formations on the outer surface of the soil. This study was carried out to determine the effects of different application rates (5, 10, and 15 mmol kg-1) of iron (III) ferrocyanide on the performance of salt removal from the soil.

Keywords: Salt Harvest Technique, Reclamation, Saline-sodic Soils, Crystallization Inhibitor.

Prevalence of the Barley Scald (*Rhynchosporium commune* [(Zaffarano, McDonald&Linde)]) Disease in Ankara, Konya and Eskişehir Provinces of Central Anatolian Region

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Abstract

Within the scope of this study, surveys were carried out in Central and some districts of Ankara, Eskişehir and Konya provinces to determine the prevalence of barley scald [*Rhynchosporium commune* (Zaffarano, McDonald & Linde)] in some barley areas during the 2013 and 2014 sowing seasons. In 2013; 11 districts from Ankara, 10 districts from Konya, 8 districts from Eskisehir and some central districts were collected to represent the districts, and disease intensity was determined. The average prevalence of the scald disease in Ankara, Eskişehir and Konya provinces was found to be 15.07%, 22.50% and 18.05%, respectively. In the same provinces in 2014, some barley areas of 12 counties in Ankara, 5 counties in Konya and 3 counties in Eskişehir were examined and the average prevalence of disease was determined. In Ankara, Eskişehir and Konya provinces, the average prevalence of the scald disease was 5.50%, 8.16% and 7.25%, respectively. Within the scope of surveys, a total of 460 fields were investigated every two years. In 2014, there was a dry season in Central Anatolia Region. For this reason, the distribution of fungi from the lower leaves to the upper leaves was less. Barley scald damage on barley crops has been rather low compared to the 2013 year crops. Fungus with the conidia spread in the field with a large amount of rainfall (rain) is doing. In spite of changing according to years, there are some problems in the Central Anatolia region that have caused drought in recent years in cereal agriculture. Besides, Central Anatolia region is in a sensitive location where climate change could be seen.

Keywords: Barley, Scald, Central Anatolia, Survey, Drought.

Determination of Factors Affecting Roughage and Concentrated Feed Preferences of Sheep and Goat Farming Enterprises in Central Districts of Iğdır Province, Turkey

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Abstract

This study was carried out in order to determine roughage and concentrated feed preferences of agricultural enterprises having sheep and goat farming in Iğdır province of Turkey. For this purpose, a questionnaire survey was administered to 63 entrepreneurs having at least 50 sheeps and goats. 81 percent of the participants were commercial aquaculture. While the preference for roughage feed in the enterprises was 79.4 % in the first place, the preference for concentrate was barley with 90.5 %. The interviewed enterprises pointed 87.3 % roughage and 77.8 % concentrated feed. 100 % of breeders have problems about feed costs in the roughage and concentrated feed supply. The most important factor affecting preferences on roughage in the survey was price, the second factor was nutritional value.

Keywords: Sheep and Goat Farming, Roughage and Concentrated Feed, Iğdır.

Determination of Feeding Value of Five Sunflower Lines in Eastern Mediterranean Agricultural Research Institute Using In Vitro Gas Production Technique

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Abstract

This study was carried out to determine the feed value of five different sunflower lines (DA-YR-13-48; DA-YR-13-44; DA-YR-13-259; DA-YR-13-12 ve DA-YR-13-18) by chemical analysis and in vitro gas production technique and to compare feed values. In vitro gas productions and gas production kinetics of five sunflower lines were determined at 0, 3, 6, 12, 24, 48, 72 and 96 h incubation times. The results of analysis of variance indicated the level of significant differences in the contents of crude ash (CA), crude fat (CF), crude protein (CP), acid detergent fiber (ADF), neutral detergent fiber (NDF), hemicellulose (HEM) and digestible organic matter (DOM) between several lines of sunflower ($P<0.05$). Dry matter (DM) did not showed difference between sunflower lines ($P>0.05$). Metabolic energy and net energy lactation contents and gas production amounts and methane production of 5 different sunflower lines statistically differed ($P <0.05$). The CP contents of sunflower lines ranged from 16.74 to 18.29 %; the CF contents of sunflower lines ranged from 42.17 to 46.02%. CA content of sunflower lines varied from 2.61 to 3.47%. NDF, ADF and HEM contents of sunflower lines varied from 34.16 to 43.27%; 18.69 to 23.07% and 14.46 to 17.93%, respectively. 24 h total in vitro gas production of sunflower lines ranged from 68.00 to 74.50 ml/200 mg DM. The calculated metabolizable energy (ME) and digestible organic matter (DOM) contents of sunflower lines ranged from 19.99 to 21.04 MJ/kg DM and 83.79 to 89.42%, respectively. As a conclusion, sunflower lines can be used successfully in ruminant feeding.

Keywords: Chemical Composition, Digestibility, In Vitro Gas Production, Sunflower Lines.

Effects of QUV Accelerated Aging on Pendulum Hardness Resistance of Synthetic Varnish and Water-Based Varnish Layers Applied on Heat-treated (TermoWood) European Alder, American Ash, White poplar and White willow Woods

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Abstract

The objective of this study was to investigate accelerated UV resistance of synthetic varnish and one component water-based varnish layer applied on heat-treated wood (ThermoWood) surfaces. In this study, wood specimens prepared from European Alder (*Alnus incana*), American Ash (*Fraxinus americana*), white poplar (*Populus alba*) and white willow (*Salix alba*) wood species were heat treated according to ThermoWood method at 190^{o}C for 1,5 hours and 212^{o}C for 2 hours. Following the heat treatment; synthetic varnish and one component water-based varnish were applied. The finished samples were exposed to UV-A 340 nm flouresent lamp in a QUV accelerated weathering tester for 144, 288 and 432 hours. At the end of each exposure period pendulum hardness values were measured. According to the results, pendulum hardness values were changed by accelerated weathering.

Keywords: Accelerated Weathering, Heat Treatment, Synthetic Varnish, One Component Water-based Varnish, Pendulum Hardness.

The Presence of Soil Pathogens in Chickpea (Cicer Arietinum L.) Growing in Winter and Summer

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Abstract

The aim of this study was to reveal the presence of soil pathogens in chickpea growing in winter and summer. Field trials were arranged as randomized blocks in design with four replications in Diyarbakır province during 2017 year. Sowing dates were November 16 for winter and March 10 for summer. Chickpea plants in all the plots were examined for root rot and wilting in the first week of June. Isolation was made from diseased plants and the diagnosis was performed macroscopically and microscopically. *Macrophomina phaseoli, Rhizoctonia solani, Phoma spp., Fusarium oxysporum, Fusarium solani* and *Fusarium spp*., were isolated in both trials but the rates were different. Chickpea plants were more affected by summer sowing than winter sowing and athe most isolated pathogens were *Fusarium* species, especially *Fusarium oxysporum*.

Keywords: Chickpea, Winter Growing, Summer Growing, Soil Pathogens.

Yield Potential of Different Hybrid and Open Pollinated Winter Rapeseed (*Brassica napus ssp.oleifera* L.) Cultivars

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Abstract

This research was carried out to determine yield (seed yield and oil yield), yield components (plant height, number of branches, number of pods on main stem, pod length, number of seeds per pod, 1000-seed weight) and crude oil content of nine winter type rapeseed cultivars (Bristol, Capitol, Orkan, Californium, Hydromel, Elvis, Embleme, H90 (hybride) and Triangle (hybride)) under Eskişehir ecological conditions during 2007-2008 and 2008-2009 experimental years. The experiment was conducted in a randomized complete block design with four replications. This study compared the yield and yield components of hybrid and open-pollinated (OP) rapeseed cultivars of different origins. Significant differences were found between cultivars with respect to yield and yield components. Especially H90 and Triangle showed higher seed yields.

Keywords: Winter Rapeseed, Yield, Yield Components, Quality.

Structural Characteristics of Sheep and Goat Farms in Siirt Province

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Abstract

This study investigates structural characteristics of sheep and goat farms in and around Siirt. Research material was formed from a survey carried out in 286 farms in Siirt and 6 districts. 8.7 % of farms were located in Centrum, intensity could be ranged as Pervari (25.5%), Şirvan (19.9%) and Eruh (18.2%). The average altitude of the villages, where farms were located, was 1117.28 m (min. 475 m max. 1865 m). 44.8% of farms were located in mountain villages, 29% in slope villages and 24.5% in lowland villages. Only 1.7 of farms were doing migratory livestock. The average age of the farmers was 47.3. The educational status rate was detected as 61.2% primary school graduates, followed by illiterate (26.2%), secondary school graduates (10.1%), and high school graduates as only 2.4%. The average number of sheep and goats per farm was identified as 146.15 head, while the total number of sheep and goats in the farms was 41798 head and the total number of cattle was identified as 6.74 head, while the total number of the cattle in the farms was 951 head. The average land size per farm was determined as 3870 da, while the highest land size in the farms was found to be 600 da, also there were not any lands in 70 farms. Child and woman effect on production in the farms was determined statistically significant ($p<0.01$) and the rate of child effect was found to be 71%, while the rate of woman effect was found to be 90%. It has been found that 97.2% of the farmers were satisfied with the breed they have raised, 40.5% of the farmers dealed only with livestock, while the 59.5% of the farmers work also in trade, crop production and public area. Structural condition of sheep and goat breeding in Siirt province consists of farms that are generally located in 1117 altitude mountain villages, farmers with primary school education, owned an average 3870 da land size with intensive child and woman contribution to the production. It was determined that for doing a more rational animal husbandry and for farm production increase, technical improvement and technical knowledge for farmers are required.

Keywords: Sheep and Goat Farms, Siirt Province, Structural Characteristics.

Applicability of Cotton Ginning Machine Waste as Litter Material in Broiler Breeding

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Abstract

This study was conducted to examine the applicability of waste remaining from cotton ginning process for litter use in broiler breeding. 630 daily Ross 308 hybrid chicks were used over a period of 40 days. Three groups kept on the commonly used sawdust; waste remaining from cotton ginning process and 50 % sawdust and 50 % waste remaining from cotton ginning process were used in three repetitions. The study revealed that the effect of litter materials was significant on live weight and carcass weight (P<0.5). It was seen that the best results regarding live weight and carcass weight (2177,93 g and 1643,10 g) were gained on the group bred on waste remaining from cotton grinning, followed by the group kept on sawdust (2173,27 g and 1622,70 g), and the group kept on 50 % sawdust and 50 % waste remaining from cotton ginning process (2068, 23 g and 1544,70 g). According to values for liver, heart and gizzard, no statistically significant differences were found. Among the groups, the best feed efficacy ratio was found for the group kept on waste remaining from cotton ginning process (1,90). However, group differences were statistically not different. While breast edema and feet problems were observed in the group kept on 50 % sawdust and 50 % waste remaining from cotton ginning process, this was not the case in the two other groups. Also, in the groups kept on sawdust and on 50 % sawdust and 50 % waste remaining from cotton ginning process, E coli colonization was determined, while it was not observed in the group kept on solely waste remaining from cotton ginning process. As a result, it can be stated that remaining from cotton ginning process is an alternative litter material to be used in broiler breeding.

Keywords: Waste Remaining from Cotton Ginning Process, Performance Characteristics, Meat Quality.

The Effect of Some Mutagens and Priming Applications of Common Bean in m1 Generation

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Abstract

After the mutagenic application to the seeds, various damages might occur and consequently some problems arise in germination and emergence. The effects of humidification (H) and humidification + neem oil (HN) priming applications were investigated before mutation applications to bean (*Phaseolus vulgaris* L. Gina cv.) seeds in order to minimize the negative effects of mutagenic applications. In the mutation treatments after the priming applications, three different doses (30, 40 and 50 mM) of EMS (Ethyl Methane Sulphonate) were applied in the mutation treatment of the seeds with radiation (120 Gy) with Gamma Irradiation Cobalt 60 device. In the M1 generation bean plants, the application of H and HN led to a shortening of the seedling emerging time. Compared to control group, H and HN priming applications of EMS2 application increased the number of pods by 56 % and number of seeds by 88 %.

Keywords: EMS, Beans, Gamma, Breeding, Mutation, Priming.

Improvement of Caper (*Capparis* spp.) Production and Employment of Women Labor in Iğdır-Aralık Erosion Prevention Area

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Abstract

Caper (Capparis spp.) belongs to Capparaceae family, and commonly known as “gebere, gebre, gevel” in the different regions of Turkey. Different parts of caper are used, but the main part utilized is the flower bud. Roots and leaves of the plant are used for drug, cosmetics, and dye industry. The caper shows antioxidant properties and has been used in treatment of cancer, tumor, hemorrhoid and stomach ulcer. The caper plant is generally growing in arid and semi-arid areas. Since its deep rooting system (40 m), caper is known as “Desert Plant”. It has been used for erosion control in recent years. Aralık town of Iğdır has a large erosion area and Ebu Cehil (Calligonum polygonoides L. ssp. comosum (L’Hér.) is the common plant growing there. The purpose of this study is to introduce caper plant as an alternative to Ebu Cehil plant to control erosional areas. Aralık erosion area (13542 ha) is the largest erosional area after Konya-Karapınar. For this purpose 2200 caper plantlets were planted at April 2017, and after two months observations were taken. Bud yield will be recorded after three years. Plantlets will be distributed to the other erosion areas as an alternative to Ebu Cehil. There is no marketing problem of the product and for the future we expect caper to be the best revenue of local farmers.

Keywords: Caper, Dryland Agriculture, Capparis Spp., Erosion, Women Employment.

Evaluation of Some Forage Pea (*Pisum sativum* ssp. *arvense* L.) Lines and Varieties in Terms of Seed Yield and Straw Quality

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Abstract

This study was conducted to determine the seed yield and straw quality of forage pea lines and varieties in 2014 and 2015 years. 14 different forage pea lines and varieties were used as materials. The research was established as a randomized complete block design with three replications. Seed yield, straw yield, thousand grain weight, crude ash ratio, crude protein ratio, crude protein yield, acid detergent fiber (ADF), neutral detergent fiber (NDF), digestible dry matter (DDM), dry matter intake (DMI) and relative feed value (RFV) characteristics were investigated. Seed yield, straw yield, thousand grain weight, crude ash ratio, crude protein ratio, crude protein yield, acid detergent fiber (ADF), neutral detergent fiber (NDF), digestible dry matter (DDM), dry matter intake (DMI) and relative feed value (RFV) values ranged from 33.8-180.2 kg/da, 160.3-887.0 kg/da, 99.1-150.2 g, 9.42-11.19%, 6.54-11.91%, 25.7-104.9 kg/da, 29.5-39.8%, 39.1-51.2%, 57.9-65.9%, 2.35-3.08% and 105.5-157.4, respectively. In terms of these parameters; the Gatem, Urunlu, Golyazi and Spring Pea 3-638 genotypes were found to be superior.

Keywords: Forage Pea, Seed and Straw Yields, ADF, NDF, Crude Protein.

Biometric Identification and Recording in Livestock

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Abstract

Consumers are increasingly sensitive to food safety. In areas related to animal health and animal products safety; there is a desire to have more information on the subjects such as the source of the products and the monitoring of the production process. The International Animal Registration Committee (ICAR) realised traditional identification and identification methods used in livestock (battering, stigmatization, ear snick, etc.) to systems such as electronic and biometric identification, after developing standards and rules for animal identification. These methods facilitate the named process and provide advantages over the prior art. The method to meet the requirements of the animal identification and traceability system should be easy to implement for different animal species, should provide animal welfare and fast access to the database. The created database should be identified and the originator must be able to communicate between traceability and national databases in a secure manner. Biometric methods used in animal identification are nasal pressure, DNA genotyping to confirm the origins of new recordings, retinal vascular tissue that is unique for each animal and does not change from the birth to the death of the animal. The advantages of these methods are ability to capture, store and retrieve images for reuse very quickly. These advantages include getting information from the animal's registered information from the place where the animal is located and is cheaper than the cost of an electronic cube. Establishment of databases for control, follow-up, disease prevention, recording and monitoring of animal movements are important. Animals benefiting from livestock support should be able to follow the system from birth until death. Identification, registration and animal movements should be done in the right way.

Keywords: Livestock, Identification, Food Safety.

Effects of Fumaric Acid Broiler Feed Consumption, Feed Utilization Rate, Live Weight Increase

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Abstract

This study was carried out with a view to determine the fumaric acid contribution on fattened chickens' rations. One day-year old 160 Ross 308 male fattened chicks have been used in the study. The group fed with basic ration (fumaric acid contribution % 0) was the control group, the groups exposed to fumaric acid rations with 1, 2 and 4 per cent levels were the treatment groups. Each group was divided into two sub-groups; the animals were randomly distributed to each sub-group by twenty (20) chicks. Testing groups had similar live weight average. Forage and water were given freely. The study period was 42 days. At the end of the trial, rations were fed with different levels of feed intake. Feed utilization rate, and live pain were statistically not significant. %2 fumaric acid addition control compared to this feed consumption has increased significantly, the contribution of fumaric acid at the same time. As a result, in the feeding of broiler chickens the content of fumaric acid used as growth has been determined that it tends to improve the utilization rate of feed fumaric acid contribution is the same and reduced the death rate at that time.

Keywords: Fumaric Acid, Broiler, Feeding, Feed Conversion, Live Weight Gain.

Occurrence of *Phytophthora Cryptogea* Causing Root and Collar Rot on Sweet Cherry Trees in Diyarbakır Province of Turkey

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Abstract

Turkey is the world's largest producer of sweet cherry (*Prunus avium* L.), a member of stone fruits, with approximately 500 thousand tons of fruit produced annually. 24,385 sweet cherry trees are grown in 1,358 da area of Diyarbakır province with 275 t of fruit produced annually. In May 2015, approximately 30% of 500 5-year-old sweet cherry (*P. avium* cv. Ziraat 0900) trees grafted onto 'Mahaleb' in Çüngüs of Diyarbakır province showed wilting, lack of vigor, and dieback, with severely infected trees dying. Reddish necrotic tissues at the base of the trunk often extending to the main roots were observed on those trees. When they uprooted; necrosis on taproots and decay on feeder roots appeared. Tissue samples taken from the margins of crown and root lesions were placed on grated apple corn meal agar amended with P_5ARPH. Plates were incubated for 4 days at 20°C in the dark and a *Phytophthora* species was consistently isolated from the tissues. The morphological features fit the descriptions of *Phytophthora cryptogea* Pethybr. & Laff. *P. cryptogea* was pathogenic on 5 to 7 mm × 20 cm diam. shoots detached from a 1-year-old 'Mahaleb' cherry (*Prunus mahaleb* L.) rootstock tree. Genomic DNA was extracted from a representative isolate. The internal transcribed spacer (ITS) region of rDNA was amplified using the ITS6/ITS4 primer pair and sequenced (GenBank Accession No: MF538788). BLAST searches showed a 99 to 100% identity with many *P. cryptogea* strains AF087475, AY995400, GU111626, GU111624, KP070713, KP070713, KP070715, KP070719, KP070716, KP070721, KP070709 etc. deposited in NCBI GenBank and Phytophthora-ID databases. The provenance of *P. cryptogea* in a sweet cherry orchard in Ankara province (Central Anatolia), in a kiwifruit orchard in Bartın province (Black Sea Region), and in a potato field in Erzincan province (Eastern Anatolia Region) was previously reported in Turkey. However, to our knowledge, this is the first report of natural infection of *P. cryptogea* in a new region, in the Southeastern Anatolia, causing root and collar rot of cherry trees.

Keywords: *Prunus avium*, *P. cryptogea*, Southeastern Anatolia.

Production Data of Organic Food Grain Legumes in Turkey

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Abstract

Organic farming market has begun to occur together with to demand healthy and natural products of consumers. Organic agriculture is a form of controlled and certified production up to from production to consumption without the use of chemical inputs. Organic agriculture is aim to produce healthier and tastier plants by protecting animal and human health without polluting the soil and water resources and adversely affecting environment. As is known, food legumes are important because of that they contain high protein in human diet, bind nitrogen to the soil through *Rhizobium ssp.* bacteria in planting rotation and feed animals with stems and grains. In addition to the cultivation of food legumes in Turkey, they are also produced in the framework of organic agriculture. When from the most production amount to the least production amount was sorting, it were lentils, chickpeas, beans (dried), peas, and cowpea in the examination of the production data of these plants in Turkey between 2009 and 2014. After from 2012 year, the largest organic food grain legumes production was seen in 2016 based on tons. As a result, the demand for more reliable food sources is increasing day by day, and the organic farming market is expanding. In Turkey, it is necessary to increase the production of food grain legumes by organic farming system for a sustainable and reliable agriculture.

Keywords: Organic Agriculture, Food Grain Legumes.

ITS and LSU-rDNA Nucleotide Sequences Based Confirmation of *Cytospora Chrysosperma* and *Chondrostereum Purpureum* from Symptomatic Cankered Tissues of *Populus* sp. Trees in Turkey

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Abstract

The fungi *Cytospora chrysosperma* and *Chondrostereum purpureum* were isolated from orange-brown inner bark with pycnidia in the bark surface and underlying wood tissues of infected poplar plants (*Populus* sp.) with symptoms of stem and branch canker in Doğanşehir, Malatya, in 2016, respectively. Twigs of poplar trees were inoculated during their first season of growth by removing the fourth fully expanded leaves and placing agar plugs colonized by representative isolates of *C. chrysosperma* and *C. purpureum* over the resulting wounds. Three months after inoculation, cankers in 6.4 and 3.3 cm length formed by *C. chrysosperma and C. purpureum*, respectively, and twigs were girdled. Pathogenicity tests in a greenhouse experiment by shallow wounds made into the bark tissue and inoculation with these isolates in a similar manner also resulted in canker formation in and around inoculated wounds 14 days after inoculation. Subsequent re-isolations of *C. chrysosperma* and *C. purpureum* confirmed that these fungi were the causal agents of the disease, and no cankers formed in wounds that received only sterile plugs. DNA was extracted from representative isolates of each fungal species. Extracted DNA templates were amplified and sequenced for rDNA internal transcribed spacer (ITS) and the large subunit (LSU) rDNA gene regions using ITS6/ITS4 and NL1/NL4 primer pairs, respectively. NCBI BLAST results showed 99% similarity with the ITS and LSU sequences of *C. chrysosperma* and *C. purpureum* in GenBank. The sequences were submitted to GenBank. Given accession numbers of *C. chrysosperma* and *C. purpureum* were MF536529 and MF536531 for ITS-rDNA; MF536530 and MF536532 for LSU-rDNA, respectively. Existence of these fungi in Turkey was previously reported. However, this is a first report of molecular characterization of *C. chrysosperma* and *C. purpureum* based on ITS and LSU-rDNA nucleotide sequences of these fungi in Turkey.

Keywords: Poplar, Canker, *Cytospora chrysosperma*, *Chondrostereum Purpureum.*

First Record for an Egg Parasitoid of Hypera postica (Gyllenhal, 1813) (Coleoptera: Curculionidae) in Turkey

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Abstract

Eggs of alfalfa weevil, Hypera postica (Gyllenhal, 1813) (Coleoptera, Curculionidae) were collected from alfalfa (Medicago sativa L.) fields in Iğdır province of Eastern Anatolian region of Turkey in spring and autumn seasons of 2014–2015 years. The eggs were cultured in the laboratory. At the end of the present study, Anaphes sp. near leptoceras (Debauche, 1948) (Hymenoptera: Mymaridae), egg parasitoid of alfalfa weevil, H. postica were identified. It is reported as a new record for egg parasitoid of H. postica and for fauna of Turkey.

Keywords:

Root and Stem Rot Caused by *Fusarium Solani* on a New Host, Apricot

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Abstract

Apricot plantations (*Prunus armeniaca* L.) in Malatya and Elazığ cover approximately ten thousand hectares with nearly 10 million trees. In a survey carried out in apricot production areas of Malatya and Elazığ provinces from April to November in 2015 and 2016, apricot trees displayed symptoms of yellowing, stunting, rotting of roots and basal stems, and wilting, especially on those with injuries. A severe brown discoloration of vascular tissue along the stems of infected trees was also observed. Tissues samples collected from symptomatic trees were disinfected with 2% sodium hypochlorite and isolations were conducted on potato dextrose agar (PDA). A *Fusarium* sp. was consistently isolated from the roots and stems of diseased trees at Pötürge, Doğanşehir, Darende, Doğanyol, Akçadağ, Battalgazi and Baskil districts with 5.7, 10.0, 2.0, 3.3, 6.7, 6.7 and 6.7% incidence, respectively. All isolates obtained had white fluffy aerial hypha on PDA. Morphological characteristics of two types of conidia, macroconidia with three to five septate and microconidia with mostly non-septate to one septate, and chlamydospores produced pointed the fungal isolates to be *Fusarium solani* (Mart.) Sacc. 1881 (Ascomycetes, Hypocreales). Microconidia were abundant and macroconidia were sparse on PDA. To confirm pathogenicity, 20 healthy 1-year-old wild apricot 'Zerdali' rootstock seedlings grown in pots (25 cm in diameter) with sterilized soil were used for two experiments. For the first experiments, a conidial suspension from one isolate (Fs3) cultivated on PDA plates at 28°C for 7 days was used for root inoculation of 6 plants by submerging roots for 20 min in a conidial suspension (5×10^5 conidia/ml). Four seedlings inoculated with sterile water were used as controls. After 1 month incubation in a greenhouse, dark brown lesions were observed in the inoculated mature roots but not in the control roots. Pathogenicity was also confirmed by stem inoculations of plants in the second experiments. Six plants were inoculated with one mycelium disk of Fs3 (1 cm diameter) each, and sterile PDA disks were placed on four additional plants as controls. The inoculation site was wrapped with Parafilm for 2 days, and then the film was removed. After 1 month, symptoms similar to those observed in the field developed on the trunks of all inoculated plants, while only slight scars formed on the control plants. *F. solani* was reisolated from all inoculated root and stem tissues. For species confirmation, the internal transcribed spacer region (ITS) of rDNA of Fs3 isolate was amplified using the ITS6/ITS4 primer pair and sequenced. NCBI BLAST results of a 509-bp sequence shared 100% identity with those of many *F. solani* GenBank accessions previously reported. The new sequence was deposited in GenBank (Accession No. MF536534). To our knowledge, this is the first report of *F. solani* causing disease on this host plant, *P. armeniaca*, in Turkey and worldwide, which may help to establish the appropriate measures to control this disease.

Keywords: *Prunus armeniaca*, *F. solani*, Malatya and Elazığ.

Fungi Isolated from Cankered Tissues of Declining Apricot Trees in Malatya and Elazığ Provinces of Turkey

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Abstract

Surveys were carried out in apricot (*Prunus armeniaca* L.) production areas of Malatya and Elazığ provinces from April to November in 2015 and 2016. Fungal and oomycetous diseases causing dieback and decline symptoms were investigated and locations where the diseases were prevalent were determined according to the districts in these provinces. Nine and 40 orchards were visited in Elazığ and Malatya during the course of the surveys. A total of 665 out of 5750 apricot trees were checked and the disease incidence was found to be 44% in the surveyed orchards. Out of isolates obtained from root and crown tissues of symptomatic trees, isolates obtained from cankered tissues were characterized according to their morphological characteristics. Genomic DNA was extracted from representative isolates. The internal transcribed spacer (ITS) region of rDNA was amplified using the ITS6/ITS4 primer pair and sequenced and submitted to GenBank. NCBI BLAST results showed 98 to 100% similarity with the ITS sequences of many *Clonostachys rosea* f. *rosea* (Link : Fr.) Schroers et. al. 1999 (Ascomycetes, Hypocreales), *Sarocladium kiliense* (Grütz) Summerb. 2011 (Ascomycetes, Incertae sedis) (Syn: *Acremonium kiliense*), *Phoma* sp. (Ascomycetes, Pleosporales), *Entoleuca* spp. (Ascomycetes, Xylariales) strains deposited in NCBI GenBank. The sequences were submitted to GenBank and given accession numbers were MF536537 and MF536538 for *C. rosea*, MF536539 for *S. kiliense*, MF536540 and MF536541 for *Phoma* spp., and MF536542, MF536543, MF536544 and MF536545 for *Entoleuca* spp. isolates. Moreover, *Verticillium dahliae* and *Macrophomina phaseolina* were also isolated from inner tissues of necrotic branches and morphologically identified. However, pathogenicity of these isolates needs further investigations. If some isolates were not pathogenic, their endophytic or hperparasitic characteristics against pathogenic ones should be tested in order to fully exploit their potential for use as biological control agents.

Keywords: *Prunus armeniaca* L., Canker, Fungi.

Occurrence of *Phytophthora Cryptogea* Causing Root and Collar Rot on Sweet Cherry Trees in Diyarbakır Province of Turkey

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Abstract

Turkey is the world's largest producer of sweet cherry (*Prunus avium* L.), a member of stone fruits, with approximately 500 thousand tons of fruit produced annually. 24,385 sweet cherry trees are grown in 1,358 da area of Diyarbakır province with 275 t of fruit produced annually. In May 2015, approximately 30% of 500 5-year-old sweet cherry (*P. avium* cv. Ziraat 0900) trees grafted onto 'Mahaleb' in Çüngüs of Diyarbakır province showed wilting, lack of vigor, and dieback, with severely infected trees dying. Reddish necrotic tissues at the base of the trunk often extending to the main roots were observed on those trees. When they uprooted; necrosis on taproots and decay on feeder roots appeared. Tissue samples taken from the margins of crown and root lesions were placed on grated apple corn meal agar amended with P_5ARPH. Plates were incubated for 4 days at 20°C in the dark and a *Phytophthora* species was consistently isolated from the tissues. The morphological features fit the descriptions of *Phytophthora cryptogea* Pethybr. & Laff. *P. cryptogea* was pathogenic on 5 to 7 mm × 20 cm diam. shoots detached from a 1-year-old 'Mahaleb' cherry (*Prunus mahaleb* L.) rootstock tree. Genomic DNA was extracted from a representative isolate. The internal transcribed spacer (ITS) region of rDNA was amplified using the ITS6/ITS4 primer pair and sequenced (GenBank Accession No: MF538788). BLAST searches showed a 99 to 100% identity with many *P. cryptogea* strains AF087475, AY995400, GU111626, GU111624, KP070713, KP070713, KP070715, KP070719, KP070716, KP070721, KP070709 etc. deposited in NCBI GenBank and Phytophthora-ID databases. The provenance of *P. cryptogea* in a sweet cherry orchard in Ankara province (Central Anatolia), in a kiwifruit orchard in Bartın province (Black Sea Region), and in a potato field in Erzincan province (Eastern Anatolia Region) was previously reported in Turkey. However, to our knowledge, this is the first report of natural infection of *P. cryptogea* in a new region, in the Southeastern Anatolia, causing root and collar rot of cherry trees.

Keywords: *Prunus avium*, *P. cryptogea*, Southeastern Anatolia.

The Flora of Oyukludağ (Karaman) and It's Surroundings

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Abstract

The flora of Oyukludag was investigated between 2003 and 2006 years; 780 herbarium specimens belonging to 448 taxa, 292 genera and 62 families were collected and identified from the area. The research area is in the district of Konya and is in the C4 square according to the Grid System. The families which have the most taxa in research area are *Compositae (Asteraceae)* 78 (17%), *Leguminosae (Fabaceae)* 58 (13%), *Cruciferae (Brassicaceae)* 34 (8%), *Labiatae (Lamiaceae)* 33 (7%), *Gramineae (Poaceae)* 29 (6%), *Caryophyllaceae* 19 (4%), *Umbelliferae (Apiaceae)* 18 (4%), *Boraginaceae* 17 (4%), *Liliaceae* 16 (4%). The number of cultivated plants are 17. The phytogeographic elements are represented in the study area as follows; Iranian-Turanian (18%), Mediterranean (17%) and Euro-Siberian (2%). The phytogeographic regions of 268 (60%) taxa are either multi-regional or unknown. The number of endemic taxa is 56 (12%).

Keywords: Flora, Oyukludağ, Yellibel, Karaman, Türkiye.

The Effects of Dietary Vitamin E and Organic Selenium on the Levels of Some Bioelements in Tissues of Laying Hens*

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Abstract

This experiment was conducted to evaluate the effects of dietary vitamin E (α-tocopherol acetate) and selenium (selenomethionine) and a combination of the two, on the selenium (Se), copper (Cu), zinc (Zn), iron (Fe), calcium Ca and magnesium (Mg) levels in liver, kidney, tibia, feather, breast and heart tissues of laying hens. Ninety-six white Lohman LSL laying hens aged of 24 weeks were randomly divided into 4 equal groups (n=24) each of which was composed of six subgroups. The groups were fed with the diets that consisted of basal diet (2770 kcal/kg ME and 17 % crude protein) (Control), basal diet + 250 mg / kg Vit-E (Trial-I), basal diet + 0.9 mg/ kg Se (Trial-II) and basal diet + 250 mg / kg Vit-E + 0.9 mg/ kg Se (Trial-III), respectively for 12 weeks. Diet and water were provided as ad libitum. At the end of the experiment, 12 animals from each group were sacrificed and aforementioned tissues were collected and stored at -20 ºC until analyzes. In tissue samples bioelements levels were analyzed by ICP-MS. Whereas, dietary selenium and vitamin-E did not affect on Ca and Mg concentrations, Se concentrations significantly increased, Cu concentrations were significantly decreased and Zn and Fe concentrations were modified in all studied tissues in experimental groups were compared to control group. Also, Dietary Vit-E got very important positive effect on concentrations of Se in all studied tissues. The results suggested that dietary selenium and Vitamin E can be modified the mineral concentrations of poultry meat also may be increased poultry meat concentrations of selenium that has been known important positive role on human health. Although, supplementing dietary vitamin E and Se have such beneficial effects when using trace elements should be carefully. Because deficiency or supplementation of one of them mg alter their balance and trigger antagonistic or synergistic effects. Alteration of trace element balance may concomitanty effect the antioxidant defense system. Because several trace elements (Se, Fe, Cu and Zn) are integral part of various antioxidant enzymes.

Keywords: Bioelements, Tissue Samples, Laying Hen, Vitamin E, Organic Selenium.

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Phenological and Pomological Characteristics of Local Pear *(Pyrus communis* L*)* Varieties Grown in Siirt

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Abstract

This research was carried out on the local pear varieties which were grown in Siirt Center, Tillo, Sirvan, Eruh, Kurtalan, Pervari districts and their villages. Between 2014-2015, 30 fruit samples were taken from the local pear varieties of fruit which has quality and high market value and people favored. Pomological characteristics of phenological observations were made on selected fruit trees and were examined on collected fruit trees. The bud burst, the beginning of flowering, the full flowering, the blooming end date, the flowering time and TÇHS (from full bloom to harvest the number of days), the harvest date were determined as phenological characteristics. The fruit weight were found between 27.33-300.26 g, the fruit size between 30.95-93.64 mm, the width of fruit between 33.61-73.21 mm, the fruit stalk length between 21.68-52.65 mm, the fruit stalk thickness between 0.38- 4.53 mm, the width of core between 2.48-6.12 mm, the length of core between 6.52-10.85 mm, the amount of water soluble solids of the fruit between% 8.75-14.50, the titratable acidity between % 0.85-3.27, the juice pH between 3.54- 4.67 on pomological characteristics of investigated varieties. Besides, the grittiness and the taste properties were determined on the rind and pulp colour of the the local pears.

Keywords: Pear, Phenology, Pomology, *Pyrus communis* L., Siirt.

Research of Brucellosis Disease in the Farm Animals Raised in Igdir Province in Terms of Economic Loss and Public Health

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Abstract

The purpose of this study is to investigate and evaluate Brucellosis disease in animal breeding enterprises in city of Igdir in terms of economic loss and public health. For this purpose, a survey study was conducted with the enterprise owners to determine the spread of Brucellosis, its transmission to humans and its prevalence in the agricultural enterprises engaging in animal breeding. On the other hand, the number of people surveyed was determined by using simple random sampling. Causing economic losses in the agricultural enterprises engaging in animal breeding, and leading to diseases by transmitting to people contacting with the animals in these enterprises, Brucellosis is caused by bacteria from the genus Brucella, and is an infectious, contagious and significant zoonotic disease that may be transmitted to people and other animals through the meat of animals such as sheep, goat, cattle and water buffalo, as well as their body liquids such as milk or urine, and products prepared with milk contaminated with this diseases or the pregnancy materials of the sick animal. Brucellosis on humans has a disease picture characterized by shivering, fever, excessive sweating, headache, fatigue, loss of weight, low back pain, and common aches in the body and it may show itself with signs distinct for each patient. Clinically, Brucellosis may have subclinical, acute, subacute, and chronic courses. Brucellosis is regarded as the most common zoonotic disease in the world.

Keywords: Brucellosis, Economic Loss, Public Health, Animal Breeding, Iğdır Province.

Determining Yield Status of Some Strawberry Cultivars Under Merzifon (Amasya) Condition

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Abstract

Among bramble fruits, strawberry is a fruit species at the first rank in terms of production and consumption value. With increase in consumer's demands, many producers make an effort for strawberry production due to the fact that strawberry cultivars are improved commercially and adapted to various climate conditions. This study was conducted on four strawberry cultivars (Albion, Sweet Charlie, San Andreas and Monterey) grown in Merzifon district of Amasya province in order to determine yield characteristics and to study their opportunity of production. At the end of the study, Monterey cultivar had the highest yield with an average of 307.8 g/plant, followed by Albion cultivar (243.7 g/plant) and Sweet Charlie cultivar (64.41 g/plant). Monterey cultivar gave the highest result with the average of 26.08 in plant number. In fruit index, Albion cultivar had the greatest fruit (12.8 g/berry), which was close to corresponding values in other cultivars. In soluble solid content, Monterey cultivar had numerically the highest value of 9.81 (%) and no significant differences were observed between the examined cultivars. It was concluded that, with the current study, strawberry production could be evaluated as an alternative product for region people in Merzifon district that have suitable conditions in climate and soil conditions.

Keywords:

A Survey of Green Areas in Tabriz: El-Goli Garden

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Abstract

This study, which was conducted on the only surviving green areas in city of Tabriz in Iran (i.e the gardeen of EL-Goli). EL-Goli gardeen is considered as an important place in the city by foreign and local tourists. However, in recent years whith the development of Tabriz and the increased need for green space and recreational areas for citizens, this historic garden has become in land use. Frequently, urban developing countries can not proceed in an environmentally friendly fashion urban plans are not implemented correctly, and green areas are lost due to construction. We used a combination of personal interviews and drup-off surveys for data collection. Finally, the results show that most visitors support the idias of developing a green space on city.

Keywords: El-Goli, Garden, Tabriz, Green Area.

Parasitoid Complex of Some Lepidopterous Pests in Maize Plantations in Iğdır Province of Turkey

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Abstract

This study was conducted to determine the parasitoid community of some lepidopteran pests and their parasitization rates in Igdir province of Turkey. Surveys were carried out in the first and second crop of maize fields in 2014-2015. Among parasitoids, Lydella thompsoni Herting (Diptera: Tachinidae) were reared from Ostrinia nubilalis (Lep.: Crambidae); Hyposoter didymator (Thunberg), Temelucha decorata Grav. Alcima orbitalis Grav., Habrobracon hebetor (Say,1836), Apanteles sp. (Hym. Braconidae, Braconinae), Chelonus (Chelonus) caradrinae Kokujev, 1914, Chelonus (Chelonus) oculator (Fabricius,1775), Chelonus (Chelonus) inanitus (Linnaeus,1767) and (Hym. Braconidae, Cheloninae) were recovered from Spodoptera exigua (Hübner) (Lep.: Noctuidae); Habrobracon hebetor (Say,1836) (Hym. Braconidae) was reared from Heliothis armigera (Lep.: Noctuidae); Apanteles sp. (Hym. Braconidae, Braconinae), Drino imberbis (Wiedemann, 1830), Exorista larvarum (Linnaeus, 1758) and Linnaemyia vulpina (Fallén, 1810) (Diptera, Tachinidae) was reared from Mythimna loreyi (Lep.: Noctuidae). Meteorus rubens Nees (Hym: Braconidae) and Sinophorus xanthostomus (Gravenhorst 1829) (Ichneumonidae) were reared from Agrotis ipsilon (Hfn.) (Lep.: Noctuidae).

Keywords:

The Important Pests of Alfalfa (*Medicago Sativa* l.) in Iğdır Province

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Abstract

The alfalfa (*Medicago sativa* L.), which is widely produced in Igdir province, is an important forage crop. There are many insects that cause economic damage on generative and vegetative parts of alfalfa. The study was carried out in order to determine these species in the alfalfa areas of Iğdır province and districts in the years 2013-2015. Species such as *Apion* spp., *Hypera postica* Gyllenhal, *Nomophila noctuella* Denis &. Schiffermüller, *Agrotis ipsilon* Hufnagel, *Epicauta erythrocephala* (Pallas, 1781), *Bruchophagus roddi* Gussakovskiy and *Adelphocoris lineolatus* (Goeze) have been identified in different periods of the study. From these species to the first harvest, it was determined that the main damage causing the vegetative part of the plant was *H. postica*. It has been determined that *N. noctuella* and *A. ipsilon* damage in the some fields of seedling alfalfa. *E. erythrocephala* was populated closed by the first harvest in the alfalfa field, but it is determined that the damage is insignificant. *B. roddi* and *A. lineatus* have been found to cause significant damage in the generative (seed) part of alfalfa.

Keywords: Pests, Alfalfa, Iğdır, Turkey.

The Effect of Tuzluca Salt Cave on Iğdır Apricot

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Abstract

Tuzluca Salt Cave is located within the boundaries of Tuzluca district, which is connected to province İğdır and covers an area about 1236 km2 and 55 acres. The most important criterion for the contribution of salt cave to the region economically is tourism which is especially in the field of health. The temperature of the cave does not change throughout the year and the humidity is quaite high. The cave has a constant temperature; moderate and high humidity; ultra aerosol elements (sodium, potassium, magnesium and calcium); clean and non-allergenic air, as well as a special bath where the ceiling and walls are covered with natural salts, spraying very fine ground salt into the air to provide a sterile, relaxing and negative ionic environment which is free of microbes and allegens. This negatively charged environment is used as a food preservation tank beside the special salt cells. This environment in the cave is thought to be a great advantage for this apricot which is known as table apricot(şalak) in Iğdır and which is gonr bad in a short time. The apricots found in Iğdır and Iğdır's regions are kind of 'table apricot'. The origins of this specy is called Erevani in Armenia. Fruits are fairly large and the average fruit weight ranges from 50 to 65 g. Fruit is sweet and meat texture is medium hard. The seeds are tall, sweet; weight is 2.1-2.6 g and are not adhered to the fruit flesh. AWSS (amount of water soluble solids) is 17-20 % ph 4.4-4.8 and total acidity is 0.30-0.50 %. Iğdır region, which has these characteristics and the Şalak apricot that grows in this region attracted the interest of many local and foreign scientists and become a subject of research. In this study, the degradation-retarding effect of the Tuzluca Salt Cave, which is unique to Iğdır region has been studied. In the study, apricot samples were stored at the same conditions in 22-24 ^{o}C in the labratory environment and cave environment in two points with the temperature of 12-13 ^{o}C and 14-15 ^{o}C, and the measurements were made at certain time intervals. In the measurements, it was determined that, the apricots kept in labratory conditions were changed to colour and even softened after 6 days but the apricots kept at two different points of the cave maintained themselves without much change except very small color change for 20 days. As a result, it was determined that Iğdır apricot, which is used for different purposes in the region also for tourism can be preserved in Tuzluca Salt Cave environment conditions and its shelf life has been increased at least three times the normal storage conditions it is thought that the research will be a light for the later scientific and commercial studies and make a great contributions to the fruits and vegetables that hard to keep in hot weather conditions in Iğdır.

Keywords:

Some Properties of Baskil District Irrigation Water

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Abstract

Water is one of the important factors affecting agricultural production. Water resources used in agriculture need to be analyzed at certain periods. For this reason, this research was conducted on surface waters (Şefkat stream, Baskil stream ve Geli stream) used in agricultural irrigation at the Baskil District (Elazığ) in April, May and June of 2016. The samples were analysed to determine pH, EC, Ca^{++}, Mg++, Na+, K+, $(CO)_3^{--}$, $(HCO)_3^{-}$, SO_4, B, Cl^{-} ions, and from these data Sodium %, SAR (Sodium Absorption Rate) and quality classes were calculated. According to the results of the analysis of irrigation water samples of some average values for the period; 7.77 pH, electrical conductivity 662 µs/cm, chloride 16,23 me/l, bicarbonate 230,24 mg/l 11,95 mg sulfate/l were found. Sewage water is mixed with Şefkat stream and Geli stream. For this reason, the quality classes of irrigation waters vary in certain periods. Baskil stream's irrigation water class in three different periods; C1S1 (low), irrigation water class of Geli streams; C2S1 (medium). However, it was determined that the irrigation water class of the Şefkat stream was in C2S1 (medium) in April and May and C3S2 (medium-high) in June. This result is thought to be due to the increase in ion concentration by decreasing the amount of water by the period. Irrigation water should be used in a controlled manner if it is evaluated in terms of quality class of irrigation water.

Keywords: Irrigation Water Quality, Pollution.

Characteristics, Usage Areas and Importance of Caper (Capparis Spinosa L.) Plant

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Abstract

Caper (*Capparis spinosa L*.) is a perennial, medicinal and aromatic plant that grows in nature in a large part of Turkey. It is named with different names among the people. Caper is a significant source of the treatment of many diseases. The flower buds, fruits and shoots of the caper are used as food, medicine, cosmetics and animal feed. The caper plant, which is very resistant to fire, drought and cold, is also known as an erosion control plant. In this review, properties of caper plant, caper agriculture, usage areas, benefits for human health and importance of caper plant to Turkish agriculture are emphasized.

Keywords: Caper, *Capparis spinosa L.*

The Viticulture Potential of Mardin City

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Abstract

The city of Mardin is a very ideal region for ecological requirements, in other words for climate and soil reqirements of grapevine. But there are very few vineyard establishments in the sense of trade. The producers mostly produce for their own necessity and the amount over their necessity is produced to obtain a small revenue. Viticulture and depending upon this enology in Mardin city goes back a long way. As the result of performing of viticulture in the city for long years; too many local grapevine varieties which indigenous to the region have comprised. Approximately 26 grapevine varieties are grown in the city. The grapevines are classified according to the evaluation manners as edible, ransom, must and wine-bin. In this stduy; the viticulture is investigated on the basis of districts and the total vineyard field of districts and yields to decare were determined. Despite of a rooted and important tradition of Mardin city; it has been observed that the viticulture was not at the level it deserves. The issues which prevent the developing of viticulture in the region also determined in this study and the solution suggestions for eliminating the issues were emphasized.

Keywords: Mardin Province, Grape, Viticulture Potential.

Investigation of Phylogenetic Relationship of Acanthalburnus Microlepis (De Filippi, 1863) Species Located as Endemic in Kura-Aras Basin by Cyt b Sequences

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Abstract

Cyprinidae is a very rich family in terms of members and species widely distributed in the world. Due to this diversity, the phylogenetic relations of the group are not well understood. In this study, located as endemic in the Kura-Aras Basin, Acanthalburnus microlepis was investigated to determine the phylogenetic relationship of the species by using mitochondrial DNA cyt b sequences. Total DNA was obtained from the fin and muscle tissues of species taken from various locations of the Kura-Aras Basin within the borders of Turkey. Total DNA was used as a source for mtDNA. The target gene regions were replicated by PCR. The relationship of taxa with each other and with other taxa was shown on a phylogenetic tree. As a result, it was evaluated that the species taken from different localities were found to be phylogenetically similar but there was no significant difference between them. Accordig to the study, it was found that Acanthalburnus microlepis was belonged to Lineage VIII and synonym with Acanthobrama genus.

Keywords: Cyprinidae, Acanthalburnus Microlepis, mtDNA, cyt b, Phylogeny, PCR.

Some Bio-Ecological Properties of Elm Leaf Beetle, *Xanthogaleruca Luteola* (Müller 1766) (Coleoptera: Chrysomelidae), on Elm (*Ulmus Minor* Gled.) in Iğdır Province[1]

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Abstract

The elm (*Ulmus* spp.) is an important tree that grows as both natural and ornamental plant in Iğdır and has become a symbol of Iğdır. The elm leaf beetle, *Xanthogaleruca luteola* (Müller) (Coleoptera, Chrysomelidae) causes significant damages to this tree. This research was conducted in order to determine the natural enemies with some bio-ecological properties of *X. luteola* in Iğdır province and carried out in laboratory and in nature in 2014 and 2015 years. As a result of the study, in the laboratory conditions, the incubation period of *X. luteola* eggs was determined 6.17 ± 0.13 days, in the first stage larva 6.7 ± 2.82 days, in second stage larva 5.47 ± 2.63 days, in 3 stages larva 11.643 ± 3.00 days. The prepupa stage and the pupa stage were completed 5.5 ± 2.44 days and 8.83 ± 1.47 days, respectively. During the female insect oviposition period, it was found that the most average number of eggs was 8.25, egg-laying at 9th day and the duration of oviposion lasting approximately 21 days, egg-laying 59.75 eggs on average. Adults in the nature were found to have passed on to the trees when the average temperature reached 14°C in the first year and in the second year and they gave a generation per year under Iğdır conditions.

Keywords: Elm, Elm Leaf Beetle, Bioecology, The Dynamism of the Population.

[1]This study is a part of the graduate thesis which is accepted by Igdir University Institute of Science and Technology

Use of MARS Algorithm for Predicting Larval Damage of the Cereal Weevil, Pachytychius Hordei (Brullé, 1832) (Coleoptera: Curculionidae) on Wheat Kernel

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Abstract

The purpose of this study was to predict larval damage of the cereal weevil, Pachytychius hordei (Brullé, 1832) (Coleoptera: Curculionidae) on wheat kernel. The predictors involved in the study were location (Alakus and Ortakoy), number of the first wheat kernels, and number of larvae in the prediction of larval damage (%), as a determinant of economic loss in wheat fields. Number of the first wheat kernels was transformed in regard to a root transformation (X), and number of larvae was transformed according to a root transformation (X+1). In the statistical evaluation of the studied data, Multivariate Adaptive Regression Splines (MARS) algorithm, which is a non-parametric regression technique, was used to develop the prediction equation for larval damage (%) of the cereal weevil. MARS algorithm gave a high predictive accuracy of approximately 0.89 R2 in predicting the larval damage on the basis of ten-cross validation. The actual larval damage (%) was correlated very strongly with the predicted larval damage in the cereal weevil (r= 0.942, p < 2.2e-16, 0.9317122 - 0.9501196 for 95% confidence interval). A standard deviation ratio of 0.337 also supported that the developed MARS predictive model had a good fit. The currents results reflected that the effect on number of the first wheat kernels on larval damage (%) varied depending upon number of larvae and location. In conclusion, it could be suggested that MARS algorithm with the high predictive accuracy as a novel approach might present a notable reference for determining preference of the cereal weevil in wheat fields.

Keywords: Pachytychius Hordei, Larval Damage, MARS Algorithm, Wheat Kernel.

Population Fluctuations of Psyllidae (Hemiptera) Species in Diyarbakır Province

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Abstract

This study has been conducted between 2007 to 2008 years in Diyarbakır province. Five species were collected. These species are: Homotoma ficus (Linné, 1758), Trioza magnisetosa Loginova, 1964, Trioza neglecta Loginova, 1978, Cacopsylla marianne (Baeva, 1966) and Aphalara grandicula (Gegechkori, 1981). Population fluctuations of five different psyllid species have been identified. This species were collected on Morus alba, Punica granatum, Prunus amygdali, Triticum vulgare, Ficus carica, Hippophae rhamnoides, Rosa canina and Pyrus communis plants. Homotoma ficus has to be most abundant and distributed species in this study. Homotoma ficus is collected on Punica granatum, Morus alba, Prunus armeniaca, Ficus carica and Rosa canina plants. Trioza magnosetosa was collected on Rosa canina and Hippophae rhamnoides. Trioza neglecta is collected on Hippophae rhamnoides. Cacopsylla marianne is collected on Hippophae rhamnoides and Pyrus communis plants. Aphalara grandicula is collected on Morus alba plant. In the following years, it is necessary to reveal the nutritional relationships of these species in plants.

Keywords:

The Cr, Ni, Cd and Pb Contents of Some Walnut Genotypes in Aras Valley

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Abstract

Cr, Ni, Cd and Pb contents were determined in some walnut genotypes selected from Aras basin. The walnut samples were collected from the trees in the districts of Iğdır (centre), Karakoyunlu, Tuzluca and Kağızman (Kars) during the 2015 harvest season. The element contents of the walnut specimens were analyzed using the ICP-AES equipment. The highest content of Cr was determined as 0.892 mg kg-1 in the samples of Tuzluca with the highest contents of Ni (0.381 mg kg-1), Cd (0.0040 mg kg-1) and Pb (0.0828 mg kg-1) in Kağızman samples. There was statistically significant difference between the locations of Cr and Ni contents ($p < 0.05$).

Keywords: Aras valley, Walnut, Cr, Ni, Cd, Pb

Non-Chemical Weed Control on Hard Surfaces in Urban Areas

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Abstract

There are many methods available to control weeds both in arable lands and in urban areas. But to date weed control study has largely focused on arable land, particularly regarding herbicides as well as regarding on non-chemical methods. Some of these methods can be used to hard surfaces like pavements, traffic islands, footways, squares and concrete block pavements which are very common in urban and industrial areas in every city. In spite of that, weed problems on hard surface areas are different from unwanted plants of arable lands. In addition, when choosing a suitable weed control technique on these areas, crop tolerance does not need to be regarded. For a non-selective vegetation removal in these areas, the use of herbicides is very common. On the contrary many public authorities rely on the use of non-chemical weed control methods, due to stringent restrictions on herbicide use in urban amenity areas because of health and environmental risks. Thermal weed control methods based on hot water is an interesting alternative that cause less wear on the surface treated compared to mechanical controls such as rotating wire brushes, hand pulling or hoeing. Hot water eliminates the hazards for workers. According to most studies, all above ground weed parts can be effectively controlled by hot water. The aim of this review is to describe current knowledge of weed controls on hard surface areas especially with hot water, reveal potential ways of advancement and indicates that for reducing weed control costs on hard surfaces there is a need for using a machine that combines a solar-powered water boiler and a system that heats water and dispenses it to control weeds without using herbicides.

Keywords: Hard surfaces, Non-chemical weed control, Thermal weed control, Solar-powered water boiler

Effects of Cephalosporium Stripe Disease (Cephalosporium Gramineum Nisikado & Ikata) on Some Morphological Characters of Some Wheat (Triticum aestivum L.) Varieties

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Abstract

This is the first study, reactions of some wheat cultivars to soil borne pathogen Cephalosporium gramineum, come to be known in Turkey. In this study, conducted in the Aegean Aegean Agricultural Research Institute in 2017, a total of 34 spring wheat cultivars were used with four replications. A study was carried out with Cephalosporium gramineum Nisikado&Ikata (=Hymenula cerealis Ellis&Everth), isolated from Denizli province and pathogenicty was done with susceptible cv. Pandas and found to be virulent, in greenhouse. The inoculum was prepared by using oat kernels and soil was inoculated 5 days before the seed planting in pots (15x15x25cm) containing sterile peat, soil and fertilizer (1:1:1). Ten seeds of wheat cultivars were sown in these pots at the date 24.02.2017 and necessary maintaining was done and followed the growth of the plants. Disease severity, plant and spike height, number of tiller and root length were determined at the date of ripening (24-25.05.2017). Treatment, variety and variety x treatment interactions were found to be significant at 1% on the all the features investigated statistically. Mean disease severity of the inoculated varieties was 34,7%. The disease generally caused to decrease in plant height and spike length at the rates of 11,7% and 18%, respectively, while the disease led to increase in the number of tiller and root length at the rates of 33,6% and 25,3 %, respectively. Disease severity ranged from 8,3% to 62,5% in the varieties. The lowest disease severities were determined on cvs. Meta-2002 (8,3%), Cumhuriyet-75 (8,3%), Yaren (8,8%), Altınöz (10%), Yüreğir-89 (16,3%) and Sarıbaşak (17,5%). The varieties detected as tolerant to the disease can be evaluated as genitor in the breeding studies.

Keywords: Wheat, Cephalosporium stripe, Severity, Reaction, Morphologic characters

A Study on the Plant Covering Ratio and Turfgrass Quality of *Lolium Perenne* Var. Ovation Used in Landscape under the Iğdır Ecological Conditions

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Abstract

In the study, the plant covering ratio and turfgrass quality performance of perennial grass (*Lolium perenne* L. var. Ovation) were investigated in five different seed quantities (10, 20, 30, 40, 50 g/m^2) under the ecological conditions of Iğdır for two years (2015-2016). The experiment was carried out in randomized blocks according to the factorial design and the values for June, July, August, September and October were analyzed for two years. According to the results of the research, the highest plant coverage ratio and turfgrass quality were obtained from 50 g / m^2 for sowing norm in both years. However, the highest plant coverage ratio and turfgrass quality were obtained in October.

Keywords: *Lolium perenne*, Seed quantity, Cutting time, Turfgrass quality

Effect of Recycled Carbon Black on Consistency Limits of Clayey Soils

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Abstract

Nowadays, the recycling of waste materials is one of the important tasks in the world. Not only does it solve the environmental problems but also provides the economic return. Many studies have been performed by researchers for re-using these kinds of waste materials in civil engineering. The scrap tire, which is not appropriate any longer to use on wheeled vehicles, is one of these materials. After completion of their lives, the scrap tires are stored in huge disposal areas. This kind of storage causes stockpiling problems due to their large volumes. Also, the components that they contain and the durability of them cause environmental problems. The recycled carbon black (CBr) is obtained by recycling of scrap tires using pyrolysis method. In this study, the effect of CBr on consistency limits of clayey soils was investigated. Two different types of clayey soils were used; the first one was high plastic clay (CH) and the other one was low plastic clay (CL). The CBr was mixed with both clays in 1%, 3%, 5% and 10% percentages at dry state. The liquid and plastic limit tests were performed on the mixtures and also on pure (0%) clayey soils. It is observed that the liquid limit value of CH clay decreases sharply between 0% and 1% CBr contents and then this decreasing trend goes on smoothly. On the other hand, the plastic limit value of CH clay increases with increasing CBr contents, achieves a maximum value at 1% CBr content and then starts to decrease beyond this CBr content. There is no considerable decrease discovered on liquid limit values of CL clay. With a similar manner, the plastic limit value of CL clay decreases with an increase in CBr contents, however, this decreasing trend is not remarkable.

Keywords: Carbon black, Recycling, Consistency limits, Clayey soils

First Findings of the Dusky-Veined Walnut Aphid *Panaphis Juglandis* (Goeze, 1778) (Hemiptera: Callaphididae) in Bolu

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Abstract

Aphids damage plants both by sucking plant juices and transmitting viral diseases. The Dusky-Veined Walnut Aphid *Panaphis juglandis* (Goeze, 1778) (Hemiptera: Callaphididae) is a pest originating from Asia. *P. juglandis* was found to damage on walnut tree in Bolu in 2016. Aduts and larvae of *P. juglandis* were determined at beginning of June. *P. juglandis* fed on the upper side of the leaves and decreased the quality of walnut tree. An adult and larva of coccinellid predator (Coleoptera: Coccinellidae) was determined as feeding on *P. juglandis.*

Keywords: *Panaphis juglandis,* Coccinellid, Walnut, Bolu

First Recording of Spotted Wing Drosophila in Bolu and Düzce Provinces of Turkey and Moleculer Identification

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Abstract

A spotted wing Drosophila (SWD), *Drosophila suzukii* Matsumura (Diptera: Drosophilidae) is an invader pest spreading rapidly. It is native to south-eastern Asia and has newly explored in Turkey. *D. suzukii* females can lay eggs in ripening fruits in pre-harvest period and cause severe economic losses. Therefore, it can rapidly become a pest of great concern for fruit production. *D. suzukii* was recorded as a new pest for Bolu and Düzce in 2016. According to first findings, it was detected in apples, blackberries, cherries, pear, raspberries, and strawberries. In addition, *Leptopilina boulard*i (Barbotin, Carton & Kelner-Pillault, 1979) (Hymenoptera: Figitidae) was determined as a Drosophila parasitoid. *D. suzukii* was defined with morphological and molecular identification (PCR).

Keywords: *Drosophila suziiki*, Bolu, Düzce, Fruits

Damage and Distribution of *Hyphantria Cunea* Drury (Lepidoptera: Arctiidae) in Hazelnut Groves of Bolu and Düzce

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Abstract

The fall webworm, *Hyphantria cunea* Drury (Lepidoptera: Arctiidae) is one of the most important quarantine pests. It is a poyphyogous pest, damaging especially on hazelnut, soft and stone fruit, and forest trees. This study was conducted in hazelnuts groves in Bolu and Düzce between 2015 and 2017. The surveys were carried out in intensive hazelnut areas and determined its intensive rates and distribution of the *Hyphantria cunea*. It was found to spread into seven towns except for Yığılca in Düzce. It was determined in Mudurnu and center of Bolu. The epidemic rate of *H. cunea* was found as 10-100% in Düzce, but there was very low rate (only thee areas) in Bolu. The highest damage rate of *H. cunea* was determined in Merkez, Çilimli and Gümüşova in Düzce. The young larvae of *H. cunea* damage by settling in the huge web over leaves and first feed on the upper surface of leaves, later produce only distinctive skeletonizing. The larvae feeds in huge nests and is able to completely defoliate trees.

Keywords: Bolu, Düzce, Fall webworm, Hazelnut, Damage, Distribution

Comparison in Terms of the Herbage Yield and Quality of Some Grain Species Grown at Different Sowing Times

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Abstract

This study was conducted to determine the herbage yield and forage quality of some grain species as the first product to be grown in the Bingöl province ecological conditions during 2015-2016 growing season. In the research; 1 triticale (Umran Hanim), 1 two row barley (Sahin-91), 1 six row barley (Altıkat), 1 bread wheat (Pehlivan) and 1 durum wheat (Fırat-93) varieties were used as plant material. The research was established as a randomized complete block design with four replications. In the study; plant height, green herbage yield, dry herbage yield, crude protein, crude protein yield, acid detergent fiber (ADF), neutral detergent fiber (NDF), digestible dry matter (DDM), dry matter intake (DMI) and relative feed value (RFV) characteristics were investigated. Plant height, green herbage yield, dry herbage yield, crude protein, crude protein yield, acid detergent fiber (ADF), neutral detergent fiber (NDF), digestible dry matter (DDM), dry matter intake (DMI) and relative feed value (RFV) were ranged from 71,5 to 86,0 cm, 1854,7 to 3140,6 kg/da, 613,2 to 767,1 kg/da, 11,2 to 12,5%, 65,4 to 92,4 kg/da, 32,2 to 34,6%, 56,1 to 61,2%, 62,0 to 63,8%, 1,96 to 2,14% and 95,5 to 103,3 respectively. In the trial, differences among species were significant for all studied characters. The first sowing time for two row barley, six row barley and bread wheat, the first and second sowing times for the triticale and durum wheat varieties were optimal sowing dates. According to the results, the highest values were obtained from early sowing dates. Therefore, it was concluded that the best optimum sowing time in Bingöl could be 1-15 October for herbage yields at grain species.

Keywords: Grains, Herbage yield, Forage quality, Crude protein, ADF, NDF

The Effect of Different Dates of Planting and Harvesting on Quantity and Quality of Sugarbeet

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Abstract

Planting and harvesting dates are one of the effective factors on yield and other characteristics of field crops, so that by determining the proper planting and harvesting date the maximum yield with the proper quality could be determined. In order to this matter, an experimental split plot based on randomized complete block design was conducted in a research agricultural organization farm in Ardabil. Planting dates were as main factors that performed in main plot and had three levels (20 March, 4 April and 19 April) and harvesting dates were as secondary factors that performed in sub plot and included three levels (40, 60 and 90 days after flowering). This experiment was conducted as three replications in the farm. The results showed that planting date had significant effect on bolting, flowering, branch diameter, root weight, root height, total wet weight at 1% probability level. Mean comparison indicated significant difference for the most of the studied properties under the first planting date in comparison to the other planting dates. Also, harvesting date had the effect on the number of branch per plant, branch diameter, leaf dry weight, branch dry weight, seed dry weight, root weight, root height, root crown diameter, over seed size > 3.25 mm in diameter at 1% probability level. Means comparison of different harvesting date showed that the number of branch per plant, branch diameter, leaf dry weight, branch dry weight, seed dry weight, root weight, seed yield had significant differences under 40 days after flowering condition for the first harvesting date in comparison to the other harvesting dates. Mean comparison of planting dates showed that the most germination rate and percentage under laboratorial and drought stress condition belonged to the third planting date. Also, mean comparison of harvesting dates indicated that the third harvesting date was better in comparison to the other harvesting dates under laboratorial conditions.

Keywords: Sugar beet, Planting date, Harvesting date, Seed quantity and quality

Jasmonic Acid and Coumarine Effects on Some Attributes of Different Potato Cultivars Mini-Tubers

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Abstract

According to the people number growth in the world, food critical problem solving has changed to an important global matter. Potato is one of the agriculture productions that has important role in human nutrition. According physiological, agronomical, quality and other attributes, improving to produce quality and sufficient seed by potato mini-tubers for planting was performed an experiment as CRD design as factorial by 3 factors in greenhouse to evaluate the methods for improving the potato mini-tubers physiological attributes. In this experiment there were 3 factors: 2 mini-tuber cultivars (Agria and Savalan), 3 levels of Jasmonic acid (0, 1 and 2 Mmol) and 4 levels of coumarine (0, 5, 10 and 15 mg/L). The results showed, the interaction of cultivar, coumarine and jasmonic acid for total wet weight of tubers per pot had the meanest amount under 2 Mmol jasmonic and 15 mg/l coumarine in Savalan cultivar and had the less amount under jasmonic control condition and 5 mg/L coumarine in Agria cultivar. Mini-tuber diameter mean included the most amount of mean under 1 Mmol jasmonic and 15 mg/L coumarine in Savalan and had the less mean amount under control condition for both jasmonic acid and coumarine in Agria. The intraction of cultivar and coumarine showed the most amount of mean under 0 mg/L coumarine in Savalan cultivar for shoot dry weight per pot attribute and the less amount of mean was related to 15 mg/L coumarine in Agria cultivar. The intraction of jasmonic acid and cultivar indicated the meanest amount under 2 Mmol jasmonic acid in Savalan cultivar and 0 Mmol jasmonic acid in Agria cultivar as the less mean amount. Coumarine and jasmonic acid interaction mean most and less amount were under 0 mg/L coumarine, 2 Mmol jasmonic acid and 15 mg/L coumarine, 0 Mmol jasmonic acid, respectively. The main effects of factors showed the most amounts of mean for Savalan, 2 Mmol jasmonic acid and 15mg/L coumarine for mini-tubers wet number per pot.

Keywords: Jasmonic acid, Coumarine, Mini-tuber, Potato, Savalan and Agria cultivars.

Saline-Sodic Soil Changings Affected by the Organic Amendments Materials

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Abstract

This experiment was conducted to assess the potassium humate and keratin effects as organic materials on the saline-sodic soil properties under sterile and microbial condition at green house. The depth of soil sampling was 0-50 cm. The treatments were potassium humate and keratin and after 3 months some chemical and physical properties of the soil were measured. This experiment was done using factorial design on the basis of completely randomized design with three replications. Acording to the results, pH, EC and SAR had the less value under potassium humate and keratin interaction. Mean comparison showed the highest amount for the studied properties under sterile conditions. Microbial conditions had significant effect on decreasing the properties of pH, EC and SAR. It could be say that by increasing the potassium humate and keratin the pH, EC and SAR properties decreased. Potassium humate and keratin under microbial conditions had the significant effect to improve the saline-sodic soils properties.

Keywords: Potassium humate, Sterile condition, Keratin, Saline-sodic soil properties.

The Effects of Different Seed Quantities on Turfgrass Performance of Rye Grass *(Lolium perenne* L. var. Ovation)

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Abstract

This investigation was conducted to determine the performance characteristics of different seed quantities (10, 20, 30, 40 and 50 g m^{-2}) on the *Lolium perenne* L. Ovation species such as plant height, green herbage yield and color in Igdır ecological conditions. The study was set up as three replicates according to the factorial design in comletely randomized blocks over the values for June, July, August, September and October in 2015-2016 years. The characteristics such as plant height and color were measured from the data in October at the highest values in both years. The effect of seed quantities on plant height and color characteristics investigated was not significant. The highest green herbage yield was obtained from the values in October of each year (2015-2016) and the highest yield of green was obtained from seeds of 50 g m^{-2} in 2015 and 40 and 50 g m^{-2} in 2016, respectively.

Keywords: *Lolium perenne* L*,* Seed quantity, Turfgrass qualities

Natural Parasitisim Rate of the Fall Webworm in Hazelnut Groves in Düzce

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Abstract

Hazelnut is an important crop for industrial, food and health sectors, and it is consumed as fresh fruits and oil. Turkey ranks first in the world in terms of hazelnut production with 75% of the world production. The fall webworm, *Hyphantria cunea* Drury (Lepidoptera: Arctiidae), is one of the most important quarantine pests preoccupying Turkey's exports and imports, takes place in the list of world invasive species. This study was conducted in hazelnut groves in Düzce between 2015-2017. The pupae of the fall webworm were collected in overwintering areas and hazelnuts groves. The pupae were collected and reared and identified for its parasitoids in the laboratory. *Chouioia cunea* Yang (Hymenoptera: Elophidae) and *Psychophagus omnivorus* (Walker) (Hymenoptera: Pteromalidae) were determined around 50% of the natural parasitism rate in overwintering pupae. Adult emerged of *Chouioia cunea* Yang (Hymenoptera: Elophidae) was ranged from 5 to 270 (average 148) for a fall webworm pupa. Also, the parasitism rate for each progeny was determined as 47-71% (average 57.6) in hazelnut groves. This study is an important fundamental study that will lead to serve for biological control of the fall webworm.

Keywords: Düzce, Fall webworm, Natural parasitism, Hazelnut

Natural Parasitism of Solitary Parasitoid *Apanteles Brunnistigma* into the Larvae of Olive Leaf Moth in Olive Orchards

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Abstract

A solitary parasitoid *Apanteles brunnistigma* Abdinbekova, 1969 (Hymenoptera: Braconidae) have recently determined within larva of Olive leaf moth (OLM) *Palpita unionalis* (Hübn.) (Lepidoptera: Pyralidae) in Turkey. Olive leaf moth feeds on the Oleaacea family mostly such as *Olea europa* L., *Ligustrum* and *Phillyrea*. It is one of the important pests in Mediterranean area. OLM feeds mostly on fresh parts of olive such as leaves and green fruits and can damage all green parts of trees. This study was carried out to determine the distribution and natural parasitism level of *A. brunnistigma* in the olive orchards of the eastern Mediterranean region including seven provinces (Adana, Gaziantep, Kahramanmaraş, Kilis, Osmaniye and Mersin). For each orchard, 100 shoots were sampled randomly from March to December for two years. In the laboratory, *P. unionalis* larvae were counted and incubated in containers at 25 °C. The number of parasitized and unparasitized olive leaf moth, *P. unionalis* larvae were counted to determine the parasitism rate of *A. brunnistigma*. Natural parasitism of *P. unionalis* by *A. brunistigma* was observed from early April to late December. The *P. unionalis* larvae parasitized by *A. brunistigma* were found in all provinces. *A. brunnistigma* was common determined in sixty-five and thirty-six olive groves of Hatay and Adana, respectively. The highest natural parasitism rate of *A. brunnistigma* on *P. unionalis* larva was found in Hatay (36%), followed by Adana, Osmaniye and Mersin (16%), Gaziantep (6%) and Kahramanmaraş (4%).

Keywords: *Apanteles brunnistigma*, Olive, Distribution, Natural parasitism rate

Investigation of Different Lactation Curve Functions for First Lactation in Holstein Cows

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Abstract

The shape of the lactation curve is considered as an important criterion by considering the milk yield in the enterprise as well as the total or 305-day milk yield. Five different mathematical models, commonly used in defining lactation curves were used in this study to determine first lactation curves of Holstein cattle. 4,472 weekly average milk yields of 104 cows between 2001-2008 years, were evaluated. The models used in the study are: $Y_t = at^b e^{-ct}$ (Wood); $Y_t = ab^c c \frac{t^{(c-1)}}{t^c + (b^c)^2}$ (Morgan); $Y_t = abe^{b\frac{1-e^{-ct}}{c-ct}}$, (Gompertz); $Y_t = a + b\delta_t + c\delta_t^2 + d\theta_t + g\theta_t^2$ (Ali Schaeffer) and $Y_t = ae^{b\frac{1-e^{-ct}}{c-dt}}$ (Dijkstra).

The models' compliance with the lactation curve has been examined and compared. Lactation curves have been investigated according to the season and the years of lactation. The R^2, R^2_d, AIC, BIC, $\bar{\varepsilon}$, and MSE values were used in the comparison of the models. As a result, the lowest AIC (-3.29), BIC (-3.12), $\bar{\varepsilon}$ (0.55), HKO (0.18) and highest R^2 (0.99) and R^2_d (0.99) values were found for the Ali Schaeffer model. This model was followed by the Dijkstra model. As a result of the study, it was determined that the most suitable models for predicting the first lactation milk yield curves of Holstein cattle were Ali Schaeffer and Dijkstra models.

Keywords: First lactation, Holstein cattle, Lactation curve, Mathematical modelling

Mathematical Models Used in Calculation of Leaching Water Norm in Saline Soils

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Abstract

Salinity, especially in arid and semi-arid regions where the annual total precipitation is low, occurs with the accumulation of resoluble salts in the root region of plant. The most effective method for reclamation of saline soils is leaching. However, water scarcity and increasingly water need efficiency of the reclamation must be emphasized. The amount of leaching water and calculation of the application time is one of the major problems of the saline soil reclamation theory. For prevail over this problem, many investigators have conducted field and column leaching experiments. Calculation of salinity using mass transport theory in "water-soil" ecosystem is important to make a mathematical model so that it can be estimated. Until today there have been many researches on the solution of the problem in question, with these studies, the reclamation of saline soils, the amount of leaching water, time of administration and the estimate of the change in salt concentration were examined in a wider dimension and the required leach water norm equations were found.

Keywords: Hydro-chemical parameters, Salinity, Soil salt leach, Mathematical modeling, Leaching norm, Mass transport.

The Effect of Dodder (*Cuscuta* spp.) Extract Against *Rhizoctonia Solani*

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Abstract

Cuscuta that spreads all over the world has about 200 varieties. *Cuscuta* is one of the Cuscutaceae family's member, and its 16 varieties are found in Turkey. Also, it is defined as fully parasite weed and may cause almost all yield loss in agricultural fields. *Cuscuta*'s crude extract is thought that has an antifungal effect against root rot disease. Hence, *Cuscuta*'s crude extract has been used to understand if it has antifungal effect against root rot during the study period. The study has been started in 2007 with preparing 30 and 100 ml concentration of the crude extract for feedlot environment, and fungus seeding has been done after sterilization. After all, it is seen that 100 ml concentration is effective on mycelium while 30 ml is not in 10 days of observation. This preliminary study shows that crude extract obtained from Cuscuta has influence on *R. solani*. However, it is believed that this study can lead future research, and weed crude extract may be used against fungal and bacterial diseases as alternative method of chemical fight in agriculture.

Keywords: *Cuscuta,* Crude extract, *Rhizoctonia solani*

The Effects of Nitrogen Fertilizing on Drug Yield and Quality of Culture Parsley (*PetroselinumCcrispum* Mill)

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Abstract

This research was carried out to determine the effect of nitrogen fertilizer on the yield and quality of parsley between March and November in 1997 under the Bornova ecological conditions. The factors of research were six different dosages of nitrogen. It was harvested 7 times. According to the findings, the highest green herbage yield (4739.4 kg/da) was obtained at the dosage of 20 kg/da nitrogen. According to the harvests; the highest green herbage yield was found at the sixth harvest and the dosage of 20 kg/da as 1414.4 kg/da. The highest drug herbage yield (956,8 kg/da) was obtained at the dosage of 20 kg/da nitrogen. According to the harvests; the highest drug herbage yield was found at the sixth harvest and the dosage of 20 kg/da as 271.4 kg/da yield. The essential oil in drug herbage percentages ranged between 0.17 and 0.58%. According to the harvests, yield of volatile oil varied between 0.16 and 0.70 kg/da.

Keywords: Parsley, Agronomy, Nitrogen fertilizing, Essential oil, Vitamin C.

Characterization and Identification of Important Phytoplasma Diseases in Solanacea Family in Van Province

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Abstract

There are important cultivated plants such as tomatoes, potatoes, peppers and eggplants among Solacacea family plants. Phytoplasma-like symptoms were observed in Solanacea family plants in Van province. The most important signs observed include violent dwarfism, large buds, small leaf formation, curling of leaves, bruising, witch broom appearance, rosetting, and small leafiness. DNA fragments of approximately 1250 bp were amplified as a result of the Nested-PCR test performed with R16mF2 / R16mR1 and R16F2n / R16R2 primer pairs in 200 different plant samples. 16S rDNA fragments of phytoplasma agents were amplified in the PCR reaction using genomic DNA isolated from leaves of plants with and without symptoms. DNA fragments of 1.25 kb were obtained from 200 in 19 samples tested by PCR. A randomly selected 2 isolates from each of the positive samples was cloned into a pGEM T- Easy plasmid vector. BLAST and RFLP analyzes of the 16S rDNA sequence were performed after the purified recombinant plasmid DNA was sequenced bidirectionally. It has been found out that tomato isolates showing severe phytoplasma symptoms has '*Candidatus* Phytoplasma solani' (GenBank Accession number: KY579358) and '*Candidatus* Phytoplasma trifolii'(GenBank Accession number: KY564268), pepper isolates has '*Candidatus* Phytoplasma solani'(GenBank Accession number: MF564267) and '*Candidatus* Phytoplasma trifolii' (GenBank Accession number: MF564266) and eggplant has '*Candidatus* Phytoplasma solani (GenBank Accession number: KR080212, KT595210). According to the authors' information, this report is the first report of phytoplasmas of *Ca*. P. trifolii naturally infecting tomato and eggplant in Turkey.

Keywords: Phytoplasma, Van province, Nested- PCR, Sequencing

Determination of the Effect of Field Dodder (*Cuscuta campestris* Yuncker) on Some Plant Pathogenic Bacteria

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Abstract

Dodders (*Cuscuta* spp) are holoparasitic plants belonging to family Cuscutaceae and parasites stems and branches of their hosts. It causes plants to slow down, stop and even die. This research was carried out to determine antifungal effects of field dodder (*Cuscuta campestris* Yuncker) which causes significant yield loss in agricultural production. In this study, different concentrations (%10, 30, 50) of methanolic extracts of field dodder had been used against plant pathogenes as *Pseudomonas syringae pv. syringae, Xanthomonas axonopodis, Clavibacter michiganensis subsp. michiganensis, Erwinia amylovora.* In addition, antibiotics were used for positive control and water for negative control in the study. *In vitro* findings show that increasing concentration of methanol extracts affected *Xanthomonas axonopodis ve Clavibacter michiganensis subsp. michiganensis* growth negatively. No effect was observed in other bacterial species. Highest effect was observed in positive control petries. In conclusion the phytochemicals effects of methanol extract of field dodder could be used against some of the plant pathogenic bacteria. It is thought that agricultural production will make a significant contribution with studies to be carried out in vivo and in field conditions.

Keywords: *Cuscuta campestris*, Methalonic extract, Antibacterial effects.

Determination of Some Yield and Vegetable Characteristics with the Preference Conditions in Grazing of Ebu Cehil (*Calligonum Polygonoides* L. ssp. *comosum* (L'Hér.)) Shrub as an Endemic Plant

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Abstract

This study was conducted to determine the preference conditions in grazing by animals with some yield and vegetable characteristics of Ebu cehil shrub growing naturally in Iğdır-Aralık wind erosion region in the eastern part of Turkey. For this purpose, grazing and unglazed areas where Ebu cehil shrub was intensively grown were chosen as research area in 2014. Plant height (cm), twing length (cm), number of branches per group (number), fresh twing (kg) and dry twing yield (kg) were examined in 25 shrub groups selected according to sampling method without plot on an area of 5 decares which was not grazed by animals, and the preference of animals to grazing was carried out on grazing pastures. In the study, descriptive statistical method was used to determine plant and yield characteristics. At the end of the study, it ranged from 120.0 to 225.0 cm for plant height, from 45.10 to 68.25 cm for twing lenght, from 12.0 to 19.0 number for number of branches per group, from 19.17 to 67.13 kg for fresh twing yield per group and from 5.49 to 16.20 kg for dry twing yield per group of Ebu cehil shrub. Regarding their preference by animals, it was seen that plants were prefered intensively by animals during the development period. As a result, it was determined that Ebu cehil shrub showed intensive branching through the root zone, having a high growth power during the vegetation period, producing feed material in an amount that was negligible during the vegetation period, and having a good alternative feed resource especially for small ruminants.

Keywords: *Calligonum poloygonoides*, Grazing preference, Igdir, Twing lenght and yield

Determination of Genetic Sources of Local Pear *(Pyrus Communis L)* Varities Grown in Some Districts (Silvan, Kulp, Hazro) of Diyarbakır

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Abstract

This research was carried out on the local pear varieties which were in grown Diyarbakır's Silvan, Kulp, Hazro districts and their villages. In 2016, 32 fruit sample were taken from the local pear varieties of fruit which has quality and high market value and people favored. Pomological characteristics of phenological observations were made on selected fruit trees and were examined on collected fruit trees. The bud burst, the beginning of flowering, the full flowering, the blooming end date, the flowering time and TÇHS (from full bloom to harvest the number of days) and the harvest date were determined as phenological characteristics. The fruit weight were found between 39,52-263,12 g, the fruit size between 38,03-88,77 mm, the width of fruit between 40,85-76,97 mm, the fruit stem length between 19,87-50,10 mm, the fruit stalk thickness between 2,45-7,98 mm, the width of core between 2,20-6,14 mm, the length of core between 7,20-12,26 mm, the amount of water soluble solids of the fruit between % 10,00-24,90, the titratable acidity between % 0,04-0,6, the juice pH between 4,07-5,26 on pomological characteristics of the investigated varieties. Besides, the grittiness and the taste properties were determined on the rind and pulp colour of the the local pears.

Keywords: Pear, Phenology, Pomology, *Pyrus communis L*. Silvan, Kulp, Hazro

The Flora of Balcılar Town (Konya) and It's Surroundings

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Abstract

The natural and cultivated plants of Balcılar Town and its surroundings were investigated between 2005 and 2008 years; 850 herbarium specimens belonging to 440 taxa, 292 genera and 71 families were collected and identified from the area. The research area is in the district of Konya and is in the C4 square according to the Grid System. The families which include the most taxa in research area are *Compositae (Asteraceae)* 76 (17.27%), *Leguminosae (Fabaceae)* 59 (13.40%), *Labiatae (Lamiaceae)* 34 (7.72%), *Cruciferae (Brassicaceae)* 33 (7.50%), *Rosaceae* 31 (7.04%), *Gramineae (Poaceae)* 30 (6.81%), *Caryophyllaceae* 19 (4.31%), *Umbelliferae (Apiaceae)* 18 4.09(%), *Liliaceae* 17 (3.86%), *Boraginaceae* 17 (3.86%). The phytogeographic elements arepresented in the study area are as follows; Irano-Turanian (17.5%), Mediterranean (16.36%) and Euro-Siberian (1.8%). The phytogeographic regions of 265 (60.23%) taxa are either multi-regional or unknown. The number of endemic taxa is 56 (12.72%).

Keywords: Flora, Tülek Dağı, Sütdedesi Dağı, Balcılar, Konya, Turkey

The Partial Purification and Characterization of Polyphenol Oxidase in Ancient Grape Kirmizi Kismis Cultivar (*Vitis Vinifera* L.) Grown in Iğdır Province

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Abstract

The local grape Kirmizi Kismis cultivar was gathered from the Necefali village of Igdir province in Turkey, and then caried into the laboratory and stored in deep-frozen at -20°C. Polyphenol oxidase (PPO) was partial purified 5.45 times using the cold acetone precipitation from Kirmizi Kismis Grape and was characterized. 50 gr of Kirmizi Kismis Grape were placed in a porcelain mortar and pestled in order to decompose cell membranes. The frozen Kirmizi Kismis Grapes were homogenised by using a porcelain mortar in 100 mL of 50 mM sodium acetate buffer (pH 5.0) containing 1% (w/v) polyethylene glycol (PEG). Then homogenate was percolated through 4-fold muslin and the resulting filtrate was santrifuged for 30 minutes at 10,000 rpm at 4°C. The supernatant obtained after centrifugation was mixed with cold acetone as much as the volume of the supernatant in the ice bath and the mixture was incubated overnight at 4°C for precipitation of proteins. After centrifugation at 10,000 rpm for 30 min at 4°C, the precipitate was redissolved in 20 mL 50 mM sodium acetate buffer (pH 5.0). Protein concentration was determined according to the Lowry method. Protein concentrations of crude extract and acetone precipitation were determined as 7.04 and 3.83, respectively. Optimum pH and temperature values were found to be 6.0 and 20°C, respectively, using catechol as a substrate. In addition, some biochemical properties such as K_m and V_{max} values were investigated. The data obtained from this study showed that this enzyme could be useful for food industrial purposes.

Keywords: Polyphenol oxidase, Partial purification, Characterization, Kırmızı Kismis

Larvicidal Effect of Essential Oils Extracted from *Artemisia Santanicum* L. and *Artemisia Absinthium* L. on the Pine Processionary Moth, *Thaumetopoea Pityocampa* (Denis & Schiffermuller) (Lepidoptera: Thaumetopoeidae)

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Abstract

The pine processionary moth, *Taumetopoea pityocampa* (Denis & Schiffermüller) (Lepidoptera: Thaumetopoeidae) is one of the most dentrimental insects found in the forest areas of Turkey and worldwide. Many methods have been used to control this pest up to now. But, the problem is still going on largely in Turkey and World. The objective of this study was to determine larvicidal effects of essential oils obtained from *Artemisia santanicum* L. and *Artemisia absinthium* L. on the 1st, 2nd, 3rd, 4th and 5th instar larvae of *T. pityo*campa in laboratory conditions. In order to test the toxicity of the oils against to the 1st, 2nd, 3rd, 4th and 5th instar larvae of *T. pityocampa*, 10 larvae of this insect were placed to petri dishes (9 × 1.5 cm deep). After each dose essential oils (10, 15 and 20 µl/Petri) were sprayed on all the instar larvae of *T. pityocampa* in the petri dishes, 10 gr amounts fresh needles of (red pine) *Pinus brutia* were placed as a food of the larvae. Petri dishes were covered with a lid. All tests were carried out at 25ºC (±2), 65% (±5) relative humidity and 14/10 h light/dark photoperiod in laboratory conditions. The sterile water + etanol as a control and Kormilin, a commercial insecticide as positive control were used. All the tests were made in triplicate. After the exposure, mortality of the larvae was recorded at 12, 24, 36 and 48 h. The toxicity degrees were found to be variable ranging from 6.66 to 100% mortality. The results showed that two plant essential oils have larvicidal effect on the 1st, 2nd, 3rd, 4th and 5th instar larvae of *T. pityocampa* in comparison with controls and can be used as potential agents against *T. pityocampa* larvae populations.

Keywords: *Artemisia*, *Taumetopoea* pityocampa, Essential oil, Mortality.

The Evaluation of Calculated Soil Thermal Properties by de Vires Model Relationship with Soil Organic Matter and Moisture Percent

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Abstract

Soil organic matter and mositure value relationship; soil temperature and thermal proeprties have an important role to assesse the effect of climate and soil temperature changings on the hydrological and carbon cycles and soil creatures life. The aim of this study was evaluation of the relationship between organic matter and miosture pecent with soil thermal properties that were computed by de Vries model. In this study soil samples with different texture as coarse and fine and different aggregate sizes (<4 mm, <2 mm and <1 mm) were used. The soil samples thermal properties such as thermal conductivity and thermal diffusivity were calculated by related formula. Also, all of the soil moisture content was measured under field capacity condition. The results showed that among the soil textures, coarse texture soil (CTS) in comparison to the fine texturer soil (FTS) had the most values of the thermal conductivity and thermal diffusivity under all of the aggregate sizes for organic matter percent and soil miosture percent. Also, the less value of the thermal conductivity and thermal diffusivity belonged to the smaller aggregate size (<1 mm) in comparison to the other aggregate sizes. According to the results can be concluded that at each aggregate size, the fine texure soil (FTS) which had the less value of thermal conducitiy and thermal diffusivity of both organic matter and miosture percent. Although fine texture soil included the high value of organic matter and moisture percent in comparison to the coarse texture soil at each studied aggregate size. Soil thermal conductivity and thermal diffusivity decreased by increasing the organic matter and miosture percent of soil showed the reverse trend and relation between the studied soil thermal properties with organic matter and moisture percent changings.

Keywords: Thermal properties, de Vries model, Organic matter, Moisture content, Aggregate sizes.

Pressure and Stress Distribution on Silos Having a Bin – Hopper Geometry

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Abstract

Silos are used for short and long-term storage of large amount of bulks and have been built increasingly in recent years in some industries including agriculture and food processing. Following the rapid spreading of computers, the finite element, finite difference and numerical integration techniques underwent vigorous development. In particular, the finite element method is now very widely used for its flexibility. The aim of this study was to investigate patterns between wall pressures (filling and discharge) and stresses with grain moisture of Bezostaya wheat variety widespread cultivated in Igdir province of Turkey in order to determine needed designing parameters for structure analysis in silos at filling and discharge. Two different types of silo models as Silo 1 (1294 tons) and Silo 2 (604 tons) were used in the study. Varying wall thicknesses were used for Silo1 and Silo 2 1 (3, 4, 5, 6, 7, 8, 9 and 10 mm). Depending on the different heights of Silo 1 and Silo 2, pressures at filling and unloading conditions have been found to increase pressure increases in both silo types as the height decreases. However, the pressure towards the outlet of the silo began to decrease and was zero at the exit of the funnel. Thus, the stresses occurring in different lines with the ANSYS 14.0 finite element software were examined. For wheat samples, 64 different simulation at filling and discharge conditions for all wall thickness on the Silo 1 and Silo 2 were performed. Depending on these simulations, Silo 1 and optimum wall thickness of 8 mm for wheat silo were determined. 8 mm wall thickness, were determined to be safe for von Mises stresses in wheat silo which was smaller than 188000 kPa.

Keywords: ANSYS, Discharge pressure, Filling pressure, Silo, Stresses, Wheat.

Current Position and Development Possibilities of Licensed Warehousing in Turkey

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Abstract

Licensed warehouses are facilities that provide the services fpr cereals saving and storing for commercial purposes under healtly conditions. Services such as weighing, fiiling, discharge bringing, transportation and handling into line to the conditions of storage and storing, repairing product packaging, product removal are accepted to licensed warehouse. Licensed warehouse system, with supplying time utilization to farmers, provides the storage with maintaining frehness of products to use or trade as much as they want and whenever they decide. In this study, the current situation of licensed warehouse is discussed in Turkey. In this context, there are 9 Commodity Commodities that are authorized to buy and sell products in Turkey. There are 4 classifiable reference classifiers for activity permits. The number of authorized classifiers that receive operating permission is 13. Currently 30 licensed warehouses are operating in our country. The total storage capacity of these warehouse is 1.256.200 tons. In addition, some suggestions have been made to develop the licensed warehouse in our country. Currently, the licensed warehouse capacity in our country will reach a total of 8.180.400 tons when all facilities that have obtained establishment permission start operating.

Keywords: Licensed warehouse, Storage, Turkey

The Effects of Different Nitrogen Fertilizer Doses on Yield and Some Nutrient Contents of Italian Ryegrass (*Lolium italicum* L. Caramba)

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Abstract

Italian ryegrass (*Lolium multiflorum* cv. Caramba) is often fertilized with high levels of nitrogen (N) in order to ensure maximum dry matter yields. This study was carried out to investigate the influence of the nitrogen levels (0, 2, 4, 6 and 8 kg da-1 with No, N_2, N_4, N_6 and N_8, respectively) on the yield and agricultural characters of Italian ryegrass grown on the loamy soils of the agricultural experimental area of Igdır University in 2015. The field experiment was designed in a split-split plot design with three replications. The traits examined were the green herbage yield, dry matter yield, nitrogen (N) and phosphorus (P). Results of the study showed that nitrogen doses increased green herbage and dry matter yields with increasing of the stage of the plant. The highest green herbage and dry matter yields were 1142.7 and 473.7 kg da-1 with N6 and N8 nitrogen fertilizations, respectively. The levels of nitrogen (N) and phosphorus (P) in the plant tissue decreased from to the first stages of growth to seed stages of ryegrass.

Keywords: Italian ryegrass, Cutting stage, Yield, Nitrogen (N), Phosphorus (P)

Some Phenotypic Characteristics of Indigenous Bhag Nari Cattle of Balochistan, Pakistan

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Abstract

The aim of the study was to determine the prospects and intimidations of indigenous Bhag Nari (beef) Cattle production systems, to evaluate and upgrade the role of indigenous cattle to farmer, food security and income. Moreover, to assess the phenotypic characteristics of local cattle breed that lead to conservation of the indigenous breed. The origin of Bhag Nari Cattle indicates that it belongs to the *Bos indicus* (Zebu cattle), and Brahman as forefathers from India. Brahman was produced by cross breeding of Kankrej, Gujarat, Ongole and the Jir or Gyr strains. Bhag Nari breed of Balochistan, Pakistan is raised as beef cattle in Balochistan mostly in Districts of Sibi, Jaffarabad and Nasirabad in Balochistan. This is the only breed with optimized performance in extreme hot and humid climatic conditions of the area where temperature goes beyond 50°C during summer. This breed in this regard is heat tolerant and also resistant to ticks. Predominantly Bhag Nari cattle have white coat color, head, forehead, and other parts with some black shade around eyes. In males, black shades are also seen at shoulder region. Hump is prominent in both sexes. Large sized body has made them suitable for beef production. A crossbreeding experiment of Bhag Nari × Droughtmaster has produced Nari Master to produce a new beef breed. The growth rate of this breed though not very high, yet suitability under harsh climatic conditions has made it suitable for beef production. Studies on various aspects are ongoing to explore its more features. It is need of the time to make breed improvement plan for these cattle but lack of financial resources is the main hindrance in this regard.

Keywords: Bhag Nari cattle, Beef production, Heat tolerance, Tick resistance, Phenotypic features

Determination of Second Product Yield and Some Agricultural Characteristics of Some Silage Sorghum and Sudan Grass Varieties

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Abstract

The aim of this paper was to investigate some plant traits and yield of silage sorghum cultivars and sudangrass grown as the second crop in the center of agricultural research and applying, in 2015 year. In the experiment three sorghum (Rox, Early Sumac, Leoti), two sorghum x sudangrass hybrid (Nutri Honey, Hay Day) and one, sudangrass (Review 80) were used under irrigated conditions of Iğdır. The experimental design was randomized block design with three replicates. Plant height of cultivars (cm), dry matter ratio (%), green herbage and dry matter yield (kg/da), leaf ratio (%), the stem ratio (%), ear rate (%), the number of leaves per plant and the plant weight (g) were determined in the trial. According to the results of the experiments; plant heights (197.1-299.4 cm), green yield (3148-8337 kg/da), dry matter ratio (29.6-54.6 %), dry matter yield (1022.6-2861.7kg/da), leaf ratio (13.6-19.3%), the stem ratio (71-78 %), the bunch ratio (7.3-12.0%), the number of leaves (9.5-13.1), the plant weight (330.6-875.4 g) were obtained.

Keywords: Silage, Sorghum, Water, Species, Yield, Correlation.

Irrigation-related Nitrate and Phosphate Losses in Iğdır Plain Agricultural Land

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Abstract

Leaching the plant nutrients from soil with irrigation water is an important problem in arid and semi-arid regions since this situation both leads to economic losses, and it also causes pollution in the water resources or ground waters that these elements receive. The aim of this study is to determine the nitrate and phosphate losses by leaching in agricultural land and to reveal their quantity in Igdir Plain. For this purpose, 19 sampling points were determined and water samples were taken from the main drainage channels at a distance of 80 km in the east-west direction Igdir plain. It was planned to take water samples during the last weeks of July, August and September. The first samples were taken at the end of July and parameters such as temperature, pH, and electrical conductivity are measured at the sampling point. Then, nitrate and phosphate amounts of the samples are measured under laboratory conditions. As a result of sampling and analysis planned for the three (3) months during which the agricultural irrigation system is applied intensively in Igdir Plain, the dimensions of water and nutrient leaching from the agricultural land will be determined. In the plain, over 90% of farmers traditionally use the surface irrigation method and therefore, much more water is moved to drainage channels than irrigation needs. As a result of initial measurements, pH of irrigation water was found between 8,18 – 8,84 while EC values ranged between 474 – 2.200 µs/cm. The analysis results of drainage water indicated the lowest nitrate value as 1,08 ppm and the highest as 4,41 ppm while phosphate values were 2,92 ppm the lowest and 293,37 ppm the highest. According to our results, these waters in the drainage channels are used for irrigation in agricultural lands particularly in summer months when irrigation water shortage is observed. The results of this study will provide an opportunity to make a remark on this issue.

Keywords: Nitrate, Phosphate, Soil, Drainage Channel, Irrigation.

An Overview of Agriculture in Iğdır: Soil and Land Use Status

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Abstract

Soil is the cornerstone of agricultural production. In agricultural production, land size is among the most important factors along with the nutrient content and the amount of nutrient supply of the soils. Igdir is available for the economical growth of many plant species due to its climate, topography and soil characteristics. There is salinity and alkalinity problems in about 1/3 of the land in Igdir plain, where agriculture is intense. Besides, starting with the Agri mountain skirts in eastern Iğdır, there is a severe wind erosion in an area of approximately 13.542 hectares from the county center of Aralık to the Kazim Karabekir Agricultural Enterprise site. However, as in every part of Turkey, the number of land plots per farmer family or per enterprise and the size of plots stand out as other limiting factors in production in Iğdır province. The total land area of Igdir province is 358.800 ha and the agricultural land area is 118.528 ha. According to TUIK 2016 data, the amount of cultivated area is 686.278 da while the amount is 534.138 da for field crop cultivation area; 40.994 da for the fallow area, 57.902 da for growing vegetables and 53.244 da for the orchards. The land size of 40.412 plots is 5 da and smaller while the size of 26.603 plots is through 5-10 da. The ratio of the subjected areas to total agricultural areas is around 42%. Law on successions, irrigation and drainage system that passes through agricultural land are the main factors that increase fragmentation and cause a decrease in the land area. This reduces the production potential of the land, prevents the agricultural mechanization and forces economic production, and consequently, the villager is forced to seek for alternative livelihoods. The first step in solving the problem is to restart the land consolidation, which has been attempted before, without any concessions.

Keywords: Soil, Agricultural production, Land Size, Land Consolidation.

Yield and Agronomic Characteristics of Some Hungarian plants (*Vicia Pannonica* L.) Cultivated in Polatlı and Gözlü Agricultural Establishments

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Abstract

The present study was conducted to investigate the yield and agricultural characteristics of four varieties of Hungarian vetch (*Vicia pannonica* L.) grown in Polatlı-Ankara and Gözlü-Konya agriculture stations in 2014. The experiment was set up with four replications according to the design of completely randomized blocks. As the average of the locations in the present study, the lowest and highest green herbage yields of the varieties were (2362.7-2993.1 kg/da), hay yield (574.8-707.0 kg/da), biological yield (779.5-986.1 kg/da), straw yield (654.1-845.9 kg/da) with Altınova-2002 and Tigem-1453 varieties, respectively. Moreover, the seed yield of Tigem-1453 variety (140.3 kg/da) was higher than the others. The agricultural characteristics of the varieties of Hungarian vetches (Vicia pannonica L.) varied due to Polatlı and Gözlü stations. The average number of flowering days were (187.5-192.5 days), main stem height (86.0-92.0 cm), main stem thickness (2.5-3.5 mm), natural plant height (48.8-57.8 cm), number of main stem (2.25-3.0 pcs/plant), lodging (2.0-4.0), winter hardness (95.0%).

Keywords: Hungarian vetch, (*Vicia pannonica* L.), Yield, Agricultural characteristics

Biodiversity of Iğdır Province, Turkey

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Abstract

Contrary to rigorous continental climate seen in Eastern Anatolia Region of Turkey, Iğdır province, which covers 5% of country's land area, has a micro-climate due to the fact that it is surrounded by mountains and has a plain area. Natural life around the region has a convenient continuity in regard to temperature and formation of the food chain. Since our country has three geographical vegetation division called Europe-Siberia, Mediterranean, Iran-Turan and functions as a bridge between two continents, as a result of the short-range changes of geographical and climatic features; it has a wide range of forest, steppe, wetland, coastal and sea ecosystems and different forms of this ecosystems with rich biological variations. In order to understand the floral richness of Turkey, it would be enough to compare it to European mainland. Although there are only 12.500 gymnosperm and angiosperm plant species in Continent Europe, in Turkey there are 11.707 (13 lycopodium clavatum, 73 fern, 42 gymnosperms and 11.579 angiosperms) plant species. 3649 of them are endemic. In other words, you cannot find them anywhere apart from Turkey. It is confirmed that 321 of 483 bird species found in Turkey live in Iğdır and use this region as a migration path. Nearly 183 species of 85.000 birds have been recorded. With 321 bird species recorded in its region, Iğdır harbours 66% of Turkey's bird entity and 60% of Europe in its area. It is estimated that in Iğdır which has rich vegetation, there are nearly 1000-1100 plant species (10% of Turkey's flora entity). In Ağrı Mountain area, 55 subgroups, 204 kinds and 386 taxons have been examined recently and in the geographical area that Iğdır and Ağrı Mountain are located, 10% of Turkey's and 9% of Europe's floral entity have been found. With these facts, richness of our region's and our country's bio-diversity can be seen clearly.

Keywords: Biodiversity, Iğdır, Agri Mount, Birds, Flora

Migratory Birds and Ecological Balance in Iğdır Province, Turkey

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Abstract

Ecological balance is necessary for all living creatures in the world. During being maintained this balance, life level of all creatures increasingly continues. In the protection of the ecological balance, all creatures and non-living things play a fundamental role, directly or indirectly. Birds eat some insects damaging trees in forests and reduce number of the insects. Birds fed with seeds and fruits cause to be propagation of plants by means of ingesting plant seeds and then defecating at remote regions. Protecting the ecological balance depends on food chain dietary composing habit of the creatures. There are 10.660 bird species in the world. The ecology and distribution of each species show the variation and birds are found at various habitats from deserts to mountains. Some of these species that are found at special habitats spread in limited areas. Taking into account the distributions of birds, it can be seen how biodiversity was around the world and that birds take also an active role at spherical environment changes. Birds perform ecosystem services such as nutrient cycle, biological decomposition, pest control, pollination etc. Migratory birds are a group of bird species that are present at various geographies in different seasons. Every year, it is estimated that 50 billion of the birds migrated in the world. Of them, five billion migrate between Europe and Africa. Billions of the birds cover a long distance between the northern hemisphere and the southern hemisphere every year. In spring season, they cover a long distance to the north for reproduction, and in autumn season, they cover a long distance to wintering grounds in the south of Turkey. As the weathers are getting cold in winter months, it is extremely difficult that birds find nutrient and the competition among them increases. Therefore, migratory birds reproducing in the northern hemisphere migrate into the southern hemisphere in every autumn. The south is richer in nutrient and hotter forms a good wintering ground. At the beginning of the spring, the migration of the birds starts from the south to the north. In spring season, density of bird population gradually increases in the northlands. Migratory birds are of vital importance in the ecological balance and the humans. Billions of the insects lay on plants and then caterpillars are eaten and controlled by birds, which eat eggs of various budworm, insect and grasshopper. Thus, the shortage is prevented.

Keywords: Migratory bird, Ecological balance, Ecosystem, Food chain, Iğdır

Biological Control of Common Bacterial Blight Caused by *Xanthomonas Axonopodis* pv. *Phaseoli* and Fuscous Blight Caused by *Xanthomonas Axonopodis Phaseoli* var. *fuscans* on bean by Biocontrol Agent Applications Under *in vitro* Conditions

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Abstract

Phaseolus vulagaris L., common bean is one of the most important crops, which is widely grown world-wide for not only its nutritious fodder, protein rich seeds, but is also known to enrich soil nitrogen in symbiotic association with rhizobium. Turkey is an important bean producer. The total bean area is 164 449 ha in Turkey. Iğdır's total bean area is 5 128 da and total bean production is 7 627 tones. Beans may be affected bacterial diseases including *Xanthomonas axonopodis* pv. *phaseoli* (Xap), *Xanthomonas axonopodis* pv. *phaseoli* var. *fuscans* (Xapf). These diseases are observed in all the fields of bean production in Turkey. Xap and Xapf phytopathogens responsible for considerable losses in the agricultural production of bean plants. In the present study, six tested bacteria isolated from lemon trees bark in Mersin. Biocontrol agents were identified using Microbial Identification System (MIS) computer software program. All bacterial applications were found effective in different inhibit zone of development Xap and Xapf under in vitro conditions. Our results show that biocontrol agents can be used to control of Xap and Xapf in bean.

Keywords: Bean, Bacteria, Biocontrol agent, Iğdır

Identification and Severity of Pathogens of Fungal Diseases Caused Root and Crown Rot on Spring Cereals in Northern Cyprus

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Abstract:

Cereal production area is 86.830 ha in Northern Cyprus. Barley has the largest production area occupying 80.400 ha while wheat and oats cover 5750 ha and 680 ha, respectively. Cereal production is carried out for the grain and biomass under rainfall conditions. Rotation doesn't apply in these areas due to drought and salinity problems. A survey study was carried out to determine the level of root and crown rot fungal diseases and to identify of fungal pathogens in the cereal fields of Northern Cyprus (TRNC) in 2011-2012 and 2012-2013 growing seasons. For the first and second years, 57 fields and 39 fields were examined between milky and dough stages (Zadoks 61-79), respectively. In this study, the disease symptoms were observed in 27 fields (47,4%) in 2012 and 15 fields (38,5%) in 2013. Average infected plant ratio was determined in diseased fields as 38 % in 2012 and 27 % in 2013. Root and crown rot disease severities in the cereal cropping areas of Northern Cyprus were determined as 17% in 2012 and 11% in 2013. Average diseases severity was 14% in inspected fields for two years. In vegetation period between November to May recorded average climate datas were as follows; (2012-2013); precipitation 439 (483,1-394,9 mm), average temperature 14,8 (13,9-15,8 ° C) and humidity 66,8 (66-67,5%). Pathogens causing the root rot diseases were determined as; Fusarium culmorum, Fusarium graminearum Gr.1, Fusarium equiseti, Bipolaris sorokiniana (=Rhizoctonia cerealis), Thanatephorus cucumeris (=Rhizoctonia solani var. graminis), Bipolaris sorokiniana (=Cochliobolus sativus), Hymenula cerealis, Oculimacula yallundae (=Pseudocercosporella herpotrichoides), Pythium graminicola, Sclerotium fulvum, Colletotrichum graminicola, and Alternaria sp. The most common pathogens were found as Fusarium sp. and Bipolaris sorokiniana. As a result, the root and crown rot diseases in these areas can cause essential yield and quality problems. Drought and salinity tolerant alternative crops should be determined and should be grown for rotation. This is the first study to identify root rot pathogens on cereals in Northern Cyprus.

Keywords: Northern Cyprus, Spring cereals, Dryland root rot, Survey, Identification

Application of Bio-ecological methods Against the Soil Degradation in Ceyranchol Winter Pastures

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Abstract

According to the results of this research we defined that during many years unsystematically exploitation of Ceyranchol territory soil, intensified the erosion, divegetation, and soil degradation processes in this area. Sowing perennial herbs during some years and providing other ecological measures will prevent soil degradation processes and will improve soil properties.

Keywords: Soil, Erosion, Soil Degradation, Perennial herb

Effect of Indole-3-Butyric Acid (IBA) and Plant Growth Promoting Rizobacteria on Root Formation in Black Mulberry (Morus Nigra L.) Cuttings

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Abstract

The effects of Indole-3-Butyric Acid (IBA) and plant growth promoting rizobacteria (PGPR) on the rooting capacity of hardwood black mulberry (*Morus nigra* L.) cuttings were investigated. Two different concentrations of IBA (Control, 4500 and 9000 ppm) and two strains of *Bacillus substilis* and *Pseudomonas fluorescens* were applied in a completely randomized design with three replications. The highest rooting percentage was obtained from *Bacillus substilis* with 30% value. *Pseudomonas fluorescens* aplication gave maximum number of rootlets (21.33). The longest root length was obtained from IBA-4500 and *Pseudomonas fluorescens* aplications with 35.71 and 35.67 mm values, respectively. The results show that *Pseudomonas fluorescens* as a PGPR is more effective in root formation of hardwood black mulberry cuttings when compared to control and other applications.

Keywords: Black mulberry (*Morus alba* L.) cuttings, IBA, PGPR, Rooting

Definition of Subgroup Contrasts in One-Way ANOVA and Agricultural Applications

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Abstract

For comparison of means in one-way ANOVA, comparison tests such as LSD, Tukey and Duncan are commonly used. These tests compare all possible combinations of each mean and they are called “unplanned comparisons”. When the number of means are too many, interpretation of the results becomes very complicated and difficult. On the other hand, the contrast analyses, consider only the hypotheses of interest and known as “planned comparisons”. In this study, subgroup design in one way experimental designs are investigated. To this purpose, with the help of numerical examples from agriculture, the definition of contrasts is examined in detail. In conclusion, it is shown that focusing on the specific hypotheses that are necessary for the researcher and therefore overcoming the difficulties faced during the interpretation of the results is possible by using the “planned comparisons”.

Keywords: One-way ANOVA, Contrasts, Subgroup Design

Elements and Heavy Metals

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Abstract

Lithosphere on outer part of the earth and pedosphere formed above this basically contain cluster of elements. Elements entering into chemical composition of earth minerals are held via an electrical force and distance or proximity of these elements ensures these bonds to be strong. Plant nutrients are elements that need to be absolutely in the growth environment for the growth and development of the plant. In order to meet the food needs of humans along with the rapidly rising world population, yield obtained per unit area also needs to increase at the same rate. Chemical fertilizers are intensively applied in the agricultural areas in order to meet this need. While nutrients required by plants are provided for the soil by fertilization, other elements in chemical fertilizer resources are given into soil and accumulated in the soil. Heavy metals are accumulated more in lands close to highways. These elements and heavy metals existing in considerable amounts in these cultivation areas are included into food chain by plants and cause various health problems in the organisms consuming these plants. In this review, it was emphasized that some elements, which were plant nutrients, were also heavy metal and their excessive amount had toxic effect and importance of these elements was explained.

Keywords: Elements, Trace elements, Heavy metal, Soil.

Usage of Microcontrollers in Agricultural Areas

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Abstract

While the world, especially the developed economies, adopted the 4th Industrial Revolution, technological improvements that increase profits, quality and reduction of time loss have become even smarter with Industry 4.0. Although technological integration into the agricultural sector seems slower than other sectors, it is likely that agricultural sector will have a large share in the industrial revolution that came with Industry 4.0. Almost all agricultural systems are equipped with sensors which are the result of the revolution called Agriculture 4.0 providing communication throughout the entire production period. It is necessary to integrate the interfaces (microcontroller) to analyze the information received from the sensors and to provide the necessary commands to the circuit elements. This study includes information on how to use Arduino, a microcontroller card widely used in the market, and how it is used in agricultural areas.

Keywords: Microcontroller, Arduino, Agriculture, Industry 4.0, Agriculture 4.0

Determination of the Physical Development of the Şalak Apricot Fruit During the Development Period

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Abstract

Şalak apricot variety is a table variety which is widely grown in Iğdır region. The tree usually grows thickly crowned and very strong. The yield of fruit is high and fruitful. Şalak apricot fruit is medium hard, elliptical and symmetrical. In this study, it is aimed to determine the physical change of the Şalak apricot fruit during the development period. For this purpose, the first fruit samples were taken when the fruit reached the hazelnut size after the flowering of the flowers. Sampling was continued until the fruits were matured. Samples were taken in three replicates. The examples of first fruits on May 2, and the last samples were taken 11 July. In the experiment, sampling took 11 weeks. The fruits have begun to mature at ninth week with the first week of receipt. The length, width and thickness of fruit samples were measured by digital calipers and sphericity values were calculated. The weights were measured using a precision balance at 1 ‰. According to measurement results, it was determined that the sphericity of values apricots ranged from 72.7% to 87.8% and the fruit weights from 2.2 to 39.6 g. In mature fruits, the smallest and largest length, width and thickness values were determined as 30.44-50.53 mm, 31.29-39.57 mm and 31.85-38.58 mm, respectively.

Keywords: Şalak apricot, Physical properties, Physical development, Growing period

The Importance of the Conservation Farming in Turkey

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Abstract

Conservation agriculture (CA) is concerned with profitable and sustainable by optimizing agricultural practices while conserving input and minimizing any impacts on natural resources. Technologies that benefit the environment can often have a negative effect on crop productivity and short-term profitability. CA is one of few practices that can enhance yield, economic returns, and food security while conserving the natural resources. The principles of the CA are zero-tillage, permanent soil cover and programing rotations or crop diversification in annual crops. However, CA practices have direct influence on climate regulation through carbon sequestration and less greenhouse gas emissions, and regulation and provision of water through soil physical, chemical and biological properties. For the last couple of decades, the degradation caused by agricultural activities increased linearly as a result of unsustainable intensification of agricultural production in Turkey. The aim of this research is empathizing the importantce of the conservation farming in Turkey

Keywords: Conservation agriculture, Conventional agriculture, Soil tillage, No-tillage, Turkey.

Heavy Metal Accumulation of Some Wild-Grown Edible Plants

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Abstract

The heavy metal (Pb, Cd, Ni, Cu, Mn, Al, Cr, Zn, As and Se) accumulation on edible parts of some wild - grown plants (Cichorium inthybus, Lactuca serriola, Chondrilla juncea var. acantholepis and Scorzonera cana var. jacquiniana) and its soils were determined by ICP-AES in Konya province highways. Maximum Pb (1.96 mg/kg), Cd (0.11 mg/kg), Ni (7.39 mg/kg), Cu (17.36 mg/kg), Mn (392.84 mg/kg), Al (861.37 mg/kg), Zn (108.93 mg/kg), and Se (1.75 mg/kg) contents were determined in Chondrilla juncea var. acantholepis, maximum Cr (13.86 mg/kg) and As (13.76 mg/kg) contents were determined in Cichorium inthybus. Maximum Pb (2258.46 mg/kg) content at the soils of plants was determined in soil of Chondrilla juncea var. acantholepis. Maximum Cd (1.21 mg/kg), Cu (553.82 mg/kg), Mn (1701.03 mg/kg), Cr (4.75 mg/kg) and Zn (2181.3 mg/kg) contents at the soils of plants were detected at the soil of Cichorium inthybus and maximum Ni (213.85 mg/kg), Al (11.8 mg/kg), As (17.76 mg/kg) and Se (5.39 mg/kg) contents were detected at the soil of Lactuca serriola. Mean percentage of heavy metals removed from edible part of plants by the washing procedure are as follow; Ls(50%)> Sc(49%)> Cj(45%)> Ci(39%) for Pb, Ci and Sc (100%)> Ls(89%)> Cj(70%) for Cd, Ls(75%)> Sc(74%)> Ci(73%)> Cj(67%) for Ni , Cj (35%)> Ci (24%) > Ls (23%)> Sc (15%) for Cu, Ci (35%)> Sc (31%)> Ls (25%)> Cj (22%) for Mn, Cj(73%)> Ci(69%)> Sc(59%)> Ls(47%) for Al, Sc(84%)> Ls(72%)> Cj (59%)> Ci(56%) for Cr, Sc(31%)> Ls(26%)> Cj(24%)> Ci(17%) for Zn, Cj ve Sc (100%)> Ls (95%)> Ci (86%) for As, Ci ve Sc(100%)> Ls(93%)> Cj(80%) for Se. The average daily intake amounts of As, Cr and Mn from the washed - unwashed edible parts and of Pb, Ni, Al and Se from the unwashed edible parts of plants are toxic for human health.

Keywords: Heavy metal, Edible plant, Accumulation, Toxicity, Highways, ICP-AES

The Effects of Different Growing Systems on Some Chemicals of Currant Cultivation

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Abstract

In this study, two different currants (Rosenthal, Red Lake) row spacing of different types, different number of branches and pruning practices in terms of their effects on yield and quality varieties were investigated. For this purpose, three different applications to currant varieties were performed during the three-year period (2014-2016). Three different distance over spacings were used as 2×1.2 m, 2×1.5 m and 2×2 m. The number of branches of plants were arranged in 1, 3 and 5 branches. Apart from these applications, the pruning was performed in some parts of plants by withholding some portions without pruning and leaving the old shoots. According to the results obtained amount of vitamin C was between 22.5 and 2779.30 mg/100ml. The amount of total phenolics ranged from 5.27 to 17.17 (mg GAE / g t), the total amount of anthocyanin ranged from 61.13 to 426.61 µg siy-3-glk/g and capturing free radicals (DPPH) activity was determined as 7.57 to 58.25%.

Keywords: Currant, dpph, Phenolics, Anthocyanin, Vitamin C

Herd Management in Livestock of Turkey

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Abstract

Most of the animal breeders in Turkey are doing animal husbandry as they see it from their ancestors. Due to the fact that the geographical conditions of our country are suitable to a large extent, extensive production based on meadows are being carried out. Government support, grants, incentives, subsidies, etc. As a result of these practices, cultures and hybrids at different kinds brought with them many negative servers, such as unconscious care and raising, crop losses and animal deaths, directly affect producers and consumers. All to ensure that the profession of the first lot of leadership in solving these problems trained and organized, national livestock breeding to bring up and a certain standard advanced around applications will be made, in breeding work of qualified personnel employment can provide the environment necessary for the animals in the culture breed animals to be brought from outside care and feeding establishing, operating in the livestock sector and prevention of migration of the population living in rural areas and must be given to the sector. From rural provinces who prefer doing business and providing of different masses who have experience in the livestock sector-related remuneration and job security all institutions, organizations and manufacturers is essential to meet the needs of qualified personnel. Increasing the effectiveness of their contribution to the economy of employed people trained in livestock activities and decision points may be active. Opening an associate degree program with the coordination of universities, scientists and related institutions for the management of herds for employment in the sector in order to avoid the production and yield losses and to obtain higher quality and economical products, and all the projects related to livestock and sanctions such as the necessity of employment in the same and cash supports to be provided can play an important role in the realization of this situation.

Keywords: Livestock, Herd management, University education

Biotechnology in Organic Animal Production

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Abstract

Organic livestock has emerged as an alternative method to overcome the adverse effects of increased use of chemical inputs and some methods applied on nature and human health. At the same time, it includes all living and friendly production systems; biochemical applications in agricultural production have gained momentum in parallel with the developments in the field of molecular biology and genetics. Agricultural biotechnological methods have also been developed to meet the needs of agricultural production and human food as the world population grows rapidly. Genomic selection applications by revealing new genotypes, embryo transfer, cloning, gene expression, introduction of foreign genes and gene positions, artificial insemination, embryo transfer, genetics, the use of growth hormones, feed additive substances are between these methods. The various methods used to genetically alter organisms or influence their organization are not considered to be compatible with organic production, growth and development in ways not possible under natural conditions or processes. But there are some applications with the permission of the relevant control body. It is necessary to determine the health and ecological effects of organic products obtained with conventional products using biotechnological methods or with limited use and to increase the awareness of consumers.

Keywords: Organic Animal Breeding, Organic Products, Biotechnology

The Sowing Mechanization, Problems and Solution Suggestions in the Eastern Anatolia Region

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Abstract

Agricultural mechanization has a 65 year past in Turkey. After tillage machines, the seed drills play an important role in agricultural mechanization. In this study, it's informed about the amount of cultivated agricultural areas and fallow areas and some agricultural product grown in the region for 14 cities in Eastern Anatolia region (Erzurum, Erzincan, Ağrı, Kars, Iğdır, Ardahan, Malatya, Elazığ, Bingöl, Tunceli, Van, Muş, Bitlis, Hakkari). The data of research bases on crop production and agricultural equipment and machinery statistics is from 2010-2016 years of Turkish Statistical Institute. According to the obtained results, agricultural areas in Eastern Anatolia region are 10.4 % in all agricultural areas in Turkey; and 40.4 % of these areas are grain sowing areas. The first three cities in point of amount of agricultural area are Ağrı, Erzurum and Van; the last three cities are Bingöl, Hakkari and Ardahan. The total number of sowing machines in Eastern Anatolia region has increased 33.5 percent between the years 2010 and 2016. 87 percent of all machines are grain sowing machines; others are the universal, the pneumatic and the stubble seed drills. The number of seed drills in Eastern Anatolia region are 2.5 percent of the number of seed drills of total in Turkey. Though seed drills increased during the last five years; none of the cities in the region have average number of the seed drills. Nevertheless, increase rate in the region is more than the one of Turkey.

Keywords: Agricultural area, Agricultural mechanization, Eastern Anatolian Regions, Seed drill

The Effect of Seed Drill Vibration on the Seed Spacing Uniformity in Row in Lentil Planting

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Abstract

The seed spacing uniformity in row is one of the important parameters that are effective on plant growth and yield. In order to find the seed distribution uniformity in row, sticky band test system is used in the laboratory conditions. In this study, the effects of seed drill vibration on the longitudinal seed spacing uniformity was investigated for the random seeding of lentil seeds. In order to evaluate the effects of seed drill vibration on the seed distribution accuracy, λ goodness criteria and V_f factor of variation were used in the random seeding method. According to the obtained results, it was determined that seed distribution uniformity in row by the effect of vibration get worse. Variation factor values (Vf) greater than 1.1 due to vibrations mean that the seed distribution uniformity in row is negative binomial. Assessment according to the criterion of goodness (λ) was found to be "inadequate" as the seed distribution uniformity ratio under the effect of vibration was below the 55% limit value.

Keywords: Seed distribution uniformity, Seed drill, Sticky band, Vibration, Lentil

Phenological and Pomological Characteristics of Local Apple (*Malus Domestica* Borkh.) Genetic Resources of Siirt Region

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Abstract

This research was carried out on local apple varieties that are grown in Şirvan, Pervari, Eruh towns and their villages, depending on field study in center of the province of Siirt, Tillo, Şirvan, Eruh, Baykan, Kurtalan, Pervari towns and their villages. Fruit samples were taken between 2014-2015 from 21 trees that are qualified as high value in marketplace and which people preffered. Phenological observations were made on the selected trees and pomological properties were investigated on the collected fruit samples. The bud burst, the beginning of flowering, the flowering time, the number of days from full bloom to harvest (FBD) and the harvest date were examined. According to the research results, the bud burst was determined between 28 March-3 May, the date of first flowering between 2 April-10 May, the full of bloom between 9 April-17 May, the end of flowering between 14 April-23 May, the harvest date between 11 August-14 October, the number of days from full bloom to harvest (FBD) between 113-149 days. According to the phenological observations, fruit weight were found between 20,45 g- 73,42 g, fruit size between 32,73-60,10 mm, fruit diameter between 36,27- 60,32 mm, fruit stalk length between 4,23 mm- 26,16, fruit stalk thickness between 1,96 mm -2,61 mm, the amount of soluble solids of fruit between % 6,032 - % 13,24, the amount of titratable acid between % 0,85 - % 6,10, the juice pH between 3,13-5,37. Besides, fruit peel color, fruit flesh color, fruit grittiness and taste states were determined.

Keywords: Apple, Phenology, Pomology, *Malus domestica* Borkh., Siirt

Alteration of Some Physical and Chemical Composition in Apricot (*Prunus Armeniaca* L.) During Fruit Development

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Abstract

Variation in the weight, dimensions, volume and density of apricot fruit, and in their content of total soluble solid, total acidity and pH was investigated in *Şalak* and *Teberze* apricot cultivars during fruit development from the days after last bloom to the harvest with 20 day intervals. We determined a remarkable increase in fruit weight, volume, dimensions (width, length and height), total soluble solid and pH within last 20 days of fruit development stage. On the other hand, total acidity mostly decreased by the end of fruit development period. There was no significant alteration in fruit density. During both fruit development stages and maturity stage, the values of physical parameters were higher in *Şalak* cultivar than *Teberze* cultivar with an exception of the density value. However, we recommended that the measurements could be taken with 5 or 7 day intervals during the fruit development stages for better understanding of fruit alteration and make a decision for optimal harvest time.

Keywords: Apricot (*Prunus armeniaca* L.), Iğdır, Fruit development stages

Morphological, pathogenic and molecular characterization of Globisporangium ultimum causing stem and root-rot disease of bean plants grown in Diyarbakır Province of Turkey

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Abstract

Bean, Phaseolus vulgaris L., is an economic important herbaceous annual legume plant in the family Fabaceae. It is amongst the most widely cultivated legumes of the world for its delicious seeds having high protein content like other legume seeds. In mid-June2016, we observed bean plants belonging to cv. Ayşekadın at near harvest stage in a commercial field located in Hanzo District of Diyarbakır Province (Southeastern Anatolia) with necrotic taproots and few lateral roots. Infected hypocotyls above the soil line and lower stems had light brown lesions, and plants showed symptoms of wilting. Within a month, the incidence of the affected plants grown in this 30 da field reached 50%. Tissue fragments of 1 mm2 were excised from the root and stem lesion of infected plants, dipped in a solution containing 1% sodium hypochlorite, and plated on grated apple corn meal agar (GACMA) amended with P5ARPH. Plates were incubated at 22°C for 5 days. A Pythium-like organism was consistently isolated from tissues. Growing hyphal tips of isolates were transferred onto V8 medium for production of sexual structures. All isolates were identified as Globisporangium ultimum (Syn: Pythium ultimum) based on the morphological characters of sporangia, oogonia, antheridia, oospores and hyphal swellings. To confirm Koch's postulates, two isolates were tested for pathogenicity against bean (cv. Ayşekadın) by placing colonized GACMA plugs or GACMA alone next to the crown. Symptoms similar to those observed in the field on bean developed on inoculated plants and the pathogen was reisolated. Controls did not develop disease. The internal transcribed spacer (ITS) region of rDNA of a single isolate was amplified using the ITS6/ITS4 primer pair and sequenced. BLAST analysis of the ITS sequence (GenBank Accession No MF536533) showed a 100% homology with the corresponding sequences of many isolates of G. ultimum in GenBank and confirmed our identification of this isolate as G. ultimum. Collar and root rot caused by G. ultimum affects bean plants in many regions of the world. The pathogen was also reported in Hatay and Samsun provinces of Turkey. No published information exists, however, on the existence of this pathogen in the Southeastern Anatolia Region (Diyarbakır). Besides, this is first report of molecular characterization of G. ultimum in Turkey.

Keywords:

Study of morphological, phenological and essential characteristics in populations of five species of Matricaria recutita in field conditions

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Abstract

In order to evaluation vegetative and generative traits of 5 populations of Matricaria recutita, an experiment was conducted in a Randomized Completely Blocks Design (RCBD) with three replicates in Alborz Research station on 2011-2012. 13 quantitative and qualitative traits such as: length, width and area of vegetative crown, plant height, flower number per plant, fresh and dry weight, time of flowering, time of harvest, essential oil percentage, essential oil yield, growth degree days of flowering and harvest were used.Goals of this survey was evaluation yield and morphological and phonological traits related with that , identification high product populations and introduction diffrent suitable populations for agriculture Chamomile . Comparing of mean population of Chamomile showed Arak 1, Arak 2 and Brojen populations had maximum length,width and area of vegetative crown and Arak 2 population had maximum flower number and plant height . Arak 2 population had most fresh and dry weight and Ghazvin population had maximum essential oil percentage. Arak 1, Brojen populations had maximum value of growth degree days of flowering and harvest. Arak 2 population because of having maximum mean in vegetative traits including length,width and area of vegetative crown , plant height and flower number per plant and Brojen population with maximum mean in generative traits including fresh and dry weight , essential oil yield, also with having lowest degree days of flowering and harvest as superior populations were considered.

Key words: Chamomile, Morphological and phonological traits, Matricaria recutita, essential oil yield

Statistics and Agricultural Economics

Forecasting Production Amount and Tree Number of Walnut Using Time Series Analysis for the Period of 2017-2023: Case of Iğdır Province, Turkey

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Abstract

Walnut is an important fruit that is beneficial in human health. The purpose of the current work was to forecast production amount and tree number of walnut growing in Iğdır province of Turkey for the period of 2017-2023 through a time series analysis method. For this purpose, time series data sets about production amount and tree number of the walnut from the period of 1992-2016 were obtained from TURKSTAT database records. The initial statistical examinations showed that the time series data sets on production amount and tree number of the walnut were stationary. In the present study, Brown exponential smoothing time series method was employed with the objective to forecast production amount and tree number of the walnut available in Iğdır province, Turkey for the period of 2017-2023. It is expected that the walnut production amount of Iğdır province, Turkey will increase from 665 to 1335 tons for the period of 2017-2023. It is forecasted that the walnut tree number for the period of 2017-2023 will reach from 10938 to 22300. The present forecasts could facilitate policy makers to develop much better strategies in order to correctly plan production and tree number of the walnut for improving food industry in Iğdır province, Turkey in the next years.

Keywords: Walnut, Brown method, Exponential Smoothing, Production forecasting, Tree number forecasting, Time Series

Forecasting Production and Tree Number of Cherry Using Time Series Analysis: Case of Iğdır Province, Turkey

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Abstract

Cherry is one of the fruits preferred by consumers and produced in Igdir province of Turkey. The present study was conducted to forecast production amount and tree number of cherry grown in Igdir province of Turkey for the period of 2017-2023. Time series data sets regarding production amount and tree number of the cherry from the period of 1992-2016 were attained from TURKSTAT database. The time series data sets on production amount and tree number of cherry were determined to be non-stationary in the consequence of the first analyses performed. After the first differences of the time series data sets were taken, they were converted into the stationary time series. The stationary data sets were exposed to Exponential smoothing methods viz. Brown, Holt and Damped. Among these methods, Brown method was determined to be the best exponential smoothing method forecasting cherry production amount and tree number for the period of 2017-2023. It is forecasted that an increase from 694 to 950 tons for the period of 2017-2023 is expected for Igdir province of Turkey. It is forecasted that cherry tree number for the period of 2017-2023 will increase from 16932 to 22436. The present projection outcomes could allow policy makers to produce macro-level policies for food safety and more effectual strategies for precisely planning cherry planting in Igdir province.

Keywords: Cherry, Brown method, Exponential Smoothing, Production forecasting, Tree number forecasting, Time Series

Forecasting Production and Tree Number of Sour Cherry via Time Series Analysis for the Period of 2017-2023: Case of Iğdır Province, Turkey

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Abstract

Sour cherry is an important fruit used widely in food industry in Turkey. The aim of the present study was to forecast production amount and tree number of sour cherry grown in Igdir province of Turkey for the period of 2017-2023 using time series analysis method. To achieve the aim, time series data sets concerning production amount and tree number of the sour cherry from the period of 1992-2016 were taken from TURKSTAT database records. The time series data sets on production amount and tree number of sour cherry were concluded to be stationary after the first statistical evaluation; thus, there was no need of taking the first differences of the time series data sets on sour cherry. Brown exponential smoothing time series method was used to forecast production amount and tree number of the sour cherry for the period of 2017-2023. It is expected to be an increase from 374 to 475 tons for the period of 2017-2023 in the sour cherry production of Igdir province. It is estimated for Igdir province that sour cherry tree number for the period of 2017-2023 will reach from 15757 to 19142. The available forecasting results could enable policy makers to improve macro-level policies for food safety and more efficacious strategies for precisely planning sour cherry production and tree number in Igdir province for the future.

Keywords: Sour Cherry, Brown method, Exponential Smoothing, Production forecasting, Tree number forecasting, Time Series

Farmer Approaches to the Impact of Wind Power Plants on Crop Farming in Kirsehir Province

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Abstract

In recent years, demand of wind energy has increased due to its renewability, nature friendliness and easy applicability feature in many places. Underlying reasons of common use can be sorted as renewableity, nature- friendliness and easy installable opportunities to everywhere. Decrease in crop production is claimed because Wind Power Plants are being constructed in agricultural areas. In this study, changes in crop planting plans of farmers with regard to wind power plants constructed on agricultural lands in Kırşehir Province are investigated and the factors affecting production are tried to be determined. The study was conducted by using face to face questionnaries in Geycek, the region where power plants exist with the sample size of 171 determined by random sampling. To determine the attitute of farmers with respect to wind power plants, crosstabbing and probit regression analysis were conducted using the data collected from this survey and provided in the tables. According to the results of the analysis, proportion of farmers who did not alter their crop farming plants after existence of wind power plants is 74,3%, while who did alter are 25,7% in the study area. Increase in the age of farmers and owning social security cause farmer do not change their plant pattern while number of household members who joins agricultural production and having knowledge about wind power plants causes farmers to alter their crop farming. Because of low impact of wind power plants on crop production and their contribution to economy and tourism in the region, it could be concludued that wind power plants should be encouraged to be constructed in proper agricultural lands.

Keywords: Crop farming, Kırşehir, Probit, Wind power plant

Determination of the Capitalization Interest Rate in Agricultural Land in Ağrı Province Central District

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Abstract

Capitalization is the process by which all the income obtained is converted into assets at a certain time. Capitalization is a method of valuing a property based on its income. This method is used for economic values (land, buildings, etc.). When capitalization method is applied, determination of the income to be used and the rate of capitalization is very difficult and important. In determining the capitalization rate, the selling price and income of the land must be carefully calculated (Capitalization Interest = Annual Revenue from Land / Value of Sale of Land). As the capitalization rate gets smaller, the value of the land will increase, as the interest grows, the value will decrease. In the study, villages information survey was completed in the villages of Agri Province central district. In the villages, the population movements and the total number of the population in the last 10 years have been determined. The number of households and houses is also determined. Cultivation, production and yield values of all crops produced on the plant basis with dry, watery and meadow land amounts were obtained in the villages. The average values of the land sold in the villages and the average amount of income obtained from 1 decare was determined. In this study, it is aimed to determine the calculation of the average capitalization interest using all the data. The necessary comments will be made according to the calculated interest and suggestions will be made.

Keywords: Ağrı, Capitalization interest, Sales price

A Research on Factor Determination Affecting Consumer Preference on Medical and Medicinal Plants in Erzurum and Bingöl

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Abstract

Economic importance in the world and in Turkey, over the past decade, there has been a renewed interest and curiosity about the use of traditional medicine, where traditional medicine in China constitutes about 40% of all health care, 71% of the population in Chile and in Colombia 40% of the population reported using similar methods of medicine. In India, 65% of the rural population is using traditional medical methods to meet basic health care needs. The number of the questionnaires was determined using the Proportional Sampling Method based on the population of Erzurum and Bingol. The number of the questionnaires was 300 in Erzurum and 250 in Bingöl. Consumer preference for medicinal plants in the study was analyzed using the probit model as a limited variable. In Erzurum province, it has been determined that the variables related to the amount of monthly income, the share of budget for eating out, and the knowledge about herbal medicines are important for people choosing herbal medicines. The monthly income in Bingöl province and the presence of herbal medicines were observed in the analysis results that they were very effective in choosing herbal remedies.

Keyword: Bingol, Consumption, Erzurum, Medicinal Plants, Probit

The Use of Random Forest for Dystocia Detection in Polish Holstein-Friesian Red-and-White Cattle

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Abstract

The aim of the present study was to verify the applicability of random forest (RF) for dystocia detection in Polish Holstein-Friesian Red-and-White cattle and to indicate the most important predictors of calving difficulty. A total of 45,057 calving records from 3,511 herds located in Poland were analyzed. The following continuous predictor variables were used: AGE – calving age (in months), GEST - gestation length (in days), RANK – dam sire's rank based on the mean calving difficulty scores of its daughters (in scores). In addition, three categorical predictor variables were included in the model: SEASON - calving season (autumn, winter, spring and summer), LACT - lactation number and SEX – calf sex (male or female). The output (dependent) variable was calving difficulty class (easy vs. difficult). The whole dataset of calving records was randomly divided into a training (L; 33792 records) and test (T; 11265 records) set. In the RF development, equal costs of misclassification and the *a priori* probabilities estimated from the training sample were used. The number of predictors randomly selected for the splits in component trees was three and the percentage of training cases used for generating individual trees was 50%. To better illustrate the RF predictive performance, the receiver operating characteristic (ROC) curves were also plotted. Sensitivity, specificity and accuracy on the T set were 0.26%, 100.00% and 96.58%, respectively. The most important predictors included RANK and AGE. The area under the ROC curve was 0.50. The applied method of dystocia detection (RF) was ineffective mainly due to the very low proportion of dystocic records in the dataset (approx. 3.3%). Its application under field conditions would require its further improvement.

Keywords: Difficult calving, Data mining, Diagnosis, ROC curve, AUC

Prediction of Dystocia Occurrence in Polish Holstein-Friesian Red-and-White Cattle Using the K-Nearest Neighbor Method

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Abstract

The aim of the present study was to verify the applicability of the k-nearest neighbor (KNN) method for dystocia prediction in Polish Holstein-Friesian Red-and-White cows and heifers. A total of 45,057 calving records from 3,511 herds located in Poland were analyzed. The following continuous predictor variables were used: AGE – calving age (in months), GEST - gestation length (in days), RANK – dam sire's rank based on the mean calving difficulty scores of its daughters (in scores). In addition, three categorical predictor variables were included in the model: SEASON - calving season (autumn, winter, spring and summer), LACT - lactation number and SEX – calf sex (male or female). The output (dependent) variable was calving difficulty class (easy vs. difficult). The whole dataset of calving records was randomly divided into a training (L; 33792 records) and test (T; 11265 records) set. In the construction of the KNN model, the Euclidean distance between objects, the normalization of predictor variables and 10-fold cross-validation (to find the optimum number of neighbors) were applied. The sensitivity (the proportion of correctly detected difficult calvings), specificity (the proportion of correctly detected easy calvings) and accuracy (the proportion of correctly indicated calvings from both groups) on the independent T set were 0.00%, 99.94% and 96.51%, respectively. The applied data mining algorithm was rather ineffective in detecting cows with dystocia, which was mainly caused by its low frequency in the dataset (about 3.3%). This made it really hard for the classifier to correctly indicate such cases. Also, the use of a larger number of predictor variables would be needed in order to improve the predictive performance of the KNN model.

Keywords: Difficult calvings, Dairy cattle, Data mining, Prediction, Sensitivity

Dystocia Detection in Polish Holstein-Friesian Red-and-White Cattle Using Boosted Classification Trees

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Abstract

The aim of the present study was to verify the applicability of boosted classification trees (BCT) for dystocia detection in Polish Holstein-Friesian Red-and-White cattle and to indicate the most important predictors of calving difficulty in this breed. A total of 45,057 calving records from 3,511 herds were analyzed. The following continuous predictor variables were used: AGE – calving age (in months), GEST - gestation length (in days), RANK – dam sire's rank based on the mean calving difficulty scores of its daughters (in scores). In addition, three categorical predictor variables were included in the model: SEASON - calving season (autumn, winter, spring and summer), LACT - lactation number and SEX – calf sex (male or female). The whole dataset of calving records was randomly divided into a training (L; 33792 records) and test (T; 11265 records) set. In the development of the BCT model, misclassification costs were equal and the *a priori* probabilities were estimated from the training sample. The learning rate was 0.1 and the percentage of training records used for generating splits in individual trees was 50%. The final number of individual trees in the model was 351. To illustrate the relationship between sensitivity (the proportion of correctly detected difficult calvings) and specificity (the proportion of correctly detected easy calvings), the receiver operating characteristic (ROC) curves were also plotted. Sensitivity, specificity and accuracy (the proportion of correctly detected easy and difficult calvings) on the T set were 58.55%, 69.57% and 69.20%, respectively. The area under the ROC curve was 0.69. The most important predictors were RANK and AGE. The applied data mining method was quite efficient in detecting dystocic calvings in Polish Holstein-Friesian Red-and-White cows, although its practical application would require its further improvement.

Keywords: Difficult calving, Data mining, Diagnosis, Sensitivity, Specificity

Estimation of Forward Goose Population of Iğdır Province with Artificial Neural Networks and Some Regression Models

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Abstract

This study was carried out to predict geese population in Iğdır province by using the Artificial Neural Networks method and some regression models for the 2017-2020 years. In the study, data between years 1992-2016 was used. The results obtained by artificial neural networks method were compared with different regression methods (Linear, Quadratic and Cubic). According to the Artificial Neural Networks method, R^2 (Determination coefficient), MAPE (Mean absolute percentage error), MSE (Mean squared error) and RMSE (Root mean-square error) values were 0.912, 11.78, 0.274 and 0.523, respectively. In Linear, Quadratic and Cubic regression models; R^2 values were 0.536, 0.638, 0.640; MAPE values were 25.25, 22.05, 21.93; MSE values were 928.072, 837.758, 855.439 and RMSE values were 30.464, 28.944, 29.248. The results showed that Artificial Neural Networks method was a better predictor of Regression analysis in the forward prediction of geese population in Iğdır province.

Keywords: Iğdır province, Goose existence, Artificial Neural Networks, Regression models

Multicollinearity

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Abstract

The aim of this study is to determine the albumen index value which is one of the interior egg quality traits via ridge regression and basic components regression method. Eggs were collected from 20-24 weeks of age, non-selected and random mated Japanese quails. If a high correlation is present among the in regression model, a problem occurs called as multicollinearity. Bias predictors are used to reduce or remove multicollinearity. The least squares, ridge regression and principal components regression methods were compared on a data set. In order to determine albumen index, a regression equation was obtained using by egg width (X_1), egg length (X_2), Haugh unit (X_3), and shape index (X_4),

$Y = -10{,}969 - 2{,}857X_1 - 7{,}743X_2 + 0{,}250X_3 - 1{,}108X_4$ R^2=0,738

$Y = 12{,}120 - 5{,}932X_1 - 5{,}658X_2 + 0{,}260X_3 - 2{,}233X_4$ R^2=0,757

equations were obtained and statistically significant (P<0.001). Ridge regression or basic components regression method should be applied statistically instead of least squares regression technique in cases where multicollynearity occurs in model studies performed between egg inner and outer quality characteristics.

Keywords: Multicollinearity, Ridge, Principal Components, Least Squares

Estimation of Forward Turkey Population in Iğdır Province with Some Nonlinear Regression Models and Exponential Smoothing Methods

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Abstract

This study was carried out with the aim of using nonlinear regression and exponential smoothing methods in predicting the existence of turkey population in Iğdır province for years 2017-2020. Annual data for the period 1992-2016 were used in the study. In the study, Gaussian, Quadratic, Power and Logarithmic models of nonlinear regression methods were used. In the comparison of the models, the criteria of R^2 (Determination coefficient), $\bar{R}^2$ (Adjusted determination coefficient) and RMSE (Root mean-square error) compatibility benefit were used. The Gaussian model with the highest values of R^2 and $\bar{R}^2$and the lowest value of RMSE had superior to the other nonlinear models. Holt Linear, Brown Linear and Damped Trend models of exponential smoothing methods were examined. These methods were compared according to Bayesian Information Criteria (BIC), R^2, Stationary R^2 and RMSE criteria. The Holt Linear method with the lowest values of BIC and RMSE and the highest values of R^2 and Stationary R^2 was identified as the most appropriate method. It was observed that Exponential Smoothing methods are better than the nonlinear regression methods in predicting the presence of turkey population in Iğdır province of Turkey.

Keywords: Iğdır province, Turkey population, Nonlinear regression, Exponential Smoothing

Online Basic Statistical Aplications Web Site

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Abstract

"Basic statistics" is usually a mandatory course for associate degree and undergraduate programs. It is used in almost every scientific field by students, educators and researchers. Hundreds of thousands of students registered in both formal and non-formal education systems receive statistics courses and thousands of educators provide these courses. Applied education is a way of increasing success in Maths and Statistics courses and most of the people agree upon its effectiveness. In this study, a website for online applications for basic statistics course (standardnormal.gen.tr) is prepared and introduced. Via this website, students will have the chance for unlimited practice regading the subjects that they were taught in statistics courses. On the other hand, the educators will be able to use this service to generate a great number of examples and exam questions. It is believed that also researchers would find this study useful for simple analyses such as t, z, chi-square, regression and correlation.

Keywords: Online Basic Statistics, Statistical Applications

Estimation of Global Irradiation Parameters at Location of Migratory Birds in Iğdır, Turkey by means of MARS Algorithm

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Abstract

This study aims at estimating sum of global irradiation amounts at location (lat. 40.07.16 North and long 43.35.00 East) of migratory birds found in Iğdır province of Turkey. In the estimation of global irradiation parameters (Hd: average daily sum of global irridation per square meter and Hm: average annually sum of global irridation per square meter), several predictors viz. ESTLOSTEMP (estimated losses due to temperature and low irradiance), ESTLOSANGREF (estimated loss due to angular reflectance effect), and COMPVLOSS (Combined Photo Voltaic system losses) were calculated. Estimation of global irradiation parameters was made through multivariate adaptive regression splines (MARS) data mining algorithm for multiple responses (Hd and Hm) with the support of R software program and the utility prediction equation was aimed to improve for further biodiversity investigations. To determine the predictive quality of the MARS algorithm, goodness of fit criteria viz. coefficient of determination (0.994 and 0.996 R^2 for Hd and Hm), Generalized Cross Validation (0.000038 and 0.024024 GCV for Hd and Hm), Cross-Validation R^2 (0.974 and 0.967 CVR^2 for Hd and Hm), Residual Sum of Squares (0.00046 and 0.28829 RSS for Hd and Hm) and Standard Deviation Ratio (0.078 and 0.063 SD_{RATIO} for Hd and Hm) were calculated for penalty= -1 in the package "earth" of the R software. MARS prediction equation was derived at the smallest estimates of GCV which is defined as the ratio of RSS to n (sample size) for penalty= -1. The smallest GCV values were set at number of terms (4) with no interaction effect. Goodness of fit criteria exhibited that the MARS prediction model had a very good fit for a cross validation of 3. The MARS prediction equations for Hd and Hm were obtained as follows:

Hd=3.782 + 0.070*ESTLOSTEMP-0.042*max(0, 2006-YEAR)+ 0.015*max(0, YEAR-2006)

Hm=87.04 + 5.41*ESTLOSTEMP-1.49*max(0, 2006-YEAR)+ 0.76*max(0, YEAR-2006)

In conclusion, it was suggested that the convenient prediction equations generated by MARS algorithm would be a respected reference for next studies to be conducted about global irridation parameters.

Keywords: Migratory bird, Global irradiation, Biodiversity, Iğdır, MARS algorithm

Configuring Agricultural Education and Teaching for Sustainable Agricultural Production in Turkey

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Abstract

Agriculture is a chain of activities that shows variabilities according to the season, beginning with the other when one ends. This situation is due to the nutrition need. For this reason, the farmers have the season, the night and day. They have a job that they can always do and a future. While it is not possible to obtain more than one product from a crop in any job or field in the world, it is possible to obtain 50-60, even more seeds from a grain of wheat in agriculture. Because it is now a value-creating sector, agriculture has always been an area in mind of eye since the early eras. Thinkers have interpreted agricultural activities as a real sector. Aristotle, who said that other sectors outside of agriculture use the residual value obtained from agriculture, even said that people outside the farmers should not be taken to their cities. In other words, agriculture is the real; others are the beneficiaries of this sector. Although the person who is carried out the agricultural activities, plans, works in the sector, is named with different names as farmer, agricultural laborer, sharecropper, yarici, agriculturist or grower, the name 'farmer' who is a common idiom used everywhere, in all languages and in every country. Well, what does summer do in the countries where the seasons are experienced such as our country? What does the farmer do in winter? First of all, the farmer lives where the production farm is located. For this reason, the farmer feels the climate changes, and a separate calendar and his own distinct criteria use. He does not really accredit the rhetoric and criteria of technical staff like us. He considers that these measures will miss the sanctity and abundance of work. However, even if the farmers, who have been become corporate and made their business to others, have a certain amount of income and expense, they still make the account according to their emotions. This is a valid practice in many countries. Turkey is quite advanced in terms of farming compared to many countries in the world. However, since the system burdens a significant responsibility on the farmers, they have always focused more on production. Whereas anybody doesn't speak the concept of more income rather than more production. It is known that the direction of the agriculture sector is the development of the sector in the case of correct application of the policies of the decisions taken for its development and progress; otherwise it causes the sector's retrenchment. For this reason, policies need to be established as a government policy apart from the political will of politics. When these policies are assessed from the point of view of past and future, it can be seen that this can be established after a serious education and teaching activity. If so, how is today's agricultural education? How and where do they do this? And there is a need to answer questions like this in the future. The aim of the study is to evaluate the gradual steps that have taken place in the emergence of agricultural education in the past along with agricultural developments. After, he aims to discuss the agriculture of the future and the education and teaching he needs.

Keywords: Agricultural education-teaching, Agricultural policies, Development policies

Forecasting Production and Tree Number of Apricot Using Brown Exponential Smoothing Time Series Method: Case of Iğdır Province

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Abstract

Apricot is an edible fruit preferred mostly by consumers for its taste and aroma peculiar to Igdir province located in Eastern Anatolia Region of Turkey. The major aim of this study was to forecast production amount and tree number of apricot grown in Igdir province of Turkey for the period of 2017-2023. For this aim, these two-time series data sets from the period 1992-2016 were obtained from TURKSTAT database. The time series data sets on production amount and tree number of apricot were described to be stationary. It is forecasted that the apricot production in Igdir province of Turkey will show an increase from 33564 to 46768 tons for the period of 2017-2023. Similarly, it is estimated that apricot tree number for the period of 2017-2023 will reach from 297581 to 422646. The current forecasting results could permit policy makers to develop macro-level policies for food safety and more influential strategies for accurately planning apricot production and tree number in Igdir province in the following years.

Keywords: Apricot, Brown method, Exponential Smoothing, Production forecasting, Tree number forecasting, Time Series

Implementation of Multivariate Adaptive Regression Splines for a Data Set of Multiple Responses with a New Generalized Cross Validation Criterion

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Abstract

For statistically evaluating multiple continuous responses, some types of artificial neural networks (ANNs) i.e. multilayer perceptron (MLP) and radial basis function (RBF) are able to be used. Compared with these ANNs, multivariate adaptive regression splines (MARS) present more apprehensible outputs to prove high dimensional interactions for the data sets having the multiple responses. Within the scope of the package `earth` of R software, the aims of this investigation were to indicate how to apply the MARS data mining algorithm to the data sets with multiple responses to produce a good prediction equation for each of the continuous responses, how to write R codes in the implementation of the MARS algorithm and how to comment the outputs acquired after the statistical analysis of the MARS algorithm. The important aim of the investigation was to develop a goodness of fit criterion on an upper bound for GCV on the condition that penalty in the package `earth` of the R program was customized as -1 for having a good fit. The model quality criteria i.e. generalized cross-validation (GCV), r (the correlation between observed and predicted values in each of the responses) R^2, Adjusted R^2, coefficient of variation (CV%) and standard deviation ratio (SD ratio) were used to quantify the predictive accuracy of MARS algorithm. As a result, it is suggested that the results of the present investigation will be a notable reference for next studies on the basis of the developed GCV criterion in MARS algorithm for the multiple responses.

Keywords: Multiple responses, MARS, Data mining, R software, Earth package

Forecasting Production Amount and Vine Number of Grape Using Time Series Analysis: Case of Iğdır Province, Turkey

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Abstract

Grape is one of the most desired fruits in Igdir province located in Eastern Anatolia Region of Turkey. The available study was carried out to forecast production amount and vine number of grapes native to Igdir province, Turkey for the 2017-2020 period. In the projection study, time series data sets on grape production amount and vine number for the period of 1994-2016 were provided from TURKSTAT database records. The stationarity status of the data sets on the grape was controlled in the primary stage of the time series analyses. It was determined that the time series data sets were stationary. Exponential smoothing methods such as Brown, Holt and Damped were fitted to the time series sets. Among them, Brown linear model was ascertained to be the most influential exponential smoothing method that forecasted grape production of 48.70 and 47.27 tons in Igdir province for the period of 2017-2020. Among these, Holt linear model was the best for predicting vine number. The Holt linear model forecasted grape vine number to increase from 101 to 104 during the 2017-2020 period in Igdir province, Turkey. Consequently, the forecasting results could let policy makers to develop macro-level policies for food safety and more effectual strategies for more accurate organization of the grape production and vine number in Igdir province for the future.

Keywords: Grape, Brown linear, Holt linear method, Production forecasting, Time Series

Procedure of Mars Algorithm for Describing the Relationship Between Body Weight and Morphological Traits of Some Migratory Birds in Iğdır Province of Turkey

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Abstract

This investigation was conducted to reveal the relationship between morphological traits and body weight of several migratory bird species in Iğdır province, Turkey with the intention of describing the species standards of these birds. Multivariate adaptive regression splines (MARS) data mining algorithm explaining high order interactions was utilized for the description process by means of the package "earth" of R free software. Explanatory variables evaluated in the investigation were age, gender (male and female), wing length, tail length, etc. in the prediction of live body weight in the birds. Model quality criteria i.e. coefficient of determination (R^2), Adjusted coefficient of determination (Adjusted R^2), Generalized Cross Validation (GCV) and Standard Deviation Ratio (SD_{RATIO}) were for testing predictive accuracy of MARS algorithm with the specification of penalty= -1 in the package "earth" of R software. The prediction procedure was performed based on the lowest GCV. The current results indicated that a discrimination of the evaluated birds in morphological traits could be straightforwardly provided through MARS algorithm as a recommendable tool within the framework of describing species standards and especially investigating biodiversity of the birds. The available results will offer baseline information for future investigators in next studies.

Keywords: Migratory bird, Morphological traits, Biodiversity, Iğdır

Forecasting Production Amount and Cultivated Area of Tomato from the Period of 2017-2023 Using a Time Series Method: Case of Iğdır Province, Turkey

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Abstract

Tomato is an important edible fruit which is essential for fresh consumption and of primary economical importance for food industry in Turkey and the World. The current study deals with forecasting production amount and cultivated area of tomato grown in Igdir province of Turkey from the period of 2017-2023. TURKSTAT data regarding production amount and the cultivated area of the tomato from the period of 1992-2016 were analyzed using Brown's exponential smoothing method. Time series data set of the tomato production amount was non-stationary; therefore, the first data set was converted into stationary data set by taking its first difference. However, time series data set of the tomato cultivated area was described to be stationary. For the period of 2017-2023, it is forecasted that the tomato production amount to be produced in Igdır province, Turkey will reach from 53655 to 63388 tons. It is forecasted that for the same period, the tomato cultivated area will increase from 17143 to 21506 da. These projection results may provide insight for making better agricultural policies on the regional rural development. The accessible forecasting results could assist policy makers to progress macro-level policies for food security and more operative strategies for indeed planning the production amount and the cultivated area of tomato cultivated in Igdir province of Turkey in the next years.

Keywords: Tomato, Brown method, Exponential Smoothing, Production forecasting, Time Series Analysis

Factors Affecting Roughage and Concentrated Feed Cattle Breeding Enterprises in Central District of Iğdır Province

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Abstract

This study was carried out in order to determine roughage and concentrated feed preferences of agricultural enterprises having cattle livestock in Iğdır Province of Turkey. For this purpose, a questionnaire survey was administered to 64 entrepreneurs having at least 10 cattle. 65.6 percent of the participants were commercial aquaculture. While the preference for roughage feed in the enterprises was 67.2 % in the first place, the preference for concentrate was barley with 68.8 %. The interviewed enterprises 95,3 % roughage and 79,7 % concentrated feed themselves produce. 88.9 % of breeders have problems about feed costs in roughage feed supply while 96.8% of them are having problems about concentrated feed. The most important factor affecting forage preferences was price.

Keywords: Cattle livestock, Roughage and concentrated feed, Iğdır

Determination of Lentil Production Cost in Agricultural Enterprises in Midyat District

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Abstract

This study aims to determine lentil production costs in lentil producing agricultural enterprises in Midyat District of Mardin province. Data gathered from 110 questionnaires conducted as Simple Random Sampling method was used in the study. According to the results of the study, 76.50% of lentil production costs consists of variable costs while the remaining 23.50% is constituted by fixed costs. 36.82% of variable costs are costs for soil preparation while 32.56% are maintenance costs and 26.04% are harvest costs. 90.00% of the fixed costs are field rents. Producers get a 152.82 kg da^{-1} yield on the main product, lentil, and 110.83 kg da^{-1} yield of the by product, hay. 1 kg of lentil is sold for 1.58 TL and 1 kg hay is sold for 0.60 TL. Producers earned 91.57 TL da^{-1} of gross profit from lentil production and net profit of 25.08 TL da^{-1}. Due to low prices in the year of the study, producers could not make enough profits from lentil production. It is necessary to organize the region lentil producers to sell products at higher prices, to provide input support for lentil production and to increase premium support.

Keywords: Lentil, Cost analysis, Midyat

European Union (EU) Projects in Eastern Anatolia Animal Husbandry

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Abstract

Eastern Anatolia in Turkey; 19.6% of the land area and constitute 9.5% of the population, this population is 50% more than the provided income from agricultural production. 60% of this ratio is a region with significant potential to be affected by livestock. The policies implemented and the incentives provided do not appear to have contributed sufficiently to the development of the region in animal husbandry. In order to strengthen the production infrastructure in Turkey and to encourage the sustainability of production and to encourage the producers, the ministerial livestock loan has been given in the past years but the breeder has not found the necessary animal material and it is obligatory to import livestock from the outside. Again, the Eastern Anatolia Development Project (EADP) was not as expected. As a result, the EU, which is prepared to develop in this way, has created the necessary infrastructure for importing to Turkey. One of the Instrument for Pre-Accession Financial Instrument, "Rural Development" (IPARD), entered into force in 2007; It is a program aiming at using financial support in place and in an effective way, participating in the sector with livestock, making accurate and realistic analysis of the need for appropriate project preparation, project control and follow-up of institutional structure. However, the expected outputs from the EU projects have not been obtained as a result of the structure of the regional enterprises, the availability of producers in a professional, institutional and economically adequate level, livestock support, productivity, product quality and standards, and utilization of those in different fields. Depending on the rules of the project components, it is a process that small businesses can not use. In 2014-2020, IPARD will be supported for agricultural projects at 42% and 70% of the grant rates. In the provinces determined by the Ministry between 2017-2019, production in livestock, increase of income, development of employment, establishment of breeding animal need, establishment of commercial and modern enterprises, it will be important to support projects that support investments. It is important for the region to implement projects aimed at preventing the migration of population dealing with animal husbandry, increasing the competitiveness of the market by providing organizations, increasing productivity to prevent export retrenchment, and increasing production to meet demand. Otherwise, negativity in rural development, economic and social problems will be inevitable to grow. It may be useful to work in the region with the consciousness that with appropriate projects, financial resources from the EU and national resources can achieve more positive results using the same direction.

Keywords: Eastern Anatolia, Animal Husbandry, EU Project

Analysis of the Factors Affecting Participation to Training Activities of Rural Women: Case of Erzurum Province

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Abstract

The most important thing that enables become individuals of women in society is education. Level of development of world countries is measured with level of education of women in those communities. The place of women in the society is determined by level of development of the country and the socio-cultural characteristics. Also, statues of the benefits from wommen's social and economic development even if connected to level of develpoment and underdevelopment of countries in generally it is a known fact that they are behind of men in all societies. There are considerable differences between women living in rural and urban areas. As can be seen in the studies conducted, education level of many of rural women is low. Also, the possibility of benefiting from the educational, social and cultural activities of rural women is very limited. The resolution of the problems of women living in rural areas and playing roles in agricultural sector is very important in terms of rural and economic development. By this means, improvement of knowledge, skills and education levels of rural women is extremely important. Successful plans and programs to be applied to women will contribute to country economies. Conciously in terms of participation in production householders's wife the factors were determined that are effective for status, desire and tendency to participate to educational activities of women in Erzurum provincial center district villages were determined. This study was conducted with 135 survey head householders's wife in Erzurum province. The obtained data were analyzed using probit analysis. According to the results of the analysis, it is determined that increases the tendency of participate to their agriculture training courses as the wife of the household head works in the non-agricultural sector, increases participation status to the courses for the development of knowledge and skills and increases education level of women. As a result, it can be said that the fact that been in the right place as role and status of women in the social means is extremely important in terms development of the country and that can be realized with a conscious and qualified education process. The level of education should be increased by giving importance to women education in the solution of rural area problems.

Keywords: Rural women, Training activities, Probit, Erzurum

Consumers' Willingness to Pay and Market Shares for Drinking Milk Profiles in Iğdır Province

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Abstract

The aim of the study was to determine the factors effecting consumers' drinking milk purchase decisions at the retailer levels, and then to calculate the market shares and the consumers' willingness to pay for drinking milk profiles on their purchase patterns. Data collected from the study were obtained from household surveys with 160 consumers consuming drinking milk in Igdir province. The data were used for *Conjoint Analysis* to determine willingness to pay *(WTP)* and market shares *(MS)* related to drinking milk purchase decisions. The result of the study highlighted that the marketing shares of the first three drinking milk profiles maximizing the consumers' total utilities were calculated as %34, %12 and %10 (card number 7, 6 and 1), respectively. On the other hand, the consumers' willingness to pay under the origins and price levels of drinking milk were analyzed as %26 for Aegean/Marmara Region at the lowest price level, %16 for Northeast Anatolia Region at the lowest price, and %12 for Eastern Black Sea Region at middle price level. By having designed drinking milk profiles maximizing the consumers' total utilities, the marketing share and penetration rates of the products could increase, and the product profiles responded to the consumers' willingness to pay could satisfy considerably their purchase decisions.

Keyword: Conjoint analysis, Drinking milk, Igdir province, *MS*, *WTP*

Consumers' Drinking Milk Consumption Pattern: A Case of Iğdır Province

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Abstract

The aim of the study was to determine the factors effecting consumers' drinking milk consumption preferences, and to reveal marketing tactics and strategies with regard to their consumption attitudes. Data collected from the study were obtained from household surveys with 160 Turkish consumers consuming drinking milk in Igdir province. The data were used for Principal Component Analysis to determine the main factors related to drinking milk consumption preferences, and for K-means Cluster Analysis to establish homogeneous consumer segments according to their consumption frequencies. The result of the study showed that while the consumers consuming heavy drinking milk appreciated their preference factors focused on core benefit for organic drinking milk and sustainable rural development, those consuming medium drinking milk gave a greater importance to sustainable rural development and reach to the retailers under food supply chain confidence by means of the hedonic and sensory quality attributes with augmented product image. On the other hand, light users focused on core benefit of drinking milk impacting on child development under food supply guarantee with actual product mix. Consequently, not only the consumers but also the suppliers could provide much more benefit from these marketing strategies designed.

Keyword: Consumer attitude and behavior, Drinking milk, Igdir province, Principal Component and K-means cluster analyses

Consumers' Drinking Milk Purchase Decisions: A case of Iğdır Province

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Abstract

The aim of the study was to determine the factors effecting consumers' drinking milk purchase decisions at the retailer levels, and then to reveal marketing tactics and strategies based on their purchase patterns. Data collected from the study were obtained from household surveys with 160 the consumers consuming drinking milk in Igdir province. The data were used for Conjoint Analysis to determine the factors and their levels related to drinking milk purchase decisions, and to design the product profiles maximizing total utility of the consumers segmented by their consumption frequencies. The result of the study highlighted that the production technique (%30), the price (%16), the brand (%15.3) and the origin (%14.9) factors on the consumers' drinking milk purchase decisions were of highest relative importance. On the other hand, the factor levels such as organic production, pasteurized milk, Eastern Black Sea origin, whole-fat milk, national brand and lower price maximized the consumers' total utilities. Drinking milk profiles designed by these factors and their levels at the retailer levels could not only maximize the target consumer misses' total utilities but also increase considerably the suppliers' profit margin.

Keyword: Conjoint analysis, Drinking milk, Igdir province, Orthogonal design, Purchase decision

How to Produce Quality Olive Oil Economically?

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Abstract

Nutrition is one of the basic needs of every living thing and human. The essential functions of the substances required for nutrition are to maintain life. These nutrients in general are calories, nutrients, proteins, carbohydrates, vitamins, minerals and oils. The oils contained in the nutrients are divided into vegetable and animal. Oils are found in a group of nutrients that need to be taken daily to live because of their ability to provide energy. Olive oil is special oil in its vegetable oil groups but with its special properties. Because olive oil is found in unsaturated fats and has fatty acids called oleic acid and some minor compounds (phenolic etc.). The human being who tries to evaluate the possibilities offered by the developing technology on the one hand with the beginning of the 21st century, on the other hand, is even more concerned about the healthy nutrition to satisfy his long-life instinct. Naturally, this change process and the differences brought about by the century are reflected in the human dietary preferences. At this point, the preference of "quality" in olive oil consumption and production is on the agenda. Olive oil differs from other vegetable oils in stages from raw material production to processing and consumption, but also shows differences due to the minor components that are mentioned above in terms of human health. It is one of the most important quality instruments that these components are not lost during olive oil processing. In this study, the changing sense of quality in olive oil production and the technical, economic and social dimensions of the quality will be evaluated in the light of the related national and international legislation.

Keywords: Olive Oil, Quality, Technology, Social, Economically

Awareness on Functional Food of Food Engineer Candidates!

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Abstract

Functional food is efficient food or food components that meet basic nutrition veins of human body, provide additional benefits upon metabolic functions, protection from diseases and a healthy life. In this study, it is though that researching awareness intended for attitudes and behaviours on functional food of 1st grade and 4th grade students at Department of Food Engineering, Faculty of Engineering, Adnan Menderes University (ADU). Original data of the study is obtained from the questionnaire performed face to face interviews to elucidated students defining with complete inventory. While the responses taken from on attitude and behavior scale regarding functional food is investigated by factor analysis, some socio-demographic and economic parameters are analyzed by quantitative analysis (crosstabs and hypothesis testing). Precise relationships among some parameters such as food consumption frequencies and health problems caused by these frequencies, family structure, and body mass index are defined in result of the study. In addition, consciousness of the students on production, marketing and inspection of functional food in future professional life is investigated. It is determined that awareness level to functional food is on to increase at 4th grade students compared with 1st grade students.

Keywords: Awareness, Healthy consciousness, Functional food

Determination of Factors Affecting Egg Consumption of Consumers: Case of Erzurum Province

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Abstract

Proteins and other minerals that contain plant and animal products are important in healthy and balanced nutrition of humans. Among the animal foods, the easiest and cheapest food for the individual is egg and contains significant quantities of minerals and proteins. This food is known as the healthiest food source after the breast milk in many studies. Egg consumption is usually one or a few times a week in developing countries whereas it is around one per day in developed countries. The aim of this study is to determine the factors which affect egg consumption of individuals in Erzurum province. In order to achieve this aim, a survey was conducted with 400 individuals according to the age range using the household demographic data of TURKSTAT in 2016. According to the research results, while 10.2% of the individuals do not consume eggs, the number of daily egg consumption per capita is 0.75. It has been determined that the maximum consumption of eggs is in the range of 35-54 years for individuals and egg consumption of males is higher than female's consumption. It was also determined that individuals within middle and high-income groups and middle education levels consumed more eggs than other groups. Egg consumption in Erzurum province is same as quantities consumed in developed countries, but this province has a high rate of individuals who do not consume eggs at all. For this reason, it is necessary to study whether these individuals are consuming other animal products instead of eggs.

Keywords: Nutrition, Erzurum, Regression analysis, Chicken eggs, Consumption

An Overview of Fruit Production Potential and Its Contribution to the Local Economy in Iğdır Province

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Abstract

Igdir province is not a considerable fruit producer but apple, apricot and peach production is more prominent comparing to other fruit species. This province's climate is dominated by type of Eastern Anatolia Region's Terrestrial Climate. According to 2016 statistics total fruit production was realized to be 60.494 tons and total production value is calculated 31.710.943 $ in Iğdir where a number of fruit species can commercially be grown except for some fruit species not hardy for cold weather like oranges, bananas and olives. Considering the 2016 year total fruit production of the Tuzluca distric rank first with 25.892 tons of fruit productions respectively as Aralık is the last with a production of 1.147 tons. Again, regarding the fruit production by species, 31.329 tons of apricot, 23.404 tons of apple and 3.301 tons of peach were produced in Igdir in 2016. In this study, through presenting the existing status of the fruit production potential of the Igdir province, it was aimed to increase the awareness and set light to decision makers in future plans for making use of and directing the existing potential.

Keywords: Igdir, Fruit production potential, Development opportunities, Economic importance.

Bridging the Gap Between Universities and Agribusiness Industries in Transition Economies

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Abstract

To provide sustainable development significantly depends on bridging the gap between agricultural universities and industries. The size of gap between higher education institutions and industries shows collaboration level of both sides, quality of education and research. In fact, there is more distance between sides in transition economies or formerly administrative economies than developed countries. Administrative management of higher education institutions, obligation for hiring alumnus by state owned enterprises, significant share of theoretical teaching in education process and other problems were disadvantages of the system. Of course, transition to market economy requires finding bridging ways in order to increase employment level of local population, provide decent work and economic growth. The Republic of Azerbaijan, which had administrative economy, faced huge gap between higher education and industry in transition period. Student enrollment of higher education institutions, including Azerbaijan State Agricultural University (ADAU), the only as a result of implementation of effective economic policy in the country, national economy has recovered from downturn. Economic growth in agricultural sector, increased competition between domestic and international goods, services and labor markets demand prepare highly qualified agricultural specialists. Student and labor market oriented policy of ADAU, recent trends in the improvement of infrastructure, new establishments, such as laboratories, education and research centers, international collaboration, campus, internships, assisting and guiding in the development of programs and support systems for the alumni, strengthening the relationship between the university and its graduates, joining Bologna process contributed to bridging the gap university and agribusiness companies. In spite many achievements, as in other higher education institutions face, the gap is remaining main challenge for the university. The philosophy of university should be based on the following idea: university is “enterprise” and alumni are its “products”. To be successful in the labor market “products” must be competitive in terms of price (price of labor) and quality (qualified skills). The difference between price of “products” and contribution of skills to revenue is benefit of agribusiness companies. To measure the size of gap between the university and agribusiness companies the university use different indicators such as number and share of employed alumni, comparable analyze of wages and salaries, gender aspects of employment, distance between workplace and homeland etc.

Keywords: University, Agribusiness, Agriculture, Industry, Transition

Analysis of Publishing Modeling Studies in the First Six Months of 2017

Mustafa Akay, Alper Çiltaş

Abstract

In this study, a literature search was made about the mathematical modeling in 2017. Six studies published in the study in 2017 have been reviewed shortly. Mathematical modeling and modeling of primary, secondary and high school students were examined in the literature survey. Besides, the problems faced by prospective teachers and teachers during modeling are discussed. The common point of their work is the problems they often encounter when doing mathematical modeling. Analyzing the problems identified in the related works while analyzing the field type was analyzed within the frame of examination. In this respect; "What are the problems encountered in mathematical modeling?", "Can the problems encountered in mathematical modeling be categorized?" and "What are the main sources of problems in mathematical modeling?" Answers were sought. As a result of the analysis; problems encountered in mathematical modeling can be examined in five chapters. These were: physical, time, teachers and educational problems. The problems underlying these problems were identified and solution proposals were presented.

Keywords: Modeling, Mathematical modeling, Problems in mathematical modeling, Literature review

Forecasting Production and Tree Number of Cherry Using Time Series Analysis: Case of Iğdır Province, Turkey

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Abstract

Cherry is one of the fruits preferred by consumers and produced in Igdir province of Turkey. The present study was conducted to forecast production amount and tree number of cherry grown in Igdir province of Turkey for the period of 2017-2023. Time series data sets regarding production amount and tree number of the cherry for the period of 1992-2016 were attained from TURKSTAT database. The time series data sets on production amount and tree number of cherry were determined to be non-stationary in the consequence of the first analyses performed. After the first differences of the time series data sets were taken, they were converted into the stationary time series. The stationary data sets were exposed to Exponential smoothing methods viz. Brown, Holt and Damped. Among these methods, Brown method was determined to be the best exponential smoothing method forecasting cherry production amount and tree number for the period of 2017-2023. It is forecasted that cherry production will increase from 694 to 950 tons for the period of 2017-2023 in Igdir province of Turkey. It is forecasted that cherry tree number for the period of 2017-2023 will increase from 16932 to 22436. The present projection outcomes could allow policy makers to produce macro-level policies for food safety and more effectual strategies for precisely planning cherry production and tree number in Igdir province for the future.

Keywords: Cherry, Brown method, Exponential Smoothing, Production forecasting, Tree number forecasting, Time Series

Perceptions of Dairy Farmers in TRA2 Region About Agricultural and Rural Development Support Institution (TKDK)'s Project Support

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Abstract

Rural development component of instrument for pre-accession assistance which is provided for candidate countries by EU is applied as well in Turkey. Agricultural and Rural Development Support Institution (TKDK) is the only accredited distributer institution that was founded for the purpose of distributing IPARD funds in Turkey. Realizing the important revolutions for development of agricultural sector, new employed fields were generated through IPARD programme, agriculture-industry integration was achieved as a most important output. IPARD grants applied in TRA2 region contributes to cattles to be grown in more modern, hygienic and more appropriate contiditions. Moreover, IPARD grants contributes to agricultural products and foods to be produced and processed in modern facilities. Perceptions of Dairy Farmers About Agricultural and Rural Development Support Institution's Project Supports. Material of the study is consisting of questionnaries obtained from 33 granted farms and 48 non-granted farms in Kars and Ağrı provinces that can represent TRA2 region. Farms in Kars and Ağrı provinces granted through IPARD were compared by production, yield, used species, technology level, expectations, and reached results. As a result, share of cultured species of granted farms was found as 74%, while 48% for non-granted farms. Mean gross profit of granted and non-granted farms are relatively 323,757 TL and 71,173 TL. Additionally, 33% of beneficiaries are very pleased and 36% of beneficiaries are pleased with grants while no unpleasent beneficiaries were encountered. As non-granted farms were investigated, 28% of them declared lack of capital, 25% of them asserted insufficient knowledge and 20% of them stated bureaucratic processes for disuse of the grants.

Keywords: IPARD, Grant, TKDK, Agricultural and rural development, Dairy farming

Profitability Analysis and Marketing Structure of Green Beans Farms in Erzurum

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Abstract

The aim of the study is to analyze the profitability of the companies that produce green beans in Erzurum and to calculate the marketing margin. For this purpose, a questionnaire was conducted in 2015 in 100 farms that produce green beans in 5 districts of Erzurum province (İspir, Uzundere, Tortum, Pasinler and Oltu). In the study area, the average land ownership is 31.20 decares, the average land size is 39.39 decares, the average number of parcels is 5.65, and the average parcel size of the property is 5.52 decares. The average family size was 3.42 persons and the average family labor force was 2.00 MBU. The average of the variable costs in the study region was calculated as 735.13 ₺/de and the cost of production as 848.03 ₺/de. It is estimated that the average of the region is 2 919.38 ₺/de, and 2 071.34 ₺/de net profit and 2 184.25 ₺/de gross profit when the production costs are taken into account. When the sum of the market costs is taken into consideration, it is calculated that the average profit of 1 991.18 ₺/de and gross profit of 2 104.09 ₺/de are obtained.

Keywords: Green Beans, Net Profit, Gross Profit

Value Chain Analysis and Using Opportunities in Agricultural Sector

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Abstract

Value chain analysis is defined as definition of operating activities for transforming inputs into output. This transformation begins with design phase of product and service ends with after-sales services. The goal of enterprises is to ensure value formation and increase of value providing continuity of activities. In this study, use of value chain analysis in agricultural sector is examined. The material of study is composed of thesis, article and literature sources about the value chain, and the study is done by the method of compilation. İn Erzincan Province Milk Sector Value Chain Analysis and Investment Plan study, while the first producer obtained 45-75 penny / liter from milk's value chain, white cheese producer obtained 5-6 TL / kg, if milk was evaluated as white cheese. If milk was evaluated as tulum cheese, the value of white cheese, 5-6 TL/ kg up to 12-13 TL / kg (Akar vd., 2009). Azak (2011) specified at ‘‘Value chain analysis in olive oil sector and encountered difficulties in the applications of ISO 22000:2005’’ olive producer price of 2.5 TL / kg, as a result of packaging and distribution stages value of a glass jar olive oil price of 9,99-34 TL / liter of output is up.

Keywords: Value chain, Value increase, Agricultural sector

Health Sciences

Gastroenteritis Zoonosis; Campylobacter

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Abstract

Campylobacter infections, which is a typical zoonosis, is the most common bacterial representative of gastroenteritis. In addition to human infection, *C. jejuni* infects domesticated livestock, including sheep, cattle, goats, and pigs, most often leading to gastroenteritis in these species. *Campylobacter* bacteria between food-borne infections are in Europe the first, the United States (U.S.) are ranked second. It has been reported that *Campylobacter* along with *Salmonella* bacteria among of acute gastroenteritis factor is the first two in our country, and even it is the first place among the food-borne infectious agents in the last years. The increase in the incidence of gastroenteritis due to *Campylobacter* species is parallel with the increase in the consumption of chicken meat in recent years, and researchers has prompted to define this relationship. It is also reported that *C. jejuni* cause abortion, enteritis and mastitis in sheep, goat and cows from farm animals, and the incidence of *C. jejuni* isolation in cows has varied between 4%-64% in 2000. In the east of our country in 2014, it is seen that *C. jejuni* is present 17.5% in cattle. Similarly, the presence of *C. jejuni* in sheep was detected as 38.5%, while in sheep it was determined as 23.4%. The true incidence of gastroenteritis due to *C. jejuni* particularly is poorly known, in low income countries; studies in high-income countries have estimated the annual incidence between 4.4 and 9.3 per 1000 population. Because *C. jejuni* can cause massive outbreaks due to food (sometimes water), it is a public health pathogen and it is need to be notified in our country. However, very few of the clinical laboratories in our country can investigate the diagnosis of this event. Our knowledge of the prevalence of *C. jejuni* infections in our country is usually limited to findings obtained from small-scale surveys because of the insufficiency of the laboratory diagnosis and the inadequacy of the notifications. According to this, it is noticed that the frequency of the incidence can vary between 0.63%-16.4%. Therefore, to identify *C. jejuni* and to control *Campylobacter* valid diagnostic methods, biosecurity precautions, to better address persistent sources strategies of contamination need to be further investigated the role of the environment.

Keywords: *Campylobacter,* Chicken meat, Gastroenteritis

Developments in Autoimmune Diseases Mechanisms and Laboratory Diagnostic Tests

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Abstract

One of the most important features of the immune system is that the individual does not respond to its own antigens while responding to many microorganisms. If this unresponsive condition, called immunological tolerance, is impaired by various causes, the immune system may attack the individual's own cells and tissues. This event is called autoimmunity and causes a number of disorders called autoimmune diseases. The main factors in the development of autoimmunity are some inherited transitions of susceptibility genes that may contribute to the absence of autoregulation and some environmental triggers that can activate autoantibodies. Autoantibodies can be used in the diagnosis of autoimmune diseases, but it should be known that the detection of an autoantibody is not always sufficient to diagnose a disease. Only autoantibody detection can not be diagnosed because autoantibodies can be found in normal people without a specific disease. The correct diagnosis of an autoimmune disease can be made by correct identification of clinical symptoms and accurate interpretation of laboratory tests. Autoantibodies are used to identify autoimmune diseases, to determine the activity of these diseases, to follow up treatment, to determine treatment response, and to identify disease subgroups in some autoimmune diseases. Recent studies have focused on the search for new autoantibodies with high sensitivity and specificity that can be used to diagnose autoimmune diseases. In this study, we aimed to discuss the mechanisms of autoimmune diseases and the parameters used in diagnosing autoimmune diseases and the developments in laboratory tests.

Keywords: Autoimmunity, Otoimmune diseases, Diagnosis in autoimmune diseases, Mechanism of autoimmune diseases, Environmental factors

Importance of Microorganisms Living in Extreme Environments.

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Abstract

Microorganisms living in extreme environments have recently attracted the attention of scientists in terms of antimicrobial and enzyme production. Antibiotics that act to kill or stop the growth of microorganisms are bioactive substances which can be obtained biologically or synthetically. Antibiotics are used in many field such as human, animal health, food, environment and pharmaceutical industry. In particular, the need for new antibiotics is increasing day by day because human medicines disrupt the efficacy of existing treatments. Enzymes are substances made by living cells that are proteins that specifically catalyze chemical reactions. Today, enzymes used for industrial purposes are usually obtained from microorganisms. Pigments, antibiotics, toxins, volatile compounds, enzyme-containing extracellular proteins produced by fungi called so-called secondary metabolites are important products of microbial origin benefited by human beings. Describes a very broad metabolic reaction scale in which sequestering metabolism products are not directly or obviously effective in normal growth. From this point of view, secondary metabolism differs from normal metabolic pathways. Nowadays, researchers see potential as microorganisms living in marine ecosystems as an alternative source for the isolation of new metabolites and attach importance to these circles. In this study, we aimed to discuss microorganisms and living environments with high economic value due to potential industrial product potential which can be isolated from extreme aquatic environments.

Keywords: Extreme aquatic environments, Microbial ecology, Microbial products

Vitamin K and Diabetes Relationship

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Abstract

Diabetes is a health problem that affects many people's life quality negatively. Researches show that vitamin K has an important effect on diabetes. In this review, it is aimed to examine the effects of vitamin K supplementation on diabetes. Diabetes is a global disease that is associated with hyperglycemia due to impairment of insulin release and/or function, a financial burden on countries and whose frequency is increasing day by day. The prevalence of diabetes in the world is 8.8%, in Turkey it is 13.7% and it has been determined that the prevalence increased 90.0% over the last 12 years. Acting as coenzymes and cofactors in metabolic events of micronutrients such as vitamins and minerals, contribute to the treatment of many health problems like diabetes. Vitamin K that is fat soluble and known as with its role in blood clotting, is a micronutrient used in diabetes treatment. In researches, it is suggested that forms of vitamin K such as phylloquinone and menacinone may reduce the risk of diabetes by improving the glucose balance. Phylloquinone and menacinone, reduce serum insulin concentrations and fasting blood glucose, cure insulin resistance, so they help to diabetes treatment. Vitamin K dependent protein osteocalsin causes these effects. In studies, it is reported that osteocalcin promotes beta cell proliferation, stimulates insulin expression and secretion. Increase in serum osteocalcin levels have been associated with low fasting blood glucose, insulin levels and insulin resistance. Also, vitamin K improves blood lipid profile, decreases inflammation, inhibates stimulates insulin resistance cytokins like IL-6, lowers serum triglyceride levels. It can be said that vitamin K supplementation have positive effects on glucose regulation, inflammation and lipid profile. Besides, additional studies about possible effects of vitamin K and determining the underlying mechanisms is needed.

Keywords: Vitamin K, Diabetes, Insulin, Blood glucose

Foods with Molasses Belonging to Diyarbakır

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Abstract

It is known that molasses is made using different products and techniques in different regions of Turkey. In this study, it was aimed to determine the production method of grape molasses and products made with grape molasses in Diyarbakır which are a part of our culture. Foods with molasses are “Pestil (bastık), Halvah, Kesme”, Sausage, Sausage with foam, Yoghurt with molasses, Egg with molasses, Braised molasses, Braised halvah with egg, Braised pestil with egg, Halvah of flour with molasses, “Malez, Asir”, Date of halbur with molasses (kalbura bastı), “Katkat” (katmer) with molasses, Bread with “Torak” and “Şilliki”. This research was conducted as qualitative study. These data were obtained from scanning on electronic scientific databases using Keywords such as molasses, grape molasses and the structured interview form from the resource people residing in Diyarbakır. Expanding and recording the preparation of molasses is important in terms of health, nutrition and economics. As a result of this study and such compilations, it will be tried to remember forgotten foods and transfer them to future generations.

Keywords: Molasses, Foods with Molasses, Diyarbakır, Traditional Foods

Special Athletes with Down Syndrome: A Case Report SWOT Analysis (Strengths, Weaknesses, Opportunities and Development Limiting Factors of Special Athletes in Turkey)

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Abstract

Sport has beneficial effect on the human health in a lot of ways, as well as mental and social development of intelligence, communication skills, attention levels, physical development and weight control. Sport is also extremely important on humans physically (lung, blood pressure, a positive effect on diseases related to the heart and hormones) as well as psychologically and sociologically. Doing sport should be the right for special children with Down Sendrome as for the every healthy individual. This study is subject to the positive impact of sport on the lives of individuals with Down Syndrome and the sporting life of a special sportsman who participates in various sports activities. Sporting has a great importance in terms of improve the life quality of the individuals with Down Syndrome. In this study, the sporting life of A.Ö., who was born in 1992 with moderate intellectual disability and hyperactive characteristics and positive experiences and skills that the sport provide to A.Ö. have been cited. The sporting life and received awards of an individual with Down Syndrome are summarized in the light of informations of his coach and family. A.Ö. who has been supported with individual trainings since birth, has been trained in different sports, especially swimming from 5 years old. He also participated in team games like basketball and football, but he has been more successful on athleticism, gymnastics, cycling, bowling and swimming. He still continues to work on basketbool, fitness and bodybuilding. A.Ö.s' interest in sport has contributed positive effect on many issues such as socialization, friend relationships, making friends, his self-care skills, taking responsibility, increasing self-confidence, nutrition and weight control. Making sports has made A.Ö. more positively different from other young people with Down Syndrome. With this aim: surveys are planned to be done by face to face interviews with 50 special athletes' family. SWOT analysis (Johnson ve ark, 1989; Bartol ve Martin,1991) which is an important technique on decision point and examining and evaluating any subject with sub-tittles as strengthes, weakness, oppurtunities and threates has been applied.

Keywords: Down Sendrome, Special Athletes, S.W.O.T.

An Important Factor to Have Impact on the Health: Indoor Air Quality

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Abstract

While it has been stated that 47% of the world populations lived in the cities at the beginning of 2000's, it has been predicted that this ratio will increase to 60% in 2030. The individual who continue his/her life in the city spends most of his/her time in the indoors such as home, public buildings, school, hotel, theater, cinema, library, hospital, shopping center, vehicle and waiting area. Conversely, it is known that the contaminating level if internal environment is higher than the external environments. The indoor environment, which affects negatively on the public health causes a set of symptoms such as weakness, fatigue, lacrimation, respiratory problems with the asymptomatic symptoms. It isn't accidental that these symptoms which affect negatively on the health are mentioned with the sick building syndrome and depressive building syndrome. Thus, it is necessary that the indoors that we spend great part of our life are searched in terms of the factors which would affect the health and the necessary informing and regulations are done within the consideration of the research results. Thus, it is necessary that the analyses are regularly done in order to prevent the radon, asbestos, cigarette smoke, formaldehyde, volatile organic compounds and the pollutants which occur as a result of burning (carbon monoxide, carbon dioxide, sulphur dioxide, nitrogen oxides and particles etc.) which can affect the health become more than the limit values of the indoor environments which constitute the working and living areas, and in the case that they get the more value than the limit value necessary precautions are taken. Furthermore, it is compulsory that the indoor environment is ventilated regularly and the fresh air entry is provided. The following manners will contribute that the man gets the well-being manner in terms of physical, spiritual and social; the air circulation of environment is well, it is cleaned from too many items, its architecture is done in a way to get benefit from sunlight. This study has been done in order to determine the impacts of environmental air quality on the health.

Keywords: Indoor, Healthy, Indoor air quality, Health impacts, Exposure

The Importance of Behaviours on the Environmental Awareness and the Healthy Lifestyle in Higher Education

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Abstract

The scientific and technological developments with industrial revolution, the increasing population and the man's insensible acts against nature are among most important reasons of many generated problems today. The man has impact on these important problems over world. An individual with environmental awareness is a person with eco-friendly acts, not being indifferent to environmental deterioration, being sensitive to environment and acting for society and environment by putting personal ambitions away. When the causes of death in the developing and developed countries are reviewed, the occurrence of great deaths is seen due to negative acts in lifestyle and diseases with negative impacts of environmental conditions. They are described as healthy lifestyle that a person can control all behavioural patterns and can select the behaviours to increase well-being manner of events in daily life. The period of higher education at youth between 15-24 ages brings the change and innovations in persons. When the occurrence of habits and susceptibilities is considered generally at youth, the viewpoints develop with experiences and knowledge, the autonomy and control mechanisms are much more developed in lifestyle rather than teenagers and this group will be persons to decide and generate in future, it is necessary to evaluate this period as an opportunity period to gain environmental awareness in young persons and to get acts of healthy way. Thus, it is necessary that acts of healthy lifestyle and environmental awareness are represented to students in higher education, the acts are supported to make them real, to take precautions to develop health as the deficiencies are determined, and to put lessons to corroborate to develop environmental awareness. As a result of literature review, many searches related to environmental awareness and acts of healthy lifestyle in students of higher education have been done but a study hasn't been seen to review the relation between environmental awareness and acts of healthy lifestyle. It is important that young generations are healthy individuals and they grow as individuals to be sensitive on environmental problems. This study was done to emphasize importance of environmental awareness and acts of healthy lifestyle in higher education.

Keywords: Environmental awareness, Higher education, Environmental knowledge and attitude, Healthy lifestyle behaviours, Health awareness

The Importance of Consuming Fish Meat in Early Childhood Period in Terms of Healthy Development

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Abstract

Early childhood period (0-8 years) is the fastest period of human development and is the most demanding period. This period covers the whole of the physical, mental and social developments. There are three main factors that influence these development types. They are nutrition, environment and education. The importance of the nutrition in child development starts in the womb, and it also continues after the birth. During the period of pregnancy, every nutrient that has a place on the mother's own diet also has an indirect effect on the baby. This situation also continues during the postpartum breastfeeding period. Protein-based foods should always be found in the children's nutrition programs during the period of supplementary food and afterwards. The fish is a highly nutritional food source and is also an excellent source of nutrition for the babies. It's a food that is extremely rich in omega-3. Omega-3 fatty acids in the fish are considerably beneficial for babies' brain development. The fish is also rich in iron, calcium, zinc and magnesium. These minerals are also very advantageous in the development of the baby. The fish is a protein source with high nutritional value because of its vitamin, mineral and fat contents, in addition to being easily accessible in our country, whose three sides are surrounded by the sea, and whose water resources are fairly rich. Our country's waters are also rich in fish species and the fish prices are suitable for every budget size. In this study, the importance of consuming fish meat during the early childhood period, where the basis of a healthy life is constituted, in terms of a healthy development has been investigated.

Keywords: Early childhood period, Fish meat, Omega-3, Development

Determination of Pathotypes of Barley Scald Disease [Rhynchosporium commune (Zaffarano, McDonald&Linde)] in Some Provinces in Central Anatolia

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Abstract

Rhynchosporium commune, causal agent of the leaf spot in barley and known as barley scald, is one of the most important diseases of barley in Turkey. The highest barley production in Turkey is done in central Anatolia. To determine current pathotypes of the agent, single spore isolates of the pathogen from diseased leaf samples were obtained as a result of the survey studies conducted in Ankara, Eskişehir, Konya and Çorum provinces of the Central Anatolia in 2013 and 2014. A total of 72 single spore isolates of *R. commune*, 24, 14, 27 and 7 from the provinces above respectively, were obtained. By inoculating every isolate on susceptible cv. Aydanhanım and resistant cv. Çetin-2000 in greenhouse conditions, pathogenicity tests were done and pathotypes of the pathogen were detected according to virulent and avirulent reactions using differential sets of Turk (Rrs1), Atlas (Rrs2), Atlas-46 (Rrs1+Rrs2), LaMesita (Rh4/10) and Osiris (Rh4/10+?). A total of 30 isolates showed susceptible reaction on the cv. Aydanhanım, while all the isolates displayed resistant reaction on cv. Çetin-2000. As a result of the study, a total of 6 different pathotypes of *R. commune* were determined. However, pathotypes (P1-P2-P3-P4 ve P5), (P1-P2-P4-P5-P6), (P1-P2-P4-P5), (P1-P2 ve P5), were found on the samples from Ankara, Eskişehir, Konya and Çorum, respectively. In the study, it was also found that cvs. Tokak157/37, Sladoran, Larende, Bülbül-89 and Topbaş (landrace) were grown in the survey areas. Of investigated 72 isolates, 28, 20, 1, and 1 showed susceptible reaction on cvs. carrying resistance genes, Rrs1, Rrs2, Rrs1+Rrs2, and Rh4/10, respectively, but none of them showed susceptible reaction on the gene Rh4/10+?. Therefore, in the manegement of *R. commune*, cultivating varieties carrying resistance gene, Rh4/10+?, could be suitable and using those cultivars in resistance studies can be offered.

Keywords: Central Anatolia, Barley, Scald, Reaction, Differential, Pathotype

Basic and Engineering Sciences

Environmental Permit and License in Turkey

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Abstract

Rapid population growth and increasing production and consumption activities in this parallel has brought a variety of environmental problems. These activities threaten to human and environmental health through adverse effects on the air, water and soil. This situation reveals the need for a number of applications in order to reduce and prevent these effects. Environmental Permit and License is one of the legal arrangements made to reduce and prevent environmental problems in Turkey. With Environmental Law numbered 2872, in Turkey; the environmental permit in order to be able operate the plants with adverse environmental impact; the plant conducting operations related to the collection, recycling, recovery and disposal of waste are required to obtain environmental permit and license. The legal infrastructure of environmental permits and license applications forms the "Regulation on Permits and Licenses regarding the Environmental Law" published in the Official Gazette on April 29, 2009 and numbered 27214. Environmental Permit and License Regulations published in the Official Gazette on September 10, 2014 and numbered 29115, went into effect on 1 November 2014 and "Regulation on Permits and Licenses regarding the Environmental Law" has been abolished. In Turkey, within the framework of an integrated approach strategy, from 01 April 2010 only an environmental permit application has been implemented rather than discharge permit, emissions permits, noise permits, deep sea discharge permit, discharge permit of dangerous materials and licenses in waste management. The purpose of environmental permit and license is to prevent emissions to air, water and soil of the plants and activities which have a negative environmental impact and is to reduce in cases can not be prevent. In this study, the Environmental Permit and License process, a process which is effective in controlling the environmental impact during the operation phase of activities in Turkey were examined.

Keywords: Environmental, Permit, License, Permit and license process

Geographical Marking and Registered Geographical Cheese in Turkey

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Abstract

Geographical indications are marks that indicate a product originating from a particular area or identified with that area by a distinctive character, reputation or other characteristics. It is the basis for implementing at least one property of the identified values from a particular geography. As a result of this, the national values of the countries are protected and the economic life as well as the cultural life are gained. With its long history, Turkey is a very rich country in terms of geographical signs and the number of products suitable for geographical indication is expressed in thousands. The protection of the product richness of geographical environment features through geographical signs is becoming more and more important depending on the developments in world trade. Protecting the consumers against imitated products, ensuring the comfort of the producers, support the rural development, protecting the cultural values of the countries and transferring them to other generations, protecting the environment and biodiversity are among the purposes of protecting geographical indications. Cheese is a product produced in Turkey with different types and have geographical markings of some varieties. Registered geographically marked cheeses of Turkey are Diyarbakır Örgü Cheese, Edirne White Cheese, Erzurum Civil Cheese, Erzurum Küflü Civil Cheese (Göğermiş cheese), Erzincan Tulum Cheese, Ezine Cheese. Also, there are many cheese varieties already in the registration phase.

Keywords: Geographical signs, Cultural values, Registered cheese

Bingöl-Karliova Highway Route Visual Quality Analysis

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Abstract

Bingol city has 1150 m altitude and it is one of the greenest cities in Eastern Anatolia Region. Karliova is the highest district of this city with 1950 m central altitude. During 70 km on this way, the altitude reaches to 900 m and presents us different landscape characters. D950 highway where this study was done has the importance to be the shortest way among north cities and south and southern cities. Besides the natural and cultural diversity, it also has view beauty. In this route, totaly two questionnaires, semi - standard and visual quality questionnaires were done. 12 photographs which were taken at this highway were used in visual quality analysis. At survey results, frequency analysis and T-test were implemented.

Keywords: Bingöl, Karlıova, Scenic road, Visual quality analysis

Conformal and Projective Vector Fields on the Cotangent Bundle with the Modified Riemannian Extension

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Abstract

Let M be an n-dimensional differantiable manifold with a symmetric connection ∇ and T^*M be its cotangent bundle. There is a well-known natural construction which yields, for any affine connection ∇ on M, a pseudo- Riemannian metric $\tilde{g}\nabla$ on T^*M. The metric $\tilde{g}\nabla$ is called the Riemannian extension of ∇. We will use a deformation of the Riemannian extension on the cotangent bundle T^*M over (M,∇) by means of a symmetric (0,2) - tensor field c on M. The metric is the so called modified Riemannian extension. We classify of conformal and projective vector fields on the cotangent bundle with the modified Riemannian extension $\tilde{g}\nabla, c$ over Riemannian manifolds.

Keywords: Cotangent bundle, Modified Riemannian extension, Conformal vector field, Projective vector field

Assessment of Natural Radioactivity Levels and Radiological Hazards in Oil Samples of Kars

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Abstract

In this study, the activity concentrations of 99 soil samples collected from different locations of Akyaka, Arpaçay, Susuz, Sarıkamış, Selim, Digor districts of Kars and also Kars centre were determined using NaI(Tl) gamma spectrometry. It was observed that the concentrations of the natural radionuclides ^{40}K, ^{226}Ra and ^{232}Th in the soil samples varies from 435.0±58.8 to 562.0±132 $Bqkg^{-1}$, 17.9±7.7 to 47.8±8.0 $Bqkg^{-1}$ and 27.7±4.8 to 57.94±14.6 $Bqkg^{-1}$, respectively. The radium equivalent activity (Ra_{eq}), the outdoor gamma absorbed dose rate (ADR), the annual effective dose rate in air due to the presence of radionuclides (AED) and lifetime fatal cancer risk (LFCR) was obtained in studied soil samples. The results presented in this study are compared with the results of similar studies carried out for different parts of Turkey and the world mean values. The results presented in this study are compared with the results of similar studies carried out for different parts of Turkey and the world mean values. The outcomes of the study enable as a reference for future evaluation.

Keywords: Soil, Natural radioactivity concentration, Gamma ray spectrometry, Cancer risk

3-MCPD Formation in Refined Vegetable Oils

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Abstract

Refining of vegetable oils is a process applied to eliminate undesirable impurities in oils. High temperature application, especially during the deodorization phase; can lead to some significant changes in the composition of the oil. 3-MCPD (3 – monochloropropane – 1,2 diol) was first detected in 1978 in acid hydrolyzed plant proteins and in products such as soy sauce. 3-MCPD formation occurs in the presence of glycerol, monoglyceride, diglyceride, chloride ions, temperature and duration effect. Nowadays there are many studies shown that the presence of chlorine ions in the water used during steam distillation during the refining of vegetable oils and the process conditions can lead to 3 - MCPD formation. The world health organization, the united nations food and agriculture organization and the European commission; in 2001, they stated that 3-MCPD has a carcinogenic and possible genotoxic effect. 3-MCPD has been detected in crackers, biscuits, malt, meat products, fish products, coffee, fried cheese, baby foods and potato products. The first study on the formation of refined vegetable oils was carried out in 2006. Especially in refined palm oil and refined olive oil, 3-MCPD was found higher amount than seed oils. As a result, it has been determined that the amount of chlorine in the water, the chemical composition of the oil, the deodorization temperature and duration, and vacuum processing are very important for the formation mechanism of 3-MCPD.

Keywords: 3 – MCPD Formation, Deodorization, Toxicity Effect, Refined Vegetable Oils

Potential of Mozzarella Cheese Production in Iğdır City

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Abstract

Mozzarella cheese, which is one of Italy's most famous cheeses, is produced with buffalo milk. It is very difficult to provide buffalo milk because the buffalo breeding in our country has decreased a lot. So, many products sold under the name Mozzarella on the market are Mozzarella cheese-like cheeses. The fact that Mozzarella cheese is a world-known cheese variety and demanding all over the world and because of our country welcomes millions of tourists from around the world every year and buffalo breeding is carried out in our city we can investigate for the production of Mozzarella cheese in Iğdır city. The analysis of the milk composition of the buffaloes breeding in Igdir province, the evaluation of the milk yield potential, the evaluation of the production lines and the potentials of the existing enterprises will be the priority areas of study to determine the production potential of this cheese. However, those who will go through this potential action will be those who want to contribute to the province of Iğdır and the city economy.

Keywords: Mozzarella, Buffalo milk

Integrated Management Systems in Food Industry

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Abstract

Providing the competitiveness in food producers is impossible without achieving the consistent quality and food safety. A remarkable number of the currently available standards and specifications ensures the management of enterprise to choose the most appropriate system. These producers can implement a single system or a set of systems which can represent the Integrated Management System (IMS). IMS are systems that Quality, Environment and Occupational Health and Safety are integrated and gathered under a single roof. The diversity of management systems requested by both the customers and the business owners are required to manage the multiple management systems at the same time. The fact that these systems are set up in different structures and viewpoints, creates difficulties in managing the systems. For this reason, instead of solving their problems separately, the systems provide a lot of benefits by approaching holistically and solving them within this structure. In addition, the separate management of the different systems is accompanied by additional management and control costs. In order to overcome these problems, systems can be installed as IMS or existing systems can be integrated later. IMS, management systems such as ISO 9001, ISO 14001, OHSAS 18001, ISO 22000, are holistic applied systems that are gathered under a single roof and requirements are supplied at the same time.

Keywords: Integrated Management System (IMS), Quality Management System (QMS), ISO 22000

On the Analytical Solutions of Partial Differential-Algebraic Equations by the Homotopy Perturbation Transform Method

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Abstract

Finding the approximate and analytical solutions of the partial differential-algebraic equation is a hot topic in the field of differential equations and its applications. This paper is devoted to the partial differential-algebraic equations by the homotopy perturbation transform method. This method is a combined form of the homotopy perturbation method and Laplace transform. The nonlinear terms can be easily handled by the use of He's polynomials. Homotopy perturbation transform method is powerful and simple compared to other methods. The analytical solutions for different cases of the equation are obtained.

Keywords: Partial differential-algebraic equation, Homotopy perturbation method, Laplace Transform, Analytical solution

Impact of Microscale Vegetation on Urban Thermal Comfort with Thermal Infrared Imaging: Erzurum City Center

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Abstract

Kentsel nüfusun hızla arttığı yaşam alanlarında, konut ihtiyacını karşılamak için yapılan çalışmalar sonucunda başta hava kirliliği olmak üzere, çarpık kentleşme, enerji tüketiminde artış, çeşitli çevre sorunları ortaya çıkartmakta ve kentlerin termal konforu azalmaktadır. Buna bağlı olarak, kentlerde oluşan ısı adası etkisi gittikçe artmaktadır. Isı adası etkisini azaltacak, sürdürülebilir kentlerin oluşması için iklim parametrelerinin plan kararlarına aktarılması doğru bir süreç olarak öngörülmektedir.

Bu amaçlar doğrultusunda, Erzurum kent merkezinde termal konforu iyileştirmek için egzotik ve doğal bitki kompozisyonlarının kullanıma uygunluğu araştırılmıştır. Termal kamera ile kent merkezinde yer alan doğal türlerin ve egzotik türlerin kompozisyonlarının yüzey sıcaklık ölçümleri alınmıştır. Ölçümler 2017 yılı yaz aylarında havanın açık, yağışın olmadığı ve sıcaklığın yüksek olduğu günlerde saatlik olarak alınmıştır. Kent merkezi içinde, aynı bakı, rakım, mevki olarak birbirine yakın mekanlarda bulunan ortamlardan alınan kayıtlardan, 4'ü seçilerek saat 14:00 e göre analiz edilmiştir.

Alınan ölçümler ve yapılan değerlendirmeler sonucunda; doğal bitkilerin egzotik bitkilere göre 0.4 ^{o}C ile 2.2 ^{o}C arasında daha serin bir ortam oluşturduğu tespit edilmiştir. Kentsel açık-yeşil alan planlamalarında termal konforun sağlanması açısından doğal bitkilerin kullanılması önerilerinde bulunulmuştur. Özellikle kentsel mekan ölçeğinde plan kararları alınırken iklim faktörünün kullanılmasının gerekliliği vurgulanmıştır.

Keywords: Thermal Imaging, Native Plant, Exotic Plant, Erzurum City

Probabilistic Uncertain Linguistic Distance Measures and Their Applications in Multi-criteria Decision Making

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Abstract

Probabilistic uncertain linguistic sets (PULSs) compose of some possible uncertain linguistic terms associated with the corresponding probabilities. In this study, we define the probabilistic Uncertain Linguistic Distance Measures and investigate some of their interesting properties. Then we establish a multicriteria decision-making method based on the distance (similarity) measure between PULSs. Finally, an illustrative example is given to demonstrate the effectiveness of the proposed method.

Keywords: Probabilistic uncertain linguistic sets, Distance measure, Decision-making

Investigation of Gif Animation's Effectiveness on Grade 12 Mathematics Education

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Abstract

GIF animation is an image type that contains multiple images in the content and we see the existing ones in sequence. The purpose of this study is to show how students who are studying in secondary education react educationally to GIF animation technological concept. Randomly selected GIFs from the internet were used to measure this response. With this use, we tried to determine what students think about the educational and visual features that exist in GIFs. 41 students participated from Science High School and Anatolian High School. Later, the results of the two schools were assessed with a form to compare and measure consistency. Number of GIFs used is numbered. Some GIFs are defined as insufficient.

Keywords: GIF, Mathematics education, Geometry, Visualization, Instruction

On Soft Multi b-Sets and Soft Multi b-Continuous Functions

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Abstract

The purpose of this study is to continue the endeavor of soft multi b-sets introduced in the article titled "Soft multi generalized regular sets in soft multi topological spaces" by A. Özkan. Then discussing the relationships among soft multi α-open sets, soft multi semi-open sets, soft multi pre-open sets and soft multi β-open sets. We also investigate the concepts of soft multi b-open functions and soft multi b-continuous functions and discussed their relations with soft multi continuous and other weaker forms of soft multi continuous functions.

Keywords: Soft set, Soft multi sets, Soft multi b-sets, Soft multi b-continuous functions

On Soft Multi Generalized Closed Sets

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Abstract

Molodtsov's soft set theory was originally proposed as general mathematical tool for dealing with uncertainty. Numerous notions of general topology were involved in soft sets and then authors developed theories about soft topological spaces. The purpose of this study is to continue the endeavor of soft multi generalized closed sets introduced by A. Özkan. In the beginning, we explain some definitions and vital conclusion under soft multi set theory. Then, the new soft separation axioms on soft multi generalized sets, i.e soft mT_i-space $(i = 0,1,2,3,4)$ was introduced and its properties were investigated. Later, the concept of soft multi generalized closed set with its some theories and corollaries were presented. We also presented soft multi generalized open sets and studied the fundamental properties. Lastly, since this concept is not only a natural generalization of soft multi closed sets, the studies of soft multi generalized closed sets caused the emergence of several new properties in soft multi topological spaces. One of them between the spaces of mT_0- and mT_1-, for example, $mT_{\frac{1}{2}}$-space which lower separation axiom weaker than mT_1. This axiom was introduced and its properties were investigated. We hope that soft multi generalized closed sets can be defined in many varieties, and the soft multi separation axioms can be developed by using them. More research can be carried out in the framework of practical applications.

Keywords: Soft set, Soft multi sets, Soft multi topological spaces, Soft multi generalized closed (open) sets, Soft mT_i $(i = 0, \frac{1}{2}, 1,2,3,4)$-Spaces

Preservice Mathematics Teachers' Approaches Towards Proving in Mathematics

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Abstract

The purpose of this study is to examine preservice mathematics teachers' approaches towards the questions regarding proving in mathematics. In this sense, four questions were identified in the light of the literature and a data collection tool involving mistaken solution of these questions was prepared by the researchers. This data collection tool was applied to all preservice mathematics teachers. In this study the case study method, which is one of the qualitative research approaches, is used. The participants of this study are 39 (thirthy nine) preservice mathematics teachers from 13 (thirteen) different state universities. Data were analyzed by descriptive analysis. At the end of the study; preservice mathematics teachers were found to have misinterpreted the mistakes in the proofs, made incorrect comments about the mistakes in the proofs, could not detect the mistakes in the proofs, and have misdetections in the proofs. As a result, it has been seen that the preservice mathematics teachers have deficiencies and mistakes in proving mistakes and interpreting proofs. On the other hand, preservice mathematics teachers were found to have basic mathematical knowledge and ideas about proof. In light of this information, it was also found that most of the preservice mathematics teachers were found partially and correctly identify the mistakes in some questions and that most of these teacher candidates can make the right solution to the questions.

Keywords: Proving, Approaches to mistakes, Preservice mathematics teachers

Elementary Mathematics Teachers' Opinions About Division Concept

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Abstract

The aim of this study is to try to describe the level of conceptual knowledge of elementary mathematics teachers on the meaning of division. To this aim, a total of 6 (six) elementary school mathematics teachers working in state schools affiliated to the Ministry of National Education were selected as sample. The data collection tools are the written opinions and the focus group discussion. The obtained data were analyzed through the method of descriptive analysis. Based on the findings, it has been seen that generalization of elementary school mathematics teachers concentrates on the meaning of grouping and sharing of division process. Elementary school mathematics teachers were also found to be unable to distinguish the division process in negative numbers in the first place. In addition, especially the division algorithm was not considered at all by the elementary school mathematics teachers. On the other hand, it has been seen that elementary school mathematics teachers do not consider the relationships between division and subtraction. As a consequence of the study, procedural learning has been still ahead of conceptual learning.

Keywords: Division, Conceptual learning, Procedural learning, Meanings of division, Elemantary school mathematics teacher

The Impact of Environmental Problems on Human Health

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Abstract

The health is a dynamic process which can change during the people's life, and it states that the continuity of an individual's functions in the different physiologic, psychologic and social aspects can be provided, and it states his/her adaptation to the environment. The man who is a bio-psycho-socio-cultural create lives in an interaction within the biological, physical and social environment. Everything except the man constitutes the environment. The interaction between the environment and the man is a continuous, mutual and simultaneous one. While the improper environment becomes a threat for the man's health, the man can also change negatively in the environment. The technological developments create the positive changes, they cause risky environments to occur in terms of the health and they bring the problems such as the increase in population, the consumption of natural sources, the increase in environmental pollution. These problems cause the troubles such as the respiratory system diseases, the cardiovascular system diseases, the infectious diseases, the nervous system impairments, the mutagenic impacts, the impairment of life quality in the man's health. A clean environment means healthy and productive generations. When it is considered from this aspect, it is necessary to determine the factors which cause the environmental pollution and to remove these factors in order to minimize the negative impacts of environmental conditions in the health. In this study, the negative impacts of environmental pollutions on the man's health have been emphasized.

Keywords: Human health, Environmental pollution, Health impacts

Influence of Stacking Sequence in Lamineted Composite Structures on the Mechanical and Dynamics Properties

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Abstract

With the new manufactured methods developed in recent years, the application areas of layered composite structures have increased considerably. In order to increase the utilization performances of these structures, hybrid composite structures were obtained by using single fabrics in different sequences. While many studies have been carried out on the mechanical properties of layered hybrid composite structures, studies on dynamic properties are not enough. In the scope of this work, samples with 4 layers with 4 different sequence were manufactured by using VARTM (Vacuum Assisted Resin Transfer Moulding) method using single glass (G) and single carbon (C) fibers. These samples are either single composite structures consisting of simple glass (C_4) and plain carbon (K_4) or symmetric composites with different order of arrangements of these two fibers within the same structure (CGGC and GCCG). Samples were cut from produced composite sheets for tensile and vibration tests according to the relevant ASTM standards. Tensile tests were performed to determine the young modulus of the samples. In addition, natural frequency and damping ratio values were determined by free vibration analysis under fixed-free boundary conditions. With the obtained results, the effect of sequence of the layered hybrid composite structures on the modulus of elasticity and vibrational properties was investigated.

Keywords: Laminated hybrid composite, Natural frequency, Damping ratio, Young modulus

Investigation of Colour and Glossiness on American Ash, European Alder, White Willow and White Poplar Heat-treated (ThermoWood method) Wood Species

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[2] Forestry and Forest Products, Oltu Vocation School, Ataturk University, Oltu/Erzurum

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[4] Superior School of Technology, Polytechnic Institute of Viseu, Viseu, Portugal

Abstract

Effects of heat treatment (ThermoWood) on some surface properties of European alder (Alnus incana), American ash (Fraxinus americana), white poplar (Populus alba) and white willow (Salix alba) such as color and glossiness were investigated. Wood samples were heat-treated at 212°C for 1 hour and 2 hours using ThermoWood Method in Novawood Factory, Gerede, in Bolu City, Turkey. After heat treatment, some surface properties of the samples of wood were determined color (L*, a* and b* parameters) and glossiness (perpendicular and parallel at 20o, 60o and 85o) values. Control (non-heat-treated) samples and heat-treated samples were compared. ΔL*, Δa*, Δb* and ΔE* values were calculated. The results showed that color and glossiness changed as the treatment time increased. The total color difference (ΔE*) values increased with increasing heat treatment time.

Keywords: Heat treatment, ThermoWood method, Color, Glossiness, Poplar wood

A New Solutions of the Riccati's Equation

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Abstract

Effects of heat treatment (ThermoWood) on some surface properties of European alder (*Alnus incana*), American ash (*Fraxinus americana*), white poplar (*Populus alba*) and white willow (*Salix alba*) such as color and glossiness were investigated. Wood samples were heat-treated at 212°C for 1 hour and 2 hours using ThermoWood Method in Novawood Factory, Gerede, in Bolu City, Turkey. After heat treatment, some surface properties of the samples of wood were determined color (L*, a* and b* parameters) and glossiness (perpendicular and parallel at 20o, 60o and 85o) values. Control (non-heat-treated) samples and heat-treated samples were compared. ΔL*, Δa*, Δb* and ΔE* values were calculated. The results showed that color and glossiness changed as the treatment time increased. The total color difference (ΔE*) values increased with increasing heat treatment time.

Keywords: Riccati's equation, Particular solution, Formula for general solution, Common cases

Determation of Users' Satisfaction About Hobby Garden in Atatürk University

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Abstract

Scientists are interested in increasingly spaces and activities where they can renew themselves in physical and spiritual ways in their free time, away from the intense everyday life of the university. Recreational opportunities to serve academicians on the outside are of great importance, because the winter months in Erzurum are long and hard. For this purpose, hobby gardens, built by the Rectorate of Atatürk University in 2012, are being used intensely by academicians. This study shows that academicians have used hobby gardens for 4-5 years. The use of the garden includes a survey study which will reveal the experience, the reasons for having the garden, the expectations from the garden, the satisfaction of the garden.

Keywords: Hobby Garden, Academician, Survey, User satisfaction

Impact of Microscale Vegetation on Urban Thermal Comfort With Thermal Infrared Imaging: Erzurum City Center

Sevgi Yilmaz[1], Emral Mutlu[1], Hasan Yilmaz*[1], Başak Ertem Mutlu[1]

[1]Architecture and Desing Faculty, Atatürk University, Erzurum, Turkey

Abstract

Kentsel nüfusun hızla arttığı yaşam alanlarında, konut ihtiyacını karşılamak için yapılan çalışmalar sonucunda başta hava kirliliği olmak üzere, çarpık kentleşme, enerji tüketiminde artış, çeşitli çevre sorunları ortaya çıkartmakta ve kentlerin termal konforu azalmaktadır. Buna bağlı olarak, kentlerde oluşan ısı adası etkisi gittikçe artmaktadır. Isı adası etkisini azaltacak, sürdürülebilir kentlerin oluşması için iklim parametrelerinin plan kararlarına aktarılması doğru bir süreç olarak öngörülmektedir.

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Keywords: Thermal imaging, Native plant, Exotic plant, Erzurum city

Thermal Comfort Models for Climate-Sensitive Sustainable Urban Planning: The Example of Dadaskent

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Abstract

Extensive studies are being carried out to increase the healthy and comfortable livability in urban areas. It is very important to design spaces where people feel comfortable, peaceful and thermal comfort away from the stress. Especially the climate change that has been constantly increased over the last years and its negative effects on people's quality of life is indisputable fact. This alteration is also a factor that directly affects the biotics and changes the way of life. For sustainable urbanization, climate-focused work has been done carrying on plan decisions. Physiologically Equivalent Temperature (PET) calculated using RayMan model, Sky View Factor (SVF) showing the sky visibility ratio obtained by fish eye lens shooting, thermal camera records and scenarios using hourly meteorological data are used in thermal comfort determination studies, ENVI- Met models were introduced. How and where these models are used is explained in the example of Erzurum city. Outputs of this study can be both more liveable, energy focused, thermally comfortable urban area and plan decisions. Local governments and planners need healthy and up-to-date data so that domain usage decisions are correct. Increasing thermal comfort designs in urban planning and assessment of the climate factor is important in terms of urban livability. It has been emphasized that different job disciplines should be seen as a necessity to work as a team for healthy, sustainable, thermal comfort and more livable intelligent urbanization.

Keywords: Thermal comfort, Erzurum, Sustainable urban planning

Determination of Cultural Structures of Old Gümüşhane (Süleymaniye Neighbourhood) and Recovered too Use Again

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Abstract

Many ethnic and religious groups such as Armenians, Russians and Turks were living together by hosting the many civilizations until the early 1920s with the position between Trabzon port and Eastern Anatolia between the 16-18. centuries. The Ottoman-Russian Wars, the relocation of the Armenian population, the Russian occupation of the First World War and the abandonment of the majority of the Turkish population, moved the Gümüşhane city 4 km north in 1920s. The abandoned city has been declared as an old Gümüşhane (Suleymaniye Neighborhood) protected area with its cultural characteristics such as traditional houses and gardens, church ruins, mosques and minarets, bath ruins, species, cemeteries, bridges and fountains. It was observed that many houses were left in examinations, the churches and baths were affected by the environmental conditions, and the cultural traces were erased day by day. Within the scope of this study, it is aimed to provide awareness of our cultural values, to introduce and to contribute to the development of cultural tourism by giving protection and usage recommendations to this establishment. As a result, 2 mosques, 3 minarets, 6 church ruins, 4 baths and traditional mansions and 35 immovable cultural properties were found in Süleymaniye Quarter, which is now called Süleymaniye Quarter. In other words, the museum, library, art school, navigation area, walking and cycling routes have been proposed to use this period. The museum, library, art school, navigational area, walking and cycling routes have been given to these buildings and surroundings by taking advantage of the characteristics of the period.

Keywords: Cultural Structure, Tourism, Planning

Modelling and Simulation of Conjugate Heat Transfer in Comsol Multiphysics for Electronic Chip Cooling

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Abstract

Industrial cooling systems correspond to systems used to remove excess heat from any medium using a fluid such as water and air in order to reduce environmental temperature to the desired temperature. Cooling is considered to be an indispensable part of many industrial processes and it is accepted that it should be seen as an important element of the overall energy management system. It is a widely used method for the preservation of food, electronic devices, medicine, various chemicals and medical materials (serum, stem cell etc.). Different methods are used to increase the heat transfer rate. For this reason, the heat transfer area can be enlarged by adding extended surfaces are called as "fins" on the heat transfer surface. In this study, cooling simulation was performed using the Comsol Multiphysics modeling program to observe the effects of the fins on heat transfer. Then, the simulation was elaborated to investigate cooling of an electronic chip.

Keywords: Heat transfer, Modelling and Simulation, Cooling, Fins

Modelling and Simulation of Fluid Flow in Shell and Tube Heat Exchanger using Comsol Multiphysics

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Abstract

Heat exchange is one of the important subjects of chemical engineering and heat exchangers are devices that perform heat transfer. Heat exchangers are used to heat or cool the fluids in the process. One of the most important factors affecting heat exchange is the fluid flow in heat exchangers. Modeling of processes at the design or production stage has many advantages. As a result of this, modeling of such processes has gained importance in recent years. Modeling allows the planned process to be tested before production. On this count, the faults that may occur during process decrease to the minimum level before fabrication. In this study, the flow in the shell and tube heat exchangers, which is a kind of heat exchanger frequently incorporated into the industry, has been investigated using Comsol Multiphysics modelling program. Water is used as the refrigerant to cool the hot fluid passing through the steel pipes in heat exchanger.

Keywords: Heat transfer, Modelling and Simulation, Fluid Flow

Research on Vitamin C Effect on Angiotensin Converting Enzyme Purified by from Human Plasma

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Abstract

Angiotensin converting enzyme was purified from human plasma by affinity chromatography. The enzyme was purified 3659 fold with a spesific activtiy of 1350 EU/mg protein from human plasma. The purity of ACE was determined by SDS-PAGE and seen two bands 60 kDa and 70 kDa on the gel. Effect of C vitamin on purified ACE activity was investigated. Lisinopril was used as reference inhibitor. C vitamin showed inhibition effect on ACE activity. Activity % versus Inhibitor graphs for C vitamin and lisinopril were drawn. IC_{50} values for C vitamin and lisinopril was found as 8.86 $x10^{-2}$ µM and 7.81$x10^{-4}$ µM, respectively. Type of inhibition for C vitamin and lisinopril from graph Lineweaver-Burk was determined to be reversible noncompetitive inhibition. K_i constants for C vitamin and lisinopril were calculated as 1.15$x10^{-1}$ µM and 6.618$x10^{-4}$ µM, respectively.

Keywords: Angiotensin converting enzyme, C vitamin, Inhibition, Lisinopril

Effect of *Matricaria chamomilla* L. Plant on Angiotensin Converting Enzyme Purified from Human Plasma

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Abstract

Angiotensin converting enzyme responsible for regulation of blood pressure was purified and characterized from human plasma by affinity chromatography. The enzyme purified 3659 fold with a spesific activtiy of 1350 EU/mg protein from human plasma. The purity of ACE was determined by SDS-PAGE and seen two bands 60 kDa and 70 kDa on the gel. Effect of ethyl acetate, butanol and water extracts of *Matricaria chamomilla* L. plant on purified ACE activity was investigated. Lisinopril was used as reference inhibitor. The ethyl acetate extract of *Matricaria chamomilla* L. plant did not show any effect on human plasma ACE activity. Butanol and water extracts of *Matricaria chamomilla* L. plant showed inhibition effect on ACE activity. Activity % versus Inhibitor graphs for butanol and water extracts of *Matricaria chamomilla* L. plant, and lisinopril were drawn. I_{50} values for butanol and water extracts of *Matricaria chamomilla* L. plant was found as 0.353 mg/mL and 1.292 mg/mL, respectively. Type of inhibition for all inhibitors from graph Lineweaver-Burk was determined to be reversible noncompetitive inhibition. IC_{50} value and K_i constant for lisinopril were calculated as 7.81×10^{-4} µM and 6.618×10^{-4} µM, respectively.

Keywords: Angiotensin converting enzyme, Inhibition, *Matricaria chamomilla* L., Lisinopril

Investigating Railway Track Infrastructure via Ground Penetrating Radar

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Abstract

In this study, defects occurring in the infrastructure of railway track is investigated using Ground Penetrating Radar (GPR) method. For this aim, a double-antenna GPR, which measures simultaneously the frequency values of 600 MHz and 1600 MHz has been employed. Furthermore, measurements have been performed on the middle of the railway track and outside of sleeper to eliminate the effects of sleepers (reinforced-concrete). Based on the analysis of GPR outputs, the defects on railway track and infrastructure layer boundries have been determined. Finally, the effects on monitoring infrastructure layer of the measurements according to different frequencies have been studied and it is concluded that although 1600 MHz antenna has less penetration depth, it is more appropriate for determining the condition of the ballast layer especially.

Keywords: Railway track, Railway infrastructure, Ballast, Ground penetrating radar

Effect of Urban Factors on Air Pollution in Igdir

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Abstract

In this study, the effects of climatic and topographic conditions, urbanization and transportation on air quality of Igdir which is the eastern province of Turkey, has borders with three countries and is one of the most suitable rare provinces to development about commercial, industrial, international transportation, agricultural, touristic and cultural sense, were investigated. An important part of the city's settlements are on fertile farmland. Air pollutants arising from industry, settlements and transportation show the density on the city center mostly without transcending elevations which have bowl shape and are located around the city during the winter months. Air pollution during the winter months causes a dense fog over the city for weeks under the influence of inversion layer and is reaching significant amount to effect human health. Igdir province is located in the orange group (it may occur health implications for vulnerable groups) in terms of EPA air quality index. Also it is much higher than 80 µg/m3 which is national limit value for PM10. In addition, the average wind speed of Igdir is 1.2 m/s and has not enough power to distribute polluted air. Consequently, Igdir is located in the bottom of the list for air quality and need urgent intervention.

Keywords: Topography, Air pollution, Air quality, Inversion, Urban planning, Igdir

Modeling and Design of a Single Phase SOFC System's Control

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Abstract

In an industrial power generation, power conversion is significantly important concern. The power flow is seamless transmitted from fuel cell to electric grid by power converter components. This paper presents modelling and simulation of grid connected fuel cell system. One of the most important types of fuel cells is that solid oxide fuel cell (SOFC) which has high-temperature technology, fuel-flexible and economic entitlement has been selected. The interconnection of the SOFC with a DC-DC converter and a DC-AC inverter for interfacing with the electric grid are modelled and simulated. DC-DC Boost converter is controlled by PI controller. Single phase adaptive filter based phase-locked loop (PLL) algorithm and pulse width modulation (PWM) is used for control of single phase DC-AC inverter. The simulation results show that the adaptive filter-PLL based control strategy is used for the control and synchronizing of the single phase electric grid connected SOFC systems, successfully. All system components are developed by PSCAD/EMTDC simulation software.

Keywords: PLL, Adaptive filter, Single phase Inverter, SOFC

Highly Sensitive Detection of Hydrogen by Single-Slot Hybrid Micro-ring Resonator

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Abstract

Hydrogen is the most common element, making up 75 % of the mass of the entire universe and has been used as a fuel for many decades in a wide range of applications. Hydrogen requires a high sensitive detection for human safety not only because of its wide flammability range of explosive nature but also its great leaking tendency feature. Many studies have been carried out for the purpose of hydrogen detection including fiber–based sensors, chemical sensors, photonic crystal sensors and micro–resonator based sensors. Micro–resonators have high potential in high sensitive detection. Hybrid structures of micro–resonators which might inhold different materials such as Pd which is considered as high–sensitive, low–cost, compact, durable, and high performance hydrogen detector compared to conventional hydrogen gas detecting instruments. Thus, in this study, a novel idea is presented for high sensitive hydrogen gas detection utilising a single–slot hybrid MRR structure in the light of [1], [2] studies. The outcome of the study regarding hydrogen sensing potential reveals a sensitivity as high as 4.34 nm/% hydrogen and an FOM of 0.59 when optimum geometrical design parameters are chosen.

Keywords: Hydrogen Sensor, Micro ring resonator, Photonic integrated circuit sensor, Optic hydrogen sensor

Adsorption of Methylene Blue onto Gürpınar Clay from Aqueous Solutions

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Abstract

In this study; adsorption of methylene blue onto natural clay, obtained from Gürpınar district of Van, from aqueous solution were investigated. The structural characteristics of the clay sample were analyzed with SEM, XRD, FTIR, TGA and BET surface area. The adsorption of methylene blue which is a cationic dye onto clay mineral were investigated. The effect of some parameters such as temperature, concentration, time and pH were evaluated. Natural clay used in the experiment was ground and dried in an oven at 105 °C and then it was passed through 325 mesh sieve range. Morphology and surface area of the adsorbent was determined by SEM and BET equipments. SEM image of Gürpınar clay was given below. It was found at pH 9, 55 ºC and $2.5x10^{-5}$ M the initial concentration of methylene blue from experimental data for the capacity of the maximum adsorption and the thermodynamic parameters (E_a, ΔH^0, ΔG^0, ΔS^0) were calculated from the data. The positive enthalpy and the negative Gibbs free energy changes showed that the removal of dye is endothermic and spontaneously, respectively. From the experimental data, it was determined to be appropriate the second order kinetic equation for the removal of methylene blue onto clay from aqueous solution. As a result, the Gürpınar clay in the removal process of methylene blue from aqueous solution was shown to be an effective adsorbent.

Keywords: Gürpınar clay, Dye adsorption, Thermodynamic parameters, Methylene blue

The Investigation of Thermodynamics Parameters and Adsorption Kinetics of Serum Albumin on Gürpinar Clay

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Abstract

In this study, the thermodynamic parameters and adsorption kinetic of serum albumin onto Gürpınar clay were investigated in aqueous solution in batch system for determining the effect of initial serum albumin concentration, initial ionic strength, temperature and pH. The structural characteristics of the Gürpınar clay sample were performed analysis of SEM, XRD, TGA and BET. Natural clay used in the experiment was ground and dried in an oven at 105 °C and then it was passed through (325mesh) sieve range. Maximum adsorption capacity values (q_m) of serum albumin onto green clay showed a great dependence on pH. It was found that q_m–pH curves reached a maximum at around isoelectric point (iep) of serum albumin. The pH values where the maximum adsorbed mass occurred might be considered as the conditions where electrostatic attraction is the most favourable. It was found at 36,5 ºC, $7{,}5.10^{-2}$ M, 0,25 g/L and pH 5.5 the initial concentration of serum albumin from experimental data for the capacity of the maximum adsorption and Pseudo-first-order, pseudo-second-order and intraparticle diffusion were used to fit the kinetics data on three different kinetic models. The pseudo-second-order model best described the experimental data. Also the thermodynamic parameters (E_a, ΔH^0, ΔG^0, ΔS^0) were calculated from the data. The negative enthalpy and the negative Gibbs free energy changes showed that the adsorption of serum albumin is exothermic and spontaneously, respectively. As a result, the Gürpınar clay in the adsorption process of serum albumin from aqueous solution was shown to be an effective adsorbent

Keywords: Thermodynamics, Adsorption, Serum albumin, Gürpınar clay, Kinetics

Analysis of Keller-Segel Model with Atangana-Baleanu Derivative

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Abstract

In this work, we analysed the Keller-Segel model with Atangana-Baleanu fractional derivative. We present the existence and uniqueness of the coupled solutions for both definitions of fractional derivatives using the fixed-point theorem. We also analysed uniqueness of the solutions.

Keywords: Keller-Segel model, Atangana-Baleanu fractional derivative

A Comparative Study of Caputo-Fabrizio and Atangana-Baleanu Derivatives for Fractional Birth-Death Process

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Abstract

In this study, we examined the fractional birth-death process with Caputo-Fabrizio and Atangana-Baleanu derivatives. We try to solve the existence and uniqueness solutions for new fractional derivative. A comparison of the results obtained is given using *Mathematica.*

Keywords: Birth-death process, Atangana-Baleanu fractional derivative, Caputo-Fabrizio fractional derivative

The Vertex PI Estrada Index of a Graph

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Abstract

A topological index is a number related to graph which is invariant under graph isomorphism. In theoretical chemistry, molecular structure descriptors (also called topological indices) are used for modeling physicochemical, pharmacologic, toxicologic, biological and other properties of chemical compounds. The Estrada index *EE* has an important role in Chemistry, since it is a proposed molecular structure-descriptor, used in the modeling of certain features of the 3D structure of organic molecules, in particular of the degree of folding of proteins and other long-chain biopolymers. In this study, we define the vertex PI Estrada index of a graph as $PI_v EE(G) = \sum_{i=1}^{n} e^{\lambda_i}$, where $\lambda_1, ..., \lambda_n$ are the vertex PI eigenvalues. Some bounds for the vertex PI Estrada index of a graph are obtained, some inequalities between the vertex PI Estrada index and the vertex PI energy are also obtained.

Keywords: Bounds, Eigenvalues, Estrada index, Graph, Vertex PI Energy

An Investigation into the Parameters That Affect Concrete Pavement Thickness

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Abstract

The need for sustainable and long-term transportation systems is increasing with the developing technology of our time. Because of the materials used for concrete production more eco-friendly than those used for flexible pavements is increasing the need of concrete pavements. They are also long-lasting solution if compares with other types of pavement. With these important features, concrete pavements are largely used in American Interstate Highway System. Besides all these outstanding characteristics of concrete pavements, their design is complicated than expected. This complication derives from complex concrete properties, the obscurity of subgrade behaviors and the loads which are affecting concrete pavements along their design life. To facilitate this complication, some design methods have been developed by organizations such as PCA and AASHTO. These methods which are developed PCA (1984) and AASHTO (1993) are extensively used by designers and researchers for concrete pavements since they were published. Both of the design methods aim to design pavement thickness by using some parameters such as concrete properties, subgrade reaction, and traffic loading. In this study, the parameters affecting concrete pavement thickness have been investigated according to PCA and AASHTO methods. By this way, correlations between pavement thickness and those parameters have been revealed. With this study, it has been investigated the effects of concrete properties, subgrade reaction, and traffic loading to the pavement thickness.

Keywords: AASHTO, PCA, Concrete pavement, Pavement thickness design

Premature Deformation of Low-rise Buildings due to Stress Components of High-rise Buildings Adjacent to Them

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Abstract

This study describes the process how design soil foundation for high-rise residential buildings. The design process comprised an initial stage of geotechnical site characterization using the results of a series of calculations to prepare a subsurface model and derive geotechnical parameters for design from emperical correlations. Following this preliminary analysis was undertaken using a combination of elastic theory and allowances for non-linear behavior of the soil system to assess the viability of such foundation system and any potential advantages of the calculations in foundation systems. Finally, a detailed analysis was undertaken using the different methods. These detailed analyses should be used to design a more efficient foundation system and to provide design actions for structural design of the foundation system for a variety of load combinations.

Keywords: Premature deformation, Foundation, Stress components, High-rise buildings

Finite Element Analysis of Fatigue Fracture Sample Using Submodel Technique

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Abstract

Finite element analysis is a widely used computer simulation in a variety of disciplines to determine the performance of various systems or structures that are difficult and costly to achieve experimentally under the prescribed conditions. In these analyzes, the submodel technique is used to get the results in any sub-region of the global system more accurately, to try different designs quickly in the sub-region and to prove the dependency of the mesh quality on the results. This technique, also known as the cut-boundry displacement method, is based on Saint-Venant's principle. In this study, the fatigue fracture sample was analyzed using the submodel technique. Submodels with boundaries at different diameters were prepared for the crack initiation region of the fatigue fracture sample. For each submodel, analysis of the finite elements was performed with different mesh structures. Element quality and skewness values are taken into consideration as mesh parameters. In the analyzes, the stresses obtained by forming the optimum mesh structure for the fatigue fracture sample were evaluated in a straight line. As a result, it was determined that the Von-Mises stress value of about 77 MPa obtained for the first mesh differs significantly from the stress value of 155 MPa obtained by the improved mesh and this variability is directly related to the selection of the ideal submodel boundaries as well as the mesh quality.

Keywords: Finite element analysis, Submodel, Fatigue fracture

Evaluation of Turkish Seismic Codes on Alteration of Intended Use: The case of Aralik Vocational School

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Abstract

The determination of earthquake safety of the building which had a change in their intended use and reinforcement of these buildings were and will be a problem for civil engineers. The existing earthquake regulation (Regulations for the Structures to Be Built in Disaster Areas, DBYBHY, 2007) and Turkish Earthquake Code, which was submitted as a draft in 2016, suggest procedures for evaluation and reinforcement of existing buildings under the earthquake forces. The studies emphasize that the existing regulations have vagueness on calculations and limits of forces (force, moment, stress) and deformations (deformation, displacement, cross-section rotation, unit elongation or unit shortening) under the earthquake forces. In the study, an analysis of structural behavior of a building, which will be transformed to a vocational school, in compliance with the mentioned regulations will be conducted. The occurred forces and deformations will be compared to the existing and proposed regulations' limit values. At the start of the project, the data about the building, such as material properties, building geometry and details will be gathered. With these details, a finite mathematical model of the building will be prepared and analyzed and some suggestions will be made about the limit values of the regulations. The results of the study will provide a new perspective for the earthquake risk assessment of buildings whose intended purpose of use had changed. Moreover, with the experience gained from the study, further researches of the government structures would be conducted and some possible gains for the revolving funds for the university and the civil engineering department could be obtained.

Keywords: Structural risk analysis, Finite element model, Turkish Seismic Codes

Gender and Season Variables on the Proximate Composition and Metal Levels of Warty Crab

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Abstract

The effects of season and sex variables on the proximate composition and metal levels of crabs (*Eriphia verrucosa*) caught in central Black Sea region (Ordu) were investigated. Crab samples were caught over 4 seasons, using gillnets, trammel net and SCUBA diving. Protein, lipid, moisture and TMS (total mineral substance) level ranges of male crabs were 20.45-22.64%, 0.95-1.27%, 75.44-77.09%, 1.63-2.08%, respectively, while these ranges in female individuals were determined as 19,45-21.46%, 0.63-0.92%, 75.44-77.44%, 2.08-3.28%, respectively, Macro (Na, Mg, P, K and Ca), trace (Cu, Zn, Mo, Fe, Mn, Ni, Co and Se) and potentially toxic (Cd, Pb and As) element levels in the muscle tissue of crabs were determined using ICP-MS. Macro and trace element levels in crab muscle tissue were determined as K>P>Na>Ca>Mg and Zn>Fe>Cu>Mn>Se>Ni>Mo>Co, respectively. Cd and Pb levels in crab muscle tissue were determined to be lower than the limit values given in codices independent of the seasonal variables. However, As levels were found to be above limit values.

Keywords: *Eriphia verrucosa*, Proximate composition, Trace elements, Macro elements, toxic metals, Black Sea

Investigation of Interface Conductance in Flexible Lithium-Ion Batteries Under Bending

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Abstract

Advances in flexible electronics have become vital to the cutting-edge technology and have created ever-increasing demand for flexible energy storage devices. In terms of safety and mechanical advantages, flexible polymer-based lithium ion batteries are the outstanding candidates for flexible applications. Flexible batteries used in flexible applications including wearable electronics, wearable sensors or touch-screens are frequently subjected to bending during their operation life. To fully understand the effect of bending on properties of flexible LIBs, it is imperative to investigate the performance of the flexible LIBs under bending. In this study, fabrication of flexible thin-film lithium ion batteries based on solid nanocomposite polymer electrolyte was performed in a laboratory. Using electrochemical impedance spectroscopy (EIS), the interfacial impedance was measured in flat and bended configurations for fresh and cycled flexible LIBs. Results demonstrated that with higher curvatures, contact resistances between layers of flexible LIBs can be reduced and contact conductance of flexible LIBs can be increased.

Keywords: Flexible batteries, Interface conductance, Lithium-ion batteries, Polymer electrolytes

Environmental Impact of the Utilization of Geothermal Energy in Balçova

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Abstract

The use of geothermal energy, considered as green, renewable and sustainable energy with compare to fossil fuel energy sources, may have some impacts upon the water quality, operation of the power plant and on human health. Geothermal areas contain hot liquids that are trapped underneath the earth crust. However, geological, physical and chemical characteristics of the geothermal resources can vary significantly from site to site. Geothermal water ascending from the underground contains significant amounts of dissolved elements such as sulphate (SO4), carbonate (CO3), chloride (Cl), lead (Pb), manganese (Mn), boron (B), arsenic (As), stronsium (Sr), fluoride (F) and others, by its nature. However, there are limits about these variables. The hydrogeochemical studies and hydrogeochemical monitoring of the geothermal fields lead one to determine these values and investigate the interaction between the hot water as it ascends to the surface and the rocks hosting it. High mineral content of these waters may also cause problems as scaling and corrosion. Heavy metal and toxic element values of the geothermal waters, besides the other minerals, are being studied in order to follow the geothermal plant, field and its impacts, involving repeated sampling of the waters. Within this paper, heavy metal contents of Balçova geothermal field has been analyzed and evaluated regarding the drinking and irrigation standards and interpreted in terms of geological structure of the field. The geological units in Balçova geothermal field, from the bottom to the top, are Upper Cretaceous İzmir Flysch, Miocene Yeniköy Formation, Pliocene Cumaovası Volcanites, Quaternary talus and alluvium overlying these units. The heavy metal contents of geothermal waters, sampled in dry and hot season from Balçova geothermal field are determined as As (0.19m/l), B (12.54 mg/l), F (10.27 m/l), Mn (0.042 mg/l), Sr (0.416 mg/l), Cu (0.07 mg/l), Li (2.52 mg/l), Pb and Zn values were below the detection limits (<0.01 mg/l). The change in the values of the elements may be due to the clayey levels, resulted from faults and alteration. The high values of boron and arsenic in the hot water in the study area should be taken into consideration in terms of environmental effects.

Keywords: Geothermal energy, Hydrogeochemistry, Heavy metal, Alteration, Environmental impact

Effect of the Depth Base along the Vertical on the Electrical Parameters of a Vertical Parallel Silicon Solar Cell in Open and Short Circuit

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Abstract

This article presents a modeling study of effect of the depth base initiating on vertical parallel silicon solar cell's electric power and photovoltaic conversion efficiency. After the resolution of the continuity equation of excess minority carriers, we calculate the electrical parameters such as the photocurrent density, the photovoltage, series resistance and shunt resistances, diffusion capacitance, electric power, fill factor and the photovoltaic conversion efficiency. We determine the maximum electric power, the operating point of the solar cell and photovoltaic conversion efficiency according to the depth z in the base. We showed that the photocurrent density decreases with the depth z. The photovoltage decreases when the depth base increases. Series and shunt resistances are deduced from electrical model and are influenced and the applied the depth base. The capacity decreases with the depth z of the base. We have studied the influence of the variation of the depth z on the electrical parameters in the base.

Keywords: Depth base, Conversion efficiency, Electrical parameters, Open circuit, Short circuit

Effects of Oxidoreduction Potential on the Quality of Dairy Products

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Abstract

Oxidoreduction potential (Redox or Eh) is a physicochemical parameter that determines the ability of chemical or biochemical systems to oxidize or reduce. Biological systems as foods contain many oxidant molecules such as dissolved oxygen, hydrogen peroxide, free radicals and oxidative enzymes, and many reducing molecules such as vitamines (C, E, beta-carotene), hydrogen, thiol-containing compounds, some reducing enzymes and other antioxidants. Many types of research were conducted researches to study the effect of redox potential on the growth and survival of some microorganisms. In dairy products, several types of research showed the effect of redox potential on the metabolism and flow metabolites of many lactic acid bacteria. Redox potential contributes also to a balanced flavour component development in dairy products. It could be used also to select microorganisms, candidate as a starter, in fermented dairy products. In the dairy industry, other parameters such as temperature, pH and water activity are taken into account to control fermentation processes and product quality. Thus, continuously measuring and controlling changes in redox potential value of the dairy product, and adjusting it if necessary, during manufacture and ripening stages could be a determinant factor in the controlling the quality of the product in the future.

Keywords: Oxidoreduction potential, Dairy product, Microorganism, Metabolism

Particle Collection Systems: Wet Scrubbers

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Abstract

Ecological balance that have a self-cleaning system for centuries has exceeded the carrying capacity and the equilibrium has begun to deteriorate day by day. The wastes in the ecosystem and the increasing amount of these wastes have reached levels that can not be neglected in the ecological balance. Air pollution comes one of the most important environmental problems facing of our world that is approaching the 21st century. Air pollution arises especially in regions where the industry is concentrated. The rapid increase in air pollutants and emission values causes deterioration of human health and environmental balance. Air pollution is not only a regional problem, but also a global problem. Therefore, the increase in these pollutants and the threat factor show that it is necessary to take precautions in national and international level. Due to this reason, the development of more effective air pollution control system is of great importance reason. In this work, the sources, characteristics, dimensions and distributions of the air pollutants will be explained and then will be given general information about the particle retention and collection systems used for cleaning polluted air in various industries. In addition to the fact that the wet scrubbers between these systems will be explained in detail. In this place, wet scrubbers will be examined in terms of type, collection efficiency, dust holding system and usage areas.

Keywords: Air pollution control system, Wet scrubber, Collection efficiency, Dust collection

Waste Disintegration Phases and Leachate Formation in Solid Waste Regular Landfills

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Abstract

Today, associated with the rapid increase of consumption society, the amount of waste formation has increased. The resulting solid wastes must be disposed in a manner that take into consideration both human health and environmental risk factors. For this reason, waste management has become crucial. Management of solid wastes is carried out by processes such as waste reduction, reuse, recycling, combustion, pyrolysis, composting and regular landfill. Solid waste regular landfill facility is the most widely used method because of its low operating cost, its ability to respond to sudden capacity increases, its simplicity and its being the last stage of the disposal chain. Therefore, each stage of the solid waste regular landfill process has to deal in detail. Regular landfill seems to play a role in many factors when assessed in terms of human health, environmental factors and economics. It takes time for waste from landfills to deteriorate and become harmless or less harmful. The biochemical degradation steps of the wastes determine this time period. Stabilization stages consist of 5 phases as the first adaptation phase, transition phase, acid formation phase, methane phase and maturation phase. Biochemical fragmentation stages are also important because they also affect leachate and characterization. In each of the stabilization stages, the quantity and characteristics of the biogas released and leachate formed vary. In this study, biochemical degradation stages of waste in landfills, factors affecting these stages, gasses at degradation stages, formation and characteristic changes of leachate and changes in leachate at each stages were examined.

Keywords: Regular landfill, Biochemical Degradation, Leachate, Waste Management

A Study on Determination of Fish Consumption Habits in Ardahan Province

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Abstract

The purpose of this study was to analyze fish consumption habits in Ardahan Province. The study was conducted with a total of 324 people in 2016. 52.46% percentage of participants were men and 47.54% percentage of participants were women. According to results of the survey, the most preferred animal products were red meat (37.66%), poultry (37.04%), fish (11.11%), goose meat (6.48%) and none (7.71%). The most consumed fish is anchovy (47.53%). Most of the participants (88.58%) consume fish as fresh. Great majority of participants (51.23%) prefer fish because of its flavor. Consumption habits of fish were determined to be fried (55.86%), steam (12.03%), grilled (14.81%), oven (11.42%) and other (2.46%). Fish products were mostly preferred during winter months (53.08%). Of processed seafood, fish ball (14.81%), canned fish (15.74%), smoked fish (4.94%), fish sausage (1.86%) and none (62.65).

Keywords: Fish, Consumption habit, Survey, Ardahan

On Soft Multi β-Sets and Soft Multi β-Continuous Functions

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Abstract

The purpose of this study is to continue the endeavor of soft multi β-sets introduced by A. Özkan. We introduce the concepts soft multi β-interior and soft multi β-closure of a soft multi set in soft multi topological spaces. We also study soft multi β-continuous functions and discuss their relations with soft multi continuous and other weaker form of soft multi continuous functions.

Keywords: Soft set, Soft multi sets, Soft multi β-sets, Soft multi β-continuous functions

On Soft Multi α-Sets and Soft Multi α-Continuous Functions

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Abstract

The purpose of this study is to continue the endeavor of soft multi α-sets introduced in the article titled "Soft multi generalized regular sets in soft multi topological spaces" by A. Özkan. We study some of their properties and investigate the concepts of soft multi α-continuous and soft multi α-open functions and discuss their relationships with soft multi continuous and other weaker form of soft multi continuous functions. Also counter examples are given to show the non-coincidence of these functions.

Keywords: Soft set, Soft multi sets, Soft multi α-sets, Soft multi α-continuous functions

The Effect of Some Chemical Compounds on the Poliphenol Oxidase (PPO) Enzyme Activity Isolated from the Iğdır Apple

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Abstract

In this study, polyphenol oxidase (E.C. 1.14.18.1; PPO) enzyme obtained from Igdır Apples as purified with affinity chromatography and various properties of poliphenol oxidase enzym were stated. The apple was provided from Igdır province. To purify polyphenol oxidase enzyme obtained from apple, phosphate buffer at 7.3 pH was used, necessary santrifuging and other processes were carried out and the homogenate applied to the column was prepared. The homogenate was applied to activate Sepharose 4B-Tyrosine-p-amnobenzoic asid affinity column. Activity showing fractions obtained from column, for quantitative protein analyse was performed at 595 nm with Coomassie Blue method. In addition, optimum pH of enzyme, optimum temperature, ionic strength effect and inhibition kinetics of some chemicals on enzyme were investigated. Optimum pH of enzyme and optimum temperature was found as 6 and 50^{o}C, respectively. Furthermore, the work carried out on the ionic strength the highest activity was seen in concentration of 0.16 M $(NH_4)_2SO_4$.

Keywords: Affinity Chromatography, Igdır Apple, Inhibition, Polyphenol oxidase, Purification

The Trace Element and Ion Analyzes of Tuzluca Salt Cave

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Abstract

The salt is one of the indispensable parts of human's and living's life throughout the history of the world. Pure salt is a solid substance which crystallizes in the cubic system, %39.34 of the which is Na, %60.66 Cl, easily soluable in water and colourless. Gray, red and blues colours can also be found depending on the mineral character of the bed where the salt is formed. Rock salt, which is the most economically important solid source on the world, is also known by name 'Halit'. The presence of elements and ions in the rock salt's composition has a special importance for salt. When it is considered in general of the world, about %60 of the salt is used as a conversion raw material on the chemical industry. In addition to this, it is used in different fields such as industrial food sector, on the road for ice, farming, hard water softening systems. It is very important to determine the presence of total negative ions and trace elements in caves, which are used as salt theraphy centers especially in the health field. The researches in the field of health (theraphy centers) suggest that the presence of negative ions help feel better, make it easier to breathe and even have a painkiller effect. And it is also known that total positive ions may be harmful for human health in our research. AAS (Atomic Absorbtion Spectroscopy) and ICP-MS (Inductially Coupled Plasma Mass Spectroscopy) devices were used for the determination of some trace elements of rock salt samples which are taken from different points in Iğdır Tuzluca Salt Cave. Anion and cation measurements were performed with IC (Ion Chromotography) device. The results that we got from this study have a great importance for the Salt Therapy Center, which is especially thought to be established in Iğdır Tuzluca, to determine the presence of trace lements and ions. Morever detailed chemical analysis of Tuzluca Salt Cave is thought to be a great academic data science.

Keywords: Tuzluca salt cave, Salt theraphy center, Ion analyzes in salt, Trace element in salts

Electrochemically Deposited Cu-graphene or Cu_2O-graphene Nanocomposites for Thin Film Photovoltaics

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Abstract

TiO_2-based materials are the most commonly used semiconductor oxide photocatalysts due to their low environmental impact. However, there are numerous obstacles impeding the maximization of photocatalytic activity in these materials, including low adsorption ability, detrimental recombination of charge carriers, and light utilization [1]. Graphene-based materials have been widely used as transparent conducting electrodes, supercapacitors, optoelectronic devices, composites, and catalysts [2]. The combination of metal/metal oxide particles and graphene is predicted to generate a synergistic effect that potentially enhances the photodegradation of organic contaminants in both gaseous and aqueous media due to the possible improvements in the adsorbability and efficient charge transfer rate. We present a new approach to electrochemical growth of Cu-graphene and Cu_2O-graphene nanostructures that are based on simultaneous reduction of copper ions and graphene oxide from an aqueous suspension on Au and indium tin oxide (ITO) electrodes. The obtained composite nanostructures were characterized by scanning electron microscopy (SEM), energy dispersive spectroscopy (EDS), X-ray diffraction (XRD), photoluminescence spectroscopy (PL), and photocurrent measurements. The experimental results show that thickness of Cu-graphene and Cu_2O-graphene films can be easily controlled by application potential and experimental media. The resulting Cu-graphene and Cu_2O-graphene nanocomposites photoelectrodes exhibits good photovoltaic properties and could be used for applications in solar energy conversion.

Keywords: Electrochemically reduced graphene oxide, graphene nanocomposite, copper oxide, photovoltaic electrode

On Soft Multi pre-Sets

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Abstract

A. Özkan defined soft multi pre-open (closed) sets on soft multi topology in the article titled "Soft multi generalized regular sets in soft multi topological spaces". In this study, we are continue investigating the properties of soft multi pre-open (closed) sets and define soft multi preclosure and soft multi preinterior in soft multi topological spaces. We are also introduce and research basic properties of the concepts of soft multi pre-regular spaces, soft multi P_3-spaces, soft multi pre-normal spaces and soft multi P_4-spaces in soft multi topological spaces, which are basic for further research on soft multi topology and will fortify the footing of the theory of soft topological space.

Keywords: Soft set, Soft multi sets, Soft multi pre-sets, Soft multi pre-regular spaces, Soft multi pre-normal spaces

On Soft Multi Semi-Sets

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Abstract

In this study, we continue the study on soft multi topological spaces and investigate the properties of soft semi sets introduced in the article titled "Soft multi generalized regular sets in soft multi topological spaces" by A. Özkan. We presented soft multi semi-interior and soft multi semi-closure. We also define and discuss the properties of soft multi semi-separation axioms which are important for further research on soft multi topology. These research not only can form the theoretical basis for further applications of topology on soft multi sets but also lead to the development of information systems.

Keywords: Soft set, Soft multi sets, Soft multi topology, Soft multi semi-sets, Soft multi semi-separation

Generation of Fast and Accurate Positive-Negative Sequences for Control of Three Phase Inverter

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Abstract

The fast and accurate orthogonal signals in stationary and synchronous reference frame obtained from the positive-negative sequences (PNS) are significantly playing key role to control grid connected three phase inverter under adverse grid conditions. The amplitude and frequency of voltage/current measured from dual second order generalized integrator (DSOGI) filter for reference power generation are relatively affected by harmonics distortions and has slower dynamic response at start-up conditions and under grid faults. This paper presents a comparison between DSOGI and a new known PNS extractor that is called third order sinusoidal signal integrator (TOSSI) filter in literature. The TOSSI based phase locked loop (PLL) algorithm ensures a high performance PNS generation that allows fast and precise characterisation of the voltage-current components. The analytical relationship between the gain parameter values, amplitudes and frequency of PNS extractor are comprehensive compared, analysed and examined. The effectiveness and availability of the DSOGI and TOSSI extractors are verified and evaluated in cases of grid faults and voltage harmonic distortions. The results obtained by PSCAD/EMTDC and MATLAB software show the effectiveness and correctness of examined PNS extractors.

Keywords: Positive-negative sequences, TOSSI, DSOGI, Grid faults, Harmonic distortions

On the Analytical Solutions of Partial Differential-Algebraic Equations by the Homotopy Perturbation Transform Method

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Abstract

Finding the approximate and analytical solutions of the partial differential-algebraic equation is a hot topic in the field of differential equations and its applications. This paper is devoted to the partial differential-algebraic equations by the homotopy perturbation transform method. This method is a combined form of the homotopy perturbation method and Laplace transform. The nonlinear terms can be easily handled by the use of He's polynomials. Homotopy perturbation transform method is powerful and simple method compared with other methods. The analytical solutions for different cases of the equation are obtained.

Keywords: Partial differential-algebraic equation, Homotopy perturbation method, Laplace Transform, Analytical solution

Environmental Radioactivity in Iğdır Region

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Abstract

The main source of environmental radioactivity are radium, thorium, and uranium, found in the Earth's crust and Actinium, radioactive series natural formation and their decay products. Environmental radioactivity is the second source of cosmic radiation in the upper layer of the atmosphere caused by nuclear transformation. Until the beginning of the 20th century's creatures just up under the influence of natural radiation sources, but as a result of the discovery of artificial radioactivity radionuclides which emitted gamma rays are also started to affect living things. The main source of artificial radionuclides around us; nuclear weapons experiments performed in the atmosphere are the major nuclear accident. Artificial radionuclides which emitted gamma rays are released directly into the atmosphere. Natural and artificial radionuclides which emitted gamma rays, atmospheric, terrestrial and aquatic environments constitutes the source of environmental radiation. These radionuclides and their degradation products are found in environmental environments such as soil, rocks, foodstuffs, water and air, and radiate with alpha, beta and gamma radiation to organisms. The nuclear power plant in Armenia is 16 km from Iğdır. VVER-440 reactor running with this power plant has a system that sprays remove grease from water cooled. This plant with outdated technology consume Uranium and radioactive pollution 14 tons a year to create. Nuclear power plants is controlled according to the energy-producing plant unless other advantageous. However, a total of 5 big accident and more than 150 small accidents. The first accident happened in 1982 and the result will show the effect of five years has exceeded its limit. A lot of uranium fission product of uranium iodine-131, cesium-137, and stronsyum-90 is dangerous to living things. Knowledge of natural and artificial radioactivity measurements in the area of the region is very important in terms of environmental cleanliness. This work will be a preliminary study for environmental factors in the province of Iğdır.

Keywords: Environmental Radioactivity, Natural radioactivity, Artificial radioactivity

Environmental Urbanization: Examples and Suggestions About Campus Design

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Abstract

The concept of sustainable development was first described in the Brundtland Report prepared by the World Commission on Environment and Development in 1987 as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". The increase in environmental problems and resource consumption due to rapid population growth has led to the conclusion that the concept should be emphasized more. While the settlement units that have completed the establishment try to integrate on the concept of sustainable development, all activities are supported with environmental approaches in newly established settlement areas. University campuses are a "small city" both in terms of organization and functioning. These areas, which do not often pass a district in terms of population, are higher in terms of education, R&D activities, settlement plans, socio-cultural development than cities. All activities on university campuses are the locomotive of the development area for the regions they are in. There are dozens of university campuses recently awarded with the "green flag award", an international award for achievements in various fields. In our country, green schools, green universities are rewarded and ecological transformations are encouraged. In the study, national and international examples of environmentally sustainable campus design and management were taken into consideration and steps were taken to integrate Igdir University Bulent Yurtseven Campus into sustainable environmental management.

Keywords: Bulent Yurtseven Campus, Ecological campus, Environmental urbanization, Igdir, Sustainable environmental management

Influence of Illumination Frequency Modulation on Electrical Parameters of a Vertical Parallel Junction Silicon Solar Cell in Open and Short Circuit

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Abstract

The influence of the illumination wavelength on the electrical parameters of a polycrystalline vertical parallel junction silicon solar cell is theoretically analyzed. From the excess minority carrier density, the photocurrent density and photo voltage across the junction are determined. The aim of this study is to show the influence of the illumination frequency modulation on the electrical parameters of the cell and the behavior of both parasitic resistances and capacitance bode diagrams versus operating point and efficiency.

Keywords: Vertical parallel junction, Incident angle, Frequency modulation, Electrical parameters, Bode Diagram

An Evaluation of Solid Waste Management in Turkey

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Abstract

In the world, where human population exceeds 6 billion, especially in the last half century industrialization process has been spreading in developing countries and such a situation has caused a great increase in the amount of waste. Development levels of world countries are perhaps the most important factor to determine the amount and formation of solid wastes. The first legal regulations on the collection and evaluation of solid wastes in Turkey were prepared within the scope of General Sanitary Law and Municipalities Act, which entered into force in 1930, but a detailed regulation was possible only with the Solid Waste Control Regulation published in 1991. Turkey had 3140 municipalities in 2002. While 2977 (92%) of these municipalities were giving solid waste collection service, only 12 municipalities had disposal facilities in accordance with the regulations. There were 12 regular storage and 4 composting facilities belonging to these municipalities. Our basic policy in waste management in Turkey is the waste minimization, recycling and final disposal. In the case of pollution / contamination, authorities are responsible for taking required measures to prevent contamination and polluting individuals are obliged to stop pollution, take measures to reduce or eliminate its effects. This study presents a brief history of the legislative trends in Turkey for Municipality solid waste (MSW) management. The study also presents the MSW responsibility and management structure together with the present situation of generation, composition, recycling, and treatment. The legislative system that will provide legal, administrative and technical guidance or a roadmap to the most important handicap projects of the local governments which want to put their budget projects into practice is not sufficient and effective in terms of institution. The Directive on Control of Solid Waste is crucially important for local administrations to implement urgently such infrastructure projects which are the most important actors to achieve the process of European Union (EU) accession process where legislative, administrative and technical frameworks have to be adherent to EU. Such an approach will be needed for Turkish people to live in a healthy environment and sustainable development in the country.

Keywords: Solid waste, Solid waste management, Turkey, European Union

Ferromagnetic Resonance Study of Fe/Cu Multilayer Thin Film

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Abstract

Magnetic multilayer thin films have attracted significant attention in the recent years due to their applications in technology such as magnetic field sensors, magnetic random access memory (MRAM), spin-torque oscillators and spin-based transistors. The magnetic properties of the magnetic multilayer thin films should be comprehensively investigated with the powerful techniques like ferromagnetic resonance (FMR) for the above-mentioned applications. In this study, Fe/Cu/Fe multilayer thin film was grown on Si (100) substrate by using magnetron sputtering technique at room temperature. It is used Fe (iron) and Cu (copper) as a ferromagnetic and spacer layer, respectively. Dynamic and static magnetisations have been investigated using FMR and vibrating sample magnetometer (VSM) techniques in the temperature range of 10-300 K. It was observed a growth induced uniaxial magnetic anisotropy from the room-temperature in-plane FMR measurements. Out of plane, FMR measurements exhibited a large magnetic anisotropy due to a large saturation magnetisation of Fe. The experimental FMR data were simulated and the magnetic parameters of the Fe/Cu/Fe multilayer thin film were obtained. *g*-value, effective magnetization, uniaxial anisotropy field and perpendicular anisotropy constant were determined. The saturation magnetisation was observed to decrease with increasing temperature due to the increase of thermal fluctuations. Also, the exchange bias effect was observed from the low-temperature VSM measurements.

Keywords: Magnetic multilayer, Ferromagnetic resonance, Magnetic anisotropy

Magnetic Properties of Bi-La Substituted Barium Hexaferrites

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Abstract

Barium hexaferrite with its stoichiometric chemical formula $BaFe_{12}O_{19}$ has drawn considerable scientific and technological attention in the last few decades because of their potential applications in permanent magnet, high-density magnetic recording and microwave devices. The magnetic properties of these materials should be developed for the above-mentioned applications. The nonmagnetic substitution can be used to tailor the magnetic properties. In this study, bismuth (Bi) and lanthanum (La) substituted M-type barium hexaferrites, $BaBi_xLa_xFe_{(12-2x)}O_{19}$ ($0.0 \leq x \leq 0.2$) were prepared by standard solid-state reaction method. The effect of temperature and concentration on the structural and magnetic properties of $BaBi_xLa_xFe_{(12-2x)}O_{19}$ hexaferrite powders has been comprehensively investigated in a wide range of temperature (10-300 K) and magnetic fields (±50 kOe). X-ray diffraction (XRD), vibrating sample magnetometer (VSM) and ferromagnetic resonance (FMR) techniques have been used. XRD analysis verified the formation of M-type hexagonal crystal structure. The average crystallite size of the powders was estimated using Scherrer's equation. Magnetic properties were found to enhance with the increase in Bi–La substitution. 'Law of Approach to Saturation' method was used to analyse the magnetic hysteresis loops. The observed saturation magnetization values are close to the bulk value of the barium hexaferrite. The saturation magnetization, coercive field and effective magnetic anisotropy constant increase with respect to Bi and La concentrations for both 10 and 300 K. FMR measurements showed that all the powders absorbed microwave energy in broad field range. The FMR spectra have a broad linewidth because of the random orientation of magnetic anisotropy axis.

Keywords: Hexaferrites, Ferromagnetism, Magnetization

Determination of the Electronic Properties of Some Organic Electroluminescent Molecules with Density Function Theory

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Abstract

Organic electronic devices are quite remarkable due to their optoelectronic features. These devices can be examined under three main headings. These are; organic light emitting diode (OLED), organic thin-film transistors (OTFT) and organic solar cells. These devices are usually structured in the form of anode-organic material-cathode layers placed on top of each other. OLEDs are devices that can generate light via organic molecules in a thin membrane layer when an electric current is applied. They are prepared by placing one or more organic semiconductor layers between two metals. Both the anode and the cathode can be semi-permeable. The device that emits light during electroluminescence is called OLED. In this study, the potential organic electroluminescent compounds that have recently attracted much of the scientists' interest is discussed. The electronic features of these organic compounds are examined with computational methods. The calculation operations were conducted with the high-performance server systems (workstation) running on LINUX and Windows operating systems found in the Computational Chemistry Laboratory of the Igdir University Research Laboratory Application and Research Center. The geometries of the studied molecules were plotted using the GaussView 5.0 computer program. Theoretical calculations were conducted using the Gaussian09 program. Later on, the HOMO-LUMO shapes of the molecules that were optimized with theoretical calculations were obtained. The HOMO-LUMO energy difference (ΔE) of each molecule was calculated in terms of eV. The results were compared with the values obtained from relevant literature. According to the theoretical and simulation results obtained from the B3LYP 6-31 ++ G (d, p) basic set calculations of the DFT (Density Functional Theory) method used in this study; when the HOMO-LUMO energy differences were examined, it was determined that from among the studied candidate molecules, there were potential molecules that have / could have optoelectronic features. Therefore, it is expected that the study will shed light on synthetic organic chemistry procedures in terms of obtaining optoelectronic materials.

Keywords: Organic Light Emitting Diode, Electroluminescent Molecules, Density Functional Theory, Gaussian09

Sulfate Resistance of Ferrochrome Slag Based Hybrid Alkaline Cements

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Abstract

This paper presents the study of the performance of ferrochrome slag hybrid alkaline cement material exposed to sulfate attack. Hybrid alkaline cement was obtained by alkaline activating ferrochrome slag with chemical materials (NaOH and Na2SiO3). Test specimens were immersed in magnesium sulfate solutions (by weight 2%, 4% and 6%) for various periods of time and the durability of geopolymer concrete was investigated. The residual compressive strength, changes in weight of these samples were obtained experimentally. It was concluded that compressive strength of both slag hybrid alkaline cement and Ordinary Portland Cement (OPC) based concrete samples decreases with increase in sulfate content and exposure duration. Hybrid alkaline cement microstructure before and after exposing to sulfate attack have been investigated by SEM/EDX too.

Keywords: Geopolymers, Hybrid alkaline cements, Sulfate attack

A New Sequence Defined by h-vectors, which is Bounded above by the Lucas number

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Abstract

In this work, we consider the sequence whose nth term is the number of h-vectors of length n. We introduce the set of integer vectors $E(n)$. Then we show that the cardinality of $E(n-1)$ is the nth Lucas number L_n, for $n \geq 2$. We also give relation between the $L(n)$ and $E(n)$.

Keywords:

Computational Studies on Structural, Conformational Analysis, Electronic, Linear and Nonlinear Optical Properties of 2, 6-Dimethoxybenzoic Acid and Its Derivatives

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Abstract

In this study, ab initio Hartree-Fock (HF) and Density Functional Theory (DFT), using B3LYP functional calculations have been performed to characterize the ground state geometrical energy, the dipole moment (μ), mean polarizability (α), the total first static hyperpolarizability (β), highest occupied molecular orbital (HOMO) and the lowest unoccupied molecular orbital (LUMO) of 2,6-Dimethoxybenzoic acid (**I**), 2,6-Dimethoxybenzamide (**II**), 2,6-Dimethoxybenzohydrazide (**III**) and Ethyl 2,6-Dimethoxybenzoate (**IV**) molecules using the 6-311++G (d, p) basis set. ^{1}H and ^{13}C NMR chemical shifts calculations have been performed using the DFT with B3LYP functional and HF methods, where the 6-311+G (2d, p) and 6-31G (d) basis sets were employed. In addition, using the calculated highest occupied molecular orbital energies (EHOMO) and the lowest unoccupied molecular orbital energies (ELUMO), electronic properties of the studied molecules such as energy gap (ΔE = ELUMO-EHOMO), chemical potential **μ**, electrophilic index **ω**, ionization potential **IP**, electron affinity **EA**, electronegativity **χ**, molecular softness **S**, molecular hardness **η** were obtained. The dipole moment for **I-IV** molecules were calculated at 6.60, 4.37, 4.71 and 5.61 Debye, with DFT/B3LYP at 6.64, 4.73, 5.12 and 6.01 Debye, with HF level of theory using the 6-311++G (d, p) basis set, respectively. The dipole moment value of **I** molecule had the highest dipole moment values in the studied molecules. Structural values of some of these molecules were compared with data in the literature. All computational studies have been performed with the Gaussian 09W program.

Keywords: 2,6-Dimethoxybenzoic acid, Polarizability, Hyperpolarizability, ^{1}H and ^{13}C NMR

Artisanal Cheeses

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Abstract

Cheeses manufactured by traditional techniques, are made from cow, goat, ewe and buffalo milk by cheesemakers on a small scale in the farmhouse or dairies. These cheeses are referred as 'artisanal cheeses' and can be produced in any scale of manufacture. They contains nongeneric and more distinctive individual cheeses, traditional “regional” cheeses with added flavourings, farmhouse traditional cheeses and goat and sheep milk cheeses. The growing interest in artisanal cheeses is due to uniqueness properties of such cheeses. Raw milk cheeses have more intense and typical flavours compared to pasteurized milk cheeses. The main differences are in the large number of microorganism and related enzymes related to raw milk. Commercial starter cultures are not absolutely used in making these cheeses. Because the cheesemakers relies on the lactic acid bacteria (LAB), as adventitious contaminants, naturally present in the milk instead of commercial starter cultures. These specialized bacteria obtained from raw milk or whey can grow during cheese making and contribute to the quality characteristics and sensory quality of cheeses. Raw milk microbiota, especially those in Protected Designation of Origin (PDO) cheeses, provide the flavor of cheeses and therefore have received special attention from consumers around the world. Artisanal cheese microflora are mainly composed of homofermentative thermophilic lactobacilli (e.g., *Lactobacillus helveticus*, *Lactobacillus delbrueckii* ssp. *lactis*) and heterofermentative lactobacilli (*Lactobacillus fermentum*) and *Streptococcus thermophilus.* Also, *Enterobacteria* dominate over LAB in some cheeses. Pico cheese in Portugal; Minas cheese in Brazil; Mexican cheeses; Grana Padano, Pecorino, Parmigiano Reggiano, Mozzarella and Provolone cheeses in Italy; Edam and Gouda cheeses in the Netherlands; Cheddar cheese in U.K.; Emmental and Gruyere cheeses in Switzerland; Roquefort, Camembert and Brie cheeses in France; Feta, Manouri and Kasseri cheeses in Greece; and Kars Gravyeri, Tulum, İsli Çerkez, Divle Obruk and Çömlek cheeses in Turkey are examples of the most known artisanal cheeses.

Keywords: Artisanal cheeses, Traditional cheeses, Raw milk microbiota, Natural starters

Assessment of Compressive Strength in Hybrid Alkaline Cement

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Abstract

The environmental impact of Portland cement is significant. In the procedure of cement production, production of one ton cement releases about one ton CO_2 in environment. This paper investigates the effect of the solids-to-liquids and Na_2SiO_3/NaOH ratios on the production of slag or pumice based hybrid alkaline cements and geopolymer. The present paper discusses the results of activating different cementitious blends containing ferrochrome slag. The reaction products obtained were also characterised by XRD, SEM/EDX. The results showed that the main reaction product was a mix of cementitious gels C-A-S-H and (N, C)- A-S-H, and that their relative proportions were strongly influenced by the calcium content in the initial binder.

Keywords: Geopolymers; Hybrid alkaline cements

Basic Principles of Designing Reinforced Concrete Structures Against Earthquakes

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Abstract

"Earthquake" is a phenomenon in which vibrations that occur suddenly due to breaks in the Earth's crust are spread in waves and shake the environment and surface of the earth. After the big earthquakes, the small earthquakes that lasted for a while are aftershocks. Sometimes, before big earthquakes, there are small jerks. These minor strains are also called pioneer earthquakes. Leading earthquakes may not always happen.The earthquake is a phenomenon that the human being assumes motionless and will play safely with the pressed land, and that all the structures on it will be damaged and can be destroyed in the way of loss of life. Almost all of Turkey is an earthquake-stricken country and constantly exposed to earthquakes. For this reason, it is vital to learn to live with the earthquakes and to survive the least possible loss of earthquakes. The risk of an earthquake reveals that the structures must be made appropriately in the design phase. Within the scope of this study, it has been considered that the contemporary structures should be designed according to the lessons learned from the various earthquakes that have occurred so far, and suggestions have been made to reduce the minimum of construction defects.

Keywords: Earthquake, Reinforsed concrete, Structures, Designing

Veterinary Science and Aquaculture

Immunohistochemical Investigation in Sheep with Parasitary Liver Fibrosis

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Abstract

Liver fibrosis significantly effect human and animal health in our country and worldwide. In this study, 30 sheep liver tissues with macroscopical parasitary fibrosis were examined histopathologically and immunohistochemically (α-SMA, iNOS COX-2, p53 and PCNA). Liver was quite stiff and pale in color due to dense fibrosis. Bile ducts were dilated and had thickened walls. Brownish mucus leaks and adult parasites was viewed in the bile ducts on the cross-section of the liver that surface covered with greyish-white hard fibrotic foci. According to the histopathological examination; hepatocytes were swollen, eosinophilic and had granules. In portal region; MNH (mononuclear cell) infiltration consisting of lymphocytes, macrophages and eosinophils was formed and fibrosis was formed. Hyperplasia was observed in bile duct epithelium with parasite and fibrosis and variable severe MNH infiltration was observed around this bile duct epithelium. In the center, nodules (pseudolobulus) which did not have vena central were formed by regenerated hepatocytes. Besides, granulomes surrounded by fibrous tissue containing polynucleated giant cells and mononuclear cells were observed. According to immunohistochemical examination; stronger positivity was observed in SMA, iNOS, COX-2, p53 and PCNA compared to control group. Strong immunopositivity with variable severity for α-SMA was observed in prolipherated myofibroblasts; for iNOS was observed in macrophages, giant cells and endothelium cells of vessels; for p53 was observed in hepatocyte cytoplasms and giant cells in granulomes; for COX-2 was observed in myofibroblasts, smooth muscle cells of vessels and in mononuclear cell infiltrations; for PCNA was observed in epithelial cells of bile ducts, fibroblasts and nucleus of hepatocytes. It is concluded that, α-SMA was used in fibrosis in order to present connective tissue increase; using COX-2 as fibrosis and cirrhosis are in the basis of liver tumors and COX-2 has a role in wound healing; using PCNA in order to evaluate increase proliferation, using p53 for apoptosis, using iNOS antibody as its secreted from macrophages were found beneficial.

Keywords: Liver parasitary fibrosis, α-SMA, iNOS, COX-2, p53 and PCNA.

The Effect of Thymoquinone on the Frequency of Micronucleus in Rats Fed High Fat Diet with Cholesterol

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Abstract

In this study, it was aimed to determine the effect of thymoquinone, an active ingredient of *Nigella sativa* seed, which has been used for many years in the treatment of many diseases worldwide, on the formation of micronucleus in femur bone marrow cells in rats fed with high cholesterol diet. Thirty-two male *Sprague Dawley* rats were used in the study. Experimental groups were identified as 1. Control, 2. Thymoquinone, 3. High Fat Diet with Cholesterol (CHFD) and 4. High Fat Diet with Cholesterol + Thymoquinone (CHFD + T). Rats in Control, Thymoquinone groups were fed on standard pellet chow and rats in CHFD and CHFD + T groups were fed on mixed pellets with 65% butter and 2% cholesterol of the daily energy amount for 8 weeks. Thymoquinone was administered by intraperitoneally daily 8 mg/kg on rats in the Thymoquinone and CHFD + T groups for 14 days. All rats were sacrificed by cervical dislocation under diethyl ether anaesthesia, and then femur bones were removed and micronucleus test was performed. As a result of statistical analyses; according to the control and thymoquinone groups, MNPCE, PCE and NCE numbers were increased depending on CHDF, whereas these numbers were decreased compared to only thymoquinone group in CHDF+T. When the PCE / NCE ratios were evaluated, it was found that the lowest ratio was in the CHFD group, and that this ratio was increased due to the application of thymoquinone to fed animals with CHFD. As a result, it was observed that the number of micronucleus increased in the rats fed with CHFD, whereas the protective effect of the thymoquinone was marked in the CHFD + T group and the micronucleus formation was decreased.

Keywords: Cholesterol, High fat diet, Thymoquinone, Micronucleus

Relationship Between Quercetin and Diabetes

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Abstract

Diabetes mellitus is a growing health problem with its increasing worldwide prevelance and incidence. As well as its treatment, prevention of diabetes and related complications is also important. It has been reported that flavonoid compounds commonly found in fruits and vegetables are protective against various diseases, especially cancer, diabetes and atherosclerosis. The aim of this study is to review the relationship between diabetes and quercetin, one of the flavonoid derivates. In recent years, quercetin has been emerged as a nutritional component that improves diabetes symptoms. Quercetin (3, 3', 4', 5, 7-pentahydroxy flavone) is widely found in the composition of foods such as apple, tea, onion, nuts, strawberry, cauliflower and cabbage. Antioxidant, anticancer, antiinflammatory and antiviral and many other biological functions of quercetin has been shown in previous studies. Quercetin catalase enzyme protects organs against free radical damage by increasing the synthesis and activity of antioxidant enzymes. It also enhances insulin secretion and protects pancreatic cells against oxidative damage via extracellular signal-mediated kinase. Several studies reported protective effect of quercetin in diabetes by reducing oxidative stress and plasma glucose, cholesterol and triglyceride levels. Several studies show that quercetin is effective in preventing diabetic complications, but further comprehensive randomized controlled studies are needed.

Keywords: Quercetin, Diabetes, Flavonoids, Health

Dietary Calcium Intake and Obesity

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Abstract

Obesity is a serious public health problem which is associated with type 2 diabetes, cardiovascular diseases and different types of cancers and its prevelance increases day by day. Investigation of the factors affecting energy balance led to increase in studies showing the relationship between dietary calcium intake and obesity. The aim of this review is to assess the relationship between obesity and dietary calcium intake. Energy intake is affected by several factors such as diet, macro and micro nutrients, and physical activity. Dietary calcium is one of these factors which plays an important role in the regulation of energy metabolism. Dietary calcium converts into insoluble soaps by binding free fatty acids in the small intestine. The lack of absorption of these insoluble soaps results in increased fecal excretion of free fatty acids in the form of calcium salts. It is also known that dietary calcium is an effective factor in reducing body fat by stimulating lipolysis and suppressing lipogenesis. Low calcium intake has been reported to increase triglyceride storage in the adipose tissue. In addition, the fat content of milk and dairy products, which are the most important dietary sources of calcium, must be taken into account to balance energy intake. Therefore adequate and balanced intake of dietary calcium sources would be effective in obesity management. In conclusion, although it is well known that various risk factors affect the obesity development, further comprehensive studies are needed to show the direct effect of calcium on obesity.

Keywords: Calcium, Obesity, Body weight, Nutrition, Health

Current Molecular Diagnosis Methods Used in Fish Diseases

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Abstract

Aquaculture is one of the fastest growing sectors in the world and in our country. Especially fish farming is an important sector due to the fact that people are able to meet their protein needs in a healthy way, provide employment and become an important export base. One of the most important problems of fish breeding is fish diseases. As a result, it is necessary to identify the pathogens causing the fish to become sick and take quick and effective measures against them. By using recently developed molecular methods, pathogens that cause disease can be detected more rapidly and more reliably. Today, the detection of fish pathogens is done faster and more accurately by using techniques such as Polymerase Chain Reaction (PCR), Random Amplified Polymorphic DNA (RAPD), Restriction Fragment Length Polymorphism (RFLP), Amplified Fragment Length Polymorphism (AFLP), In Situ Hybridization, DNA microarrays and Multiplex PCR. In this study, the molecular methods used in the detection of pathogens causing fish diseases are examined and their usage areas are mentioned.

Keywords: Aquaculture, Molecular diagnosis, Fish diseases.

Common Bacterial Fish Diseases in Turkey

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Abstract

Fish is protein value as well as sport, aquarium and rest, and people have been familiar with it. The most important obstacle in the growing aquaculture is the diseases of the mentioned products. A total of 48 pathogenic bacterial species have been reported in bacterial diseases in Turkey. It has been stated that the highest outbreaks occur in the larval and infant stages of fish. Among the reported diseases, bacterial fish diseases most commonly reported are Vibriosis, Furunculosis, Moving Aeromonas Septicemia, Yersiniosis, Photobacteriosis and Flavobacteriosis. In this study, the most common bacterial fish diseases in the fish breeding industry are mentioned.

Keywords: Fish diseases, Aquaculture, Bacterial Diseases

SOCIAL SCIENCES

ARCHAEOLOGY

Ancient Salt Production and Usage of Salt for Human Health during Antiquity

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Abstract

In prehistoric and ancient times if a mineral could be found in the nature inherently human beings started to use it earlier. It is of course about the geography to reach to the raw material and we also need more scientific researches to say more about the first usage and production area of salt. Salt is a mineral composed primarily of the chemical compound sodium chloride (NaCl). As a mineral, salt is the maybe only and most commonly eaten rock in the world. There are several types and colors of salt. You can produce salt from saline lakes, seas or from rock caves. Mineral form of the halite and the other rock salts played an important role of human affairs for long periods. Chloride is such important for digestion, carrying for food stuffs and oxygen. Civilizations rose in Africa, China, India, Middle East and the Anatolia (modern Turkey) around rich salt deposits. Salt bought slaves (halotenos) and at times was traded at a value twice that of gold. In ancient times except being an essential nutrition for human health, salt especially used for food preservation, offering, mummification, for barter, to separate silver from gold, for medicine, for beverage fermentation and as money. According to the numbers of modern salt industry, salt has fourteen thousand different usage areas nowadays. Both sea salt and rock salt were well known to the ancient Greeks. Observable salt effects on basic human body functions especially the digestion and excretion of fluids like urine obviously led to medical applications of salt. From Egypt, medical practice came to Greece and was codified by Hippocrates (c.460-370 B.C.) who is known as “the father of western medicine”. Greek medicine, primarily the healing methods of Hippocrates made common use of salt. Salt-based remedies were thought to have expectorant powers. A mixture of water, salt, and vinegar was used as an emetic. Topical application of a mixture of salt and honey was used to clean bad ulcers, and salt-water was used externally against skin diseases and freckles.

Keywords: Salt, Antiquity, Salt Deposits, Anatolia, Asia Minor.

Assos from the Perspective of the Foreign Travelers

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Abstract

Anatolia, before the archaeology aroused as a discipline, excited the attention of the foreign travelers that completed the industrial development, increased the level of prosperity and influenced by the oriental current. Because of the fact that it had hosted different civilizations, Anatolian Peninsula that is entitled as Asia Minor by the foreign travelers was seen as a warehouse especially for the archaeology museums that were constituted in the Europe. When a traveler had wrote something about mystical orient the other traveler didn't believe or wanted to prove the predecessor and visit the region. Certain travelers visited the region for political and military reasons beside the scientific researches. The other important reason, in these period ancient languages translated into European languages and especially the İliad of Homer caused to increase the interest to the region of Biga Peninsula that was named Troas in ancient times. The main purpose of this study is to compare the data and the writings of travelers about Assos, to enlighten the unknown points and to evaluate the phases from previous to nowadays. The texts and drawings that we have about Assos -including small mistakes- are from the foreign travelers. And also we tried to find the answers about some questions like to identify the routes, in which years and why they try to visit the region, reasons of the deductions and especially to learn about "image of Turkish people" in their minds during those days. The necessity and the development of archaeology as a science is unfold. And the most important subject is to search about the reasons of why an important Greco-Roman city like Assos is lack of interest. The maximal difficulty about the research is the oldest versions of languages during the translation of the texts. While the publications are being translated, they are completely loyal to the original. Most of the publications were printed many years ago and most of them have no new edition that's why some of the travelers were explained with the reference to the transit of other travelers.

Keywords: Assos, Travelers, Travelogues, Asia Minor, Anatolia.

An Ideal Polis Quintessence: Assos

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Abstract

Assos which is located on the Aegean shore of Çanakkale-Ayvacık, Behramkale Village is the most preserved Polis in the Asia Minor. This is the reason that the American Archaeology Institute which is founded in 1879 had chosen Assos as the first excavation area. Six of the Platon's students' mainly including Aristotle, were active in Assos between the years 347-45. The Athena temple on the acropolis is the only Dorian structure in the Archaic Age in Western Anatolia. Assos is a typical Greek police quintessence with its necropolis, fortification walls, gymnasion, agora, bouleuterion, two storey stoa and the harbour. The excavations were revealed out that Assos was founded as a polis in the mid-7th century and uninterrupted till today. Most of the parts of the remains of the ruins belong to the Hellenistic and Early Byzantine Ages.

Keywords: Assos, Asia Minor, Ideal Polis, Anatolia, Public Buildings

An Assessment on the Factors that effect the Establishment of Cities and Urbanism in Ancient History

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Abstract

During prehistoric ages, villages were established as a natural result of the fact that humans were unable to overcome challenges alone. These villages were transformed into cities as the needs of humankind changed and the population increased. With this transformation, humankind left their caves and adopted a sedentary life, which was the precursor of various novelties. The most important of these novelties is urbanization, which is the subject matter of this study. Planned urbanization, namely grid planning, which has existed since prehistoric ages, is the basis of today's urbanization. This is because the system, consisting of vertical cross-cut streets and avenues, is the most influential factor against the non-planned urbanization of today. Existing since the prehistoric ages, urbanization has been accompanied by many concepts. For example, the principles of establishing a city resulted in improvements in architecture and engineering. The definition of urbanization includes the notions of city planning and civilization, which is an inseparable part of city planning. In parallel with the improvements in architecture and engineering, specific construction materials and techniques were developed, which played an important role in the development of urbanization and implied that functionality and aesthetic concern were presented in integrity. However, when we review the developing architecture of today, aesthetic concerns in vertical structures have become more prominent compared to the past. An inseparable part of urbanization, city planning is perceived as an assurance of people living together, and it also reinforces the civilization. However, the city planning notion has been losing its meaning day by day, and the interest to the ancient world has been increasing. Having been described with various discourses so far, urbanization is essentially a reflection of humankind and nature, because the materials used to construct the city comes from nature and from humans who shape these materials. Thus, urbanization is integral of all human factors. Considering this integrity, we must protect natural and cultural heritages, as we need them to reshape our future. They are the warranty of our future. We must discharge the responsibility that civilization imposes upon us, we must endear natural and cultural heritages to society, and we must serve as their conscious minds.

Keywords: City, Urbanization, City Planning

ARCHITECTURE AND FINE ARTS

Literary Arts in Folk Songs

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Abstract

Folk ballads express the true experiences which encompass a thousands of years- process via music and lyric . There are literary arts in those ballads which have been formed by the uneducated people despite their lack of formal education. This survey aims to determine the reasons of literary arts' existence in those folk ballads and to study the literary arts through those individual samples. This study is considerable since it reveals the literary productiveness of folk ballads and indicates that relevant music field depends on a deep-rooted artistic basics. While the oral pieces in Turkish Folk Music repertoire present the survey's universe, some lyrics taken from TRT archive and three compiled folk song lyrics constitute the paradigm.

Keywords: Lyrics (Türkü), Literary Arts, Folk Songs

The Significance of Vocalizing in Religious Music and Voice Training

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Abstract

Turkish religious music is required personal sensitivity in vocalizing due to its particular sense of lyrics as well as performance places and their occasions. In this respect, religious music's vocalizing depends on a set of rules and principles. After revealing the traits of religious music clearly, there also has been examined the course of religious music's vocalizing. This survey is significant in determining the relevant traits scientifically, drawing attention to this subject and it offers proposals for voice training. While the universe of this survey consists of religious music performance patterns, the principles on which vocalizing depends in that field express the paradigm.

Keywords: Religious Music, Vocalizing, Voice Training.

Reflections of Motifs on Tomb Stones with Ram to Todays Oyas in Turkish Culture

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Abstract

Turkish culture has characteristics those resources great civilizations of the world and that continuous its livelihood in societies with all of its vigor via integrating cultural component within its structure. It reached present day via gliding thorough emotions, thoughts and enjoyment of the society and it is shaped with the reality of human and nature. Turkish culture had a dynamic characteristic embodying both material and immaterial components such as belief, history, art and philosophy. Those cultural values are clustered around customs, traditions and beliefs complying with expectations and templates of three important trasition phases of human life, birth, marriage, death. These cultural values reached to modern day by preserving its importance via motifs and symbols. Motifs were developed when revealing life style, enjoyment and sorrow of the society. Thus, motifs became carriers of the cultural elements of that society with what they symbolize. Symbols and cultural codes reached present day as a continuation of material and immaterial culture of the society using those codes. For various reasons, those symbols are reflections of thoughts and desires that are unwanted or that cannot be explained. The tomb stones in Turkish culture with ram forms explains us the those thoughts and desires through forms and motifs. Sheep or horse shaped figures are important cultural treasures that carry traces of Turkish cultural life through Central Asia to Anatolia. Those sculptures that turned into tomb stones over time became reflections of early period steppe style art. This culture has been moved to Caucasus and Anatolia by some Turkish tribes migrating west. As a matter of fact, it became possible to come across with sheep and horse figured tomb stones in Turkish geography such as Georgia, Azerbaijan, Iran, Anatolia, Kazakhstan, Kyrgyzstan, Mongolia etc. Along with providing very important clues on brightening history of the area, with the form and decoration characteristics they appear as art Works reflecting cultural traditions of their era. In every period, societies always used the art as a tool to express themselves. While that tool has been used on the tomb stones with motifs and symbols at the past, motifs continue to be used on embroidery. In our study, we will try to examine reflections of motifs and symbols on sheep and horse shaped tomb stones to present day embroidery art.

Keywords: Ram Head Gravestones, Turkish Culture, Oya

Dede Shamshir In Camil Akbar Literature

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Abstract

The Azerbaijani people have always been proud of their talented people. These people, as well as in different professions, have registered their names on the golden pages of history with their works in the field of culture and art and literary-artistic works. Since our poets, Sheikh Nizami, Mohammed Fuzuli, to Samet Vurgun, Osman Sarıvalli, Bakhtiyar Vahabzade have been able to survive to this day because of their enrichment of our literary world with wise words with poetic values, and will live in the hearts of our people in the future. One such talented person is son of Imamverdi, Camil Akbar. Cemil Akbar's 60-year literary and artistic career is characterized by the fact that he is a multi-subject. Among 2500 poems, there are issues related to the lyrical topic, as well as those that are based on the human factor. At the same time, it is reflected in satirical, critically-motivated poetic samples with those dedicated to socio-political problems Along with topics that instill sympathy, feelings of confidence in the future, complaints of spirit, sadness and sadness are also common. Azerbaijan has conquered the peak of Dede in the field of saz-verbal art, and one of the masterpieces of our literary literature is Dede Shamshir. Since 1956 folk poets Samad Vurgun and Osman Sarvali until today's poets, there are countless poems devoted to Dede Shamshir. Ashiq Azhafli Mikhail, Ashyq Gamkesh Allahverdi, poet Bahman Vatanoglu, Ali Qurban, Shamil Asgarov, Demirchi Abbas, Nariman Hasanzadeh, Zalimkhan Yagub, Eliza Tapdig, Mammad Aslan and Jamil Akbar are among the names. Dede Shamshir's poetic pearls began to appear in different years, and Cemil Akbar took his prestigious place in his work. There are more than 20 poems dedicated to Dede Shamshir in the work of Camil Akbar. In this article, we aim to reveal many poems about the name of Dede Shamshir in the work of Camil Akbar.

Keywords: Camil Akbar, Dede Shamshir, Ashiq, Poem, Literature

A Case Study toward the Development of Artistic Awareness of Post-Graduate Students

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Abstract

The aim of this research is to determine the contribution of the students who are educated in the graduate programs of the Fine Arts Institutes to the artistic awareness of their use in artistic research and practice activities. Participants of the research were students who attended Atatürk University Fine Arts Institute 2015-2016 / 2016-2017 Fall semester, students who took courses in Textile Design and Contemporary Commentary in Traditional Turkish Handicrafts and Theater Costume Design course. In the acquisition of the data, "Application Research Model" was used. Within this scope; the lessons were made in various sections of the museum with special permission from the Archeology Museum of Erzurum and the documents were used for the collection of the data. The research data were analyzed with a research project paper given to the students at the end of the semester. As a result of the research, it has been observed that museum-based trainings can reflect the creative ideas of the old and the new, which strengthen the connection between the students themselves and the society they live in, easily with their project assignments. Another important result reflected in the results of the research is that they have developed new design questions that strengthen students' awareness of artistic design.

Keywords: Museum, Post-Graduate Education, Awareness, Art, Design.

A Model Recommendation on the Current Garment Designs of Erzurum weaving as a Model Suggestion

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Abstract

Erzurum is a city that is a city that is Evliya Çelebi Söyler Ki Evliya Çelebi's "Place of happiness, solid fortress" dating back to the fifth century, a historical past established in the North East of Anatolia. Ehram is used as a street wear in this city. Those who weave this weave (Culha/çulfa) are mentioned in the book of Ahmed Hamdi Tanpinar in 1913. Accordingly, this fabric is based on very old and there is a huge impact on folk culture. The purpose of this study is; In the traditional forms of Erzurum Ehram textiles for the use of a model proposal in current clothing designs. A unique garment design that was prepared in the workshop, the main fabric of this design was woven around Erzurum about 90 years ago, and it has dimensions of 2.50 cm x 1.85 cm (some parts are destroyed these days). Although design is multi-component, design is also known to be important at the same time, research, review and literature review and information and analysis. Drafting may involve incorporating traditional forms into an important stepping stone creative design idea. In addition, the designer will develop forms of clothing that he has de

veloped and blends in with his own culture, contributing to popular culture, knowledge and sanctity.

Keywords: Erzurum, Ehram, Original Clothes Design.

Determination of Cultural Structures for the Old Gümüşhane (Süleymaniye Neighbourhood) and Recovered to Use Again

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Abstract

Gümüşhane city 16-18. Many ethnic and religious groups such as Armenians, Russians and Turks were living together by hosting the many civilizations until the early 1920s with the position between Trabzon port and Eastern Anatolia between the centuries. The Ottoman-Russian Wars The relocation of the Armenian population, the Russian occupation of the First World War and the abandonment of the majority of the Turkish population, moved the city after 4 km north of the abandoned city in the 1920s. The abandoned city has been declared as an old Gümüşhane (Suleymaniye Neighborhood) protected area with its cultural characteristics such as traditional houses and gardens, church ruins, mosques and minarets, bath ruins, species, cemeteries, bridges and fountains. It was observed that many houses were left in the examinations, the churches and baths were affected by the environmental conditions, and the cultural traces were erased day by day. Within the scope of this study, it is aimed to provide awareness of our cultural values, to introduce and to contribute to the development of cultural tourism by giving protection and usage recommendations to this establishment. As a result, 2 mosques, 3 minarets, 6 church ruins, 4 baths and traditional mansions and 35 immovable cultural properties were found in Süleymaniye Quarter, which is now called Süleymaniye Quarter. In other words, the museum, library, art school, navigation area, walking and cycling routes have been proposed to use this period. The museum, library, art school, navigational area, walking and cycling routes have been given to these buildings and surroundings by taking advantage of the characteristics of the period.

Keywords: Cultural Structure, Tourism, Planning

New Channel in Political Propaganda: Social Media

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Abstract

The aim of this study is to investigate the effects of the social media phenomenon as a means of political propaganda, on political participation and democratic understanding. The propaganda activity, which is mainly based on the influence and directing strategy, is directly influenced by the mass media, which is considered as the fourth force in today's democratic societies, and as a result of this influence, the evolving appearances of propaganda in 'New Media'. The development of Internet technologies also affects the usage habits of the people and this leads to a change in political propaganda methods. Social media, which offers political access, not only facilitates the relations that the candidates and / or parties establish with their target groups, but also gives them the ability to use economy and time phenomena more effectively. Unlike traditional media instruments, it is important to question the effects of new communication technologies and social media, which offer significant benefits to their users, in the context of political propaganda. The use of social media as a means of political propaganda is also a fact that will bring significant gains in the name of democracy, even if it presents some adversities.

Keywords: Political Propaganda, Social Media, Mass Media, Democracy

The Effects of the Internet Environment at Context of Cultural Change in Turkey

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Abstract

The common features of society to bring together by community has created to the cultural values and with this formation, culture is transmitted to future generations. Therefore, changes has caused the innovations in the transport of cultures. As a matter of fact, the changes and transformations experienced in the globalizing world it has a decisive role on cultures as well as on all fields. So that, this effect is an important point both in terms of the traditional media and the new media. On the other hand, when the impact of the internet, which is a new media tool, as cultural changes, come forward the power of the internet factor. In this context, the study aimed to reveal the cultural change effect of internet ambience and the findings obtained by the qualitative data analysis technique were interpreted by the content analysis. In working context, as a result emerging findings was discussed under headings.

Keywords: Culture, Internet Ambience, Society

The Reflection of the Lost Identity of the Individual in the Consumer Society to the Social Media: Instagram Samples

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Abstract

At the heart of the concept of consumer society, which emerges as one of the consequences of globalization, there are consumers that have made consumption a lifestyle. So much so that individuals living in this society structure are constantly driven in every area of life from their feelings, their feelings to their designs and object relations, to respond to the stimuli, that is, to constantly be consumed. In this sense, purchasing or consuming is subtracted from the original attitude towards the purpose of satisfying the concrete need of the individual. The distinguishing feature of the consumer society is that consumers do not consume for necessity, but consumption comes alone for a purpose and need. In the era of globalization, the meaning of people's lives depends on consumption. If people consume, they are meaningful. If it does not consume, it does not make sense. The main component of the consumer society is body. In the world that is built by globalization, it is reduced to human consumer position. In this society, the identity of the person who is kept away from the relations of human emotions and from the thoughts has lost face to disappearance. The conceptual framework of working in this context constitutes the concepts of consumption society and identity. By linking these concepts, social media applications, which are most commonly used by individuals, have been analyzed through the Instagram sample.

Keywords: Consumption Society, Social Media, Identity, Instagram.

Paradigm Change in Education and Media Impact

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Abstract

In today's post-modern era, we live in an unlimited space of a world of social networks. Mobile technology is at the center of human life. The media has given a new dimension to education and to all concepts of education especially since the process started with television. Throughout the process, it gradually served the function of education. As the the media owed a bit superiority over the conflict of 'forces' the game started to be played as the media wished. The media has rebuilt the society and change for education has become inevitable as the new community began to enter the of the school door. Today, the individual is kept in a steady stream of information. Informal learning is obviously superior than formal learning, or formal learning has the weakness comparing with informal learning. These uncontrolled learning, of course, do not always happen in the desired direction. In the following process, the internet has taken the responsibility of delivering information from schools and school teachers. Individuals can get immediate information they need from the whichever internet site they want. When necessary, he/she can access the documents and listen to it repeatedly from different narrators. Today, children since secondary school are eager to become 'ticky', style icon, 'cool' with media jargon as a miniature of the fame they have followed in the social media age. The first characteristic of a child who tries to get into this mold with his speech, his clothes, his gestures and his mimics is 'an extreme rebellion to the school'. On every new day, new tasks are fall to individuals who try to reflect what he/she has learned and therefore to teachers. With this study, the rapid development in technology the effect of media will be analyzed with literature review method and the results will be discussed.

Keywords: Education, Paradigm, Social Media, Internet

ECONOMICS AND ADMINISTRATIVE SCIENCES

Human Resources Management in the Context of Islamic Management: A Comperative Study

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Abstract

Islam is not a religion that concerning only individual behaviors, but also regulates the relationships between individuals and society. Business life is stated on relationships among institutions and people as staff, consumer, client and so on. In this perspective, Islam gives orders to human about justice and good faith in trade, refinement and fairness in staff relations, fair distribution of the profit among shareholders. Also Islam cares about qualification for hiring people for a specific job. Aim of this paper is to establish the difference of Islamic Management perspective of Human Resources Management field. And develop a point of view for Human Resources Management with Islamic references.

Keywords: HRM, Islamic Management, HRM in Islamic Perspective.

The Places of Foreign Trade Composition between Turkey and Azerbaijan of Speech "One Nation Two States"

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Abstract

One of the important factors for economic growth and development is the composition of goods in foreign trade as well as foreign trade. Technology-intensive goods in the foreign trade of the developed countries and labor-intensive goods in the foreign trade of the developing and underdeveloped countries. Turkey is mainly engaged in foreign trade with EU and Eurasia countries. On the other side, unfortunately the desired level of reflection of cognate and close cultural relations between Turkey and Azerbaijan in foreign trade is not. It is also seen that even though there have been significant increases in the volume of foreign trade in recent years, there is a lack of technology as a group of goods and a concentration in low technological goods.

Keywords: Economic Growth, Foreign Trade, Azerbaijan-Turkey.

Institutionalization of Family Companies

Deniz Alkan

Abstract

Family is all of the individuals of the same family or having the relationship relations among them. Societies are formed by gathering of families. People live in families since the prehistoric ages. In time family did not change but members of family and duties of members changed some. Company is an institution formed in order to produce goods or service to needers. The family company is kind of company where the family members are efficient substantially in making decisions, founded by the family members and an important part of the management stages are filled out by the family members. It also has an important place in economies besides company itself for the companies to be able to continue their activities in order to maintain their presences and to transfer to the next generations. Also, it is very important for companies in order to maintain their presences and protect their stabilities to adapt to the competition environments and conditions with the changes and developments also experienced by effect of globalization in today's world. Although institutionalization is much harder and troubled in regard to the other companies for the family companies, it is an irrevocable phenomenon for their longevities. It is seen that there are family and administration in essence of work when looked at the common points of the definitions made for the family company. In some of them, the case of being in the active management in administration is cared while, in some definitions, the founder personalities and the family way of the family company are put forward. In some of them, it is preferential that ownership belongs to whom, in another definition group the work's management is preferential. The Family Administrations confront us as a subject necessary to be examined for the various regards with their social and economical extents because they undertake the basic role in the economical efficiency and have possibility to be able to reply to/meet the affection and working desire at the same time. The family relations should be the first point where the family companies will start to institutionalize. In the family companies the institutionalization process is a process that might be considered difficult and required the family members to believe in this process and to surrender something. This case reveals that the family companies have to start from family itself at first in name of institutionalization. This mentioned case should spread in common of family.

Keywords:

USA's Politics Toward Caucasia

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Abstract

In this study, the history of the US Caucasus policy was examined in the period after the disintegration of the USSR. The United States and Russia are investigating how they can not share the Caucasus in the post-Soviet period and what policies the US has produced for the Caucasus. At the beginning of the study, the policies of the USA towards Azerbaijan and Armenia, and the period of the Russian-Georgian war, were examined. The United States intervenes even if it is far from the Caucasus region, which has a very important geo-strategic position, and it can not share this region with Russia even though the Cold War is over. The Saakashvili was brought to power after the tulip revolution that the US made in Georgia through Jewish dollar billioner George Soros. Later, when Georgia entered the autonomous region of Adjaria, Russia entered tanks of Adjaria, which it saw as its own. It was not limited to this, and it came to the Batum with tanks and caused extensive damage. Unfortunately, the United States has refrained from supporting Georgia in this war and hesitated to intervene in the war, fearing a war could break out with Russia if it intervenes.

Keywords: US Caucasus Policy, Azerbaijan, Armenia, Georgia, Russia.

Determining Job Advertisements Related to Businesses by Content Analysis: Career Net Sample

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Abstract

Today with the increasing of human resources managements in business, the importance of job adverts also increases. With the increasing of job adverts, a website was required which includes in staff for business and business for staff. Therefore, the job adverts in Career Net have gained importance. For this reason, the purpose of the study is to assess the job adverts in business in Career Net website. In scope of the study, the data were collected with the help of statements about the job adverts for all sectors in the website. For the assessment of the statements, content analysis method, one of the qualitative data collecting methods, was used in order to study the data in detail and to obtain valid outcomes. The content analysis of the interpretations was analysed with MAXQDA qualitative research pack program. As a result of the study, 46 job adverts about sectors and 56 about departments were found when the website was studied. In so-called sector, including 26.398 experts, 5.399 managers, 7.045 employees, 2.179 service personel, 481 disabled, 2.187 new grads and other positions and in total there are 56.519 job adverts. It was noticed that the most prevalence of the adverts was about marketing.

Keywords: Business, Career Net, Job Adverts

The Accounting System at State Universities: Budget Accounts and Applications

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Abstract

Today, the most important problems of enterprises are production of quality goods and services. With the growth of the service sector and spreading to wider areas, competition between businesses is increasing day by day, and this competition is pushing consumers to be more sensitive and conscious about quality and businesses to provide better quality service. In many respects to ensure quality and control the quality of service is much harder than the quality of the product. While a number of unique features of services differentiate services from goods, they also limit the impact of service operations on quality. There may be differences between the quality of the service offered by service businesses and the quality of service perceived by service providers. When evaluated from this point of view, the presentation quality of the service presented is foreground. The quality of the service offered is also important for the sports enterprises which can be evaluated within the scope of the service enterprises. The purpose of this study is; Determine the quality of service perceived in sports enterprises. This study has been carried out in sports enterprises that provide fitness service in Ağrı province. The "Sport-Fitness Centers Perceived Quality of Service Scale (SFC-SQS)" developed by Uçan (2007) was used in the study. SPSS 21 package program was used for statistical analysis of the data.

Keywords: Sport Operations, Service Quality, Statistical Analysis.

Implications of Perceived Psychological Contract Violation on Organizational Commitment: Iğdır University Sample

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Abstract

Labor productivity is always one of the most important topics in business life. To increase the productivity of manpower, managers have to pay attention on understanding the employment relationships. The concept of the psychological contracts indicates those relations through unwritten, unspoken terms have been forged or believed to be forged by an employee and an organization. Inherently effects of psychological contracts surface when a violation occurred and affect the motivation, enthusiasm, and productivity of the employees. This study focuses to determine the perception of psychological contract violation and its impacts on the organizational commitment. In this context; Igdir University was selected as a sample. In the study researchers applied an electronic survey which has three dimensions as follows; demographics information, scales of psychological contract violation and organizational commitment. The results are subjected to statistical tests.

Keywords: Psychological Contract, Organizational Commitment, Violation of Pyschological Contract, Perceived Pyschological Contract Violation.

Determinants of Foreign Direct Investments: Comparison of Developing Countries with EU Countries

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Abstract

There are several important advantages of foreign direct investment (FDI) in terms of developing countries. It is possible to say that there are the capital investments, employment opportunities and technology transfers to these countries among these advantages. In this context, developing countries see it as an important opportunity to withdraw capital investments from foreign countries, especially developed countries, in order to achieve a sustainable economic development. However, depending upon the economic stagnation seen in the developed countries in recent years, the importance given to the FDI in these countries has increased.In this research, the macroeconomic variables which are affecting the FDI and tried to be determined by comparatively through the European Union (EU) countries and the developing countries. In the extent of the research, the period between 1990-2015 was analyzed with panel data analysis

Keywords: Foreign Direct Investment, Developing Countries, European Union.

Impact of Organizational Justice Perception on Organizational Opposition Behavior

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Abstract

In this period, we are working on many studies that show how important the human factor is in the organization. For this reason, managers at the management level of the organization should hire employees who are in line with their goals and objectives. They should evaluate the employees they employ with the points where they will be most productive. However, it is not always possible to achieve the desired harmony and unity among the employees within the organization. For this reason many different problems arise within the organization. Justice in the organization and the opposing behavior of the employees in the organization are a very important concept among these problems. The aim of the study is to reveal the relationship between employees' justice perceptions and their opposing behavior and the level of interaction between these concepts. In this context, the research was carried out by obtaining data from 327 academics working at Kafkas University, and a meaningful relationship was found between organizational justice perceptions and organizational opposition behaviors.

Keywords: Organizational Justice, Organizational Opposition, Academician, Kafkas University, Kars.

The Role of Incentives in Regional Development: A Research in Iğdır

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Abstract

In recent yerars incentives have been used by many governments to increase employment, offset income disparities and regional development imbalances. Espacially developing countries consider important incentives to accelerate their development policies. Like other developing countries in Turkey offers incentives in economic policies for purposes such as securing sectoral development and developing underdeveloped regions. However, there are some considerations that need to be taken into account when using incentives. When the incentives are applied, such as what are the aims to be achieved, the determination of the support to be attained and the supervision of these supports are included in the matters to be considered. The aim of this study is to investigate the role of incentives made in province of Iğdır in the regional development of the province. Province of Iğdır is located in the sixth region and TRA2 region. In the plan of this study, firstly the definitions, aims and types of incentives will be given, then incentives will be announced in terms of regional development and then brief information about TRA2 region and Iğdır province will be given and the results of the incentives made to Iğdır province will be analyzed by examining the economical reflections on export-import and public investment, The results of the incentives will be announced. Finally, a general evaluation will be made in the study and recommendations will be made for this study.

Keywords: Incentives, Regional Development, Iğdır.

Competition Problems of the Banks Related to the Insurance Field Operations

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Abstract

Bank insurance application is one of the subjects which need to be pointed out when analyzing the insurance field structure and its place within the economy. One of the most important advantages of insurance is making easier get loan from the bank. Banks could force people for life assurance to ensure that the credit will be paid back. People could be requested for a life insurance when asking for a loan from the bank. In this way, the bank ensures the back payment of the money. However, the banks request life assurance of the people applied for a loan with the insurance companies they specify. Banks were remonstrated to the Competition Board due to infringing fourth and sixth matter of 'Act on the Protection of Competition' by forcing people to make life assurance with the insurance companies specified by them. However, the Competition Board concluded that there is no need to start a prosecution against the banks. The issue was sued to the State Counsel after declining by the Competition Board. The conclusion of the State Counsel was that the fourth and sixth matter of 'Act on the Protection of Competition' were not infringed by forcing people to make life assurance with the insurance companies preferred by the banks when applying for a loan, and there is no monopoly concern.

Keywords: Bank insurance, Economy, Credit, Competition.

The Effects of Credit Rating Agencies' on the İstanbul Stock Exchange

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Abstract

Credit rating agencies play a key role in directing investments in the economy of the relevant country in line with the notes given to the country's economy in orienting investments. Investors, banks, debt issuers, businesses, financial institutions and organizations direct their investments to make investments by taking into account the recommendations of the financial rating agencies. When domestic savings are inadequate, countries try to earn foreign resources into the country's economy in order to sustain their economic growth. Especially in order for foreign capital to invest, requires a certain sense of confidence. Credit Rating Agencies provide this confidence that is required. Three of the world's largest credit rating agencies (S&P, Fitch, Moody's), because of the origin America, has given scandal decisions in America. For example, Companies on the brink of bankruptcy has given notes can be done investment. Because of their wrong decisions, many companies has gone bankrupt. They became the focus of criticism because of these wrong decisions. After 15 July coup attempt in Turkey, Moody's made a scandalous decision and dropped the Turkey note. Therefore, The BIST 100 index has declined from the level of 82590 to the level of 72000. And then, it was improved in a short time and as of June 2017, it has reached the level of 99200. In this study, credit rating agencies did not make transparent decisions, their decisions were political, and the only criterion for investors was not credit rating; Turkey is economy growth regularly 27 quarters, export is upwards and it has been seen that the crisis environment in Europe is influential.

Keywords: Fiscal Policy, Current Account Deficit, BİST, S&P, Moody's, Fitch.

Budget Concept of Changing Process: Erosion and Budget Explanations for the Balanced Budget Priority

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Abstract

The budget right is a legislative draft which constitutes the income and expenditure of the state in certain periods for the future and permits them to be implemented and enforced. The budget right is that the legislative organ shall authorize the budgetary law on the collection of the public revenue of the public on behalf of the public and the public expenditure, and then check the implementation results. In democratic regimes, the right to budget is in the hands of the people. It is important that the state revenues and expenditures are equal to each other within the budget period of the state. The budget also shows the stability of fiscal policies implemented by governments for a long time. It also emphasizes avoiding excessive government oversight of tax and spending policies. During periods when states actively demonstrate their existence, they have followed different budget policies. Depending on the changes in the budget policies of the state, the budget understanding which expresses the monetary compensation of the changes in these budget policies has also undergone significant changes. In this study, firstly the definition of budget right under the title of change process in the concept of budget concept, the changes that occurred in the concept of development and budget, budget deficits are examined and the results of these developments are revealed.

Keywords: Budget Right, Balanced Budget, Budget Deficits.

Story and Personality Characteristics of Women Entrepreneurs in Iğdır Province

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Abstract

The participation and empowerment of women as economic entrepreneurs in economic and social life is a vital basis for the economic development of countries. The aim of this research is to examine the entrepreneurship story and personality characteristics of women entrepreneurs in Iğdır. The method of research is designed in both quantitative and qualitative research. The data will be collected through primary (survey, interview) and secondary (press news) data sources. In order to determine the personality characteristics of female entrepreneurs, the six personality characteristics called self-confidence, innovation, focus of control, tolerance to uncertainty, risk taking and need for success were taken into account. Gürol and Atsan (2006) '40 questionnaire was used for entrepreneur personality traits. In addition, information on the stories of female entrepreneurs was obtained through a structured interview. In the survey, 10 female entrepreneurs (1. Gazioğlu Yufka owner of business Nebahat Karadağ; 2. Elit Sigorta owner of business Duygu Sümer; 3. Yıldız Gelinlik owner of business Yıldız Altuntaş; 4. Kelebek Ev Tekstil Ürünleri owner of business Asena Şöllü; 5. Rüyam Eşarp owner of business Şükran Cantepe; 6. Almina işletmesinin sahibi Derya Eren; 7. Modaliza owner of business Sunay Mert; 8.Serla Hobi Dünyası owner of business Lale Karadağ; 9. Tuana Perde owner of business Figen Bayındır 10. Komegene Çiğ Köfte owner of business Aygül Polat) Entrepreneurial stories, entrepreneurial personality characteristic, difficulties they have experienced, economic contributions and suggestions for women have been reached.

Keywords: Entrepreneurship, Woman Entrepreneur, Entrepreneurial Traits.

Tourism Based Growth Hypothesis: Panel Data Analysis

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Abstract

One of the fastest growing sectors with an important place in the world economy is tourism. Tourism is one of the important tools for the development of the country. The tourism sector is an important sector that ensures the elimination of income, employment and balance of payments problems. This study attempted to examine the impact of tourism on economic growth in developed and developing countries. For this purpose, the data set belonging to the period of 1995-2015 of the 44 countries included in the research are used. Panel data analysis was used in evaluating the data. The findings from the analysis confirm the positive impact of tourism on economic growth.

Keywords: Tourism, Growth, Panel Data Analysis.

On the Possibility of Establishing a Technology Free Zone in Iğdır

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Abstract

Globalization has been transforming the world economy since the last quarter of the twentieth century. This new economy is defined by knowledge-intensive production and rapidly changing consumer preferences. The importance of local and regional economies has also been increasing with globalization, as intensified trade and capital flows created winning and losing regions. In the face of competition from the global market, local and regional economies must be competitive to generate jobs and income for the local populations. Moreover, economic activity tends to concentrate in regions and cities in the form of agglomeration economies, emerging as a result of the idea of utilizing positive externalities occurring with the clustering of geographically-proximate firms and service providers. The new local and regional development paradigm, therefore, puts a special emphasis on increasing competitiveness through innovation, export-oriented growth and utilizing regionally-embedded advantages. Being innovative is the key to stay competitive in a dynamic economy in which consumption patterns change everyday. It is observed that regions which have innovative knowledge-intensive or technology clusters perform well in the global markets. Thus, improving the innovative base of the economy has become a common policy objective in national and regional plans. In this respect, such policy tools as technoparks and technology transfer offices are used widely to stimulate knowledge-intensive production and innovation particularly in disadvantaged regions. Technology Free Zones is such a tool which aims to enhance knowledge-intensive entrepreneurship, facilitate adoption of new technologies and increase production and export of knowledge-intensive goods. This paper contends that Iğdır, the only province of Turkey to border three countries, has a geographical comparative advantage for the establishment of a technology free zone. Establishing a technology free zone in Iğdır may improve the innovative base of the region, diversify and increase exports and provide an outlet for international entrepreneurs to commercialize their ideas.

Keywords: Iğdır, Regional Development, Innovative Regions, Technology Free Zone.

Analysis of the Relationship Between index Closure Prices and Economic Growth by Granger Causality Test: Example of Turkey

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Abstract

Indices that are among the most traded instruments in the country's stock market are one of the most important indicators in the financial markets, which enables the stock exchange traded on the stock exchange to determine the overall trend of the stock exchange, either as a whole or as a proportion of the changes in sales and prices over a certain period of time on a sectoral basis. The indices in the stock market provide opportunities to make measurements and more healthy and realistic predictions about the performance of the companies are offered to public, sectors and cn the performance of the overall course of the country's economy. In the theory of economics and finance it is accepted that there is a relationship between stock prices and economic growth in the same direction. However, it can not be said that the field has provided a consensus on the result of the statistical empirical studies carried out at home and abroad. Our main goal in this study, starting from the sample of Turkey stock exchange Istanbul '(BİST) located in and academic studies that have not been addressed previously BİST 30, BİST How banking, BİST National and BİST Tourism Indexes and Gross Domestic Product (GDP) are related in the time and if there is a relationship (cause and effect relation) statistically determined, contribute to the field literature. The causality relationship between the indices included in the study and the GDP will be used for the quarterly data for the 1997Q1-2017Q2 period. To determine the existence and direction of the relationship between stock market indices and GDP will be examined VAR Granger (VAR Granger Causality) causality analysis an impact-response analysis with the help of the EViews program. Before making econometric analyzes, it will be checked whether the data possess to the variables are stationary. Since the results of regression from econometric analyzes made with non-stationary time series data are insufficient to reflect reality, data must be stabilized. Whether the data belonging to the variables included in the study are stable will be examined by the Augmented Dickey-Fuller (ADF) test and the result will be determined by looking at the significance value obtained from this analysis.

Keywords: BIST, Economic Growth, Index, Granger Causality.

The Business Intelligence Concept and Its Importance at Scope of Tourism Sector Technically and Administratively

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Abstract

Today, there is both a high technology-dependent business intelligence of the information society and the modern industrial concept of new economy the methods of business intelligence acquired at the markets for the consumers. In this sense, business intelligence has showed to situation both technical and administrative aspects of the subject as the container, integrator and connector. As a matter of fact, business intelligence today has become an art that regulates large quantities of data, extracts unnecessary information, digitizes important information, and keeps them together. On the other hand, in order to evaluate business intelligence in terms of globalization that we need to accept the influence of big companies especially in the world market today. So that these companies operate in a range of economic, political, social and cultural environments. Therefore, the tourism sector is one of the areas that guide the world market and the concept of business intelligence is an important point in terms of the tourism sector. In this context; the center of our work; has created to the situation in the tourism sector of business intelligence concept technically and administratively. The purpose of this study is to reveal the importance of the concept of business intelligence within the tourism sector and in this study, the literature was searched with the general screening model and the results was discussed.

Keywords: Business Intelligence, Tourism, Market, Economy.

The Legal Infrastructure Issue seen in Urban Security Management Systems

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Abstract

In order to prevent crime and enable citizens to live in peace, security services are offered via the technologies of information and communication in the globalized world. Urban Security Management Systems (USMS) serve as an organization removing the fear of crime perceived by citizens and allowing the society to live more freely and happily and interact with judicial organizations by playing an active role in prosecution of criminals. Urban Security Management Systems using effectively their technical equipments and enabling the solution mechanisms to work encounter some problems and are discussed because of the reasons of these problems since they have not completed their legal infrastructure yet. Whether the evidence obtained by this system should be accepted or not is a topic of discussion, especially the topics of respecting human rights and intervening the secrecy of private life are mainly criticized in this study. The legal status of these systems has been directly affected by this process. Thus, since the use and run of MOBESE systems (USMS) are sustained by the security organization, there is no institution controlling whether the secrecy of private life is breached or not. For this reason, there are some questions about this issue. In this study with this context, some solutions will be presented by examining the causes and results of the problem and the problems caused by the insufficiency of legal infrastructure of Urban Security Management Systems will be evaluated and analyzed according current events. The problems caused by the insufficiency of legal infrastructure will be discussed and suggestions will be presented with a general evaluation in the study in which a general literature review will be done and case studies will be examined. In this study, the researchers themselves conducted observations and did evaluations in Trabzon and Kars in which USMS widely used.

Keywords: Security, Technology, Law.

EDUCATIONAL SCIENCES

Situation Analysis of Present Sport Systems of Iğdır and Solution Suggestions

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Abstract

In Turkey, especially in last years, number of sport facilities shows a significant increase. When sport clubs and licensed athletes are considered, it cannot be said that these facilities are insufficient. However, one of the factors that the sport in our country cannot become widespread is not inadequacy of facilities, but the distribution of facilities, lack of quality and non-optimal use of these facilities. While planning facilities, since inter-regional population growth, advantages and disadvantages of regions in geographical position, organizational culture and organization climate, demographic structure considered sports facilities policies at national and local levels are not taken into a consideration, imbalances emerge based on region and sports branches.The purpose of this research is to present solution proposals for current problems in the context of situation analysis of sport system of city of Iğdır. In Iğdır, there are a total of 46 sports facilities, 7 of which are connected to University, 12 are connected to Directorate of Youth Services Sports Provincial Directorate and 27 are connected to the Directorate of National Education. As of 2017, when the numbers of athletes are examined, it is seen that the total number of athletes is 15,558 while 10819 of them are male and 4739 of them are female athletes. However, considering the number of active athletes, this number is observed to decrease from 15558 to 2061. 1425 of this number are Male Sportsmen and 636 are Female Sportsmen.When considering the sufficiency of existing facilities, even though the number of licensed athletes is high, the decrease of the number of active athletes constitutes the focal point of our research. In various uses of facilities where sports competitions are hold and the athletic skills are performed, the important thing is to manage, plan and operate sports facilities well. There are shortcomings in public announcement of facilities, promotion of sports facilities, and proposals for solutions to the problems of sportsmen. Generally, it is thought that there are no brochures and documents promoting sports facilities and sports programs produced in these facilities, and individuals are not illuminated by sports experts. Considering the different infrastructure and training needs of sports branches, trying to bring all of them together under a single roof, in a common payday, reduces the effectiveness of the trainings given, and in addition, it necessitates the renewal of the curriculum in these branches. In this study, which deals with the current situation analysis of the sports system of Iğdır, educational, institutional, legal, long, medium and short term solutions are proposed to prevent these problems.

Keywords: Sport Facilities of Iğdır, Active Athletes, Sport Management, Problems in Sport, Solution Suggestions.

The Effect of a Constructive Teaching Approach on 10th Grade Students' Conceptual Learning of Logarithm Function

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Abstract

Little research in math education looked specifically at students' understanding of logarithms. On the other hand, it was not encountered any research on students' understandings when used constructive approach in the process of teaching the function of logarithm. The current research focused whether constructive approach improves students' understandings on the function of logarithm and its rules. This study has been administered to 26 tenth grade students (12 female, 14 male) over a 3 week-period (12 courses). At the end of the treatment period, the students were asked 10 open-ended questions designed to probe their conceptual learning of logarithm. It was seen that the success rate of the students was 15% averagely.

Keywords: Logarithms, Conceptual Learning, Constructivism.

A Comparative Study on Mathematical Modelling Performances of Turkish and English Prospective Mathematics Teachers

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Abstract

The aim of this study is to compare mathematical modelling performances of prospective mathematics teachers. Sub problems of the study are as follows: "To what extent did Turkish and English prospective teachers become successful in the stages of mathematical modelling given by Berry and Houston?" and "Is there a significant difference between their performances?" 38 Turkish and 26 English prospective mathematics teachers attended the study. The participants' performances were determined and compared on the basis of "understanding the problem", "determining the variables", "setting and interpreting the model", and independent-samples t-test was carried out as well. Most of the students were not successful at dealing with a real life problem. This means that prospective mathematics teachers could not transfer the algebraic concepts such as function, equation and inequality that they learn in school to such a real life problem. In addition, English students' performances were better than the Turkish students.

Keywords: Mathematical modelling, Modelling competency, Prospective mathematics teachers

Investigation of the Solutionly Skills of Daily Life Problems of the Secondary School Students

Alper Çiltaş

Abstract

Mathematical modeling plays an important role in the formation of relationships between mathematics and everyday life problems. Mathematical modeling; As a method representing the solution of real life problems in mathematical terms, has entered into the mathematics curriculum of 2005 by the Ministry of National Education and emphasized the importance. Mathematical modeling; In fact, simplifying, abstracting, or transforming real life problems into a mathematical form. This method, which is interwoven with real life, has been one of the basic skills in the mathematics curriculum that will enter into force in 2017. With this thought in mind, it was researched in this study that the ability of seventh and eighth grade students to solve daily life problems could be determined. The sample of the research consists of 50 students, 25 of which are seventh grade and 25 of which are eighth grade, consisting of the seventh and eighth grade students who are studying in the east on the east. Students are given a daily life problem called "Travel Problem" from the literature appropriate to their level and they are asked to solve. The data were evaluated by quantitative descriptive statistics method. In the analysis of the data, it was determined that middle school students had not the skills to solve daily life problems. In reaching the numerical result, the rate of decision making is 22% and the expected mathematical model is 10%. These results suggest that modeling activities, which are among the basic skills under the light, should be done in schools.

Keywords: Daily Life Problems, Secondary School, Mathematical Modelling.

Doğuş and Kars Eli Periodicals Coverage of the City of Ani

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Abstract

The City of Ani, located 40 km southeast of the Kars province, served as the center of many post- and pre-Islamic Turkish dynasties for almost 800 years. It is a city of cultural richness as it housed diverse nations throughout its history. The city was conquered by Alparslan, one of the sultans of the Seljuk Empire, in 1064. This conquest was the first and most significant step towards the Turkification of Anatolia. Ani, which served as the gateway through which Turks accessed to Anatolia in 1064, hosted diverse nations. In 1647, Evliya Çelebi, a Turkish explorer who travelled pass the city on his way from Kağızman district to Yerevan, described the city as a small, ruined fortress. It is not known when exactly this place was developed into a city. The date of the conquest of Ani has always been considered sacred for the Kars province and its inhabitants. On August 16, 1964, a variety of great events were organized in the city to celebrate the Turkification of Anatolia. On the 901st anniversary of the conquest of the city, celebrations were held only in halls as the date coincided with the general elections; however, from 14 to 18 August 1966, large celebrations were held to mark the 902nd anniversary. Kars Halkevi Doğuş Periodical and Kars Eli Periodical covered a wide range of aspects regarding the history and other features of the City of Ani, a city of great historical importance. In this study, the aforementioned periodicals were reviewed and the details that were provided in these periodicals regarding the City of Ani were presented. For the purposes of the study, all relevant sources were explored, although main focus was on the content offered in the subject periodicals.

Keywords: Ani, History, Alparslan, Doğuş Periodical, Kars Eli Periodical.

Academic Self-efficacies of Turkish Teacher Candidates

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Abstract

An individual's belief on being capable of carrying out a task is concerned with academic self-efficacy. Self-efficacy is a self-judgment of an individual for the capacity of organizing the required activities and successfully carrying out them in order to exhibit a certain act (performance) (Bandura, 1997). Expected success and failure or a desired behavioral change in education process is not only about the education program or the information being learnt. This is because the most important point here is an individual's belief on himself/herself. Self-efficacy is a condition considered to have an effect on behavior. Rather, it is the potential of an individual to carry out a task as it concerns that individual having to make a preliminary preparation and know himself/herself concerning the tasks he/she is going to or willing to do. Additionally, it affects how people should think, feel, motivate themselves, and act (Bandura, 1995). The self-efficacy belief reflecting on human behaviors as a result of these effects determines the effort to be made by the people, decisiveness, and assertiveness levels (Aydın, 2014). The results of the studies have indicated that the perceived self-efficacy of the students is positively related to the learning outcomes such as task selection, task continuity, effective student activities and academic success (Zimmerman, 1989). Self-efficacy perception is the individual's belief on himself/herself concerning these tasks. The purpose of this study is to determine the academic self-efficacies of Turkish teacher candidates, who constitute the basis of education process. In brief, self-efficacy relies on the belief on skills and it is required in order to arrange and reveal a behavior that is necessary for reaching goals (Bıkmaz, 2004; Hamurcu, 2006; Özçelik and Kurt, 2007, Aslan, 2010). This study was conducted in the survey model in order to determine the academic self-efficacies of Turkish teaching students. "Survey models are the research approaches that aim to describe a past or existing situation as it was/is" (Karasar, 2010:77)."In survey studies, the aim is to find out the opinions or characteristics of numerous participants" (Büyüköztürk, 2008:248).The sample of the study consisted of the students studying at the department of Social Sciences and Turkish Teaching in the Faculty of Education, Kafkas University in the academic year of 2016-2017. The data were collected by using "Academic Self-Efficacy Scale" developed by Jerusalem and Schwarzer (1981), and adapted into Turkish by Yılmaz, Gürçay, and Ekici. The data were analyzed in terms of variables such as gender, class and age. The data obtained would be shared in the following stages.

Keywords: Turkish Teacher, Academic Self-efficacy, Education, Teaching.

Determining the Metacognitive Reading Strategies of Turkish Teacher Candidates

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Abstract

Reading is the process of understanding and interpretation. There are various factors that affect this process from the beginning to the end. In fact, reading is the act of processing, storing, and using the materials received by an individual from a kind of text or surrounding. "Reading is the activity of seeing, perceiving, comprehending, and interpreting the words, sentences or a text as a whole with its all elements" (Gündüz and Şimşek, 2011; 13). Reading comprehension, on the other hand, is the product reached as a result of this complicated process. Therefore, it is important for this product to be sound and healthy, and subsequently to be renewable and usable. For this reason, the process of reading and understanding should be made free from any type of problem and the individual should be ensured to come to conclusion through his/her own knowledge and skills. Reading is the most economical way used while an individual gathers knowledge. Additionally, this concept is one of 4 main language skills that are the cornerstone of being successful in the process of education, and in order to reach self-realization in the society. The acquisition of this skill and its use in the process is a condition that requires extreme care as the most important result of reading is the understanding. Understanding accurately can only take place through accurate reading, and in order to achieve this, pre-reading, reading, and post-reading stages should be analyzed carefully. How advanced a nation may be is related to its educational level and development. Nevertheless, the progression of a society takes place through a studying, educated generation. For this reason, the acquisition of the skills of reading and reading comprehension, the stage following the acquisition should provide benefits to individuals. The problems likely to arise during this process should be taken into account and overcome. The purpose of this study is to determine the metacognitive reading strategies of Turkish teacher candidates, who are to teach the skills of a language. This study was conducted in the survey model in order to determine the metacognitive reading strategies of Turkish teaching students. "Survey models are research approaches that aim to describe a past or existing situation as it was/is"(Karasar, 2010:77)."In survey studies, the aim is to determine the opinions or characteristics of numerous participants" (Büyüköztürk, 2008:248). The sample of the study consisted of the students studying at the department of Social Sciences and Turkish Teaching in the Faculty of Education, Kafkas University in the academic year of 2016-2017. The data were collected by using "Metacognitive Reading Strategies Questionnaire" developed by Taraban, Kerr and Rynearson (2004), and adapted into Turkish by Çöğmen and Saracaloğlu (2010). The data obtained would be shared in the following stages.

Keywords: Turkish Teacher, Metacognitive Reading, Strategy, Teaching.

The Reasons for Choosing Public Education Centers: Osmaniye Province Example

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Abstract

The importance of Public Education Centers is an undeniable fact about the creation of a physically more active society and the adoption of an active lifestyle by individuals. Physical activity and quality of life, both being the vital components of public health, have been increasingly becoming important. With respect to this issue, in order to make an emphasis on regular pyhsical activity and to increase the quality of life, countries and related associations publish many articles and reports. This research is designed with descriptive and quantitative basis. Sampling of this research consists of a total of 314 numbers of course attendees of Osmaniye Public Education Centers which were volunteers to attend to this research. The data have been collected with the Personal Information Form. Descriptive statistics and chi-square test have been used in the study. Public Education Centers are much more preferred by women than men and low-income ones than high-income ones in this study that aims to determine the reasons for choosing the Public Education Centers according to the factors of gender and income levels. In conclusion, in order to develop a sustainable human health, there should be established a physically more active society and a style of a physically active life should be adopted by the people. It should be expressed that the economical and social development can create a positive difference in the quality of life and this difference affects the reasons for choosing Public Education Centers according to the gender and income levels of the individuals.

Keywords: Gender, Income Level, Public Education Center.

Language Learning Strategies: A Literature Review of Definition, Classification and Instruction

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Abstract

A shift of focus from the teacher and teaching to the learner and learning in language education has initiated an era of expansive interest in individual differences, learner characteristics in other words, in the field of second language acquisition. Language learning strategies, or learner strategies as referred in some resources, are among the learner variables that are most related with effective language learning. An interest in the scientific community aroused on language learning strategies in 1970s, when the term 'good language learner' was first coined and in following decades, considerable research has been conducted investigating and eventually supporting the contribution of strategy use to language learning. However, the literature on learning strategies lacks a consensus on a single definition and taxonomy despite the appreciable amount of research. This paper provides a broad literature review of definitions and classifications of language learning strategies and how they are implemented in language classrooms through strategy-based instruction.

Keywords: Language Learning Strategies, Learner Strategies, Individual differences, Strategy-based Instruction.

Alienation of the Labor with Thematic Examples from Various Art Disciplines

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Abstract

According to Marx, labor, which is the greatest value added to life by genuinely productive human, is a necessary tool for the survival of man. The present day employee who performs this action with his work can be a place in the society according to the work while he can continue his existence on the one hand. According to Ferguson & Lavalette; the employer of today's working life can exploit the talents of employees and cause them to become alienated by waiting for them to work as an arm of a machine or as a machine. During the goods production process; the alienation of labor is conceptualized for the first time by Karl Marx, as the meaning that work exists independent worker as a stranger to himself, revolts against him, and becomes a power on its own. Marx, inspired by capitalist production relations, emphasizes that capitalist production relations are mainly based on private property and that the production activity aimed at increasing profit and capital accumulation alienates workers in different ways. According to this approach, the worker is alienated in four dimensions including his work activity, his product, his other employees and people, and his potential. According to the Marxist approach, which emphasizes the chain of alienations created by the capitalist system, today's worker is deeply affected by alienation and this alienation can lead to mental and emotional disorders, extreme sensitivity to other people, suicide and drug addiction, negative attitudes towards marriage, criminal behaviors and excessive alcohol consumption (Durakbasa; Nettler; Seeman & Anderson). In this work, in addition to conveying conceptual alienation, it was presented examples of works in various branches of art that exhibit the negativities created by alienation in a critical way, and also was conveyed with these examples the reflection of the alienation in art.

Keywords: Alienation of Labor, Art, Capitalism, Sociological Approach.

Evaluations on Özdemir Asaf's Works that Remain in Magazines

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Abstract

Having lived between 1923 and 1981, Ozdemir Asaf is one of the notable figures of Republican period Turkish literature. Asaf weaves his poetry with thoughts and offers the readers clues as to how people can enrich their lives. Even the most important themes such as love and loneliness are grounded on philosophical roots in his poems. Ozdemir Asaf is known for his poetical identity by the Turkish readers. However, his writing is strong in prose as well. Short stories, essays, ethica are the genres in which he produced. In line with his poetry, Asaf dwells on people and life in these genres as well. He addresses people as "you" and places a counterpart in the form of "I". He tries to arrive at truth by stating the differences and conflicts between these two subjects. To this end, he tries to construct sharp and multiple meanings through few words, which is what distinguishes him. All these characteristics lead Ozdemir Asaf to be considered a distinct name in Turkish literary history. However, there is a process during which he realized himself and determined his literary principles as it is the case with everyone engaging in literature. In this process, Asaf tries to know the important names and movements in Turkish literature. He translates world literature and tries to learn important philosophical systems of his time. This process started approximately when Asaf was 16. It is possible to trace this process through his poems and writings published in magazines such as Servet-i Fünun [Wealth of Sciences], Büyük Doğu [The Great East], Kaynak [The Source], and Yedigün [Seven Days]. In these writings, Asaf focuses on a wide range of points from his purpose in arts and literature to the poetry in his period and from world literature to Turkish poetry tradition. This study offers analyses regarding these poems and writings by Asaf that remained in the aforementioned magazines and not included in his books. Analyses will be given under the subtitles such as poems, short stories, and criticisms. Hence, an aspect of Ozdemir Asaf, considered as one of the distinct names in Turkish literary history, that was not thoroughly explored previously will be clarified.

Keywords: Özdemir Asaf, Poems, Poetry.

Analysis of the Perceptions of Entrepreneurship of University Students: The Example of Iğdır University

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Abstract

The aim of this research is to analyze the perceptions of entrepreneurship of the students of Iğdır University and to show which variables these perceptions differ. The research is a descriptive study in the screening model as it is done to determine the entrepreneurial perceptions of university students. A questionnaire consisting of 40 questions was applied to 350 students and 287 forms which were considered to be suitable for analysis were evaluated. As a result of the analyzes, the level of entrepreneurship of the students of Iğdır University was determined as "High Entrepreneurship". Looking at the gender variable, male / female students, in favor of the students. A significant difference was found against the students of the Faculty of Theology. In terms of classroom change, no significant difference was found.

Keywords: Entrepreneurship, Entrepreneurship Level, University Students.

Classroom Management Strategies Used to Deal with Unwanted Behaviors Encountered by Pre-School Teachers

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Abstract

The aim of this study is to identify classroom management strategies used to deal with unwanted behaviors encountered in the classes of pre-school teacher. Phenomenology patterns, one of the methods of qualitative research, were benefited in the research. The study group consists of 18 pre-school teachers all working in kindergartens in the city center of Iğdır. To determine the study group, easy accessible case sampling, which is one of purposeful sampling methods, was benefited. The data, consisting of 3 questions asked to teachers, was obtained via semi-structured interview forms. Interviews conducted by the researcher and one to one with the teacher took about an hour each. Questions in the form directed to teachers and the answers were transferred to a computer after which it was analyzed via content analysis and descriptive analysis techniques. The data set was presented to another expert academics and he was asked to create a theme and codes. The theme and codes of the researcher and the expert academician matched up exactly and were seen to be reliable. Analysis of the results indicated not following classroom rules, misbehavior, complaining of friends and violence in classroom behavior as the mostly expressed complaints by teachers. This behavior was found to occur mostly during free time period and during when schools are just opened. It was found that teachers benefited from rewarding and consolidating, identifying the class rules and ignoring to cope with this unwanted behavior.

Keywords: Preschool Education, Classroom Management, Misbehaviors.

Cyber Crime Awareness in Young Breasts: The Case of Erzurum

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Abstract

The most adverse conditions resulting from the development of technology is perhaps cybercrime fact. This type of crime which is more recent and current compared to other types of crime began to create great dangers for the countries. One of the measures that can be taken in this issue is to raise awareness. Especially the higher level of awareness of computer users in the younger is important in this regard. The aim of this research is to investigate cybercrime awareness of the students in informatics department of vocational and technical high schools. “The Survey of Cybercrime Awareness in Secondary Schools” generated by benefiting from domestic and foreign sources and by receiving expert opinion was performed with 269 students in informatics department of vocational and technical high schools in Erzurum province. The data obtained in the study were analyzed using SPSS 16. As a result of the analysis performed, the factors called as "Detecting the dangers of the Internet against personal values", "Understanding that People and organization can use in bad faith", "Comfort level in the Internet", "The level of the measures taken for Internet" were obtained and some comments were made on cybercrime perceptions of young minds.

Keywords: Young Breasts, Cybercrimes, Cybercrime Awareness.

An Evaluation on History and History Education Departments

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Abstract

The aim of this study is to make an evaluation on history and history education department according to data of YOK Atlas. Method of this study based on document analysis. When the study's data is examined, there are 181 history departments which was approved by YOK. Five of that program is in KKTC and twenty nine of that programs are in foundation (private) universities. Five programs are on abroad. These Universities are: Baku State University, Hoca Ahmet Yesevi University, International Turkey-Kazakhstan University, Ivane Javakhishvili Tbilisi State University, Manas University, Sota Rustaveli State University. There are two time periods in the history programs in Turkey. One of them is evening period, another is day period. There are two universities in Turkish Republic of Northern Cyprus and they have got five history programs. There are two open education system in two universities. These are graduate programs. One of them is in Eskisehir Anatolian University which accepted 2539 students to history program in 2016. Another one is İstanbul University which accepted 812 students to history program in 2016. In Turkey there are seven programs which give education to history teachers' candidates. We can also see the history department's points from highest to the lowest via YOK ATLAS. Based on that data Bogazici University is in first place: Ardahan University is in 151th and last place. When we evaluate history teacher education departments Marmara University's history teacher education program is in the first place and Van Yuzuncu Yıl University is in the last place. When we evaluate Foundation Universities, Istanbul Sehir University is in first place according to base points, yet KTO Karatay University is in twenty nine and the last place. When they graduate, the great portion of students of history departments also asks for the pedagogical formation education to become history teacher. Yet on February 2017, only 398 history teacher candidates managed to be history teachers. Universities should abandon to open new history departments in order to improve the quality of history education system.

Keywords: History, History Education, YOK, Faculty of Education, Faculty of Arts and Sciences.

High School Students' Perceptions about the Physics

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Abstract

Recent research on student learning in higher education has highlighted the effect that students' perceptions of the nature of learning and understanding of their discipline has on their consequent understanding of the subject matter. The purpose of this study is to examine the perception of physics in secondary school students through metaphors. In this study, phenomenological design is used from qualitative research methods. The study group constitutes a total of 309 high school students in the environmental districts of Erzurum province. The data of the study was obtained with a single-question form filled with space. In the analysis of the data, content analysis technique was applied. As a result of the research, it is seen that students usually see physics as a feared, unworkable and disliked lesson; and a small group of students saw it as an easy, fun and necessary lesson. As a result, it is important to emphasize the use of the activities that attract the attention of the students in the physics lesson which the students have difficulty in understanding. It is especially important that the daily living uses of physics are emphasized in lessons.

Keywords:

Effect of Jigsaw Technique on 10th Grade Students' Academic Success

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Abstract

Purpose of this study is to analyze the effect of using jigsaw technique for teaching optics unit on academic success of 10th grade students. This research was conducted by participation of 40 students who were sophomores at vocational and technical Anatolian High School located in Mamak province of Ankara, during second term of 2014-2015 education year. Students were randomly assigned to four study groups consisting of five students both within treatment group (N=20) where instructor centered teaching technique was utilized and within control group (N=20) where jigsaw technique was utilized. Previously planned topics were assigned to treatment groups and planning was explained to students. Duration of this study was six weeks in total consisting of one week introduction and planning and five weeks of application. Results show that using jigsaw technique for teaching optics unit is more effective than instructor centered teaching method on academic success of students.

Keywords:

A Dialectical Approach to the Individual and Social Interactions of Artistic Activities in Visual Arts

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Abstract

It can be said that art is a phenomenon that provides cultural interaction and development and interacts with social parts from individual to society and from society to universe. This phenomenon allows the artist, who is part of the society through various artistic actions, to meet the personal experience on the concepts and events with the society. As a consequence of this meeting, the value of artistic works, and also the community perception diversity, and an intellectual process are arised among the diversity of these values. In this sense, it can be said that it is one and the most important of the main missions of artistic activities. Artistic actions are quite diverse and divided into categories until today's modern world. This categorization is not only in terms of artistic action, but also in the sense of artistic language. The proliferation of these diversities as biennials, trienals, fairs and so on enriches the sensation and thinking power of the society and humanity who were in a struggle for artistic perception as well as the enrichment of the expression language of the artists. In this study, besides the relationships between individual, society and universe and the artistic activities and performances in the field of visual arts are treated, and the necessity of art and artistic actions and a dialectical approach to the conclusions of this necessity are presented, and it is given examples of the aims and results of these artistic actions.

Keywords: Artistic Action, Artistic Perception, Biennial, Exhibition, Trienal.

Outdoor Activities in 6th Grade Social Studies Course: Kars Province Sample

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Abstract

The purpose of this research was to identify and assess to what extent outdoor activities of sixth grade students were influential on their attitudes to the social studies lesson, observe the differences between education by traditional methods and education by the method of outdoor activities, and make suggestions based on the results obtained. For this purpose, two groups were formed including an experiment group and a control group. Brainstorming and, from traditional education techniques, verbal lecture and question & answer technique were applied to the control group while brainstorming and an education technique based on outdoor activities were applied to the experiment group. The experimental design of pretest-posttest with a control group was utilized in the study. The experiment group of the study consisted of a total of 43 students attending the classrooms no. 6-A and 6-B in the Fevzi Paşa Secondary School in the city of Kars, Turkey. For assessment of results, the scale for attitudes to the social studies lesson was used as the pretest and posttest, and the Students' Self Evaluation Form, the Group Self Evaluation Form and the Group Evaluation Form were utilized to assess the process. Tables of means, standard variations and significances were created for the analysis of the data obtained regarding process assessment, and the experiment and control groups were compared in the tabularized form. The Wilcoxon Signed Ranks Test, which is the nonparametric equivalent of the t-test for dependent samples, was utilized regarding the differences between pretests and posttests and the Mann Whitney-U test, which is the equivalent of the t-test for independent samples, was utilized regarding the differences between the experiment and control groups. It was found based on process assessments that the average scores of the experiment group, which carried out outdoor activities, were higher than that of the control group, and that, therefore, outdoor activities made a positive and significant contribution. It is concluded that teaching of social studies by utilization of educational methods based on outdoor activities improves attitudes of students to the social studies lesson and that this improvement is statistically significant based on the pretest and posttest attitude scores we obtained.

Keywords: Kars, Activity, Social Studies, Attitude.

GEOGRAPHY

Origins of Place Names in Iğdır

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Abstract

It is obvious that the place names in the area of study have mostly been given by the peoples settling here in a long historical process. That there are such Turkish place names in the area like Kimmer, Vanad, Bulgar, Saka, Udin, Arsakli, Kipcak, Hun, Agaceri, Pam, Sabir and Hazar shows that there have been Turkish settlements in the area since 7th century B.C., and thus it has been a Turkish settlement since old ages in history. The most commonly seen Turkish names in the region are those given by Seljuck Turks and other Turkmen-Oguz clan, trips and nomads since 11th century. The fact that the historical geographical names in Igdır are varied and common is because it has been a junction and a place where trips from various places have used to pass through due to its being a geographically suitable area. Some of them only passed through the region; but others settled there. The number of settlements with names from nature is more then those in other parts of Turkey. The names related with plants are fewer because the lands of the region does not have forest plant cover.

Keywords: Iğdır, Geographical Names, Historical Names, Turkish Settlements, Sürmeli.

Main Features of the Population in the City of Iğdır

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Abstract

Since the early days of human history, various information about the individuals who make up the societies has been researched and recorded, even for different purposes. Decisions made in the development of a place need to know the available resources in order to achieve the objectives. The most important of these resources is human resources. It is important to know the characteristics such as population quantity, characteristics, distribution according to age groups, gender structure in one place. Some notable characteristics Iğdır with the investigation of city population is sought to be realized in this context. Migrations in the pre-Republican and Republican periods have a significant effect on the demographic structure of the province. In this context, Iğdır, which has the feature of being the 7th province with the least population in 2016, At the same time, the rate of population growth is the highest in the region. The vast majority of the population is concentrated in the northern plains, and the impact of geographical conditions on the demographic structure is felt in a significant manner.

Keywords: Population, Iğdır, Population Growth, Distribution of the Population, Migration.

The Importance of Fish Farms in Respect of Daily Recreational Activities: "Hamurkesen Village Trout Farm Example"

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Abstract

In this study, "Hamurkesen Village Trout Farm and Recreation Area" which is an important recreation area used daily by the people living in Iğdır was discussed in terms of tourism geography. Mentioned farm is located in the administrative borders of Hamurkesen Village of Tuzluca District of Iğdır Province. The facility is located in the western part of the village which is 1800-1850 m height, on bank of the river in same name with the village. There is an altitude difference of about 1000 m between the area where the farm is located and the city center of Iğdır, and this leads to an average temperature difference of 5 degrees and it makes a cool environment in summer on the farm compared to Igdir Lawland. The river that composed the fish farm got many mills work in the past. The remains of the mills used until recent times also provide touristic attraction to the area. The recreation area is reached by two separate asphalt roads changing between 50 and 60 km. Along with being active in summer and winter, there are fish ponds, restaurant and picnic areas in the farm which attracts more visitors especially during the 6 month warm period between May and October.

Keywords: Iğdır, Tuzluca, Hamurkesen, Recreation, Trout Farm.

HISTORY

Evaluation of 2010-2017 Iğdır Surface Explorations

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Abstract

Iğdır, which is on the most important route for transition from Caucasia to Anatolia, is located in Erzurum-Kars Part in the north-east of Eastern Anatolia Region. The region, which has a strategic position, has been a place that societies have maintained their lives since ancient ages for its large lowlands, river basins, mild climate which is different from the other districts in the region. The first study in the region was carried out by İ. K. Kökten. The earliest settlement in Iğdır goes back to Mesolithic period as indicated by Kökten's date of Gökçeli Höyük finds. Iğdır, which was settled by several societies during Mesolithic, Neolithic, Chalcolithic, Bronze and Iron Ages, is significant because of the fact that it is a border region. At the surface explorations we carried out from 2002, many archaeological centres such as a lot of castles, mounds settlements, rock tombs and cairns to enlighten ancient history of Iğdır have been detected and recorded by us. In this paper, we are going to try to evaluate surface finds in the frame of area archaeology.

Keywords: Caucasia, Eastern Anatolia, Iğdır, Surface Explorations, Bronze Age, Urartu.

Matamir Name for Iğdır in Islamic Sources

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Abstract

Islamic geographers mention about the existence of natural shelters and caves that they call each of them as “Matmûre” which are located in different parts of the world. The most well-known of them in Anatolia is located in the Melendiz mountainous area between Aksaray and Niğde provinces. Some of the Islamic historical sources address that the “Matmûres” are also found in the Igdır region and the region is called "Matâmir". Muslims discovered this region with the first Islamic conquests. It is also understood that the name of “Matâmir” related to this region has remained from this period

Keywords: Matamir, Matmure, Islamic Geographers.

Evaluation of 2002-2010 Iğdır Surface Explorations

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Abstract

Iğdır, which is located at easternmost of Turkey, is a junction between Caucasia and East Anatolia. Historically, Iğdır has been a region preferred by humankind to live and develop themselves due to its river basins, lowlands and mild climate. Iğdır, which dates back to Mesolithic and Neolithic periods, has been a area given great importance by various societies during Chalcolithic, Bronze and Iron ages because of its fertile geographic location. At the surface explorations we carried out from 2002, many archaeological centres to enlighten Ancient History of Iğdır have been detected and recorded by us. Among these archaeological centres, a lot of castles, mounds settlements, rock tombs and cairns can be given for instance. In this paper, we are going to try to evaluate surface findings in frame of area archaeology.

Keywords: East Anatolia, Iğdır, Surface Explorations, Chalcolithic Age, Bronze Age and Iron Age, Urartian.

Escape from Massacres of The Armenian Gangs (Kaça Kaç)

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Abstract

When Tsarist Russia collapsed in 1917, Russians began to withdraw from the eastern regions of the Ottoman Empire leaving these places to Armenians whom they had armed. Armenian gangs were strong in terms of weapons and ammunition. After Mudros Armistic and between 1918 and 1920, Armenian gangs attacked to Surmeli and Sahat Hole which included Igdir. Northern part of Aras River saw total assault and massacre movements of the Armenian gangs, and people in region of Igdir were trying to escape to Agri Mountain region where they thought it was safe. Under difficult conditions, hungry and patient people tried to save their lives. While some of these people were trying to go to places like Hoy and Maku through Dogubeyazıt, others were trying to go to Iran through Aralik. In Nakhichevan, people who had been attacked by Armenian gangs were trying to pass to Iran through Noroshin and Sederek. The people who went to Iran with forced migration had two years of struggle for survival under hard conditions. After Turkish troops under the command of Kazim Karabekir Pasha cleared the region from Armenian gangs, those people after Gumru Agreement could return to their homeland. But when they came back, they saw that all their belongings were burned, destroyed and plundered. Their ruined houses and lands reminded them of the pain they had experienced. In this paper, the sufferings of people in Igdir and its surroundings will be examined.

Keywords: Ottoman, Turks, Armenian, Iran, Massacre, Kaça Kaç.

Iğdır People's Houses and Public Rooms Activites

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Abstract

People's houses and public rooms, the newly established state of the Republic of Turkey who wanted to reach the level of modern states, tried to realize her ideals between 1932 and 1951 when she was active, and became one of the most important organizations of the single party period. As it is known; purpose of people's houses is that promote, adopt and improve the principles and reforms of Atatürk to the public. People's houses, had tried to keep cultural development by acting through nine different branches. Public rooms have been established In this way. Thus, while the state and the people were being integrated, tt was aimed to spread the revolutions to the society base. After the first People's houses was establishmented many People's Houses opened around Turkey, and one of them was Iğdır people's houseses which is the most important city in Kars. The scope of this work, which prepared in a comprehensive way for the symposium is that Iğdır people's houses and public rooms. This work, are revealed by scientific researches, which based on the documents about Igdir people's houses. Therefore, it is thought that this work will illuminate Iğdır's history between 1931 and 1950. Also, what kind of situation Iğdır have in cultural and social areas between 1932 and 1950 will be revealed by this work. This work was created, by searching literature and archives, national and local publications were scanned and by studying works related to the public houses.

Keywords: Igdir, Public Houses, Public Chambers.

The Titles and Names that has Given Timurid

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Abstract

Timurid is an important historical character not only for Turkish history but also for World history. Timurid, who has led many conquest and military campaigns with his military geniu and crowded armies, has been given many title and names like Amir Timurid, Timur Gurgan, Tamerlane, and Sahipkiran both in the books that have been written on his name and other sources. This study will be about the meaning of the names that have been given Timurid and to what extend these names cover his character.

Keywords: Timurid, Tamerlane, Amir Timurid, Timurid Gurgan, Sahipkiran.

A Survey on Situation of the Castles in Middle Age Period in Iğdır: Şedik Castle, Üçkayalar Castle, Yüceotağ Castle and Sürmeli Castle Case

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Abstarct

Castle word comes from the root of *"kal"* which means disrooting and scratching. *Kalaa* means a big piece of rock dropping from a hard-to-climb, unreachable mountain and a cloud big as a mountain and the word castle is thought to be come from "kla'a" word which means stedfast structure built on mountain tops. From the very earliest age of history, castles, which were considered in terms of military architecture, were used in different periods and different societies until recent history with apparent differences and some significant similarities (bastions, dual wall system, ditch etc.) in parallel with developments in architectural, technical, military and war techniques. City of Iğdır, which is settled on the northwestern foothills of Mount Ağrı which was called Sürmeli Çukuru (Sürmeli Valley) before on 870 meters above the sea level, has been on a significant passage point since ancient times. Many middle age castles which can be considered in terms of military architecture were identified in the city and around which had a significant position in Middle Age as it has now. In this study, information about Şedik Castle, Üçkayalar Castle, Yüceotağ Castle and Sürmeli Castle will be evaluated and their situations at the present time will be studied.

Keywords: Iğdır, Middle Age, Castle, Yüceotağ Castle, Sürmeli Castle.

The Operation of 13th Corps in Iran and the Menzil Services During the First World War

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Abstarct

Menzil services include providing all kinds of needs to maintain the mobility of the army and transferring sick, injured, captive, trophy and unused material from war zone to inner zone. For better planning of menzil services, there is a need for a healthy transportation network, means of transportation, human power and money as well as time. Due to the fact that a serious threat from the Iraq region was not expected during the World War I mobilization, preparations started quite late on this front. However, the 13th Corps affiliated to the 6th Army in Iraq also received an order for operation in Iran, where there had been no preparation in terms of menzil services during the war during the war. During this operation, Ottoman forces progressing to Hemedan faced many difficulties in regard with menzil services. In our study, in the light of ATASE Archive documents and memoir type of works, the operation of 13th Corps in Iran will be discussed in terms of the menzil services and logistic support.

Keywords: Menzil, Iran, 13th Corps, Transportation, Victualing.

Iğdır (Korhan) and Ahura in Travel Books

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Abstarct

Travelers are witnesses of the times they lived. They define their witnessing, observations and researches in their own perspective and pass them on to future generations through travel books. In doing so, they are not satisfied with only the information revealed by history. They blend what they see with history, and they take pictures of where they are and the period. These are the main differences between travel books and historical texts. Travel books are separated from historical texts by the way they deal with geographical, ethnic, religious, cultural, social, economic and political issues. Iğdır and its region is far away from the main caravan roads extending westward through Iran, therefore it had been visited by very few travellers. In every period of history travellers from West to East travelled for different purposes, such as trade, research, getting information, getting to know the East closely or for some special duties and political aims. The main focus of these travellers in Iğdır and its surroundings is Mount Ağrı (Ararat), and the ship of Noah, thought to be on it. Clavijo, one of the travellers visited the region, gave information about Tuzluca, Sürmeli province and Iğdir (Korhan), but he did not mention Ahura (Yenidoğan). Jean-Baptiste Tavernier and Joseph De Tournefort, in their successive visits, mentioned Ahura, but not Sürmeli province and Iğdır. Joseph De Tournefort and his team did not succeed even if they attempted to climb Mount Ağrı. Dr Parrot, who succeeded in climbing Mount Ağrı for the first time, gave long and detailed information about Korhan, Sürmeli trench, plain villages and Tuzluca, along with Ahura where he has camped. In this study, I will cite Iğdır and Ahura observations of the above-mentioned travellers and researchers and make general evaluations on them.

Keywords: Iğdır, Ahura, Mount Ağrı, Travel Book, Observation.

Historical Changes in the Names of Iğdır in the Cultural Context (Based on Historical Literature in Azerbaijan, Armenian and Russian)

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Abstract

In our article, we will examine the Igdir's name in the cultural context, mainly based on historical literature published in Azerbaijan, Armenian and Russian. The historical changes in the name of Igdir and Igdir region that existed from ancient times so far, onomastic issues, oyconyms and etymology, the sense of word meaning, all the problems drawing our attention that associated with customs and traditions will be illuminated in the context of culture. The word Igdir has been historically known in a very different ways. Thus, we encounter in sources and works with different formats of Igdir: Yayji, Ighdir, Iqdir, Iqdir Nova, Ighdir Mava, Surmali Mahal, Surmeli Chukhur (Groove), Tsolakert (Solakert), Cholegert, Nuhun Ayaqlari (Noah's feet), (Arnoyotn), Ardiank etc. The Armenian Soviet Encyclopedia describes Igdir's name in the Middle Ages as "Solakert" (Armyanskaya Sovetskaya Encyclopedia, Volume 4, Yerevan, 1978, p. 309). While I.H.Shopen though did not mention the name of Igdir while speaking about the "Surmali Mahal", he mentions this region, especially Kars Pashalig, describes the neighboring Sharur mahal and village of Yayji in detail (I.N.Shopen. Istoriceskiy pamyatnik sostoyaniya Armyanskoy prisoyedineniye k Rossiyskoy imperii. Nauka, 1852, 1231 pp., p. 373). Our article will ground that the Turkish-Islamic culture dominated in the Igdir region from the Middle Ages, which united many peoples, nations and civilizations since ancient times. At the same time, attention will be drawn to periods during which Azeri (Azerbaijani) culture dominated. It will be emphasized that it is preserved in folk culture. In the article, matters related to the name and location of Igdir will be illuminated through the works of V.V.Bartold, N.A.Baskakov, I.N.Shopen, E.B.Sevortyan, B.E.Budaqov, A.K.Imanli and other authors. It will be grounded that the South Caucasus, the Sahat Chukhur, as well as the Surmeli Chukhur (Igdir Plain), are the locations where along with the Cimmerians and Saxs, after the VII-VI centuries, were continually settled by the Turkish tribes. So, the goal of the article is to elucidate the place and role of Igdir in the specified framework and in the context of culture based on historical literature in Azerbaijani, Armenian and Russian.

Keywords: Yayji, Surmeli Mahal, Tsolakert, Nuhun Ayaqlari (Noah's feet).

Historical Personalities Related to Iğdır Region

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Abstract

Iğdır with its former name Surmeli and its surroundings as an accommodation and transit point has been a frequent destination for immigration, war and trade expeditions throughout history due to its moderate, green and fertile terrain and climate structure against high geography and harsh weather conditions of the near region. Although big cities were not established here, it became a place where many wellnown people in history had visited, rested and spent time during their important political activities. First of all, the stories are narrated about this region related to the flood of Noah prophet. Personalities of great service in the history of Turkish and Islam as related to the region have been told. In this context, personalities such as Tuğrul Bey, Alparslan, Kutalmışoğlu Süleyman, Ertuğrul Gazi, Melikşah, Nizamülmülk, Celaleddin Hazermşah, Şah Ismail, Yavuz Sultan Selim and Kazım Karabekir are mentioned. These persons have somehow passed through the area, stayed here or had a political work. In addition, important travelers such as Marco Polo and Clavijo had traveled in this region and penned writings about their impressions. In this paper, the events and persons referred to Igdir, throughout the history and especially in the history of Islam and Turkish will be evaluated.

Keywords: Iğdır, Noah, Alparslan, Melikşah, Şah İsmail, Yavuz Sultan Selim, Kazım Karabekir.

The Place and Importance of Iğdır for Urartu Kingdom

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Abstract

Iğdır and around it, which are strategic points of East Anatolia, have been a settled region since ancient ages thanks to its fertile soil, junction location, low altitude and appropriate climate together with the Assyrian threat beginning from 14.century B.C. and the fact that Urartian Kingdom was situated powerfully during confederations between 13. and 9. century in the region, ancient history of which dates back to Mesolithic Age, the whole of East Anatolia witnessed a new development and housing action. Big cities such as Luhiuni, which was the capital of Erikua in the Early Iron Age, and Menuahinili, which was an important administrative centre of Iğdır region, were strategic centres to be conquered for Urartian Kingdom to spread on Aras Valley. These centres, where agricultural products of the region were stored and hierarchical governmental order was secured, were conquered by the mighty king of Urartians, Menua (810-786). After the invasion of these regions, Urartian Kingdom established an important base for the military expeditions from the north of Aras Valley to South Caucasia. Owing to this base, Urartian Kingdom acquired an important line of defence against the threat from Caucasia.

Keywords: East Anatolia, Iğdır, Urartian Kingdom, Erikua, Menua.

Surmeli Lowland in the Middle Ages' Travelogues

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University

Abstract

Surmeli Castle is one of the most important cities which was built by Byzantine Empire on the eastern border of Anatolia territory. The city appeared in the Middle East history as one of the important locations the controller of which changed among the states trying to dominate the territory. Given different names since its foundation, city has been an important settlement of peoples of the territory since its first day. In the middle ages, the city which was taken under the dominance of states that leave their marks upon history like Byzantine Empire, Seljuks, Karakoyunlu State, Akkoyunlu State, Timurid Empire and of smaller states and local dynasties was founded in a very important location, connecting East and West? Bearing the misfortune as well as the advantages of its geopolitical position, the city appears to be important halt point of Middle Age travellers. The remarkable history of the territory which was mentioned by the travelers like Arab traveller Ebu Dülef Mis'ar b. Mühelhil, little known in our country, who lived in the period of Samani State and who has the travel book starting in Iran and proceeding in Anatolia, Spanish Ruy Gonzales de Clavijo who came to the territory in Timurid Period, Willem of Ruysbroeck travelling to the palace of Mengu Khan, Marco Polo who is one of the most important travelers of the West - hasn't drawn essential attention. Despite located on important trade routes from the East to the west, demolition by every dominant power handling control on the territory has negatively affected the historical identity of the territory. Being little mentioned in the main sources, given limited information because of being located on the edge territories of any dominating state is one of the most important misfortunes of the history. Surmeli Castle and Lowland which have benefited from the fertility of Mount Ararat which has drawn attention of nearby peoples because of its height and mythological feature, Mount Alagoz which is right opposite it, and Aras River which vitalizes the territory between these two mountains have kept their attraction throughout history.

Keywords: Surmeli, Lowland, Geography, History, Travel.

Settlement of Bulgarian Turks in Iğdır (1937-1960)

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Abstract

With the end of the 1st World War and definition of the new borders, those Turks living within the borders of other countries now became minorities. One of the best examples of a such situation was the Turks living in Bulgaria. After the change of the goverment regime in Bulgaria; very oppressive, assimilative and ethnic discrimination based policies were implemented. Then, the Turks facing many difficulties in their political, social, cultural and economical life have sought immigrating to their Motherland as a solution. The State of the Turkish Republic could not stay indifferent against these developments, and therefore opened its borders to the Turks coming from Bulgaria. Within the framework of a settlement law, with the number 2510 and legislated in 1934, accepting immigrants to Turkey and their settlement were realized. Throughout the settlement process, the suitability of the climate conditions and the availibility of farm lands were the critical criteria for the determination of the settlement regions in the country, as the main sources of income of the families coming from Bulagaria was agriculture. Thus, the Turkish Goverment aimed at providing those immigrating families with a life condition that they were already accustomed in their life in Bulgaria. Considering these criteria, the Iğdır county was among the regions of settlement defined by the Turkish government during the years between 1937 and 1960. The main reasons why Iğdır was chosen to be among the settlement regions were the low population level, having a mild climate despite of its location in the East Anatolia, and availibility of rich farm lands. In order to prevent the immigrants from having difficulties and to get them used to carry out their new life, several improvement policies were begun to be implemented. However, because of the Bulgarian Government's immediate decision of deporting the Turks, the immigrated Turks had to be settled in the county of Iğdır before the preparations were fully completed. In this study, the following issues were covered; the reasons leading to the compulsory immigration Turks during. 1937-1960, problems encountered during the immigration, settlement process of the immigrated citizens in the Iğdır county, the problems that the immigrants faced after the settlement process, and the changes observed in the socio-economical status of Iğdır.

Keywords: Immigration, Settlement, Iğdır, Bulgarian Turks.

Urartian System of Cuneiform in the History of Writing

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Abstract

In the early years of the establishment of political and cultural system Urartians seem to be unaware from the revolutionary progress dealing with a new writing system which led trends among many peoples of ancient world. This was invention and adoption of alphabet. Main reason that Urartians stayed away from this new trend was not only due to the distance from the Levante region but due to the historical tradition that caused Urartians isolated. It is a well known matter from the historical sources Urartians tried to reach out to the local Cilician state in their military campaigns. It is highly probable that Urartians got some cultural and political connections with Syro-Anatolian States as well as Phoenicians and Greeks. But traditional approach to the use of writing among Urartians evaluates that they learnt the cuneiform writing system from Assyrians and then developed it according to the needs of the Urartians language. This approach may be accepted on the two possible hypotheses. According to the first one Urartians elites went to Assyria where they were brought up by Assyrian scribes and there they learnt how to sculpture the cuneiform script on stone and clay tablets. According to the second one Uratian elites both in the palace and in religious sanctuaries knew already the writing but at the beginning they did not see the necessity to record their political, religious and building activities. This is highly connected with the development of idea of state. In this presentation the characteristic features of the Urartians cuneiform script will be evaluated on the basis of comparisons.

Keywords: Ancient History, Urartu, Cuneiform, Writing Systems.

Beliefs About Death in Iğdır Province and Dead's Day

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Abstract

One of the most important transition period, death, by time and geography was met in the frame of religion, culture and tradition of community with various applications and values. Beliefs about death and grave had an important place for Turks who believed in life after death and they made different ceremonies for it. Respect for graves is called as "Atalar Cult" in sources and it caused to protect graves and visit them at certain times. "Atalar Cult" has a special place in ancient culture of Turks. Although thousand years had passed over many beliefs and applications about "Atalar Cult", it is still available among some Turk peoples. İt is possible evaluate visiting the graves before Nowruz holiday as continuation of "Atalar Cult" culture in Iğdır and Nakhichevan. Visiting the graves was known as Dead's Day in Eastern Anatolia and especially among Azerbaijan Turks who lived in the territory of Kars. İt was done for the sake of fathers' spirit. Comparative researches shows that Dead's Day was implemented by various ways according to dead's age and gender. Dispended food and drinks, prayers were known as beneficence for deads' ghosts in the visiting of grave. It was not considered good to celebrate Nowruz Holiday without visiting dead's' graves according to the beliefs of folk in the article.

Keywords: Iğdır, "Atalar Cult", Deads' Day, The Belief of Death, Tradition, Nowruz.

Evaluation of Pottery of Iğdır Region in the Light of Surface Explorations

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Abstract

Since 2002, many pottery data have been obtained in surface explorations carried out in Iğdır and around Iğdır. When human settlement and its dispersion are taken into consideration, it can be obviously seen that since Chalcolithic age, there has been a nearly continuous human settlement in Iğdır. It is understood that during this continuous settlement, production and technology of pottery have changed partly. The area, which can be identified as interposition between Transcaucasia and East Anatolia, the density of Karaz pottery becomes prominent. Population increase having emerged on lowlands since Bronze Age and novelties in pottery typology are remarkable. The presence of more laboured, glazed and polished pottery shows itself with Iron Age. In this paper, pottery obtained as a result of surface explorations are going to be interpreted in the light of Karaz pottery, which is prepotent culture of the region and typology of pottery in the region and their difference are going to be construed.

Keywords: East Anatolia, Iğdır, Ceramics, Karaz Culture, Bronze Age, Iron Age.

LITERATURE

The Cultural Separation of Male Teens in the Classical Period Last Mesnevi Examples in Turkish Literature and Tanzimat Novel

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Abstract

This paper aims to provide a type-centered comparison between the novels of the Tanzimat period and some classical texts which are regarded as the beginning of the modernization process of Turkish literature. In this research, especially rhetoric discord and non-tradition are discussed between the last important mesnevi's of Divan poetry as a classical text and male types in Tanzimat novel. Considering that literature has a continuing tradition of continuing traditional discourse, it also provides an unthinkable framework for the type of fiction that confronts us in the first novels of our modern literature. Therefore, the types in the mesnevi related to the last period of classical poetry with the texts of the Tanzimat period are not only the relation between tradition and literary discourse, but also the comparison of culture, politics and society.

Keywords: Novel, Mesnevi, Type, Culture, Modernization.

The Dilemmas used in the Legend of Ağrı Mountain

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Abstract

The novel called Ağrı mountain legend, which was taken as semi-legendary semi-real by Yasar Kemal, is regarded as a folk legend. The legend of Agri mountain, written in poetry language mastery, is a blended form of novel and epic. Anatolia, which has complexity and accumulation of civilizations, is a mysterious geography where nomadic culture and resident cult have merged. In Anatolia, this encounter and fusion has resulted in rich and far superior mythology, folklore, folk literature, epic, legend and language. Anatolia, Yunus Emre, Pîr Sultan, Karacaoglan, Nedim, Sheikh Galip, Nazim Hikmet and many more artisans have earned to Turkish nation and humanity. The language of these artisans is lean, rich and fluid. Yasar Kemal's language also has these characteristics. Nomadic society has a very rich oral literature and language. This culture, which is synthesized by blending with established culture in Anatolia, provided enormous wealth. Yaşar Kemal, who is an important representative of contemporary Turkish literary language, has created a poetic novel language specific to himself by taking advantage of all these riches. The author benefited from the accumulation of Turkish culture, literature, folklore and Anatolia. He wrote his works using all the possibilities of the Turkish language. The legend of Agri mountain is a small and rich work that can be a source of many disciplines. In this study, a clear scale of the Turkish language, the dilemmas / repetitions / sequences / dual repetitions were examined. The dilemmas studied by many linguists are defined by different names: Muharrem Ergin, dilemers "Repetitions", Grönbech uses the term "sorts" instead of "dilemmas" ,Korkmaz preferred the statement of dilemma. The dilemmas is used frequently in Old Turkish . In Turkic, dilemmas are formed in seven different ways. It have semantic and structural features in terms of meanings. In this study, the dilemmas used by Yaşar Kemal in his novel "The Legend of Agri" were studied. The dilemmas detected in the writing, they were evaluated in terms of meaning and form together with the sentences they used. Yasar Kemal's unique uses were identified. It has been observed how functional positions of the dilemmas that stand out in the basic vocabulary of the Turkish language are located in the Legend of Agri.

Keywords: Legend of Ararat Mount, Yaşar Kemal, Dilemmas, Turkish Language, Anatolia.

Dead Festival in Iğdır Jaffer in the Context of Functional Folklore Theory

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Abstract

Rituals after death and have an important place in the formation and maintenance of the culture and thought structure of societies. Fort his reason, the compilations and theoretical, examinations made in relation to this rituals provide important findings fort he functioning of the cultural nature in particular. In this context, we will focus on the “Dead Day”, on important ritual of Nevruz Feast of the Igdır Jafar’s which we have compiled from the scene and this ritual will be evaluated in all its aspects by examining it within the framework of functional folklore theory, one of context-centered theories.

Keywords: Ritual, Iğdır, Jaffars in Iğdır, Feast of Dead, Functional Theory.

Evaluations About Iğdır's Place in Human History

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Abstract

The Noah's Flood, which is expressed in the whole sacred books and provides noteworthy information about destruction and salvation of mankind, is a name of period that has been executed as punishment for sins of mankind. Only believers and a couple of every animal species would have survived this disaster. Allah has revealed this news to the Prophet Noah and asked him both to warn mankind about the disaster and gather a couple of creatures. He ordered him to make a big ship to get rid of a major flood disaster. Prophet Noah made a big ship and placed people who believed and animal species in it. Severe rains in the Middle East have flooded the region. Only the people and animals on board could survive. After a while the ship stood on a high mountain with the waters withdrawn. The creatures that left the ship began to increase by spreading to the green and fertile fields around the mountain, so humanity started to its second struggle for existence there. Although different narratives are about the subject, stories were told throughout the history and the beliefs were revealed that the mountain where the ship stopped was Agri Mountain, and the first homeland where the people spread and increased was Igdir plain. In this paper, information will be given about the narratives and sources about the flood and salvation of humanity in related to the Igdir region.

Keywords: Noah's Flood, Prophet Noah, Iğdır, Ararat Mount, Story.

Nineteenth Century, Backwardness, Moral and Literary Texts

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Abstract

The nineteenth century is the time zone in which two opposites meet, such as decline and progress. At the same time, it is also a fact that these two opposite actions feed each other's fields of existence. Because, a state that has been advancing for centuries, has now lost this feature and has faced a structure that needs to be trained. The advance of the West has mirrored the backwardness of the Ottoman Empire. Backwardness was directly attributed to Islam, to religious institutions and religious personalities; the offenses have been directed entirely to the values and virtues of a nation. At the beginning of these values and virtues is, of course, the question of morality. It has been perceived as an imperative or even an obligation to put the morality of the Ottoman in order to remove the destruction against the West and restore the peace and dominance of the past. From this moment on, we had to find the way forward and start a solution process. We want to evaluate the idea that the morality that causes society to decline in the face of western existence should be resolved. Instead of searching for other reasons for the backwardness, those who had read the period had insisted on this issue and focused especially on some texts for the remedy, did the Ottomans always try to put their morals on the path, even though they were unethical? Even more important is the fact that the devine intellectuals who attacked the institutions and people who serve in this frame and in this frame are questioning whether to apply the texts of the people raised around the church and the church of the West while trying to solve the matter in question. We want to concentrate on an example when discussing this issue. This example is Télémaque of Fenelon, which emphasizes that it is the beginning of our literary history after the Tanzimat. We will pay attention to conveying our thoughts by going out of the various translations of the subject matter. The work, which is a moral text rather than a novel, has been translated in a way that does not correspond to the perception of the novel, and since then, the work has been positioned in the first order of a new literature with the claim that it has established the substructure of our novel. Therefore, the Télémaque translation should be read as a novel or moral text, and the matter will be discussed. Likewise, if we read it as a moral text, not a novel, we will also strive to identify and criticize that this time we are faced with a much more grave situation.

Keywords: Fenelon, Télémaque, Novel, Morality, Backwardness.

Lives in the Shade of Belated Will: Defeated Manhood and Womanhood in Kuyucaklı Yusuf

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Abstract

Sabahattin Ali's novel, titled *Kuyucaklı Yusuf,* has a narrative that presents a great deal of social and cultural issues to its reader at the same time. In the novel, the way how characters struggle against the hardships throughout life and the manner they utter their demands and desires have determinant features to direct the course of the relationships they worked up both in social and individual sphere. The reticence of Salâhattin Bey against protagonist Yusuf's stepmother Şahinde, who is all-grumbling, avericed and pleasure-driven, causes Şahinde to take the possession of the malignant power that leads the doom of the family. Yusuf, who has inherited the legacy of Salâhattin Bey's will, which he deferred by straying away from home and seeking refuge in alcohol, turns out to be the embodiment of manhood exemplified through justice, morality and affection as if he were mythologized in the novel. Nevertheless, father's will, which has been debilitated both in public and private sphere, occasionally disrupts and silences Yusuf's aspect which revolts against social order and of his private destiny. In the study, men trying to cope with the unjust social order and the causes that shape out the loss of women characters, who do not want to succumb to defeat, are going to be dwelt on. The inaction and the victimization caused by the silencing of language they experience at the moments that might determine the milestones of their lives are tried to be discussed in terms of social and gender hierarchies. Accordingly, by the disruption of the struggle launched around the individual and social justice, manhood and womanhood are fated to live in the shade of belated will which are going to be analyzed by the perspective of the turning points of the narrative fiction.

Keywords: Kuyucaklı Yusuf, Gender Hierarchies, The Language of the Victimized and the Defeated.

Diachronie and Synchronie Phonetic Features in the Iğdır Tales

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Abstract

In order to meet the social, cultural and legal needs of the state administration written dialect, written language. During this period, the dialect of Istanbul in Turkey was taken as a writing language for this reason. One of the most important language areas of Turkish Turkic languages, the dialects have taken place as a wide field of study in Compilation and Screening Dictionaries. The dialect features have found many work areas not only in Turkey but also in the world. In addition to the morphological studies and classifications related to Turkish Turkic dialects, classification experiments were carried out based on phonetic and structure characteristics. In the region where dialect studies are performed, different aspects of the language are determined by taking advantage of various expression styles such as ballads, lullabies, legends and tales. In this study, we will give examples from the tales collected in Igdir region and in these examples we will show the distinguishing sound characteristics according to the standard written language of Turkish Turkic. We will also illustrate the simultaneous and simultaneous phonetic properties of the lagoon pool of Igdir dialect, preserved for various reasons. We will also reveal the concept of creating a concept field that is processed in the new word derivation.

Keywords: Iğdır Tales, Dialect, Phonetic, Diachronie, Synchronie.

The Reflection of Turkish-Russian relations in the Ancient Customs

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Abstract

The theme of the article is one of the most interesting moments of Russian-Turkic cultural relationships. As known, territory Turkic-Russian cultural relations goes back to old times.So, when we study the culturel features of both nations, we see some similirties. We decided to search some of them. As the main theme of this article is the cultural relations of the peoples of the ancient period, we worked with the Dictionary of Russian and Turkic languages and some oral litetature items. The history of relations between Turkic and Eastern Slavic people dates back centuries ago. For many hundreds of years Turkic and Russian people for various reasons they are in relationships with each other. Accommodation in the same geographical area, the neighborhood with each other significantly affect the material and moral culture of both nations. Making a comparative analysis Turkic and Russian customs, it may be noted that influence.

Keywords: Turkish-Russian Relations, Ancient Custom, Concept of Time.

Hurufilik in Handanî Divan

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Abstract

Handanî is 16th century classical Turkish literature poet. The date of death of the poet born in 947 (1539-1540) is not clear. There is no information about the life of the poet living in Kanuni Sultan Süleyman, II. Selim and III. Murat periods. The poet's divan is the work that is now known. It was seen that the poet was influenced by Hurufilik by way of divan. Concepts related to Hurufilik and Hurufilik are mentioned especially in poems written in the form of mesnevi and kaside. In this study, Hurufilik was given briefly and the findings of Hurufilik in Handanî Divanı of 16th century works were evaluated.

Keywords: 16th century, Handanî Divanı, Hurufilik.

Consonant Mutations and Assimilations in the Tales of Iğdır

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Abstract

Folk narrations are the products which best express the linguistic characteristics of a dialect. Tale, which is one of these narrations, is generally in prose and they are long narrations although not as long as epics and folk tales. In these narrations, simple and comprehensible language is used which would be easy for the public to understand. Types of folk literature such as ditty, idiom, proverb, epic, anecdote, ballad, prayer, curse, riddle could be seen in these narrations. For this reason, tales reflect thoroughly the dialect characteristics of the location where they are told. Turkish language which has been spread to wide areas throughout history and used in different geographies has a great richness in terms of dialect and vernacular structure. One of these is Iğdır dialect. Iğdır dialect has a great richness in terms of its morphological and phonetical structure. In this study, consonant mutations and assimilations will be analysed and explained with examples with reference to the narrations selected out of Iğdır tales.

Keywords: Iğdır Dialect, Consonant Mutation, Consonant Assimilation, Tale.

An Analysis on the Literature created by the Azerbaijani Immigrants who settled in the Iğdır Region and its' Impact

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Abstract

From the 19th century until the early 20th century, the Turks of Azerbaijan were first subjected to the oppression and attacks of the Russians and then the Armenians. As a result, the Turks of Azerbaijan, who run away by various means from different regions of Azerbaijan with their families or alone and settled in various countries in order to ensure the safety of life, had to endure various troubles in order to survive their daily lives in the countries they settled and tried to protect their identities and their cultures. These people who had to migrate due to various reasons, especially occupation and regime changes in their country, created the "Migration Literature" in the countries they live in. It is possible to see traces of the political, social and cultural life of the country where they live, as well as their own national cultures in the structure of these cultural and artistic activities created by the migrants. One of the countries where the Azerbaijani Turks migrated to is Turkey. These people, who migrated to various cities of Turkey including Iğdır, continued their literary and cultural activities and contributed to the formation of a rich art atmosphere. In this study, the ongoing and partially local-leveled literary activities of the Azerbaijani Turks who settled in Iğdır are analyzed. Even though the emigration is ended after the retrieval of Azerbaijan's independence in 1992, it is possible to mention the existence of a literature which continues by this impact and created by the second generation who is connected with the immigration.

Keywords: Azerbaijan, Migration, Migration Literature, Iğdır.

A Study on E.M. Forester's Theories of Characterization on Female Characters in Quran and the New Testament

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Abstract

Human being has enjoyed listening to the stories and from past has made stories and listened to them. The history of story can be as long as the history of human life. Story as a form of a literature is enjoyable for people and God conveys his message by stories because it is seen in the Holy Books. Each story should have a plot which includes sequence of events. But events alone can not make a story. For developing each story characters are required to serve the purpose of the story teller. As characters are considerably significant, Holy Books use them to express the stories. Female characters along with male characters in Quran and The New Testament indicate their roles as the protagonists or antagonists. However minor their role sometimes might seem, they are required to conclude the message of Lord. Understanding a character is more difficult than understanding the story itself. When we explore characters and characterization, theories of literary criticism enter our study. This study aims to show how the female characters are presented in the Holy Quran and the New Testament. Using Forster's model on characters we divide the female characters to round and flat one. Besides this, we try to show the conflicts in the round characters and how the women confront the conflicts. Similar to the male characters in the Holy Quran and the New Testament, the female characters see revelations from God, speak with God and some become believers and some remain nonbelievers. Unlike what majority of the people think, the Holy Books are not patriarchal.

Keywords: Female Characters in Quran, Female Characters in the New Testament, E.M. Forster, Round Character, Flat Character.

The Levels of History, Identity and Homeland Concepts in Zelimhan Yakup's Poems

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Abstract

In this study, the Bolshevik Revolution in the poems of Zelimhan Yakup, who does not see the meaning of the term "Turkish Literature" limited to the Anatolian geography, but which is based on the concept of carrying the whole of literary productivity found in the Turkish language into the "Turkish Literature" it will be pointed out how the poet wants to realize the consciousness healing by pointing to the breaking areas of history, identity and homeland perception. Zelimhan Yakup 's "Ovuc Torpaq", which emphasizes how important it is to hold the controversy that Soviet Russia regards as an antithesis in exchange for the othering politics, will be based on examining the literary, sociological and psychoanalytic knowledge of the levels of discourse conveyed to other poems based on poetry. It is debatable how the consciousness of the Bolshevik Revolution is to push the gap and to encompass the societies as well as the individuals as they are ontologically surrounded by insecurity and hopelessness. How Zeliman Yakup's poetry transforms into an identity-forming work, how to position the reader in the context of 'other-beriki', the question of how the existence of Turkish literature in Georgia should be assessed in the context of history, identity and homeland and why it is evaluated in a different way.

Keywords: Zelimhan Yakup, Identity, History, Bolshevik Revolt, Self.

A Study on Some Religious-Sufism Elements of Iğdır Folk Ballads with Repeated-Word *Ne Dersin*

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Abstract

Religion and sufism are most important thought systems which have deep effects on Turkish folk poems, folk ballads and culture. Beside classical literature elements, some religious and sufism factors source Iğdır folk ballads. In this study, within the context of mentioned ballads, it will be focused on images of *you* and *me* which are mostly expressed by sufists like Yûnus Emre ve Mevlânâ Celâleddîn-i Rûmî.

Keywords: Iğdır Folk Ballads with Repeated-Word *Ne Dersin*, Sufism, You, Me.

To Classical Poetry from the Orhun Inscriptions the Concept of East and West

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Abstract

The concepts of east and west have been used frequently in literary, political, historical, religious and social narratives since the first historical records known both in terms of direction and cultural meaning. Because of the representation of east and west sunrise and sunset, civilizations became the symbolic expression of birth, presence and departure. The concepts of east and west have been used since the historical texts that describe the foundation of Turkish culture and civilization. In the Orhun inscriptions that the first written document of the eastern and western Turks, the state was used to describe the idea of expanding the territorial boundaries of the state, as well as the idea of dominating a large area by pointing out the spread of the Turkish presence. East and west ın classical Turkish poetry, it is also used in verse forms such as ghazal, mesnevi. In classical poetry, which is a product of a well-established and well-established order and a deeply rooted civilization, the boundaries of literary text in its meaning world have similarities to the first written texts of Turkish history and their use in different meanings. In this study, from the Orhun inscriptions and out of way the classical poetry, the cultural meanings and values of the east and west concepts will be mentioned with sample texts. In addition to the semantic similarities in the use of the east and west concepts in these texts, a brief process reading of the history of Turkish culture and civilization will be made with these two concepts, with emphasis on the differentiating meaning of the world order that has changed over the centuries.

Keywords: East, West, Orhun Inscriptions, Classical Turkish Poetry.

Erkin Vahidov's Thoughts on Pure Uzbek Language

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Abstract

Erkin Vahidov, one of the most important representatives of Contemporary Uzbek Poetry, used elements of pure Uzbek Turkish in his works and expressed that there are many significant aphorisms in pure Uzbek language which he considered as magnificent. The poet who emphasized that language is the most important symbol of a nation states that number one condition to be a nation is to have a language which includes its own elements. The vocabulary used by the poet is his works brings out poet's thoughts on pure Uzbek language. In this study, Vahidov's thoughts on pure Uzbek language will betouched upon under the light of his work 'Söz Letafeti'.

Keywords: Erkin Vahidov, Uzbek Turkish, Pure Uzbek Language.

North-Eastern Anatolian Culture with Respect to Novel

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Abstract

The effort to disseminate the novel which is a type of quest which starts with Reform gains the populist identity appropriate to the spirit of the period. Our novel world that has developed out of Istanbul with a naive effort has gained an Anatolian identity, especially with the understanding of National Literature, so that it has been opened to the life style of the provincial people who have been ignored both in Anatolia geography and for years. This orientation, which is further strengthened together with the Village Literature, has set the stage for the reflections of literature and especially novel with all the fronts of Anatolia after a while. The reflection of the Eastern Anatolia used as a deprivation metaphor in our modernization adventure have become too late and weak if we disregard the weak examples. Oriental perception, mostly processed through cliché samples, turn into quite different colour when combined with Northeastern Anatolian geographical qualifications. In the reflection of Northeastern Anatolia which has different characteristic in the Turkish geography with its cold and rugged geography, these features stand out. Sociocultural norms overlapping with hard geography, individual lives crushed by collective attitudes, has led to the meeting, struggle and partnership of many different cultures In this region, which has frequently changed between Russia and the Ottoman states for centuries in power struggles. In this study, traces of Northeast Anatolia reflected in the novel world in the increasing density in the recent years will be followed, the positive and negative projections of the cultural world of the local people will be tried to be determined.

Keywords: Novel, North-eastern Anatolia, Culture, Space, Human.

Pearl, Carnelian, Ruby and Emerald in the Classical Persian Poetry

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Abstract

Stones which have been used throughout history as ornaments for the crown of the kings, garnish objects of the ladies' jewellery, symbols of nobility and richness as well as treatments and protection in medicine attracted attention of the poets and authors with their values and beauties glamorized everyone. Poets in the Classical Persian Poetry made use of semi-precious and precious stones in the nature; used semi-precious and precious stones with their real meanings; and sometimes used them to make comparisons. In the Classical Persian Poetry, stones such as pearl which is taken out of seas and ruby taken out of the mines near corals, emerald and carnelian have been associated with various things due to their colors and shapes. In the Classical Poetry, pearl has been likened to the tooth and tear of the lover and rain drop due to its white color and shape. Ruby, on the other hand, is likened to the red lips or mouth of the lover; the bleeding tear drops of the lover for the beloved and etc. due to its red color and sometimes it has become an allusion for wine and blood. Carnelian has sometimes been used for the red color just like ruby and sometimes it has been likened to the red lips of the lover, the bleeding tear drops of the lover for the beloved and red wine. Another valuable stone, emerald, besides its real meaning, has been likened to leaves and grass due to its green color. Classical Persian poets have mentioned in their poetry the old beliefs about the formation of those stones. For example, they have mentioned the belief in their poetry that April rains falling into the mother of pearl created pearl or the stone turned into ruby due to the heat of the sun. In this paper, the use of pearl, ruby, carnelian and emerald, the similes and metaphors, examples of couplets from certain poets of the Classical Persian Poetry will be touched upon through translation from Persian to Turkish.

Keywords: Pearl, Carnelian, Ruby, Emerald, Poetry.

Kingdom Davul and Zurna in Turkish Proverbs and Idioms

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Abstract

Iğdır and around it, which are strategic points of East Anatolia, have been a settled region since ancient ages thanks to its fertile soil, junction location, low altitude and appropriate climate together with the Assyrian threat beginning from 14.century B.C. and the fact that Urartian Kingdom was situated powerfully during confederations between 13. and 9. century in the region, ancient history of which dates back to Mesolithic Age, the whole of East Anatolia witnessed a new development and housing action. Big cities such as Luhiuni, which was the capital of Erikua in the Early Iron Age, and Menuahinili, which was an important administrative centre of Iğdır region, were strategic centres to be conquered for Urartian Kingdom to spread on Aras Valley. These centres, where agricultural products of the region were stored and hierarchical governmental order was secured, were conquered by the mighty king of Urartians, Menua (810-786). After the invasion of these regions, Urartian Kingdom established an important base for the military expeditions from the north of Aras Valley to South Caucasia. Owing to this base, Urartian Kingdom acquired an important line of defence against the threat from Caucasia.

Keywords: Turkish Folk Literature, Music, Proverb, Idiom, Davul, Zurna.

SOCIOLOGY

An Investigation on Invisible Reality and Confiscation of a Nation's Identity within the Context of the Middle East's Doomed Facade

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Abstract

Arguing that the stories told by Homer is an antecedent of the military invasions and massacres of civil populations experienced by today's post-modern societies would not be a misguided point considering the identity extermination which has been happening in Syria. On the other hand, most significant injustices and effects of this crisis occurs at the humanitarian level. According to the numbers announced in Syria Donors meeting organized in London, the civil war in Syria has resulted in the deaths of 250 thousand people and caused over 4 million refugees to flee other countries. Thus, the remaining population has been subjected to forced migration and the implemented identity extermination became the name of a huge human tragedy. Long-continuing Syrian civil war has been ultimately stretched to the international arena and made serious social and psychological impacts throughout the Middle East. The desire to conquer, which destroys the spatiotemporal context, removes geographical distances in line with unrestrained ambition of ruling powers for more power and global interests of imperialist forces and acts as an indicator of metaphysical conflicts between reality and virtuality. At this point, the ongoing tragedy, besides being a regional problem, has become a problem of the international system. The most striking reality of 20th century thus has been the wretched migrant bodies. Power which holds the authority to suppress takes the individual's sense of self and the migrant body which has been sent away from the heimat has been brought to the domain of social struggle by being positioned at the center of political power-competence relations that remained behind the border. This study is an investigation of intervention on the body in terms of migration. Migration was studied in the context of Syrian refugees and findings of the literature review were discussed in socio-cultural, political and socio-psychological terms.

Keywords: Migration, Refugees, Postmodern, Identity.

Space Sociology: Erzurum Terminal Street

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Abstract

The place is considered to be the place where people live in the most basic sense. However, it is fields where people can interact with each other, perform socio-cultural activities, and communicate. The space for space sociology is not only a physical place but also a social, economic and cultural area. The place has a direct impact on human life with these characteristics. In the same way, the production, design and arrangement of the space is caused by the influence of the person on the space. There is a mutual interaction between human and space. Throughout history the transformation of societies has also affected urban spaces. Urban spaces have changed constantly as structures, functions, usage patterns. Terminal Street is one of the important settlements of Erzurum. In recent years, the street has undergone a major transformation about visitors, places and dwellers. Started to be seen as a center of attraction by people. The purpose of this work is to demonstrate the process of change in Terminal City and the direction of change. The study will be based on data obtained observation and in-depth interview.

Keywords: Space, Space Sociology, Transformation, Urban Spatial Transformation, Terminal Street.

Social Support Mechanisms and the Quality of Life Iranian Elders

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Abstract

Although there is no vital crisis related to the aging of the population, it is assumed that there will be increase in the amount of elder people in coming decades in Iran. Because of this reason there are some researches considering the quality of life of these older population at both academic and governmental level in this country. Findings show that the old people who were living in their houses alone were not willing to go to nursing home due to the negative background they had about nursing homes even if they are not protected by their children. Women in nursing homes did not have any children. The main reason of putting the old people in nursing home was relapse. Some of the people who are cared with welfare organization and Welfare State .Those at home prefer to live alone there rather than living in the nursing home. In this presentation by using the phenomenological hermeneutics the elder Iranians evaluations about their life, social relations as support mechanisms are examined. semi structured interview is used as data gathering technique and the results revealed that, traditional family ties are still basic source of elder caring in Iran. This kind of support leads to the increase in the their quality of life.

Keywords: *Social Support, Quality of life, Nursing Home, Family.*

Bread: Playing a Leading Role in Preparation for the Winter

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Abstract

Kulu is surrounded by Şereflikoçhisar and Bozdağ in the east, Cihanbeyli in the west, Haymana in the north and Tuz Lake in the south. Kulu, a county of Konya, has a population of over 70,000 and this number doubles up with the population whose majority comes from Sweden. There are a lot of innovations to learn from a person who is from Kulu. Especially the culinary culture should be examined deeply. Because of the fact that eating and drinking culture in Sweden is so blended with Kulu, cooking methods, prepared meals, presented meals and their tastes make people to stop and think. This research has planned as a qualitative study and the data were obtained from the people living in Kulu as an information source by using structured interview form. Kulu people, who come to their homeland in the winter, make a lot of preparation such as vegetable-fruit-meat drying, sheep milk storage, "mantı" and bread for the Europe. In this preparation making bread comes into prominence. Bread is indispensablity of Kulu. Women make breads at the courtyards which are too many meters of high with the flour bought with gunny bags. Not only is it made with cooperation between neighbors and relatives but also with paying for the women as workers. Because the bread is for winter preparation, it is made both for the ones who will be going to Sweden and the other family members living in Kulu. The oldest woman in the family watches carefully this activity absolutely. Even if she does not make herself, she gives ideas about amount of flour and how to roll out the dough. In this study, it is aimed to determine and record bread making in Kulu, ingredients which are used, storage and consumption ways.

Keywords: Bread, Winter Preperation, Culinary Culture, Kulu.

Reconstruction of the Inventive thought against the Prevailing Positivist Thought in Science

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Abstract

The mentality to construct a civilization is an issue directly associated with the cultural values owned. In fact, the scientific tradition of our own inventive thought system was stopped in the 19th century, and a scientific tradition based on the Modernist, Positivist and Rationalist thought system of West emerged within this process within the frame of the heathenish pagan mentality dating back to the antiquity. The methods (ways) of these disciplines formed by this scientific tradition, which completely dominated our thought system for the last two centuries, have also emerged based on the same understanding. In fact, the essence of the thought being the main basis of all disciplines is to know the beings in every aspect and try to understand how these were created. The Meeting for Forming the Higher Education Field of the Islamic World, organized within this framework, was initiated in Ankara on the date of 26th July, under the aegis of the Presidency. The event carried out as the Forum of Rectors from Islamic Countries was held the participation of more than 120 rectors from 36 Islamic countries and 180 rectors from Turkey. "The Meeting for Forming the Higher Education Field of the Islamic World," has been a significant meeting for the amelioration of the civilization through knowledge and knowledge method of the Islamic world –that has not even been pronounced for the last two centuries. As a matter of fact, the Meeting for Forming the Higher Education Field of the Islamic World was an event to be noted in the history with the submission of the following ideas among the Islamic countries through the universities that are the source of knowledge and thought production; Dealing with the theme of "Brotherhood", Emphasizing "Union", Bringing a new model for the academicians to create knowledge in the axis of Tawhidi inventive of the "İlmiye" class with the verse "For he is the one closer to us than our aorta". Accordingly, through the Rectors in the Islamic world, the founding nature of the construction of a scientific mentality based on "collaboration in thought management and knowledge production system" grounding on "corporate cooperation through universities". In this study, matters to do for the reconstruction of the inventive thought system will be revealed and the scientific methods (ways) that emerged based on the Positivist thought, the worldwide prevailing thought, will be examined.

Keyword: Inventive Thought, Positivist Thought, Brotherhood, Union, the Rectors in the Islamic world

Geographical Indications as a New Rural Development Tool: "Iğdır Apricot" as an Example of Obtaining Potential Geographical Indications

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Abstract

Geographical indication is a sign that shows a particular quality, reputation or other characteristics of a product which its origin specified by a region, area or country. Geographical indications seen as an important instrument of rural development policies and strategies in order to raise farmer income, keep rural population in the same place, preserve and develop local products, protect the environment and traditional knowledge. In this study, geographical indications regarded as a new agent of rural development in terms of presenting a field of struggle to local actors where they can continue their existence in free market conditions. In this context, this study aims to reveal the positive role of added value in rural development by examining the Iğdır Apricot with characteristic traits ability to obtain potential geographical indications. Observation and interview techniques as well as statistical data were used in this study to understand current production relations.

Keywords: Geographical Indications, Rural Development, Iğdır Apricot, Relations of Production.

Çamlıdere's Favorite Dessert : "Höşmerim"

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Abstract

In this study, it is aimed to present the components and preparation processes of "höşmerim" dessert which is specific to Ankara's Camlıdere region. This research has planned as a qualitative study and the data were obtained from the people living in Camlıdere as an information source by using structured interview form. Camlıdere, which has climatic and vegetation characteristics of both Central Anatolia and Black Sea regions, has a rich culinary culture that is based on Ottoman flavors. The county's suitability for organic beekeeping makes the region a honey basin, in this way honey and honey products can be found in the most natural form. It is possible to come across honey types obtained from the region while preparing the culinary desserts of the county. As being one of the most prominent desserts of Camlıdere, "höşmerim"s the most important feature is its service made with adding honey on the top of it. The basic components of this dessert are milk, eggs, cream, butter and sugar. In preparation processes, milk and cream are boiled in a stewpot, then flour is added on it. Egg is also added to mixture while blending it quickly. Sugar and butter are slowly added and than the dough is fried until it seems like a bulgur. After frying, the edges of the mixture are shaped roundly and the serving plate is closed on it. It is expected to be fried down side of it and when the fried side comes up by making it upside down, it becomes ready for the service. It is served with honey or optionally with sugar on top of it. It is thought that recording of the preparation processes of "höşmerim" dessert will enrich our culinary culture with enhancing its preparation.

Keywords: Culinary Culture, Höşmerim, Dessert, Camlıdere, Ankara.

A Cultural Communucation Center “Iğdır”

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Abstract

Culture and communucation are the most important topics that concern sociology. There are channels of culture and communication. Among these are can be considered such as geographical location, country, city and ethnic groups. These items are very important for the culture and communucation title. Iğdır is very suitable city to be evaluated in this context. The city is an important cultural formation because it is a witness of human relations and historical events. Threrefore, the city has entered into the field (area) of interest olmost all of the social sciences. Culture is a socia-culturel area which is sperated from the history of society and is shaped by historical developments. Culture is a socia-culturel field that changes with the formation of cities at the same time. For this reason, the culture that is formed in the cities and the city culture is an important part of life. The culturel changes after the modern period have created culturel developments in the city. İt is called “city culture”. Urban culture, is the formation process of the values produced by people living in that city. Urban culture, is a new culture formed by the history of the society and the features brought by the post modern period. For this reason, the people living in this city have lived and lived the process of the learning tol ive together with this new culturel product. City and urban culture occupy an important place especially for sociology. Iğdır; Armenia, Nahcivan and İranian are neighbors. There is a cultural inretaction and richness between the people coming from these regions snd the people of Iğdır. With this new cultural richness that occurs, people get into communucation with other cultures and peoples about communucation. İn fact, it is important not tol ive under a single culture but to live whereever people are. This report will examine the characteristics of Iğdır in a context of culture and urban culture. Urban culture is historical, culturel and cosmopolitan structure. Examination of urban culture, about Iğdır related to viability will give us tips. People living in the city of Iğdır, will answer us with this subject.

Keywords: City, Culture, Urban Culture, Communucation.

Newroz

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Abstract

There are the events to impress on the man's life. The custom-and-habit-based festivals are ones of them. Both of folklore and rituals in the belief world are available within the newroz festival. Generally, this festival which is mentioned in Turkish world has been always celebrated especially in Igdir. The newroz events have been presented with its history, the customs of newroz, the proverbs and idioms related to the newroz, its customs and habits in Igdir, the province. The following manners have been presented the meaning of newroz, how the history of states in Turkish society and their important in our cultural history were mentioned in the works, how they have been given in our literatüre, the events of newroz festival on the newroz habits, proverbs and idioms. Secondly, the customs of newroz festival and their ways to be mentioned in the families have been included in our province. The living of newroz in the pre and post Islamic periods has been mentioned. In the society. In the recent years, the scientific studies, which are done in the other Turkish state and societies especially in Turkey prove that the newroz is a spring festival in Turkey. However, when some of the viper's nests from the foreign parts started to the activity to use this festival to the detriment of us, the subject came up and the event started to be reviewed seriously. The newroz in Persia has been mentioned in a spring festival like us. The newroz is a synonym of newroz in Persian language which passed as "Neyruz" in the Arabian. The newroz was celebrated as a formal festival in the first years of Republic. The newroz festival sustains the common custom and habits in Turkish history and culture with all its vitality in our province. We have tried present the celebration of newroz festivals with all of its rituals in Igdir on our declaration.

Keywords: Newroz, Custom, Culture, New Year.

The Role of Traditional Identity in the Formation of Social Gender Perception in University Students: Iğdır University Sample

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Abstract

Our research examine straditional identity and gender perception in Igdir University vocational school students and the effects of these in the attitudes of they outh regarding religion and their religious life. Our study consists of theoretical and practical parts. Our research is a field research. Questionnaire form is applied to 278 students consisting of 156 males and 122 females. Whenthestudents' views regarding gende rroles in respect to work life, social life, married life and family life are examined, it has been found that there is a statically significant difference between the genders in the majority of the statements. It has been determined that the men have more traditional perspective regarding gender in the fields related to social life, married and family life, religion and religiousness and servility in there search. The results of there search have importance from the point of university students' suggesting the irviews regarding gender. That there are students who still have traditional views concerning gender in the education of universities shows the university which aims to raise educated individuals can not meet completely this target an the is then ecessity of sensibility acquisition in the matter of gendere quality in addition basic professional education.

Keywords: Gender, Traditional Identiy, Religon, Identiy, Gender Role Perceptions.

Çamlıdere Desti Kebab

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Abstract

Camlıdere is a settlement area covered with forests which is 95 km away from Ankara and located between E-5 and Istanbul highway. The cute district located in the transition section of Central Anatolia and Black Sea region and has the characteristics of climate and vegetation covering both regions. As a result of natural abundance meeting with the cuisine culture, tourism activities in the region are increasing. Local food of Camlıdere in Turkish cuisine culture have developed and have been developing with geographical location, production method, historical development and a sense of nutrition. It is known that the rich cuisine culture of local people rely on Ottoman Period and this heritage is adopted by the folk. Particularly local foods have become one of the indispensable elements of activities on occasions such as circumcision, festivals, weddings and condolences. A flavor established in culture of Camlıdere region, Testi Kebab has been the focus of interest throughout history. The Kebab known as Desti among folk attracts attention of tourists visiting the region with its taste, appearance and presentation. In this study, it was aimed to determine and record the preparation process and characteristics of Testi (Desti) Kebab through the source people which is a kind of food belonging to Camlıdere region. The expansion of Testi preparation is believed to enrich our cuisine culture.

Keywords: Testi, Kebab, Cuisine Culture, Camlıdere, Ankara.

Assumptions of Strategic for European Union and Turkey in the Near Future the Human Factor

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Abstract

The formation process of the European Union, subject to many economic and political developments are emerging in the new world perspective. After the World War II, theories of development and growth became important, causing countries to search for a way out of continuity. The "Schuman Declaration", as proposed by Robert Schuman, French Foreign Minister, considered to be the European Union's technical basis; It is important to have a sense of unity in Europe or at least to ensure peace. The founding member countries display a strategy and unity view to ensure the continuity of economic activity with the European Coal Steel Community in order to solve the problems experienced in the sources in the 1950s. The global crisis of the 1970s has affected Europe and the whole world. The European Union, which is in the process of customs and monetary union, is confronted with the labor force, especially the young labor force problem. Today, the total population of the European Union member countries is stated as approximately 510 million people. Germany, one of the founding members of the European Union, has a population of 82 million and can be expressed as the most important human resource within the Union. However, estimates of the future population serve danger signals for EU. The potential of labour force in future is decreased will be the most important negative parameter for structure of European Union. It is highly important that members of countries and EU, taking appropriate decisions, should easily adapt to the quick changes and developments that occur in World. In the near future, the structure of the population and the size of the labor force in EU's countries will be an important indicator of the economic development and social development of countries. The EU will definitely need a young labor force in the coming years, due to the declining birth rates, along with having an older population. Projections of Turkey's population are in a positive trend and increase, contrary to the human scenario in the EU. At this point, it would not be utopian to claim that Turkey has a strategic prefix for the structure of the EU and that future developments in the EU will repeat in the 1970s. In this study; In addition to literature studies, population structure, birth and death rates, labor force, employment rates, age scales, birth expectancy, estimates of strategic with economic and vital will be evaluated based on official statistical data such as Eurostat, World Bank, UNDP and Turkish Statistical Institute. As a result of scenario analysis method; A possible portrait of the EU humanitarian structure in the near future, and the perspective of Turkey in this scenario will be reviewed by us. The possible future of the European Union and Turkey will be tried to be evaluated as a result of the work that will reveal the potential presence of Turkey.

Keywords: EU, Near Future, Perspective of Turkey, Labour Force, Analysis of Scenario, Assumptions.

Refugee Integration and Turkey: Suggestions of Social and Economic Adaptation

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Abstract

After World War II, the United Nations High Commissioner for Refugees (UNHCR) has been mandated to safeguard the rights and well-being of refugees by leading and coordinating international action to protect refugees and resolve refugee problems worldwide. However, The refugee problem is not sufficiently perceived as a problem within a consortium on an international level, in many economic, social and humanitarian contexts. Filippo Grandi, United Nations High Commissioner for Refugees, says that "the global crisis, the refugee crisis, has reached an unacceptable size." According to UN statements "twenty people are entering Turkey as refugees". Approximately 4 million refugees live in Turkey and this number is more than the population of many Balkan countries or some countries. According to the UN High Commissioner for Refugees, Turkey is the most refugee-hosting country in the world. Turkey, which has hosted thousands of refugees from Iraq, Afghanistan, Iran, Somalia and other countries outside of Syria, presents a unique picture in a historical responsibility. Turkey has spent about 25 billion dollars for the refugees and still continues to spend the necessary expenses on this responsibility. Turkey has been forced to learn the concept of refugee integration very quickly. According to the research, many of the refugees in Turkey want to settle completely, even with the temporary asylum status. However, the economic and social integration process should be supported by the decisions taken in terms of physical and social harmony of refugees. Turkey does not receive adequate support at the point of seeing the basic and specific needs of the refugees seen as temporary asylum seekers and producing solutions. Turkey needs a more concrete and sustainable integration strategy as it becomes a "final country" for refugees after the agreement with the EU. The development of new projects for the economic and social integration process of refugees is a necessity and a continuous alignment strategy is essential. In this study; the general profiles of the refugees will be determined based on the results of the UN and Turkey's official institutions by the situation analysis and the necessary strategies for the determination of basic needs of refugees, especially the health, education and employment of Syrian refugees, the design of effective programs and the economic and social integration will be presented.

Keywords: Refugee, Turkey, Integration, Adaptation of Economic and Social, Situation Analysis, Suggestions.

THEOLOGY

The Sufis Continuing Sufi Culture in Iğdır and Neighbours in Republic Period

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Abstract

Iğdır, which is an administrative district connected to the province of Kars until 1992, has a rich historical and cultural background due to its geographical location. It has traces of religious and cultural patterns one side from Anatolia and on the other side from the Iranian and Azerbaijani regions. Iğdır and its neighbours have been influenced by the mobility of Islamic world in this area since Sufism became institutionalized. Situated in the direction of passing way of Anatolia, sufi sects that were active in especially Turkestan, Horasan and Iran, Igdir took advantage of this rich Sufi culture during the Ottoman and Republican periods. The closure of the tekke (dervish lodge) and zawiyeh (a small dervish lodge) to the Republican period officially ended sufistic activities. However, this situation has not been enough to remove the activities of the sects and the sufi culture resulting from the ages which have been a serious acceptance among the people for centuries. For this reason, the activities of some of the Sufi sects such as the Naqshibendiyya and Kâdiriyye orders played a dominant role in the continuation of sufi culture in Igdır and its neighbours. Inter alia, the irshad activities (act of showing the true path) carried out by the Naqshbandi-Khalidi sheikhs of Bitlis Kufrevi Tekkesi, and Adıyaman Menzil Dergâhı were in the centre of Iğdır and Aralik district, they also performed activities in Sarıkamış and Kağızman, district of Kars. Some of the Kâdirî sheiks belonging to the Birifkan Tekkesi in Iraq have begun their activities in Aralik, the town of Iğdır can be counted as examples of sufi activities carried out in the name of the Karadiyya sect. Among the personalities that give life to Sufism around Igdir are Sheikh Shahabeddin Behdini, Sheikh Ebubekir Igdiri, Khalifa Yusuf Pufikî, Khalifa Eyyub Karabahi, Khalifa Zeynelabidin Kağızmanı, Khalifa Husnî Suphabi, Khalifa Muhammed Bashî and Khalifa Ahmed Shivekari.Igdir has a rich culture in terms of society and sect. Because Shiite-Jafari Azeris and Sunni-Shafi'i Kurds living in the region provide a colourful social structure. The gnostic Sufism which were adopted by Azeris spread more in Iran and Sufi activities having a rich infrastructure in Anatolia and adopted by Kurds have been influential in the continuation of sufi cultures in Igdir. Sufi activities in the Republican period played a positive and constructive role in strengthening the social structure in Igdir, serving unity and solidarity.

Keywords: Republican Period, Iğdır, Sufi Culture, Sufis.

Mind Codes of Religious Movements (The Taliban Example)

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Abstract

Religion can be described as a system that maintains the lives of individuals, the organization of relations within the framework of ethical and cultural values, a system that affects the national values of the society and worldviews, and reveals the dynamics of society, or a feeling of keeping people alive. So it can be said that religion is one of the most important elements that distinguish people from other beings. Because of the strong relationship between religion and man, it was concluded that there were religions in the first societies together with the first man. Religion has influenced phenomenology, individuals and societies in various forms. In other words, religion influenced the people living in the societies more than they thought. In this direction, religion has taken place in the socio-cultural structure, allowing individuals to continue their institutional structures and walk on a healthy ground by influencing the mindset and mind codes of individuals. In parallel with the change, transformation and differentiation that took place in society, it was seen that some changes occurred in the other, and religion also differentiated from the functional aspect. From an anthropological point of view, he emphasized that religions could change in the process by drawing attention to the variability of social events. The phenomenon of in religion change has been expressed differently in the Islamic literature. Positive change, rehabilitation, remediation, discontinuity and evolution, and negative change are expressed by words such as trip, falsification, infertility, corrupted and subtitles. Religions, human beings "built-in nomadic" to life, "sites empires" and "from rural civilizations to industrial civilizations" And has caused various changes and differentiations over time. In this context, religions should have a social character, be in relation to social events and influence-reaction. This means that religion depends on geographical, social and cultural variables to some extent. Afghanistan has taken an important route in terms of its geographical position. Afghanistan has been the cradle of various civilizations before and after Islam. The cities like Gazna, Herat and Balkh became the centers of knowledge and culture in the Turkish-Islamic world. However, the absence of a strong and just political power in Afghanistan has led this country to civil war and unrest. In recent history Afghanistan has been the scene of the war of tutelage of powerful states. On the other side, certain Islamic countries are also part of the war of tutelage in Afghanistan. The aim of the work is to present the sociological sub-structures of religious movements and religious groups in Afghanistan with healthy, critical, objective information and explanations within scientific methods and techniques, starting from the religion-motivated Taliban movement. At the same time, this work is important in terms of understanding sociological aspects of religion and worldviews of Afghan society and especially Pashtun tribes. The presence of movements such as the Taliban, which appear in the Islamic world and are referred to from the outside, is an important problem of our time. We hope that the subject will be deeply evaluated in accordance with the scientific framework as far away from the prejudices, and will contribute to the study of sociology of religion in Afghanistan and Islamic world and will guide the work on religion-based movements that have emerged in the Islamic world.

Keywords: Afghanistan, Religious Movements, Taliban.

Salahaddin's Relation to the Crusaders before the Conquest of Jerusalem

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Abstract

Salahaddin, grown to rescue Jerusalem from the Crusaders since his childhood, ran to battle on horseback for decades to break the Crusader's dominance over the Muslim country until the death.

Salahaddin's struggle with the Crusaders must be examined in two stages of his later part of Nuraddin's death. The first phase is the period of struggle until the Conquest of Jerusalem. In this period he got along well with the western crusaders and fought only with the eastern Crusaders and the western Crusaders who helped them. The second phase is the period that began after the Conquest of Jerusalem and continued until his death. In this period he fought both the eastern and western Crusaders. This war ended with an agreement reached between the two sides in 21 Shaban 588/1 September 1192.

Keywords: Salahaddin, Crusaders, the Conquest of Jerusalem, Battle of Hattin, Battle of Ramla.

Iğdır from Sociocultural and Religious Perspective

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Abstract

The proportional distribution of the provincial population is made up of Azeri Turks and Kurds, and the social contribution of educated people who comes from outside for the civil service adds wealth to the cultural life. Mutual intermerries, commercial and agricultural life-support, common sharing of everyday life rasp the prejudices between them. They have learned the value of living together by living peacefully for hundreds of years and for generations. The joint defense of the city in the war at the turn of the century brought the greatest solidarity between the two groups. From this common ploy, they tolerate religious and sectarian differences and the minor conflicts between them. About one-third of the existing mosques belong to Jafaris. In these centralized ones, time-honored prayers are regularly performed by their own imams. The absence of the official title of the scholars enabled the traditional respect for them to be maintained in an exaggerated way. This serves them as the leader of opinion in religious and social matters. The scholars have traditionally completed their education in Iran. Some have the title of Hujjat al-Islam and they receive their scientific legitimacy from the theological schools in Kum. They, at times, gave their opinion to the relevant authorities to be recognized the same legitimacy by Diyanet. The fact that a significant part of Sunni sect belongs to the Kurdish and Shafii sects constitutes a massive community in mosques. These citizens who exhibit a deep religiousness perform their duties in accordance with this sensitivity. Nawroz and Muharram which are religious days in the city organize various activities in city as well as the liberation of enemy occupation of province on November 14th. There are also many festivals in Iğdır, including the Apricot, the Korhan Plateau and the Traditional Agri Mountain Festival. Some of the people of the province are of Azerbaijani origin. That is why the Karbala incident led to a great law especially in Shiites. During this time, Iğdır and the surrounding areas to take care, to give and take a girl, to do weddings and do not do similar work is shown.

Keywords: Multiculturalism, Cultural and Religious Relations, Azeri and Kurdish People, Nawroz Eid, Muharram Moon, Festivals.

Sahabe (Companions of Prophet Mohammad) Definitions in the Book of Dâvûd-İ Karsî Şerhu Usuli'il-Hadîs Li'l-Birgivî and Reviews on this Subject.

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Abstract

Davud-i Karsi is an important scholar living in the 18th century. Davud-i Karsi, born in Kars, has been educated in the field of Islamic sciences in Istanbul. He was in Egypt and Cyprus for a while. Then he settled in Birgi town of Ödemiş district of İzmir and was busy with writing books and educating students until the end of his life. He has written works in various fields of Islamic sciences such as logic, Arabic language, kalam, hadith. Dâvûd-i Karsî's most readable book in Ottoman medrese is Şerhu Usuli'l-Hadith Li'l-Birgivi. This book is a commentary on the work of Imam Birgivi concerning the method of hadith. Some evaluations have been made on the definition of the companion in this commentary. This definition is criticized in two studies on the book. The issue of our work is also the analysis of these criticisms.

Keywords: Hadith, Sahabe (Commandings of Prophet Mohammad), Dâvûd-i Karsî.

Concubines in the Dove's Neckring (Tawq al Hamamah by Ibn Hazm)

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Abstract

Dove's Neckring (Tawq al Hamamah) is a book beyond of own period. Ibn Hazm was aware of this when writing his book. In relation to that, he said, "I know, some people of my bigoted enemies will comdemn me and they will say "He turncoat and wander." At somewhere else of this book, he said so, "Quite an experience is to write my experiences in past; to indicate ups and downs in my destiny; to hold some images in my memory and to remember all that things." Accordingly we can say that, author had written this book based on his experiences. Sometimes he make mention of own experiences and sometimes he speak of relationships his friends, courtiers, statesmen, scholars, students and in respect thereof slave masters and concubines. Therefore it is a living and first-rate resource in terms of witnessing the works. Especially when the reading between lines is done, in terms of our understanding of social situations and human relations, it will be seen that Tawq al Hamamah is not only about love and lovers but also about human. Every story about selected topics turn into a historical documents that we will elicit different knowledges and inferences. At the work, when we read the life of khalifas, viziers, scholars, at the same time, we come into life of masters and concubines in Andalus. This aspect of work provide knowledge about situation of concubines. Since Ibn Hazm's childhood, one of the prominent families of Andalus, living in an important and rich environment, has been influential in dealing with this issue. As a matter of fact, since this work carries an autobiographical character at the same time, the writer sometimes talks about concubines that he has personally acquired.

Keywords: Concubine, Slave masters, Social Situation, Ibn Hazm, Dove's Neckring (Tawq al Hamamah), Andalus.

Thoughts on Cultural Diversity and Compulsory Religious Education: the Case of Iğdır Province

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Abstract

Two main points are gained when religious education is given in a pluralistic society because students and teachers are two basic elements of religious education as much as education. First, religious education given to students should create a cultural wealth in the student. Secondly, teachers who will provide religious education need to be equipped with specific information. Given the importance of these two issues, therefore, it is possible to answer these two questions correctly: The first, “how do the teachers of religious education go through the training process and what kinds of basic information are they equipped with?” Second, “what is the necessity of compulsory religious education practice?” The most strong and legitimate ground behind the obligation of religious education: The importance of religious and moral education in the development of personality is obvious. If Turkey does not want to face with problems that difficult to solve on religious education in the future, it should produce new theories on the basis of cultural diversity and implement pilot applications. Turkey already has a accumulation of experience that can not be denied about religious education and a historical heritage inherited from the past. Igdir, on the ground that a province where cultural diversity is dominant, can be a study center in terms of religious education. It is necessary to be understood at least two basic principles for the continuation of cultural diversity in Igdir: The first is that the parties with different cultural backgrounds accept each other's existence. Second, the presentation of cultural manifestations as a way of life and belief. Those should not be in the style of repressing the life and belief of the other or turning it back to its own life and belief. As in the case of Igdir, compulsory religious education in communities where cultural diversity prevails can mediate the promotion of intercultural communication. Religious education in multicultural communities can contribute to analysis of processes about understanding, explaining and living religon, as well as the development of methods to get gain depth to religious texts, religious phenomena and events.

Keywords: Multiculturalism, Cultural Diversity, Compulsory Religious Education, Intercultural Communication, Cultural Diversity in Iğdır, Religious Education in Iğdır.

The Evaluation of the Relation of Culture and Religion in terms of Philosopy of Culture in Iğdır

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Abstract

Main problem of the philosophy of culture is culture and its nature. Philosopy of culture begins with the question: What is culture. It is obvious that one of the components that bring societies together is culture. Culture represents all intruments that is used to transfer moral and non-moral (maddi) values to next generations. One of the parameters that constitute *sui generis* character of culture is religion. Any religion is not only a subjective experiences that individuals practice, but they objectivise through changing into a concrete form and attitude. By this way, religion and culture are in a continuous relation. The relationship between culture and religion is seen as direction of social spirit that is formed through historical experience that societies lived and the most effective factor in taking form of cultural identity. Farabi denotes religion which is the essential and important element of culture in the context of his time, main constructor of cultural identity in accordance with general opinion of public. At present, loosing origin of cultural identity makes it hard to define who is individual. As a cultural inheritor in religious pluralism Igdır is an important city that makes it possible many cultural, religious and sectarian differences to live together. By sectarian pluralism meant teology and philosophy of life of many different perspectives in a religion.ıgdır is seen as an example of sectarian pluralism in the sense of belief whic represents by Jaafari, Hanafi and Shafi in practice. The geography that is lived in shows an undivided whole with culture that is inherited from previous generations. It is only possible to develop possibility and ways of living together through awareness of ancient culture. Because this common sense contains respect to differences interative in the same time and existence together and tolerancein its structure.

Keywords: Iğdır, Culture, Religion, Philosophy of Culture.

Killing-Aim Relationship in Islamic Law

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Abstract

The Qur'an has the concept of killing in many places. This concept has been dealt with under the headings of deliberate killing in Islamic law, intentional killing and mistake killing. Thus, this concept has been given a systematic structure. If the broad meaning used is to be left to one side, the concept of killing in Islamic Law is treated in a very special way. Different types of killing have been mentioned in the nature of the acts that led to the killing. The killing is the separation of the soul from the body. When the act of killing is carried out by someone else, it is called "katl". Life is spontaneously called sonata, it is called "mevt". The notion of killing also means that one has to kill himself, just as it means to kill someone unfairly. It also refers to killing others and killing them at unjustifiable grounds. It also refers to the killing that comes with error and the killing in the way of Allah. Islamic lawyers did not regard deaths that happened spontaneously as killing. "Makâsıd" means the purpose of putting the provisions of the law maker. When the concept of killing is evaluated in this respect, the following result is obtained: It is forbidden for someone to kill himself and kill others unfairly. Nevertheless, it was encouraged to die in the way of Allah, to be killed in the way of Allah, and to act in talion. This study aims to examine the killing types in terms of putting the provisions of Allah.

Keywords: Islamic Law, Legislator, Kill, Purpose.

The Temple Mountain Policy of Omar Following the Conquest of Jerusalem

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Abstract

Jerusalem is a sacred place where three of the most important religions active on the earth are considered sacred. It is also the name of the place where they gave their lives for the sake of their happiness. These lands, which contain a great temple built by Süleyman, remain as important today as they were in the past. This place by the Jews has represented the power of life, the ideal and the calmness of each period. This mabed which was made with the intention of worshiping the people of the period, was falsified and destroyed after the end of various assaults. The Romans (have been hit hard by the Israelites, who have made it into the center of the mad life. This continued until the time of Omar's Caliphate, when the Islamic armies conquered Jerusalem. When the keys of the city were handed over to Omar, known as a just ruler, Jerusalem went to Islamic administration and a separate policy was followed in these lands. We will present the general situation before the conquest of Jerusalem and the developments after that. In this land of Umar will be explained the saving of the temple and the attitude of the local people (Christian and Jew), which was once the construction of the Solomonian Temple

Keywords: Omar, Al-Quds, Temple Mountain, Jews, Christian.

In the Example of Iğdır, the Islam Common Value and Together Living Culture

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Abstract

Islam is a religion that suggests the establishment of love and respect for the foundation of peace and well-being. Today, Muslims live one of the most troubled periods of their history. In recent years, my geography has been dominated by blood and tears. To come from above these negatives, we need to get a guide of reason, science and tolerance. So, if we see what we have differences, not separating us but as powerful fractions, we can create a common living space for everyone. Turkey has a rich diversity in the context of different beliefs. Historically, we have witnessed that Islam rapidly spread from the first moment when it reached the region. This spreading process has also led to the emergence of different sects due to socio-cultural and economic reasons, depending on the human factor. These different perspectives on Islamic understanding, is not a divergence on the people of the region but a source of cultural richness and rooted in the birth of a cult. One of the regions where sectarian pluralism is experienced in Turkey is Igdır. Igdır's experience of sectarian life, is a very important example for coexistence culture. Iğdır's has what ethnic, religious and sectarian experience is also influencing on current religion and sectarian perception. In Igdir, ıt has also been accepted Caferism, besides the Hanafism and Shafism of the Ahl-i Sunnat sects. These sects examining when, how and under what conditions these sects spread is important both in terms of the perception of belief and the determination of the cultural atlas. Igdir is one of the most beautiful examples of Turkish mosaic with all its diversity, and it is a city where peace and peace are dominant with the culture of living together. In this respect it is one of our country symbol cities that can be an example to our country and the world with living together that is shaped around Islamic common value. In the presentation, we will talk about the historical background of Muslim sects in Igdir region. In this context, we will try to show how they have managed to survive together in terms of causes and consequences as Igdir society connected to different denominations.

Keywords: Iğdır, Islamic Sects, Hanefism, Shafiism, Cafarism.

The Effect of Custom in Establishing Legal Rules: the Case of Islamic Law

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Abstract

Establishment which it's existence the thing first come to mind in relation to organising and maintaining social order is law establishment. Initial condition for this establishment's giving performance properly is it's formation by taking into consideration community characteristics which is applied to. This circumstance as a matter of course requires to represent localness in a sense characteristics of related community. Otherwise it will be not able to get organized consistantly with faulty imported legal systems and norms as a consequence interim measures which in the shape of everlasting law amendment will never be off the agenda. When matter is approached with solution oriented perspective it will be deduced that one of sources have recourse in the process of establishing practicable and functional law. Custom, in a word, can be described things which most people internalise and get into the habit, is the best mechanism represents characteristics of the community.It exists in the formation of both man-made and religious-based legal systems. It also exists in Islamic law which is religious-based legal system so much that it is stated a judge who is appointed in a new place must not adjudicate till comprehend custom there. Besides as a general rule "Specifying with custom is like specifying with nass (text of Qur'an/Sunnah)" expresses it's importance in Islamic law. Likewise cases like integrating tax and management systems, belong to foreign cultures which had been chanced upon expanding Islamic geography, to Islamic state makes clear how is custom effective in Islamic world.

In this paper first will be mentioned defition and nature of custom, and it's significance as a source for legal norm formation in a general framework. Afterwards, it will be discussed meaning of cumstom, it's place and value as a source in Islamic law. Also, will be tried to show traces of custom changing on Islamic law.

Keywords: Law, Custom, Legal rules, Islamic law.

The Relation between City, Culture and Belief

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Abstract

Cities built on the earth's geography have a feel from different cultures and beliefs. Baghdad, Damascus, Samarkand, Bosnia and Istanbul are among the top cities. The way to turn cities into the source and the cradle of civilization is to ensure that the construction sites are permanent and "reliable". Otherwise, it is not possible to bring to future the cities and the cultures that keep cities alive. Today when we look at the cities as one carrier of civilization, the city's construction area stands out. If the cities are built on the slopes of mountains, both it brings the cities to future and those cities exist in both future and habitable places in terms of stability and durability. Mount Ararat takes place in the religious textes as Torah and Bible and the source of Islamic history in detail. The fact that Mount Ararat is within the borders of Igdir province can contribute to international presentation of Igdir, turning into an opportinity this feature of Mount Ararat. Furthermore, Mount Ararat within the borders of Igdir can be used both from the point of tourism and as earthquake-resistance residential area. Thus, agricultural land is rescued from being the settlement. Because to open to the construction yard the agricultural lands where are the vital points of the cities and fruit and vegetable warehouses is to condemn the cities to absence. If security is provided, Mount Ararat can make enormous strides in “taleland tourism”. Taking place Mount Ararat in the cultures of the Semitic religions and being known Prophet Noah by both Jews and Christians as well as Muslims can lay the groundwork for religious tourism. In this context, the establishment of a thematic museum on the ship of Noah can make the region even more attraction center. It would also make sense to put the documentation together in a way by means of benefited from the myths in the literature. If the culture of societal peace and reconciliation that Anatolia possesses is put into practise in accordance with the principle of “unity in multitude”, there will be a chance to keep alive the differences, not to alteration and conversion. Because that the different cultures coexist and live together is a social wealth. This means that social values will be strengthened again. And it is necessary to remind the message brought by Noah to whom tracking down the ship of Noah in different times, such that the real purpose do not get lost. The common ground that the followers of Judaism, Christianity and Islam can find and express themselves is Noah.

Keywords: City, Culture, Belief, Mount Ararat, Prophet Noah, Coexisting.

TOURISM

The Effect of Ethical Leadership Behavior on Organizational Justice

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Abstract

The objective of this research is to identify the effect of ethical leadership behavior on organizational justice. So, whether there is a relationship or impact between ethical leadership behavior and organizational justice there is if any a relationship or impact in which extent will be determined. With the purpose of in theoretical part of research elaborated ethical leadership behavior with organizational justice interaction related to proposition analysis, within research field study was done and datas were collected by means of questionnaire. Within the scope of this research, 313 hotel business worker was determined for research sample. The data were collected through e-mail questionnaire and face-to-face interview method. Besides, based on time and financial difficulty to reach all of the hotel business workers, as provided filling in online questionnaire through webpage data number increasing manner was done. The results of this research analyzed with proper analysis techniques on computer. In research frequency, percentage, standard deviation, mod, correlation and regression analyses were done. As a result of multiple regression analysis conducted, in climatic ethics and decision making the effect of distribution justice, operational justice and interaction justice of ethics are come to light linear and positively outcome. The effect of distributive justice and interaction justice of communicational ethics and lastly the effect of behavioral ethics on only interaction justice are come to light linear and positively outcome. In addition to this, there is no impact of communicational ethics on distribution justice, also behavioral ethics on both distribution justice and operational justice, result of analysis are seen. That is to say, as ethical leadership behavior increase exhibited by managers of hotel business workers also the perception of organizational justice accordingly increases.

Keywords: Ethics, Leadership, Ethical Leadership Behavior, Organizational Justice.

The Effect of Emotional Labor Factor on Service Orientation: The Case of Nevşehir

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Abstract

The purpose of this study is to determine the level of emotional labor and service orientation of employees and to reveal the impact of emotional labor on service orientation. With this purpose, a model was offered for assessing the impact of emotional labor on service orientation and this model was tested with multiple regression analysis. Scales previously developed was implemented to measure emotional labor levels of employees and service orientation. In the investigation extent, employees in the four and five star hotels in Nevşehir were included. Purposive sampling was used and data was gathered through survey method. The results of study indicate that emotional labor levels of employees are not high and emotional labor attitudes usually arise as deep acting. In addition to this service orientation levels of employees are high. The impact of surface acting on service orientation is detected as negative. On the other hand, surface acting and deep acting have positive impacts on service orientation.

Keywords: Emotional Labor, Service Orientation, Hotel Business.

In the View of Touristic Potential and Routes for the City Where the Sun Rises: Iğdır

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Abstract

Iğdır, which has many traces of civilization in its history, Historical and cultural values as well as unspoilt natural texture, microcircuit climate which is unique to the region, and the fact that it is the only province of our country which is border neighbor with the three countries. Ağrı Mount, which is the highest mountain of Europe and Turkey, and Igdir, which was established on the Aras River basin, which forms the Armenian border, it is known as the place where the sun first emerged in my country. Iğdır; The sun was born in the city, Noah's Back Garden, Noah's City, Witness to History, Çukurova of the east, Sürmeli Valley, Gate of Asia, Center of the Caucasus, Cradle of Civilization, also known as different names. Iğdır also has an advantageous position in terms of tourism; more than one type of tourism can be done such as History and Culture Tourism, Faith Tourism, Agriculture Tourism, Rural Tourism, Health Tourism, Nature, Mountaineering and Hunting Tourism, Bird Observation, Winter Tourism, Eco Tourism. With this study, it is planned to give a perspective to the types of tourism that can be done in Igdir; with SWOT analysis to be done, it is expected to be evaluated as an alternative to other businesses in tourism in Iğdır, focusing on the positive and negative aspects of Iğdır Tourism. In addition, various tourist routes with examples of dealing with this work will create travel agencies and tour operators is expected to be a pioneer.

Keywords: Iğdır, Tourism, Tourism Route.

The Relationships Between Demographical Characteristics and Burnout of Hotel Employees: The Example of Provinces of Iğdır, Kars, Ağrı, Ardahan

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Abstract

In this study, it is aimed to understand the importance of burnout. This research which is oriented to determine the burnout of the employees of Iğdır, Kars, Ağrı and Ardahan's hotel business and the relationship between burnout and demographical characteristics. First, burnout concept has been handled in detail. The last part of the study consists of finding gathered from "Burnout Scale", "Demographical Characteristics" tests whose credibility and validity have been tested by the researcher in order to scrutinize the relationship between burnout and demographical characteristic. The results of the research found out that from burnout dimensions and decrease in personal achievement are moderate and the depersonalization sub-dimension is low and the research indicate that there are no significant differences between the burnout and gender, marital status, tourism-related education. In addition, there are significant differences between the burnout and monthly income, working department, educational status, working time in tourism sector, recommend the job to another.

Keywords: Burnout, Hotel Business, Hotel Employees.

The Relationships Between Characteristics, Job Satisfaction: An Application on Hotel Management Employees in the TRA2 Region

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Abstract

In this study, it is aimed to understand the importance of personality concept which is generally disregarded by the organizations and in that way the employees' personality, job satisfaction, and relations of these concepts have been examined from different aspects by featuring the importance of harmony between the personality of the employee and the job. This research which is oriented to determine the characteristics of employees of hotel business in TRA2 region and the relationship between personality, job satisfaction. The study consists of findings gathered from "Five Factor Personality Scale", "Job Satisfaction Scale" tests whose credibility and validity have been tested by the researcher in order to scrutinize the relationship between personality, job satisfaction. It has been found out that agreeableness dimension is the dominant personality type of TRA2 hotel employees and general job satisfaction with internal and external satisfaction dimensions are high.

Keywords: Personality, Job Satisfaction, Hotel Business.

Iğdır's Mountains Open their Arms to the World

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Abstract

As İskender Iğdır Ağrı Mountain Mountaineering and Nature Sports Club and Iğdır Photography Travel Culture and Nature Associations in the researches we conducted. We believe that it is suitable for nature tourism; we have obtained data indicating that nature tourism can be done in areas such as Hell Valley, Ekerek Lake, Demirsıkan Lake, Güzeldere Canyon, İrem Vineyard, Bulakbaşı Reed-Bed, Tuzluca Halıkışlak Countryside, Gaziler Valley, Zor Plateau, Küp Lake. We prepared a variety of visuals about these areas, including air and underwater. We are of the opinion that it is suitable for mountaineering tourism and it allows all branches of this sport; we obtained data about mountain climbing and extreme nature sports from Greater and Little Ararat Mountains, Tekelti Mount, Zor Mountains, Canderviş Mountains, Hadımlı Cliffs, Akdiz Cliffs, Erhacı Cliffs and Kızıldağ. We have prepared a variety of visuals of air and action related to these areas. We are of the opinion that because of the disturbing attributes such as terrorist incidents, our rarely encountered region hasn't got enough interest. Therefore, with the help of visual materials that we have prepared, we are continuing our efforts to show these areas that there is no risk of terrorism in the region to foreign visitors. In previous activities we have taken nature athletes from different regions of Turkey and the world to the mentioned areas and organized various activities. We plan to continue these activities by increasing. We are targeting by visual and audiovisual materials to introduce the mentioned areas and to convey that there is no risk in being these areas in the symposium that organized by Iğdır University. In addition, we are planning to open an exhibition of 30 boards in the symposium, consisting of the photographs in which our members take part in natural and historical beauties drawn in different regions of Iğdır.

Keywords: mountain, travel, tour, nature, mountaineering, canyon, valley

POSTERS

Sample Size Determination for Logistic Regression

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Abstract

The purpose of this study is to determine the largest sample that can be used in a logistic regression analysis for a specific long term costly workload. Searching; works by pulling a sample with a sampling method appropriate to the population (populations) that is being examined for insufficient precious resources such as time, labor, money, tools and equipment. According to the statistics obtained from the sample, the researcher will make comments about the population and make decisions. The correctness of the decisions given is closely related to, for example, the size. For this reason, the problem of determining sample size is one of the first and important problems faced by an investigator. A small sample of information would be incompatible with the purpose of sampling in an overly large sample, while causing information loss and wrong decisions. For this reason, the problem of sample size determination becomes sensitive. The optimal sample size is the sample size that we can decide with a certain level of confidence, leaving a certain margin of error. There are methods to determine the sample size with the aid of prepared graphs (OC curves), ready rulers or formulas.

Keywords: Logistic Regression, Sample Size.

Determination of the Factors Affecting the Success of Secondary Education Student by Decision Tree Analysis

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Abstract

The aim of this study is to classify the factors affecting the success of secondary education students by decision tree analysis. In accordance with this purpose, studies were carried out through the data obtained from 44 secondary schools in Dulkadiroğlu, Kahramanmaras. In this study, dependent variable is student success and independent variables affecting the dependent variable are reading habit, numerical ability, having a room, sibling number, health condition, father job status, mother job status, the location he/she lives, computer addiction, television addiction, father educational status, mother educational status, preschool education status and status of living with his/her own family. A number of algorithms were developed in order to classify in decision trees. The best algorithms were determined to be used in these developed algorithms and by doing analyzes with these algorithms, the algorithm allowing the best classifying and tree modelling were formed. The most appropriate classificator algorithm was determined by practising CHAID, C5.0, C&R TREE and QUEST algorithms and looking at the analysis results. Among these classsificators, C5.0 decision tree algorithm provided the best performance. Classificator rulers were determined according to tree modelling this algorithm structure formed.

Keywords: Education, Data Mining, Decision Tree

Shock in Dogs and Cats

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Abstract

The circulatory system is formed by the heart, blood vessels (arteries, capillaries, venules) and blood. Shock, the fall of the cardiac output, is an acute circulatory failure characterized by poor vital organs and poor nutrition of vessels. Hypovolemic shock occurs when the vascular volume falls. It is formed by the loss of fluid in the veins or between the cells. It is also referred to as circulatory failure associated with intravascular fluid, blood plasma, and loss of extracellular fluid. Shocks in cats and dogs are more likely to result in trauma and fluid-loss illnesses. Circulatory shock is divided into 3 hypovolemic, cardiogenic and distributive (vascular) shock. Hypovolemic shock results in reduced intravascular volume. The main causes of hypovolemic shock are; acute haemorrhages, trauma, burns, acute fluid and electrolyte losses. Cardiogenic shock is all kinds of heart anomalies that disrupt the function of the heart pump. These reasons; heart diseases, myocardial injury, cardiac tamponade, and arrhythmias. Distributive shock is not affected by cardiac functions and blood volume, but because the vessels are dysfunctional, they cannot reach as many blood cells as blood. Neurohormonal disorders, inflammatory mediator release, obstacles to blood transport (thromboemboli) are among the reasons. Decreased consciousness, CRT (Capillary recharge time) prolongation, pallor of mucous membrane, tachycardia, reduced pulse quality, cooling of the extremities are clinical signs of shock. Cell hypoxia, free radical damage and the emergence of inflammatory mediators are the pathological consequences of circulatory shock. Circulatory shock can quickly impair the vital functions and cause death. As a result, early diagnosis and treatment of shock is very important.

Keywords: Cat, Dog, Shock.

Structures and Functions of the Peyer's Patches

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Abstract

The lymphoid system is functionally divided into primary, secondary and tertiary lymphoid organs. Primary lymphoid organs are responsible for lymphocyte production, secondary lymphoid organs are responsible for antigen presentation to leukocytes, and finally, the tertiary lymphoid organs normally contain only a few lymphoid elements, particularly where memory cells and active precursor cells are re-stimulated with antigen. Gut-associated lymphoid tissue (GALT) is composed of both isolated and aggregated lymph follicles and is one of the largest lymphoid organs that contain 70% of the body's immunocytes. The lymphoid follicles, also called Peyer's patches in the aggregate specie of the small intestine in the jejunum and ileum, are secondary lymphoid organs. This lymphoid tissue is the main site where the T and B lymphocytes, which are produced in the primary lymphoid organs and made immunocompetent, are implanted and the humoral and cellular immunity defence of the gut is performed. In conclusion, it is thought that Peyer's patches are a lymphoid tissue that plays a very important role in the construction and development of T and B lymphocytes by showing primer and secondary lymphoid tissue functions in the immune system, and in immigration of circulating lymphocytes and also in protective mucosal immune response in the intestinal lumen.

Keywords: Peyer's Patches, GALT, Immune System.

Proximate Compositions of the *D. trunculus* from Black Sea

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Abstract

The changes in the proximate compositions of the *D. trunculus* caught in the middle Black Sea (Ordu) were investigated monthly. Protein, lipid, moisture and ash ratios were found to be 10.08-12.58%, 1.21-2.00%, 82.43-86.52% and 1.52-2.73%, respectively. The highest protein value was determined in October and the lowest protein value in April. There were differences in protein amount between months. The highest and lowest lipid values were found to be in February and September, respectively. The lowest values for moisture and crude ash were observed in January and May, respectively, and the highest values were observed in May and July. There were differences in moisture and ash values between months.

Keywords: Proximate Composition, *D. trunculus,* Black Sea.

Use of Artificial Neural Networks in Food Industry

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Abstract

The use of computerized imaging systems in agriculture and food has gained considerable importance in recent years. Especially for the purpose of quality control, compliance with standards and increasing the value of the product market, image processing systems find use in the industry. Problems that can not be formulated mathematically and can not be solved can be solved by computers by means of heuristic methods. The studies that equip computers with these features and the development of these skills are known as artificial intelligence studies. The artificial neural network model can automatically perform the ability to derive and discover new information through learning from the characteristics of the human brain without any help. Due to the superiority of the model, it has been increasingly used nowadays to use effectively to solve nonlinear problems and to provide very reliable results. In food engineering, neural networks, fuzzy logic and genetic algorithms are especially used. It is used in food areas such as product grading, classification, process modeling and optimization, monitoring of quality control, conversion of image into numerical data, product design, control of storage systems, and estimation of product yield. This modeling applications also can be used for determination of rheological properties of dough, heat process evaluation in food, the classification of the wine by determining the contents of the anthocyanin, the classification of the fruits, vegetables and nuts according to their morphological characteristics, and so on.

Keywords: Fuzzy Logic, Artificial Neural Network, Genetic Algoritms, Neural Networks.

Use of Microbial Enzyme in Dairy Products

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Abstract

In nature, microorganisms have been endowed with vast potentials. They produce an array of enzymes, which have been exploited commercially over the years. Due to the diversity of enzymes in their applications in the industry and their suitability for production, the cost of use in the industry is estimated to reach approximately two billion dollars. With the use of enzymes in foods, it is possible to achieve high product quality, low energy usage and chemical reaction without creating side products. But natural enzymes are not available in sufficient quantities for the food industry. Selected strains of molds, bacteria, and yeasts are currently used as sources of enzymes for food processing. *Aspergillus oryzae, Aspergillus niger, Bacillus subtilis Bacillus cereus* and *Rizomucor miehei* are the most useful, well-known, and safe microbial sources for enzymes. Half of the cost belongs to food enzymes. It is therefore important that enzymes be isolated from microbial strains and specifically obtained in quantities to be used in the commercial field. Microbial enzymes are used in applications such as increasing the production and quality of milk and dairy products, preparing dietary products and modifying functional properties in dairy products technology. Most known enzymes in dairy products are milk-clotting enzymes or rennets, recombinant fungal and bacterial rennets for cheese manufacture, and fungal lactases for the manufacture of some milk products with reduced content of lactose. Other dairy enzymes include proteinases for accelerated cheese ripening for good flavour and textural development, proteases to reduce allergic properties of cow milk products for infants, and lipases for the development of lipolytic flavours in special cheeses**.**

Keywords: Microbial Enzyme, Microbial Rennet, Dairy Products.

Utilization of *Rheum Ribes* L. (Uşkun) in Food Industry

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Abstract

Rheum ribes L. is a kind of edible wild that belongs to the *Polygonaceae* family, and also it is one of the perennial plants. *R. ribes* is locally known as "uşkun, ışgın, ravent, revas" and it is grown especially in the east part of Turkey such as Van, Erzurum, Kars, Iğdır provinces. Also in Iran, Lebanon and Iraq countries uşkun is known as a famous edible plant. *R. ribes* is the only rhubarb species grown between 1800 m and 2800 m altitute rocky countryside of Turkey. Generally, uşkun is eaten as fresh, while the outer skin is being peeled off. According to some studies *Rheum ribes* is the source of one of the most important crude drugs in west Asiatic regions. These plants contain vitamins A, B, C in abundance. Rhubarb root (*Rhizoma Rhei ribi*) is used traditionally to treat diabetes, hemorrhoids, ulcers and diarrhea. The plant is also used as a digestive and appetizer in Bitlis, Turkey. On the other hand, fresh rhubarb roots and stems are used to prevent measles, variola and are used as biligenic. Nowadays, in the food industry, active biological compounds present in *Rheum ribes* can be considered as potential alternative natural antioxidant sources, due to increased concerns over synthetic antioxidants. And also there are many studies shown that, *Rheum ribes* is a good source of antimicrobial agent. In the recent studies of bakery products, uşkun is used as ingredient material due to rich fiber content and flavorant property. The extract of uşkun has a wide usage area on food preservation. Moreover, ongoing laboratory studies, extract of uşkun is added to different foods in order to extent shelf life.

Keywords: *Rheum ribes* L, Antioxidant, Antimicrobial.

Detection of Potential Ecotourism Karlıova, Bingöl

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Abstract

Karliova is situated in the shortest route among north cities and south and southern cities, it is also located in the middle of D950 main road of Bingol-Erzurum which is densely used. Opportunity of ecotourism in Karliova is discussed in this study. Karliova, 1940 meters central altitude that is circled with %83 high mountains, is the highest district of Bingol which has 1150 meters altitude. According to Ozhatay and his friends, one of the most important plant areas are Bingol mountains (3250 meters) which are located in this area are rich in terms of flora and fauna. In this study, ecotourism proposals which can enable economic contribution to local residents are put forward, also some areas that can enter to protected area statue are recommended.

Keywords: Bingöl, Ecotourism, Karlıova, Protected Areas.

The Antioxidant Compounds of Some Plants-Spices and Using in Food Industry

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Abstract

Lipid oxidation is an important problem that limits the shelf life of foods and causes quality loss. Antioxidants are compounds that reduce or eliminate the harmful effects of free radicals in our bodies. Antioxidant compounds and synthetic antioxidants were used for many years to control lipid oxidation. Consumers have therefore begun to prefer natural antioxidants against synthetic antioxidants. Antioxidants are taken on a diet with a balanced diet having a different precaution. Nowadays, plants and spices have become popular because of not only flavor ingredients but also their antioxidant and antimicrobial properties. Some of the best known antioxidant plants and spices are rosemary, thyme, peppermint, sage, clove, black pepper, turmeric, cumin, etc. These kinds of plants and spices can be added either directly or as extract in the food. Due to the chemical components of these plants and spices are different, their antioxidant effects and active substances are different. Our country has a large production volume of plants and spices. Because of the natural antioxidant and antimicrobial properties of these plants and spices, recently it has found a wide using area in food industry.

Keywords: Natural Antioxidants, Lipid Oxidation, Plants- Spices, Food Industry.

Digestion System Anatomy in Experimental Animals

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Abstract

In the development of modern medicine, experimental studies on animals have played an important role. In the scientific records, it was found in the 400-year-old Corpus Hippocraticum book. Today, many animal species are used as subjects from simple vertebrate animals to advanced mammals. The most commonly used tests are rats, mice, rabbits and fish, while those used moderately are pigs, guinea pigs, hamsters and monkeys. Test animals are used in vaccines, drugs, toxicity studies and biological tests. In general, we compiled this compilation by comparing the anatomy of the digestive system of experimental animals with different anatomical structures. In the guinea pig tooth formulas 2 (I 1/1, C 0/0, P 1/1, M 3/3) total 20 teeth. The hamster has a long diastema due to the absence of premolar teeth. In rats, the dental formula is in the form of I 1/1, C 0/0, M 3/3. There are a total of 16 teeth in tooth formula 2 (I: 1/1, C: 0/0, P: 0/0, M: 3/3). There is diastema between incisive and molar teeth. The rabbit's dental formula is 2/1, C 0/0, PM 3/2, M 3/3. As salivary glands in the guinea pig gl. parotis, gl. submaxillary, gl. sublingualis, gl. orbitalis (zygomaticum) is found. But there is a big gl. orbitalis externa in the cranial of the ear bail leaning over her m. temporalis and a small gl. Infraorbitalis in the ventro-caudal of the bulbus oculi in rat. In the rabbits, gl. parotis, gl. mandibularis, gl. zygomatica (gl. orbitalis), gl. buccales, gl. sublinguales are found. There is torus linguae in guinea pigs and rabbits. Hamster has a long language. There are no tonsilla in rat. The mouse is tongue depressed. There are tonsilla on both sides of the rabbit. The rabbits have sacculus rotundus. In the mice, the anterior stomach forms a blind pouch. The gall bladder is present in the Syrian hamsters, but not in the European hamsters. There are no vesica felleae in the rats. The digestive system anatomy of experimental animals was compiled comparatively.

Keywords: Anatomy, Experimental Animals, Digestion System

Women's Labor Force in Potato Production

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Abstract

The agricultural sector is characterized by being labor-intensive and low-yielding, and being a production arena abandoned primarily by the men's labor force. This situation brings about a conceptualization of increasing women's labor to become more open to exploitation. More than 80% of women in our country are unpaid family workers in rural areas. In the labor force in Turkey, the sector in which women are most concentrated is expressed as agriculture. In this context of the study, it is aimed to investigate the status and working conditions of the women's labor force in the production of potatoes, which requires a labor-intensive production plan. For this purpose, Erzurum province where the potato production is done intensively was included in the study. In this context, face to face surveys were conducted with 130 companies based on the number of enterprises in Erzurum province and random sampling method. The results of the survey were used in crosstab analysis to determine the characteristics of the women's labor force and the business involved in potato production. When considering the results of the analysis, it is observed that women working in potato production are married people who are between 30-40 years old, graduated from primary school, residing in their own home, having a land of 41 or more, having their own land and a monthly income of 1-2 million TL, selling potatoes they produce to wholesalers in the center of Erzurum, producing potatoes more than 41 tons per year and working in potato production for 6-8 hours a day. Women also emphasized that they cannot receive a recompense for their labor and work under unhealthy conditions. It is thought that it would be important for the women with these characteristics to be supported in relation to the evaluation of their labor with policies to be applied, and at least for the continuity of the sector to guide these people in terms of marketing their products with a cooperative to be established in this region.

Keywords: Erzurum, Potato, Women's Labor Force.

Organic Agriculture and Climate Change

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Abstract

As global temperature increases and weather changes dramatically inconsistent, intersection between climate change and agriculture is important issue how agriculture plays a role in global warming and how agriculture effects global warming. İn the past years, sustainability in agriculture and productivity, and the balance between long-term sustainability emerges as a major handicap in agriculture due to intensive use of inputs starters used in order to increase productivity with the green revolution. Agriculture is a system not only affecting by climate change, but also contributes to climate change. 10-12% of greenhouse gas emissions is caused by human food production. Researchers indicate that global warming and climate change in agriculture will reach threaten sizes sustainability. In addition, the studies demonstrate that intensive agriculture lead to the loss of land resulting in deforestation and lead to loss of pasture. Such negative changes in land provides significantly contribute to global carbon emissions. When considering climate change and global warming, organic farming attracts more attention, which has many functions with positive effects on soil productivity, conservation of biodiversity and natural resources in agricultural system. Several field trials shows that organic fertilizers largely increase CO_2 uptake from the atmosphere into the soil when compared to mineral fertilizers. As a result, organic agriculture is likely to be an important common agricultural strategy in the future in terms of agro-ecosystem strengthening dealing with destruction of natural resources and adversities arising from climate change.

Keywords: Organic Agriculture, Climate Change Greenhouse Gas, Biodiversity.

Organic Production Situation in Iğdır Province

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Abstract

Nowadays, organic products began to have an important place in world markets, there is a strategic situation that Turkey has in this market. The family business of farming that not much use of inputs such as fertilizers and chemical pesticides in agricultural production, it was concluded that this strategic importance of the difference due to the desired application in organic agriculture. Iğdır province is in Turkey's east is surrounded by abundant high areas such as Ağrı Mountain, and it is a region with potential for high temperature, low humidity and little rainfall. If we examine the organic farming activities in the Iğdir province; wheat, barley, alfalfa, sainfoin vetch, meadow, corn and potato in terms of crop production patterns between 2010 and 2016 years had cultivation. Although maximum number of farmers in cultivation of organic products was reach in 2011, it has decreased over time. In 2012, the total area where the cultivation of organic products was highest. Alfalfa is the most organic production of the products. As a result, cultivation of fodder crops in the region is coming after the planting of grain crops. In addition, when most of the product ranges, it was determined that remain with a limited number plants of organic farming. Therefore, there is need of studies to promote farmers of organic agriculture for increasing the diversity of plants and organic agriculture in this region.

Keywords: Iğdır Province, Organic Agriculture, Plant Production.

Effects on Biodiversity of Organic and Intensive Agriculture

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Abstract

Biodiversity is one of the important sources of both human beings and the other living things in the world. Since the 20th century, biodiversity and natural resources have been quickly destroyed at striking rates in human history because of a result of unsustainable developments. The destruction created on biodiversity has reached a size that can not be compensated by only regulating land use and creating certain protected areas. Climate change, all forms of environmental pollution and unsustainable use of natural resources have caused a large scale negative impacts on biodiversity. People have developed different agricultural strategies to ensure sustainable food production and on the other hand to preserve biodiversity. Organic agriculture is one of the environmentally friendly agricultural systems developed for sustainable and safe food production. Organic agriculture is also an agricultural system developed to protect biodiversity. The number of studies on organic agriculture and biodiversity has increased significantly in recent years. Meta-data analysis studies on this subject have been carried out in order to make clear that organic agriculture provides or is not an advantage over biodiversity when compared with intensive agriculture. Studies have shown that organic agriculture has positive effects on biodiversity when compared with intensive farming. Moreover, a number of comparative studies have shown that organic agriculture has positive effects on fauna and flora at level farm and field. Meta-comparative analyzes carried out by different researchers have shown that organic farming areas have about 30% more species and 50% more individuals than non-organic areas. Biodiversity plays a critical role in the life of human beings in terms of being one of the important factors supporting sustainability and ecosystem balance. Therefore, development and prevalent of this agricultural system is important for future generations when considering the positive effects of organic agriculture on biodiversity.

Keywords: Biodiversity, Intensive Agriculture, Organic Agriculture, Fauna, Flora.

The Heavy Metal Contents of Organic Fertilizer and Their Standards

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Abstract

Organic fertilizers include nitrogen (N), phosphorus (P), potassium (K), calcium (Ca), sulfur (S) and other plant nutrients, not just one or more plant nutrients as in mineral fertilizers. The effects of organic fertilizers on the development of plants are slower, but longer, than mineral fertilizers. Organic fertilizers not only provide plant nutrients to the soil, but also affect the physical, chemical and biological properties of the soil positively. Of course, there are organic materials whose contents and characteristics are very wide and different, which are used for different agricultural purposes. This report seeks to reveal the properties, heavy metal content and optimum levels of these materials in order to use valuable and scarce organic materials more efficiently, rationally and sustainably.

Keywords: Organic Fertilizers, Heavy Metals, Limit Values, Standards.

Determination of Seafood Consumption Habits of Yozgat Province

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Abstract

This research has been conducted to display the fish consumption habits and preferences of people living in the Yozgat province. In 2016, the data was collected through questionnaires with 270 people in the age range of 17-67 according to the random sampling method. 82 % of participants consumed fish. Fish consumption preference is highest with 60.6% while healthy and balanced nutrition constitute the most and the reason for not consuming is 57,1%. It has been determined that 97,7 % of the participants consume fish as a fresh, 1,3 % frozen and prefer 1 % preserves. Anchovy is the most consumed sea food with 94% consumption. Chi-square analysis was used for statistical evaluations.

Keywords: Yozgat, Fish Consumption, Consumption Preferences, Aquaculture.

Knowledge about Hygiene and Sanitation of Personnels Working at Fishery Selling Places in Yozgat City

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Abstract

The purpose for this study is to determine the knowledge about hygiene of the personnel working at fishery products processing and selling stages in Yozgat city. During the study, the participants were questioned; 60% of them graduated from high school and 40% of them graduated from primary school. Before being accepted to jobs, 80% of them passed a health control but 20% of them did not. It was determined that 33% of staffs passing health control had both throat and stool control, and the remaining 67% had only one of these controls. It was determined that 80% of the participants were working in the sector for 6 years and over, and 60% were between the ages of 41-50.

Keywords: Fishery Products, Personnel, Hygiene and Sanitation, Yozgat.

Situation of Field Crops in Iğdır Province According to Years

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Abstract

Iğdır province which has unique climate id an area of 92,200 hectares. Iğdır has a proccessed agricultural land with 686,278 decares and covers 0.28% of Turkey's total proccessed agricultural land (237.625.723,87). In this study, characteristics such as cultivated land (decare), production (ton) and yield (kg / da) of some field plants belonging to Iğdır province were examined. When the data belonging to Iğdır province in 2007-2016 years was examined, significant differences were observed in agricultural productions in scope of some field crops. While cultivated lands in terms of cereals and food grain legumes were observed there was an increase in bean (350 - 810 da) and corn (593 - 28.534 da), respectively 2007-2016, there was a decrease in wheat (240.915 - 189.480 da) and barley (108.000 - 72.836). Cultivated land of potato (400 - 706 da), cotton (200 - 1200 da) and sunflower (183 - 460 da) increased in this years, but cultivated land of sugar beet (37.441 - 1.415 da) was decreased considerably. A significant increase was observed in the cultivated forage plants for animal feeding. The cultivated land of alfalfa plant and sainfoin plant showed a significant increase between 2007-2016 years, respectively 113.957 – 185.480 da and 1.050 – 10.700 da. In conclusion, when the agriculture data of 2007-2016 of Iğdır province was examined, it was seen that cultivated land of vast majority of plants belong to field crops increased according to years.

Keywords: Iğdır Province, Cereals, Food Grain Legumes, Forage Plants.

Theoretical Investigation of ^{1}H and ^{13}C-NMR Spectrometry of Diethanolamin Dityocarbamate RAFT Agent

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Abstract

The materials used to achieve chain transfer in RAFT polymerization are called RAFT agents. RAFT is the most important compound in the realization of polymerization. Thiocarbonyl thio compounds are widely used as RAFT agents. In this work, diethanolamine dithiocarbamates RAFT Agent 1H and ^{13}C-NMR spectra experimental values are compared with theoretical values .^{1}H and^{13}C-NMR of these compounds experimentally are obtained from another study. For the theoretical values Gaussian 03W packet program were used. With the help of this program, theoretical values of Diethanolamine Dithiocarbamates RAFT agent were calculated. ^{1}H and^{13}C-NMR values were calculated as theoretical in levels B3LYP with method GIAO by using packet 03W Gaussian appointment theoretical ^{1}H and ^{13}C-NMR. In calculatıons TMS (Tetramethylsilan) was taken as reference. Obtained results showed that experimental and theoretical values are very close to each other.

Keyworld: Diethanolamine Dithiocarbamates RAFT Agent, ^{1}H-NMR, ^{13}C NMR, GIAO, B3LYP.

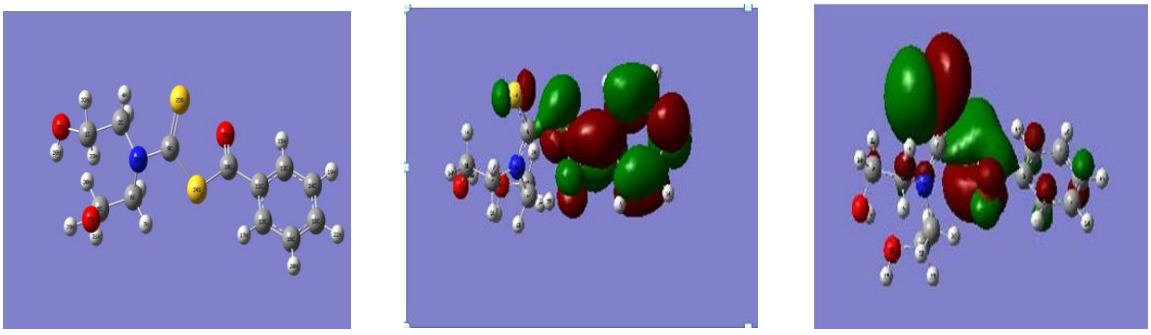


Figure 1: Geometric structure and LUMO-HOMO orbitals of Diethanolamine Dithiocarbamate RAFT agent

Algorithms Used in Decision Trees

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Abstract

A decision tree is a structure used to transform decision trees into smaller data sets by applying decision rules to create rules that provide a statistical significance from very large data sets. For this reason, a number of algorithms have been developed to implement decision trees in the field of data mining. The algorithms used are: Id3 algorithm, C4.5 algorithm, C5.0 algorithm, Chaid algorithm, C & rt algorithm, Cal 5 algorithm, Random forest algorithm, Rotation tree algorithm, Hunt algorithm, Mars, Accelerated trees, Sprint, Sliq and Quest. It is aimed to recognize the algorithms used in this study.

Keywords: Education, Algorithm, Decision Tree.

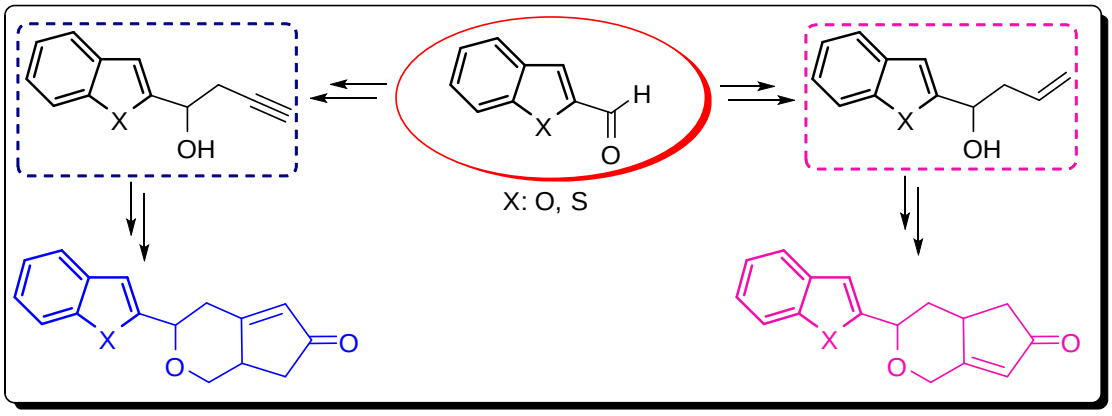
Synthesis of Novel Chiral Cyclopentenone Derivatives

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Abstract

2-Heteroaryl substituted homoallyl and homopropargyl alcohols have been easily and efficiently resolved by enzymatic resolution with high ee values. They are good candidates for the synthesis of chiral enyne systems because of their oxygen-anchoring site. Enantiomerically enriched enyne skeletons derived from homoallyl alcohols were subjected to intramolecular Pauson-Khand reaction and corresponding chiral heteroaryl-substituted bicyclic cyclopentenone derivatives were obtained with high yields (Scheme 1).



Scheme 1

Keywords: Chiral Cyclopentenone Derivatives, Pauson-Khand Reaction, Enzymatic Resolution.

Corrosion of Dental Alloys in Different Mouth Media

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Abstact

In this study, corrosion of dental alloys of Co, Cr, Ni, Mo and W in various solutions that may occur in the mouth was investigated (citric acid, mouthwash, NaCl, artificial saliva, artificial saliva + mouthwash, artificial saliva + carbamide peroxide and carbamide peroxide solutions). Corrosion measurements were performed in these solutions by using with open circuit potential (OCP)-time, AC-empedanz (EIS), lineer polarization and current-potential curves measurments by electrochemical methods at 37^{o}C. Cations in studied solutions formed by corrosion of metals measured with ICP-MS and surface analyse on the metal surface by SEM/EDX. Results showed that dental alloys were more correded in some studied solutions. Results showed that dental alloys in some environments significantly corroded.

Keywords: Corrosion, Dental Alloys, Corrosive Media.

Organic Safflower (*Carthamus tinctorius* l.) Production

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Abstract

Safflower (*Carthamus tinctorius* L.) — an oilseed crop — is a member of the family *Compositae* or *Asteraceae*. Safflower, a multipurpose crop, has been grown for centuries for the orange-red dye (carthamin) extracted from its brilliantly colored flowers and for its quality oil rich in polyunsaturated fatty acids (linoleic acid, 78%). In recent years, especially in the developed countries, safflower has attracted significant attention due to its edibility and medicinal values. Safflower petals are very important as a source of medicinal preparations, natural food colour and dyes for colouring fabrics. In addition to the colouring properties, safflower petals are used for curing several chronic diseases such as hypertension, coronary heart ailments, rheumatism and male and female fertility problems. Spineless varieties are used as cut flowers in Western Europe, Japan and Latin America. Until this century, before cheaper aniline dyes became available; safflower was mainly grown for dye. Safflower plant is tolerant to severe drought and salinity. Thus, it can be cultivated, as an oil crop, under poor environmental conditions. Continuous efforts are being carried out at state level to popularize safflower and increase its cultivation in Turkey, especially in problematic areas. The purpose of this review study is to compare organic and traditional safflower production. Studies revealed that organically produced safflower seed has high nutritional and oil quality, and has more medicinal properties. It is also suggested that organic system permits the crop deep root growth, enabling safflower to use water and nutrients from a greater soil depth than crops with traditional system. As a rotational crop, safflower also can be beneficial for breaking disease cycles in organic production system. Organically produced safflower is one of the highest quality vegetable oils and a medicinal plant. High-oleic safflower oil is lower in saturates and higher in monounsaturates than olive oil and is beneficial in preventing coronary artery diseases and tend to lower blood levels of LDL (bad cholesterol) without affecting HDL (good cholesterol). The content of linoleic fatty acid in safflower oil ranks first in all kinds of vegetable oils.

Keywords: Safflower, *Carthamus tinctorius* L., Organic Agriculture, Oil Seed Crops.

Misuse of Agricultural Areas in Our Country

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Abstract

Soil is one of the most important resources that enable life to begin, produce and sustain life on it. The most unfavorable development in recent years is that the land is regarded as a means of rent because it is an economic value, and this situation is a danger to our future. As it is in the whole world, erosion, housing area, tourism areas, power plants, substructures, industrial facilities, etc. Agriculture is rapidly disappearing due to problems such as unintended use, pollution and salinization. The inauguration of some of the regions with fertile agricultural land in our country is an important factor in the rapid disappearance of agricultural lands. Green texture, fertile agricultural land, rural meadow pastures for livestock and our country has significant potential in terms of agricultural activities. With the applications made, traffic, settlement, construction of some facilities seem to be the solution today; with the future population growth, the need for food resources will make non-recyclable losses for a cleaner world of breathing that will be left to the next generation in terms of protecting ecological balance. One of the negative consequences of the destruction of agricultural land for urbanization or industrial investments; plants, animals, and other micro organisms that sustain their life in the land. Humans can breed, but the earth can not reproduce. It is important to maintain our limited territory, to maintain this resource necessary for the growing population to meet their food needs and to survive, to maintain better agricultural plans with better master plans.

Keywords: Turkey, Soil, Agriculture.

Anatomy of Respiratory System in Poultry

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Abstract

Respiration is one of the functions that have vital preserve for the continuity of metabolism. The level of metabolic activity of a living organism is dependent on the respiratory system that mediates the transport of oxygen to tissues and the accumulation of accumulated carbon dioxide. A respiratory passageway forms are naris, cavitas nasalis, larynx, trachea, syrinx, primer bronchi (mesobronchi), secondary bronchi, inferior bronchi (parabronchi), air capillaries, pulmo, air sacs and pneumatic bones. One of the most important features of birds is their ability to fly, distinguishing them from other animal species. Air ventilation in the wings is achieved by air compression of the body, wing and foot movements. Half of the air taken in inspiration goes to the caudal airways, and half goes to the cranial airways over the lungs (leaving oxygen and loading carbon dioxide). In the expiration, the air in the caudal sections passes through the lungs to the trachea while the air in the cranial air passes to the trachea. The respiratory system in birds is associated with the air gaps formed in the bones, helping to reduce body weight and also plays a vital role in thermoregulation.

Keywords: Poultry, Respiratory System, Anatomy.

Digestive System Anatomy in Poultry Animals

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Abstract

The survival of the living, the growth, the nutrients necessary for the repair of damaged cells and tissues, and the digestion of energy consuming foods. The intake of food stuffs proceeds mechanically, enzymatically, chemically and by bacterial effects in the digestive tract. Secretions of the pancreas, liver, stomach and small intestines also play an important role as secretory factors during the transit of nutrients in the digestive tract. In order for food to be used by cells and organs, mechanical and chemical digestion is required so that they can interfere with blood and lymph. In the wings, the digestive tract forms the beak-rostrum, lingua-glossa, pharynx, mouth pouch, crop-ingluvies, esophagus, proventriculus, isthmus gastris, ventriculus, intestinum tenue (Duodenum, jejunum, ileum), intestinum crassum (cecum, rectum) and cloaca. The main goal of the digestive system organs is to break down the nutrients taken into the building stones and make them absorbable by the intestines. The initial part of the digestive system is the beak against the lips in the mammals. The beak is responsible for catching, breaking, and correcting the plume. Lingua in the wings is the task of catching the nutrients by mixing the nutrients in the developed species. Saliva secreted by salivary glands is responsible for creating slipperiness in the mouth and for wetting and softening the food. Esophagus is a tubular organ that allows food to pass through the pharynx and reach ingluvies. İngluvies stores and softens the foods slowly and sends them to proventriculus. Proventriculus initiates chemical digestion with digestive enzymes produced. Mechanical digestion occurs thanks to the stones found in the ventriculus. The intestine is the part of the digestive tract that starts in the midgut and ends in the coprodeum of the cloaca.

Keywords: Poultry, Digestıve System, Anatomy.

Recirculation Aquaculture Systems (RAS) in Aquaculture

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Abstract

Aquaculture, known as fish, shellfish or plant farming refers to the breeding, rearing, and harvesting of plants and animals in all types of water environments including ponds, rivers, lakes, sea and the ocean. Fisheries and aquaculture is a source not just of health but also of wealth. The sector provides jobs to millions and supports the livelihoods. Fish breeding in Recirculating Aquaculture Systems (RAS) has become a preferred system after excessive and unknowing hunting with the increase of water pollution. A preferred aquaculture system on land which recycles and reuses water by means of treatment devices for the culture of water organisms. Recirculating Aquaculture Systems (RAS) are generally semi-closed loop facilities that retain and treat the water within the system, rather than flow through fish farms. RAS allows producers to control all of the factors that might affect the environment and provides complete control over factors affecting the growth and health of the fish such as temperature, water quality and oxygen levels, while external threats such as predators, pollution and harmful algal blooms are eliminated. Most of the fish species (salmon, trout, sturgeon, pike perch, eel, tilapia, ornamental fish, carp, sea bass, sea bream, cod, turbot, sole etc.) and catfish are grown in ponds, floating net cages or water channels and can be commercially grown in recirculation systems. The aim of this study is to attract RAS in fish farming.

Keywords: Recirculating Aquaculture Systems (RAS), Aquaculture, Water Quality.

Yield and Traits of Goose Eggs and Hatchability Traits

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Abstract

Geese are more resistant animals to hard environmental conditions and illness but they have the lowest level of fertility characteristics among the farm poultry animals. Updated knowledge on egg production and hatchability characteristics of geese were examined. Fertility is the most vital feature of living things. In poultry, fertility mainly includes egg yield and eggs hatchability traits. The goose egg contains approximately 17.5 g of protein and 14.5 g of fat and other nutrients and provides a suitable environment for chick development. Geese generally enter the egg season in January. Egg production is highest in March-April. According to the genotype and environmental conditions, the geese makes 8-60 eggs. It was determined that average egg weight was 163.74 g in Turkish native geese. The most suitable egg for hatchability in goose eggs is between 140-200 gr. The yield of goose eggs and artificial incubation is low. Nonetheless, geese are the best poultry animals that evaluate natural conditions.

Keywords: Geese, Egg Yield, Egg Traits, Hatching Traits.

Feather Yield and Traits of Geese, and Feather Production in the World and Turkey

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Abstract

This study focuses on goose feathers yield and quality, and the factors affecting it. The study also provides information on the status of geese feather production in Turkey and in the world. Feather is a vital structure for poultry animals. Feather is also a material that has economic value for humans. Waterfowl feathers are recognized as the most valuable. The feather is a fairly light structure and is 2-3 times heavier than the skeleton. In poultry animals, 5-7% of live weight constitutes feathers. According to live weight groups, 200-260 g feathers from 3.5-4.5 kg geese and 290-327 g feathers from 5-7 kg geese can be obtained. There is a positive and medium-high correlation between feather yield and live weight in the geese. Gender and age are effective factors on goose feathers. China is the most important country where feather production is made. In China, 80-90% of the feather production is obtained from ducks and 10-20% from the geese. It is estimated that goose feather production is about 145 thousand tons / year and soft goose feather production is 43.5 tons / year in Turkey.

Keywords: Geese, Feather Traits, Feather Yield, Feather Production, Turkey.

An Overview of the Fishmeal in Turkey and in the World

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Abstract

Fishmeal is described by nutritionists as a high-quality, very digestible feed ingredient that is favoured for addition to the diet of most farm animals, in particular fish and shrimp. Fishmeal hauls large quantities of energy per unit weight and is a perfect source of protein, lipids (oils), minerals, and vitamins; there is very little carbohydrate in fishmeal. Top fishmeal producing countries are Peru (Anchovy), Chile (Anchovy and Horse mackerel), China (Various species), Thailand (Various species), U.S.A. (Menhaden, Pollock), Iceland, Norway (Capelin, Herrings, Bluewhiting), Denmark (Pout, Sandeel, Sprat), Japan (Sardine/Pilchard) and South Africa (Pilchard). Basic processes of fishmeal are cooking, pressing, drying and grinding the fish. There are several processing methods to produce good quality fishmeal, but the basic principle involves separation of the solids from the oil and water. Advantages are; addition of fishmeal to animal diets increases feed efficiency and growth through better food palatability, and enhances nutrient uptake, digestion, and absorption. According to our estimates, world fishmeal production reached only 4.09 million metric tons in 2016 at approximately 400 fishmeal and oil manufacturers all over the world. It produced approximately 5.000 tons at Turkey in 2016. In this study, firstly, a general overview of the fish and flour sector in the world and Turkey was made, and then the current situation of fish flour in the sector and the potential of it has been discussed.

Keywords: Fishmeal, Sector, Turkey, World.

Effects of Progesterone-Based Estrus Synchronization on Some Reproductive Parameters in Abaza Goats

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Abstract

This study was undertaken to investigate the effects of progesterone-based synchronization on reproductive characteristics and fertility outcomes for the first time in native Abaza goat breed. A total of 40 Abaza goats, weighing 40-50 kg, aged 2-5 years, were used in the trial. The study was conducted during the mating season. Group 1 (n=15) received hormone administration with progesterone and estrus synchronization. Group 2 (n=25) did not receive hormone administration (control group). The length of estrus was 25.1±2.11 and 25.4±3.69 hours in Groups 1 and 2, respectively. The rate of pregnancy in the first estrus was 73.33% and 88%, respectively in Group 1 and 2, respectively. Moreover, the duration of pregnancy was 153.50±3.21 and 151.26±3.89 Group 1 and 2, respectively. There was no statistically significant difference between the groups in terms of estrus duration, first estrous pregnancy rate, duration of pregnancy, and time of birth ($P>0.05$). It was especially found that the births were daytime and 72.98% between 06.00 and 12.00 hours ($P<0.001$). Group 1 twin ratio (53.34%) was significantly higher than Group 2 (12%) ($P=0.005$). As a result, it was determined that the Abaza goats did not have many reproductive problems, their births were daytime, the twin births were low and synchronization application has not negative effect on the production.

Keywords: Abaza Goat, Birth, Progesterone, Estrus Synchronization, Twin.

Removal of the Methylene Blue from Aqueous Solution Using Polyethylene/Clay Composite Films

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Abstract

In this study; bi-component composite film using a single screw extruder and controlled microprocessing apparatus (primarily with our own design; laboratory type) was synthesized containing polyethylene and a natural clay obtained from Gürpınar district in VAN. The synthesized composite films was performed by characterization using FTIR-ATR, TG and SEM-EDX apparatus. Removal of methylene blue and thermodynamic parameters (Ea, ΔH, ΔG and ΔS) of this removal from these composite films were calculated in aqueous solution containing methylene blue. Natural Gürpınar clay used in the experiment was dried in an oven at 105 °C and the clay mineral grinding was passed through 325 mesh sieve range. Grinding polyethylene purchased from PETKİM passed through the sieve will have the same particle size. Mass ratio (m / m) was chosen as (1: 1) composite film synthesized in the experiments in terms of components. Then, Polyethylene/clay composite films were synthesized in a controlled manner as homogeneous in laboratory-type extruder apparatus at 180 °C. Experiments of removal of methylene blue from aqueous solution were performed using composite films under various physico-chemical parameters after characterization procedures. In experiments; dye concentration, pH, time and temperature effects were studied parameters. Also some thermodynamic parameters were calculated from the experimental data. Composite films verified presence of interference and structure of components in FTIR spectra. Maximum removal from experimental data was determined to occur at 55ºC and pH 9. The positive enthalpy change of Dye removal is endothermic process showed negative Gibbs energy change occurs in the event of voluntary way. Also experimental data, process the removal of methylene blue from aqueous solution using composite films were determined to be appropriate kinetic equation from second order. Consequently polyethylene/clay composite films were synthesized using a laboratory-type extruder device in the study and the removal process of methylene blue in aqueous solution was shown to be an effective adsorbent.

Keywords: Polyethylene, Gürpınar Clay, Composite Film, Thermodynamic Parameters, Extruders, Adsorption.

Occurrence of Viroids in Dahlia (*Dahlia sp*.) Plants in East Mediterranean Region of Turkey

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Abstract

Viroid status was investigated in commercial dahlia (*Dahlia sp.*) plants at intensive dahlia production greenhouse and gardens in Adana and Gaziantep. 70 asymptomatic dahlia plants were randomly selected for this study. The samples were tested for the presence of pospiviroids using a set of generic *Pospiviroidae* primers (pospi1-RE/FW, Verhoeven et al. 2004). Additionally, specific RT-PCR tests were conducted for *Hop stunt viroid* (HpSVd), *Dahlia latent viroid* (DLVd) and *Citrus exocortis viroid* (CEVd) using primer sets and protocols described by Verhoeven et al., 2013 and Önelge 1997. *Dahlia latent viroid* (DLVd), *Citrus Exocotis viroid* (CEVd) and *Hop stunt viroid* (HpSVd), were detected for the first time in dahlia plants. DLVd was detected in samples from 8 of the 20 gardens sampled and in 10 of 50 greenhouse plant samples. CEVd was detected 12 and HpSVd was detected 5 of greenhouse plant samples. Reverse transcription-polymerase chain reaction amplification, sequence identity, and pathogenicity of dahlia extracts on cucumber and dahlia seedlings confirmed the presence of DLVd, CEVd and HpSVd. Infection with these viroids was associated with chlorosis and reduced plant vigor but there were no acute disease symptoms associated with the presence of these viroids.

Keywords: Dahlia, DLVd, CEVd, HpSVd, Turkey.

Evaluation of the Genotoxic Effects of Industrial Chemicals on Mammalia

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Abstract

The release of industrial pollutants into the environment following the development of technology has become a phenomenon that negatively affects all living groups over time and threatens vitality with biological accumulation in the long run. The studies about the genotoxic effects of industrial chemicals on the mammals were presented and evaluated, and it was aimed to be summarized in such a way that it can generate resources for future studies. The available literatural information were arranged as review by revising in the direction of the researches in Kafkas University, Faculty of Arts and Sciences, Department of Biology Laboratories. It was observed that there has been an increase in the number and variety of carcinogenic and mutagenic substances that organisms are exposed to, by the progress of the technology. It has been noted that living beings were directly or indirectly exposed to various industrial chemicals at any stage of development. In this review, genotoxic effects on mammals exposed to various industrial chemicals have been tried to be determined by various genotoxicity tests, and it has been reported to cause a variety of chromosome and nucleus anomalies, changes in some gene regions in live-affected organisms, and even numerical decreases in some populations. Based on examined data, it has been determined that industrial chemicals cause genotoxicity at different degrees depending on the amount of toxicity of the chemical the mammals are exposed to, genotoxicity increases in parallel with the amount of chemical that is exposed and the exposure period, and the research results evaluated are similar to each other.

Keywords: Genotoxicity, Industrial Chemicals, Mammalia.

Evaluation of the Genotoxic Effects of Pesticides on Amphibia

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Abstract

Amphibians, are important in transition from aquatic life to terrestrial life, are also important indicators in the evaluation of aquatic pollution. Nowadays, pesticides affect both aquatic and terrestrial organisms in different ways and alter the genetic structure of organisms with biological accumulation. The evaluation of the studies on the possible genotoxic effects of pesticides which are the most important environmental pollutants on Amphibians by re-examining, and the creating resource for the next studies by summarizing the reports obtained were aimed in this review. The available literatural information were arranged as review by revising in the direction of the researches in Kafkas University, Faculty of Arts and Sciences, Department of Biology Laboratories. Even if the pesticide presence is tried to be limited at the ecosystem level, the widespread usage of pesticides in various areas still continues. Many organisms are directly or indirectly exposed to the adverse effects of pesticides in this direction. In this review, genotoxic changes occurring in amphibians living in both aquatic and terrestrial forms as a result of exposure to pesticides were investigated. It has been reported that different pesticide types cause similar genotoxicity in amphibians in the data obtained from explorations were done using various test systems. In the direction of reports that are being reviewed, it was revealed that pesticides cause susceptibility to Amphibians, genotoxic changes increase in parallel with the increase in concentration, but the certain chemical-specific sensitivity cannot be mentioned. As a result of the studies evaluated, it was seen that the recorded findings were generally parallel to each other, and the exposure to pesticides was genotoxic effect on amphibians. In the extension of the genotoxic effects of pesticides' assessment in ecotoxicological studies with this review, it was shown that genotoxicity test systems both useful and beneficial, besides being complementary to genotoxicity testing systems.

Keywords: Genotoxicity, Pesticide, Amphibia.

Reducing Atmosphere Packaging to Prolonge the Shelf-life of Strawberry

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Abstract

The preservation of strawberry fruits for long-time during storage is difficult due to the relatively high respiration rate of this fruit when compared to other fruits. Microbial, enzymatic and biochemical deteriorations accompany with high postharvest respiration rate phenomen. Strawberry fruit tends to be crushed because of its soft texture. When crushing, an increase of respiration rate accompanied with the biochemical and physical deteriorations will decrease the shelf-life of the fruit. Recently, with consumer awareness on food safety, researchers have tested novel technologies to extend shelf-life of fruits. One of these technologies is Modified Atmosphere Packing (MAP). MAP technology is a shelf-life extension technique based on restricting fruit respiration by changing gas concentrations around the fruit inside the package with other gases which slow the respiration rate of fruit and then increase its shelf-life. The RAP (Reducing Atmosphere Packaging) technology we proposed in this work could be a novel technology in extending the shelf-life of fruits using hydrogen gas, a reducing gas, in addition to other gases such as nitrogen and carbone dioxide. The application of reducing gases permits to inhibit the oxidation reactions occurring in different biological systems inside the cells of fruit, then to preserve the sensorial and nutritional properties of fruit. In this study, we investigated the effect of reducing atmosphere packaging on the shelf-life of strawberries during cold storage. Different gas mixtures were used to package strawberry fruits using H_2, N_2 and CO_2 gases. Different analyses were carried out weekly to evalute the quality and the shelf-life of the fruits such as hardness, skin color, pH, Brix and sensorial analyses. As a result, strawberries stored with RAP showed better fruit hardness, color and appearance characteristics compared to other MAP and air-stored strawberry samples. In addition, the strawberries stored under air showed loss in the tissue hardness and bad smell, but strawberry samples stored with the RAP showed better sensorial and mechanical quality. The technique of RAP could be used to increase the shelf-life of perishable fruits such as berries fruits.

Keywords: Reducing Atmosphere Packaging (RAP), Strawberry, Shelf-life, Cold Storage.

Synthesis and Characterization of Poly (Lactic Acid- B- ε-Caprolactone) Block Copolymers

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Abstract

The lactide monomer that forms the polylactic acid can be produced by carbohydrate fermentation or chemical synthesis. The PLA polymer can be synthesized by methods such as azeotropic dehydrative condensation, direct condensation or lactide polymerization. However, the synthesis that is frequently used in the industry occurs through the mechanism of ring opening polymerization. With this method, PLA with high molecular weight is obtained. In recent years, new synthesis mechanisms have also been found in commercial life. In this study, the synthesis of poly (lactic acid-b- ε-caprolactone) block copolymers by ring opening polymerization of ε-caprolactone initiated by poly lactic acid was carried out. For this purpose, poly lactic acid (PLA) was synthesized by condensation polymerization of lactic acid (Figure1). Poly (lactic acid-b-ε-caprolactone) block co-polymer was synthesized from the poly lactic acid (PLA) by changing some polymerization parameters such as polymer and monomer amounts and polymerization time. (Figure 2). Block copolymers were characterized by using ^{1}H-NMR, ^{13}C-NMR, FT-IR, DSC and GPC chromatography methods.

Keywords: Condensation Polymerization, Ring Opening Polymerization, Poly Lactic Acid, Block Copolymer.

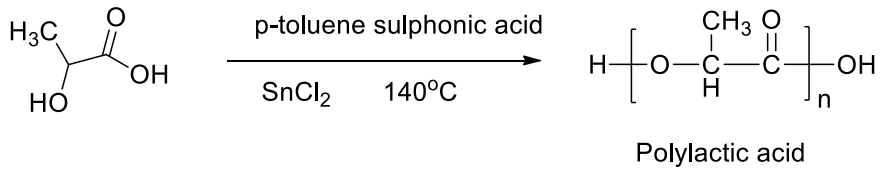


Figure 1: The polymerization reactions of lactic acid

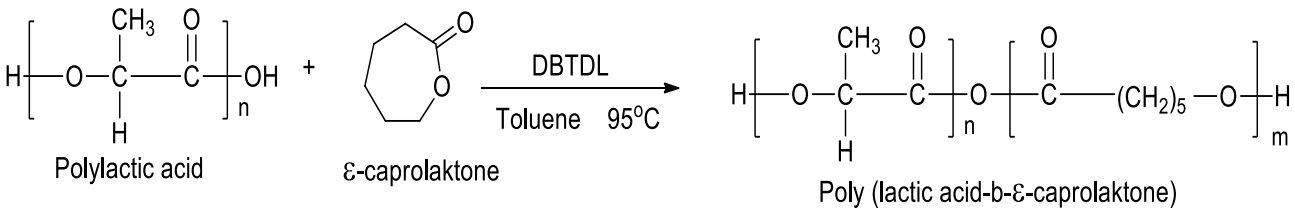


Figure 2: Synthesis reaction of poly (lactic acid-b-ε-caprolactone) block copolymer

The Determinatin of the Meat Yield and Chemical Composition of Blue Fish (Pomatomus Saltatrix L., 1766) Caught in Middle Black Sea

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Abstract

This study was carried out to determine the meat yield and chemical composition of bluefish (Pomatamus saltatrix L., 1766) caught in Middle Black Sea. A total of 96 fish samples were used in this study. Total length and total weight of fishes ranged 13.2-21.7 cm, and 23.21-88.19 g, respectively. Head, fins and internal organs of fishes were removed, the remaining part was determined as carcass weight. The ratio of carcass weight to total weight is expressed as carcass yield. Average carcass yield of bluefish used in this study was found for female, male and female+male as 72.93±0.51%, 71.96 ±1.85% and 71.77±1.12%, respectively. According to the results of the research, the meat yield of bluefish is higher than many fish species. Chemical analyses results showed that in all fish, mean percentage values of crude protein, crude fat, dry matter, moisture and crude ash were 16.39±0.23%, 13.37±0.09%, 32.80±0.47%, 67.20±0.47% and 1.02±0.04%, respectively.

Keywords: Bluefish, Pomatamus Saltatrix, Meat Yield, Chemical Composition, Black Sea.

Synthesis of Poly (Caprolactone-Graft-Glycidylmethacrylate) Graft Copolymer

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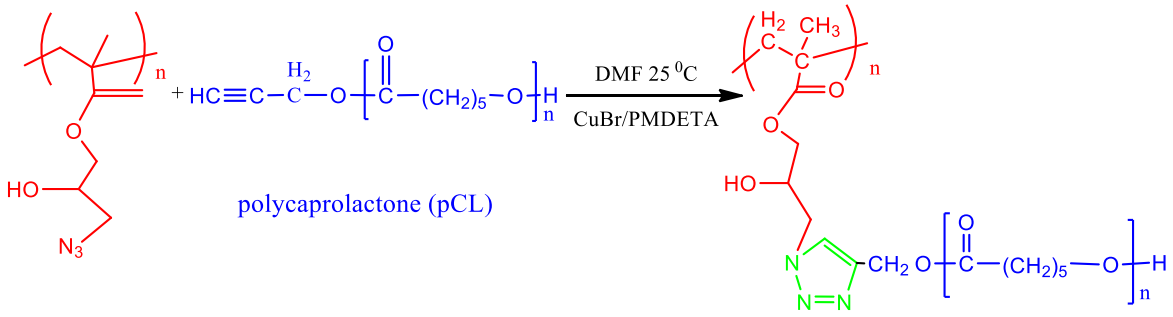
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Abstract

It is not only the synthesis of new types of plastic materials, but also the modification of existing polymers in order to meet the requirements of new applications. Graft copolymerization is a method of improving the properties of polymers. Two different monomers with different physical or chemical properties can be incorporated into the same polymer molecule at varying ratios. This leads to the formation of new scientific and commercial materials. Polyglycidyl methacrylate was obtained by radical polymerization of vinyl monomer glycidyl methacrylate using AIBN (2,2 Azobisisobutyronitrile) as the azo initiator. Azide-ended polyglycidylmethacrylate (pGA) was obtained using sodium azide (NaN3). Poly (caprolactone-graft-glycidylmethacrylate) graft copolymer synthesis with triazole ring was carried out by copper catalyst catalyzed by using polycaprolactone (pCL) synthesized as alkaline end. A graft copolymer synthesis involving the triazole ring was performed by the click reaction of the azide and alkyne. The structure of the synthesized graft copolymer was characterized by ^{1} H-NMR, ^{13} C-NMR and FT-IR spectroscopy, GPC and DSC techniques.

Keywords: Click Chemistry, Graft Copolymer, Glycidyl Methacrylate.



polyglycidylmethacrylate (pGA)

Poly (caprolactone-graft-glycidylmethacrylate) graft copolymer

Characterization of Polyphenol Oxidase from Hawthorn (*Crataegus monogyna*)

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Abstract

Polyphenol oxidases (PPO) are crucial enzymes group in many industrial applications, food, medicine and cosmetics. Especially in the food industry, enzymatic browning is an undesirable oxidation reaction caused by the enzyme polyphenol oxidase present in fruit, vegetable and fungi. Therefore, PPO purification and characterization is of importance. In this study, polyphenol oxidase or (PPO) (E.C.1. 14.18.1) from Hawthorn (*Crataegus monogyna*) was partially purified 3.58 fold by cold acetone precipitation method and characterized. The optimum pH and optimum temperature of the enzyme were found to be 5.0 and 30 °C, respectively, in the presence of catechol as a substrate. The maximum reaction rate (V_{max}) and the Michaelis-Menten constant (K_m) values for the catechol substrate were calculated to be 12.72 mM and 5507 U/mL.dak, respectively, using the Lineweaver-Burk plot. Inhibition studies were performed for ascorbic acid, sodium metabisulphite and benzoic acid, which are common inhibitors of the enzyme, and the IC_{50} values for each inhibitor were determined to be 0.012 mM, 0.099mM, 2.21mM, respectively. The PPO were tested on different phenolic substrates including 4-methylcatechol, catechol, L-tyrosine. The highest activity was observed in the presence of catechol for enzyme.

Keywords: Polyphenol Oxidase, Partial Purification, Characterization, Inhibition, Hawthorn.

Oxidative Stress in Microorganisms

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Abstract

Microorganisms are exposed to various stress factors such as heat, oxygen, acid, bile salts and osmotic stress belonging to their environmental conditions. There are number of different responses to stresses according to importance of stress/stresses. Stress response system varies according to the type of microorganisms, stress intensity applied to microorganisms and whether they can be adapted to this stress. The oxidative stress that is the primary of these stress sources has been defined as imbalance between oxidants and antioxidants in favor of oxidants. The cells are damaged with this stress and the substances that are the result of oxidation. Oxidative stress particularly affects facultative and anaerobic microorganisms. Although anaerobes can not develop in the presence of oxygen, facultative organisms can develop under oxygenated and anaerobic conditions. While respiration provides significant advantages in oxygen production during energy production, free radicals that may occur during this time threaten the life of the organism. The free radicals consist of both the reactive oxygen species (ROS) and reactive nitrogen species (RNS). Superoxide anion radical (O_2^-), hydrogen peroxide (H_2O_2), hydroxyl radicals (HO^-), hypochlorous acid (HOCl), singlet oxygen (O_2), ozone (O_3), alkyl radical (R), peroxyl radical (POO^-), organic peroxyl radical ($RCOO^-$), perhydroxyl radical (HO_2^-), alkoxyl radical (RO^-) are called as ROS and nitric oxide (NO^-), peroxynitrite ($ONOO^-$) molecules are called RNS. These substances have a toxic effect on the cells and they affect cellular macromolecules such as lipids, proteins and DNA in the cell.

Keywords: Oxidative Stress, Free Radicals, ROS, RNS, Anaerobics.

Olive Oil and Health

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Abstract

Olive production in the world is concentrated on the Mediterranean coasts. Spain, Italy, Greece, Tunisia and Turkey are major olive oil producing countries and Turkey is in the 5th place with 5.3% share of world olive oil production. With the nutritional and economic importance in the kitchen culture, olive and olive oil are based on very ancient histories like 8000 years. This can be expressed as the best evidence of the place and continuity of olive in human health. Olive oil is preferred as the main oil source of the diet known as the traditional Mediterranean diet and identified with a dietary habit associated with a healthy long life. Many studies have been carried out in the world about the benefits of olive oil and its health effects and these studies are still going on. It is known that olive oil has positive effects on arterial stiffness, heart diseases, stomach, intestines and gall bladder. In addition, the positive effects of olive oil on child development are among the research topics. On the other hand, olive oil used in the production of oily solutions and in the preparation of many medicines is also used as raw material for the cosmetic industry. In this study, statistics on olive oil production, consumption and exports in Turkey were examined and the effects of olive oil on health were also included.

Keywords: Olive Oil, Health, Mediterranean Diet.

Modeling Egg Curves in Egg Chickens

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Abstract

In this study, the modeling of egg curves (Lohmann LSL Classic) with five different mathematical equations is examined. For this purpose, eggs from the Lohmann LSL Classic white hybrid drive (n = 31831) were used. In the study, weekly egg yields were used from the 22nd week to the 62nd week. Gompertz, Gamma, Richard, Logistic and Kubi Partial regression models are taken into account. R^2 and error squares averages were taken into account, the best model was Cubic piece regression ($R^2 = 0{,}967, ESA = 354213{,}7$) and the worst model was Gompertz model ($R^2 = 0{,}867, ESA = 377012$).

Keywords: Egg Curves, Models.

SPSS Clamentin Statistical Package Program and Application

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Abstract

In this study, the algorithms used in the SPSS Clamentin statistical package program, general lines of the program, assignment of algorithms, definitions, construction of tree structures and evaluation of analysis results are discussed. For this purpose, a numerical example has been studied and all stages are presented visually.

Keywords: SPSS Clamentin, Algorithm.

Table Olive and Olive Oil Marketing Organization, Problems and Suggestions in Turkey

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Abstract

Turkey's olive oil sector has an important potential for production and export in olive oil and olive oil sub-sectors. In order for the sector to continue its economic functioning, as well as the olive growing and evaluation of olives, marketing should be planned well. However, due to the problems arising from production and the deficiencies in the marketing strategy, this potential can not be assessed as desired. The other important point is that in order to obtain table olives and olive oil in high quality, it is necessary to identify the problems correctly and provide solutions. Before the final product acquisition phase; production technology should be applied by taking into account olive harvest forms, olive maturity status, domestic and foreign market demands, etc. The marketing described as a chain of services that needs to be done to bring the product from where it was produced to where it is consumed is not just advertising and selling the product. Due to the fact that olive enterprises are the foundation of small-scale family businesses and due to the inadequacy of infrastructure and not able to produce desired quality in existing infrastructure, manufacturers can not sell their products at a value price. If the manufacturer can not present the product directly to the market, he usually finds the trader or commissioner in front of him. In general, product prices can be very high in the direction of the hand changes from producer to the consumer. Within the marketing chain, the producers get the lowest profit margin. The marketing of olive and olive oil in Turkey is quite complex and relatively in different structure from other agricultural products. Harvested olives reach the final consumer as raw olives, table olives, olive oil. In this study, raw olives, table olives, olive oil marketing organization and marketing structure in Turkey are presented. In addition, in order to obtain table olives and olive oil in high quality, problems have been identified and solution proposals have been introduced in order to identify the problems of the sector correctly and to provide solutions.

Keywords: Marketing, Table olive, Olive oil, Solution proposals

Investigation of Breeding Conditions of the Pangasius (Pangasius hypophthalmus Sauvage, 1878) Fish in Turkey

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Abstract

Pangasius fish, which is known as Asian catfish, has a living area that is particularly common in South East Asia, naturally in the tropical climate zones. Pangasius fish, a member of the Pangasiidae family under the Siluriformes kind, shows a wide distribution in Vietnam, India, Pakistan, Myanmar, the Malaya Peninsula, Indonesia, and Thailand. Especially its breeding is common in fish farms in the Mekong Delta in Vietnam. It also has a high demand for its white meat; and is marketed from Vietnam to more than 60 countries. Its ability to grow rapidly, to make good use of the nutrition, being able to survive in stress-poor water conditions and having a good quality of the taste of the meat are among the main reasons for its widespread production. Especially the southern regions in our country have the climatic conditions that are suitable for breeding this species. In the last few years, the first initiatives on its commercial breeding have started in Hatay province. In the near future, if it is promoted in the domestic market and the studies on its consumption and breeding are encouraged, a large market can be created. In this study, it is aimed to investigate the breeding conditions of Pangasius fish in our country.

Keywords: Pangasius Fish, Pangasius Hypophthalmus, Breeding Conditions.

Some Indicators of Business Managers and Enterprises Benefiting from Forage Plant Supports in Cattle Breeding Enterprises in TRA

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Abstract

Enterprises in cattle breeding business in the TRA Region, where animal and vegetative production are intensively performed due to climate conditions, are involved in the production of forage plants. Forage plants constitutes one of the most important inputs of animal production and are known to have positive effects on soil structure. Producers are directly supported to have an increase in production of the forage plants through forage plant supports implemented by the government. This study is carried out in order to reveal some characteristics of the enterprises and business managers benefiting from the forage plant supports in cattle breeding enterprises in the TRA Region. For this purpose, the characteristics of enterprises and business managers benefiting from forage plants are determined by Probit Analysis Method, based on 257 questionnary data made face to face with cattle breeding enterprise producers. As a result, cattle breeding business managers benefiting from support for forage plants are those aged between 31-50, primary school graduates and insurance holders. It has been determined that the animal and vegetative production of the business managers are performed to satisfy the household needs and to do trade. It's among the results that the business managers starts producing with their own means when the enterprises are first established. Business managers benefiting from support for forage plants have also used this income to satisfy the needs of their family alongside to cover the operating expenses. Producers who benefit from the support for forage plants have the idea that new regulations on government policies should be made. It's among the results that the producers who receive forage plant supports are determined to continue the vegetative production.

Keywords: Cattle Breeding, Frage Plant, Supports, Probit Model.

Gender and Season Variables on the Proximate Composition and Metal Levels of Warty Crab

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Abstract

The effects of season and sex variables on the proximate composition and metal levels of crabs (*Eriphia verrucosa*) caught in central Black Sea region (Ordu) were investigated. Crab samples were caught over 4 seasons, using gillnets, trammel net and SCUBA diving. Protein, lipid, moisture and TMS (total mineral substance) level ranges of male crabs were 20.45-22.64%, 0.95-1.27%, 75.44-77.09%, 1.63-2.08%, respectively, while these ranges in female individuals were determined as 19,45-21.46%, 0.63-0.92%, 75.44-77.44%, 2.08-3.28%, respectively. Macro (Na, Mg, P, K and Ca), trace (Cu, Zn, Mo, Fe, Mn, Ni, Co and Se) and potentially toxic (Cd, Pb and As) element levels in the muscle tissue of crabs were determined using ICP-MS. Macro and trace element levels in crab muscle tissue were determined as K>P>Na>Ca>Mg and Zn>Fe>Cu>Mn>Se>Ni>Mo>Co, respectively. Cd and Pb levels in crab muscle tissue were determined to be lower than the limit values given in codices independent of the seasonal variables. However, As levels were found to be above limit values.

Keywords: *Eriphia Verrucosa*, Proximate Composition, Trace Elements, Macro Elements, Toxic Metals, Black Sea.

Effect of Sex Ratio on the Egg Production and Egg Characteristics of Laying Japanese Quails *(Coturnix coturnix japonica*).

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Abstract

This study was carried out to determine the effect of sex ratio on the yield of egg production and egg characteristics of laying Japanese quails *(Coturnix coturnix japonica*). In the current experiment, two experimental groups in triplicate were established. First group was consisting of 9 female and 3 male. Second group was consisting of 12 female and 0 male. The current experiment lasted for 10 weeks. Thirty eggs were analyzed from each experimental group to external and internal egg characteristics. The differences between two groups were tested using t test. The weight of eggs from second group (12.58 gr) was higher than that of the first group (12.08 gr). The length of egg, height of albumin, weight of yolk from second group was higher ($p<0.05$) than those of first group. As a conclusion, it can be said that there are considerable variation between two groups in terms of yield of egg production and egg characteristics of Japanese laying quails.

Keywords: Effect of Sex Ratio, Quail, Egg Production.

Effects on Quality of Common Vetch (*Vicia sativa* L.) and Barley (*Hordeum vulgare* L.) Mixture Rates in Bingöl Conditions

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Abstract

In this study, quality of common vetch (*Vicia sativa* L.) and barley (*Hordeum vulgare* L.) mixture rates were investigated under Bingol conditions during the 2016 growing season. In the study, Gorkem common vetch variety obtained from Department of Field Crops, Faculty of Agriculture, University of Dicle and Altikat barley variety obtained from GAP International Agricultural Research and Training Center were used as plant material. The research was established as a randomized complete block experimental design with three replications. The results of variance analyses showed that there were statistically significant differences among some characters (crude protein ratio, crude protein yield, crude ash ratio, ADF and NDF ($P \leq 0.01$)). In the study; crude protein ratio, crude protein yield, crude ash ratio, acid detergent fibre (ADF) and neutral detergent fibre (NDF) were analyzed. Results of the research; crude protein ratio from 6.27 to 20.43, crude protein yield from 42.76 to 58.98 kg/da, crude ash ratio from 6.86 to 11.41, ADF from 30.92 to 33.89 and NDF from 46.96 to 62.69 were obtained. Based on this study, mixture of 60% vetch + 40% barley may be concluded that was the best mixtures in terms of the highest crude protein content and the lowest rates ADF for Bingol and similar ecological regions.

Keywords: Common Vetch, Barley, Mixture, Crude Protein Ratio.

Determination of the Electronic Properties of Some 1,3,5-Triazine Based Organic Electroluminescent Compounds

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Abstract

In this study, some potential electroluminescent compounds were considered which receive considerable interest by the scientist in recent years. The electronic properities of the organic compounds have been investigated with computational methods. Some important results have been obtained. The geometries of studied compounds were drawn by GaussView 5.0 computer program. The theoretical calculations have been performed by using GAUSSIAN 09 package program. The HOMO-LUMO schemes of triazin based compounds have been obtained after geometry optimizations. HOMO-LUMO energy difference (ΔE) in eV has been calculated for each molecule. The results have been compared with the data obtained from the relevant literature and important conclusions have been drawn. According to the results obtained by using DFT method B3LYP/6-31G (d, p) basis set; among the series of six 1,3,5-Triazine containing compounds, 6a, which has ΔE=2.095 eV was found to possess the most potential optoelectronic property. The study is expected to shed light on this aspect of optoelectronic materials to achieve in terms of synthetic organic chemistry procedures.

Keywords: 1,3,5-Triazine Compounds, DFT (Density Functional Theory), Optoelectronic Property, Electroluminescent Compounds.

Gaussian Calculations of 1-Acetyl-3-methyl-4-(4-methoxybenzylidenamino)-4,5-dihydro-1H-1,2,4-triazol-5-one

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Abstract

In this study, 1-acetyl-3-methyl-4-(4-methoxybenzylidenamino)-4,5-dihydro-1H-1,2,4-triazol-5-one was synthesized by the reaction of 3-methyl-4-(4-methoxybenzylidenamino)-4,5-dihydro-1H-1,2,4-triazol-5-one with acetic anhydrate. The compound synthesized was characterized by IR, ^{1}H-NMR, ^{13}C-NMR and UV spectral data. This compound was optimized using the B3LYP/6-311G (d,p) and HF/6-311G (d,p) basis sets. ^{1}H-NMR and ^{13}C-NMR isotropic shift values were calculated by the method of GIAO using the program package Gaussian G09W. Experimental and theoretical values were inserted into the graphic according to equitation of δ exp=a+b. δ calc. Experimental data were obtained from the literature. The standard error values were found via SigmaPlot program with regression coefficient of a and b constants. IR absorption frequencies of analyzed molecule were calculated by two methods. The veda4f program was used in defining IR data which were calculated theoretically. The experimental and the obtained theoretical values were compared and found by regression analyses that are accurate. Furthermore, geometric properties (bond angles, bond lengths and dihedral angles), electronic properties (total energy, dipole moment), the highest occupied molecular orbital (HOMO) and the lowest unoccupied molecular orbital (LUMO), Mulliken atomic charges have been investigated by using Gaussian 09W program.

Keywords: 1,2,4-triazol-5-one, Gaussian 09W, 6-311G(d,p) Basis Set, GIAO, Vibrational Frequencies.

Some Biochemical Parameters in Pregnant Cows with Subclinical Paratuberculosis

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Abstract

Johne's disease and Hohnesche Krankheit, also known as bovine paratuberculosis, *Mycobacterium avium subsp. paratuberculosis* is the cause. The disease is clinically characterized by a thickening of the intestinal wall, chronic enteritis that does not respond to treatment, and a contagious infection characterized by cachexia. Diagnosis of the disease in terms of human health and studies in this direction are important because it causes great economic loss in animal health and plays a role in the aetiology of Crohn's disease. The purpose of this study was to determine the parameters of alanine aminotransferase (ALT), aspartate aminotransferase (AST), gamma glutamyl transferase (GGT), creatinine (CREA), URE, total protein (TP), lactate dehydrogenase (LDH) and iron (Fe) parameters in pregnant cows with subclinical paratuberculosis. For the study group, 12 pregnant cows with paratuberculosis 2-6 years old, and 12 clinically healthy pregnant cows of similar age were used for the control group, which were detected positively from the animals screened using the ELISA commercial kit. Colorimetric commercial kits were used for measurements (ALT, AST, GGT, CREA, URE, TP, LDH and Fe) in the autoanalyzer. In paratuberculosis cows, a significant increase was found in ALT ($p<0.001$), AST ($p=0.007$) and URE ($p<0.001$) according to the results obtained from the analyses. A significant decrease was observed in CREA ($p<0.001$) and Fe ($p<0.001$). Statistically, GGT, TP and LDH were not significant ($p>0.05$). In conclusion, it was seen that parameters indicating liver and renal functions could be affected in subclinical paratuberculosis. It has been concluded that Fe measurement may be useful, especially for subclinical infections or inflammations.

Keywords: ALT, Cow, Creatinin, Fe, Johne's Disease, Subclinical Paratuberculosis.

Structural and Spectroscopic Analysis of the [Ni (2-Benzimidazoly-urea)$_2$ (ethanol)$_2$] [NO_3]$_2$ Compound Using Density Function Theory

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Abstract

In recent years, the benzimidazole derivates get remarkable attention especially due to their features in cancer treatment. Additionally, benzimidazole derivatives are also used as antiviral medication and corrosion retardants. Benzimidazoles and derivatives form benzimidazole-metal complexes with various metal salts in appropriate solutions in near-neutral media. Calculation methods used today can be easily applied for compounds that have been obtained or cannot/could not be obtained under real conditions and the desired results can be obtained. Density Functional Theory (DFT) which utilizes quantum mechanic laws in electronic structure methods and is extensively used in theoretical modelling. The development of the better exchange correlation functionals has enabled the calculation of many molecular features due to reduction in computational cost. Sources in literature indicate that DFT produces results close to experimental values in obtaining many features such as geometry, dipole moment, and resonant frequencies. In this study, the theoretical calculations of the [Ni(2-Benzimidazoly-urea)$_2$(ethanol)$_2$] [NO_3]$_2$ compound, whose molecular structure was determined with a single crystal X-raydiffraction method, was conducted and the theoretical values and the experimental results were compared. The molecular geometry was obtained directly from the results of the x-ray diffraction experiment. Theoretical calculations were conducted in the Computational Chemistry Laboratory in the Igdir University Research Laboratory Application and Research Center. The Density Functional Theory was selected as the computational method using the Gaussian 09W program, and the gaseous phase quantum mechanical data was obtained by using complex gen keyword optimized in the B3LYP/LANL2DZ level.

Keywords: Benzimidazoly-urea, Modeling Studies, Nickel Complex, Density Functional Theory.

Determination of Population Development and Some Biological Observations of Coldling Moth [*Cydia pomonella* (L.) (Lepidoptera: Tortricidae)] in Apple Orchards of Iğdır Province

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Abstract

This study was conducted between the years of 2013-2016 to determine the status of codling moth [*Cydia pomonella* (L.) (Lep. Tortricidae) in Iğdır province. Sexual attractive pheromone traps are used for monitoring the development in the population. During the study, followed the biological periods of the pest. The study was carried out in four apple orchard that are located in the districts of Iğdır province center, Melekli village and Eğrekdere village of Tuzluca district in 2016. First adult emergence time of codling moth, population changes, adult pest peaks and active periods in the nature time have been determined. Pheromone capsules 4-6 weeks changed, if need sticky part is quite changed. For determining first adult flight pheromone traps were controlled daily at the beginning of the season and then for determining infestation rate and population development studies carried out weekly. At the end of study, according to the time change of adult individuals caught in pheromone traps. The first adults appeared in the second week of April and it has been found that it forms three peak points in Iğdır and Melekli. The first adults appeared in the first week of May and it has been found that it forms two peak points in Eğrekdere village of Tuzluca. Codling moth under natural climatic conditions gives two or three generation year in Iğdır province. Codling moth adults are active in the nature for about five months that from the second week of April to the second week of September.

Keywords: *Cydia Pomonella*, Codling Moth, Population Pevelopment, Pheromone Traps, Iğdır.

Identification of *Erwinia amylovora* (burr.) winslow et al. Strains Obtained from Apple Trees in Iğdır by Pathological, Biochemical Tests and Fatty Acid Methyl Ester Profiles

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Abstract

Fire bligth caused by *Erwinia amylovora* (Burr.) Winslow et al. is the most serious and destructive bacterial disease for apple, pear and other plants belonging to *Rosaceae* family. In 2013 and 2015, in Iğdır, samples were taken from apple trees showing characteristic symptoms of fire blight disease. In the study, 84 bacterial strains were isolated. 51 of them were *Erwinia amylovora*. In the diagnosis of the pathogen, morphological (cell and colony morphology, mobility test), biochemical test (catalase, oxidase, growth in 36^{o}C, KOH gram reaction, growth in saccharose nutrient agar), pathogenicity test and moleculer technique including fatty acid methyl ester profiles were used.

Keywords: *Erwinia Amylovora*, Fire Blight, MIS.

Evaluation of Trace and Macro Mineral Compositions under Stressful Conditions Originating From Toxic Puerperal Metritis and Chronic Endometritis of Cows

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Abstract

The purpose of this study was to evaluate some mineral levels under the stressful conditions in cows with the diseases of Toxic Puerperal Metritis (TPM) and Chronic Endometritis (CE). Seventy cows were used in this study (10 cows with TPM, 20 cows with CE and 40 healthy cows in two different control groups (SB, DB)). Cu, Zn, Fe and Mg levels decreased, and Na levels increased in infected groups. As a marker of inflammation, GA test and rectal temperature measurements were carried out. Significant correlation test results were observed between GA test times, body temperatures and some minerals, such as; positive correlations between GA test time – serum Cu, Zn, Fe and Mg (min $r = 0.397$, $P<0.01$), negative correlation between GA test time – serum Na ($r = - 0.673$, $P<0.001$); negative correlation between Temperature – serum Cu, Zn, Fe and Mg (max $r = - 0.309$, $P<0.01$), positive correlation between Temperature – serum Na ($r = 0.479$, $P<0.001$). Consequently, some serum minerals were affected by stress originated from TMP and CE. TMP was more effected than CE. GA test time and body temperature findings were closely related to the serum mineral status (positively or negatively), except Ca and K levels.

Keywords: Metritis, Mineral, Serum, Stress, Cow.

Effect of Barium Selenate Injections on Fertility of Pirlak Ewes Subjected to Estrus Synchronization during Non-Breeding Season

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Abstract

This study was aimed at determining the effect of barium selenate injections on the fertility of Pirlak ewes which had been subjected to progesterone-assisted estrus synchronization during the non-breeding season. A total of 150 Pirlak ewes between the ages of 2 and 5 years were used in the study. Sponges containing progesterone were inserted into the vaginas of the ewes for 11 (groups I and III) or 14 days (groups II and IV) for the purpose of estrus synchronization, and 500 IU equine chorionic gonadotropin (eCG) was administered on the day of sponge removal. In addition, barium selenate was injected s.c. immediately before estrus Synchronization protocol in groups I and III. After the sponges had been removed, estrus was observed for four days. The ewes were mated with fertile rams. The pregnancy was determined by transrectal ultrasonography 30 days after mating. It was observed that the estrus rate, pregnancy rate, conception rate, lambing rate, twinning rate, and litter size were not statistically different ($P>0.05$) between the groups, but estrus onset was different ($P<0.001$). In conclusion, barium selenate injections did not affect the fertility parameters before progesterone-assisted synchronization was applied to the Pirlak ewes during the non-breeding season.

Keywords: Barium Selenate, Pirlak Ewes, Progesterone, Estrus Synchronization.

The Viticulture Potential of Batman City

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Abstract

The city of Batman has an important viticulture potantial. Viticulture can be performed in this city and all the distcits connected to this city. The district of Gercüş in where viticulture is performed widely is the leading producer of Batman city in the sense of grapevine production. Almost all grapevine production and the 75 % part of edible grapevine production are performed in this district. The viticulture potential of central Batman city and the districts of Beşiri, Gercüş, Hasankeyf, Kozluk and Sason were scrutinised within the scope of the study. The present vineyard fields and yield to decare values of these districts were determined. The highest vineyard fields on the basis of districts are respectively determined in Gercüş (31.200 da), Beşiri (4.000da), Kozluk (3.800 da), Merkez (1.100 da) Hasankeyf (650 da), Sason (500 da) districts. The yield on the basis of districts were observed respectively as Hasankeyf (480 kg/da), Batman centre and Kozluk 407 kg/da), Sason (394 kg/da), Beşiri (386 kg/da) and Gercüş (301 kg/da). The average yield is too low, the present vineyard fields are old and performing family viticulture were seen in this city. There were determined that the grown grapevine varieties in the city are indigenous to the region; only appeal to the taste buds of the region people and can not be sold other markets. The inadequacy of modern techical growing applications in the city are determined as the major issue. The viticulture issues of Batman city were also mentioned in this study and there were put emphasis on the solution suggestions aimed to develop the viticulture in the city.

Keywords: Batman Province, Grape, Viticulture Potential.

Evaluation of Seeded Raisin Potential of South-East Anatolia Region

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Abstract

According to the TUIK statistical data year of 2014, total agricultural land is 23.942.000 ha and 467.000 ha is used as vineyards. Of the total production in our country, 52% is considered as table, 37% as dry and 11% as wine-juice. The share of grape production in our total fruit production is 24.95%. Although the seed raisins are located in different regions as agricultural regions, the first order among the agricultural regions is the Southeast (Adiyaman "Besni Province, Mardin, Diyarbakır) and Eastern Mediterranean (Gaziantep and Kilis) regions. The most important types of seeded raisins of these region are; Besni, Rumi, Dımışkı, Kerküş (White), Segi karası and Horoz Karası. In addition to these varieties mentioned above, Banazı Siyahı which is increasingly well known in recent years and dried with cluster is gaining importance as one of the varieties of Malatya province. In recent years, the demand for black raisins have increasing in terms of healthy nutrition due to their blood-forming and high antioxidant content.

Keywords: Southeastern Anatolia Region, Seed Raisins.

Investigation of Thermodynamics Parameters and Adsorption Kinetics of Serum Albumin on Activated Carbon Obtained from Apple Shells

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Abstract

The thermodynamic parameters and adsorption kinetic of serum albumin (SBA) onto activated carbon obtained from apple shells were investigated in aqueous solution in batch system for determining the effect of contact time, temperature, initial protein concentration, initial ionic strength, stirring speed and pH. Experimental data was found at 36,5 ºC, $7{,}5.10^{-2}$ M, 0,25 g/L and pH 5.5 the initial concentration of serum albumin from experimental data for the capacity of the maximum adsorption. The results obtained showed that the pH dependence of adsorption reached a maximum around isoelectric point (iep) of serum albumin and the adsorption of BSA on activated carbon particles was affected greatly by the pH, while the effect of ionic strength concentrations was insignificant at a low concentration. Also characterizations of activated carbon particles were carried out using fourier-transform infrared spectroscopy (FTIR), XRF, TGA and BET aparatus. SEM was used to confirm the attachment of BSA on activated carbon particles. Three different kinetic models, pseudo-first-order, pseudo-second-order and intraparticle diffusion were used to fit the kinetics data. The results obtained showed that the pseudo-second-order was determined as optimum model. Also the thermodynamic parameters (E_a, ΔH^0, ΔG^0, ΔS^0) were calculated from the experimental data. The negative enthalpy and the negative Gibbs free energy changes showed that the adsorption of protein is exothermic and spontaneously, respectively. The obtained results confirmed the applicability of serum albumin on activated carbon obtained from apple shells.

Keywords: Thermodynamics, Adsorption, Serum Albumin, Activated Carbon, Kinetics.

Synthesis of Poly (Acryloyl Chloride-Graft-Epichlorohydrin) Graft Copolymer with Combination of Ring Opening Polymerization and Click Technique

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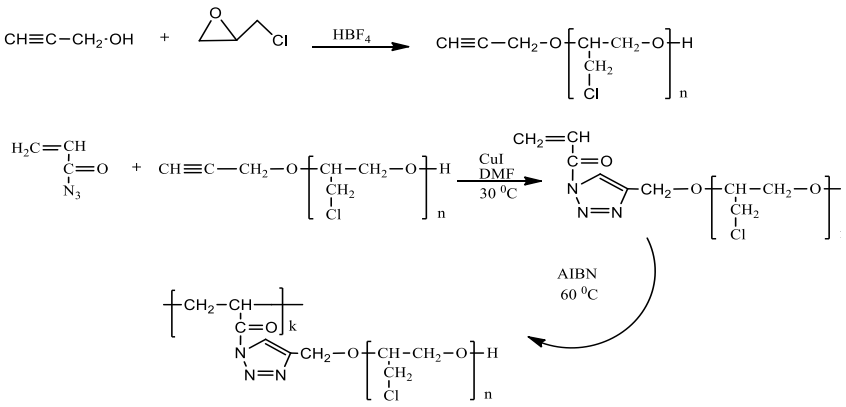
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Abstract

Recently, complex-structured macromolecules, in which the polymer chain end functionality and the graft chain moiety are formed, are highly synthesized starting from controlled polymerization processes. Functional polymer chains are assembled in the desired polymer architecture. Coupling reactions "click reaction" as it is called in chemistry. These reactions allow for the synthesis of modular, stereospecific, functional groups tolerant, large area, high yield and reliable products. Successful synthesis of many complex architectures, polymers, macro monomers and macromolecules has been successfully accomplished with click reactions. In our work, macro monomer were synthesized by click reaction (Cu (I) catalyzed azide-alicyclic cyclization) of terminal alkynes and azides formed on different monomer. Poly (acryloyl chloride-graft-epichlorohydrin) graft copolymer were synthesized in the polymerization of the obtained vinyl macro monomer using 2,2'-azobisisobutyronitrile (AIBN) as initiator. The synthesized macro monomer and graft copolymer were characterized by ^{1} H-NMR, ^{13}C-NMR and FT-IR spectroscopy, GPC and DSC techniques.

Keywords: Click Chemistry, Graft Copolymer, Ring Opening Polymerization (ROP).



poly (acryloyl chloride-graft-epichlorohydrin)

Figure1. Synthesis of Poly (acryloyl ch

Spectroscopic and Thermodynamic Properties of 3-Phenyl-4-(3-methoxybenzylidenamino)-4,5-dihydro-1H-1,2,4-triazol-5-one Compound

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Abstract

In this study, 3-phenyl-4-(3-methoxybenzylidenamino)-4,5-dihydro-1H-1,2,4-triazol-5-one was synthesized by the reaction of 3-phenyl-4-amino-4,5-dihydro-1*H*-1,2,4-triazol-5-one with 3-methoxy-benzaldehyde. The titled compound was characterized by IR, ^{1}H NMR and ^{13}C NMR spectral data. The molecule was optimized by using B3LYP/6-31G(d) HF/6-31G(d) basis sets. ^{1}H-NMR and ^{13}C-NMR spectral data values were calculated according to the method of GIAO using the program package Gaussian G09W. Experimental and theoretical values were inserted into the graphic according to equitation of δ exp=a+b. δ calc. The standard error values were found via SigmaPlot program with regression coefficient of a and b constants. Also, calculated IR data of compound were calculated in gas phase by using of 631G(d) basis sets of B3LYP and HF methods and are multiplied with appropriate adjustment factors. Theoretical infrared spectrums are formed from the data obtained according to B3LYP and HF methods. In the identification of calculated IR data, veda4f program was used. Furthermore, molecule's theoretical bond lengths, UV-Vis values, dipole moments, mulliken charges, HOMO-LUMO energies, total energy of the molecule, ionization potential, electron affinity, electronegativity and thermodynamic properties for both methods were calculated. Experimental data were obtained from the literature.

Keywords: 4,5-Dihidro-1H-1,2,4-triazol-5-one, GIAO, B3LYP, HF, 6-31G(d).

Spectroscopic and Calculated Thermodynamic Properties of 3-Ethyl-4-(4-diethylaminobenzylidenamino)-4,5-dihydro-1H-1,2,4-triazol-5-one

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Abstract

In this study, 3-ethyl-4-(4-diethylaminobenzylidenamino)-4,5-dihydro-1H-1,2,4-triazol-5-one was synthesized from the reaction of 3-ethyl-4-amino-4,5-dihydro-1*H*-1,2,4-triazol-5-one with 4-diethylamino-benzaldehyde. The titled compound was characterized by IR, ^{1}H NMR and ^{13}C NMR spectral data. This compound was optimized by using the B3LYP/6-31G(d) and HF/6-31G(d) basis sets. ^{1}H-NMR and ^{13}C-NMR isotropic shift values were calculated by the method of GIAO using the program package Gaussian G09. Experimental and theoretical values were inserted into the grafic according to equatation of δ exp$_{=}$a+b. δ calc. The standard error values were found via SigmaPlot program with regression coefficient of a and b constants. IR absorption frequencies of this compound were calculated by two methods. The veda4f program was used in defining IR data which were calculated theoretically. Furthermore, thermodynamic parameters, geometric properties (bond angles, bond lengths and dihedral angles), electronic properties (total energy, dipole moment), the highest occupied molecular orbital (HOMO) and the lowest unoccupied molecular orbital (LUMO), mulliken atomic charges of 3-ethyl-4-(4-diethylaminobenzylidenamino)-4,5-dihydro-1H-1,2,4-triazol-5-one (3) were investigated by using Gaussian 09W program. The structural data of this compound have been calculated by using 6-31G(d) basis set with density functional method (DFT/B3LYP) and Hartree-Fock method (HF).

Keywords: 4,5-Dihidro-1*H*-1,2,4-triazol-5-one, GIAO, B3LYP, HF, 6-31 G(d).

Spectroscopic and Calculated Thermodynamic Properties of 3-(*p*-Methylbenzyl)-4-(2-thienylmethyleneamino)-4,5-dihydro-1H-1,2,4-triazol-5-one Molecule

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Abstract

In this study, 3-(*p*-Methylbenzyl)-4-(2-thienylmethyleneamino)-4,5-dihydro-1H-1,2,4-triazol-5-one was synthesized from the reaction of 3-(*p*-Methylbenzyl)-4-amino-4,5-dihydro-1*H*-1,2,4-triazol-5-one with thiophene-2-carboxaldehyde. The titled compound was characterized by IR, ^{1}H NMR and ^{13}C NMR spectral data. This compound was optimized by using the B3LYP/6-31G(d) and HF/6-31G(d) basis sets. ^{1}H-NMR and ^{13}C-NMR isotropic shift values were calculated by the method of GIAO using the program package Gaussian G09W. Experimental and theoretical values were inserted into the grafic according to equatation of δ exp$_{=}$a+b. δ calc. The standard error values were found via SigmaPlot program with regression coefficient of a and b constants. Experimental data were obtained from the literature. IR absorption frequencies of this compound were calculated by two methods. The veda4f program was used in defining IR data which were calculated theoretically. Furthermore, thermodynamic parameters, geometric properties (bond angles, bond lengths and dihedral angles), electronic properties (total energy, dipole moment), the highest occupied molecular orbital (HOMO) and the lowest unoccupied molecular orbital (LUMO), Mulliken atomic charges of 3-(*p*-Methylbenzyl)-4-(2-thienylmethyleneamino)-4,5-dihydro-1H-1,2,4-triazol-5-one were investigated using Gaussian 09W program. The structural data of this compound have been calculated by using 6-31G(d) basis set with density functional method (DFT/B3LYP) and Hartree-Fock method (HF).

Keywords: 4,5-Dihidro-1*H*-1,2,4-triazol-5-one, GIAO, B3LYP, HF, 6-31 G(d).

Investigation of Theoretical and Experimentical Spectroscopic Properties of 3-Methyl-4-[4-(4-methylbenzoxy)-benzylidenamino]-4,5-dihydro-1H-1,2,4-triazol-5-one

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Abstract

In this study, 3-methyl-4-[4-(4-methylbenzoxy)-benzylidenamino]-4,5-dihydro-1H-1,2,4-triazol-5-one has been compared theoretically and experimentally. For this purpose, firstly the molecule has been optimized using B3LYP/6-311G(d,p) and HF/6-311G(d,p) basis set. Starting from this optimized structure with ^{1}H-NMR and ^{13}C-NMR chemical shift values according to GIAO method was calculated using the method of Gaussian G09W program package in gas phase. Theoretically and experimentally values were plotted according to exp=a+b. δ calc Eq. a and b constants regression coefficients with a standard error values were found using the SigmaPlot program. According to obtained conclusions, theoretical and experimental values were seen to be compatible. Also, theoretically calculated IR datas of synthesized titled compound was calculated in gas phases by using of 6-311G(d,p) basic sets of B3LYP and HF methods and are multiplied with appropriate adjustment factors and the data obtained according to B3LYP and HF methods are formed using theoretical infrared spectrum. The identification of calculated IR data was performed by Veda4f program. Experimentally and theoretically UV-vis values in ethanol were calculated. Additionally, the molecule had bond angles, bond lengths, dipole moments, the HOMO-LUMO energy, mulliken charges, total energy of the molecule, ionization potential, electron affinity, molecular softness, molecular hardness and electronegativity from both methods. 3-Methyl-4-[4-(4-methylbenzoxy)-benzylidenamino]-4,5-dihydro-1H-1,2,4-triazol-5-one was synthesized by the reaction of 3-methyl-4-amino-4,5-dihydro-1H-1,2,4-triazol-5-one with 4-(4-methylbenzoxy)-benzaldehyde, which was synthesized by the reaction of 4-hydroxybenzaldehyde with *p*-methylbenzoyl chloride by using triethylamine. Experimental data was obtained from the literature.

Keywords: B3LYP, GIAO, HF, 4,5-Dihydro-1H-1,2,4-triazol-5-one, 6-311G(d,p).

Polyethylene Glycol (PEG) Based Macro RAFT Agents, Solution Polymerization of Methyl Methacrylate and Characterization of Block Copolymers

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Abstract

Among the controlled polymerization techniques, the reversible addition-removal chain transfer (RAFT) polymerization has a unique position. RAFT polymerization is indispensable for a wide range of monomer weight, solvent tolerance and compatible reaction conditions. Furthermore, in the design of molecules architecture, both functionality and weight distribution of molecules have been used in many syntheses. Chain length of polymer structure with the polymerization used by macro RAFT agents is important in terms of their thermal, mechanical, optical properties, changing as depending on molecular weight and polydispersity. In this study, using macro RAFT agents containing polyethylene glycol (PEG) (400-600 g/mol) polymer block was carried out polymerization of methyl methacrylate. A series of polymerizations was measured quantitative values of the molecules weight increase by following time. The linear increase against time in block copolymer formation was observed to be effective in chain transfer of RAFT agents. Analyses of PMMA-b-PEG-b-PMMA tri-block copolymers which can be used in various potential applications was performed. Synthesized new type RAFT agents and the structures of polymers were characterized by ^{1}H-NMR, ^{13}C-NMR and FT-IR spectroscopic methods.

Keywords: Controlled Radical Polymerization, RAFT, Block Copolymer, Polyethylene Glycol.

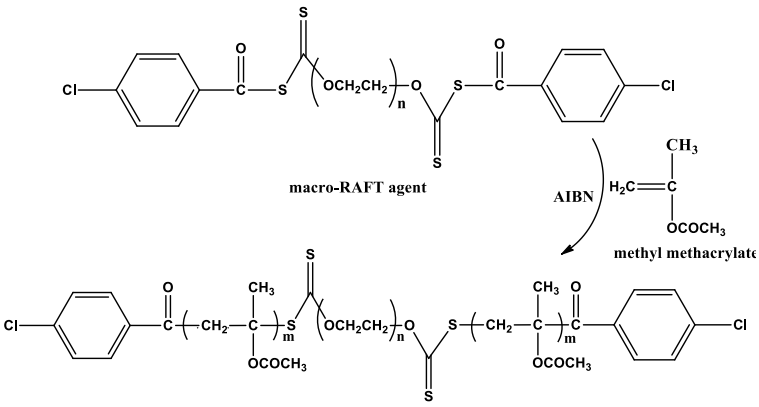


Figure 1. General Formation Reaction of PMMA-b-PEG-b-PMMA Block Copolymers

A Study on Theoretical and Experimental Spectroscopic Properties of 3-Benzyl-4-(2,5-dimethylpyrrole-1-yl)-4,5-dihydro-1H-1,2,4-triazol-5-one

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Abstract

In this study, theoretically spectral values of 3-benzyl-4-(2,5-dimethylpyrrole-1-yl)-4,5-dihydro-1H-1,2,4-triazol-5-one was calculated and these values were compared with experimental values and obtained conclusions were evaluated. For this purpose, firstly, 3-benzyl-4-(2,5-dimethylpyrrole-1-yl)-4,5-dihydro-1H-1,2,4-triazol-5-one has been optimized using B3LYP/6-311G(d,p) and HF/6-311G(d,p) basis set. ^{1}H-NMR and ^{13}C-NMR spectral values according to GIAO method was calculated using Gaussian G09W program package in gas phase and in DMSO solvent. Theoretically and experimentally values were plotted according to δ exp=a. δ calc. + b, Eq. a and b constants regression coefficients with a standard error values were found using the Sigma plot program. Experimental data were obtained from the literature. Theoretically calculated IR values of this compound were calculated in gas phase by using 6-311G (d,p) basis sets of B3LYP and HF methods and are multiplied with appropriate scale factors and the values obtained according to B3LYP and HF methods are formed using theoretical infrared spectrum. The identification of calculated IR values were performed using veda4f program. UV-vis values in ethanol were calculated. In addition, bond angles, bond lengths, dipole moments, the highest occupied molecular orbital-lowest unoccupied molecular orbital (HOMO-LUMO) energy, mulliken charges and total energy of the molecule were calculated with both methods. The calculated and experimental results exhibited a very good agreement.

Keywords: 4,5-dihydro-1H-1,2,4-triazol-5-on, Gaussian 09W, GIAO, B3LYP, HF, 6-311G(d,p) Basic Set.