

Participatory Evaluation of True Potato Seed (F1C2 Tuberlets) for Potato Production at Kabhrepalanchok district, Mid Hills of Nepal

Bhattarai Prakash^{1*}, Gautam I.P.²

¹National Potato Research Program (NPRP), NARC, Khumaltar, Lalitpur, Nepal; ²Regional Agriculture Research Station, Khajura, Nepalgunj, Nepal

*Corresponding author. Email: prakash235@yahoo.com

Abstract A participatory evaluation experiment was carried out in mid hill Kusadevi (1500masl) site of Kabhrepalanchok district, Nepal during 2012/13 and 2013/14 to identify suitable True Potato Seed tuber families (F1C2) having high yield for potato production. Eight hybrid TPS F1C2 families were evaluated and compared with standard clonal variety Janakdev. The genotypes were evaluated in randomized complete block design with three replications. The data on growth parameters, late blight infection, tuber number and tuber yield were recorded for performance evaluation. Based on the experimental results, TPS F1C2 tuber families LT 8×TPS-13 and LT 8×TPS-67 was significantly produced highest tuber yield (31.5t/ha) and (30.7t/ha) in farmer's field in 2012/13 respectively. But, in 2013/14 significantly maximum tuber yield (38.19t/ha) and (37.64t/ha) was obtained from C96H-13.29×TPS-13 and C96H-02.4×C99HT-2-32.17 respectively. Most of the TPS F1C2 tuberlets produced highest tuber yield as compared to standard clonal variety tested in both experimental years. No late blight symptoms could be noticed during both experiments. The results suggest that the hybrid TPS tuber families (F1C2) performed overall better than commercial variety Janakdev. The study concluded that through TPS technology disease free potato tubers can be produced on commercial basis and true potato seed families could be successfully used as seed purpose for higher tuber yield up to F1C2 generations. Hence, TPS tuber families LT 8×TPS-13, LT 8×TPS-67, C96H-13.29×TPS-13 and C96H-02.4×C99HT-2-32.17 was found promising for potato production by F1C2 tuberlets planting in mid hill Kabhrepalanchok district of Nepal.

Key words

evaluation, F1C2 tuberlets, mid hill, true potato seed, tuber yield, variety

Researches on phenotypic evaluation of apricot hybrids concerning the genetic resistance to ppv (*Plum pox virus*)

Adascalului M^{1.}, Hoza D^{1.}, Moale Cristina², Ion Ligia¹

¹University of Agronomy Sciences and Veterinary Medicine Bucharest, Marasti Street, no. 59, ²Fruit Research & Development Station Constanta, Romania

*Corresponding author. Email: ioannagyligia@yahoo.fr

Abstract For fenotyping of apricot hybrid progenies obtained over three years of research, which revealed no Sharka symptoms on shoots were growing were supervised for visual, using serological immunoassay test (ELISA). So PPV infection was evaluated during three consecutive periods of vegetation as measured by visual inspections and Elisa tests. Shortening plants was performed at the beginning of each growing season to induce force new growth and the emergence of symptoms. The genotypes

Key words

Plum pox virus, apricot, cultivars, rootstocks, resistance

that did not develop symptoms PPV visually or by ELISA were tested by a reverse transcription reaction in a polymerase chain (RT-PCR) using primers specific for the PPV, P1 and P2 (Wetzel et al. 1991) , which amplifies a 243 bp fragment located at the C-terminus of CP PPV gene.

The PPV particle was isolated with PPV polyclonal antibody adsorbed on the walls of an Eppendorf micro-tube. Kit purchased from Sigma and used for RT-PCR.

Plants were classified as resistant if they showed no symptoms and positive reactions in ELISA tests or RT-PCR in the last three periods of growth and were evaluated for three determinations.

Behavior study for pollination a romanian apricot varieties using different source of resistance to sharka

Adascalului M.¹, Hoza D.¹, Ion Ligia^{1*}

¹University of Agronomy Sciences and Veterinary Medicine Bucharest, Marasti Street, no. 59

*Corresponding author. Email: ioannagyligia@yahoo.fr

Abstract Identification of genotypes potential resistant to PPV is a constant and timely activity al long that the Prunus / PPV interaction remains unknown. Using thevarious sources of resistance to PPV in the process of breeding in apricot, as SEO genotypes, NJA 38, Harcot, Traian, in different combinations with Romanian apricot varieties, can offer a new perspective manifested in phenotypic and genotypic expression of F1 hybrid progenies. Study of behavior in breeding program for pollination of some apricot varieties as Danubiu, Carmela, Tudor, Traian, Dacia demonstrate a strong variability in compatibility, the worst results were obtained from Carmela variety which actually pollinate the flowers are very fragile and difficult binding rate is extremely low. Very well behaved for pollination the variety Danubiu with a percentage of flowers was large, 53.08%.

Key words

plum pox virus, apricot, cultivars, breeding, resistance

Assessment of storage capacity of some white cabbage varieties according to histological and histochemical structure

Alexe Constanta^{1*}, Lamureanu Gh.², Chira Lenuta³, Pricop Simona⁴

¹Research and Development Institute for Processing and Marketing of the Horticultural Products – Bucharest;

²Research Station for Fruit-Growing Constanta; ³University of Agricultural Sciences and Veterinary Medicine Bucharest; ⁴Ovidius University Constanta

*Corresponding author: Email: tantialexe@yahoo.com

Abstract White cabbage, which occupies an important place in the assortment of fresh vegetables in autumn-winter period, presents a different storage capacity, depending on the variety. To establish the resistance to handling and storage of the cabbage, in order to choose the most resistant varieties, that are able to maintain unaltered their commercial and nutritional qualities a longer period, within Research and Development Institute for Processing and Marketing of the Horticultural Products – Bucharest and University of Agricultural Sciences and Veterinary Medicine Bucharest were initiated, during the period 2012-2014, researches regarding the influence of

Key words

cuticle thickness, vascular bundles, glucides, lipids

histological and histochemical structure of cabbage upon its storage capacity. It was worked with two varieties of white cabbage, Buzoiana (Romanian variety), with reduced storage capacity and Gredana (Danish variety), with a good storage capacity, provided from a culture situated in Dobrogea area. The microscopic analysis point out that the Gredana variety has a better storage capacity due to the following histological and histochemical features: thick cuticles on both epidermises, suberized epidermis of the cell walls, numerous and grouped vascular bundles, the mesophyll parenchyma with small cells and intercellular spaces, less numerous stomates, high content of simple glucides and high quantity of fats maintained during the whole storing period.

Effects of some electrotherapy treatments of pvx infected potato plantlets cv. Roclas, on several biological development indicators

Carmen Liliana Bădărău^{1,2*}, Damșa Florentina¹, Nicoleta Chiru¹

¹National Institute of Research and Development for Potato and Sugar Beet Brasov, România; ² Faculty of Food and Tourism, Transilvania University of Brasov, România

*Corresponding author: badarau_carmen14@yahoo.com

Abstract The purpose of this study was to estimate several toxicity effects of some treatments (electrotherapy in tissue culture) used for decrease PVX (potato virus X) infection level. The biological material used in experiments was plants (variety Roclas, virus free biological material) mechanically inoculated using PVX secondary infected plants from Ostara variety. Electrotherapy was applied in 9 variants: after washing and sizing explants, potato stems infected were exposed to either 40, 50 or 100 miliampers (mA), for 5, 10 or 20 minutes, followed by sterilization and planting the axillary buds tip in vitro. The biological indicators estimated were the following: multiplication rate, mean leaf number and mean long stem of the treated material. The electrotherapy variant 10minutes at 100mA showed the maximum values of the multiplication rate in all subcultures for all the PVX infected material. This treatments variant had positive effects on the other biological indicators estimated by biometric measurements of the material obtained from treated vitro-plants.

Key words

potato virus X, multiplication rate, electrotherapy

Management measures in “Bazos Arboretum” protected area

Cadar N.^{1*}, Merce O.¹, Turcu D. O.¹, Cântar I. C.¹

¹Forest Research and Management Institute – Timișoara branch

*Corresponding author. E-mail: nicu_cadar@yahoo.com

Abstract The Arboretum has a special scientific importance (from botanical and forestry points of view).

The botanical importance is given by the richness of the scientific collection of woody plants cultivated here (over 800 systematic units), from which many taxons are very rare (conifers, magnolias).

The aim of the management plan of the Bazos Arboretum is the sustainable development and the conservation of dendrological and landscape values settled during the eight decades of existence of the protected area. The

Key words

Bazos Arboretum, management measures

values must be recognized by the public, locals and scientists, and tourism is welcome.

They are identified 5 main management themes:

- the dendrological collection;
- the landscape;
- the area with natural vegetation;
- the tourism;
- education, informing, awareness.

Research on renaturation process in forest plantation installed on tailing dumps from Moldova Nouă area

Cântar I. C.^{1*}, Simon-Cernescu Nicoleta¹

¹Forest Research and Management Institute Timișoara branch

*Corresponding author. Email: cantar.cosmin@yahoo.com

Abstract Made to stabilize waste dumps of wind erosion, plantations made along the slopes and plateau of tailing dumps “Boșneag” and “Danube Valley” from Moldova Nouă, today successfully fulfill their ecoprotective role, forming a green oasis borders and conquer “desert” tailings sand. Plantations performed on the tailing dumps from Moldova Nouă, encircling today tailings dumps, successfully exerting their ecoprotective role, fighting against wind erosion and improving the soil helping on enrichment of the biodiversity on these areas.

Current work present the research in five directions: research on the development of the main tree species on forest plantations installed on tailing dumps, research on biomass of the main tree species from plantations, research on the rooting system of the main species, research on amount and contents of litter on the plantation and research on biodiversity of the entomofauna on the plantations.

Key words

Tailing dumps, renaturation, biodiversity

Expanding of *Tuber melanosporum* truffle in culture - case study

Cântar I. C.^{1*}, Merce O.¹, Cadar N.¹, Simon-Cernescu Nicoleta¹

¹Forest Research and Management Institute

*Corresponding author. Email: cantar.cosmin@yahoo.com

Abstract The main objective for this work is to develop the technologies for planting and care of forest cultures specialised in truffle production in Romania. Preparation the ground for the installation of culture involved: plowing of soil on the entire surface, correction of soil acidity by application of amendments, shredding of soil and incorporation and mixing the amendments on soil. Planting scheme used, was of 5 X 5 m, in 5 rows with 8 sapling on each. Also, this paper show some aspects about care of young forest culture mycorrhized with truffle and growth of saplings in the first vegetation season.

Key words

Truffle, *Tuber melanosporum*, area of culture

Behavior in the nursery of some new cherry tree varieties in the conditions from Dobrogea

Caplan I.¹, Lamuranu Gh.¹, Alexe Constanta^{2*}

¹Research Station for Fruit Growing Constanta (Stațiunea de Cercetare si Dezvoltare Pomicola Constanta)

²Research and Development Institute for Processing and Marketing of the Horticultural Products - Bucharest (Institutul de Cercetare si Dezvoltare pentru Industrializarea si Marketingul Produselor Horticole - București)

*Corresponding author: Email: tantialexe@yahoo.com

Abstract Cherries are the first fresh fruits of the year, and through their high content of vitamins, minerals, easily assimilable sugars, appealing aspect and their pleasant refreshing taste, they are the object of one of the most efficient commercial activities of a crop, which takes place from the second part of May until July. In order to establish a conveyor of cherry varieties which is appropriate for the pedoclimatic conditions of Dobrogea and local and seasonal requirements, a study was organized at Research Station for Fruit Growing Constanta, to determine the ecological adaptability capacity of new varieties, grafted on the main rootstock which is recommended in the area - mahaleb. The study targeted 24 varieties of Romanian and foreign origin: Colina, Simbol, Severin, Cerna, Izverna, Ponoare, Amara, Timpurii de Bistrita, Rosii de Bistrita, Negre de Bistrita, Uriase de Bistrita, Jubileu 30, Rubin, Somesan, Iva, Ana, Cetatuia, Golia, Maria, Marina, Catalina, Amar Galata, Amar Maxut and Van. Researches were related to the following aspects: affinity between graft and rootstock in the nursery, expressed by the percentage of grafting success and the corresponding growth of grafted trees: increase in thickness of the trunks, height of the one year old grafted trees and number of anticiqated shoots. Regarding the success of grafting, the best results, with a percentage of 100%, it was obtained by the varieties Severin, Amara, Jubileu 30, Maria, and the weakest by the varieties: Amar Maxut, Marina, Somesan and Uriase de Bistrita. The varieties: Izverna, Somesan, Uriase de Bistrita, Amara, Amar Maxut and Rubin had a strong growth of the trunk, above the average of the studied varieties. In terms of height of the one year old grafted trees the following varieties have vigorous growth: Maria, Rubin, Izverna, Jubileu 30, Negre de Bistrita, Marina, Somesan, Cetatuia and Colina. The large number of anticiqated shoots on the trunk (which is an indicator of early fruit bearing) is seen in the varieties: Severin, Timpurii de Bistrita, Jubileu 30, Ana, Cetatuia and Amar Galata.

Key words

graft, rootstock, rooting in grafting, rod, yield expectation

Suitability for processing as puree of some fruit varieties of peach group

Lamureanu Gh.¹, Alexe Constanta^{2*}, Vintila M.²

¹Research Station for Fruit Growing Constanta; ²Research and Development Institute for Processing and Marketing of the Horticultural Products Bucharest

*Corresponding author. Email: tantialexe@yahoo.com

Abstract In our country, fruit purees still do not enter in our daily meals, as it happens in the countries with developed industry. Their introduction is very indicated, being that in the same volume, the value of alimentary principles is with 50% until 100% higher than in stewed fruits, which represent the type of canned food closes to the purees and that is consumed frequently. Among the species of stone fruits, peaches are the most

Key words

nectarines, peaches, clingstone, sensory analysis

processed as puree. In this paper we proposed the assessment of suitability to processing as puree of a number of 11 fruit varieties within peach group: peaches clingstones and nectarines (Southland, Redhaven, Raluca, Collins, Filip, Catherine, Mimi, Anemona, Flavortop, Fantasia, Independence), from the experimental culture of Research Station for Fruit Growing Constanta. The fruits were processed at Research and Development Institute for Processing and Marketing of the Horticultural Products Bucharest, in the micro-production laboratory. Sensory analysis of product was made according to STAS 12656-88, that establishes the analysis methods with unitary scoring scales (method A), used for the evaluation of organoleptic characteristics of alimentary products, and that are applied for the appreciation of a set of organoleptic properties: appearance, color, taste, texture or, in case, consistency. The best results were obtained at clingstone variety Mimi, whom was given maximum score for color and taste and an average total score of 19.22. This variety, together with varieties Southland - peach (18.34 points) and Catherine - clingstone (18.01 puncte) obtained the score "very good". The lowest suitability of processing as puree is presented by peach variety Colins (13.75 points) and nectarine variety Flavotrop (13.91 puncte), which received the score "satisfactory".

Behaviour of Excelsior peach variety grown in the conditions of Romanian seacoast zone

Lamuranu Gh.¹, Alexe Constanta^{2*}, Caplan I.¹

¹Research Station for Fruit Growing Constanta; ²Research and Development Institute for Processing and Marketing of the Horticultural Products – Bucharest

*Corresponding author: Email: tantialexe@yahoo.com

Abstract The peaches are cultivated for their fruit which are rich in dietetic and nutritional elements and which are consumed in high quantities both as fresh as well as for processing as jam, nectar, confitures, piure and compotes with a special flavour and of a higher quality, as well as sugared fruit and so on. The aim of this paper is to present the Excelsior clingstone variety, an American variety, cultivated at the Research Station for Fruit Growing Constanta, taking into consideration the production performance, both from a quantitative and qualitative point of view. To this extent, observations, measurements and determinations were performed regarding the productivity, the resistance to the attack of the main pathogen agents, the fruit quality and their adequacy for being processed as confiture, jam, nectar and stewed fruit. The obtained results reveal that the trees, having a medium vigour and an average height of 2272 cm, begin blossoming in the period between March 30th and April 10th and this phenophase lasts for 21 days, until April 18th-25th. The ripening of the fruit takes place in the third decades of the month of September, being the latest variety of peach cultivated in our country. The fruit are big (over 100 g), with the pulp being flavoured and firm, while the dry soluble substance represents 9.5% and the titrable acidity is of 0.57%. The stone represents 7.4% of the fruit's weight. The production is of 38.4 kg/tree and 31987 kg/ha. The readiness of the fruit for industrial processing is very good, the four products obtained through processing (confiture, jam, compote, nectar) obtaining the grade "very good" following the sensorial testing. All these characteristics recommend the Excelsior variety for extension in orchards and gardens.

Key words

productivity, resistance to the attack of the pathogen agents fruit quality, suitability for processing

Specific management measures for the 9260 habitat – Forest vegetation with *Castanea sativa*

Merce O.^{1*}, Turcu D. O.¹, Cântar I. C.¹, Cadar N.¹

¹Forest Research and Management Institute – Timișoara branch

*Corresponding author. E-mail: oliver_merce@yahoo.com

Abstract The Natura 2000 sites are represented by two types of protected areas Sites of Community Importance (SCIs) and Special Protection Areas (SPAs, especially for bird species' protection). Forests can be considered one of the most important components of the natural environment in Europe. One indicator of the vitality of forests is that the forest biotope hosts a large number of species of plants and animals. The forest habitat "9260 – Forest vegetation with *Castanea sativa*" is located in the alpine and continental bioregions. Its conservation status can be maintained or restored in combination with economic management of forests, consequently in this habitat the economic activities can be continued without substantial changes.

Key words

the 9260 habitat, management, Natura 2000

Study on forest accessibility and collection distances from Moldova Nouă, as the key in defining of eco-productive technologies

Moatăr Mihaela¹, Chisăliță I. ¹, Ștefan Carolina¹, Stanciu S. ², Foră C. ¹

¹Faculty of Horticulture and Forestry Timișoara; ²Faculty of Farm Management;

*Corresponding author. Email: mihaelamoatar@yahoo.com

Abstract Develop a network of forest roads in accordance with the interests of forest protection and production, results in the implementation of forestry work and the upper and rational exploitation of all forest products, from which the wood has the highest weight. In any case, however, an inaccessible forest area out of business in wood and non-wood resources, sometimes considerable, difficult execution forestry work, creates a high potential ecological risk, limited tourism and economic development in general. In relation to how studies should be conducted to equip forest roads can issue differ, depending on the ability, experience and tradition that has every country in this field.

Key words

forest accessibility, collection distances, ecoproductive technologies

Researches concerning the behavior of torrents correction works from Valea Miniș River Watershed

Moatăr Mihaela¹

¹Faculty of Horticulture and Forestry Timișoara

*Corresponding author. Email: mihaelamoatar@yahoo.com

Abstract Under our country's relief, rock and precipitation, creating a condition very favorable potential torrent, the main factors that led to the onset of rain events in the mountain and hilly in our country and hence disruption of

Key words

torrential phenomena,

hydrological regime of most water courses , consisted of altering the functions of protection of vegetal cover, and disturbance of physical-biological functions of soils. In particular, by exploiting irrational and savage destruction of forests - the important factor regulate the water flows - have been created to the outbreak of intense torrential phenomena, which resulted in almost all branches of the national economy suffers, every year, directly or indirectly, significant damage. Torrential corrections in hydrographical basin are needed because of the beneficial effects they can produce.

hydrographic basin,
morphometric and
hydrological calculations

Investigating forest canopies using modern field-based methods

Turcu, D. O.^{1*}, Merce O.^{1,2}, Cântar I. C.¹, Cadar N.¹

¹Forest Research and Management Institute – Timișoara branch; ²Banat University of Agricultural Sciences and Veterinary Medicine “King Michael I of Romania” from Timisoara – Faculty of Agriculture

*Corresponding author. Email: turcu_dani@yahoo.com

Abstract The forest canopy is one of the most active parts in the functioning of the forest ecosystem. Important physiological processes are developing in the canopy like respiration and other gas exchanges, transpiration, and, most important, photosynthesis. Therefore, the shape and properties of the canopy represent key elements of the forest structure and dynamics. This paper expresses one of the most modern field-based methods of canopy investigation, taking as a reference the most complex forest structure available in the country – the virgin beech forest from Izvoarele Nerei Nature Reserve, SW Romania.

Key words

forest canopy, horizontal forest structure, vertical forest structure, natural forests

Specific management measures for the beech forest habitats from Western Romania

Turcu, D. O.^{1*}, Merce O.^{1,2}, Cadar N.^{1,2}, Simon-Cernescu, Nicoleta^{1,2}

¹Forest Research and Management Institute – Timișoara branch; ²Banat University of Agricultural Sciences and Veterinary Medicine “King Michael I of Romania” from Timisoara – Faculty of Agriculture

*Corresponding author. Email: turcu_dani@yahoo.com

Abstract Beech (*Fagus sylvatica* L.) forests cover vast areas on the European continent, being a very important, even emblematic tree species, definitory for many forest ecosystems. It represents one of two very important tree species for Romania and it has particularly large extent and good ecological conditions in the Western part of the country. Beech is also very present in the Natura 2000 protected areas from the region, a fact that shows a current need for specific management measures for the beech forest habitats of the region. The current paper aims to synthesize the specific management measures and practices for the beech forest habitats, the most frequent forest habitats in the area and the with best stability.

Key words

Natura 2000, beech forest habitats, management measures

The evaluation of somatic variability in the callus of bitter melon (*Momordica charantia* L.) using molecular methods

Simina Alina¹, Botau Dorica¹, Popescu Sorina¹

¹Banat's University of Agricultural Sciences and Veterinary Medicine, "King Michael of Romania" Horticulture and Silviculture Faculty;

*Corresponding author. Email: dbotau@yahoo.com

Abstract The cultivation methods for callus for a long period under the influence of phytohormones allow the selection of cell lines with somatic variation, which can be useful for the production of valuable metabolites. In the present research we studied based on molecular methods the somaclonal variability that is appearing after a long period of callus cultivation from bitter melon on MS medium added with different hormonal balances. Using the RAPD markers we established that some tissue lines present modifications at DNA level of 3 years callus cultivation with hormonal balances. In these conditions it is possible that the binding sites of the used primers can be affected.

Key words

Momordica charantia, callus, somatic variability

Physical and chemical traits of new apricot fruit selections

Petrisor Cristina

Research and Development Station for Fruit Tree Growing Baneasa, Bdv. Ion Ionescu de la Brad, No.4, Sect.1, Bucharest, Romania

*Corresponding author. Email: crisstop@yahoo.com

Abstract Fruits of fourteen apricot selections grown in south area of Romania were collected at full ripening during the growing season of two years. Some selected compositional characteristics such as: weight, dry matter, acoustic firmness index, color parameters, carotenoid pigments, soluble solid content, titratable acidity, were investigate. A high variability was found in the apricot selections evaluated and significant differences among them were found. The results have shown that weight, dry matter, soluble solids of H1, H2, H3, H5, H8, H9 apricot selection are considerably higher than the other selections investigated in this study. Results also showed that apricot selections H1, H2, H3, H4, H5, H9, H14 had high concentration of the carotenoids pigments. We concluded that H1, H2, H3, H5, H9, have an important value as a germoplasm material in order to obtained new apricot cultivars with a high quality in breeding program.

Key words

color, dry matter, apricot fruit, firmness index

Ecological reconstruction of *Pinus nigra* spp. *banatica* stands from the South-Western Romania

Simon-Cernescu Nicoleta^{1*}

¹Forest Research and Management Institute, Timișoara branch

*Corresponding author. Email: nicoletacernescu@yahoo.com

Abstract Current work approach the ecological reconstruction of *Pinus nigra* spp. *banatica* stands affected by forest fires in southwestern Romania, respectively across OS Baile Herculane. The amelioration perimeter in the study is located in Production Unit no VI, management unit no 108 B, with an area of 25 ha. The paper relates to the material and methods for working on ecological reconstruction of these stands, by following all steps from seeds collection and saplings production to afforestation works. Results and conclusions of the ecological reconstruction of *Pinus nigra* spp. *banatica* stands, refer to the successful of these works and also to caring works required in order to this work be a success.

Key words

ecological reconstruction, Banat black pine, *Pinus nigra* spp. *banatica*

The influence of main climatic factors on *Chardonay*, *Feteasca regala*, *Sauvignon* and *Feteasca neagra* varieties

Vizitiu Diana^{1*}, Onache Anca¹

¹National Research and Development Institute for Biotechnology in Horticulture Stefanesti-Arges

*Corresponding author. Email: vizitiud@yahoo.com

Abstract Grapevine plants adaptation to the climatic conditions which are in continuously changing is essential for the obtaining of the healthy grapes productions and the superior quality wine. The understanding the climatic change is very important because they help to a proper application of the vineyards technologies. The climatic changes may modify the grapevine biological cycle and can influence the quantity and quality of grape production by earlier budburst followed by late spring frosts, or by low temperatures and abundant precipitations during flowering. The climatic conditions from 2011-2014 have influenced differently the phenological phases and the sugar accumulation, as well as the acidity content, on the entire period of the study. These have been influenced by largely the precipitations which were reduced in 2011, 2012 and 2013, and in excess in 2014 compared with the multiannual averages. Also, the temperature negatively influenced the acidity content, through the abnormal accumulation of tartaric acid.

Key words

sugar, acidity, grape, grapevine, viticulture

The response of *Coleus sp.* plants to treatment with growth regulators

Vâșcă- Zamfir Diana^{1*}, Bălan Daniela¹, Luță Gabriela¹, Gherghina Evelina¹

¹University of Agronomic Sciences and Veterinary Medicine Bucharest

*Corresponding author. E-mail: dianazamfir2000@yahoo.com

Abstract The *Coleus* genre include leaves decorative annual and perennial species with oval leaves, colored in shades of green, red, purple, white, yellow, originating in tropical regions of Asia and Africa, used both in outdoor and indoor spaces.

The aim of the present study was to assess the effect of treatment of *Coleus* plants with different concentration of Cycocel solutions on plants growth and development and also on the pigments amounts in the leaves.

Cycocel (chlormequat chloride) is one of the most widely used plant growth regulators in order to reduce stem elongation, to induce early flowering, to improve flowering and to produce compact plants with multiple buds per shoots.

The researches performed indicated that foliar applications of varying concentrations of Cycocel determined a decrease of the plants height and of the shoots length, so that more compact plants were obtained. It also induced increased amounts of pigments (chlorophylls, carotenes, anthocyanins) in the leaves and color enhancement.

Key words

Coleus sp., Cycocel, growth retardants, pigments

Evaluation of quality, growth, and physiological potential of various turf grass cultivars for shade garden

Saif Malik¹, Shoaib ur Rehman¹, Adnan Younis^{1,2*}, Muhammad Qasim¹, Muhammad Nadeem², Atif Riaz¹

¹Institute of Horticultural Sciences, University of Agriculture, Faisalabad, Pakistan; ²Department of Horticulture, Kyungpook National University, Daegu, 702-701, Korea.

*Corresponding author: adnan@knu.ac.kr

Abstract Achieving excellent performance of the warm season turfgrasses under low light environment is a bit difficult task. The present study was designed to explore the response for quality, growth, and physiological potential of various turfgrass cultivars adopted in today's landscape. During the growth period of six months, all cultivars exhibited variations in color, texture, and visual quality. Maximum quality scores (8.2) for color were achieved in cultivar 'Fine Dacca'. Stolon diameter was maximum (2.1 mm) in the ecotype Khabbal in the month of December. Maximum fresh weight of clips (4.2 g) was noted in the cultivar Fine Dacca in the month of April followed by the ecotype Khabbal. Similarly the rate of photosynthesis was higher in the cultivar Fine Dacca ($7.23 \mu\text{mole m}^{-1}\text{S}^{-1}$) in the month of March followed by Tifway. Higher Chlorophyll contents ($2.73 \text{ mg g}^{-1} \text{ FW}$) were observed maximum in the cultivar Tifway in the month of December. Similarly, all cultivars exhibited contrasting results for transpiration, stomatal conductance and internal carbon dioxide concentration under the sun and shade conditions. From the results of the present study it was found that Bermudagrass cultivar 'Fine Dacca' performed better under sunny conditions, whereas, Zoysiagrass cultivar 'Korean' performed better under shady conditions.

Key words

Bermuda grass, Gardening, Lawn, Physiology, Tolerance

Evaluation of the microbiological contamination of air in a company designed to obtain wooden packaging and sticks used in the food industry

Misca Corina¹, David I.¹, Jianu C., Rinovetz A.¹, Bujanca G.¹, Misca C.B.², Marginean Oana-Maria³, Misca L.C.³

¹Banat's University of Agricultural Sciences and Veterinary Medicine of Timisoara, Faculty Food Processing Technology, Timisoara, 300645, Calea Aradului 119, ²Medical Dispensary, Varias 551, 307455 district Timis

³UMF Victor Babes Timisoara, 300041, Piata Eftimie Murgu 2

*Corresponding author. Email: corina_misca@tpa-timisoara.ro

Abstract This paper aims to analyze the microbiological load of the air from a wood processing enterprise from the log phase resulted in forest harvesting until the obtained finished products –used for food packaging and sticks. The microbiological parameters determined, in accordance with the law, verifies the presence of colony forming units, total coliforms, coagulase positive *Staphylococcus*, fecal streptococci respectively β hemolytic streptococci and fungi. The evaluation was conducted monthly in 2013, in two halls - production and finished product selection. The results show the dependence to environmental factors of the microbiological load – temperature, humidity, aswell as other factors – the production process and the proper cleaning processes.

Key words

wood, UFC, coliforms, staphylococci, streptococci, fungi

Antioxidant activity of thyme extracts. Influence of the extraction solvent

Costescu Corina Iuliana^{*1}, Hădărugă Nicoleta Gabriela¹, Szakal R.¹, Pogor Veronica¹, Popescu (Pintilie) Georgeta Sofia¹, Riviş A.¹, Hădărugă D. I.²

¹Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timișoara, Faculty of Food Processing Technologies, Calea Aradului 119, Timișoara, România; ²Polytechnic University of Timișoara, Department of Applied Chemistry, Organic and Natural Compounds Engineering, Carol Telbisz 6, Timișoara, Romania

*Corresponding author. Email: cor_costescu@yahoo.com

Abstract In this paper it has been studied the antioxidant effect of alcoholic extracts of wild thyme through the use of 2,2-diphenyl-1-picrylhydrazyl (DPPH) method. There were carried out solid-liquid extractions using different concentrations of ethanol-water solutions and the antioxidant effect was evaluated based on the average reaction rates of DPPD on different intervals of time.

Key words

thyme, solid-liquid extraction, ethanol-water solution, antioxidant activity, volatile oil

Chemical characterisation of white (*Morus alba*), and black (*Morus nigra*) mulberry fruits

Popescu (Pintilie) G. Sofia¹, Velciov Ariana-Bianca¹, Costescu Corina¹, Gogoasa I.¹, Gravila Corina², Petolescu Cerasela³

¹Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" Timisoara, ¹Faculty of Food Processing Technology, ²Faculty of Animal Science and Biotechnology, Faculty of Horticulture and Forestry, , 300645 Timisoara, Roumania,

*Corresponding author. Email: sofiapopescu@yahoo.com

Abstract In the present study, 2 types of mulberry (white (*Morus alba* L.) and black (*Morus nigra* L.)) fruits from local areas were investigated for fat content, total antioxidant capacity and polyphenols content. Total antioxidant capacity was analyzed using CUPRAC method and total polyphenols content by Folin Ciocalteu method. The highest total phenolic contents were observed in black mulberry and *M. alba* had the highest total fat content.

Key words

mulberry species, fat content; total polyphenols, antioxidant capacities, CUPRAC method

Characterization of tourism activity from Central Region, Romania

Iancu T.^{1*}, Hurmuzache Tabita Cornelia¹

¹Banat's University of Agricultural Sciences and Veterinary Medicine „Regele Mihai I al României”from Timisoara

*Corresponding author E-mail: tibi_iancu@gmx.de

Abstract Tourism represents now undoubtedly a phenomenon that dominates the contemporary world, a profitable segment of the world economy, which is characterized through dynamics, multiple motivations and a variety of forms of expression. If at first tourism activity has a strong social character, in recent years, has become one of the most important economic factors. Currently the two correlative sides of tourism are closely correlated, tourism gaining an important social and economic role.

Key words

Central Region, tourism, accommodation capacity, overnight stays, average length of stay

Issues characterizing Romanian agricultural production

Iancu T.^{1*}

¹Banat's University of Agricultural Sciences and Veterinary Medicine „Regele Mihai I al României”from Timisoara

*Corresponding author E-mail: tibi_iancu@gmx.de

Abstract Agriculture is still an important sector of the national economy. Having a considerable potential, this sector has the purpose to contribute greatly to the recovery and development of the national economy. Through the importance it has in the Romanian economy, agriculture is an important social and environmental factor, providing food for population and also raw materials for many processing industries.

Key words

agricultural potential, plant agricultural production, animal farming