The influence of fertilizers upon mineral substances and macroelement content of different triticosecale varieties grown in West Romania

Antanas (Bojin) Simona [1*], Lazureanu A.[2], Radulov Isidora[3]

[1]PhD student of Banat's University of Agriculture Sciences and Veterinary Medicine, Timisoara and of Project POSDRU/CPP107/DMI1.5/S/ 80127, [2]Faculty of Horticulture and Forestry, Banat's University of Agriculture Sciences and Veterinary Medicine, Timisoara; [3] Faculty of Agriculture, Banat's University of Agriculture Sciences and Veterinary Medicine, Timisoara.

*Corresponding author. Email: simo_lavi84@yahoo.com

Abstract The aim of this paper was to determine the fertilizers influence upon mineral substances and macroelement content of different triticosecale varieties grown in West Romania. Four triticosecale varieties were subjected to a factorial experience: factor A – triticosecale varieties: Mungis, Gorun, Trismart and Tulus; factor B - base fertilization with the following experimental variants: V_1- N_0 P_0K_0, V_2-N_{45} $P_{45}K_{45}$, V_3-N_{60} $P_{60}K_{60}$, V_4-$N_{120}P_{60}K_{60}$.
The research was carried out in the territory of the Didactic Station Timisoara of USAMVB Timisoara and followed the influence of fertilizers on the minerals and macronutrients (calcium, potassium, magnesium). Determination of mineral substances was made by calcination at 600°C and macroelements conten was performed with the help of spectrometer AAS (Varian 220 FAA equipment) in the Laboratory of Soil Science and Plant Nutrition, Faculty of Agriculture, USAMVB Timisoara.
The supply with mineral fertilizers change the samples **potassium contents** analysed in the case of application V2 (N45P45K45) fertilization variant compared with V1 (N0 P0K0). Significant differences regarding potassium content are recorded for variant V3 (N60P60K60) compared to variant V4 (N120 P60K60); The highest ***content of magnesium*** is recorded in MUNGIS variety.
No significant differences were registered between magnesium content in the experimental variants with different doses of NPK fertilizers.

Key words

triticosecale, minerals, macroelements

Assessment of "in vitro" propagation potential for some gloxinia (*Sinningia speciosa*) genotypes

Ioja-Boldura F[*1]., Ciulca S.[1]

[1]USAMVB Timisoara, Faculty of Horticulture and Forestry,

*Corresponding author. Email: florin.ioja.b@gmail.com

Abstract: Gloxinia (*Sinningia speciosa* Hierm) belongs to the family Gesneriaceae and is a commercially important ornamental plant. Gloxinia produces single or double flowers that are available in a variety of colors. This plant can be traditionally propagated by leaf, stem, rhizome, seed, and crown cuttings from a mature plant after blooming. The biological material was composed of five genotypes of Gloxinia (*Sinningia speciosa*): Kaiser Wilhelm;

Key words

gloxinia, in vitro, propagation potential

Kaiser Friedrich; Mont Blanc; Prince Albert; hybrid MA. The aim of this study was to investigate the in vitro regeneration potential of different gloxinia genotypes on different hormonal balances, in order to further increase the efficiency of their multiplication rate. The hormonal balance has the highest contribution on the variability of this trait (85.73%), followed by the genotype (5,51 %), while the culture duration had a lower contribution of 2.24 %. Kaiser Friedrich variety recorded average values of shoots number/explant significantly higher to other genotypes. The balance BA4+ANA0.1 proved to be the most effective for the initiation and formation of shoots, thus resulting statistically assured increases of shoots number/explant compared to the other studied hormonal combinations.

Studies concerning the influence of genotype and hormone balance on "in vitro" shoots growth of gloxinia (*Sinningia speciosa*)

Ioja-Boldura F*[1]., Ciulca S.[1]

[1]USAMVB Timisoara, Faculty of Horticulture and Forestry,

*Corresponding author. Email: florin.ioja.b@gmail.com

Abstract: Gloxinia (*Sinningia speciosa* Hierm) belongs to the family Gesneriaceae and is a commercially important ornamental plant. Gloxinia produces single or double flowers that are available in a variety of colors. This plant can be traditionally propagated by leaf, stem, rhizome, seed, and crown cuttings from a mature plant after blooming. The biological material was composed of five genotypes of Gloxinia (*Sinningia speciosa*): Kaiser Wilhelm; Kaiser Friedrich; Mont Blanc; Prince Albert; hybrid MA. The aim of this study was to investigate the influence of genotype and hormone balance on in vitro shoots growth of gloxinia, in order to reduce the duration of the regeneration cycle. The culture duration had the highest contribution (90.14 %) on the variability of this trait, while the hormonal balance has an effect of 6.46%, and the genotype contributes significantly only with 0.41%. The hybrid MA registered a shoots growth significantly superior to the other, achieving increases ranging from 9.9% towards Kaiser Wilhelm and 28.61% to Mont Blanc. Also, Kaiser Wilhelm variety showed a significantly higher shoot length compared to Kaiser Friedrich and Mont Blanc. The use of hormonal balance with benzylaminopurine 4 mg/L in combination with alpha-naphthylacetic acid 0.1 mg/l has allowed a better development of shoots, statistically assured increases with values between 24 and 242% compared to other hormonal balance, respectively.

Key words

gloxinia, in vitro, shoots growth, genotype, hormone balance.

The influence of site characteristics on beech growth in northeastern Romania

Lupescu M.[1*], Curca M.[1]

[1]University "Ștefan cel Mare", Faculty of Forestry, Suceava, 13 Universității Street, 720229, Suceava, Romania

*Corresponding author. Email: lupescu.mihai@gmail.com

Abstract The influence of orographic factors on beech growth (Fagus sylvatica L.) was studied in stands located in north - eastern Romania. 52 stands were analyzed. The studied stands range from 45 degrees northern latitude to 48 degrees northern latitude and 25 degrees eastern longitude to 28 degrees eastern longitude. Statistical parameters of growth series such as the correlation between trees in a stand, the average size of annual tree ring, standard deviation and altitude, slope exposure and latitude influence on beech growth were analyzed for the period 1959-2008. Correlation study showed that this is quite low on large surfaces of the study area. The highest values are found in the eastern half of Suceava county. The highest values of radial growth are achieved in areas with average altitude that provide a favorable rainfall treatment, but there are also exceptions such as areas with low altitude from Botosani county where beech found optimal conditions for growth. Standard deviation correlated with altitude. The natural tendency is to achieve smaller variations in annual tree ring size at low altitudes, higher variations in annual tree ring size at average altitudes and lower variations of the annual tree ring size at high altitudes. The analysis of the spatial variation of the analyzed series according to altitude led to the formation of three groups. The first group consists of growth series from high altitudes - 900 m, 1000 m, 1100 m and 1200 m The second group consists of series from middle altitudes that range from 500 m to 800 m. The third group consists of growth series achieved at low altitudes - 200 m, 300 m and 400 m The explanation for series spacing is related to the environmental conditions in which these series were formed. At low and high altitudes, slope exposition has a stronger influence, leading to environmental factors changes with a larger impact on growth. The slope exposition at medium altitudes has a lower influence on growth.
Hierarchical analysis (cluster) of the series led to grouping according latitude.

Key words

spruce, variability, radial growth, altitudinal gradient

The influence of site characteristics on spruce growth in northeastern Romania

Lupescu M.[1*], Curcă M.[1]

[1]University "Ștefan cel Mare", Faculty of Forestry, Suceava, 13 Universității Street, 720229, Suceava, Romania

*Corresponding author. Email: lupescu.mihai@gmail.com

Abstract Orographic influence on the growth of spruce (Picea abies L.) was studied in stands located in north-eastern Romania. 102 stands were analyzed for spruce. Studied area ranges from 46 degrees north latitude to 48 degrees north latitude and 25 degrees east longitude to 26 degrees east longitude. There were analyzed statistical parameters of growth series such as the correlation between trees in a stand, the average size of the annual

Key words

spruce, variability, radial growth, altitudinal gradient

ring, standard deviation and the influence of altitude, exposition and latitude on spruce growths for the period 1959-2008. Correlation between trees in the same stand, for spruce, is closely related to the altitude. The highest correlation values are found in stands located at high altitudes in mountain areas in Suceava county and Neamt county. Spruce achieved high levels of annual growth in low altitude areas with sufficient water and the annual ring size is reduced with increasing altitude. Standard deviation of the spruce series indices is strongly correlated with altitude. Its values increase with decreasing altitude and in mountainous areas with high altitude standard deviation values are low. Analysis of the spatial variation of the series analyzed according to altitude caused the formation of three main groups. The first group consists of series growing at high altitudes: 1500 m and 1600 m. The second group consists of middle altitude that ranges from 900 m to 1400 m. Third group consists of growth series formed at low altitudes: 600 m, 700 m and 800 m. The slope exposition determines formation of groups only in higher average altitudes (1200 m - 1400 m), where the series with southern expositions are characterized by negative values and the series with northern exposition are expressed by positive values on the second axis. Analysis of the spatial variation of the analyzed series prompted the formation of two groups according to latitude.

Researches concerning the evolution of yield in some grape varieties by applying different vineyard floor management systems

Petru A.[1*], Dobrei A.[1], Dobrei Alina[1], Boc R.[1]

[1]USAMVB Timisoara, Faculty of Horticulture and Forestry

*Corresponding author. Email: adrian.petru@mah.ro

Abstract Researches were carried out in Timisoara Didactic Station vineyard in 2011 and 2012 and focused on the influence of different vineyard floor management on the yield quantity.

It has been studied two grape varieties from different groups: Burgundy variety from superior red wines group and Silvania variety from table grape group with a medium maturation.

Vineyard floor management variants were: V_1 – row middles herbs and grasses strips, bare soil by tillage undervine (tractor and adjustable offset rotary tiller); V_2 – bare soil by tillage floor between vines (cultivator) + herbicides treatment undervine; V_3 – row middles bare soil by tillage (cultivator) + bare soil by tillage undervine (tractor and adjustable offset rotary tiller); V_4 - row middles soil ripping (tractor and ripper) + bare soil by tillage undervine (tractor and adjustable offset rotary tiller); V_5 – row middles herbs and grasses strips + manual hoeing undervine; V_6 - bare soil by tillage row (tractor and rotary hoe) + rotary hoe undervine (tractor and adjustable offset rotary tiller); V_7 – row middles herbs and grasses strips+ herbicides treatment undervine. Out of the seven types of vineyard floor management was intended to identify the most economically efficient, this being done by setting yield per hectare and per vine for the varieties studied in the years in which research was performed.

Key words

quantitative production, grape varieties, soil maintenance

Influence of vineyard floor management on the variety Silvania buds viability, in SD Timişoara growing conditions

Petru A. [1*], **Dobrei A.**[1], **Dobrei Alina**[1], **Nistor Eleonora**[1]

[1]USAMVB Timisoara, Faculty of Horticulture and Forestry

*Corresponding author. Email: Adrian.petru@mah.ro

Abstract Researches were done in 2011 – 2013 period, in Timişoara Didactic Station, and focused on studding Silvania grape variety to found out which from several types of vineyard floor management is the best. Accordingly, were established seven variants of floor management and was studied their influence regarding the number of viable buds. Vineyard floor management variants were: V_1 – row middles herbs and grasses strips, bare soil by tillage undervine (tractor and adjustable offset rotary tiller); V_2 – bare soil by tillage floor between vines (cultivator) + herbicides treatment undervine; V_3 – row middles bare soil by tillage (cultivator) + bare soil by tillage undervine (tractor and adjustable offset rotary tiller); V_4 - row middles soil ripping (tractor and ripper) + bare soil by tillage undervine (tractor and adjustable offset rotary tiller); V_5 – row middles herbs and grasses strips + manual hoeing undervine; V_6 - bare soil by tillage row (tractor and rotary hoe) + rotary hoe undervine (tractor and adjustable offset rotary tiller); V_7 – row middles herbs and grasses strips+ herbicides treatment undervine. Regarding tillage variants was found that the worst results were obtained when the row middles were maintained grassy and soil was manually hoeing undervine (V5) or with herbicides treatment (V7). In both cases differences compared to control are distinct significantly negative.
The aim is to identify the most efficient variants of soil maintenance, as regards the enforcement costs; the economic factor is today a very important factor decisive in the vineyard efficiency.

Key words

buds viability, ripping, soil milling

Drought sensibility of Norway spruce (*Picea abies* [L.] Karst.) provenance installed outside their natural area

Curcă M.,[1]* **Lupescu M.**[1]

[1]University Stefan cel Mare Suceava, Romania

*Corresponding author. Email: c.marius83@yahoo.com

Abstract The present stands installed outside their natural area are deconstructed in an ecologically point of view due to climatic influence, favored by the defectous management mode through inappropriate application of technical rules specify to this stands.The actual situation of spruce stands and other coniferous species placed outside their natural area requires special attention in order to obtain optimal solutions to maintain, or if necessary, replacement of these crops and return to the natural composition of stands replaced. The research accomplished till present have shown that precipitation is the main limiting climatic factor for extending of spruce outside their natural area vegetation. The study area covered the Hantesti experimental behavior of autochthon and European spruce provenance installed outside their natural area in 35 years of existence, under the action of disturbances. Research has accentuate the response and vulnerability of spruce provenance on radial growth under the influence of drought periods.

Key words

outside the vegetation range, provenance, drought sensibility, Norway spruce

The dynamics of forest stands composition in Range Forest Adancata in the period 1950-2005

Curcă M.[1]*, Lupescu M.[1]

[1]University Stefan cel Mare Suceava, Romania

*Corresponding author. Email: c.marius83@yahoo.com

Abstract Current forests are the result of cumulative stationary conditions (relief, soil, climate) and anthropogenic management materialized the way in the past. Often stands today is totally different from the natural types - fundamental of which were from.
In the context of climate change, pollution or inadequate application of silvoculturale measures, trend analysis of succession forest species and the mechanisms that underlie them, will allow modeling existing structures by applying some silvoculturale measures in accordance with the principles of sustainable management. Based on forest planning, analysis was made of the dynamics of forest composition in the last half of the twentieth century in the Range Forest Adancata

Key words

outside the vegetation range, forest planning, composition

The manifestation of the productive potential of the NJC 110 clingstone cultivar in the pedo-climatic conditions of Dobrogea

Lămureanu Gh.[1*], Alexe Constanţa[2], Caplan I.[1]

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

[*]Corresponding author: Email: theangell_l@yahoo.com

Abstract Taking into account its economical value the peach tree is currently occupying the second position at a global level (following the apple tree), among the species with falling leaves. Being resistant to draught, the peach tree is among the few species which develop adequately in the plain and even the dry steppe areas, on condition that sheltered places be provided for it, given the fact that it is sensitive to frost. The evolution of the normal biological cycle is conditioned by the evolution of the temperature, both in the resting period as well as afterwards. The peach tree culture for industrial usage occupies a special place in the context of peach tree culture in general, having become more and more important lately and displaying a more complex problematic as compared to traditional cultures. The aim of this paper is to present the NJC 110 clingstone cultivar 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 fruit quality and their adequacy for being processed as comfiture, jam, nectar and stewed fruit. The obtained results reveal that the trees, having a medium to great vigour and an average height of 280 cm begin blossoming in the period between March 29th and April 5th and this phenophase lasts for 20 days, until April 18th-23rd. The ripening of the fruit takes place in the first two decades of the month of July. 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 0.43%. The core represents 8.9% of the fruit's weight. The production is of 24-27 kg/tree and 20t/ha.

Key words

productivity, fruit quality, suitability for processing

The resistance to the attack of the main pathogen agents of several clingstone cultivars from the experimental crop of the Research Station for Fruit-Growing Constanta

Lămureanu Gh.

Research Station for Fruit Growing Constanta

Corresponding autor: E-mail: theangell_l@yahoo.com

Abstract The peach tree's resistance to disease as well as the cultivar's sensitivity is highly influenced, as far as certain pathogen agents are concerned, by the environmental conditions of the crop. The territory of the RSFG Constanta is influenced, from a climatic point of view, both by the Black Sea as well as the Danube, which means that spring arrives later, summers are droughty and autumns are long and warm. The introduction within cultures of peach tree cultivars which are more resistant to the attack of the most harmful pathogen agents offers numerous economic advantages and is consistent with the protection of the environment. The purpose of this paper is to highlight the cultivars the most resistant to pathogen agents which are important from an economic point of view for the industrial peach tree and to recommend said cultivars for extension in production. The observations and measurements were carried out in two comparative contest crops established in 1992 (17 cultivars) and 1999, respectively (6 cultivars). Four types of pathogen agents were monitored: *Taphrina deformans* (blistering of the leaves), *Cytospora cincta* (perennial cancer of the peach tree), *Monilinia laxa* (moniliosis or the monilinian drying of the branches) and *Monilinia fructigena* (the fruit become rotten and mummified). Most of the studied cultivars and hybrids manifested an increased resistance to the attacks of the harmful pathogen agent *Taphrina deformans*, thus entering the resistance classes of no attack (N.A.) or tolerant (T). As far as the attack of the *Cytospora cincta* fungus is concerned, the hybrids NJC 108 and NJC 84 sel.clon. proved to be rather sensitive, which is not the case for the attack of the *Monilinia* fungi, to which all the studied cultivars and hybrids proved to be tolerant (T).

Key words

intensity and frequency of the attack, resistance class

Studies regarding the influence of planting distances on some morphological characters at some ornamental vegetable species used in landscaping

Sălăvăstru Mihaela[1]*, Berar V.[1]

[1]BUASVM from Timisoara, Faculty of Horticulture and Forestry

*Corresponding author. Email: mihaelasalavastru@gmail.com

Abstract Ornamental garden is not a new idea, the vegetables were almost always considered attractive these having an old tradition since ancient times.
By the term edible is understood a combination of vegetables with ornamental plants, only combinations of vegetable plants, landscaping that can include only vegetables plants and landscaping that can include combinations at any proportion between fruit trees, fruit shrubs, vegetables plants, herbs and edible flower plants.
Landscaping possibilities with vegetables plants are several and varies according to the aesthetic sense of every landscape architect.

Key words

ornamental vegetable species, morphological characters, landscaping

Research regarding the influence of nutritional mixtures on plant vigor at some species of ornamental vegetables

Sălăvăstru Mihaela[1]*, Berar V.[1]

[1]BUASVM from Timisoara, Faculty of Horticulture and Forestry

*Corresponding author. Email: mihaelasalavastru@gmail.com

Abstract The nutritive mixture used to produce seedlings plays an important role in obtaining best quality plants and considering this they must meet the following criteria: good structure, permeability and richness in nutritive elements.
The biological material used in our experiments was represented by the following species and varieties: *Brassica oleracea* convar. *acephala* (D.C.) Alef. var. *sabellica* L. (cv. Nagoya și cv. Halbhoher Grüner Krauser), *Capsicum baccatum* L. var. *fasciculatum* Sturtev. (cv. Apache), *Capsicum baccatum* L. var. *pendulum* (Willd.) Eshbaugh. (cv. Bishop's Crown), *Cynara scolymus* L. (cv. Green Globe), *Lactuca sativa* L. convar. *incocta* Helm. var. *crispa* L. (cv. Lollo Rossa), *Lycopersicum esculentum* Mill. var. *cerasiforme* (Dunal) A. Gray (cv. Large Red Cherry).

Key words

ornamental vegetable species, seedlings, nutritive mixture

The Exotic Fruits, Source of Minerals

Alda Liana Maria*[1], Cuc Liana Lavinia[2], Grama Paula[1], Velciov Ariana[1], Rada Maria[3], Gogoasa I.[1], Bordean Despina Maria[1], Alda S.[1] and Gergen I.[1]

[1]University of Agricultural Sciences and Veterinary Medicine of Banat "King Mihai I of Romania" Timisoara; [2]University "Aurel Vlaicu" Arad; [3]University of Medicine and Pharmacy “Victor Babes” Timisoara

*Corresponding author. Email: lianaalda@yahoo.com

Abstract This paper is a study regarding the distribution of some minerals in different imported fruits, known as exotic fruits. We determined, through flame atomic absorption spectroscopy (FAAS), the contents of Ca, Mg, Na, K, Fe, Mn, Zn, Cu, Ni, Co, Cr, Pb, and Cd of such exotic fruits as pineapples, mango, avocado, grapefruits, oranges and lemons. The results obtained from experimental analysis of macro-and micro-elements of studied fruits reveals that that these imported fruits are characterized by high nutritious metallic element content. The minerals distribution among this fruits is uneven. Experimental results show important contents of minerals and small, insignificant concentrations of toxic metals, which make this fruit category important for its supply of macro- and micro-elements, that completes the range of bioelements from native varieties of fruits.

Key words

pineapples, mango, avocado, grapefruits, oranges, lemons, minerals

Researches Regarding some Winter Wheat Cultivars Behavior under Pedo-Climatic Conditions of Timis County

Alda Liana Maria[1]*, Cuc Liana Lavinia[2], Fora C.[1], Alda S.[1], Gogoasa I.[1], Bordean Despina Maria [1], Cristea T.[1] and Carciu G.[1]

[1]University of Agricultural Sciences and Veterinary Medicine of Banat "King Mihai I of Romania" Timisoara; [2]University "Aurel Vlaicu" Arad

*Corresponding author. Email: lianaalda@yahoo.com

Abstract This work is aimed to evaluate some qualitative indices in nine winter wheat varieties: Apache, Element, SO-207, Soissons, Sorrial, Exotic, Ciprian, Lovrin 34 and Sobbel, cultivated on a cambic chernozem, in Timis County, Romania, for a period of three years(2010-2013). Determination of Zeleny index, protein and gluten content in wheat grains were performed using OmegAnalyzer G device. The results show that protein and gluten content for all cultivars are strongly correlated with the climatic conditions. So, in 2011/2012 agricultural year all quality parameters analyzed were favorably influenced by the climatic conditions. Among all the cultivars, Ciprian registered the best quality indicators, followed by Element and Lovrin 34. In 2013 winter wheat cultivars Apache, SO-207 and Sobbel registered unsatisfactory values of the Zeleny index(under 30 ml). According to literature, our results reveals that Zeleny index is directly proportional to protein content. Regarding the impact of temperature and humidity on quality parameters of winter wheat, variations in climatic conditions influences the accumulation of protein in grain and its quality.

Key words

winter wheat, cultivar, protein, gluten, Zeleny index

The influence of culture technology upon the temporary storage capacity of tomatoes

Alexe Constanta[1*], Lamureanu Gh.[2], Chira Lenuta[3], Pricop Simona[4]

[1]Research and Development Institute for Processing and Marketing of the Horticultural Products – Bucharest; [2]Research Station for Fruit-Growing Constanta; [3]University of Agricultural Sciences and Veterinary Medicine Bucharest; [4]Ovidius University Constanta

[*]Corresponding author: Email: tantialexe@yahoo.com

Abstract Tomatoes are very important both in our country as well as worldwide from the point of view of the population's consumption. During the valorisation process the goal is to ensure that tomatoes get from the producer to the consumer while maintaining their quality which is why their temporary storage until the specific periods is often required. The duration of the maintaining of the quality depends on its realisation during the production process, during which various technological culture links are applied. This paper aims to present the influence of the cultivar, of the culture density and of the nutritional regime upon the temporary storage capacity of early and summer-autumn tomatoes coming from the Dobrogea region. The carried out experiments reveal that the best results concerning production/quality/storage capacity (the lowest quantitative losses and qualitative depreciations) were obtained by the Isalnita 50 and Buzau 1600 cultivars, which come from a crop having a density of 40,000 plants/ha, fertilised with NPK fertilisers with a concentration of 300:200:100 kg/ha.

Key words

cultivar, plant density, nutrition level

The crop technology - impact factor of the obtaining and maintaining of the quality of the onion

Alexe Constanta[1*], Vintila. M[1]., Lamureanu Gh. [2], Caplan I. [2]

[1]Research and Development Institute for Processing and Marketing of the Horticultural Products – Bucharest; [2]Research Station for Fruit Growing Constanta (Statiunea de Cercetare si Dezvoltare Pomicola Constanta)

[*]Corresponding author: Email: tantialexe@yahoo.com

Abstract The quality of the Romanian vegetable production is currently of a great importance as far as alimentation, horticultural economy and commerce with such perishable produce because that it determines competition on both the internal and the external market and, implicitly, the maintaining of the market for Romanian products in the context of an open, competitive market. This paper presents aspects concerning certain technological links which are extremely important for the realisation of the onion's quality and its ability to maintain its attributes during long term storage. The experiments are based upon a number of factors, among which the influence of the cultivar, the plant density and the level of fertilisation upon the physical and biochemical indicators related to the quality of the onion and to the quantitative losses and qualitative depreciations during storage under refrigerated conditions for various periods of time. The results revealed the fact that moderate densities and fertilisations ensure a long term quality of the onion, despite the fact that it is realised to the detriment of the quantity of the production.

Key words

physical and biochemical indicators, quantitative losses, qualitative alterations

Research on some biological and technological features of red wine varieties in conditions of "Minis Maderat" Vineyard

Drăgunescu Aneta Anca[1]*, Dobrei A.[1], Mălăescu Mihaela[1], Dobrei Alina[1]

[1]USAMVB Timisoara, Faculty of Horticulture and Forestry

*Corresponding author. Email: anca_dragunescu@yahoo.com

Abstract Capacity analysis of vine varieties to harness the natural potential of "Miniş-Măderat" Vineyard under the variable annual environmental conditions established on longer periods of time, confer the possibility of knowing the wine types obtained, on varieties and the need of cantonment of varieties in order to improve specialization and diversification of all vine productions.

The study made upon the agrobiological features and the main technological features of red wine varieties cultivated in "Miniş-Măderat" vineyard has a purpose the observations made upon the behaviour of Cadarcă, Cabernet Sauvignon, Merlot and Oporto in the climate and soil conditions of this vineyard.

The varieties were grafted on *Berlandieri* x *Riparia Kober 5 BB* rootstock. The vine plantations have 19 years since establishment, and the stocks are pruned in semi-high system with bilateral canes, the vines being supported on an espalier with three wires.

Along the research period there were made numerous observations and determinations regarding; buds' viability, vegetative phenophases'

Key words

wine varieties, viability, vegetative phenophases, production, quality

development, grapes' production and must's quality.

The studied varieties from "Miniş-Măderat" vineyard can be remarked by good and quality productions, which maintain and recommend them for extension in culture.

Research on the fertility, productivity and quality of some red wine varieties cultivated in conditions of "Plaiurile Drincei" Vineyard

Dragunescu Aneta Anca[1]*, Mălăescu Mihaela[1], Dobrei Alina[1], Dobrei A.[1]

*Corresponding author. Email: anca_dragunescu@yahoo.com

Abstract The goals of this research were to determine the technological, quantitative and qualitative potential and also to determine the physic-chemical and technological features of the studied red wine varieties: Cabernet Sauvignon, Merlot and Pinot noir.

In this vineyard the grape vines were planted at a distance of 2m x 1.2m, having a density of 4167 vine stocks/ha. The culture system is unprotected and the pruning system was Guyot. For each stock there were left 4 fruiting parts made from one replacement spur with 2-3 buds and a fruiting cane of 8-9 buds, giving a load of 32-36 buds/vine stock.

During the research period we made observations and determinations regarding the beginning of vegetative phenophases, soil's fertility, the productivity potential, production of grapes and its quality for each variety.

"Plaiurile Drincei" vineyard has optimum climate and soil conditions for grapevines, especially for red wine varieties; the fertility and productivity values of studied varieties are the ones specific for the grape varieties cultivated in the South of Romania; the production of grapes obtained in the two experimental years are a bit different, approximately equal to the average value.

We recommend the extension of vineyards cultivated with these red wine varieties.

Key words

fertility, productivity, production, quality

Researches regarding the impact of agro-technique measures upon amino acids content in different triticosecale varieties

Antanas (Bojin) Simona [1*], Lazureanu A.[2], Alexa Ersilia[3], Negrea Monica[3]

[1]PhD student of Banat's University of Agriculture Sciences and Veterinary Medicine, Timisoara and of Project POSDRU/CPP107/DMI1.5/S/ 80127; [2]Faculty of Horticulture and Forestry, Banat's University of Agriculture Sciences and Veterinary Medicine, Timisoara; [3]Faculty of Food Processing Technology, Banat's University of Agriculture Sciences and Veterinary Medicine, Timisoara.

*Corresponding author. Email: simo_lavi84@yahoo.com

Abstract The aim of this paper is to study the influence of agro-techniques measures, respectively the dose of fertilizer applied upon the essential and nonessential amino acid content of different triticosecale varieties. The results were correlated with protein content of the analyzed samples. Were used 4 triticosecale varieties: Mungis, Gorun, Trismart and Tulus with the following experimental variants: V_1- $N_0P_0K_0$, V_2-$N_{45}P_{45}K_{45}$, V_3-$N_{60}P_{60}K_{60}$, V_4-$N_{120}P_{60}K_{60}$.

The research was carried out in the territory of the Didactic Station

Key words

triticosecale, amino-acids, agro-technique measures

Timisoara of USAMVB Timisoara and followed the influence of fertilizers used in the experimental field upon aminoacids content of the triticosecale varieties studied. Have been identified 9 essential and nonessential amino acids: arginine, lysine, threonine, valine, tyrosine, serine, proline, leucine, histidine. The values determined were compared with data reported in the literature. Regarding correlations between protein and amino acid intake, it appears that there is a significant positive correlation between protein content and arginine content for Mungis and Tulus varieties and a negative correlation in the variety Trismart while between protein content and the amino acid valine there is a negative correlation for all varieties analyzed; The overall analysis of the amino acids profile in triticosecale samples analyzed show a high intake of amino acids in the case of Trismart and Gorun varieties and correlated with a higher protein intake of these varieties.

Garden design and restoration - rebuilding hystorical places Yvoire France

Szekely G.[1]*

[1]Banat's University of Agricultural Scinces and Veterinary Medicine Timişoara, Faculty of Horticulture and Forestry

Corresponding author. Email: gabi.szekely@gmail.com

Abstract The small village Yvoire, situated in France, on the shore of Lake Léman has preserved nearly untouched its image which originates from the middle ages. In the last decades it has been transformed by two activities. One of them is restoring the old buildings, the other the continuous work of gardeners and garden designers who filled the village and its botanical garden with plants. The effects of these activities should be an example for many little settlements, the history and surroundings of which create a proper basis.

Key words

Yvoire, garden design, flowers

European urban image today. The lasting principles of Kevin Lynch

Szekely G.[1]*

[1]Banat's University of Agricultural Scinces and Veterinary Medicine Timişoara, Faculty of Horticulture and Forestry

Corresponding author. Email: gabi.szekely@gmail.com

Abstract Fifty years ago American urban planner Kevin Lynch published a book about the importance of Urban Image, which is a study of three major American Cities. His conclusions about the outlook of urban spaces, and the way in which people understand them are interesting. The psychological aspects of the study are modern even today. The idea of studying our settlements in detail, creating nice urban spaces, is in perfect harmony with the tendencies of European towns in the last two decades. Creating unity in our towns with the means of design, is another issue widely spread around the world. There is continuity between the thoughts presented in the above mentioned book and present day design.

Key words

Urban Image, Landscape, design

Variability of the mitotic activity to some foreign sunflower genotypes

Bonciu Elena[1]*

[1]University of Craiova, Faculty of Agriculture and Horticulture

*Corresponding author. Email: elena.agro@gmail.com

Abstract Sunflower oil is a valued and healthy vegetable oil and sunflower seeds are enjoyed as a healthy, tasty snack and nutritious ingredient to many foods. As a means of production, the seeds are a good start for the future culture, if they have a rapid germination and high biological value, coming from improved varieties with the genetic, physiological and morphological index of quality. Generally, a high mitotic activity is directly proportional to the viability of the seed.
In this study have been made some cytogenetic researches to six foreign sunflower hybrids (Barolo, Flavia, Fleuret, Fly, Rigasol and Aldaba). The mitotic activity analyzed to these genotypes, expressed by mitotic index, was variable from 20.0% to 40.0% limits. Analysis of the mitotic activity and the mitotic division indexes has revealed the genotypic specificity for the foreign sunflower hybrids investigated as well as that the most intense mitotic activity of the meristems was observed in the Flavia genotype.
The determination of the mitotic activity in the sunflower roots could contribute to revealing on the cell division particularities to sunflower genotypes and their correlation with the heterosis.

Key words

sunflower, genotypes, mitosis, index, variability

The superiority of the Saturn sunflower genotype in terms of the content of oil

Bonciu Elena[1*], Matei G.[1], Iancu Paula[1]

[1]University of Craiova, Faculty of Agriculture and Horticulture

*Corresponding author. Email: elena.agro@gmail.com

Abstract Sunflower oil is high in the essential vitamin E and low in saturated fat. There is a variety of health benefits associated with the consumption of sunflower oil.
In order to determine the agronomic performance in terms of the content of oil, six native sunflower genotypes were tested in the central area of Oltenia. The hybrid which has proven its superiority in this respect was genotype Saturn. It recorded an oil content of 54.7%, and simultaneously recorded the lowest content of the membranes percentage (22.4%). From the obtained results we can recommend the cultivation of this hybrid in the experimental area; it also can be used in modern breeding programs as a valuable parental form.
The Romanian genotype Saturn has demonstrated an excellent adaptability to environmental conditions of the experimental area, and thus it is recommended to be extended into production in association with other hybrids, in order to achieve a genetic diversity which should suppose great and constant yield of seed and oil per area unit.

Key words

sunflower, genotype, oil content, variability

Heavy Metals as Potential Contaminants of Different Assortments of Fruit Brandy in the Banat Area

Gogoasa I., Rivis A., Velciov Ariana, Gergen I.

University of Agricultural Sciences and Veterinary Medicine of Banat "Regele Mihai I al Romaniei" Timisoara

Corresponding author. Email: ionelgogoasa@yahoo.com

Abstract The paper presents experimental results concerning the content in toxic or potentially toxic heavy metals Pb and Cd, and Zn and Cu, respectively – in different assortments of homemade fruit brandy in the hill area of the Caras-Severin County, Romania, an area with a long-lasting tradition in such alcoholic drinks. Heavy metal content was measured with the air-acetylene flame atomic absorption spectrophotometry method (FAAS). Results point to low concentrations of potentially toxic heavy metals (below maximum admitted limits) which is due to both the lack of major natural and fabricated pollutants and the type of processing and storage of such drinks specific to the area.

Key words

fruit brandy, brandy, heavy metals, Cu, Zn, Cd, Cd, Pb, FAAS