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VEGETABLE GROWING

Research on quality of carrot cultivars grown in Dobrogea

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Keywords: carrots quality, nitrates, carbohydrate, acidity, vitamin C

ABSTRACT

Carrot is a vegetable species and roots are used in human food both fresh and preserved or cooked condition. Carrots have high content of carbohydrates (8.64 g/100g fresh weight), minerals (calcium 33g/100g fresh weight, phosphorus 32g/100g fresh weight, iron 0.6 g/100g fresh weight, sodium and potassium 42g/100g fresh weight and 303g/100g fresh weight) and vitamins, especially vitamin A (11,000 IU). The aim of this research is to establish the quality of different cultivars of carrots cultivated in our country. Analyses of quality suppose some agrochemical and biochemical characteristics and also the production obtained at cultivated cultivars.

Study of the productive and qualitative potential behavior of some eggplant hybrids cultivated in field in different technology conditions

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Keywords: production, technology, nutrition, hybrid, fertilization

ABSTRACT

Long drought conditions in unprotected field, as a result of the "global warming", determined a drastic decrease of vegetables production, especially for *eggplants*, because of the excessive temperatures that embarrassed pollen's germination and as a consequence determined no fecundation of flowers. In order to obtain profitable productions it is necessary that, along the choose of the suitable hybrids for the culture system, to apply an adequate culture technology and to assure a water regime (in soil and air) and a root nutrition necessary for plants, to assure also an extra-root appliance of bioactive products in order to stimulate flower fecundation and plants' metabolism. In this paper there are presented the results of production obtained after assuring the optimum conditions of humidity, root and extra-root fertilisation in a polyfactorial experiment initiated in this purpose.

The impact of establishment method and flower binding stimulation method upon the productive and qualitative potential of melons' culture in protected and unprotected field

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Keywords: culture, technology, stimulation, melon, production

ABSTRACT

Production potential and quality of melon hybrids, with recognized organoleptic qualities, by the application of direct seeding technology classic unprotected field or, at best, a classic in the field by planting seedlings unprotected (improved traditional technology), was not observed within, due to the limited influence of some important technological links, such as protection against late frosts in spring, providing a constant hydric regime, fertilization, stimulation of flowers' binding etc. Improving and upgrading technologies applied in culture focused on technological links mentioned above, were the basis for achieving a high level of production, considering both quantity and quality. In this paper, results are presented under the influence of irrigation and crop establishment methods as well as stimulating the binding of flowers, using a variety of products with foliar application.

Study of *Thrips tabaci* Lind. attack in the seedling stage of vegetables

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Keywords: greenhouse, experiments, efficacy of insecticide

ABSTRACT

During 2008 - 2011, greenhouse experiments were performed in Vegetable Research-Development Station Bacau - Romania, in order to evaluate the vegetable varieties and lines susceptibility to the onion thrips attack in the seedling stage at the following species: tomato, cabbage, lettuce, pepper and egg plant. It was identified the attack symptoms in: tomato (Unibac: F% - 1.6 %, I% - 15.4 % and DA – 0.2%; Roma F – 4.3%, I – 11.6%, DA – 0.5%; Moldoveanca F – 1.2%, I – 9.8%, DA – 0.1%; Rio Grande, F – 0.2%, I% - 2.4%, DA – 0.1%), diagram 1, in cotyledon and 5 leaves stage. lettuce (Silvia, F – 1.2%, I – 4.6%, DA – 0.1%), in 8 leaves stage; round pepper (Creola, F – 2.9%, I – 2.2%, DA – 0.1%), in 4 leaves stage, round pepper (Lider (F – 5.2%,I – 3.1%, DA – 0.2%), in 4 leaves stage; sweet pepper (Dariana Bac, F – 0.9 %, I - 0.7%, DA – 0.1%), in 3 leave stage; long pepper (Ionel (F – 6.7 %, I – 2.5%, DA – 0.2%, in 5 leaves; long pepper (Siret (F – 1.1%, I – 0.8%, DA – 0.1%, in 2 leaves; egg plants (Contesa F – 8.4%, I – 0.1%, DA – 0.1% in 5 leaves. In tomato: L1, 2 and L3, in cabbage and Serata - lettuce variety we didn't identified any virus attack. The efficacy of insecticides against onion thrips was very good: Laser 240SC – **0.05%: 85.9% after 24 hours,96.5% after 48 hours, 98.3% after 72 hours, followed by Talstar 10 EC – 0.05%: 74.3% after 24 hours, 91.4% after 48 hours, 94.2% after 72 hours, and Confidor Energy – 0.08%: 65.7% after 24 hours, 89.3% after 48 hours and 91.6% after 72 hours).**

Researches regarding the red onion seed's production, according to: bulb size, planting time and the density of plants/ha

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Keywords: bulb weight, number of plants/unit area, seed production capacity, quality indices of seeds

A**BSTRACT**

From the researches of some factors which influence the quantity and quality of onion seed was found that among the most important factors include: bulb size, time of planting, plant density per unit area. The bulb's size denotes the quantity of restored substances from the bulb that examine the plant growth and the seed's plant development from the first phase after the resumption of vegetation of the transformation from the bulb-plant phase into seed plants phase. The influence of planting time is determined by the vernalization conditions of bulb-mother plants. The plant's density per unit area influence the production and quality of onion seeds through the nutrition area that was provide to the seed plants.

Effect of plant density and fertilizer on crop growth root yield and quality of carrot

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Keywords: variety, nutrition, spacing, management

ABSTRACT

Many of the physiological process are directly or indirectly controlled by environment under which crops are grown. In addition, hybrids type, soil and cultural practice have a profound influence on the productivity and quality crop plants. In order to suit the requirement for a crop, the environment can be manipulated to certain extent by cultural practices (Horgoş, 2003). Hence, an attempt was made to increase the yield as well as quality by way of manipulating cultural practices like date of sow, nutrition and spacing (Ciofu et al., 2003).A field experiment was carried to study the effect of nutrition, plant density and root production in carrot crop.

Research and results on the influence of nutritive solutions in the nonconventional carrot culture on perlite sublayer

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Keywords: soilless culture, cultivars, management

ABSTRACT

The extended research made along the years by scientists and researchers on mineral nutrition of the plants cultivated in a nonconventional system resulted in a series of nutritive solutions. Nutritive solutions are to soilless culture the most important technological factor whereby the mineral and hydric nutrition of plants is assured with maximum accuracy. Elaborating and preparing nutritive solutions requires solid knowledge of chemistry and plant physiology, so that putting them into practice should represent a specific manner of obtaining large and good quality productions (Atanasiu ,2009).For the culture achieved within this experiment, fertirrigation has been made by using some nutritive solutions whose main parameters, electroconductivity and pH have been monitored and adjusted function of the phenophases and the environment conditions.This work presents experimental data regarding the evolution of the plants components and some preliminary results on production. It is very important to be familiar both with the composition of the nutritive elements in the solution as well as with the best concentrations or limits within which they may vary so as not to become toxic for the plant. Therefore these recipes present both the composition of nutritive elements necessary to the carrot culture and the concentrations they must have when supplied in the nutritive solutions.

Influence of peat unconventional substrate on the use of economic resources materials to tomatoes grown in greenhouses

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Keywords: tomato greenhouse, peat substrate, fertirigation in open circuit

ABSTRACT

Unconventional culture of tomatoes is well known by vegetables horticultures in Romania. With the exception of companies operating modern greenhouses fertiirigation in closed system (total of 20ha in the entire country), the vast majority of growers interested in these high-tech solutions are less interested high costs, such as those used as substrates, peat, fiber coconut and perlit, with fertirigation in open system. Basic advantages such as high productivity, relatively easy to maintain plant health and the possibility of using even older building greenhouses old and outdated, are supported by a range of modern technology, the use of preparation and management stations and nutritional solutions supplementary pollination by bumble bees. To reduce production costs, most small producers using greenhouses and conservatories cold. Extending this culture system is subject to much higher productions than for soil cultivation technology. It was and is necessary to establish the experimental basis of unconventional culture technologies, adapted to the conditions provided by the spaces of culture used.This paper presents a comparative study of culture technologies applied in greenhouses block, built in the 70s of last century, soil and peat substrate, resulting in production results can be as good appreciated (152 500kg/ha in cycle I briefly).

Research regarding the influence of planting material on the quantity and quality of potato production, in Braşov area

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Keywords: potato, planting material, varieties, production

ABSTRACT

The special importance that the potato has for the human nutrition determines the approach of this culture from many points of view. Therefore, a bifactorial experiment, in subdivided parcels was conducted at INCDCSZ Braşov. The two studied factors were: the variety, Roclas and Christian, created at INCDCSZ Braşov and Ostara, created in Netherlands and the size of the planting material, the categories 30 mm-45mm and 45mm-55mm. The interaction of these factors over the total potato production, the structure of the obtained production, the number of tubers per nest and the average weight of the tubers was observed. From the processing of the data obtained from the study, it was noticed that the tubers from the 45mm-55mm size category, used for planting, influenced the total potato production for all the analyzed varieties, obviously for the Ostara variety, for which a production increase of 85 % was recorded compared to the 30mm- 45mm size category. Analyzing the structure of the obtained production, it could be observed that the largest production was obtained for the 30 mm–55 mm size category for all varieties, which demonstrated that the 45mm– 55mm size category was the best. The number of tubers per nest and their average weight were influenced by the 45mm – 55mm size category and it is recommended for the culture of the analyzed varieties.

Research regarding the influence of fertilization systems on the tomato production in the Bărăgan Plain

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Keywords: hybrid, tomato, fertilization.

ABSTRACT

The research monitored the influence of fertilization on the production capacity of the tomato culture in the Rămnicelu area, Brăila County.

In order to determine the influence of the dose of fertilizer on production efficiency, the culture has been made using the classical methods and was set on the same soil type for 2 years.

Through this experiment there have been studied two hybrids, Sultan and Campbell 33, which showed good suitability to the pedoclimatic conditions of the area in which the experiment took place.

The observations made revealed that the Sultan hybrid has registered greater production values in all fertilization versions, the maximum recorded value was for the version fertilized with $N_{60}P_0K_0$, while the Campbell hybrid has had a greater production in the first year in the unfertilized version compared to the a_2b_2 variant.

Research on the methodology of extraction of chlorophyll and carotene content of tomatoes grown in the south of Romania area

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Keywords: tomatoes, qualitative determination, pigments.

ABSTRACT

The study was carry on nine samples on tomatoes grown in Romania. For the determination of chlorophyll and carotene were selected three known organic solvents (diethyl ether, acetone, methanol) and the methodology of dosing was a spectrophotometrical one. Values depending on the variety and on the solvent used regarding both chlorophyll a and b, as well as carotene.

Plant regeneration through indirect shoot formation from different explants of red cabbage

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Keywords: *Brassica oleracea, red cabbage,* regeneration, caulogenesis.

ABSTRACT

In this paper, the authors have proposed a study on the variation in efficiency of micropropagation in vitro due to the influence of donor genotype and explants type used red cabbage head. In this test three commercial varieties of red cabbage seeds were tested for the ability of regeneration by organogenesis from hypocotyls, cotyledons, and stem segments. Our results have shown us that the intensity of red cabbage head regeneration depends on the genotype used but also the type of explants.

Our observations on the effect of phytohormones on the evolution of red cabbage explants cultured "in vitro" have led to the conclusion că benzilaminopurina BAP concentration of 2 mg/l, in the presence of low concentrations of acetic acid naphthyl ANA-0, 4 mg/l is the supplement optimal hormone not only to stimulate the formation of callus and adventitious buds of developing and subsequently to develop long-term multiple shoots able to be included in the next steps of micropropagation, respectively rhizogenesis induction and acclimatization.

Hipocotil fragments taken from seedlings to "Cabeza Negra 2"had the greatest total capacity to produce shoots than the other two genotypes tested when the combination of phytohormones was used consisting of 2 mg/l 6-benzyl-aminopurine (BAP) and type auxine ß indolilacetic acid (IBA) and α naftilacetic acid (NAA) at concentrations of 0.2 to 0.4 mg/l. The inoculated cotyledons explants also developed regenerative callus in about 6-8 weeks after initiation of cultures.

Subculturing was performed every 3-4 weeks in culture medium variant used in initiation, as it has demonstrated its effectiveness in stimulating the development of multiple shoots and in the lengthening them.

The behavior of some new cultivars of sweet pepper in Braila's vegetable basin

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Keywords: soil respiration, carbon pools, management

ABSTRACT

Sweet pepper is part of the traditional assortment of vegetables grown with good results in the south part of Romania, mainly on fertile soils and irrigation conditions. The assortment of traditional sweet pepper created and bred in Romania until 1990 corresponded to the time requirement for fresh consumption and industrialization. After 1990, on the domestic market there were many cultivars having new Western European origin (from countries like Holland, France, Spain, Italy and even the Middle East, Israel), which compete as effectively as its production and the local range. Extending these cultivars in good areas of culture can be done in safe conditions only after a detailed study of their behavior in areas of interest. This work presents the results of testing in Braila's vegetable basin of a new assortment made up of varieties and hybrids of native and Western European origin. It is distinguished by the results obtained the following cultivars: Opal 32551 kg/ha of native range and Barbie F1 52957 kg/ha and 47216 kg Blondy F1/ha in Western Europe range.

The use of different types of pots for the Chinese cabbage seedlings production

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Keywords: plastic material, transplantation, polyhydroxybutyrate, biodegradable

ABSTRACT

The quality of the seedling represents an important premise for doing a rentable vegetable culture. The paper present the results obtained by the use of different type of pots with a different grade of biodegradability upon the Chinese cabbage seedling development. Compared with the control variant – the nutritive pot, the best results were obtained in the case of the plastic pots in which the majority of the morphometric and physiologic indicators surpassed the other variants (16 cm height, 8 leaves, the best average weight of the plant and of the assimilatory pigments from seedlings leaves), followed by the Biomer pot, based on a new bioplastic materials like PHB (polyhydroxybutyrate). PHB is a natural biological storage material which can be used as a feeding source for the bacterial and fungus microorganisms.

The different type of pot had a specific substrate volume and implicit a significant influence on the growth and quality indicators for the seedling of the Chinese cabbage: root height, leaf number, aerial plant weight and implicit total weight. The explanation for the weak results in the case of Jiffy strip transplantation variant could be the smaller volume of substrate and the nutrient quantity given to the seedlings for this type of pot.

Studies on the behaviour of some Japanese tomato cultivars in Romania, under specific climatic conditions and technology

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Keywords: Japanese**,** cultivars, tomato

ABSTRACT

This preliminary study was made at the Vegetables Department from the Horticultural Faculty at University of Agronomical Sciences and Veterinary Medicine Bucharest in the period of May-September 2011. We tested six tomato cultivars of Japanese origin, provided by the seed company Kaneko Seeds. The experiments were settled up in high tunnel condition. We had remark that these cultivars responded favorably to high tunnel cropping conditions in the south of the country. The following yields were obtained: 9.400 kg/m2 at Candel Light F1 and 11.968 kg/m2 at V3 - Pasta F1. Upon our recorded results, we are encouraged to conclude that all tested variants can properly respond to our Romanian growing conditions, like natural light amount and high temperature, under plastic film protection.

Research regarding the biochemical and chemical contents of industrialization process of tomatoes

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Keywords: tomato products, diet, helth

ABSTRACT

Tomato consumption in Romania is growing every year and expect a growing health benefits because people use in daily diets.Tomatoes ranked 16 in the world among all fruits and vegetables consumed as a source of vitamin A, the 13 th place for vitamin C (Gerster, 1997). Tomatoes also contain appreciable quantities of lycopene, ß-carotene, magnesium, iron, phosphorus and potassium, sodium and thiamine. (Di Mascio et al., 1989, Angela R. Da' is et al., 2002). For research were taken in nine trial paste samples of tomato juice, ketchup, and tomato juice, slicedor whole canned tomatoes. All samples taken in the studio are sold in supermarkets and shops for household consumption or fast foods and pizzeria. The samples were purchased randomly within the consumer and were analyzed of the views of many biochemical and chemical characteristics.

The study of the climbing pod beans regarding the influence of the cultivar and plant density per hectare on seed production per hectare under the environmental conditions of SCDL Iernut

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Lidia Ioana Chiper, Elena Liliana Milovici (Dumitraşcu), Minerva Heitz
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Keywords: *climbed bean pods, cultivar, density, production*

ABSTRACT

There have been studied four cultivars: the Mădăreşeni variety, L-Alina, L-Grasa of Iernut (Ghiboleasca) and L-Viola-2. The plant density per hectare was distinguished by the number of plants per hectare. It was maintained the distance between rows and was varied the number of plants on the planting hole. A great importance has the seed production on the planting hole depending by the number of plants on the planting hole and also the quality indices (EG, FG).

The effect of some organic fertilizer resources on the production of tomatoes grown in the solar

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Keywords: semi fermented manure, poultry dejection, mushroom compost, oligotrophic peat

ABSTRACT

The research has mainly aimed the study influences of organic fertilization of tomatoes with some organic resources from livestock waste (semi fermented manure, semi fermented poultry dejection), natural sediments (oligotrophic peat) and waste compost (compost from mushrooms) on the productivity and quality of tomato fruits, on the foliar diagnosis and also on the main indicators of argic phaezem, for using them in the technological process of tomatoes production from protected space.

Preliminary studies regarding the carrot culture on billon

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Keywords: carrot, billon, production, culture

ABSTRACT

The culture of carrot on billons is a new culture technique in order to obtain quality roots, especially without ramifications, when the soil does not entirely meet the requirements of the species. The presence of this species intercalated in a young fruit growing plantation is also an advantage in order to obtain certain revenues until fructification starts. The nectarine plantation from Râmnicu Vâlcea has 5 m between rows and 1.5 m between trees on the same row, which allowed the manual making of billons for carrots at a distance of 1.2 m between them and 1.3 m between the tree and billon, the soil being mechanically maintained using the tiller, whose working width was 1 m. The sowing was manually made, each billon with one row, on its top, in the first days of April, while the uniform appearing of the plants took place between 25th and 26th April. Two cultivars were used, an earlier one but less vigorous, and a late one but more vigorous, both having special qualities for fresh consumption, but also for storage; the two cultivars reacted very well to this culture method. The largest roots, both in weight and in length, and the largest production were obtained for both cultivars, on a land with billons. Nebula F1 recorded a production rate of 1 kg/m^2, while Nantes 0.8 kg/m^2. The ratio between the diameters of the root and central cylinder highlighted the quality of the roots, element highlighted by the value of the correlation coefficient of 0.833.

Assortment influence on the dynamics of harvesting production upon pickling cucumber hybrids grown spring in solarium

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Keywords: *Cucumis sativus L.*, density, evaluation, quality, production.

ABSTRACT

The *Cucumis sativu s* is highly influenced by the culture techniques and hybrids in solarium. Solarium experiment was conducted in 2010 using the next density: 41.600 plants/ha which corresponds to row spacing 80 cm and 30 cm between plants inside the row, grown for manual harvest. On this experience we try to show the Optimum density required to maximize the revenue. Results of this study suggest that hybrid *Karaoke F1* have the biggest production at the density of 4.16 pl/sqm., with 96,346 to/ha.

The influence of seed position on the number of days required for emergence to cucumbers gherkins type grown in greenhouses in Tărtășești area, Dâmbovița County

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Keywords: *Cucumis sativus L*., position, seed, germination, influence.

ABSTRACT

The process of germination is a very complex physiological process, the process by which the embryo of the seed plant vegetation starts after a period of rest (Burzo et al. 1993). Following in the shortest time will appear sprout, a major advantage in growing vegetables to obtain early spring productions, getting very high production per unit of surface of products and getting high income.

The influence of protecting artichoke upon the productive potentiality and the economic effectiveness

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Keywords: *Cynara scolymus* L, protection, production, lucrativeness

ABSTRACT

Since artichoke, a Mediterranean species is sensitive to negative temperature and therefore prone to freeze in the wintertime of our country, protection through different methods is necessary before the cold season comes. The results presented in the paper prove the benefical effects of protecting the plants with different materials upon the productive potentiality and the economic effectiveness in the case of the "Unirea" artichoke. A three weeks' advance is gained in comparison with the witness as well as a growth in the number of inflorescences formed on the plant. In comparison with the unprotected witness, the inflorescence mass was by 10.1-15.6 % bigger in the case of the samples protected with earth and straw and the production reached 11.88 tons per hectare and respectively 12.47 tons per hectare, with considerable differences. The protection of the plants during the winter influenced the profitabilioty of the artichoke culture favourably through the growing of the income achieved by the production sale as well as by the reducing of the expenses, which meant 1000 lei production. In the case of "Unirea" variety, the protection with straw can reach to a 2.3 bigger profit rate in comparison with the unprotected artichoke culture.

The influence of the fertilization upon the growth of the plants and the production obtained on salted soil, in potato summer culture

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Keywords: *potato,foliar and organic fertilization, growth, production*

ABSTRACT

The results presented in the work show the influence that both the systems of fertilization (organic and foliar) and the doses of fertilizers applied have upon the growth of the potato plants and upon the production of tubers, in the case of the potato cultivated on salted soil in south Romania. Using a mixt fertilization with half fermented chicken manure in doses of 20t per ha and Folimax in doses of 8 l per ha, the size of the plants exceeded with 62% the height of the unfertilized witness. In what concerns the influence of the fertilization upon the production it was observed that the genetic potential of the Santé variety was best pointed out when using 20 t/ha of halffermented chicken manure, a dose which determined an increase of 122% as compared to the control. All doses of Folimax produced a synergic effect with that of the halffermented chicken manure, the greatest increase of 138% as compared to the unfertilized control being achieved at a dose of 8 l/ha. Combining the two systems of fertilization during the vegetation period, the growth of potato production was generally in direct proportion to the applied doses, the greatest increase in comparison to the unfertilized control being observed in the case of fertilization with 20t chicken manure per hectare and 8 l/ha Folimax, being obtained 41,4 t potato tubers per hectare.

Study about the influence of the fertilization upon the nutrition of the potato cultivated on salted soil

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Keywords: *potato, phasic fetilization, salted soil, plants nutriton*

ABSTRACT

In the conditions of a salted soil, the fertilization with chicken manure and that with foliar fertilizers during the vegetation period, allow the improvement of ensuring the plants with the nourishing elements and the obtaining of high productions. The work presents the influence that the fertilization with various doses of halffermented chicken manure and foliar fertilizer *Folimax* has upon the the nutrition of the potato plants and the production on salted soil, in the conditions of a low supplying with phosphorus and azote, but a good one of potassium. At harvesting, the level of potassium from the soil was decreased at all the variants (from the initial level of 140 ppm to 42 ppm), as a result of the fact that the plants extracted it from the soil. The smallest quantity of potasssium in leaves (5080 ppm) had been determined at the variant fertilized with big quantities of chicken manure (20 t/ha) and Folimax (8 l/ha), there being emphasized a more intense metabolisation of this element. In this variant, there had been obtained the biggest productions, with increases of 122 - 138 % as compared to the unfertilized control. The concentrations of the potassium from the soil and from the plants at harvesting have a decreasing tendency, as well as an increase of the production caused by the increasement of the doses of the applied fertilizers.

Influence of seeding period on production of dill

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Keywords: *Anethum graveolens*, seeding period, dill leaves, biometric traits

ABSTRACT

In order to achieve objectives during the years 2009-2010 field experiments were conducted monofactorial type. The experiences have been located in the experimental teaching of field, Department of vegetable production, State Agrarian University of Moldova. The biological material used in experience is represented by variety of dill: Gribovskii-early variety, created in Russia, approved and included in the register of plant varieties, intended for use in fresh and for technical purposes. The effect of age on production of sowing throughout the cycle of experimental dill, indicates that the highest average production was recorded in the first decade of June 1,290 kg/m^2, and the lower production of 1,224 kg/m^2 in the first fall in April.

The influence of cultivars parsley on production of green mass

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Keywords: *Petroselinum hortense*, variety, biometric traits, harvest indices

ABSTRACT

The experiences were carried out in 2009-2010 years, on experimental plots of the State Agrarian University of Moldova. The biological material was represented by four cultivars of parsley: V1 Comun, V2 Titan - cultivars with flat-leaf and V3 Triplex, V4 Caderava - cultivars with curly-leaf. The cultivars Comun and Triplex are approved and included in the register of plant varieties of RM. Experimental variants were situated randomized in three repetitions; experimental plot area was 3m^2. Production of parsley depending on the cultivars constituted: 2,750 kg/m^2 cultivar Comun; 1,705kg/m^2 cultivar Titan; 1,580kg/m^2 cultivar Triplex; 1,315kg/m^2 cultivar Caderava.

Sweet corn ear properties growth in sandy soil

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Keywords: ear quality, nutrient supply, overdose NPK

ABSTRACT

In our experiment we have studied the effect of nutrient supply, as an important technological element, on earlier sweet corn. In the same time we searched the answer, if the double incresing of nutrient elements (NPK) dosis, more than recomanded by nutrient balance approach system, we can improve yield's quantity and quality of sweet corn. The treatment without fertilization – based on symptoms, because of nitrogen deficiency – produced weak results, but in case of sugar content it has the highest values. The plants of fertilized treatments did not produce any deficiency or overdose symptoms. Compared to control treatment, the application of higher fertilizer doses did not influence significantly seeds emergence or plant's development, so we consider adequate to apply, in similar growing circumstances the fertilizer dosis included into control treatment. Double increased NPK dosis did not increased significantly the yield of sweet corn. In this experimental year, 2008, we could not reached the planned yield quantity.

Research on agrochemical and biochemical characteristics of onion crop cultivated in Southern Romania

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Keywords: cultivar, onion, sensitive characteristics, production

ABSTRACT

The research was conducted in Dobrogea County, in an irrigated agricultural area bordering Danube-Black Sea Canal, holding the Glade. Experience has been placed in sole dry bulbs grown for the production of the sown directly in five variants. Tendency of countries with modern agriculture is to maintain or even reduce the surface with onions, but to increase production per hectare by applying the best technologies that include mandatory use of the best drill (varieties and hybrids). The results of measurements at the onions cultivars show that the size of the largest onion vegetables were recorded at Banko, Daitona F1 and Tamara F1;The degree of coating of onions varied range limits between 4.20 and 5.83 that, the latter being characteristic to cultivar Banko; A good phosphorus content over 200ppm value was insured at cultivars Banko, Daitona and;The nitrate accumulation varied between 56ppm and 75ppmN-NO_3.; Biochemical characteristics of onion ensure their sensory quality. Carbohydrates, acidity and vitamin C were accumulated in the normal range and ensuring good quality of onions; Production of onions harvested, average variation ranged from 27.30 t/ha and 35.78 t/ha. Statistical interpretation of the degree provided shows that very significant insurance.

Effect of shoots pruning and plant spacing on fruit yield and quality of sweet pepper grown under greenhouse

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Keywords: shoot pruning, pepper, fruit quality, plant density

ABSTRACT

In greenhouse pepper crops, fruit yield and quality can be increased by managing shoot pruning and plant density. An experimental study was conducted at Sakha Protected Cultivation Center, Kafr El-Sheikh governorate during the winter seasons of 2007/08 and 2008/09 on "Titanic" sweet pepper hybrid under unheated plastic house. The effect of shoot pruning (without pruning, one or two main stem) and plant spacing (25 and 50 cm) was studied for effect on vegetative growth, fruit yield and quality of greenhouse grown pepper. Shoot pruning and plant space affected both and yield. The results revealed that the pruning treatments increased plant height, leaf area and decrease number of leaves and stem diameter. The significantly higher yield per m^2 was recorded in plants pruned to one shoot at spacing of 25cm followed by unpruned plants, pruned plants to two shoots at 50 cm then pruned plants to one shoot (50 cm) which gave the lowest values in both seasons. Plants pruned to one shoot and planted at spacing of 25 or 50 cm gave the highest average fruit weight compared to another pruning treatment and unpruned plants in the first season. Pruning treatments decreased nitrate content in fruits than unpruned plants treatment which gave the highest values. The highest ascorbic acid content of fruit juice was obtained when plants were pruned to one shoot at spacing of either 25 or 50 cm.

Research regarding influence of fertilization regime on the quality and production of cucumbers type cornichon in solarium

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Keywords: cucumber cornichon type, fertilization, solarium, F1 cultivars.

ABSTRACT

Among the methods of intervention on the production of cucumbers in greenhouses is cornichon type, one of the most important positions, the problem of optimal fertilization of this crop. Technological progress in recent years in domestic vegetable, made available to producers and complex fertilizers, total soluble allowing accurate management of fertilization regime and cucumbers grown in greenhouses cornichon type in the autumn cycle.

Researches regarding the behavior of some new cultivars of cornichon cucumbers in solarium

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Keywords: cornichon cucumbers, cultivars, solarium, autumn consume culture

ABSTRACT

Cucumbers, cornichon type are in Romania a performance culture in greenhouses, both for early production and for fall production. After 1990, the technology culture of this species have entered in our country elements of technological progress such as total flowering cultivars F1 with gino and parthenocarpic fruiting, resistance and/or tolerant to diseases, drip irrigation systems, soluble fertilizers used for fertirigation, systemic fungicide performance, and others. This scientific paper presents results obtained in autumn crops production in solar for a wide range of F1 cultivars recently introduced in the supply of seeds for the our country. Through production results are remarkable: Mirabelle F1 with 91 t/ha, Pasalimo F1 with 84.33 t/ha, Sirius F1 with 72. 4 t/ha and Triumph F1with 68 t/ha, which is of particular importance for the modernization of the range of type cornichon cucumbers in greenhouses recommended for extension, producing for consumption fall.

Setting up the degree of suitability of some types of soil for directly sowed onion crop

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Keywords: physical properties, typical chernozem, calcareous alluvial soil, Diamant, Daytona F1

ABSTRACT

The researches have been done with the scope of establishing the suitability of two types of soil (typical chernozem and calcareous alluvial soil) for the onion crop set up through direct sowing.

The biological material used for performing the experience was Diamant sort and Daytona F1 hybrid, with applying the same crop technology.For Diamant cultivar, the highest level of production was recorded on typical chernozem soil 34.75 t/ha. The cultivation of this sort on the other type of soil has as consequence a decrease of production level, being recorded negative differences as against mt 1 (V1) with statistic cover.

The negative difference of -15.75 t/ha as against the standard sample, recorded at cultivating the some sort on calcareous alluvial soil (V3) is very significant.As compared with the standard sample – Diamant sort cultivated on typical chernozem, it is seen that the production performances of Daytona F 1 cultivar are superior in case of variant 2 (Daytona F1/typical chernozem), a very significant positive difference.

Following to the researches performed, it resulted that the highest production was obtained on typical chernozem soil (42.00 t/ha)) against only 54.67 t/ha on calcareous alluvial soil in case of Daytona hybrid. In case of Diamant sort, the level of the productions obtained was a little bit lower, but it varied in the same way as per the type of soil on which the crop was set up.

Researches regarding the behavior of autumn cabbage crop set up on different types of soil

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Keywords: Krautkaiser, De Buzau, chernozem, alluvial soil, physical properties

ABSTRACT

The researches performed had as objective determining the types of soil that offer the best conditions for autumn cabbage crop that will be recommended for micro-zoning this crop in Braila County.

Experimental variants mounted on each of the four types of soil, four repetitions each: typical chernozem, saline chernozem, calcareous alluvial-soils and saline alluvial- soils.

For each type of soil, the experimental variants have been mounted in multi-staged blocks without randomization, the experimental surface being of 480 m² for each type of soil, the area of a repetition being of 60 m² and total area of the experience for the four types of soil was of 1920 m².

The biological material used for performing the experience was De Buzău sort and Krautkaiser F1 hybrid, with applying the same crop technology.

Accordingly, for the sort De Buzău, the highest level of production was recorded on calcareous alluvial soil 90.44 t/ha, recording a positive difference distinctly significant against standard sample. Cultivating this sort on other types of soil had as consequence decrease in production level, being recorded negative differences against mt 1 (V1) with statistic cover.

At Krautkaiser F1 cultivar, against the standard sample (V2), at variant V6 (crop on calcareous alluvial soil), the statistic interpretation highlights a positive difference of +4.76 t/ha that is very significant. At the same cultivar, the negative production differences of -3.86 t/ha and -8.18 t/ha are very significant.

Setting up the autumn cabbage crops by using the cultivars De Buzău and Krautkaiser F1 is recommended on calcareous alluvial and typical chernozem soils, because on these types of soil, there have been obtained productions larger by 8.53-14.26 t/ha at De Buzău sort and by 8.62-12.94 t/ha at Krautkaiser F1 hybrid, as against saline chernozem and saline alluvial soil.

Influence of hybrid on the productive potential of sweet corn

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Keywords: Zea mays, *var*. *rugosa (Bonaf)*, convar. Saccharata Koprn *(Sturt.)*, growing, production, precocity

ABSTRACT

The hybrid is one of the most important technological factors that influence the quantity and quality of production. The results presented in this paper demonstrate the influence of hybrid on morphological and production characteristics of sweet corn. Main phenophases of growth and development in sweet corn were appeared differently depending on hybrid. Deliciul verii hybrid was the first at phenophase of anthesis (67 days) as well as silk emergence phenophase (72 days), followed by hybrids Prima and Boston, while the hybrid 702 was later, requiring 81 days for anthesis and 95 days for silk emergence. Therefore, harvesting took place differently, the first three hybrids reaching consumption maturity in 107 days while 702 hybrid reached consumption maturity 10 days later. The highest production level was recorded for 702 hybrid, for which 21.8 tons/ha were harvested. Local hybrids had cobs of a lower size compared to the foreign hybrids, but have formed more cobs per plant, achieving production of 18.6 to 20.7 t/ha, which exceeded the Boston hybrid. Foreign hybrids were superior to the indigenous regarding the higher percent of ears (80%) from the total mass.

ORNAMENTAL PLANT

Studies concerning the growth and development of *Gloxinia speciosa* cuttings under the influence of rooting substrate

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Keywords: *Gloxinia speciosa* cultivars, leaf cuttings, perlite, peat, sand

ABSTRACT

The species from which Florists Gloxinias were derived came from Brazil in 1785. The name *Gloxinia speciosa* was originally assigned in 1817 by Conrad Loddiges, an English Nurseryman, in honor of P.B. Gloxin of Strasburg, Germany. In 1825, the species was renamed, placing it in the correct genus, *Sinningia*. The modern *Gloxinia* is a hybrid from two Brazilian tropical species; *Sinningia speciosa* and *Sinningia maxima* . It arose as a chance seedling raised by a Scottish gardener, John Fyfiana, in the nineteenth century. *Gloxinia* includes approximately 15 species of herbs from tropical America. Commonly grown as houseplants, they can be grown outdoors in mild weather. Their showy flowers are pollinated by birds and bees. Leaves are succulent and hairy. Generally, these tender rainforest species are intolerant of high night temperatures, low humidity, alkaline pH, and cold. *Gloxinia sylvatica* has a greater tolerance for heat and cold and thrives outdoors year-round in South Florida. It is highly recommended. *Sinningia speciosa,* one of the more commonly cultivated gesneriads, is usually, though incorrectly, referred to as gloxinia because it was once included in this genus. It can be multiplied easy by seeds or by leaf cuttings. In our research, has studied the effect of rooting medium in the case of three gloxinia cultivars: Star of Fire, Emporer Friedrich and Emporer Wilhelm. It was followed the degree of rooting and development of cuttings in to rooting mediums: peat + sand, peat + perlite. Best results were registered at Etoile de Feu in peat+sand.

Researches concerning the behavior of *Gerbera hybrida* cultivars in pots

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Keywords: *Gerbera hybrida*, cultivars, pot plant, morphological characters, diversification assortment

ABSTRACT

Gerbera flower is an important species grown worldwide both as cut flowers and garden plants. The importance of culture is reflected in the statistics that describe production and value of culture. Economic statistics show a steady increase year by year of areas planted with gerbera in Germany, Holland, France and Israel. Improvement and diversification of gerbera is a basic concern in Romania both for cut flowers, but especially lately witnessing the introduction of varieties in pots for interior decoration and landscape for summer. The experiments were organized to "SC GEMINI SRL" Aiud at InterFiorella flowershop in the period 2009-2011 and followed the behavior of six new varieties of potted gerbera: ‚Optima', ‚Fiorella', ‚Frenzy', ‚Blondi', ‚Meriva' and ‚Little Ruby'. Varieties were brought from Holland and observations and measurements were made on the main morphological features decorative: flower stem length, flower diameter, flower diameter disc, the number of ligules, colored flowers, storage capacity of flowers, resistance to diseases), which are considered of interest in a breeding program of these species. The statistical analyze of the characters was do using DL test. Our results showed that varieties: 'Optima', 'Frenzy' and 'Little Ruby' present morphological characters and decorative top. These varieties can be used indoors or out in pots outside in the summer in pots.

The influence of the nutrition regime on the quality characteristics of some Pelargonium peltatum varieties multiplied in greenhouse

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Keywords: chemical fertilization, frequency of applications, different concentration

ABSTRACT

This paper presents the influence of the chemical fertilizers, used in different concentrations, on the qualitative characteristics of some weeping geranium varieties with simple flowers, which are cultivated in greenhouse. The experiments were made in propagation glass-house of the Research and Development Institute for Processing and Marketing of the Horticultural Products-Horting, Bucharest, during 2009-2010 periods. The researches had as purpose to underline the qualitative differences (number of inflorescences -flower, inflorescences -bud, leaves) between plants, determined by different conditions of fertilization with NPK ($N_{19}P_{19}K_{19}$+ME and $N_{14}P_{14}14K_{28}$+2%MgO+ME, depending on the growing phase), in some concentrations (no fertilization, 0.1%, 0.2%,) and frequencies of fertilization (one or two applications/week). For the establishment of the fertilization regime it was aimed satisfaction of the demands of the species, in order to obtain plants of superior quality. The studied geranium varieties were: Balcon Red (red flowers), Balcon Lila (lila flowers) and Balcon White (white flowers). These were obtained from cuttings from mother-plants, grown in pots. As a result of the researches it was concluded that the most valuable qualitative characteristics were obtained to the plants with were fertilized which chemical fertilizers in concentration of 0.2% and with a frequency of two applications/week, in comparison to other variants. The results also show that, between the three studied varieties, important differences related to quality were registered, the most valuable variety being Balcon Red, followed by the Balcon Lila variety and then Balcon White variety.

Climatic effects on the phenology of some geophytes rustic species

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Keywords: geophyte rustic plants, phenology, climatic conditions

ABSTRACT

Most rustic geophyte species have similar requirements concerning the ecological factors, requiring light, permeable, well drained, and humus-rich soils, in a sunny or semi-sunny location. The requirements regarding the temperature of the flowering plants from this group varies along the vegetation period, the temperature being a key factor that correlates with the phases of vegetation; the temperature level determines the starting of the main phenophases and also the duration of the decor period. The insufficient water determines a reduced growth of floral stems, and in terms of light, the most studied bulbous plants prefer sunny places, shady places causing the damage of the decorative aspect of the flowers (Anton D., 2003, 2004, Toma F., 2009). This paper aims to study the behaviour of some rustic geophyte plants from the phenological point of view, of which some less used in the city of Craiova, and the determination of the decor period according to different climatic conditions in the five experimental years. From the analysis of the average values, it results that *Hyacinthus orientalis* and *Tulipa fosteriana* had the shortest decor duration (10.2, 10.4 days respectively), and the highest values correspond to *Muscari armeniacum* (30.2 days) and *Allium hollandicum* (25.7 days) genera, less used in our area.

Research on technology of obtaining *Delphinium cultorum* by sowing

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Keywords: covering materials, viability, humidity

ABSTRACT

Obtaining good seedlings is of crucial importance for commercial producers and one of the perennials flowers what is known to be difficult is *Delphinium cultorum*. Therefore is recommended to find the best method for production of seedlings as in this moment the percentage of plants obtained from the seed in hybrids is less than 60% and the propagation from cuttings is not capable of generating enough plants for commercial purposes. The impact of coverage of the potting mixture is a major one in the process as much as the quality of the seeds (source and the type of storage applied), both being able to increase/decrease the percentages shown in germination, and by that having an essential role. Different sources of seeds (Franchi Sementi, Magic Fountain, Pacific Giant, New Millennium Delphinium) and materials for covering the seeds (sand, perlite, potting mix, potting mix with wet paper tissue) were used to determine the technology best to be applied. The results obtained after conducted trials revealed that the importance of keeping the soil moist is having implications in obtaining a high germination rate (can be achieved more than 80% using perlite or potting mixture with wet paper towel) and a good quality of obtained plants as indicated by surviving seedlings in one month after germination (around 70%) and also a sustained conclusion that the source and quality of seed is a crucial factor.

Study on medium-term behavior of *Delphinium cultorum* in Bucharest, Bacau and Caransebes

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Keywords: temperatures, location, viability

ABSTRACT

Delphinium cultorum **has high demands for the growing conditions and its development and viability are related to the range of weather conditions that occur in different stages of the culture. The influence of those was broken down because in all three locations of the trials the cultures were started in the same conditions, were applied all the fertilizers and pesticides needed and all types of soil in which plants have been grown have similar qualities, the exposure to the sun was the same. Trials have been conducted having as subject the implications of weather coordinates on the medium term behaviour of *Delphinium cultorum* in cultivation, depending of region, taking into account as the most important coordinate being the temperature who is involved in all stages of cultivation and is limiting the evolution of plants. The results showed a high dependence of the culture technology and site selection for cultivation vs. temperature range and variation, leading to the drastic reduction of the number of surviving plants in the Bucuresti location, in fact due to high temperatures during late Spring to Autumn, and the diminished number in Bacau after three years of trials. The best results for viability and number of inflorescences on every blooming period have been obtained in Caransebes directly related to lower temperatures during summer.**

Micropropagation of *Phalaenopsis* Orchid by natural substances for unique-formed "Orchid Key-Holder" on small bottle in order to agritourism development

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Keywords: Micropropagation, Phalaenopsis, Natural Subtances, Orchid-key holder

ABSTRACT

***Phalaenopsis* is one of the unique plants groups, highly aesthetics, it has become one of important export commodities, like; plant-potted, cut flower, etc. Another unique-formed is "key-holder" to growth and development by tissue culture technology (on small bottle 1.3x0.6 inch) for Agritourism Development in Indonesia. The aim of research was to know and obtain the best interaction between chitosan and potato extract (natural substances) on the growth and development of Phalaenopsis hybrid protocorm *in vitro*. The explants protocorm of Phalaenopsis Join Angel X Phalaenopsis Sogo Musadian were grown in MS medium. The design of experiment was Completely Randomized Factorial with sixteen treatments and three replications. The first factor was chitosan concentration (without, 10 , 20 and 30 mg/L), and the second was potato extract concentration (without, 100, 200, and 300 ml/L). The results of experiment showed that there was interaction effect between chitosan and potato extract on number of PLBs (protocorm like bodies) number of shoots, number and width of leaves.. The best result showed at 10 mg/L chitosan and 100 ml/L potato extract, especially for "*orchid key- holder* "development.**

Use of chitosan and potato extract on Hyponex medium for hybrid *Phalaenopsis* Orchid propagation *in vitro*

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Keywords: chitosan, potato extract, *Phalaenopsis*, protocorm.

ABSTRACT

Orchid was known as an ornamental plant with the aesthetic and high commercial value. The high production of orchids caused by the higher market demand. Much research has been done to improve the growth, development, production, and quality orchids. To reproduced *in vitro* orchid, you can use natural materials, such as chitosan and extracts of potatoes. Chitosan was a deacetylation of chitin derived from fungal cell walls, crustacean exoskeleton, the cuticle of insects, and some algae. Chitosan acts as a growth promoter in some species of plants, including orchids.

This study aimed to determine the effect of interaction between the concentration of chitosan with potato extract on the growth of hybrid *Phalaenopsis* Orchid protocorm in Hyponex medium and to get the concentration of chitosan with potato extract which gave the best effect on growth of *Phalaenopsis* hybrid protocorm on Hyponex medium. The experiment was conducted at Tissue Culture Laboratory, Faculty of Agriculture Seed Technology, Padjadjaran University, in December 2009 to February 2010. The method used in this experiment was Completely Randomized Design (CRD) factorial pattern, with three replications. The first factor is the concentration of shrimp chitosan which consists of four levels as without chitosan, 10, 20, and 30 ppm. The second factor is the concentration of potato extract which consists of four levels, as without potato extract, 100, 200, and 300 ml/L. Basic medium used for each treatment were foliar fertilizer Red Hyponex 1 g/L The results showed that the interaction between chitosan with potato extract on the variable in the number of *PLB* (Protocorm Likes Bodies) and number of shoots at 12 weeks after incubation. The best treatment obtained at chitosan concentration of 30 ppm with potato extract 300 ml/L. Addition of chitosan with potato extract independently at different treatment concentrations gave the same effect on the variable of leaves. At the variable of root number, treatment independently without chitosan and 10 ppm and without potato extract and 200 ml/L gave a better effect. In the meantime, the best effect on the character of wet weight was on treatment with potato extract concentration of 200 ml/L.

Research on the influence of fertilization regime on growth and flowering of *Alstroemeria hybrida* Hort. plants

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Keywords: *Alstroemeria*, fertilization regime, growth, flowering

ABSTRACT

Our research aimed at assessing the influence of fertilization regime on growth and flowering of *Alstroemeria hybri da* plants. Experiments were conducted during the vegetation period 2010-2011 and included four experimental versions, each version being applied fertilizers with different chemical composition. To study the stages of growth and flowering of *Alstroemeria hybrida* plants were made the following observations: number of shoots per plant, height of shoots, when the appearance of flower buds, flower buds during the appearance of the bloom, the number of days from flowering to wilting flowers, flowers in inflorescence number, inflorescence diameter and total number of stems per plant flowers. The results demonstrate that fertilization had a positive effect on growth and flowering but differentiated *Alstroemeria hybrida* plants, depending on the type of fertilizer applied.

INTRODUCTION

Alstroemeria hybrida is one of the most popular species grown for producing cut flowers, lies in the top ten species planted for this purpose (Toma, 2009). It is a specie geophyta with rhizomes, they enter the rest in high temperatures and drought conditions (Le Nard et al., 1993). It is a demanding species to light but moderate claims against temperature (Selaru, 2002). Requirements in relation to water plants and culture substrate are high, frequent watering and fertilization are necessary to support a more adequate nutrition of plants (Toma, 2009). *Alstroemeria* is appreciated not only for outstanding ornamental qualities but also for resistance to diseases and pests (Bellardi et al., 1994).

Research concerning the propagation by cutting of some new cultivars of petunia

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Keywords: petunia, propagation, cutting, substrate, rooting

ABSTRACT

This research has aimed at testing the potential for breeding by cuttings of four new varieties of Petunia: *'Veranda Scarlet', 'Picotte Purple', 'Surfinia Blue'* and *'Shihi Purple'*. Seedlings were used for cuttings with 3-4 nodes peak, collected in three stages, every month, in January and February. All varieties have demonstrated a good capacity of cuttings, the highest number of seedlings collected in the period under review (16) being recorded in the variety *'Surfinia Blue'* the lowest (13) the variety *'Veranda Scarlet'*. Rooting cuttings was done in alveolar plate diameter of 3 cm, the substrate of peat (90%) + perlite (10%), under artificial fog (90% RH) and an average temperature of 18-24 ° C. Rooting duration was 18 days in the varieties *'Veranda Scarlet', 'Surfinia Blue', ' Shihi Purple'* variety and 21 days *'Picotte Purple'* and the percentage of rooting of cuttings ranged from 97.43% to the variety *'Purple Picotte'* and 88.25% for the variety *'Blue Surfinia'*. These results demonstrate a good propagation through cuttings capacity of the four varieties studied, potting-up is thus a practical alternative planting material production in Petunia.

Research on the influence of the cold period and the type of substrate on growth and flowering plants *Hyacinhus orientalis* L, the variety *'Ostara'*

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Keywords: cold period, substrate, *Hyacinthus*, growth, flowering

ABSTRACT

Our research aimed at testing the influence of the cold period and the type of substrate on growth and flowering hyacinth plants of the variety *'Ostara'*. Bulbs were planted in mid-November 2009, two types of substrates: a mixture of peat and soil made of equal parts ground celery, sand and peat. After planting the bulbs were maintained in cold (5-7 ° C) for 9 and 12 weeks, then were brought into the greenhouse to begin the process of forcing itself. The results of observations on growth and flowering plant elements hyacinth substrate showed that culture does not significantly influence any of these items. Instead, during the cold, even at a difference of 3 weeks, determine significant differences between versions, the best results being obtained for maintenance in cold weather bulbs for 12 weeks.

LANDSCAPE ARCHITECTURE

An investigation into the increased use of Desso Grassmaster in modern sport

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Keywords: Artificial grass, sports surfaces, turf technology, stadium innovation's, pitch construction.

ABSTRACT

An investigation into the Desso Grassmaster system and its increased use on various types of sport pitches around the world. Grassmaster is one of a few systems that has enabled increased hours of play compared to more conventional surfaces. "The health and safety and social benefits from sports participation are more easily achieved if the sports surface provisions are safe, affordable and of a high quality. Investment, construction and research into artificial sports surfaces have increased to meet this provision" (Kolitzus, 1984; Nigg & Yeadon, 1987)[(1)]. However, Full provision cannot be met without natural turf surfaces. Modern sport demands that the sports surface is in pristine condition all year round, however with increased hours of play and a longer playing season, the pitch, the focal point of the stadium can become subject to criticism. It is also common to find two separate clubs sharing the same stadium such as at Adams Park, Wycombe which is home to Wycombe Wanderers Football team as well as London Wasps rugby union team. This can demand that the pitch needs to be switched from one sport to the other over night or in some cases the same day this puts immense stress on the playing surface.

Landscaping solutions for redecorating part of the USAMV Cluj-Napoca campus, using the Japanese Garden techniques

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Keywords: green spaces, Japanese garden, design, didactic role, ornamental plants

ABSTRACT

The landscaping in Agriculture and Horticulture University institutes has different connotations then regular green spaces. They enable scientific research, host practical lessons and expose to students or visitors rare, exotic species. The USAMV University Campus owns round 46.900 square meters of terrain, which includes orchards, vineyards, experimental plantations, greenhouses, but also leisure spots. One key area of the Campus is the one located next to three important buildings: West from the Horticulture Faculty building, south from the Agriculture Faculty building and East from the Veterinary Medicine Faculty (Fig. 1), therefore is highly circulated. The original vegetation consists on several tree and shrub species, part of which would be kept in the redesigning project, but also a few solitary roses. Considering the key location of this area, it is recommended a more specific, clear type of landscape, part of a complex project, which targets the whole University Campus. Therefore, based on the nature of the interest area, and the resources it offers, a modern and exotic type of landscape, such as the Japanese garden, would fit perfectly. The main reason is the educative one, as it offers a live example of an oriental garden, for the students, not to mention the aesthetic valences, and the utility of the spot, which would be designed to host outdoor classes, workshops or just a nice, quiet place to study.

Why we [don't] love palm-trees? Landscape design between local identity and exoticism.[1]

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Keywords: soil respiration, carbon pools, management

ABSTRACT

Our article aims to analyse the relation between the people and the public space design in Bucharest. It also tackles the role played by landscape architects in a society bent on applauding the overwhelming kitsch around the city. One acknowledges that kitsch calls for a certain dubious, at times aggressive, aesthetic sensibility, which would be ready to visually pamper rows of palm-trees and clusters of rustic design in the middle of a 19th-century plaza or along modernist boulevards. The aesthetic conflict is exacerbated by the highly suspicious manners in which public money is spent, by the endangering of urban ecosystems, the crumbling of school buildings behind the tapestries of flowers and topiaries, the lack of improvement in the public services sector, along with the steadily missing urban politics. The most sensitive issue at hand, we claim, is the public aesthetic education. Should the landscape architects, as professional elite, impose their taste standards upon the almost general preference of the population for topiaries, palms and rustic add-ons? Should we attempt to impose a visual coherence of the city? If kitsch is a way to escape a dull and gray daily reality to an exotic and idyllic imaginary world, why should landscape architects force a poor and stressed population to face their "misery". Yet, what about our cultural heritage? Do we have the duty to preserve it? What about our existing cultural values, which are largely ignored nowadays? Trough interviews, inquiries and blog analyses we will try to understand the conflicts generated by the aesthetic globalisation in a specific cultural context. Otherwise put, what aesthetic carnival ensues when the palm-tree mediates in such a way that Nice becomes the landscaping model of Bucharest?

The new landscapes of old infrastructures

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Keywords: infrastructure recovery, urban ecology, urban landscape, public space

ABSTRACT

The old transportation infrastructures built in the 19th and beginning of 20th century are abandoned, thus creating gaps in the urban tissue but also new resources for the contemporary urban development. The article is analysing, though three case-studies, the possibility of ecological development by landscape urbanism means. Two of the most important and well-know projects – *Promenade plantée* from Paris and the High Line from New York are presented in order to better understand the trends in both urban development and landscape architecture. The third project – Bucharest-West Green Line – has a utopian character in the local context of Bucharest urban development but demonstrate the possibility of an alternative approach of urban landscape and urban policies. A central point of our research will be put on the wild vegetation integration into the urban landscape projects, aiming to highline the new trends around the world that are still absent in our country. The new aesthetic developed in the 20th century ecological paradigm is largely ignored at the local level and has to be integrated in landscape education but also in the landscape architecture and urban development practice.

"Green Roofs" - a viable alternative for increasing the comfort in urban environment

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Keywords: overheating, adaptability, thermal island, integrated development

ABSTRACT

Under current conditions of progressively diminishing of surfaces used for traditional landscape arrangement (on the ground), the roofs of (civil or industrial) buildings represent a resource of extending the green space and implicitly an improvement of parameters envisaging the psychological, thermal, ecological and social comfort of inhabitants living especially in urban environment. According to Government's Emergency Ordinance no. 114/2007, referring to Bucharest, until 31st of December 2013, the authorities of local public administration must provide from intra-urban land, a green surface of minimum 26 square meters / inhabitant. Therefore, there has been identified an area from Bucharest located near the "thermal island" of the city, an area generating of thermal and hydric discomfort but also of excessive pollution and inadequate quality of air, representing our object of study. This area is located on the quay of Dambovita River, in Regie Building Complex of Student Halls. There was studied a number of 12 buildings, evaluated from the point of view of resistance of built structures as being capable of additional loadings, on whose roofs there have been proposed two strategies of landscape arrangement. The obtained results have finally lead to choosing an arrangement strategy proving both a higher degree of adaptability of vegetal composition to the extreme conditions existing on the roofs of the buildings as well as an equilibrium between the resistance of the building's structure and the ecological and esthetical role of the vegetal component.

The landscape as a complex notion - integration in the internal legislation through the adoption of the European Landscape Convention

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Keywords: public policy, territorial model, administrative level

ABSTRACT

The mechanisms put into practice by the European Landscape Convention (Florence, 2000) are meant to develop in a balanced way the European territories. The landscape thus becomes a new element that creates territorial coherence, protecting, at the same time, the local diversity. In view of the European Convention the landscape becomes a territorial development engine which guarantees to each individual an active participation in shaping and developing the territory which he owns. At the same time, the landscape is also viewed as a tool for awareness and education of the European society, designed to protect and valorise territorial identity. The adoption of the Convention has legislative implications at national, regional and local level because the landscape must be introduced in all public policies of a ratifying country. There are differences in interpretation and adoption, and there are also different levels of integration of the Convention, which are determined by legislative differences and by degrees of regional autonomy. Putting the principles of landscape into the practice of each country becomes a complicated mechanism that collides with specific legal interpretations. Thus, at the European level, we come across different models of integrating the landscape in the public policies, but also legislative difficulties that hinder the embracement of the principles of the Convention. This article tries to briefly illustrate the French model of insertion of landscape into the territorial policies. In parallel with the French model it is exemplified the situation in Romania, still in the early adoption phase of the European Landscape Convention.

Conceptual approaches on landscaping study

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Keywords: symbolism, cultural value, entropy

ABSTRACT

Sustainable landscaping requires the integration of natural, social, economic and cultural sciences, to deal with their systemic diversity (Bimberg et al, 2009). Ranging from matter to idea, the landscape is staged on three abstraction levels: the object-landscape, the visible-landscape and finally, the perceived landscape (Boureau et al). On the highest abstraction level, the cultural value relies on the whole architecture of the landscape, bearing the influence of material environment and social perception. Furthermore, cultural attributes of landscapes target the widest time spans, just the same way that biodiversity is integrated within sustainability efforts. Unfortunately, cultural attributes often make the non-market value of landscapes (Wrbka et al, 2004), which is a growing risk considering globalisation issues. Variety, significance, views obstruction, fame, sky quality (Casatella et al, 2011) – as cultural attributes, are all emulations of one fundamental issue: the landscape concept. The paper is focused on its impact within landscape sustainability, concept integration in landscape design and finally, the concept-use benefits for society and for the landscape architect. Concept use obstacles are identified and conclusions show possible ways of improving landscape design conceptualisation.

Carol I Park in Bucharest in the ’30s – *Celebrate Bucharest Month*.

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Keywords: public park, landscape architecture, modern style, fountain

ABSTRACT

Inaugurated in 1906, Carol I Park underwent a second and significant phase of development in 1936. This is when it hosted the first edition of the *Celebrate Bucharest Month* exhibition, which henceforth would become an annual event and an urbanism show of great significance for the capital. This event engendered major transformations in the park. First, the old pavilions from 1906 were restored or entirely rebuilt. Second, an entire neighbourhood, named the “Old Quarter”, was reconstructed. Third, a copy of Colţea Tower – for long the tallest building in Bucharest- and a restaurant were constructed on the lakeshore. The circular plaza that led to the main access point to the park also received major improvements. It became the site for a monumental artesian fountain designed in modernist style. Its characterizing feature constituted a mosaic representing the signs of the Zodiac. The old main gate built in the form of a triumphal arch was demolished and changed with a provisional one for the duration of the exhibit. Following the conclusion of the event, the park would henceforth be accessed through a smaller, permanent metallic gate. This gate endures to the present day.

Trends in 20th Century Landscape Architecture – Garden City

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Keywords: garden city, garden district, landscape architecture, ecology

ABSTRACT

The Garden City is a concept founded in Great Britain by Sir Ebenezer Howard in 1898 based on the principle of creating new suburban towns composed like a radius around the already existing cities, which would then be surrounded by farming land. He proposed that these garden cities should blend all the benefits of urban life with those of country living so that people gain the best of both worlds. The first garden cities were built in Great Britain, but after that, they spread all over the world. In France they became known as *Cité-jardin*. Here, they blend the original concept with typical French rationalism and progressivism. France has garden cities located within the boundaries of palace or castle parks built in the previous centuries.

Common sense and other senses regarding the historical monuments. Case study: Carol Park and Zodiac Fountain in Bucharest

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Keywords: preservation of historical parks and gardens, professional ethics, authority ethics

ABSTRACT

All over the world, historical monuments are aggressed in a plant of ways. The preservation of historical monuments has to be part of a large frame of laws, each of them accompanied by specific duties and a frame of coercion means. In Romania, the frame of coercion is very poor and the result is the continuous alteration of the historical character of the monuments. We are in a great danger: to loose a very important part of the national patrimony. The incompetence and the ignorance are other dangers in this field. Ethics has no significance for the authorities and, sometimes, for the professionals too. Carol Park and Zodiac Fountain are the perfect example of destroying the historical character of the monuments. Both of them are part of the List of Historical Monuments. They are monuments of national and international importance ("A" category monuments). The protection area of these monuments is ignored completely and also the vegetal composition. The green cadastre and the management of vegetation are goals for professionals but not for the authorities. The case study presents some aspects, relevant in this context.

Natural stone pavements in landscape arrangements

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Keywords: natural stone, pavement, alley, garden

ABSTRACT

The paper studies the diversity of methods of natural stone usage for different alleys and pavements in public and private green spaces arrangements. The study analyses and points out the multitude of functional, esthetical and ambient aspects generated by the usage of natural stone in alleys and circulation spaces from gardens or public spaces. Because of its multiple qualities it is one of the most used materials for realizing different types of alleys regardless of their size and the character of the space in which the landscape arrangement is used.

Plastics in landscape arrangements

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Keywords: plastics, garden, urban green spaces

ABSTRACT

The study intends to highlight the diversity of usage modalities of plastic materials in contemporary urban landscaping in public and private green spaces. Also, the present paper discusses and analyses the multitude of functional, esthetical and ambient aspects generated by the usage of plastics in the functional and esthetical composition of urban landscape arrangements. Because of their multiple qualities, plastics are used not only in the realising of architectural-functional constructions and utilities, but also that of decorative objects.

FRUIT GROWING & TECHNOLOGY

Researches regarding the influence of the fertilization on the firmness of the nectarines

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Keywords: Cora, Delta, chemical, organic, penetrometer

ABSTRACT

This paper presents the influence of the nectarine trees fertilization on the structural-textural firmness of the fruits at harvest and its evolution during nectarines preserving, stored in different technological conditions. There were tested two varieties of nectarine, obtained from SCDP Constanta (Cora and Delta), which were fertilized with organic and chemical fertilizers, applied to soil and foliar. The nectarines were stored at ICDIMPH-Bucharest in three variants: the ambient temperature (26-28^{0}C), in cold conditions (T = 2-4°C) and cold + modified atmosphere conditions. The results show that the different fertilization of the trees is reflected in the firmness degree of the fruits at harvest, but not in its evolution during storage. For the both varieties, the biggest firmness at harvest is represented by the fruits of chemical fertilization – soil and foliar variant (78,33 UP for Cora variety and 68,79 UP for Delta variety). The lowest firmness is represented by the fruits of chemical fertilization to soil (111,75 UP and 93,57 UP, respectively). The evolution of the firmness during the preservation is especially influenced by the storage conditions. Nectarines stored in a warm space lose very easily the firmness, by its rapid ripeness.

In case of cold conditions the intensity of the maturate process is reduced, thus the fruits keep their structural-textural firmness for a longer period (28 days). By supplying atmosphere in the storage space with carbon dioxide, the metabolic processes become slower, and the firmness of the fruits is kept for a long time (35 days).

Evaluation of some sweet cherry cultivars on PHLC and CAB dwarfing rootstock in Istrita-Buzau, Romania

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Keywords: *Prunus avium* L., growth, yield, phenology

ABSTRACT

In the Istria Fruit Nursery Station, a production and experimental area of approximately 8 ha was planted in 2009 with a wide range of modern sweet cherry varieties and rootstocks. Trees are planted in a high density plot (4x2m) trained as central leader with a trellis system and pine poles. Evaluation of the behavior in terms of morpho-productive traits of the trees in the third year after planting have been carried out on the following cultivar/rootstock combinations: Kordia/PHLC, Ferrovia/PHLC, Van/PHLC, GiantRed/CAB6P, FirmRed/CAB6P, FirmRed/CAB11E, EarlyRed/CAB11E. Regarding the growth vigor expressed as TCSA and tree height, the most vigorous combinations were Kordia/PHLC and GiantRed/CAB6P and the weakest Ferrovia/PHLC. In all combinations studied, the percentage of spur branches on the trees crown is over three quarters due to the dwarfing rootstocks effect. Kordia/PHLC recorded the largest number of flowers/tree but the most productive combination was Van/PHLC. FirmRed, EarlyRed and GiantRed had a very poor fruit set percentage but the fruit weight and fruit quality was remarkable.

Increase quantity and quality of apple fruit by normalization of load by different methods of thinning

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Keywords: spindle-shaped, thinning fruit, variety,

ABSTRACT

Investigations were conducted in the years 2009-2010 in apple orchard in SA Zubreşti planted in the spring of 2003, with 4x2 m planting scheme. Trees are driven by thin spindle-shaped crown improved. We studied the apple fruit thinning by chemical thinning, manual and mixed in 3 varieties Golden Delicious, Idared and Florina, grafted on rootstock M26. It was determined blossoms number, fruit number, weight and quality. The number of blossoms Idared variety in control variant is 96 peaces/tree and almost doubled in version 2 reached the threshold of 200 pieces/tree. In the other two variants blossoms number is 50 percent higher in variant 3, respectively, 53.3% in April compared to the control variant.

Quantitative formation of apple trees roots in dependence of their nature radial spread limitation

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Keywords: apple tree, variety, root system, cutting, plastic film.

ABSTRACT

The article describes the increasing of the quantity of tree roots of Golden Delicious, Idared, Spartan, 1-11-157, Ianvarscoe, Slava pobediteleam apples (grafted on MM-106 stocks) depending on the variants of the directional formation of the root system of fruit trees. The directional formation of the root is provided by the limitation of their expansion trough their cutting and blocking with a plastic film.

Study regarding the tendencies of the international organic product market

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Keywords: certified, requirements, consumers, quality, fruit and vegetables, yields, conversion period

ABSTRACT

In the last two decades, a strong steady growth in the sales of organic foods has provided these products with a viable and sometimes value added market nice. Changes in dietary habits among many segments of the population of developed countries- resulting from increased health awareness and the increasing demand for a wider variety of products, including convenience food- have contributed to this growth. Due to major food scares, which hit many countries in Western Europe in the late 1990s and early years of this century, consumers in general have become more critical when purchasing food. Moreover, they have become more demanding regarding information on production and processing aspects (including traceability of the product). The sales organic horticultural product has been expanding rapidly in many of the major organic markets (ex. The United States, countries in the Union Europe and Japan). However, the market share of organic products in total food sales is still small. Diversification towards high-value crops can help to reduce the vulnerability of many agricultural producers in some countries, especially for resource poor and small-scale farmers. This study focuses on fresh certified organic fruit and vegetables.

Consumer preferences on import and local fruit in Indonesia*

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ABSTRACT

Research Center for Agricultural Policy and Agribusiness (2009) revealed that the contribution of the total fruit of Brotu Domestic Product (GDP) of about 35449.46 billion (48.36%), only the last ten years decreased. On the other hand the demand of fruits in Indonesia has increased the increase over the last five years 10%. This is because the majority of Indonesia began promoting a healthy lifestyle by eating healthy foods like vegetables and fruits. Beside that, since the government policy on FDI *(Free Domestic Trade)* in 1998, then semakim many supermarkets in Indonesia and the more fruit imported into the Indonesian market.

The purpose of this study to know the description of the characteristics of respondents who consume imported and local fruits, how consumer preferences and attributes which are the most dominant of these local and imported fruit. The research was conducted in Bandung West Java Indonesia on the grounds that supermarket growth increased more than other cities in West Java and other provinces in Indonesia, excluding Jakarta (World Bank, 2007). Determination of the respondents conducted in this study is to use *sampling judgment. Judgement sampling* as many as 100 people. Data was analysis by Fishbein Model.

Result of this research revealed that the reasons to consume imported fruit because seeing other people buy (59%), looking for variations in fruit (24%), as a source of vitamins (14%), and favorite families (3%). Apples, oranges and mangoes locally preferred by consumers because of the habit of eating a local family (38%), a source of vitamins (17%), and are the fruit favorite family (45%). In looking at the attributes of apples, oranges and mangoes, oranges and mangoes have higher level of interest on the attributes than the apples. This is interpreted that in buying oranges and mangoes, many things are being consider by the consumers than buying apple. Consumer prefer buy import fruits than local fruits, because cheap price and attractive colour. For consumers not an issue of varieties of fruit, the more important factor is the price, color, usability and freshness. The suggestions are it is necessary to educate to the consumers that buying import fruits does not mean more prestigious, and it is necessary to adjust the quality and other things contained in fruit attributes which are tailored to the needs of consumers for increasing value added.

New Romanian nectarine and brugnone cultivars

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Keywords: *Prunus persica* var. *nucipersica*, assortment, quality of fruit, processing, can

ABSTRACT

The nectarine is the species with a good development under soils and climatically Romanian's conditions. The studies regarding its breeding and extension of new cultivars are achieved well. The objectives of nectarine and brugnone breeding were diversified as: quality of fruit, productivity of trees, ripening time, size, form, color, flavor, sugar, taste and so many others characteristics and traits. This paper presents these new nectarine cultivars, their biological performances and their future for extension in culture. All this varieties, like: 'Cora', 'Delta', 'Romamer 2', 'Costin', 'Marina', 'Creola', 'Liana', 'Valerica' and 'Anemona', having very good sensory indices, improving the Romanian assortment.

Punica granatum – decorative variety with perspective in parks and gardens

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Keywords: ornamental, shrubs, woody, characteristics, cuttings.

ABSTRACT

***Punica granatum* is a decidous shrub, originary from Central Asia, very decorative through their big, red or orange flowers, remarkable in the middle of the summer.**

During 2003-2009, the *Punica* genus was studied at Research Station for Fruit Growing Constanta.

The researches followed aspects regarding plant description, phenology, resistance to draught and low temperature as well as the multiplication of *Punica* by green cuttings in different substratum and period of growing.

***Punica gr anatum* is a perspective variety for Black Sea Coast green spaces, both to their remarkable ornamental aspect and long period of decor (80-90 zile). It is required shaltered places, sunny and periodically watering. The plants can be easy multiplied by cuttings using perlite as substratum.**

Correlations between the biometric and the productive indicators for some apple tree varieties, as a result of differentiated pruning

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Keywords: apple tree, pruning, correlations, biometric indicators, productivity

ABSTRACT

The calculation of some correlations between the main biometric and productive indicators for some apple tree varieties, which differentiated pruning was applied to, highlighted the fact that the fruit production is not strictly dependent on a certain vegetative indicator (trunk section, annual growth, length of shoots etc.). The production per tree correlated only with the number of fruit buds. The indirect connection between the quantity and quality of fruit was also verified in the present experiment. The severe pruning of the trees stimulated the vegetative growth and negatively influenced the fructification.

Research on the behavior of some new, disease-resistant apple-tree varieties, cultivated in the environmental conditions of Voineşti area, Dâmboviţa County

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Keywords: variety, vigor, fructification type, growth potential, production, productive efficiency

ABSTRACT

The present research, developed on Voineşti Station for Research and Development of Tree-culture, was based on the study of 8 native or foreign apple-tree varieties with genetic resistance to diseases, in their 7th year of age, compared to 2 control varieties, sensible to diseases: *Jonathan* and *Golden Delicious*. *Redix, Iris, Remar, Inedit, Voin icel, Real* and *Irisem* varieties are the most recent creations of Voineşti Station for Research and Development of Tree-culture in the domain of disease-resistant apple-tree varieties and *Florina* is a well-known apple-tree variety, with genetic resistance to apple-scab and with partial resistance to powdery-mildew, created at INRA Angers, France, also known as *Querina*. The 8 apple-tree varieties were appreciated in order to determine the morpho-productive particularities, distinguished by their growth vigor, production potential, productive efficiency and their resistance to the main diseases. In order to establish the growth vigor we determined through measurements trunk diameter, tree height and crown diameter, also analyzing the fructification type. The production potential was determined by weighing the fruits obtained on a tree, for three consecutive years. By dividing the fruit production (kg/tree) to trunk's transversal section we calculated the productive efficiency index for each variety and the values were compared to those of the 2 control variants, Jonathan and Golden Delicious. It was also determined the resistance of the studied apple-tree varieties to the attack of the main pathogen agents –*Venturia inaequalis* and *Podosphaera leucotricha*- and the result for all the studied varieties was 0 attack of Venturia inaequalis and an improved resistance to Podosphaera leucotricha, with a minimal attack.

Study upon the impact of some soil maintenance systems upon apples' quality index of Pionier variety cultivated in conditions of the Didactic Station Timişoara

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Keywords: Pionier, apples, soil maintenance systems, quality

ABSTRACT

In this article we present some studies concerning the impact of some soil maintaining systems upon fruits' quality of Pionier variety cultivated in the western part of Romania, in the pedo-climatic conditions of the Didactic Station Timisoara. In this purpose, we tried soil maintenance in apple orchard in a less pollutant way, by using especially plants as green manure. There were established 8 experimental variants, as it follows: V1 – black field (2 manual hoeing + 2 mechanical hoeing) – control, V2 – seeding and incorporation in the soil with green manure (white clover), V3 – seeding and incorporation in the soil with green manure (bird's-foot trefoil), V4 – seeding with grass mixture 1 (2 manual hoeing), V5 - seeding with grass mixture 2 (2 manual hoeing), V6 - seeding with grass mixture + mulching, V7 - seeding with grass mixture + Roundup 360 SL (3 l/ha), V8 – mixed field, Roundup 360 SL (3 l/ha) + mechanical hoeing Experimentally. We determined the physical features of apples (big and small diameter, height, size index), dry substance and sugars content by refractometric method, acidity expressed in malic acid, total minerals, vitamin C content by spectrophotometry and microelements content (Fe, Mn, Zn, Cu) by atomic absorption spectrophotometry (AAS). In conclusion, the experimental variants in which we used green manure (*Lotus corniculatus* or *Trifolium repens*) had a higher content of sugars and minerals.

Theoretical aspects on estimate the geometrical shape changing of apples during storage

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Keywords: apples, static compression, damage, pack, storage.

ABSTRACT

The value and quality of fruit are reduced both through injury by crushing the pulp tissue as well as strains and deviations from the characteristic geometric shape of the fruit. Major cause of production of the two forms (types) of mechanical defects in apples is static compression as they are subject to packaging (containers) due to the weight of the upper ranks, during periods of storage - warehousing - transport. The static compressive forces were evaluated, producing either cruses of the tissue of the fruit, or geometric shape changing characteristic, based on the application in a first approximation of the theory of Hertz bodies with convex surfaces, with applications to apples (apple - apple, apple - rigid flat surface).On this basis has developed a methodology for determination – evaluating pack height (container) for storage - warehousing, provided that the fruit in the bottom of the pack does not suffer mechanical defects.

Experimental aspects regarding the geometrical shape changing of apples during storage

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Keywords: apples, static compression, damage, pack, storage

ABSTRACT

After storage, the quality of apples is reduced due to deformations and deviations from their geometric shape, a major cause of these mechanical defects produce a being faced by static compression in the lower ranks due to the weight of packaging in the upper ranks. For the evaluation (prediction) of the package height, so that the apples that are placed on the bottom do not undergo changes of the characteristic geometrical shape, was necessary to achieve adequate equipment to perform measurements to determine the compressive strength of packed apples. With apparatus designed the static compressive forces were evaluated, producing either cruses of the tissue of the fruit, or geometric shape changing characteristic, based on the application in a first approximation of the theory of Hertz bodies with convex surfaces, with applications to apples (apple - apple, apple - rigid flat surface).

Experiments will be performed by a methodology of determination – assessment of the height of the package (containers), developed for keeping-storage (provided that the fruit on the bottom of the pack would not suffer mechanical failure).

The dynamics of dry matter accumulation in leaves and shoots of peach trees (*Prunus persica L.*) cultivated in modern systems of planting on reddish preluvosol from the Romanian Plain

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Keywords: training system, dry matter content, peach varieties, Tatura Trellis

ABSTRACT

The peach is probably the third species of fruit trees cultivated in the world after apple tree and orange tree. Because it is a perishable fruit it cannot be kept fresh for long time, therefore, in an orchard, it is necessary to cultivate more varieties with different ripening periods to ensure a gradual production to cover the market requirements. The modern pomiculture always brings many novelties concerning peach cultivation. Modern culture systems (the intensive and super-intensive systems) induces the production of large amounts of fruit per hectare ever since the first years of the culture. The paper presents the behaviour of new peach varieties introduced in Romania: Royal Time, Royal Time Isthara, Royal Lee, Royal Estate, Early Rich, October Star, Ruby Rich, Late Luka, grown on two rootstocks: GF 677 and Ishtar in Tatura Trellis training system. The researches were made conducted in the experimental field of the University of Agricultural Sciences and Veterinary Medicine from Bucharest. The dynamics of dry matter accumulation was studied in the trees cultivated on the reddish preluvosol from the Romanian Plain. During the intense growing period of the fruit trees, the accumulation of dry matter in the leaf reached a maximum intensity, with a value of 73.93% in Early Rich and Ruby Rich variety recorded a value of 71.32% at the level of the shoots.

Behavior of some plum varieties to the attack of the plum moth *Grapholitha funebrana* Tr.

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Keywords: pheromone traps, Stanley, Centenar, Minerva

ABSTRACT

In Romania the plum moth *Grapholitha funebrana* Tr. is one of the key pests of the plum orchards, the damages produced can reach 70% from the yield. In order to establish the behavior of some plum varieties to the attack of *Grapholitha funebrana* Tr. at the S.D. Valcea has been set up experiences in a collection of plum varieties. The plum moth population has been surveillance using pheromone traps, one trap for each variety. The recorded data shows that the largest number of male butterflies captured in traps in 2010, was recorded at the Stanley variety, followed by Centenar and Minerva variety.

Research regarding the choice of mother plants of wild cherry seeds in Transylvanian Plain

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Keywords: *Cerasus avium* genotypes, vigor of growth, crown shape, capacity and state of health

ABSTRACT

After the existing statistical data (FAO, 2006) the areas planted with cherry fell in the last 10 years, to 9317ha, with 28.31% less than in 1996, when 12,995 ha were cultivated, so cherry culture has the 3rd place in Romania as acreage as plums 95,478 ha and 72,740 ha of apple, but before the hair, apricots, peaches and nectarines. The aim of this paper is to present the characteristics of some wild cherry genotypes from Targu Mures vicinity used to obtain after scientific examination new orchard of cherry.

Survey on the behavior of seedlings obtained from different types of wild cherry

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Keywords: kernel performance, 1000 kernel weight, percentage of emergence of stoning

ABSTRACT

Use cherry rootstocks culture is beneficial because of their qualities lend rootstock rootstocks: a better use of soil, climate where it was founded orchard. After decades of research on the influence of rootstocks, we can say that there is no noble variety that rootstocks influence would not in any way, what is true and vice versa, influencing a variety noble way or another rootstock. Were identified, marked and described 18 genotypes of *Cerasus avium* . These types of wild cherry were marked with letters and numbers, as follows: KM 1, KM 1', KM 2, KM 3, KM 4, KM 5, KM 7, KM 8, KM 9, KM 10, KM 11, KM 12, KM 13, KM 15, KM 16, KM 21, KM 22, KM 29. From the 18 selected genotypes of wild cherry, 5 types of kernel yield values is between 15.17% to 19.31%, which far exceeds the average kernel yield characteristic of wild cherry presented in the literature. In the case of wild cherry nine selections, the rate of emergence of stoning exceeds 60% which is a very valuable leaming pepinieristic. From the 18 selected genotypes of wild cherry, 5 types of kernel yield values is between 15.17% to 19.31%, which far exceeds the average kernel yield characteristic of wild cherry presented in the literature. In the case of wild cherry nine selections, the rate of emergence of stoning exceeds 60% which is a very valuable leaming pepinieristic. Seedlings derived from most selections (except the 3 selections) falls into the category of force under middle with value between 4.1 to 6 mm package thicknesses. With reference to the above, we conclude that wild cherry selections under study have provided valuable descendence generative, with important features in terms pepinieristic such as reduced growth and vigor of high school uniform seedlings

Fruits characteristics obtained from apple species from mutagenesis induction

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Keywords: fruit characteristics, mutagenesis process, agrochemical characteristics

ABSTRACT

Apple seeds treated with variable intensity doses of irradiation, produced alterations of heredity of apple species and cultivars, which characterized by the reduction of apple heights, modification of fructification type, crop capacity, shape, color, and biochemical contents of fruits. Researches made in 2010 year were about the morph productive particularities of trees and the apples quality of twelve apples genotypes, which were in culture at S.C.P.D. Voinesti, and as controls were Jonathan and Delicious Golden species. To registered data regarding the morpho productive characteristics there were made biometrical measurements regarding: heights of apple trees, diameter of trunks and diameter of apple crowns. Biochemical determination were water content, total dry matter , total sugar, acidity, vitamin C and mineral elements total nitrogen, protein, phosphorus, potassium, calcium, iron, and heavy metals Cu, Zn, Pb, Cd. The analyses for the growing potential of some apple genotypes obtained through mutagenesis induction show that between the apple trees existed significant differences in the heights, diameter of trunks and diameter of apple crowns and types of fructifications. Another characteristics which were research, were biochemical ones. The mutagenesis process made influenced medium values of biochemical characteristics of apple genotypes.

The impact of manual thinning upon fruits' chemical features of some peach varieties cultivated in conditions of the western part of Romania

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Keywords: peach, neactarine, thinning, sugars, acidity

ABSTRACT

Peaches' main chemical substances content are sugars, organic acids, pectic substances, tannins, vitamins and minerals. Manual thinning of peaches is almost compulsory and gives high results by assuring a sufficient space between fruits, increasing their quality. In this article we present the impact of manual thinning upon the content of soluble dry substance, rephractometrical determined, sugars, determined by soluble dry substance method, total acidity, determined by juice extraction and titration with NaOH, and gluco-acidimetric index. The studied varieties were 2 varieties of peach Spring Lady and Maja, and 2 nectarine varieties Caldesi 2000 and Nectaross. The trees were planted at a distance of 4.0 x 2.5 m, having a density of 1000 trees/ha and the crown system is Palm Spindelbusch. The soil is maintained clean by mechanical hoes and the use of Roundup 360 SL herbicide. Manual thinning was done when fruits had the size of a walnut till the stoning of stones. There was done a severe thinning at 15 cm, a moderate one at 10 cm and a softer one at 5 cm. Manual thinning had different intensities, such as: 5 cm between fruits, 10 cm between fruits and 15 cm between fruits, and the results obtained showed that sugars increase in those variants where thinning was more severe, than in those with slightly thinning.

Study on fruits production of densely gooseberry bush plantation

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Keywords: gooseberry, variety, yield, intensive plantation, irrigation.

ABSTRACT

This work presents the results of scientific researches made on 2007-2010, concerning the motivation on the productivity of gooseberry culture in intensive plantation on the irrigate growing conditions. Rationally using the land to plantations on irrigated land by planting distance of 1.5 x 1.0 m depending on the quality can get a variety of fruit production up to 25-32 t/ha. The average mass of fruit, gooseberry bush on the train irrigated varieties ranged from 2.1 to 3.9 g studied, and the maximum mass of fruit, from 2.4 g to 4.4 g. up large fruit varieties are: Captivator (3.9 g), Sadko (3.6 g), Smena (3.3 g). Small fruited are Gruşenca and Severnîi captain (2.1 g). Average yield of gooseberry bush varieties studied ranged from 7.4 to 19.5 t/ha on irrigated land. Studied varieties of gooseberry bush Colobok, Grushenca, Captivator, Sadco, Smena, Severni kapitan, Slivovi or acted as highly productive varieties with a yield of over 6 t/ha.

Horticulture in Sulawesi Utara Province - Indonesia

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Keywords: species, tropical fruits, vegetables, ornamental plants, cropping systems

ABSTRACT

Located few degrees north from the Equator, Sulawesi Utara Province (North Sulawesi) Indonesia, is a rich land were horticulture is well developed. The paper presents some aspects regarding the Horticulture sector. After a brief presentation of the geographical position and province relief, some data regarding the climate characteristics, population and labor force are detailed. For the most important fruit and vegetable crops, total cultivated area, average yield and total production are presented. Tropical fruit production is dominated by three crops: coconut cloves and nutmeg, those crops being representative at the national level. Some of the native ornamental plants are also described. The plants name are presented both in English, Bahasa Indonesia and Latin.

Researches on the *in vitro* micropropagation of certain species of fructiferous arbutus in the spontaneous flora

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Keywords: *Rosa canina, Hippophae ramnoides, Sambucus nigra, in vitro* micropropagation

ABSTRACT

The researchers are part of a more ample project, whose main objective is the selection from the spontaneous flora of certain valuable biotypes of the *Rosa canina* L., *Hippophae ramnoides* L., Sambucus *nigra* L. *species,* as well as the determining of the propagation methods. By analyzing the results obtained in the phase of initiation of the *in vitro* culture, the best results were obtained with the briar, on the Neculae & Teodorescu (1994) growth medium with 35% grown explants, followed by the sallow thorn, on Lee & Fossard (1977) growth medium + 3.2 ml/l NaFeEDTA, 1ml/l GA3, 0.1 ml/l IBA, 40 g/l dextrose, 8 g/l agar with 23% grown explants and elder with 22% on the Murashige & Skoog (1962) + 3.2 ml/l NaFeEDTA, 1ml/l GA3, 0,1 ml/l IBA, 40 g/l dextrose, 8 g/l agar. Within the multiplication phase for the briar species the highest values of the propagation rate were obtained on the Murashige & Skoog (1962) and Neculae & Teodorescu (1994) growth mediums with values of 12 respectively 10 micro sprouts/explant, 8 in the sallow thorn on Lee & Fossard (1977) growth medium, and in the common elder the highest propagation rate was 7 on Murashige & Skoog (1962) growth medium. The highest percentage of micro cuttings rooted *in-vitro* was of 60 – 80 and it was obtained in the three species on Neculae & Teodorescu (1994) growth medium, containing 0.5 mg/l IAA. In the acclimatization phase the best results were obtained on the support of peat + perlite culture (1:1), in the briar with 80% acclimatized plants, followed by the sallow thorn with 73% and the common elder with 71%.

Fructification apple trees depending on the normalization of the fruit load

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Keywords: spindle-shaped, thinning fruit, variety,

ABSTRACT

Investigations were conducted in the years 2009 - 2010 in apple orchard in SA Zubreşti planted in the spring of 2003, with 4x2 m planting scheme. Trees are driven by thin spindle-shaped crown improved. We studied the apple fruit thinning by chemical thinning, manual and mixed in 3 varieties Golden Delicious, Idared and Florina, grafted on rootstock M26. It was determined by counting the number of blossoms button flower, fruit number and weight. The variety Golden Delicious fruit were the lowest recorded in the control variant (106 g) with an amount of 16.5 kg/tree and 20.6 t/ha, and most fruits were two options - (136 g) and an amount of 22.7 t/ha, and variant 4 (138 g) and a total quantity of fruit per hectare to 24.1 t/ha.

VITICULTURE & OENOLOGY

Enhancement of the volatile profile of Royal Feteasca wine by using selected enzymes and yeasts

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Keywords: Royal Feteasca**,** electronic nose, Heracles, sensory profile, aroma fingerprint

ABSTRACT

Royal Feteasca is a Romanian wine grape variety cultivated in almost all viticultural regions of the country due to its versatility and high productivity. The wines are very popular in Romania, but the rustic aroma does not appeal to many foreign consumers. The volatile profile of a wine can be modify and enhanced by using, in the winemaking process, selected yeasts specially designed to produce more aromatic compounds during fermentation and enzymes which can contribute to the release of the aromatic compounds from the grapes. For Royal Feteasca the enzymes tested proved to be of limited importance in changing the typical aromatic profile, while some of the yeasts, such as QA-23 and NT-116, made a significant difference in improving the final aroma of the wine. Other yeasts, such as Cross Evolution, had a lower impact on the general volatile profile, the results obtained by using an electronic nose showing that the wine aroma of these wines is close to that of wines made by the natural fermentation. More yeasts is currently being tested for the establishment of an improved technology to make this variety more commercially attractive.

Comparative study of the economic efficiency of using some commercial bentonites for fining white wines

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Keywords: bentonite**,** white wine fining, economic efficiency

ABSTRACT

The most applied treatment which ensures protein stability of white wines is the bentonite fining. Many bentonites are available commercially, differing on composition, granulation, the sediment they produce in wine and cost per unit of product. Although the differences in prices may not seem extensive, correlated with the final result of wine fining, a difference of 0.1 euro per liter of treated wine, at industrial scale, may prove to be significant. The paper presents a comparative study of some commercially available bentonites and their economic efficiency. In the study 5 Na-bentonites and 2 Ca-bentonites were used, of which 6 from international providers and one from a national provider. The results showed that the most efficient was Bentonite Sodium Volclay Granular, followed by the indigenous Bentovin, both Na-bentonites. Other Na-bentonites from the same international provider, Microcol Powder and Microcol Granulated, ranked last due to their relative high price and loss of wine in the relative high amount of sediment they produce. The two Ca-bentonites, CLARSOL KC2 and CLARIT L455 JD, as far as the price and sediment were concerned, ranked in the middle and they are not preferred also due to their release of undesirable Ca ions in the wine. The Bentogran, another Na-bentonite, ranked also in the middle, producing a sediment of 10% of the total wine treated and can be an option for use provided the price drops a little.

The influence of climatic changes on quality of wines obtained from the Romanian varieties of grapes

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Keywords: climatic changes, wines, varieties, vineyards

ABSTRACT

In Romania, the climate heating changed the quality of wines obtained from the Romanian varieties of grapes and their geographical spreading. So, one of the well known Romanian variety of grapes used for the quality of white wines, named Fetească albă, restricted its growing area comparing with the last century. During the last years this variety is less and less cultivated in the Southern vineyards of the country, where the annual medium temperature is over 11^0 C.

Composition and sensorial features of multivarietal red wines from Vânju Mare vineyard

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Keywords: wines, assortment, composition, sensorial features

ABSTRACT

The red wines, assortment type, as technological blend of many sorts in various proportions, represent a suitable solution in order to increase the quality of wines obtained in winegrowing region of Oltenia, particularly in Vânju Mare vineyard. According to the results obtained in 2007 – 2009 the wines produced by the combination of various sorts of quality, get superior parameters of composition, and chromatic and sensorial features comparing with the wines produced of the same sorts but processed as pure sorts.

Research concerning the influence of types of pruning and bud loads on vegetative and yielding balance at grapevine

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Keywords: grapevine, pruning, vegetative and productive equilibrium

ABSTRACT

The results of the research made on Fetească regală variety in the experimental field of Viticulture and Enology Department from Bucharest University of Agronomic Sciences and Veterinary Medicine, for a period of three years (2008-2010) have allowed the highlighting of some valuable conclusions for rationalization of grapevine culture and maximization of yield's quality. The experiment has followed the interaction between pruning type (Guyot on demi-high trunk, Cazenave cordon and spur-pruned cordon) and bud loads (10 and 15 buds/sq m). The interaction between the two factors studied has as results some canopy architectures, leading to a differential reception of solar radiation, a specific microclimate inside the leaf wall and a certain quality of the yield. In order to maximize the quality, it is recommended, in case of normal yields, to assure some values of the vegetative and productive balance index between 20 and 25, a ratio „yield/pruning weight" between 4 and 6, and also 10 - 18 sq leaf area/g of grape.

Color changes induced by fining treatments in red winemaking

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Keywords: gelatine, polivinilpolypirolidone, ovalbumine, CIELab, color analysis

ABSTRACT

The study shows the change of color composition after fining treatments of a red wine. Wine samples were analyzed with a spectrophotometer for color composition (D_{420}, D_{520} and D_{620}) and CIELab parameters were determined. Spectrophotometer readings were statistically analyzed by SPSS 17.0 and then interpreted under Duncan's test. Each treatment has a different effect on wine color and this study allows the winemaker to decide the appropriate fining method to use in accordance to the final product desirable characteristics.

Perspective clone elites from the Italian Riesling variety

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Keywords: elite clonal, quality, production

ABSTRACT

For the Italian Riesling variety, a number of other elite clones with special skills and quality production have been studied. Clonal selection has been made since 1983 and based on the principle of early stage of development. It is known that the Italian Riesling begins variety its maturity later, and in some years, it fails to reach full maturity, due to climatic conditions, deficit temperatures of the Tarnave vineyard. The two elites presented in the paper begin to ripen about 10 days earlier, compared with the control clone. The presented elites can be proposed for homologation as they register high grape production and accumulation of sugar with better values than the Italian Riesling clone – 3 Bl. taken as a witness.

Researches concerning the behavior of some white wine grape varieties in different pedoclimatic and technology conditions

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Keywords: production, quality, quantity.

ABSTRACT

Vine culture is an activity which dates in Romania from ancient times, the grapes and wine being for centuries one of the most valuable natural resource of the country. In time, Romanian wines got and carried over a special fame because of their quality, which made our country, together with France, Spain, Italy, Germany or Portugal, one of the largest wine producers in Europe. In wine composition there are vitamins, such as: A, B1, B2, B3, B5, B6, B9, C, E, D and P, minerals, iron, sodium, calcium, potassium, phosphorus, magnesium, chlorine, silicon, manganese, arsenic and chromium. Because of this composition based on vitamins and minerals, grapes are an extremely valuable aliment. Doctor Arcadie Percek said: "a glass of wine can be identified with a miniature laboratory". Wine is an aliment and an energising factor, the white one has dietetic effects, it is good for digestion stimulation. Research undertaken on white wine varieties have assumed that white wine has the largest share in terms of wine consumption.

Researches regarding the deployment phases of vegetation, fertility and productivity of some wine grape varieties grown in the vineyard of the Didactic Station Timisoara

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Keywords: foliar surface, production, quantity, quality

ABSTRACT

Observations and measurements presented in this scientific paper were made in the vineyard of the Didactic Station Timisoara during the years 2009 and 2010. Researchers have mainly pursued completion phases of vegetation and fertility as well as productivity aspects of wine grape varieties: Pinot noir, Cabernet Sauvignon, Merlot, Burgundy, Italian Riesling and Muscat Ottonel. The above mentioned features are not always in a direct correlation but they influence decisively the production obtained. It is important to have quantitative and qualitative balanced production to obtain high-quality wines.From this point of view all the mentioned varieties had a good behavior, pointing out the large production of Burgundy varieties and Merlot and a high quality of Pinot Noir varieties and Cabernet Sauvignon. The amount of sugar accumulated in berries enables obtaining high quality wines to all varieties analysed. Deployment of the vegetation phases occurs differently from year to year depending on environmental conditions within the same variety, and the differences between varieties are determined mainly by their genetic characteristics. Productivity and fertility of varieties was estimated according to the percentage of fertile shoots, the number of inflorescences on the vine, the coefficients of fertility and productivity indices, Merlot variety being considered the most fertile and the productivity of varieties analysed ranged in specific values for wine grape varieties. Pedoclimatic conditions in the perimeter of Timisoara are favorable to growing quality vine varieties.

The agrobiological study of old grape varieties in vineyard Dragasani

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Keywords: shoot, bud burst, full bloom, varieties, descriptors.

ABSTRACT

The study was made in years 2010-2011 and followed the main properties of agrobiological old varieties in the Dragasani Vineyard. The study was made in order to save these old varieties, which are increasing uncommon in Dragasani Vineyard, because of different social or economic causes. The study was carried out in the private plantations located in the Dragasani Vineyard for the conservation of the old grape varieties *on farm*, *in situ* and *ex situ* in ampelographic collections. For an easier identification of these grape were used accredited organizations in this field descriptors, namely: O.I.V., U.P.O.V, I.B.P.G.R. as easy as possible to identify these varieties, aiming the promotion and the multiplication of these varieties and the recovery of old traditional assortment in Dragasani Vineyard. The study showed the existence extremely valuable genetic resources, of old traditional varieties.

Comparative study of some table grape cultivars in view of the extension of varietal conveyer in Huşi vineyard

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Keywords: table grape varieties, Husi vineyard

ABSTRACT

The results of the research on 6 new varieties obtained in Romania (Azur, Tamina, Victoria, Napoca, Xenia) and in the Republic of Moldova (Moldova), as compared to the control varieties Muscat de Hamburg, Chasselas doré and Afuz Ali under the conditions at S.C. Vincon S.A., Recea farm, during the 3 years of experimental studies (2006-2008), have evinced valuable conclusions for the enlargement of table grape assortment in Husi vineyard and the improvement of production quality.

The obvious climate changes of the last years, regarding the high thermal resources and the shortfall of humidity, especially during the aging of the grapes, are allowing the cultivation expansion of the large berry table grapes varieties further north, compared to those foreseen 30 years ago. The interaction between variety, bud load when pruning and the cluster thinning has determined certain vegetation architectures, leading to a vegetation and yield balance as well as to a certain quality of it.

It is recommended, the culture expansion in the Huşi vineyard of the varieties Victoria and Xenia, due to their adequate behavior in the culture, the pleasant appearance of the grapes and the taste balance appreciated by the consumers. The pleasant appearance of the Moldova variety grapes, the good preservation capacity and the frost resistance recommends this variety for the expansion in the culture.

Effects of conditioning treatment on chromatic structure of young red wines

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Keywords: conditioning, color intensity, tonality, pigments, flavil

ABSTRACT

Physical, physical-chemical, and physical mechanics treatments applied young red wines perform different actions on their chromatic structure depending on their mode of combination and order of intervention. Heat treatment increases the intensity of colors and color tone. Interventions with cold, bentonite and filtering cause significant reductions in intensity colors.

Restrictions, precautions and trends in using the herbicides in viticulture

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Keywords: weeds control, diffuse pollution, environnemental respect, vine

ABSTRACT

Herbicides technique appeared in viticulture in the 1950-1960 periods, at the same time with the paraquat and the aminotriazol like foliar herbicides and the diuron and the simazine like preemergency herbicides to settle the matter of the weeds. Today in many U.E. regions, in special in France, the herbicides are concerned like negative in connection with environment. Even if using the herbicides we have a very good weeds control, reduced soil erosion, have a good selectivity for grapevine, the grapes and wines without residues, the detection of the superior limit 0,1 µg/L in the superficial and underground waters is necessary to use theses with restrictions and cautious. The herbicides based on Simazin and Terbutylazin were forbidden, the doze of use of Diuron was reduced at 1500 g/ha/year and do not use as single, the doze of Glyphosate and Sulphosate was reduced at 2200 g/ha/an. To avoid using the herbicides for return zones, for vegetation fosses, for drains are environmental favorable measures.

Use the Terbutylazin associated in different combinations like with Isoxaflutol and S-metalaclor for weeds control on the vine row, and natural grasses on the rows interval were experimented in vineyard Stefanesti in the 2008-2010 period.

Merlot 7Vl and Cabernet Sauvignon 30Vl, clonal selection for red wine designation of origin

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Keywords: traditional varieties, elite, approval, bifactorial experience, interaction, appreciation organoleptic

ABSTRACT

At Research-Development Institute for Viticulture and Winemaking, Valea Călugărească, continues to happen in clonal selection was made of varieties that produce wines with controlled appellation of origin including Merlot and Cabernet Sauvignon. To the best of both varieties elite files have been prepared for approval in 2011 under the name of Merlot 7Vl and Cabernet Sauvignon 30Vl. The study of clonal forms in the present study was conducted between 2007-2009. The first clone, Merlot 7Vl, boasts a higher grape production by 17% from the average clone approved in a previous year, Merlot 8Vl, increase the quantity being 8.66 t/ha to 10.20 t/ha. A second clone approved Cabernet Sauvignon30Vl, is distinguished by a higher grape production by 19% to clone approved earlier, Cabernet Sauvignon 33Vl increase the quantity being 7.07 t/ha to 8.40 t/ha. Grape quality is slightly superior clones of control who were approved in previous years. Sugar content of grapes was 206 g/l for Merlot 7Vl at 204 g/l compared with Merlot 8Vl control. Cabernet Sauvignon 30Vl clone had 208g/l compared with compared with control sugar Cabernet Sauvignon 33Vl which 201 g/l. Other technological features are very similar to the new clones compared with respective controls. The content of anthocyanins in wine was Merlot 7Vl of 274.75 mg/l compared with control which was 264.25 mg/l. Anthocyanin content was the Cabernet 30Vl, 603.75 mg/l compared with control which was 565 mg/l. Organoleptic assessment was the wine tasting Merlot 7Vl clone 18.3 compared with 18.0 for the control Merlot 8Vl; Cabernet Sauvignon 30Vl the note was of 18.8 compared with 18.3 control Cabernet Sauvignon33Vl.

Results of clonal selection of Cabernet Franc

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Keywords: elite, approval, bifactorial experience, interaction, noted to taste

ABSTRACT

Cabernet franc is a grape variety for red wines complement the recommended designation of origin where the Dealu Mare vineyard with Cabernet Sauvignon grown. The year 2011 has been completed clonal selection of the variety is approved by the Research and Development Institute for Viticulture and Winemaking continue to happen in two clones of it: Cabernet Franc 43Vl and Cabernet Franc 81Vl. The study of clonal forms in the present study was conducted between 2007-2009. As the average three-year study, two clones of Cabernet Franc, CF and CF 81Vl 43Vl achieved 8.02 t/ha respectively 8.15 t/ha, compared with the average experience that was 7.55 t/ha. The increase in production compared with the average experience for 43Vl CF clone is 6.2%, but compared to the elite homologated CF 5/7 is 18.5%. If CF clone 81Vl increased production compared with the average experience of 8% compared with the elite but homologated CF 5/7 is 20.4%.

It is distinguished by its capacity CF 43Vl clone which has accumulated 225 g/l sugar, compared with the average experience with 215 g/l sugar. In the anthocyanins contained in grape CF 81Vl was 569 mg/kg. compared with the average experience of 551.11 mg/kg. Acid content is highest in the elite CF 5/7, 3.60 g/l (H_2SO_4), compared with an average of 3.48 g/l (H2SO4). In terms of alcohol content are differences between the versions: from 12.2 vol% of CF 5/7 up to 13.1 vol % for CF 81Vl. The content of anthocyanins in wine was superior to the Cabernet Franc 81Vl it with 556 mg/l, while the Cabernet Franc 43Vl was 498 mg/l, which was compared with the average 499 mg/l. The highest intensity of staining had the 6886 Cabernet Franc and Cabernet Franc 81Vl 43Vl was 5984, compared to an average of 6.4373. Optical density in the red spectrum, which most interest was the highest value of Cabernet Franc 81Vl 32.45% and Cabernet Franc 43Vl was 27.65%, compared to an average of 29.47%. Noted to taste of Cabernet Franc 43Vl was 18.5, followed by Cabernet Franc 81Vl with 18.4 g/l compared with the average which was 18.2.

Selection of vine clones to produce certified planting material

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Keywords: serotypes, approval, quarantine diseases, viral diseases, starting material G0

ABSTRACT

It was continued research of the 4 clones recently approved (7Vl Merlot, Cabernet Sauvignon 30Vl, Cabernet Franc and Cabernet Franc 43Vl 81Vl) certificate to obtain biological material was performed between 2007 and 2009. Clones were tested for fan-leaf virus vine + Arabis mosaic virus (GFLV + ArMV), vine leafroll associated virus serotypes 1 3 (GLRaV-1 +3), Fleck vine virus (GFkV) and virus vine a (GVA) by double antibody sandwich - enzyme-linked immunosorbent assay (DAS-ELISA) (Clark and Adams, 1977) using commercial kits purchased from BIOREBA, Switzerland. As some corresponding ELISA values of biological material samples of Cabernet Sauvignon clone 30 Vl, indicated the presence of virus GFkV Fleck, was moved to devirozation by in vitro chemotherapy. Regular checks concerning the assessment of the ribavirin effect on virus elimination Fleck to clone Cabernet Sauvignon 30 Vl, allowed the choice of healthy plants that were initially propagating material G0. Plants were promoted the next steps leading to the production of certified planting material.

Parallel to the work done at fitotron continued observations in the field test which confirmed clones for approval on 18.02.11. Thus, 7Vl Merlot clone has the highest production of grapes per hectare, 10.20 tons and has a production clone Cabernet Franc 43Vl lowest, 8.02 t 8.69 compared to their average clone t. CF 43Vl gained 225 g/l sugar, (most) compared to the average experience with 213 g/l sugar. In the anthocyanins contained in grape clone of Cabernet Sauvignon 30Vl was 691.90 mg/kg, the highest value and Merlot 7Vl had the lowest value of 389.39 compared to the average experience with 551.35 mg/kg. In the alcohol content, the lowest value has a 11.9 vol% Merlot 7Vl and Cabernet Franc 43Vl had 13.1% alcohol volume than the average of 12.32 vol%.

Anthocyanin content of wine was Cabernet Sauvignon 30Vl of 604 mg/l, the largest and the Merlot 7Vl was 275 mg/l, the lowest compared with the media was 483 mg/l. Note the greatest tasting Cabernet Sauvignon was 30Vl of 18.8 and the lowest was 18.3 Merlot 7Vl than the average which was 18.5.

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The combined effect of maceration and pectolytic enzyme preparations on extraction of terpenes compounds by flavour grapes

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Key words: flavored grapes, maceration, enzymatic preparation, volatile terpenes, bound terpenes

ABSTRACT

The results obtain shows that using in a different variant of maceration can be a notable difference between them concerning wines chemical composition parameter, but mostly in concerning terpenes complex parameters and the proportions. The researches some enzymatic preparation using during the maceration process in flavour wine technology have a positive effect on wine volatile terpenes content, result an product with better aromatic potential.

Comparative analysis of the main elements which define viticultural “terroir” and their influenece on the Dornfelder variety

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Keywords*:* vineyard, climatical index, grape varietes, favorability

ABSTRACT

Terroir is an unique word, which can’t be translated in any language, but basically, the notion of terroir includes all natural elements that can’t be significantly influenced by man. In the last decade, has become a word "fashionable", often, the distinctive character and quality of wines, are described with reference only to the qualities of the natural environment where are cultivated grape varieties. The concept of terroir has to be, however understood, like a relationship of interdependence between the natural environment, vineyard and variety. This paper represents a synthesis in which was tried, through a comparative study, to highlight the behavior of the variety of German origin Dornfelder, in two areas very different in terms of ecopedoclimatic conditions – the experimental field of the ampelographic collection of the University of Agronomical Sciences and Veterinary Medicine, Bucharest and Rheinhessen, Ingelheim am Rhein, Germany. The study conducted by analyzing the main elements that define the terroir of these two areas, we can say that the variety Dornfelder suits best the natural environment of the two growing areas, apparently very different in terms of terroir conditions.

Research on the dynamics of *Empoasca Vitis* species in vineyards located in central Transylvania

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Keywords: *Empoasca vitis*, green cicada, the dynamics of the population

ABSTRACT

Species Empoasca vitis (Green Cicada vines) is reported more and more in vineyards located in central Transylvania. For a long time, the damage caused by this pest has been confused with other phenomena: burning, dryness, nutritional deficiencies, mites, etc. The presence and spread of the pest was monitored in demonstration plots located in the vineyard of Tarnave (Blaj and Aiud). The observations and determinations of the number of insects (larvae) found an average number of 2-4 larvae/leaf in the control plots.

The incidence of the attack of *Agrobacterium tumefaciens* on the maturation of the drafting canes for some varieties of *Vitis vinifera L.*

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Keywords: *Agrobacterium sp.*, grapevine, maturation, insoluble and soluble carbohydrates

ABSTRACT

***Agrobacterium tumefaciens* is a bacterium that causes serious losses to many species of plants, including the grape vine. The tumors caused by this bacterium damage the plants in the plantations producing graft/rootstock cuttings and, therefore, are required periodic inspections to identify and eliminate the infected ones (by burning). The purpose of this study was to estimate the incidence of the *Agrobacterium tume faciens* attack on the degree of maturation of the graft strings of some *vinifera* genotypes. The biochemical findings regarding the water, soluble carbohydrates and starch content in the wood led to the conclusion that the wood maturation was poor in the infected plants, with direct influence on the tolerance of these varieties to negative temperatures during the dormancy and thus, on the quality of the material used for propagation.**

Preliminary research regarding virulence testing of the bacteria *Agrobacterium tumefaciens*, *in vitro* and *in vivo*

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Keywords: *Agrobacterium vitis*, soil, nursery, graft, vineyard, vine

ABSTRACT

Crown gall of grape it is a dangerous disease, found in many regions of the world. The disease occurs mainly in cold climates, but also in Mediterranean countries. The purpose of this study was to isolate and identify, from several vine plants, the bacterium that causes crown gall, and to test the virulence *in vitro* and *in vivo*. For isolation of bacteria were used Lieske and D1 culture medium, and for identification Roy & Sasser and M1A culture media. The bacterium was identified as *Agrobacterium tumefaciens* and does not make the same number of bacterial colonies in any medium suitable for virulent strains of this species. The virulence was tested on carrots and vine plants from *in vitro* culture.

Influence of oxygen on vital – metabolic processes of acetic bacteria

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Keywords: acetic acid, acetic bacteria, oxygen, viable cells.

ABSTRACT

Oxygen is generally indispensable for the multiplication of acetic bacteria. To multiply and make acetic fermentation, acetic bacteria need more air. Is known to increase the volatile acidity of wine with acetic acid 1 g (respectively 0.8 g H_2SO_4) acetic bacteria use oxygen in the air at least two liters.

BOTANY & PHYSIOLOGY

Glandular trichomes and volatile oil composition of *Artemisia lerchiana* (*Asteraceae)*

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Lăcrămioara Ivănescu[2], Aurelia Dobrescu[1], V. Ciocârlan[1]
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Keywords*:* tectorial hairs, secretory hairs, essential oil

ABSTRACT

This paper presents a study of *Artemisia lerchiana* species belonging to family *Asteraceae* coming from the spontaneous flora of Romania, county Tulcea, Capul-Doloşman. This research purposed to study the secretory structures in petiole and leaves of *Artemisia lerchiana* as well as the composition of the essenţial oils extracted from fresh herba. Analysis of the essential oil extracted by hydrodistillation was performed by GC-MS and emphasized the presence of some major chemical compounds in *Artemisia lerchiana* essential oil. The main components of *Artemisia lerchiana* essential oil are: eucalyptol, camphor and borneole.

The chemical composition of volatile oils in ten species of *Achillea* from Romania

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Keywords: *Achillea*, volatile oil composition

ABSTRACT

We identified 72 different components in the volatile oils extracted from ten species of *Achillea*. The number of components in each species varies from 18 in *Achille afilipendulina* and 35 in *Achille aochroleuca*. Among identified substances, only three were found present in volatile oils of all *Achillea* species: camphor, terpinene-4-ol and germacren D. The main components of volatile oils in each species were identified as follows: *A. coarctata*: eucalyptol and germacren D., *A. distans*: germacren D (18.39%), eucalyptol (17.56%), borneol (6.26%), β-pinene (10.95%) and α-pinene (7.38%), *A. leptolphylla*: camphor and eucalyptol, *A. millefolium*: camazulene, β-pinene, eucalyptol, *A. nobilis subs p. neilrechii*: borneol, *A. ochroleuca*: eucalyptol, *A. panonica*: eucalyptol, sabinene and β-pinene, *A. setacea*: eucalyptol, eudesmol and borneol, *A. sudetica*: β-pinene, eucalyptol, sabinene and eudesmol and *A. filipendulina*: β-eudesmol, elemol and cubenol.

Research on the biometric and biochemical features of some apple market varieties from western side of Romania (*Malus domestica*)

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Keywords: apple, fruits firmness, soluble glucyds, dry matter, starch-iodine test.

ABSTRACT

Fresh fruits and vegetables are highly perishable commodities that can easily spoil or deteriorate during produce handling along the supply chain from the producer to the final retailer. All fruits and vegetables are living parts of plants containing 65 to 95 percent water. They continue their life metabolisms after harvest and thus change their characteristics depending on product handling, storage and treatment; all of which have a decisive impact on the life of the product. In fruits occur a lot of physiological and biochemical processes from which result modifications of color, consistency, juicy and taste of fruits. Post-harvest losses following products can damage up to 50% or more for countries that are developing. Therefore reducing losses is highly economically significant for both producer and consumer (FAO, 2006). In this experiment we studied the biometric and biochemical features of some apple varieties form agricultural market in western side of Romania.

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Overview of physiological significance of hormonal signalling on plants defense responses against biotic stress

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Keywords: stress physiology, higher plants, molecular signaling

ABSTRACT

The plants are exploited by many stress factors, including biotic factors such as bacteria, fungi, nematodes, insects and even other plants nearby. Therefore, to successful overcome these drawbacks plants have developed specific mechanisms to recognize stressors and to shifting perceptions in defense responses. Within these complex molecular mechanisms hormones have a special role, being signals that integrate internal development processes and external inputs, with their translation in appropriate specific answers. In such context, this overview summarizes recent progress on plants hormonal signaling that is activated in response to biotic stress factors attack, from fundamental point of view and with relevance for practical activity.

Contribution to knowledge the volatile oil from Freesia x hybrida lowers, “Yvonne” and ”Versailles” variety

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Keywords: Fressia x hybrida, volatile oil, floral scent, perfume.

ABSTRACT

The scent from the *”Yvonne”* and *”Versaille”* varieties of the *Freesia x hybrida* flowers contains till 87.5 % monoterpenes and sesquiterpenes, and small quantities of benzene compounds (0.45 – 3.76 % of identified substances) and hydrocarbons (0.13 – 0.43 % of identified substances). Only 4 substances, from the indentified, was present in both Freesia hybrids, in both years (2010 and 2011): linalool, α-terpineol, nerol and geraniol. The share is owned by linalool which is about 53.47 – 82.43 % from the total indentified compounds from the both Freesia hybrids, and the α-terpineol was 1.20 – 17.08 % from the total indentified compounds.

Contribution to knowledge the volatile oil from *Iris germanica* L. Flowers

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Keywords: *Iris germanica*, volatile oil, floral scent, perfume.

ABSTRACT

The volatile substances that make up the scent of flower buds of Iris germanica contained 8 compounds: benzyl benzoate (32.83% from the total identified compounds) and 7 hydrocarbons (49.39 from the total identified compounds). In perfume mature flowers were identified 26 substances, represented by 12 hydrocarbons (67.97% from the total identified compounds), 8 sesquiterpenes (15.65% from the total identified compounds) 3 fatty acids (5.27% from the total identified compounds), 2 monoterpenes (0.94% from the total identified compounds) and 1 aldehyde (0.51% from the total identified compounds).

Analysis of ruderal communities located along the railway Bucharest - Oltenita (segment Morarilor Road-Ion Şahighian Street)

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Keywords: ruderal flora, specific composition, life forms, allochoric, autochoric species

ABSTRACT

Specific composition of the ruderal flora along an abandoned railroad from the eastern part of Bucharest includes both wild and ornamental species. They have specific requirements to the conditions of the biotope and a high capacity to multiply. Analyzing the composition of species according to economic categories and their role in biocoenosis were found several with medicinal, culinary, dyeing, aromatic, cosmetic uses or honey producers.

Anatomy study of *Physalis peruviana* L. species (*Solanaceae*)

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Keywords: stem, leaf, epidermis, stomata, bicollateral vascular bundle

ABSTRACT

The anatomical observations were made at the stem and leaves *of t he Physalis pe ruviana* plant, cropped in the field. The shape of the stem is round in transversal section, with slightly nervures with the many multicellular tector and secretor hairs and a lot of bicollateral-opened fascicle bundle. There are cells with crystals of calcium oxalate into the cortex and medulla of the stem. The petiole of the leaf is semicircle in the transversal section with two adaxial nervures with a big median bicollateral opened fascicle and two small fascicles in the nervures. There are many tector and secretor hairs in the epidermis of the stem. The blade of leaf is amfistomatic with anomocitic stomata. There are multicellular tector and secretor hairs on the both epidermis. The average number of the stomata/square millimeter is higher in the lower epidermis. The mesophyll of the leaf blade is bifacial and monolayer palisade tissue.

The influence of mulch color and eggplant variety on some leaves physiological parameters

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Keywords: *Solanum melongena* L., photosynthesis, respiration, chlorophyll, carotenoid pigments, colored mulch

ABSTRACT

This paper presents haw different soil cover with polyethylene sheeting (mulch) influence plant physiological processes and their precocity. Mulching the soil with polyethylene film, regardless of color, accelerated plant growth and taking advantage *of Solanum melongena*, compared with plants grown in uncovered field, as a result of a high photosynthesis: respiration ratio, probably due to the higher temperatures achieved under the polyethylene film. The intensity of photosynthesis, respiration and accumulation of carotenoids pigments depend on variety and mulch used.

Studies concerning combinative ability of some French bean cultivars in organically grown condition

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Keywords: general and specific combinative ability, garden beans hybrids

ABSTRACT

The paper presents the studies of F1 hybrids resulting from diallel crosses and the parental forms according to Griffing model. According to this method, we selected parental forms with different origins: 4 certified varieties (Carson, Jutta, Inka, and Lingua di Fuoco) and 3 local populations from Brăila County (Tichileşti, Vădeni and Movila Miresii). The main objective of our study was to establish the value of some genotypes as parental forms for the quantitative characters. It has been observed that for the general combining ability, the effect amplitude was between –0,95 for pods/plants character at Lingua di Fuoco variety to 2,4 at Inka variety, between –0,4 for seeds/pod at Jutta variety to 0,8 for seeds/pod at Movila Miresii variety. As for the specific combining ability, it has been noticed that each combination produced different outcomes, most values registered being positive. The best effects for general and specific combining ability has been observed for Lingua di Fuoco x Jutta hybrid (4,25 – CCG for no. pods/plant and 1,34 – CCG for no. seeds/pod) and for qualitative characters (crude proteins in pods and seeds) the best results has been observed for Inka x Carson hybrid (0,32 – CCS for crude protein in pods, and 1,05 – CCS for crude proteins in seeds).

Total protein and starch dynamics in an assortment of barley genotypes cultivated on different types of soil

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Keywords: protein and starch content, barley genotypes

ABSTRACT

The paper shows how varying crude protein and starch content of barley grain in two varieties (Thuringia and Annabell), grown on two soil types (chernozem and alluvial soil) area Vadeni, Braila county. In addition to these quality indicators were determined and humidity and dry beans, 10, 17, 24, 31, 38 days after ear emergence were seen in the significant negative correlation between water content and dry matter content and between water content and crude protein content. To highlight how the accumulation of the protein and starch in grains of barley were used the same technology culture in the two study years (2009 and 2010) and have made charts and calculating the coefficients of correlation between quality indices analyzed, using Microsoft Excel.

OTHER FIELDS

Study regarding the tendencies of the international organic product market

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Keywords: certified, requirements, consumers, quality, fruit and vegetables, yields, conversion period

ABSTRACT

In the last two decades, a strong steady growth in the sales of organic foods has provided these products with a viable and sometimes value added market nice. Changes in dietary habits among many segments of the population of developed countries- resulting from increased health awareness and the increasing demand for a wider variety of products, including convenience food- have contributed to this growth. Due to major food scares, which hit many countries in Western Europe in the late 1990s and early years of this century, consumers in general have become more critical when purchasing food. Moreover, they have become more demanding regarding information on production and processing aspects (including traceability of the product). The sales organic horticultural product has been expanding rapidly in many of the major organic markets (ex. The United States, countries in the Union Europe and Japan). However, the market share of organic products in total food sales is still small. Diversification towards high-value crops can help to reduce the vulnerability of many agricultural producers in some countries, especially for resource poor and small-scale farmers. This study focuses on fresh certified organic fruit and vegetables.

Alternaria ribis, pathogen of curran bushes. Biological growth parameters

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Keywords: biological parameters, pathogen fungi, curran bush,

ABSTRACT

The most suitable moments to apply any preventing control measures, aimed at stopping he infection development can be determined by learning the biology of these pathogens. Our studies have been oriented toward defining the biological development parameters of fungal growth, under controlled circumstances, related to the influence of some abiotic factors: temperature, relative atmospheric humidity, pH value of culture media. The Alternaria ribis fungal colony development is influenced by temperature values.: the lowest temperature limit for colony development was 2°C; the optimum temperature needed for colony development was between 20-24°C; the highest temperature level may be considered at 32°C; the lethal temperature level was identified at 34°C, when colonies did not germinate, not even when the Petri dish was exposed to an optimal temperature of 32°C; the atmospheric relative humidity is an important factor in fungal evolution. Colonies did not develop at a 15% level. The lowest humidity limit was established at 36.8%; the formed mycelium was loose and no conidia had been formed.The optimal humidity limit was established at values over 75.6% when the formed colonies had a characteristic appearance.

The exposure to either a permanent or alternating light (12h/12h or 8h/16h), enhanced the best development of *Alternaria ribis*. The total absence of light had a negative impact on sporulation. The pH values of the culture medium influenced the fungal growth: the lowest limit was 3; the optimum limit ranged from 4-8. Higher values of medium alkalinity exerted a negative influence by stopping the colony growth. *A. ribis* fungal incubation period on leaves was determined by temperature in 95% humidity. At a 8°C temperature the fungal incubation lasted for 14 days. Between 20°C – 28°C the incubation period decreased to 6 days. Over 32°C the infection did not occurred any longer. The presence of a carbon source is indispensable for the *Alternaria ribis* fungal growth on a culture medium. This fungus metabolizes carbon well from mono-saccharides: glucose, dextrose, levulose, maltose, manose, trehalose, arabinose, manitose and ribose; in the same manner it metabolizes the polysaccharides: cellulose and starch. The absence of a nitrate source inhibits the formation of Alternaria Ribis colonies. This fungus metabolized very well the nitrate from the inorganic compounds based on potassium nitrate and the organic compound, peptone.

Out of the 7 culture mediums tested (Leonian, Czapek, those containing wood, oat, wheat, barley, PGA and malt 2%) the best fitted for the growth of *Alternaria ribis* were those containing oat, wheat, barley, PGA and malt 2%.

The dosing of active substances from vegetal extracts

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Keywords: vegetal extract, active substance, plans diseases

ABSTRACT

The vegetal extract was obtained by using 4 species of plants: *Hyssopus officinalis Rosmarinus officinalis, Satureja horten is and V aleriana officinalis*. In HOFIGAL laboratory was determining active substance on all this hidrolachohlic extracts: dosing the total polyphenols as chlorogenic acid, the total content of hydroxycynammic derivatives as rosmarinic acid, the total polyphenols as caffeic acid and determination sesquiterpenic acids as valerenic acid (%).In our investigations we have obtained results regarding the antifungical activity of the extract in vitro against the pathogenic fungi from the gooseberry. The colonies of the fungi *Botrytis cinerea* were inhibated by the S*atureja hortensis* extracts to a concentration of minimum 5%; and demostrated a toxic effect on the fungi *Alternaria ri bis* and the germination of the *Oidium* condia (teleomorph *Sphaeroteca mors-uvae)* was inhibited too.

The development of the fungi *Botrytis cinerea* colonies was inhibited by the *Hyssopus officinalis* extract with 5% concentration. The germination of the *Oidium* conidia (teleomorfa *Sphaeroteca mors-uvae)* was totally inhibited by the same extract. The plant extract obtained from *Valeriana officinalis* included in the culture media in concentration of 20% demonstrated to have an inhibitory action against the fungi *Alternaria ribis.*

Bacterial cancer of horse chestnut

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Keywords: horse chestnut, *Agrobacterium tumefaciens* (Smith et.Townsend). Con., first signaling

ABSTRACT

The development of horse chestnut (*Aesculus hi ppocastanum* L.) is affected by the attack of pathogens, for example, phytopathogenic fungies like: *Mycospahaerella maculiformis* (pp) Schrot., which produced a chestnut leafs brown staining; *Mycosphaerella al phitoides* Griff.et Maubl., which causes mildew leaves, *Endothia parasitica* (Murr.) Piet HW Anderson etc. In 2008, we identified the presence of bacterial cancer disease at horse chestnut caused by the *Agrobacterium tumefaciens* (Smith et.Townsend) Con., which wasn't mentioned before in Romania.

Industrial voids and multifunctional sites

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Keywords: industrial void, brownfield, friche, adaptive reuse, multifunctional sites

ABSTRACT

Industrial areas may be located either in town or at the periphery, squeezing out discrete industries, cleaner or other small laboratories and workshop. Most times, however, are grouped around the station, along the transport axes, on the seashore or ocean. Other industrial changes are occurring in the last decades that influence the localization of the sites and the activities. Relocation, deindustrialization, upgrading are the process that influence the industrial areas. This industrial areas can be describes by using different terms. Brownfield is one of them, it’s represent any land which was used in the past in certain sectors, but now no longer in use. Friche can be another but doesn’t include the polluted areas. Sociological analyze can introduce the term industrial void. Redevelopment is the main idea for these industrial areas. Demolition or adaptive reuse, are the two major strategies. Adaptive reuse refers in changing the primary function of maintaining buildings keeping some details that make them unique. Multifunctional sites can be a method of redevelopment of industrial sites.

Industrial landscape

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Keywords: industrial landscape, cultural landscape, integrated tourism

ABSTRACT

Landscape as we know changed its meaning during time and is studied by many sciences. Industrial landscape concept itself doesn't have a history as long as the landscape itself. Cultural landscape can be widened today because of the indirect influence of mankind on the environment. Cultural landscape is analyzed as a system but also by its components. Industrial landscape is a cultural landscape. Industrial landscapes taxonomy is complex, but the majority of landscapes are the evolved type. An industrial landscape analysis models require different steps: determination of the industrial enterprises location, interpretation of the industrial changes through time and examination of spatial relations, both among themselves and with the development pattern of settlements and transport systems. The disappearance of part of industrial sites in the world has enabled the expansion and planning of new public spaces, more cities have opened new perspectives for development. Rehabilitation of old industrial sites in a spirit of ecological concepts is the main concern. Conservation and conversion features as historic cultural and artistic part of the new trend of industrial landscape regeneration. Integrated tourism is a sustainable method of development.

Future of the agriculture on degraded lands by water erosion in Romania

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Keywords: farms on eroded lands**,** sociological investigations, rural areas.

A**BSTRACT**

The future of the Horticulture on degraded lands by water erosion depends on certain factors, grouped as follows: farmers, engineers involved in soil and water resources management, specialists in environmental protection, economists deciding upon financial issues, political factors. Population can benefit from the effects of interventions for mitigation of major negative implications generated by water erosion. Farmers should accept the rehabilitation projects as well as adopt and maintain the works. It is obviously that the eroded lands management must rely on knowledge about the land-owner's priorities and psychology.

The paper presents how the sociological investigations could facilitate the understanding of farmers' requirements and customs. The main tasks are as follows: the identification of farmers' perception and behavior on the anti-erosion works as well as their view-points of the perspective of their future life level and progress.

Considerations on the evolution and current situation of agricultural cooperatives in relation to those whose activity domain is horticulture

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Keywords: association, agricultural cooperatives, horticulture profile.

ABSTRACT

Romania's economy is based largely on the agricultural production due to the large areas of arable land that our country holds. Regarding that, these areas are still divided into many parcels; there is a problem in the efficient use of arable land. Romanian farmers also have limited production capacity, resulting in an imbalance of supply that although has large amounts, it is not uniform. Solution for these weak points and also for strengthen sustainable rural development can be achieved through the process of association between producers. One of the most widespread forms of association is agricultural cooperative. This concept emerged in Romania in the nineteenth century and evolved up to the beginning of the Second World War, has succeed to capacitate large agricultural resources in our country. After the war, followed the communist period, at which agricultural cooperatives were reduced to instruments of permanent state intervention in agriculture. In 2004 appeared the first agricultural cooperative based on democratic principles that can support an integrated development and marketing management concepts in relation with EU requirements. Agricultural cooperatives in the horticultural domain has emphasized both numerically (they represent one third of the total number of agricultural cooperatives in Romania) and in terms of structures and development programs that they have adopted.

Biotechnology for solid-state cultivation of mushrooms on organic wastes from wine making industry

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Keywords: biotechnology, biomass, edible mushrooms, solid-state cultivation, winery wastes

ABSTRACT

The main aim of this research work was to establish the best cultivation biotechnology of medicinal mushrooms by using such organic wastes as appropriate growth substrata for two mushroom species, namely *Ganoderma lucidum* and *Pleurotus ostreatus*. The experiments of inoculum preparation were set up under the following conditions: constant temperature, 23°C; agitation speed, 90-120 rev. min^{-1}; pH level, 5.0–6.0. All mushroom cultures were incubated for 120–168h. In the next stage of experiments, the culture composts for mushroom growing were prepared from wine wastes in the shape of marc of grapes that were used as substrates for mycelia development and mushroom fruit body formation. The tested culture variants were monitored continuously to keep constant the temperature during the incubation as well as air humidity, air pressure and a balanced ratio of the molecular oxygen and carbon dioxide. During the whole culture cycles all the physical and chemical parameters that can influence the mycelia growing and mushroom fruit body formation were investigated.

Submerged fermentation of cereal wastes by enhanced cultivation of edible and medicinal mushrooms

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Keywords: biotechnology, continuous cultivation, edible and medicinal mushrooms, submerged fermentation

ABSTRACT

The main aim of this work was focused on testing new practical procedures in order to optimize the efficiency of medicinal mushrooms cultivation by enhancing the enzymatic activity of mycelia to get high nutritive biomass as fungal pellets. In this respect, special culture media for fungal growing were prepared by using a liquid nutritive broth, having the following composition: 15% cellulose powder, 5% wheat bran, 3% malt extract, 0.5% yeast extract, 0.5% peptone, 0.3% powder of natural argillaceous materials. After the steam sterilization at 121^{o}C, 1.1 atm., for 15 min. this nutritive broth was transferred aseptically inside of the culture vessel of a 15 l laboratory scale bioreactor. This complex culture medium was aseptically inoculated by using a suspension of activated spores of pure strains of *Ganoderma lucidum* and *Lentinula edodes* . The submerged fermentation was set up at the following parameters: constant temperature, 23°C; agitation speed, 80 - 100 rev.min $^{-1}$; pH level, 5.7 – 6.0 units; dissolved oxygen tension within the range of 30 - 70%. During a period of submerged fermentation lasting up to 120 h, small fungal pellets were developed inside the broth. In this stage, 70-80% of the former fungal pellets were harvested by extracting them from the culture vessel of the bioreactor and separating them from the broth by slow vacuum filtration.

Research on the biological features of the *Phoma lingam* (Tode ex Schw) Desm. pathogen isolated on rape

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Keywords: biology, fungus, pycnidia

Abstract

The *Phoma lingam* fungus is manifest on every plant organ in every stage of plant development. The abiotic factors play an important role during the fungus development and pathogenicity. The study must be done in order to establish its needs regarding certain abiotic factors such as: temperature, humidity-atmospheric and light. The study is necessary in order to get to know the moment when the first infections occur. Under laboratory condition, the phytopathogenic fungus *Phoma lingam* was isolated on potato-glucose-agar. The sick biological material of rape, formed from leaves and stems with specific disease symptoms, was put in a wet room where the mycelium formation was observed after 3 days. The conditions germination is possible at 4°C, and 16 hours are necessary. The *Phoma lingam* fungus colonies developed extremely well in the presence of light. As relative atmospheric humidity value grows higher, the colony development is very good, and the vegetative mass is extremely dense, thick, grey in colour. Temperature, relative atmospheric humidity and light are important factors in the *Phoma lingam* fungus evolution.

Profit versus entrepreneurial profit in agricultural activities

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Keywords: agricultural companies, farms, economic results

ABSTRACT

The demand for vegetables made in Romania is increasing. It requires the analysis about activity and economic results, obtained in farms with different forms of organization. The companies which are deeply rooted in agricultural world, have need for machinery and equipment, a relatively easy access to credit for business and investment, have firm supply contracts with suppliers of brand, that use scientific technologies for vegetables and sell your products to wholesalers or supermarkets. Small family farms, without legal personality, have difficulties due to: low self-financing capacity, impossible lending, insufficient working capital, expensive inputs, relatively small production, limited markets, and lack of knowledge on current technologies. All these difficulties do not allow extension activities in small farms and moving to a new form of organization. The achieved analysis is based on determining the level of expenses, costs, revenues and economic results in two farms with different forms of organization (profit versus profit, entrepreneurial profit).

Performances of the vegetable farm measured by intermediate management balances sheet

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Keywords: profitability, commercial trading, value added, results of the exploitation, current result, net result of the financial year

ABSTRACT

The annual financial statements prepared by the agricultural company provide information on potential cash balances concerning exploitation, financial and extraordinary activities. These balances, entitled Management of Intermediary Balances (MIB) are expressed by the indicators characterizing the operation and profitability of the farm: commercial margin, production of financial year, value added, the surplus/deficit gross working surplus, the results of the exploitation, the current result, gross and net results of the financial year. Each MIB reflects the state of financial results determined at a certain level, having function to illustrate the remuneration of production factors and financing the future activity.

Determination of biogenic amines in bananas by high performance liquid chromatography

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Keywords: validation parameters, HPLC, biogenic amines, bananas.

ABSTRACT

This paper report an adaptation of a liquid chromatographic determination of biogenic amines in dry sausages for a vegetal matrix: bananas and an internal validation study. All nine biogenic amines (tryptamine, 2-phenylethylamine, putrescine, cadaverine, histamine, serotonin, tyramine, spermidine and spermine) were well separated. The range of linearity was from 0.5 to 7 µg/ml for all 9 amines and the correlation coefficients were between 0.9928 and 0.9994 for all standard curves. The detection limit and quantitation limit values range from 5 to 50 and 10 to100 µg/l, respectively. Relative standard deviation values of repetitiveness and reproducibility range from 0,71 to 3,62 and 1,4 to 3,93, respectively. Recovery was between 67 and 102% for all amines.

The diversity of local isolates *Bacillus thuringiensis* as a biological pest control agents *Plutella xylostella Linn* and *Crocidolom ia binotalis Zell* toward cabbage crops in south Minahasa Regency

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ABSTRACT

The purpose of this study was to isolate the bacterium *Bacillus thuringiensis* from soil and find out the pathogenicity *B. thuringiensis* against the *pest Plutella xylost ella* and *Crocidolomia bin otalis.* The research was conducted in the laboratory Department of Plant Pests and Diseases Faculty of Agriculture Sam Ratulangi Manado. The method used is the method of sampling with three replicates for each location. Soil samples taken at each location as much as 100 grams, put in plastic bags and labeled with the date and location of the next below to the laboratory for the isolation. Caterpillars *P. xylostella* and *C. binotalis* collected from cabbage crop in plantations Rurukan subdistrict, Tomohon then kept in the laboratory with cabbage leaves to feed larval instar III to obtain required for testing. Laboratory studies include the isolation of bacteria from soil samples and purification of bacterial inoculum to obtain *B. thuringiensis* is pure and will be used in testing. Isolation results in getting the four isolates of *B. thuringiensis* isolates namely THMS, TCMS, TJMS and TSMS. These isolates showed characteristics of *B. thuringiensis*. Morphologically vegetative cells of *B. thuringiensis* rod-shaped chain with oval spores and crystals are located separately paraspora with spores. The four isolates are capable of causing the death of the larvae of *P. xylostella* and *C. b inotalis*. The results showed that isolates TCMS and TSMS with the highest concentrations at 96 observation hours to be able to kill the larvae of *P. xyl ostella* to 96.67% followed TJMS isolates and a low of 73.33% of isolates THMS, while testing on the larvae of *C. binotalis* with the highest concentration at the observation hours to 96, isolates TSMS capable of killing up to 96.67% followed by 80.00% ie TCMS isolates and isolates the lowest THMS and TJMS ie 46.67%. Based on the test results, it can be concluded that the four isolates of THMS, TCMS, TSMS and TJMS can cause death for caterpillar *P. xylostella* and *C. b inotalis*. Based on the conducted tests, besides having the mortality of the tested caterpillars, it was also able to cause abnormalities of growth and development of next stadia.

The techno-economy dynamic system on broiler farming industries in West Java Region

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ABSTRACT

The basic research concept about positive feedback interaction between transformation process of technology and economy path was done with a study case approach on broiler farming industries in West Java region. Technology path transformation as an internal aspect on micro level serves to promote the effectiveness optimality output toward, while economy path as an external aspect on the macro level serves functions to push efficiency leading of production going to input and output price stability. The aim of the research is to seek a systematic and holistic interpretation in determining problem solving model through mechanism of dynamics method system. Furthermore, this information can be used by the decision makers to formulate with appropriate strategies in facing changes of internal and external aspects. The research conclusions: Firstly, for knowledge contribution; the combination of technology and economy concept with regard to the positive interaction feedback is a contribution concept of techno economy knowledge. The mutual interaction is an issue that should be internalized in policy making process. Secondly, for policy contribution: i). in internal aspect, profile improvement of production resources competency among stakeholders need to be a part of policy on micro level, especially technology factor, ii). in external aspect, the price components of chicken meat as an output value, then raw materials and chicken feed as an input value, are macro level policy in economy factor on broiler farming industries determining.

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