Compare the different media on the growth characteristics of sports turf

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Abstract Turfgrass due to sensitivity to water stress are required to cover the seeds as mulch. Organic fertilizers due to pathogen contamination problems, unpleasant odor, having weeds seed and other are environmental problems. In this experiment, using various combination of vermicompost, coco peat, perlite and soil as mulch layer and cultured media were studied and the effect these substrates on growth characters of sports turf were evaluated. Treatments were prepared using five medium volume ratio of vermicompost, cocopeat and perlite and was compared with soil. Visual turf quality, turf density, color and were record weekly during the growing season. Other traits turfgrass include fresh and dry weight, organic matter, chlorophyll and relative water content were calculated. The use of organic fertilizer vermicompost in combination with soil, turfgrass physiology traits such as shoot length, shoot dry weight, total organic matter and quality were improved. In contrast, the combination of soil and cocopeat reduced growth traits of turfgrass. Advantages of vermicompost in agriculture as soil organic matter due to the wide range of features that improves its physical and biological characteristics. Therefore be stated that vermicompost can be used as a mulch cover and media lawns in the industry to be used.

Key words

Coco peat- Growth- Perlite- Turfgrass- Vermicompost

Romanian tomatoes obtained from INCDBH Ştefăneşti-Arges

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Abstract Lately consumer demands quality vegetables, especially tomatoes experienced a pronounced orientation towards sensory seeking and appreciating as much taste and aroma of red even at the expense of the commercial aspect of the fruit perfectly. The varieties presented in this paper were obtained from INCDBH Ştefăneşti Arges, after repeated research papers in several years and have been approved in 2013. The paper presents two tomato varieties with unlimited growth, respectively 22 and Costs 21 varieties Stefanesti tomato INCDBH approved to have been a revival of vegetable research in the area, which were discontinued for a period of over 20 years and vegetable sector been missing for 8 years. Tomatoes can be eaten in a variety of ways: fresh, as simple salad or mixed with other vegetables, or cooked in soups, pot, sauces, stuffed tomatoes, industrially processed form of paste, canned broth, juice regular or spicy. Tomatoes have high nutritional value due to fruit content in vitamins, minerals, sugars, organic acids and amino acids.

Key words

new variety, physiologically ripe, tomatoes, resistance to transport

Profitability of cultivation table grapes at INCDBH Ştefăneşti-Arges

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Abstract Growing table grapes offer manufacturers a number of priorities compared to growing grapes for wine. It should be noted that by making table grapes, obtaining income is recorded immediately. If several varieties are grown cocere staggered, these revenues are obtained over a longer period of time. Table grape varieties are more productive (12-18 t / ha), so the profit will be higher. For table grape varieties all depends on quality. If that technology cultivation of these grapes, then it will get a good harvest and a good price. This paper presents the results obtained Ştefăneşti-Arges vineyard productivity, quality and quantity production of grape varieties: Argessis, Canner, Muscat d'Adda and Augusta. In the period 2010-2013 these varieties were recorded at commercial maturity amounts of sugars from 130.9 to 155.2 g / l; was staggered harvesting period from 18.08. to 23.10. Argessis Variety noted by most commodity production 17,5t / ha and most pleasing aspect of grapes.

Key words

table grapes, profit, mature consumer goods production

Study of the inheritance of hull content in a six-parent half diallel cross of winter barley

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Abstract The hull content in barley is an important component of feed malt and quality of the grains. Also, the presence of hull influenced other attributes of barley grains like dormancy or sprouting resistance.
The present research aimed to evaluate the inheritance type, nature of gene action and the component of genetic variance for hull content in a six-parent half diallel cross of winter barley.
The dominance and recessiveness are both associated with positive and negative alleles. Worthy to be taken into account are the recessives alleles of Turul variety and the dominant alleles of Viktor variety that determine a reduction of grain hull content. For this set of varieties, the dominant alleles that control the hull content have a higher frequency than the recessive ones and also an asymmetry of positive and negative genes effects due to dominance is highlighted. The small value of narrow sense heritability indicates that a considerable part of the hull content variability is due to the dominance so that the response of this trait to selection will be low.

Key words

Winter barley, hull content, diallel, gene action.

The express manner of thousand grains weight in F_1 hybrids of winter barley

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Abstract Thousand grain weights is one of most important parameter of seed quality influenced by both genetic and environmental factors. The present studies were under taken to assess the level of thousand grains weight for 15 F_1 hybrids of six winter barley varieties, with different genetic and ecological origin, to identify valuable combination that can be use in future breeding programs.
The potency ratio showed that for most of the hybrids, the gene effects were associated with an increase in most cases, except for Metal x Plaisant and Metal x Turul where the dominance has very low influence on the genetic control of thousand grains weight. Also, in the case of five combinations this trait was controlled by partial dominance. The hybrids: Viktor x Lyric, Orizont x Lyric and Plaisant x Turul showed the highest values of mid and better parent heterosis and may be used as breeding material for increasing barley grains weight and productivity.

Key words

Winter barley, thousand grains weight, F1 hybrids.

Bacterial variation response depending on cultivated plant

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Abstract Vegetables introduction in crops rotation is a practice used to improve the quality of soil. In this study the bacteria was isolated in laboratory condition from soil samples from plots cultivated both with legume and graminaee. For bacterial study was used nutrient medium Topping. The 7th experimental variants were: AS1 - *Avena sativa nigrum* (edafosphere); AS7 - *Avena sativa var. nigrum* (rhizosphere); M2 - *Pisum sativum* (edafosphere); M3 - *Pisum sativum* (rhizosphere); VS4 - *Vicia sativa,* (edafosphere); VS6 - *Vicia sativa* (rhizosphere) and AS5 – barley cultivated after vetch (rhizosphere).
In this study was observed beneficial influence of barley and vetch plants on bacterial community, fact demonstrated through significant increasing in interaction root - soil zone (M3, AS7).

Key words

bacterial community, barley, vetch, peas, eutricambosoil weak gleyed

The influence of some plants from graminaee and vegetables on actinomicaetae quantitative evolution

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Abstract The actinomicaetae represents a microbial group that are interesting for several domains, including agriculture. These microorganisms were isolated from a eutricambosoil weak gleyed, from Western Romania. Soil samples were taken from experimental barley fields (edafosphere/AS1, rhizosphere /AS7), peas fields (edafosphere/M2, rhizosphere M3), vetch in pods (edafosphere/VS4, rhizosphere /VS6) and barley cultivated after vetch used as green fertilizer (edafosphere/AS5).
After 7 days incubation period, in conditions of pour humidity, there was a significant increase of actinomicaetae from M2 and AS1 variants.

Key words

actinomicaetae, Avena sativa nigrum, Vicia sativa, Pisum sativum, eutricambosoil weak gleyed

Analysis of Magnesium Contents in *Zea mays, Beta vulgaris, Medicago sativa, Cirsium arvense* and *Agropyron repens*

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Abstract The mineral composition of food crops showed that they could be used as rich sources of essential nutrients. Magnesium is an essential macronutrient found from 0.2-0.4% dry matter and is necessary for normal plant growth. In vegetation, magnesium is the metallic ion at the center of chlorophyll, and is, thus, a common additive to fertilizers. In addition to its role in chlorophyll, Mg is the most common activator of enzymes associated with energy metabolism or energy transport, particularly those utilizing adenosine triphosphate (ATP). The purpose of this study was to monitorize the Mg accumulation in *Zea mays, Beta vulgaris, Medicago sativa, Cirsium arvense* and *Agropyron repens*, grown on a chernozem soil. The plants samples were analyzed by flame atomic absorption spectrometry (FAAS). The mean values of Mg contents in plants are: *Zea mays* grain– 485 (mg/kg dry weight), *Beta vulgaris* root- 1205 (mg/kg dry weight), *Medicago sativa* leaf- 724 (mg/kg dry weight), Cirsium arvense leaf- 249 (mg/kg dry weight) and *Agropyron repens* leaf- 960(mg/kg dry weight).The trend of Mg accumulation in the edible parts of plants was the following: *Beta vulgaris* root > *Agropyron repens* leaf > *Medicago sativa* leaf > *Zea mays* grain > *Cirsium arvense* leaf. Our results show that that animals consuming these plants ingest significant amounts of Mg.

Key words

Magnesium, *Zea mays, Beta vulgaris, Medicago sativa, Cirsium arvense* and *Agropyron repens*

Monitoring the lycopene content in some fruits and vegetables

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Abstract Lycopene, a carotenoid phytonutrient, is the most potent antioxidant naturally present in many fruits and vegetables. The goal of this paper is to evaluate the lycopene content in some fruits and vegetables. Fruit and vegetable samples (Watermelon, Guavas, Tomatoes, Papaya, Grapefruits, Red cabbage, Asparagus) were taken from Timisoara supermarkets. Lycopene in fruits and vegetables samples was extracted using hexane: ethanol: acetone (2:1:1)(v:v:v) mixture and determinations were made by using Spectrophotometer UV-VIS SPECORD 205 by Analytik Jena. The results are similar with results obtained by other researchers and show that recommended daily level of intake (5-10mg lycopene) can easily be achieved by ingesting the fruits and vegetables taken in our study.

Key words

lycopene, fruits, vegetables, daily intake

Research on the differentiation of accumulation of dry matter and nutrients in the foliary-fertilized tomato plant grown in the field

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Abstract Dry matter and nutrient accumulation in tomato plants grown in the field is developed in terms of integral curves with increasing and higher rates since the formation of the first flowers to their complete formation and with smaller portions, even decreasing, starting from the formation of 85 -90% of production to the end of vital cycle.În this context foliar fertilization complements the soil fertilization in terms of plant intensive consumption.

Key words

dry matter, nutrients, vegetative phenophases, foliar fertilizers, tomatoes

Research regarding the foliar fertilizations upon the agro-chemical indices from tomato plants cultivated in greenhouses

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Abstract Leaf analyses showed constant values for the main nutrients: nitrogen, potassium, calcium and positive values for the phosphorus and

Key words

magnesium. The ratio Ca / Mg supports the process of photosynthesis, which favors the production quality. Foliar fertilization applied to the greenhouse tomato crop, stimulated the nutrient accumulation in plants, supporting the mineral nutrition of plants in the areas of agrochemical optimum. The studies on foliar fertilizers have shown that foliar fertilization plays a secondary role and completes the soil fertilization and soil fertilization conditions the effects of applying foliar fertilizers.

foliar foliar fertilizers, vegetative phenophases, nutrient assimilation, tomatoes

Weeding level in grain maize in the area adjacent to the perimeter of the Barzava River

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Abstract Weed control is one of the main technological measures in maize. For these measures to be highly efficient, we need to determine the composition of the weed species and then to establish the weed control to be sued. Weeding level oscillates as follows: Gătaia – 94 weeds/m^2, Ghertiniş – 125 weeds /m^2 and Berzovia – 106 weeds /m^2. In Gătaia, the predominant weeds were *Amaranthus retroflexus* (15,96%) and *Chenopodium album* (12,77%). The predominant weed species in Ghertiniş were *Amaranthus retroflexus* (12,80%) and *Setaria glauca* (12,00%). In Berzovia, the predominant species were *Setaria glauca* (11,32%) and *Amaranthus retroflexus* (10,38%). The ratio between biological categories was: annual monocots 25%, perennial monocots 15%, annual dicots 35% and perennial dicots 25%. The 20 weed species belong to 10 botanical families, the most representative of which are Poaceae (8) and Asteraceae (4).

Key words

weeds, grain maize, share percentage e, biological categories, botanical families.

Ecotourism and nature tourism – components of a sustainable management of forests

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Abstract This paper studies the link between functions and the role fulfilled by forests and ecotourism or nature tourism. There are defined concepts of ecotourism and nature tourism, showing the principles governing the two activities. European network of Ecotourism started work in 2011 as a result of an international project and developed a European standard ecotourism certification, based on 40 criteria. It is intended to act as an instrument of European regulatory harmonization initiatives in ecotourism quality or regulate individual service offer of ecotourism. They inventoried the most popular ecotourism destinations in Romania, as well as products and certified ecotourism destinations.

Key words

sustainable nature-based tourism, ecotourism, community development, forest recreation

Change of hue and intensity of color during the fermentation in case of must obtained from various varieties of red grapes from Minis-Maderat Winery

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Abstract The color and opacity of a red wine reveal clues regarding the type of wine. The color of a wine reveals its age, the variety of grapes, density of aroma and its acidity.
This work is presenting the differences of color existing between the varieties of red grapes during the fermentation process. The parameters that have been assessed within this study have included the chromatic parameters (intensity and hue of color) correlated with the pH changes and depending on the alcohol content of the fermenting must. Three red wines obtained by fermenting in rotary tanks grapes of three black varieties (Merlot, Burgund and Pinot Noir) cultivated in Minis-Maderat winery from Pancota, were studied. The wines have been obtained in the month of September 2013. During the fermentation process the intensity of color has decreased, while the hue of color has increased. The highest value of the color intensity has been reached by the Burgund red wine (23.418) and the lowest the wine obtained from the Pinot Noir variety (8.458). The highest value of the color hue has been reached by Pinot Noir wine (0.65) and the lowest by the red wine Merlot (0.54). The value of these parameters has changed during the fermenting process and is very different in relation to the grapes variety, the change of pH value and of the alcohol content. The results that have been obtained regarding the chromatic parameters of every wine in particular are important in anticipating the color of red wines at the end of the fermentation process when the finite product is obtained.

Key words

hue, intensity, fermenting must, red wine

Research on walnut germoplasm in Western Romania

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Abstract Walnut is among the oldest widespread tree species. In the past, and particularly in the Tertiary, walnut was spread more than it is nowadays. A tree species with important ecological and economic potential, appreciated since times immemorial by the entire Earth, walnut also draw attention due to the food and therapeutic value of its fruit and for the quality, finesse and resistance of its wood. Needed in the confectionary industry, in family kitchen, in pharmaceutics and in technical industries, walnut kernel is highly rated in nut trade due to its high content of fat substances, carbohydrates, vitamins and minerals.

Key words

walnut, walnut biotype, germoplasm, biometrics

Fruit quality in apple tree in the soil and climate conditions of the Didactic Station of Timisoara, Romania

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Abstract Apple tree ranks first as importance among temperate climate fruit tree species due to large cultivated areas, production and ecological plasticity. In Romania, apple tree is cultivated on about 75,000 ha and produces about 600 t, the main apple-producing counties are Argeş, Suceava, Mureş, Maramureş, Dâmboviţa, Iaşi, Cluj, Bihor, Bistriţa, Năsăud, Bacău, Sălaj, and Vâlcea, In Romania, apple is cultivated everywhere, from sea level to pre-mountain areas.

Key words

apple, cultivar, quality, weight, diameter, dry matter

Assessment of apricot color and quality changes using color indices

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Abstract In apricot fruit, establishing the optimal harvest time is crucial, since fruit quality potential are closely related to the ripening stage at harvest. Stage of maturation is usually estimated by fruit color through parameter L*,a*, b*. The goal of this study was establish feasibility of different chromatic indices for apricot color and quality determination and their relationship with pigments and ethylene concentration. Color changes during apricot ripening were the result of significant changes in the values of a*, h°, $(a^*/b^*)^2$, (1000a*/L*b*), (180- h°/L*+C*). Chroma and lightness were not a good parameters to express apricot ripeness because narrow range of variation and small differences between stages of maturation and even between varieties. Relationship between b*, L*,C* and total carotenoids content were very weak. For ripened apricot fruits a*, h° and chromatic indices could be used as objective ripening indices.

Key words

apricot, chromatic parameters, carotenoids, color index

Research regarding the influence of culture conditions upon the main physiological indices at Paulownia shan tong

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Abstract *Paulownia shan tong* is a fast-growing tree species with a considerable economic potential because of its value for wood as well as its high biomass production, and elevated stress tolerance. The objective of the present study was to evaluate the influence of different culture conditions upon the main physiological indices at Paulownia shan tong. The observations were made using three different variant of culture conditions starting from internodes taken from elite plants cultivated in the field, which were separated in three study variants. The variant 0 (witness variant) – in vitro culture made in the green house in normal conditions; variant 1 – in vitro culture inoculated on Murashige and Skoog tissue culture medium supplemented with 3% (w/v) sucrose and 0.6% (w/v) agar; variant 2 – in vitro culture inoculated on Murashige and Skoog tissue culture medium supplemented with 3% (w/v) sucrose and 0.6% (w/v) agar, 6-Benzylaminopurine and Gibberellic acid. The physiological indices used to determine the differences between culture conditions are: the chlorophyll, detected with the chlorophyll meter, the dry matter (%) detected with the thermo balance and the photosynthesis detected with the photosynthetic apparatus by gas changing method (Qubit Systems, 2010).
In what regards the chlorophyll, the results are situated between the values 34.12 – 48.16; the minimum value represents variant 0 ad the maximum value represents the variant 1. The dry substance is found between the values 22.13 – 23.81; the minimum value being represented by variant 2 and the maximum value by variant 0. The photosynthesis is found between the values 1.7 – 2.42 with the minimum value obtained by variant 0 and the maximum value obtained by variant 2.

Key words

Paulownia shan tong, in vitro culture, photosynthesis, chlorophyll, dry matter

The influence of MGA and NS media over the isolation of *Fusarium* colonies from infected wheat seeds

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Abstract Several species of the genus *Fusarium* are involved in Fusarium Head Blight (FHB), also known as "scab," a widespread disease which can reduce the crop yield up to 80% of production. Therefore, permanent monitoring required rapid isolation of infectious species using an appropriate medium. In our research we use two media for isolation of *Fusarium* species that infects wheat crops in the Timiş County, MGA and NS, establishing by analysis of variance as the best medium to achieve significant results for the isolation of the different species of *Fusarium* is MGA.

Key words

Fusarium, wheat, seeds, colonies

Researches regarding the quality of some sprouted grain flours

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Abstract The nutritional value of sprouted grain flour (sprouted grains) is given by many active principles: oligosaccharides, vitamins, antioxidants, enzymes, microelements etc., making it a very valuable raw material for food, pharmaceuticals and diets. The aim of our study was the biochemical characterization of flour obtained from germinated cereals (wheat, barley and oats) carried out for the proteins content, the lipids content and the B_1 B_2 and B_3 vitamins content. There were performed graphical representations for these biochemical characteristics from germinated and non-germinated cereals flours. The flour obtained from germinated Capo wheat genotype had the highest content of proteins (20,98 g/100 g flour) and lipids (11,12 g/100 g flour). Flours derived from non-germinated grains had significantly lower values of proteins and lipids content than those obtained from germinated cereals. Flour from IPZ 807 germinated barley variety had the highest content of B_1 and B_2 vitamins (0,040 mg/100 g and 0,254 mg/100 g) and flour made from germinated Capo wheat genotype had the highest B_3 vitamin content (1,875 mg/100 g) to all other studied genotypes. These flours may be used in food and in pharmaceutical preparations.

Key words

germinated cereals, sprouted grain, flours, proteins, lipids, vitamins, content

Germination of Different Wheat Cultivars under Salinity Conditions

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Abstract Salinity effects were evaluated on seed germination of fourtheen bread wheat cultivars (*Triticum aestivum* L.) Salinity treatments measuring (150mM, 200mM, 240mM) were achieved by adding NaCl in deionized water. A control (distilled water) was maintained for each cultivar for comparison. Data regarding germination attributes were recorded. Results revealed that increasing concentration of NaCl solution resulted in gradual reduction in seed germination in all wheat genotypes.

Key words

wheat, germination, salt tolerance

Studies regarding the content of inorganic compounds (phosphates, sulphates, chlorides) long ways Timis River basin

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Abstract The purpose of this paper is to present the results of monitoring the river Timis in terms of inorganic compounds content (sulphates, phosphates, chlorides) in the period 2011-2013. The water monitoring was done in six points along the river Timis, situated close to the localities: Slatina-Timis, Caransebes, Gavojdia, Lugoj, Cebza, Graniceri. The results shown that chlorides and sulphates content is low, corresponding to first class of water quality. Inorganic ions concentration profile study recorded the same upward trend from upstream to downstream with increasing diffuse pollution points, the concentrations were lower in 2013 compared to 2012 and 2011 to sulfate ion and chloride, but slightly increased in 2013 compared to previous years, the phosphate ion. Elevated concentrations of phosphate ion, are recorded in semesters I and IV, when consumption biogenic elements by plants is low.

Key words

phosphates, sulphates, chlorides, water, Timis river

Influence of soil work on soil moisture (%) and soil water reserve (m^3/ha) in grain maize in the hill area of the Timis county, Romania

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Abstract Because of the smaller and smaller water reserve worldwide and at national level nowadays we need to rationalise water. Agriculture is one of the national economy branches with large water consumption. A correct assessment of soil water evaluation methods and prognosis allows a good understanding of the soil water balance and, implicitly, the choice of cultivation technologies correlated with a high degree of suitability to produce high yields. Soil work, soil type, soil moisture an apparent density influence directly the level of productions. In Giarmata, Timis County, Romania, apparent density oscillates between 1.26 g/cm^3 (0-10 cm) and 1.70 g/cm^3 (40-50 cm). Soil moisture in the 40-50 cm horizon reaches 21.16% while soil water reserve in the 0-50 cm horizon is 1,434.95 g/cm^3. On the sole in Pişchia, Timis County, Romania, apparent density ranges between 1.27 g/cm^3 (0-10 cm) and 1.68 g/cm^3 (40-50 cm). Soil moisture in the 40-50 cm horizon reaches 20.87%, which determines, in the 0-50 cm, a soil water reserve of 1,347.26 g/cm^3. Apparent density in Sidvias, Timis County, Romania, reaches between 1.32 g/cm^3 (0-10 cm) and 1.84 g/cm^3 (40-50 cm). Soil moisture in the 40-50 cm horizon is 21.20%, and soil water reserve in the 0-50 cm horizon is 1,484.68 m^3/ha. The sole in Jupani, Timis County, Romania, is characterised by moisture levels ranging between 1.38 g/cm^3 (0-10 cm) and 1.81 g/cm^3 (40-

Key words

water, soil, apparent density, water supply, soil works

50 cm). Soil moisture in the 30-40 cm horizon is 23.45%, while soil water reserve in the 0-50 cm horizon reaches 1,672.95 m^3/ha. In the hill area, the sole at Fârdea, Timis County, Romania, apparent density in the 40-50 cm horizon reaches 1.75 g/cm^3. Soil moisture reaches a maximum value of 23.17% in the 20-30 cm horizon. Soil water reserve in the 0-50 cm horizon was 1,593.52 m^3/ha.

Preliminary research regarding the use of some vegetables (carrot, parsley, celery and tomato) as supplementary sources of bio minerals

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Abstract The paper presents experimental results regarding the measurement of some essential minerals such as Ca, Mg, K, Fe, Zn and Cu in carrot, parsley, celery and tomato – to use them as supplementary sources of essential minerals. Results show that the mineral supply of the studied fresh vegetables in the recommended daily intake per gender varies within broad limits, i.e. between 4.82% (in Zn, in carrots) and 41.11% (in Cu, in parsley). The mineral supply in the daily diet is conditioned by both the importance of the bio element and the assortment of vegetables. Preliminary data of mineral supply in a certain vegetable or in associated vegetables (raw vegetable salad, for instance) confirm the possibility of using vegetables as an alternative supplementary source of bio elements.

Key words

vegetables, carrot, parsley, celery, tomatoes, minerals, supplementary sources of bio minerals

Preliminary research regarding the use of some berries (blueberries, blackberries and raspberries) as supplementary sources of bio minerals

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Abstract The paper presents experimental results regarding the measurement of some essential minerals such as Ca, Mg, Fe, Mn, Zn and Cu in three fresh forest berries – blueberries, blackberries and raspberries – to be used as supplementary sources of minerals. Preliminary data point out that the daily supply of minerals by these berries per genders varies within wide limits because of both the nature of the mineral and the type of berry. In general, the supply of minerals in the two genders follows, in our experiment, the following descending trends: Mn > Cu > Fe > Zn ≅ Mg > Ca in men and Mn > Cu > Fe ≅ Mg ≅ Zn > Ca in women.

Key words

berries, minerals, supplementary sources of bio minerals

Using GIS technology in processing and analyzing satellite images – case study Cheile Nerei Beusnița National Park, Romania

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Abstract Satellite images, as objective representation of the earth's crust, represent the basis for analysis and classification of the reality from the field in real time or for storage of information in digital format. The purpose of this study is the analysis and classification of the land from National Park Cheile Nerei Beusnita, Romania, based on satellite images and GIS technology. Analysis and classification of the land corresponding to the reference area was on based on satellite images LandSat 8. Processing and analysis of the images was performed using ArcGIS software, by means of two algorithms, ISO Data and K Means, with a variation in the number of iterations in order to evaluate the precision of the analysis process. In order to characterize the reference area we used the combination of spectral bands 432 (RED-GREEN-BLUE) and for analyzing and classifying the land, the band combination 543 (NIR-RED-GREEN) was chosen. By analyzing the satellite images based on the two algorithms, the results obtained were close regarding the size of the land surfaces according to the 7 user-defined classes. Under the conditions of a change in the number of classes, by defining a higher number, or by arbitrary classification without operator intervention, when achieving a complete classification based on digital information found in the base image, significant differences started to appear between results. At the same time by increasing the number of iterations, we recorded an increase in the analysis and classification accuracy while significantly increasing working time.

Key words

GIS, Landsat 8, spectral bands, IsoData, K Means, classification

The situation of green spaces in Timisoara today

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Abstract In the last decades the green spaces of Timisoara had changed a lot. Some have developed in time and are today in accordance with European standards. There are many nice green spaces in Timisoara. Nevertheless the present study shows that in most of the districts of the town the green surfaces are insufficient, or are in a bad state. An exception is the central part of the town where green spaces are nicely arranged and cover great pieces of land. The obvious solution for the future will be to grow the surface of parks, especially in certain disadvantaged quarters, using available free land, buying land, redesigning parks, squares, cemeteries, river banks. Rearranging parks for outer quarters is an important issue, especially in order

Key words

Timisoara, parks, quarters, green spaces

to satisfy the needs of families with children or elder people who need green spaces near to their homes.

Tendencies in European landscape and garden design during the last centuries

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Abstract The ideas concerning green spaces changed a lot in Europe during the centuries. The role of these gardens, their aspect, their dimensions and social role seemed to be in a continuous transformation. Some innovative ideas were born in Europe, while others were imported from other continents. The Renaissance, French Gardens and English Gardens added their contribution to European culture. The old gardens of Europe were the isolated, but often beautiful parks of the noblemen, which were usually connected with palaces and other important buildings. The restoration of these green spaces follows in general the same principles which are used nowadays in the case of built areas, though there are some important differences. After the fundamental changes that succeeded in time, with many famous innovations, the role of gardens changed. Many became in time important urban symbols, or include elements that define the settlement. Today green spaces are fundamental parts of town and country policies, all over the continent, and contribute a lot to the aspect of settlements. The social and economic importance of gardens changed in time, and is still changing in the present. Urban planning and restoration programs use today the means offered by garden and landscape design, as essential elements for redefining urban areas. Tourism is much determined by the quality of urban spaces, which include green areas. For many developed countries the modeling of certain territories has become a major issue. The purpose is to obtain an attractive landscape, as a result of the evolution which takes place in accordance with the regional development plan.

Key words

culture, garden design, landscape, green spaces

Comparative physico - chemical and microbiological analysis of obtained beer in laboratory system and the same product obtained in industrial system

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Abstract Beer is an alcoholic non-distilled beverage fermented with yeast to a mash made from malt, water and boiled with hops. It is considered a food drink. We performed comparative analysis of the characteristics obtained in laboratory beer comparative with a standard industrial system.
Were performed physico-chemical and microbiological analyzes and the result reflects the lack sterile environment.
It is noted that in the process of maturation of beer, the fermentation process

Key words

extract, polyphenols, yeast, bacteria

seems to continue, expressed by decreasing of the pH and increasing of the alcohol content.

Evaluation of genetic diversity of some *Phalaris sp.* using microsatellites

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Abstract In this experiment we took young vegetative samples from 12 varieties of Phalaris that were cultivated in USAMVBT didactical and experimental field having the main goal of genotyping this valuable biologic material. A number of 15 randomly chosen ISSR molecular markers were used in the preliminary screening experiment. From this set, four primers were further used, based on their qualities as resulted from the screening. Based on preliminary data a dendrogram of genetic similarities among Phalaris varieties was constructed. The varieties grouped in two main, distinct clusters and the polycross clone as part of the second cluster tended to separate from the others varieties.

Key words

Phalaris spp.; genetic diversity; ISSR molecular markers; genotyping

Evaluation of genetic diversity of some *Phalaris sp.* Using minisatellites

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Abstract The experiment was conducted in order to see the genotypic expression of 12 varieties of Phalaris spp. in order to determine their degree of relatedness and genetic diversity. The samples become from USAMVBT didactical and experimental field were Phalaris is cultivated and breaded. 7 DAMD molecular markers randomly chosen were tested. After the preliminary screening, four primers were further used according to their polymorphic ability. The data collected from those probes made possible the development of a Dendrogram of genetic similarities among those 12 probes. In this paper is described the first attempt to genotype Phalaris spp. Using minisatellites molecular markers (DAMD).

Key words

Phalaris spp, genetic diversity, DAMD molecular markers, Dendrogram

Sodium chloride effect on rye (*Secale cereale*)

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Abstract Sodium chloride has negative effects on rye seeds. In study were used seeds from two genotypes of rye (Ergo and Orizont). The germination was accomplished in sterile plastic recipients, on germination paper at a temperature of 21 ^{o}C. The sodium chloride concentrations 0,5, 1, 1,5 and 2 g/l were used for watering the seeds. After a week it was observed a significant decreasing of the germinating seeds in rapport with the control, at concentrations over 1g/l (V3, V4, V5). Between the two genotypes, after applying the treatment, it was noticed that Orizont had a greater sensitivity than Ergo.

Key words

Rye, sodium chloride, germination