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VEGETABLE GROWING

STUDIES CONCERNING THE FEATURES OF THE MAIN QUANTITATIVE CHARACTERS OF THE MELON VARIETY "BRILIANT"

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ABSTRACT

The variety BRILIANT belongs to the group of middle-early varieties, with a vegetation period of 80-90 days (60 days from planting). The medium weight of the fruits is almost 0,8-1,8 kg. The shape of the fruit is round, slightly oval. The colour of the fruit's skin is green (during its development) and yellow with greenish variegation (at physiological maturity stage). The colour of the flash is green-whitish, the flash is juicy, perfumed, tasty, delicious, representing almost 80% from the entire weight of the fruit.

The fruits are well attached to the plant. Are resistant to transport and storage.

The seeds seem like the cucumber seeds, they can be distinguished one from each other by the fact that the melon seeds have the basis is more plane, the colour is uniform white –yellowish. In one gram are 30-36 seeds. The number of the seeds from a fruit is almost 410-550, with a total weigh of 20-24 g seeds/fruit.

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THE EFFECT OF SOME MODERN MATERIALS UPON THE TOMATOES PRODUCTION CULTIVATED ON ORGANIC SUBSTRATUM IN NO HEATED GLASSHOUSE

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Keywords: tomatoes, organic substratum, no heated glass house

ABSTRACT

Experiments made regarding the tomatoes culture on the mixture of organic materials in no heated glass house shows the real technical difficulties regarding the obtaining and homogeneous fertilization of these substrata.

The transplants were made in alveolar peat pots Jiffy-7 with 42 mm diameter. Those pots were made from dehidratated peat, sterilized with water steam, with a full content of nutritive elements and with a pH good for substrata recommended for transplants.

The substratum (peat), made by Finn Society BIOLAN with the indicators B3L, fertilized PG-Mix, which was used as substratum for the culture. The watering was made with complex chemical fertilizers, soluble ones from Holand with the Scotts`brand.

The fertilization watering was realized with Queen Gill installation, where the drops were at the terminals of tubs tip spaghetti.

Hybrids F-Abellus, Alboran, Cibelia, Birdie, 73-430RZ made in Rijk-Zwaan-Olanda where used in experiments and as control was used Arletta F.

Materials used to transplant production and also as a culture substrata have performing qualities which determined to obtain some parameters of production which could be appreciated as very good comparison with others obtained in our country;

] Between these materials it can be put out peat Bidan B32, soluble complex fertilizers tip Unisol and Jiffy-7 pots use for transplants.

Between hybrids from the experiment Cibella F1 and Birdie F1 from Rijk-Zwaan-Holand are the best.

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EFFECT OF MULCHING WITH VARIOUS MATERIALS ON CERTAIN TECHNOLOGICAL FACTORS AND EARLY POTATO PRODUCTION

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Keywords: early potato, mulch

ABSTRACT

Soil mulching in potato early crop has positive effect on some yield characteristics. Also, the mulching has a great influence on number of weeds.

This paper reflect the mulching effect using different materials on production level and the degree of weeds in early potato crops**.**

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LOTUS TETRAGONOLOBUS L. – A NEW SPECIES OF PERSPECTIVE FOR VEGETABLE ASSORTMENT DIVERSIFICATION IN ROMANIA

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Keywords: Asparagus pea, Winged pea

ABSTRACT

Lotus tetragonolobus – a herbaceous annuale legume was observed and there are data regarding the main parametres of vegetative development and fructification; also, there are presented the fruit anatomy.

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PRELIMINARY STUDIES IN THE POSSIBILITY OF USING FOR DECORATIVE PURPOSES SOME VARIETIES OF PEPPER

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Keywords: *Capsicum annuum,* varieties, decorative pepper.

INTRODUCTION

Of all the Solanaceae plants, pepper can be used the most for ornamental purposes.

Genus *Capsicum* includes 5 species: *annuum*, *frutescens, chinense*, *pubescens* and *pendulum*. The plants belonging to *annuum* subspecies *fasciculatum are* recommended mainly for decorative species purposes.

The multitude of varieties, varieties and hybrids, and the characteristics of this species, allow a successful use of the pepper for ornamental purposes. As a decorative plant characterized by rich bushes, variety of forms and colours of fruit, the pepper may be used in the garden, on terraces or balconies, in flowerpots or in flats during wintertime.

The preservation of the decorative aspect for a long time is another reason for using the pepper for ornamental purposes. Decorative pepper plants may be used as multi-annual indoor species. A plant decorating the balcony in summertime, when it reaches fructification, may be transplanted in different flowerpots and it continues its vegetation during wintertime in the flat. In these conditions, fructification is almost permanent, with flowers and fruit simultaneously at different maturity phases (different colours).

The pepper can be used for ornamental purposes also as a dry fruit, in various flower arrangements.

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GENOTYPE INFLUENCE ON RESPIRATION PROCESS, ENDOGENOUS ETHYLENE PRODUCTION AND ELECTRICAL CONDUCTIVITY OF FLASH TISSUE OF SIX MELON CULTIVARS

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Keywords: melons, climacteric, postharvest, shelf ripening

ABSTRACT

The fresh melon fruits are eaten as deserts being praised for their flavour, sweetness and high content in ascorbic acid. Respiration intensity, ethylene synthesis and electrical conductivity of flesh tissue seem to have a strong influence in maintaining a good quality for a long time. This research shows the genotype influence on some physiological parameters (respiration, ethylene and conductivity). We chose these parameters because of their importance during transport and storage conditions.

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RESEARCH METHOD FOR BORON DEFICIENCY IN PLANTS

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Keywords: boron deficiency, soil, plants, cauliflower, magnesium hydroxide

ABSTRACT

The paper presents an original method for releasing B deficiency in plants, in order to offer the possibility to study this nutrient disorder. The researches have been carried out in the greenhouse in a monofactorial experiment; as test plant has been used the cauliflower, a species sensible to B deficiency. The *in situ* blocking of the soil hydrosoluble boron has been done using magnesium hydroxide. The immobilization of boron was based on the fact that the boric acid is strongly adsorbed on the magnesium hydroxide. The experimental results confirmed the premise. So, even if the initial soil chemical properties were not favourable for B deficiency, specific B deficiency symptoms have been observed in cauliflower.

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VARIABILITY OF THE MAIN CHARACTERISTICS IN A ROMANIAN FRENCH BEAN VARIETY DELICIOASA DE PASAREA DURING THE PROCESS OF CONSERVATIVE SELECTION

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The professor influence for eternity
...he can say never where his influence finish
Henry Broke Adams

Keywords: French bean, variety, variability, morphological traits, conservative selection.

ABSTRACT

The research was made to R.I.D.V.F.G. Vidra, during the year 2005, on the field of prebase seed to the French green bean culture. The biological material was represented by the new Romanian variety: *Delicioasa de Pasarea.* The object of this study was obtain the prebase seed. For determine the variability of principal characters of biological material were made the following biological measurements: number of pods per plant, pod length, number of grains per plant, the number of grains in the pod, the weight of the grains per plant, weight of one thousand grains during the dry stage. There were calculated the arithmetic mean, standard deviation, variability coefficient for integrating those in the variability limits of principal characters studied. *Delicioasa de Pasarea* belongs to the middle late group French bean (72 days from the sprouting date to the technological maturity of the pods), with green pods, middle length (13,0 cm) and elliptical section. The flowers are violet. The dry grain is very big having a variegated colour.

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VARIABILITY OF THE MAIN CHARACTERISTICS IN TWO ROMANIAN GREEN PEA VARIETIES PERLA DE MAI AND DIANA DURING THE PROCESS OF CONSERVATIVE SELECTION

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Keywords: green pea, variety, variability, morphological traits, conservative selection.

ABSTRACT

The research was made to R.I.V.F.G. Vidra, during the year 2005, on the field of prebase seed to the green pea culture. The biological material was represented by two Romanian varieties: *Perla de Mai* and *Diana.* The object of this study was obtain the prebase seed. For determine the variability of principal characters of biological material were made the following biological measurements: the total height of the plant, number of pods per plant, pod length, number of grains per plant, the number of grains in the pod, the weight of the grains per plant, weight of one thousand grains during the dry stage. There were calculated the arithmetic mean, standard deviation, variability coefficient for integrating those in the variability limits of principal characters studied. The cultivar *Perla de Mai* is very early, with long pod (12,6 cm) and middle number of grain (6). *Diana* has tall plants, high inserting point of the pods and extrafine grains.

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MICROCLIMATE MODIFICATIONS IN SOLARIUMS COVERED WITH PHOTOSELECTIVE FOILS

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Keywords: temperature, illumination, relative humidity, soil humidity

ABSTRACT

The work presents the influence of some endogenious photoselective foils on solarium microclimate. The best results concerning the illumination were obtained using the transparent foil treated with chemical additives, and the pink foil, which bouth induced differences of over 2000lx compared with the ordinary PE foil. Over a period of 40 days the sum of temperatures accumulated in the solariums increased by 17,6 °C under the pink foil and 7,9 °C under the green foil, while for the rest of the foils it was below the level registered for the control. Soil temperature was improved under the yellow and pink foils. Generally it was detected an increase of air relative humidity and a decrease of soil water content in the solariums covered with photoselective foils, one exception being the pink foil which supported the water status of the culture environment.

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STUDY REGARDING PLANT OF SOME LETTUCE VARIETIES WITH DECORATIVE ASPECT

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Keywords: lettuce, cultivars, containers

ABSTRACT

The diversity of lettuce cultivars can be the possibility to select those with a decorative and attractive aspect to cultivate in our garden.

Because the lettuce radicular system is superficial we can cultivate any cultivars of lettuce in jardinière and pots.

The study was proposed the possibility to cultivate of some leave lettuce cultivars in jardinière and pots. For this I selected ten leaves cultivars to be cultived in jardinière and pots. The production dates, regarding to edible mass of plants, has statistically interpreted and the conclusion was that the cultivars can be cultivated in jardinière and pots without existing significant differences of edible mass plant between variants.

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LEAFS MORPHOLOGICAL MODIFICATION IN SOME VARIETIES LETTUCE INDUCED BY TEMPERATURE

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Keywords: lettuce, cultivars, low temperature

ABSTRACT

The study was made in the Vegetable field of the Horticulture University from Bucharest at Piroga and Paris White lettuce cultivars typical for summer cultures.

In present study we follow the behaviour of two cultivars of lettuce cultivated in cold greenhouse in winter period with the purpose to establish the plant negative reaction in this condition.

We can observe that the low temperature determined the increased of leaves and the detaching of epidermis, darkness spaces between leaves nerves having a negative effect on the commercial aspect.

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STUDY UPON TOMATO CULTURE WITHOUT SOIL, USING ORGANIC SUBSTRATA IN DIFFERENT RECIPIENTS IN INDUSTRIAL HOTHOUSES WITH A NON-CONVENTIONAL ENERGETIC CONSUMPTION

STUDIUL CULTURII TOMATELOR FĂRĂ SOL UTILIZÂND SUBSTRATURI ORGANICE ÎN DIFERIŢI RECIPIENŢI ÎN SERE INDUSTRIALE CU CONSUM ENERGETIC NECONVENŢIONAL

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Keywords: cultură fără sol, tehnică de vârf, oboseala solului, sistem intensiv de cultură, substraturi de pietriş, substraturi organice, seră, apă geotermală.

ABSTRACT

Pe plan mondial cunoştinţele despre aceste sisteme de cultura fără sol, precum si diversitatea lor sunt extrem de avansate. Primul sistem comercial de cultura al plantelor fără sol a fost conceput de Gericke (1930) profesor la Universitatea Barkley, din California.

Anul 1973 marchează începutul erei propriu-zise a tehnicilor de cultura fără sol când Cooper in Anglia da publicitarii rezultate de producţie obţinute prin tehnica filmului nutritiv (NFI).

Griin (1988), aduce în discuţie problema oboselii solului şi lupta împotriva dăunătorilor din sol, a nematozilor in special, din cauza imposibilităţii efectuării unei rotaţii adecvate în ţări cu suprafeţe mari de sere (Olanda, Franţa, Belgia, Anglia, Germania) în care se practică un sistem foarte intensiv de cultură.

În ţara noastră deşi Maier încă din 1969 face primele semnalări asupra acestor culturi, cercetările în acest domeniu au fost puţine.

Răuţă şi col. (1986) dau publicitarii rezultatele obţinute la culturile de legume înfiinţate pe substraturi de pietriş sau alte agregate grosiere, în comparaţie cu cele de la sol, precizând ca au dat in medie sporuri semnificative de producţie.

În ţara noastră, acest sistem de cultură a rămas în stadiul incipient de existenţialitate cu un timid început de cercetare, neavând nici suportul susţinerii industriale, fenomenul condiţionându-se şi excluzându-se reciproc.

În prezenta lucrare se prezintă rezultatele parţiale ale unui studiu privind cultivarea tomatelor pe substraturi organice în diferiţi recipienţi (găleţi din P.V.C. şi saci din folie de polietilenă cu turbă amendată) cu avantajul organizării experimentului într-o seră încălzită cu apă geotermală.

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RESEARCHES REGARDING THE DIVERSITY OF ASSORTMENTS OF TOMATOES VARIETIES AND HYBRIDS FOR GREENHOUSE CULTURE

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Keywords: *Lycopersicon esculentum*, protected culture, production, fruits quality

ABSTRACT

The purpose of this research was to study the behaviour of some tomato hybrids cultivated in cold greenhouse , especially form the production point of view. The culture was led with 5 flower growths. The number of flowers was unequal between hybrids , most of them were at Harmony and the least at Belle. The number of fruits per plant was very different as it follows: 48,1 at Harmony, 30,2 at Fade, 27,6 at Water, 19,7 at Belle and 18,2 at Rally. The percentage of tied fruits swung between 91% at Harmony and 73% at Rally, Marfa having only 86%. The evolution of fruits was influenced not only by the number of fruits per plant but also by their weight. Consequently, the biggest production had been obtained at Fada 3,6 kg/pl, followed by Rally 3,4kg/pl and Marfa 3,1kg/pl. The smallest production was at Harmony 1,3kg/pl. The fruits were big and strong at Belle and Fada, with acceptable taste at Rally, Belle and Harmony. The best early time was registered at Harmony.

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PRELIMINARY RESEARCHES REGARDING THE INFLUENCE OF SOME ORGANIC MATERIALS USED FOR MULCHING THE CUCUMBER CULTURE

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Keywords: *Cucumis sativus*, compost, fruit production, vegetative growing

ABSTRACT

The paper regarding the influence of different organic materials on the cucumber culture was a necessity because of multiple advantages that this work has on cultures. As mulches was used compost from the white mushroom, from *Pleurotus* and straws. After the first experimental year, very good results were obtained at mulching with compost from the white mushroom with the total production of 50 t/ha. Over 90% from production ranged in 6-9 cm and 9-12 cm categories. Also, good results were obtained by using the compost from *Pleurotus*. The straws used as mulches at cucumber determined a production of 30 t/ha comparatively with the one at witness of 23 t/ha.

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PRELIMINARY RESEARCHES REGARDING THE EFFECT OF SOME LEAF FERTILIZERS AND GROWING STIMULI ON THE QUALITY AND QUANTITY OF TOMATOES FRUITS

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Keywords: *Lycopersicon esculentum*, fruit production, vegetative growth

ABSTRACT

The use of complex leaf fertilizers and growing stimuli represents a very important technological item to obtain very high results in the culture of vegetables. Experiments regarding this aspect were made in 1980s at tomatoes, cucumber, pepper with great results. Nowadays, when the problem of fitosanitar protection of cultures is highly extended is necessary to use the leaf fertilizers and the growing stimuli in order to make the plants stronger and to rise their capacity of fructification. For this reason the experience regarding the effect of the products on tomatoes has been founded, using Microfert U, Agroleaf total and Murtonik. From the data obtained after the first year of use the best results were obtained for Agroleaf total and Microfert U, the extra production being of 50% and respectively of 32% The fruits are bigger with a higher biochemical content in comparison with those obtained from the untreated control.

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NITRATE DETERMINATION METHODS USED FOR SOME VEGETABLES

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Keywords: agrochemical analyse, vegetables, maximum admissible limits

ABSTRACT

The objectives of our study were to analyse the nitrates content of some vegetables through different methods used in agricultural laboratories and also in some certified laboratories for export of products.

There are compared two nitrate determination methods: spectrophotometric and ionometric. The paper also presents the nitrate contents in vegetables from Bucharest markets, interpretation by maximum admitted limits (Addiscott T.M., 1990; Dejeu L., 1997; Lacatus, 2003).

Agrochemical analyses were made on fresh vegetables. To extract the nitrates, it acetic acide 2% was used and to obtain the nitrates two methods were used: one colorimetric and another ionometric one. For colorimetric method the FDS was used in the presence of natrium hydroxide 20% reagent and for the determination spectrophotometer Cecil 2041 was used (England, 1999). For ionometric method a nitrate ion-selective Consort C533 was used (SUA, 1999).

Nitrate contents varied with the species of vegetables. In lettuce plants nitrate, contents varied between 1282 and 4493 ppm, in turnip cabbage between 1272 and 2103 ppm and in cucumber between 287 and 1097 ppm. In most of the cases of analysed vegetables, the maximum admissible limits of the Health Mondial Organization were exceeded (V. Voican, 2002).

STUDY CONCERNING CABBAGE CULTURE – MUSKETEER HYBRID – USING ORGANIC FERTILIZERS

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Keywords: semi-composted manure, chicken manure, biological agriculture

ABSTRACT

The aim of this research was to determine the optimum doses of the organic fertilizers (manure, chicken manure) for the early cabbage culture. The biological material was represented by the early cabbage hybrid Musketeer. Superior results for the average weight of the cabbage heads were obtained at the variants fertilized with chicken manure, which reached a weight of 1487 g at the variant V_5 fertilized with 1.5 kg/m^2 chicken manure. The content of nitrates as an expression of the cabbage heads' quality, presented exceed levels, over the maximum limit of 600 ppm admitted by OMS at the first harvest time. At the subsequent harvest periods, on 20.06 and 27.06.2005 the nitrates in the cabbage heads were within CMA of 600 ppm. The best yields of 7.6 and 9.8 kg/m^2 were obtained at variants V_4-V_6 fertilized with chicken manure. The maximum yield was given by V_5 fertilized with 1.5 kg/m^2 chicken manure.

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THE INFLUENCE OF PHOTOSELECTIVE FOILS ON LETTUCE PLANTS GROWTH CULTIVATED IN SOLARIUM

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Keywords: *Lactuca Sativa, Ilona variety, high tunnels, plant quality.*

ABSTRACT

The paper presents the preliminary results concerning the influence of photoselective additivated PE foils, produced in our country, on lettuce plants growth. The results show the positive influence of the pink and green foils, which increased the lettuce rosette diameter by 6-8 % as well as their weight for the pink foils. The root system characteristics were not significant although it was detected an increase of the root system volume for the green foils and the transparent treated ones, which implied an increase of the root absorption capacity. For protected lettuce cultivation, the use of pink, green and treated transparent foils are recommended for their positive influence on plants growth.

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THE INFLUENCE THE METHOD OF OBTAINING SEEDLINGS HAS ON THE GROWING AND DEVELOPMENT OF TOMATO PLANTS CULTIVATED IN A GREENHOUSE

PRELIMINARY RESEARCH

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Keywords: *tomatoes, seedling, Jiffy pots, Jiffy 7, Jiffy strips, cell-like palettes*

INTRODUCTION

Producing vegetable seedling for the forced protected cultures requires their being transplanted, obligatory, in different types of pots.

World wide, the utilization of peat pots has greatly utilized the nutritive cubes made of different soil mixtures; also, regularly used in our country are the flexible or rigid plastic but non-degrading (Ciofu R., 2004). The producing of seedling in alveolus palettes made of plastic material of different sizes has also greatly increased (Marinescu A., 1986).

This research paper presents the study of the method of producing seedlings in different pots, made of both by biodegrading and ne-degrading materials and the continuation of the experiment until the obtaining of the production.

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THE INFLUENCE OF DIFFERENT TYPES OF COMPOSTS TO THE GROWING AND YIELDING BELL PEPPER CULTIVATED IN UNHEATED GREENHOUSE

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Keywords: greenhouse, compost, fertilization

ABSTRACT

The research was made in an unheated greenhouse of Vegetable Department of Horticulture Faculty of University of Agricultural Sciences and Veterinary Medicine, in 2005.

The influence of compost types and organic mixtures on peppers was investigated. Bianca and Nikita cultivars were used under the following variants: V_0 control – hybrid Bianca, non-fertilized, V_2 - hybrid Bianca, fertilized with leaves compost, V_3 - hybrid Bianca, fertilized with chopped branch wine compost, V_4 - hybrid Bianca, fertilized with mushrooms compost, V_5 - hybrid Bianca, fertilized with vegetable waste compost, V_6 - hybrid Nikita, fertilized with vegetable waste compost, V_7 - hybrid Nikita, fertilized with mushrooms compost, V_8 - hybrid Nikita, fertilized with chopped branch wine compost, V_9 - hybrid Nikita, fertilized with leaves compost, V_1 control – hybrid Nikita, non-fertilized. The experimental design was organized over the subdivided plots with three repetitions.

On 15 April 2005 we planted the peppers (3.7 plants/m^2). The organic composts were applied once (fundamental fertilization rate 30t/ha). The growing and developing dynamics of the studied plants, soil and compost analyses, and yield and yield quality were measured.

Variants fertilized with mushrooms compost 3.91 kg/ m^2 to Nikita and 5.86 kg/ m^2 to Bianca and leaves compost (4.19 kg/ m^2 to Nikita) had the best results.

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EVALUATION OF THE QUALITY AND PRODUCTIVITY FOR FEW NEW HYBRIDS OF ASPARAGUS

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Keywords: Asparagus officinalis, evaluation, hybrids, quality, productivity

ABSTRACT

The asparagus is worldwide considered as a very important therapeutically and industrial crop. As an early vegetable it is successfully cultivated from North and South America to Europe and Asia, been considered as a very productive and profitable agricultural business . Romania is a country where the asparagus crop is still not very spread. One of the purposes of this experiment was to argument the importance of this crop among the traditional vegetables cultivated by the Romanian farmers. Between 2002-2004 the behaviour of the five asparagus hybrids have been studied concerning their level of adaptation to environment conditions in our country. From this five hybrids, Andreas is French and the others are Californian: Atlas F1, Grande F1, Apollo F1 and UC 157 F1. The objective of the experiment in 2003 and 2004 consisted in examination the biological development of the French hybrid in comparison with the Californians ones. After two years of experiment, no significant difference were noticed.

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ORNAMENTAL PLANTS & LANDSCAPE ARCHITECTURE

PRELIMINARY RESULTS REGARDING THE ROOTING OF THE *JASMINUM* CUTTINGS

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Keywords: propagation, auxin, rhyzogene

ABSTRACT

Jasminum is a very appreciated specie for its decorative qualities, the aim of this paper is to improve the way to obtain new plants very quickly using different types of cuttings. In this direction we start to treat the cuttings of the *Jasminum* with hormonal substances like auxins (ANA, IBA) and compare them with the effect of the rhizogene substances (Radistim 1, Radistim 2) and untreated control. It was also studied the influence of the cutting types on the rooting, separating the cuttings in three categories: herbaceous, semi-woody and woody cuttings, corroborated with the hormonal and rhizogene substances application.

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PRELIMINARY RESEARCH REGARDING THE BEHAVIOUR OF *SPATHIPHYLLUM* PLANTS ON DIFFERENT SUBSTRATES

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Keywords: *Spathiphyllum wallisi* 'Viscount', substrates, containerized culture, growth.

ABSTRACT

The research aim was to establish and develop some substrates containing biodegradable organic materials like bark, leaves compost, marc of grapes and manure in the cultural technologies of for *Spathiphyllum* plants. Biometrics measurements and agrochemical analysis of experimental substrates - pH, soluble salts, nitrogen, phosphorus and potassium supply - were made during the vegetation period.

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PRELIMINARY RESEARCH REGARDING THE REGENERATION IN VITRO, FROM INFLORESCENCE AT *SPATHIPHYLLUM SP.*

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Keywords: tissue culture, regeneration, callus, micropropagation, inflorescence, *Spathiphyllum wallisi* 'Viscount'

ABSTRACT

Plant regeneration of *Spathiphyllum sp.* as possible using in vitro culture of inflorescences. Callus induction was obtained after three months in explants growing in Murashige & Skoog (MS) medium supplemented with 10 mg/l of IBA and 10 mg/l of alpha-naphtil-acetic acid (ANA). In the same medium the formation of small shoots was observed. Biometrics measurements of plants regarding the explants number, length and width of explants, number of fruits, number of fragments, number of leaves/explant and the length of both limb and petiole, number of roots and their length.

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PARTIAL RESEARCHES CONCERNING THE MULTIPLICATION BY SPORES AT *POLYPODIUM VULGARE*

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Keywords: polypody, substrate, temperature, humidity

INTRODUCTION

Polypodium vulgare - Common polypody, Little fern

Relative small fern with very deeply bipinnatefid, green fronds, wearing on back fronds plump sporangia distribute in two parallel lines.

The second nervures have three-four bifurcations.

Forms new fronds in summer-autumn. They are often found growing on trees, rocks or shady side of the woods. It is a rustic species, needs acid compost (peat), fertile, humus-rich.

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PARTIAL RESEARCH CONCERNING THE INFLUENCE OF ORGANIC FERTILIZERS UPON THE GROWING AND FLOWERING OF *AMARYLLIS VITTATA* PLANTS

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Keywords: Amarillis, bulb, substrate, organic fertilizer, fertilizing

ABSTRACT

We realized eight culture variants in containers using as substrate the classic soil without fertilization and the sawdust compost with fertilization. We used three organic fertilizers applied as solutions with different concentration. The growing and the flowering of the plants were observed through biometrical observations. The plants cultivated on the classic soil had a better vegetative growing because of their bigger capacity to retain the solution. The plants that were cultivated in sawdust compost have developed many and longer roots, just to achieve to the fertilizer solution in the plate from the container's base. The flowering of the plants cultivated in a classic soil was better comparing to the plants cultivated on sawdust compost.

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PARTIAL RESEARCHES CONCERNING THE INFLUENCE OF ORGANIC FERTILIZERS UPON THE GROWING AND FLOWERING OF *SPATHILLUM WALLISII* PLANTS

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Keywords: Spathiphyllum, substrate, organic fertilizer, fertilization, development.

ABSTRACT

I realized eight culture variants, using as the lower layout some sawdust compost, to whom I month applied some fertilization procedures, and I used a mixture of land without any fertilization.

For the fertilization procedure I used some organics fertilizer, as solutions of different concentration.

The plants grew in the mixture of land, had a very good evolution, the green colour of the leaves was more intensive. The dimension of the petiole and of the limb was bigger in comparison with the plants cultivated on the sawdust compost.

At the plants cultivated on the sawdust compost is obvious the development of the roots, orientated towards the fertilization solution from the plate.

First the plants flowering were the plants cultivated on sawdust compost.

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CASE STUDY REGARDING THE APPLICATION OF THE METHODOLOGY FOR THE ANALYSIS AND VALUATION OF THE PARK OF THE MOGOŞOAIA PALACE

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Keywords: Restoration, historic site, landscape, historic-stylistic value, esthetical-functional value, global value

ABSTRACT

The researches regarding the restoration of the park of the Mogoşoaia Palace imposed the study of the analysis criteria and valuation method that enabled the quantification of the historic-stylistic, esthetical-functional values and finally the determination of the global value of the studied historic site. Further to establishing the global value, the emergencies of the interventions and the scheduling of the works for the restoration of the park were determined.

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RESEARCHES REGARDING THE VEGETATIVE PROPAGATION OF *COTONEASTER SP.*

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Key words: rooting, substrate, cutting time, culture system

ABSTRACT

The aim of this work was to establish the rooting capacity of *Cotoneaster dammeri*. We tested the time of cuttings collection, the influence of rooting media and the system of culture. The cuttings were rooted under a mist in the greenhouse and mist. Cuttings were collected in June (herbaceous cuttings) and August (semi-hardwood cuttings) and were treated with hydro alcoholic solution of IBA 1000 ppm. Two different rooting substrates: peat + sand (2:1, by volume) and peat + perlite (2:1) and in two systems of culture: rooting bed and multipot systems were used. Rooting performances were expressed in terms of rooting percentage, average root number per rooted cutting, roots length, average number and shoot length per cutting. An 86,9 % rooting percentage was obtained on peat + perlite substrate and multipot rooting system. August time collection (semi-hardwood cuttings) is recommended for *Cotoneaster dammeri* propagation by cuttings.

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STUDY ON THE FOREIGN ARTISTIC INFLUENCES UPON PUBLIC GARDENS FROM ROMANIA FROM THE SECOND HALF OF THE 19TH CENTURY AND THE BEGINNING OF THE 20TH CENTURY. THE DEFINITION OF THE GARDEN AS A WORK OF ART.

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Keywords: historical context, urban development,artistical gardens, quality, historical art monuments.

ABSTRACT

The study deals with the conditions under which the first urban public gardens from Walachia appeared and have developed starting as of the second half of the 19th century under a strong foreign influence. The historical context of that period also enabled the influence of the great European artistic currents upon the Romanian culture. The artistic incursions of certain professionals in the field determined the creation of gardens that finally materialized in valuable works of art. The garden is defined as a work of art created by a landscape artist and the main inspiration model is "live nature", the thoroughly studied landscape that is also represented in the painting of the time – the one that actually was the first stage of knowing "orderly" nature in esthetic view and the idea was later taken over in the arrangement of gardens.

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THE ELABORATION OF A METHODOLOGY TO ANALYZE AND VALUATE HISTORIC GARDENS AND PARKS FOR RESTORATION/REHABILITATION

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Keywords: establishing a hierarchy, criteria, indicators, registration sheet

ABSTRACT

The scope of this paper is the elaboration of a methodology to analyze and valuate historic gardens and parks that should enable the establishing of a hierarchy of their values and the determination of the priorities of granting the restoration and rehabilitation funds and of the order of the necessary intervention works. The methodology comprises the analysis and valuation method, criteria and indicators and a valuation sheet.

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EVALUATION OF STRAWBERRIES QUALITY AFTER ANTAGONIST YEAST PRODUCT TESTED

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ABSTRACT

Because of the existing trend at international level to supply to the consumer horticultural products with high quality, presented in food safety and hygienically conditions; modalities of fruit storage are in continuous extension, being tested and used different storage methodologies for a large number of fruit.

Because of fruit storage in low temperature conditions, controlled humidity and different atmosphere composition is a simple and economical procedure and does not involve use of chemicals which affect consumer's health we had in mind to apply these techniques for storage of some strawberry cultivars.

Strawberry fruits were analysed in all experimental variants for quality parameters (dry matter, titratable acidity, soluble solids, ascorbic acid content) at harvest and after five days of cold storage in the aim to evaluate influence of fungicide treatments about fruit quality evolution.

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SALINITY RESISTANCE OF SOME ORNAMENTAL WOODY SPECIES FERTILIZED WITH HELLRIEGEL NUTRITIVE SOLUTION

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Keywords: substrate, ornamental species, salinity, nutritive solution

ABSTRACT

Some ornamental woody species are adapted to various conditions, while some other can survive only in certain conditions. The substrate total content of salts and pH are restrictive factors for the growth and the development of ornamental plants.

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THE COURT OF GHEORGHE GRIGORE CANTACUZINO IN FLOREŞTI - PRAHOVA

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Keywords: Romantic park, river, water-features, lake, stream,

ABSTRACT

The Court of Gheorghe Grigore Cantacuzino, in Floreşti village, Prahova county, is situated on the eastern border of Prahova river, between the villages Floreşti and Cap Roşu. Its surface is about 160 hectares, and its length is about 3 kilometers. This ensemble, with a significant historic, architectural, artistic and documentary value, which is now a ruin, deserves to be brought to life, with any effort. The proximities and their effects produced on the ensemble, has been analyzed by the point of view of circulations, accesses, functions, networks and vegetation. The hole composition of the ensemble, and each element of it too, has been analyzed. The area of the ensemble is possible to be divided into two functional zones: the south zone - dedicated to hotels and some functions associated to them, and the northern zone - dedicated to sports. The park, with its Romantic nature, where walking is a very important *activity*, is the connection between the two zones. A proposal was elaborated in order to bring to life and to emphasize this significant ensemble, partially by restoration, partially by restitution, partially by changing some actual functions and by creating new functions, in relation with some sports.

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ORIENT AND OCCIDENT IN CONSTANTINE BRÂNCOVEANU'S COURT IN POTLOGI

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Keywords: study, documents, synthesis, Oriental and Occidental influences

ABSTRACT

Romanian Architecture was marked by the personality of Constantine Brâncoveanu, the powerful, rich, Christian Prince of Wallachia. The Architectural Style which was created in the 17th century and developed during the following century, known as the "Brâncoveanu Architectural Style", generated the "New-Romanian Architectural Style", at the end of the 19th century and the beginning of the 20th century. The gorgeous palaces of Constantine Brâncoveanu had also Beautiful Gardens. Assuming the idea that these Gardens had the same origins as the Architecture of the Palaces, we are trying to recreate the atmosphere of the civil and official events of that time, by synthesizing Oriental and Occidental Influences. This magic mixture become a New Style of its own, an Authentic Romanian Style.

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A CONTEMPORARY APPROACH TO THE COURT OF CONSTANTINE BRÂNCOVEANU IN POTLOGI - DÂMBOVIȚA

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Keywords: European garden, Oriental garden, synthesis, contemporary manner.

ABSTRACT

An Architectural Ensemble as the Potlogi - Dâmbovița, with its significant merit, should be emphasized and shown. The Potlogi Palace is a synthesis of the melting pot of the European and Oriental cultures and it is typical for the Architectural Style known as "Brâncoveanu Architectural Style". "The Brâncoveanu Gardens" were very famous, but we have only written documents by scholars and travelers from Europe, Byzantium and the Near Orient. The aim of this approach is to bring to life the Court of Constantine Brâncoveanu in Potlogi, for cultural reasons. The motivation of this approach is to make complete the beauty of the architectural ensemble, with a succession of fabulous gardens, in a contemporary manner, by creating the glorious atmosphere of the end of the 17th century. The harmony and the contrast, the deep link with the past and the contemporary approach are the features of our proposal. This is the first Romanian Contemporary Synthesis of Oriental and European influences, in landscape design and in approach to a historic ensemble. The Court of Constantine Brâncoveanu in Potlogi will be a desired Cultural Center, due to the accomplishment of its Gardens, and to the freshness unexpected contemporary ideas for the gardens and for the present landscape problems.

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REHABILITATION OF "CHILDREN'S PALACE" PARK- BUCHAREST

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Keywords: Urban landscape, continuity, urban green area, specificity, functionality, diversity.

ABSTRACT

The topic discussed herein refers to the impact of the degraded green areas and parks' improvement on the urban habitat, an issue of concern both for local authorities (the Municipality) and for specialists: landscape architects, architects, city planners. Such degraded urban green areas are real and they might be restored to their former good condition for the benefit of the city, and also enriched with new functional, aesthetic or ecological elements.

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ANALYSIS OF THE FUNCTIONAL, AESTHETIC AND ECOLOGICAL DEFICIENCIES OF THE AREA SURROUNDING VACARESTI LAKE OF BUCHAREST, AS SPACE ANTHROPIZATION FACTORS

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Keywords: Urban landscape, grassland "shortage", continuity, functionality, anthropization, enhancement of urban green areas' quality, diversity.

ABSTRACT

This study is focused on the analysis of the main anthropization factors identified for the area under discussion, and having a negative impact on the urban habitat. The main dysfunctions are related to the environment quality, the area's traffic flow, the area's urban development potential, as well as to the overall aesthetic and ecological features of the respective zone.

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A NEW GLADIOLUS HYBRID CREATED TO R.D.I.V.F. VIDRA

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Keywords: hybrid, gladiolus, spike, corm, cultivar

ABSTRACT

The research was made in experimental fields of Department of Flower Growing of Research and Development Institute for Vegetable and Flower Growing- Vidra, in 2005. The biological material was represented by four gladiolus cultivars: Oscar, Priscilla, Nova Lux, Wind Song and the new hybrid H.G. 9631-3. Large corms were planted on April, in sandy-loam soil, to 10 cm deep, spaced 10 cm apart in the row and 25 cm between rows.

After an overall and exacting analysis of main characteristics, the following conclusions were drawn regarding hybrid H.G. 9631-3 is the earliest cultivar, the flower colour is red-orange, the length of spike is 55 cm, 20 florets/spike, and large, showy flowers has a very good multiplication capacity 3 corms/plant.

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RESEARCHES CONCERNING THE CONTAINERIZED AND UN-POLLUTION CULTURE OF *POLYANTHES TUBEROSA L.* PLANTS

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Keywords: tuberose, substrate, container, organic fertilizer, flowering

ABSTRACT

The growing and the flowering of tuberose are very highly influenced by the quality of substrate and the fertilizer program. We realized eight culture variants in containers using as substrate the classic soil without fertilizations and the sawdust compost with fertilizations. We used three organic fertilizers applied as solutions with different concentrations. The growing and the flowering of the plants were observed by biometrical observations. The plants cultivated on the classic soil were the best vegetative growing because the nutrients were better used; we observed that the leaves colour of these plants was more intensive green than the plants cultivated on the sawdust compost. Also, the flowering of the plants cultivated on the classic soil was better comparatively the plants cultivated on the sawdust compost. In the sawdust compost, the fertilizers are not well restrained and the plants can not use in the optimum conditions the nutrients. These results were also demonstrates by the big values of the number and the length of roots of plants cultivated on the sawdust compost. However, the plants cultivated on the sawdust compost were the big values of the flowers stem. Also, the number of the flowers in inflorescence was comparable with one of plants cultivated on the sawdust substrate.

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RESEARCHES CONCERNING THE CULTURE SUBSTRATE INFLUENCE UPON GROWING AND FLOURISHING OF SOME *MAMMILLARIA* SP. PLANTS

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Keywords: *Mammillaria elongata, Mammillaria backenbergiana*, cacti, offshoots, flower

ABSTRACT

The aim of the present researches was to find the optimal substrate for growing and flourishing of and plant. There were made studies of different substrates type, on two different years, looking for plant height at the beginning and at the end of the studies, offshoots growth, and the number of flower on a plant.

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RESEARCHES ON ORNAMENTAL POTENTIAL OF SOME *HIPPEASTRUM* SP. CULTIVARS, INTRODUCED ON CULTURE AT UNIVERSITY OF AGRONOMIC SCIENCES AND VETERINARY MEDICINE BUCHAREST FLOWER GREENHOUSES

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Keywords: greenhouse, bulbs, flowering parameters

ABSTRACT

The aim of the present researches was to obtain more information about the ornamental potential of some new *Hippeastrum* sp. cultivars, useful for greenhouse culture in specific condition of Romania. On the international flower market there can be find a lot of *Hippeastrum* sp. cultivars, very close as quality parameters, with differences visible only in very close analyze, using statistically methods.

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FRUIT GROWING & TECHNOLOGY

THE EFFICACY OF SOME PHYTOSANITARY TREATMENTS, ON SOME APPLE FRUITS CULTIVARS STORAGE CAPACITY

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Keywords: moisture, treatments, pre-harvest, post-harvest

ABSTRACT

Looses during storage of fruits are still considerable in some cases about 20-30% of all produced harvested worldwide is not consumed because of fungal or physiological deterioration. In the present paper, we present the research results of the pre-harvest treatments using the products: Rover- 0,2%; Sumilex 0,1% and Topsin – 0,1%, as well as post-harvest treatments: using Rover – 0,2% and Sumilex –0,1%. The studied apple varieties (Jonathan, Generous and Golden Delicious) were provenance from the private farmers, Voinesti – Dambovita.

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THE RECIPROCAL INFLUENCE BETWEEN GRAFT X ROOTSTOCK AT PLUM SPECIES IN THE SOUTH AREA OF OLTENIA REGION

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Keywords: plum tree, variety, rootstock, compatibility, interaction

ABSTRACT

The plum is a plant very important of temperate zone thanks to fruits solicitation to consume in state fresh and for processing.

To obtained production grands it is necessary testing for all rootstock and variety as and retaining their for each area to precocious, productive and with high quality.

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THE BIOCHEMICAL FRUITS COMPOSITION TO SOME SELECTION OF *ASIMINA TRILOBA (L.) DUNAL*

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Keywords: northern banana, breeding, hybrids

ABSTRACT

Asimina or northern banana is a new fruit specie that incited the interest of the specialists and growers in the native area – Northern America, but also in many European countries. Northern banana *(Asimina triloba L.)* belongs to the Annonaceae family and is known in America under the name of pawpaw, Indiana banana or northern banana. In our country this new fruit specie current exists in Cotroceni Botanical Garden, in few private gardens, and in 2003, a small collection was established within the Faculty of Horticulture in Bucureşti, with varieties and hybrids from Italy. The present paper shows the preliminary results concerning fruits biochemical composition, nutritional and caloric content to some new selections of *Asimina triloba.* The new selections *Vitroplant 2* and *Vitroplant 3,* have a unique tropical flavour and powerful aroma*,* a high nutritional quality with high content in vitamins, minerals, and amino acids.

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THE INFLUENCE OF PESTICIDES ON THE GROWTH OF FUNGUS *HAINESIA LYTHRI* (DESM.) HÖHN

Cristina CRISTESCU

Key words: ***Hainesia*****,** pesticides

ABSTRACT

The influence of different pesticides used in strawberry cultivation on the growth of the fungus *Hainesia lythri*, a natural pathogen of strawberry, was evaluated under the laboratory conditions. The fungicides studies were penconazol (Topas 100 EC), propiconazol (Sanazole 250 EC), tebuconazol (Orius 25 EW), triflumizol (Trifmine 30 WP), hexaconazol (Anvil 5 SC), miclobutanil (Systhane 12 E), mancozeb (Dithane 75 WG), dichlofluamid (Euparen 50 WP), procimidon (Sumilex 50 FRV), captan (Merpan 50 WP), folpet (Folpan 50 WP) and clorotalonil (Bravo 500 SC). Good results were obtained with penconazol, propiconazol, tebuconazol, triflumizol, hexaconazol, miclobutanil and mancozeb which inhibited growth of fungus.

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THE OPTIMIZATION OF THE PEACH AND APRICOT CULTURE BY INTRODUCING OF SOME IMPROVED TECHNOLOGICAL MEASURES

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Keywords: fertilization, foliar, phytosanitary, pruning

ABSTRACT

The technology of the trees culture has to become friendly with the environment but to allow obtaining big and constant harvests with unpolluted and qualitative fruits. Thus, it were realized more intervention variants in the frame of the technological sequences at the peach and apricot, concreted by choosing the moment of the pruning, setting of the peach bearing by short and long pruning, foliar fertilizations applications in condition of associating with the rest of the technological links. For summer pruning of the apricot, it was obtained significant increased production comparatively with the winter pruning, at peach, short pruning had recorded increased productions; the long variant registered a lower production in the unapplied manual thinning condition. By using foliar fertilization, it were also obtained different increased productions depending on the variety and the fruits presented a lower content in azoth, sodium and nitrites comparatively with the control, the phosphor, potassium and calcium being in generally bigger.

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RESEARCHES REGARDING THE MICROPROPAGATION RESULTS OF DWARF PEACH HIBRIDS

PETICILĂ A.G.

Keywords: Dwarf peach, nutrient medium, plant disinfecting.

OBJECTIVES

- Finding out the virus free plants.
- Finding out the protocol for micro propagation of dwarf peach hybrids.
- Finding out the best nutrient medium type to decrease the necessary time to obtain ready plants for planting in the field.
- Studying the effect of different solution concentrations in the disinfection treatment.

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CONDUCTING THE DIFFERENTIATION PROCESS TO IMPROVE EFFICIENCY OF THE `*IN VITRO*` REGENERATION IN *FICUS CARICA*

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Keywords: Explants, culture media, photoperiod, hormonal balance, organogenesis

ABSTRACT

The advantages of "in vitro" culture determine that a big number of species to be tested for the culture. Ficus carica is a species more and more required for people's gardens in latest time. The experiment organized at the Research Institute for Fruit Growing Piteşti-Mărăcineni has had in view the establishment of optimal parameters that make efficacious some culture for Ficus carica. The media tested M & S and Lepoivre showed that answer different regarding to the need of macro and microelements for this species. The regeneration percent was influenced by uses of different auxins NAA or IBA and by different quantities of citokinin BAP = 0,1 mg/l; 0,5 mg/l and giberelic acid GA_3 = 0,3 mg/l; 1 mg/l.

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GROWING AND FRUCTIFICATION OF SOME KAKI VARIETIES IN THE ROMANIAN`S PLANE CONDITIONS

Iuliana STANCIU and N. CEPOIU

Keywords: fructification, ripening period, biochemical content.

INTRODUCTION

The studied species is *Diospyros kaki* grafted on *Diospyros lotus*. The trees were propagated throw grafting.

The kaki fruit is a berry; it looks like a tomato, except the calyx which is completely different. The fruit is climacteric.

The aims fallowed in this research were:

- The adaptation of some kaki varieties in the Romanian Plane;
- The pomological characterisation;
- The knowledge of the biochemical content of the fruits;
- The establishment of the optimum period of the fruits harvesting.

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INTEGRATED FRUIT PRODUCTION AND THE NECESSITY OF EUROPEAN INTEGRATION

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Keywords: European regulation, environment friendly technology, traceability, marketing

PRINCIPLES OF INTEGRATED FRUIT GROWING

- Use of new resistant varieties to pests, diseases and abiotic stress factors;
- Chose of species, varieties and rootstocks adapted to specific areas and micro areas of fruit production;
- Development of the fruit trees ecosystem biodiversity thorough the creation of biological systems based on the use of the antagonists organisms in pests and disease control.

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INFLUENCE OF PRUNING ON GROWTH AND FRUITING IN SOME APPLE RESISTANT CULTIVARS

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Keywords: pruning, apple resistant cultivars

ABSTRACT

All new cultivar/rootstock combinations are evaluated in order to establish the differentiated technologies. This paper proposes the study of different pruning in some apple resistant cultivars (Pionier, Prima, Generos, Florina). The moderate pruning of semiscaffold and/or shoots (with ½ of length) induced a small vigor and a higher production than the strong pruning (with 2/3 of length) treatments.

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THE BEHAVIOUR OF THE GRAFTED PLUM TREE ON DIFFERENT MOTHER PLANTS IN THE NORTH-WEST PART OF THE COUNTRY – AT S.C.D.P BIHOR

Aurora VENIG and Iulian STEFAN

ABSTRACT

The results refer to the behaviour of the plum tree on seven mother plants studied, under the conditions from the North-West part of the country, at S.C.D.P. Bihor.

Notice the fact that after the made researches and the obtained results for the Stanley species, the best mother plants are C.P.C., created at I.C.P.C. Pitesti – Maracineni, and the Scoldus mother plant, which reaches superior values of the sectioned trunk surface and bigger fruit productions – 21-22kg / tree.

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CHARACTERISTICS OF LONG TERM DWARF AND SEMI-DWARF ROOT STOCKS PROPOSED FOR HOMOLOGATION, FOR PEACH AND ALMOND SPECIES, AT BIHOR COUNTY RESEARCH AND DEVELOPMENT FRUIT TREE GROWING STATION

Aurora VENIG and Iulian ŞTEFAN

ABSTRACT

The results of this study are regarding to three root stocks, two of them semi-dwarf:Oradea-1 X Stark Sumburst Dwarf and De Balc X Stark Sumburst Dwarf and one dwarf: Stark Sumburst X Tuono, and to the analysis of their behavior as small height root stocks for peach and almond species, in the nursery and in the first years in orchard. It is remarkable that, due to analysis and determination and due to results obtained, we can confirm that Stark Sumburst Dwarf X Tuono is a dwarf stock (with small height) and that it gives to the trees grafted on it a smaller growing capacity in nursery and orchard, in terms of trunk section surface and tree height. The growing capacity indicator determined by the rind to wood ratio gives the same conclusion by being 0,41 given to 0,47-0,52 for the other 2 stocks that were part of this study.

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PRELIMINARY RESULTS REGARDING THE POT PRODUCTION OF THE APPLE PLANTING MATERIAL

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Keywords: *Malus domestica*, table grafting, grafting wax.

ABSTRACT

The pot production of the apple tree planting material can influence the existing nursery structure in our country thorough the elimination of some technological chains. The paper present the influence of different factors involved in the nursery production: grafting compatibility of some new apple varieties on different rootstocks, forcing temperature, grafting method, etc. on the percentage of the grafting success. Application of table grafting technology may offer an efficient alternative to the standard technology being simple, more economic and faster.

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VITICULTURE & OENOLOGY

ANALYSIS OF THE POTENTIAL ECONOMIC ADVANTAGES ASSOCIATED WITH THE USE OF ENZYMES, SELECTED YEASTS AND FERMENTATION ACTIVATORS IN WINEMAKING

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Keywords: enological materials, modern winemaking, small producers, economic analysis

ABSTRACT

The paper presents the potential economic benefits achieved by shifting from traditional winemaking procedures to a modern winemaking that makes use of enological materials such as pectolytic enzymes, selected yeast and fermentation activators. These adjuvants help in obtaining wines of increased quality which can be traded at better prices. The analysis shows that for white wines the application of enological materials can lead to an estimated benefit of 62.9 EUR/1000 l if the wine is sold in bulk or 162.9 EUR/1000 l when it is sold bottled. The benefits for red wines are estimated at 113 EUR/1000 l for the wine sold in bulk and 143 EUR/1000 l for the bottled one.

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COMPARATIVE ASPECTS REGARDING THE BIOLOGICAL CYCLE OF GRAPE MOTHS UNDER THE CONDITIONS OF THE ŞTEFĂNEŞTI-ARGEŞ VINEYARD

Daniela BĂRBUCEANU

Key words: *L. botrana, E. ambiguella*, biological cycle, comparative aspects

ABSTRACT

Between 1998-2003, *Eupoecilia ambiguella* Hb. and *Lobesia botrana* Den. et Schiff. were observed by means of pheromone traps set in the Ştefăneşti-Argeş vineyards. Situated in South-Central part under the meridional Carpathian Mountains, these vineyards are characterized by a temperate climate. Under these local and annual climate conditions the flight of the two species is highly synchronized. Nevertheless, *L. botrana* displays an earlier coming out of butterflies and a phased flight, without a well marked peak, as in the case of the other species. *E. ambiguella* displays a shorter first flight, up to 4-5 weeks, while the second flight lasts till September. A third flight of *L. botrana* can be observed in the second half of August and September, this third generation having a partial development.

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THE INFLUENCE OF THE HYDRIC CONDITIONS ON THE EVOLUTION OF CERTAIN PHYSIOLOGICAL PROCESSES OF GRAPEVINE

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Keywords: hydric deficit, photosynthesis, transpiration, grapevine varieties

ABSTRACT

Grapevines are multiannual plants, hence the significant importance of the influence of the annual ecological offer over production, especially its quality. The knowledge of physiological particularities determined by the pedoclimatic conditions is important for elaborating and supporting the viticultural technical activities. In this papers studies were focused on the influence of the hydric variable regime on physiological processes (photosynthesis, transpiration) for 6 grapevine varieties.

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FROST RESISTANCE OF SOME GRAPE CULTIVARS IN THE WINTER 2004/2005

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Keywords: grapevine, frost damage, cultivars, cold resistance, recovering capacity

ABSTRACT

The low winter temperatures (down to -23ºC in the air and -27ºC at soil surface, registered in Bucharest-Băneasa meteorological station in February 2005) affected buds of grapevines. A great difference between the 45 tested *Vitis vinifera* cultivars was noticed; the viability of primary buds was comprised between 3% (Muscat timpuriu de Bucureşti) and 88% (Burgund mare). At frost resistance cultivars Burgund mare, Columna, Furmint, Traminer roz, Riesling italian, Oporto, Muscat Ottonel and Cabernet Sauvignon), the percentage of primary bud viability was comprised between 80-88. They proved to be very cold tender cultivars: Crâmpoşie, Cardinal, Sauvignon, Victoria, Băbească neagră, Zghihară de Huşi, Cadarcă, Timpuriu de Pietroasa, Italia, Muscat timpuriu de Bucureşti, with a viability comprised between 3-30%. There were noticed differences between the types of pruning and the bud loads given at pruning regarding frost resistance and the recovering capacity of the grapevine.

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RESEARCH ON LEAF AREA PRODUCTIVITY OF GRAPEVINE

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Keywords: grapevine, leaf area, leaf area to fruit weight ratio, leaf area to sugar production ratio, fruit weight to pruning ratio.

ABSTRACT

The research was carried out in Bucharest (N 44º25', E 26º6') in an vineyard of Fetească regală cultivar grafted on Kober 5 BB. Vines were spaced 2.20 x 1.20 m by using five types of pruning (multiple Guyot-low training); Guyot with periodically renewed arms, Guyot on demi-high stem; Cazenave cordon and spur-pruned cordon); three levels of bud load were imposed at pruning: 10, 15 and 20 buds/m^2. The balance between grapevine vegetative growth and crop load was determinate by the ratio of total leaf area to grape yield. The greatest sugar accumulation was obtained at 12-14 cm^2 leaf area to fruits weight ratio, beyond which the sugar content das not benefit of the ratio's raising. Meanwhile, the yield to pruning weight ratio is well correlated to leaf area to sugar production ratio (cm^2/gramme ratio). At normal grape yield to pruning weight ratio (between 2,5 and 7,0) the leaf area necessary for producing one gramme of sugar in the fruit is 25-75 cm^2 leaf area per 1 gramme of sugar. These results show that maintenance of proper leaf area to fruit weight ratio is able to optimize the quality of grapes.

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OBTAINED RESULTS IN THE VINE PRODUCTION DOMAIN REGARDING THE ECOLOGICAL PREVENT AGAINST DISEASES ON THE CONDITIONS OF EXCESSIVE HUMIDITY

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Key words: viticulture ecosystem, ecological treatments, warning, phenological phase.

ABSTRACT

The year 2005 shows an accentuated abnormality character. In order to establish the treatment scheme it takes into account the last knowledge that came out regarding this domain in the last decade, as well as the international tendencies.The variety on which were done ecological treatments was Chardonnay. Regarding the mildew attack, it became manifested for 15 generations and it warned 7 treatments. For manna it warned 10 treatments because it produced 6 primary infections and 37 secondary infections. During the vegetation period it can be possible 1-4 primary infections and, up to 50-60 secondary infections. The year 2005 is characterized by a strong manna attack.

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RESEARCHES RELATED TO THE HYDRIC STRESS CONDITIONS OF PIETROASA WINE CENTER, USING THE HYDROPHYSICAL SOIL INDICES

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Keywords: physical and hydro-physical indices, provision momentary of the soil, hydric stress

ABSTRACT

The climatic modifications of the last decade consisted in the global warming as well as in the accentuation of some negative phenomena that affected the growth and the normal fructification of the vineyard. Thus, the noxious minimum temperatures became more frequent in wintertime (2002/2003; 2004/2005), as well as the long severe droughts (2001/2002; 2002/2003). 2005 can be characterized by excessive precipitations with very unfavourable consequences.

The hydrophysical indices of the soil have been calculated on the basis of the observations made during the above-mentioned dry years and in 2005 which can be characterized as excessively rainy.

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THE FERROFLUIDS – BIOSTIMULATORY OF CALLUSOGENESIS PROCESS IN GRAPEVINE CULTURE

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Key words: ferrofluids, callusogenesis, grapevine

ABSTRACT

In this study it was observed the influence of ferrofluids upon callusogenesis in grapevine culture. The use of magnetically fluids determined the apparition of some differences between the treated lot and the control. These differences regard the form, colour and the type of callus formatted. It remarks a negative correlation between callus mass and the concentration of ferrofluids from culture medium. But, the use of magnetic fluid determined an initialization of callus with 2-3 days before the callus forming from control lot. In conclusion, we can say that the presence of magnetic fluid in medium culture had a positive influence upon the evolution callusogenesis.

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RESEARCH REGARDING A COMPARATIVE STUDY OF SOME PHYSIOLOGICAL INDEXES OF GRAPEVINE LEAVES OBTAINED *IN VITRO* CULTURE AND A GRAPEVINE LEAVES OBTAINED FROM FORCED CUTTING IN CONTROLLED ENVIRONMENT

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Keywords: *vitis,* rootstock, cultivars, micropropagation, explants.

ABSTRACT

The aim of this paper is to determinate some physiological indices (dry substances contents, proteins and glucid contents, mineral elements contents) of the grapevine leaves obtained *in vitro* and the grapevine leaves obtained from forced cutting in controlled environment

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CONTRIBUTIONS TO THE STUDY OF MICROCLIMATE FROM PIETROASA WINE CENTRE

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Keywords: correlations, differentiations, variations, biological limit

ABSTRACT

This study makes a correlation between precipitations and average temperatures, taking into consideration that they influence, to a large extent, the quality and the quantity of the grapes`production. This correlation is linked to the climat variations between 1975 and 2005, as compared to the multianual average, calculated for 59 years. This study also contributes to the analysis of the effects of 2005 over the vineyard of Pietroasa.

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BEHAVIOUR OF *CABERNET SAUVIGNON* VARIETY IN VITICULTURAL ECOSYSTEM TOHANI FROM DEALU MARE VINEYARD

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Cabernet Sauvignon variety, considered "father" of red wines of superior quality can be find on *Dealu Mare* region were we can find sonny south slope and ground who contains enough *Fe, Ca* and *Mg.*

Well known wine-growing center *Tohani*, long time tradition in grape wine crop, meet special natural condition for black grapes variety destined to obtaining red wines of higher quality (I. Marin, 2003). Land characteristics and also the very good specialists give good hope for future design of local and world viticulture according to tendency of modern consumer who like more the red wines (I.Marin, 2003).

INFLUENCE OF CUTTING TYPE OVER MEAN PRODUCTION OF GRAPE AND THEIR QUALITY TO THE VARIETY FOR MAKING RED WINE IN *TOHANI* WINE GROWING DISTRICT

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In Romania, as in other countries with viti-vinicol tradition, the culture of black grape variety for red wines represent a subject for many research workers who tried to establish the factors who influence the quantity but especially the quality of grape production to this variety.

Tohani wine growing district dispose extraordinary ecopedoclimatic conditions for destined to grape vine culture, particularly for the variety destined to obtain important red wine: *Merlot, Feteasca Neagra, Cabernet Sauvignon* and *Pinot Noir*. Number of eyes influence and cutting type applied to grape vine represents an important factor of conducting for this variety, quantities and qualitative standpoint.

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COMPARATIVE EVALUATION OF RESVERATROL IZOMER FORMS FROM SEVERAL VINE VARIETY OF OLTENIA WINE-GROWING AREA, BY HPLC SYSTEM

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Keywords: phytoalexin, cis and trans, liquid chromatography, grapes.

ABSTRACT

Resveratrol (3,5,4- trihydroxystilben) is a natural phytoalexin produced by a wide variety of plants such as grapes (Vitis Vinifera), peanuts (Arachis hypogaea) and malberries as a response to the stress (termical and hydrical) injury, ultraviolet (UV), irradiation, fungal (Botrytis cinerea) infection and it exists in cis- and trans-forms.

The poliphenolic compounds present in grapes and wine has been reported to have health benefits including anticarcinom effects, protection against cardiovascular diseases and in red wines case they are responsible for the cholesterol-lowering effect.

This study implicates the detection of the two resveratrol isomer forms (cis- and trans-) from grapes by HPLC, their totalization, and also, a comparative evaluation in order to establish the synthesis potential of grape variety.

In the future, this determination will be used to extract the resveratrol and to use it in medical area.

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INFLUENCE OF SOME TECHNOLOGICAL LINKS ON CABERNET SAUVIGNON GRAPE YIELD AND QUALITY

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Keywords: *Vitis vinifera*, culture techniques, crop load, vine canopy, vine quality, vegetative-yielding indexes

ABSTRACT

The elaboration of some performant culture technologies for the grapevine able to create increased possibilities of expressing the yielding and quality characteristics of *vinifera* varieties implies a thorough knowledge concerning the effects of the different technological links applied upon the yielding capacity of the vines and the grape quality.

The research works performed inside the experiment aimed at studying the influence of the planting distances, training and pruning systems and crop loads considered in their interaction upon the Cabernet Sauvignon/Kober 5BB grape yield and quality. The results obtained evidenced that the small planting distances (2.0 x 1.0 m), the bilateral Cordon training system, the great crop loads (30 eyes/vine) and the diminished height of the canopy (60 cm) induced a better yielding of the vines, whereas the large planting distances (2.5 x 1.0 m), the double Guyot and high double Cordon training systems, the reduced crop loads (24 eyes/vine) and the great height of the canopy (140 cm) had a positive influence upon the quality indexes of the grape yield (high contents in sugar and anthocyanins, high values of the gluco-acidity index.

The grape yield may be managed under its quantitative and qualitative aspect by using several technological links which, when interacting, are able to achieve different structural patterns of grapevine vegetation.

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BOTANY & PHYSIOLOGY

HISTOLOGICAL ASPECTS CONCERNING THE SHOOTS OF SO4 ROOTSTOCK

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Key words: rootstock, *Berlandieri* x *Riparia*, wood maturation, anatomical areas

ABSTRACT

The SO4 rootstock displays a high affinity with many vine cultivars from Romania. The material which was harvested at three different moments in July 2004 was subjected to an anatomical analysis. The authors studied all anatomical parts of the shoot with emphasis on cortex, vascular bundles and pith. The results are presented in dynamics and can be easily followed in a synoptic table with biometrical figures, graphs and original photos.

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PRELIMINARY RESULTS CONCERNING THE ANTIFUNGAL ACTIVITY AND THE CHEMICAL COMPOSITION OF THE ESSENTIAL OILS FROM *PINUS SYLVESTRIS* L.

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Keywords: antimicrobial activity, pine, volatile oil

ABSTRACT

The essential oils as methanolic extract of *Pinus sylvestris* needles were examined for its antifungal activity against: *Aspergillus ochraceus*, *Botrytis cinerea*, *Fusarium oxysporum* f.sp. *vasinfectum* , *Phytium spp*. *and Penicilium expansum* plant pathogens. Also the chemical compositions of the essential oils has been analised by GS-FT-IR technich. The results of in vitro assays, revealed that the optimum concentration that induced the greatest visible inhibition of fungal growth varied according to the type of fungi. It was noticed that the most sensitive fungus to volatiles was *B. cinerea,* the first two concentrations (1%; 0,5%), assuring a inhibition percent of 100 %, while in the case of *F. oxysporum* f.sp. *vasinfectum*, the essential oil was found to be less efficient and the total micellium growth inhibition has been registered only at 1% essential oil concentration. In the case of the others fungus species it can be say that the essential oil had a fungistatic effect in some cases or just a lack of the antifungus activity, so no inhibition, such as the Phytium species situation. The qualitative and quantitative profiles of the essential oils from P. sylvestris revealed the presence of 11 compounds, and there were emphasized the abundance of α-pinene (83%), followed by others such as β-pinene, myrcene, β-caryophyllene and terpinolene.

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CHARACTERIZATION OF THE USEFUL FLORA WITHIN THE AREA LEORDENI COMMUNE (ARGEŞ COUNTY)

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Keywords : useful flora, medicinal plants,

This paper presents the useful flora within the area Leordeni commune (Argeş county): medicinal plants, plants used for tincture, melifery plants, flavour plants, tannant plants, plants used for nourishment, wooden plants, fodder plants, ornamental plants.

Lucrări ştiinţifice U.S.A.M.V., Seria B, Vol. XLVIII, 2005

RESEARCH REGARDING THE PHYSIOLOGICAL AND BIOCHEMICAL CHANGES IN APPLE FRUITS DURING MATURATION AND SENESCENCE PROCESSES

Monica FLEANCU

Keywords: apple fruits, photosynthesis, respiration, maturation, senescence.

ABSTRACT

The purpose was to identify the physiological and biochemical changes which take place in the apple fruits (Idared, Golden Delicious, Jonathan) during maturation and senescence processes.

It has been determinate photosynthesis rate, respiration rate, assimilation pigments, amount of the sugars, pectin, vitamin C, tanants substances.

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LEAF ANATOMY AND STOMATA COMPLEX AT *TANACETUM BALSAMITA*, L. – COSTMARY (*ASTERACEAE)*

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Keywords: isolateral parenchima, palysadic tisue, amphystomatic, anomocytic

ABSTRACT

Tanacetum balsamita is a aromatic and medicinal plant with a high content in volatile oil. It was studied the anatomy of leaf, the density and the type of stomata. The leaf is amphystomatic, the type of stomata complex is anomocytic and the mesophyll is isolateral. In the both epidermis there are trichomes and glandular hairs. The density of stomata is 50-68/sq.mm. The length of stomata cells is 37-46 μm and the wide is 31-34 μm.

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OTHER FIELDS

THE ESTIMATION OF SOIL COVER AND LAND EVALUATION CAPACITY IN URZICENI AREA – S.C. "AGROINDUSTRIALA"

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Keywords: alkalization area, pedogenesis factors, biogeochemical processes, phreatic and surface waters

ABSTRACT

The „Agroindustriala" society land is located in the western-central part of Baragan Plain, in the area of Urziceni, Garbovi, Armasesti localities.

Soil cover knowing was necessary for establishing a land standard price, in order to start leasing and granting negotiations. The area belongs to chernozems and cambic chernozems domain, morphologically being influenced by gleic processes, alkalisation, high phreatic regime and alkaline pH.

The presence of Sarata rivulet, which springs from Buzau subcarpathians, a region enriched in salt resources, leaded to phreatic waters mineralization and soils alkalisation.

Land evaluation potential was estimated to be 4th Class (62 points), in classical system of evaluation, and 2nd Class in today system (according to the Law 18/1991). Agroeconomically, the value of one hectare of arable land in Urziceni area is about 55 million lei.

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SOILS AND AGRARY FIELDS EVALUATION IN DARJOV BASIN – S.C. BRIAS S.A., OLT COUNTY

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Keywords: post-quaternary Lithologic deposits, vertisols, land, vertisols, land evaluations

ABSTRACT

Darjjov hydrographic basin drains north-central part of Boianu Plain, going from Brebeni to Lisa-Greci place. It includes four farms, representing 4.989 hectars of arable surface. The most frequent soils are red-brownish soils and vertisoils.

These soils physical and hydrophysical features impose restrictions for some indicators like: bulk density, total porosity, aeration porosity etc; this is explained by fine clayey texture of soils.

Regarding land evaluation, the most productive lands belong to 5th Class for wheat and 6th Class for maize.

This research study also contains Soil Resources Map and land evaluation tables.

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THE NECESSITY OF KNOWING LANDED RESOURCES FROM S.C. "REDIAS" S.A., OLT COUNTY, FOR LEASING AND GRANTING

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Keywords: resources of soils, pedogenesis, phreatic level depth

ABSTRACT

The making of studies regarding fields agroproductive capacity has become a current practice in today Romania's economy; this can be easily explained with two arguments: property form and land value.

S.C. "Redias" S.A. is organised in 3 units which belong to communal terirories Redea, Dobrosloveni, Falcoiu.

Geographically, the region is a part of Romanati Plain, a subunit of Oltenia Plain. Soil cover is largely occupied by Chernozems (cambic chernozems, especially); small surfaces are represented by red-brownish soils and alluvial soils. Evaluation coefficients for 12 agrary cultures and 2 agrary using belong to 4th Class and 5th Class for most cultures; some cultures have superior coefficients (2nd and 3rd Class).

Agroeconomically, the value of Redea land is, according to calculation, 56 million lei/hectare, over the local market, but lower than European area.

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BRIEF CHARACTERIZATION ABOUT ROMANIA'S LAWNS FAVORABILITY

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Keywords: fields' favorability, bioclimatic floor, production capacity

ABSTRACT

The lawns in Romania occupy 4 467 000 ha surface, which is represented by 3 044 000 grazing fields hectares and 1 423 000 hayfields hectares. The lawns are largely extended in Romania, where they can reach 2500 m heigh. The favourability of this land category was established using land evaluation system, according to pedoclimatic districts; big scale pedological classification materials were used, as well.

The most extended lawns surfaces belong to 4th and 7th Class of favourability (between 31-50 points). Large surfaces are occupied by lawns belonging to 8th and 9th Class (between 11-30 points), located in Romania's north area, in Cernei and Mehedinti Mountains, in Poiana Rusca and Sureanu Mountains.

Last class of land evaluation, the 10th, has a very decreased favourability, lawns being located in high montaneous areas (Retezat, Parang, Rodnei Mountains). Regarding lawns capacity production, the average productivity was estimated at 2 tones dry substance/hectare, in mountains area, and 5 tones dry substance/hectare in mountaneous depressions.

EVALINFO 1.1

aplicatia conceptului de CARTE INTELIGENTA

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CARTEA INTELIGENTA

MIJLOC EFICIENT DE PREDARE SI STUDIU

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CARTEA INTELIGENTA

- carte pe suport magnetic
- beneficiaza de avantajele mijloacelor multimedia
- gandita sa interactioneze cu utilizatorul

SCOPUL NOSTRU

- Sa atragem atentia asupra **potentialului extraordinar** pe care il ofera domeniul cartilor inteligente in procesul de instruire.

- Sa oferim experienta noastra concretizata in programul **Evalinfo 1.1**

APLICATIA EVALINFO

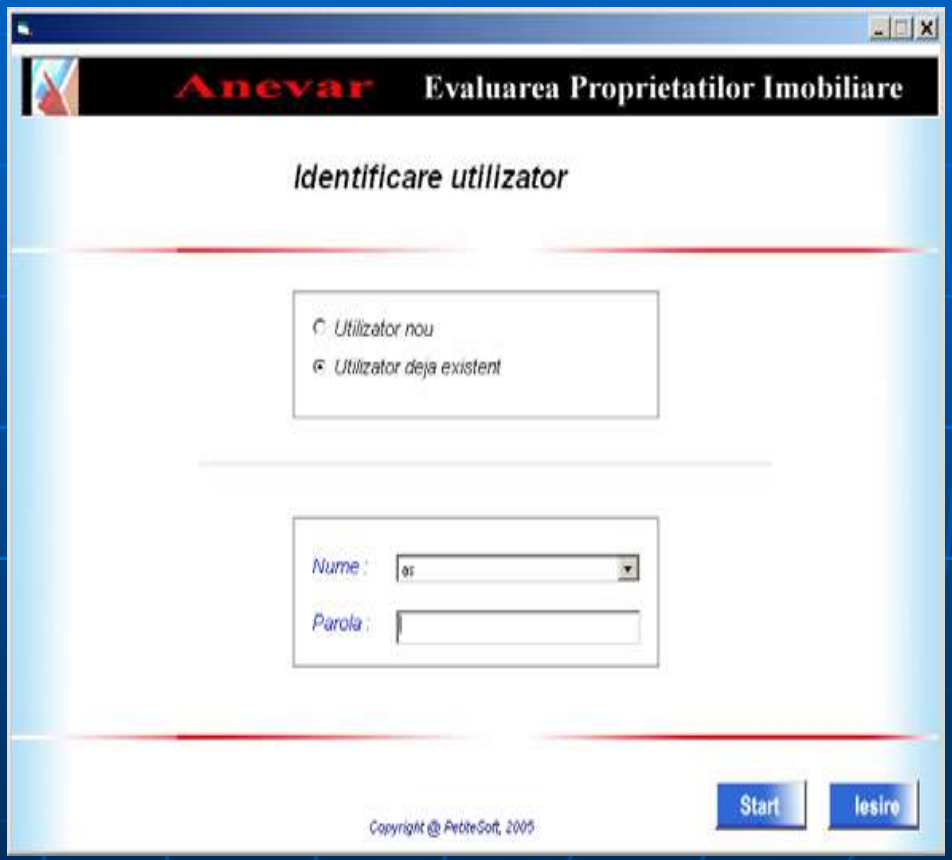
- Este o aplicatie a conceptului de “carte inteligenta”
- S-a ales domeniul de “Evaluare a proprietatilor imobiliare” si s-a creat baza de date specifica.
- Poate fi folosita cu eficienta in procesul de instruire

PREZENTARE APLICATIE

- Studentul poate parcurge cursul (aici prezentat in format pdf la apasarea butonului ‘Curs’)
- Dupa parcurgerea teoriei din curs, studentul isi fixeaza cunostintele folosind testele construite pe baza informatiilor din curs, apeland butonul ‘Instruire prin Teste’

INSCRIEREA STUDENTULUI LA TEST

Studentul parcurge testele identificandu-se cu nume si parola, care se vor inregistra in baza de date.

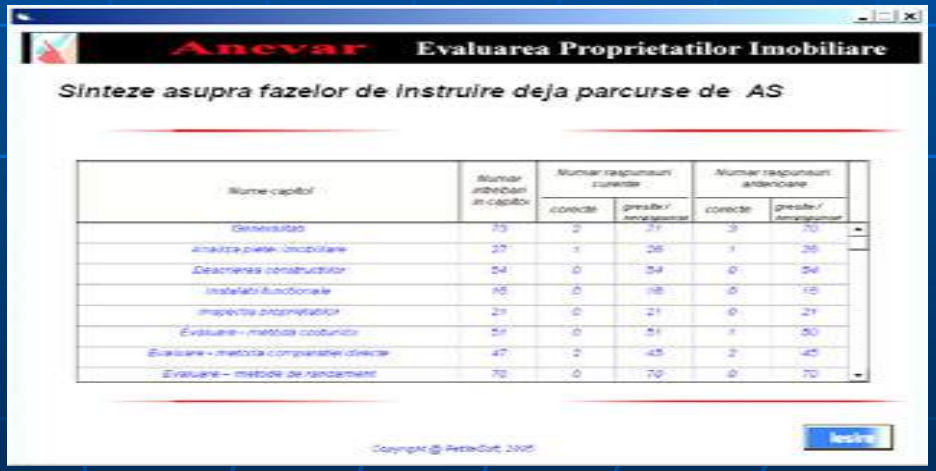


ALEGERE TEST

Cartea cuprinde un numar de teste construite prin trei metode:

1. Teste alese dintr-un capitol, la care verificarea raspunsurilor se face la finalul testului
2. Teste alese dintr-un capitol, la care verificarea este imediata
3. Simulare examen, adica un test complet din mai multe capitole

Dupa parcurgerea testelor se poate vizualiza 'Sineza rezultatelor' pentru a se constata evolutia studentului in procesul de instruire



SETARI TEST

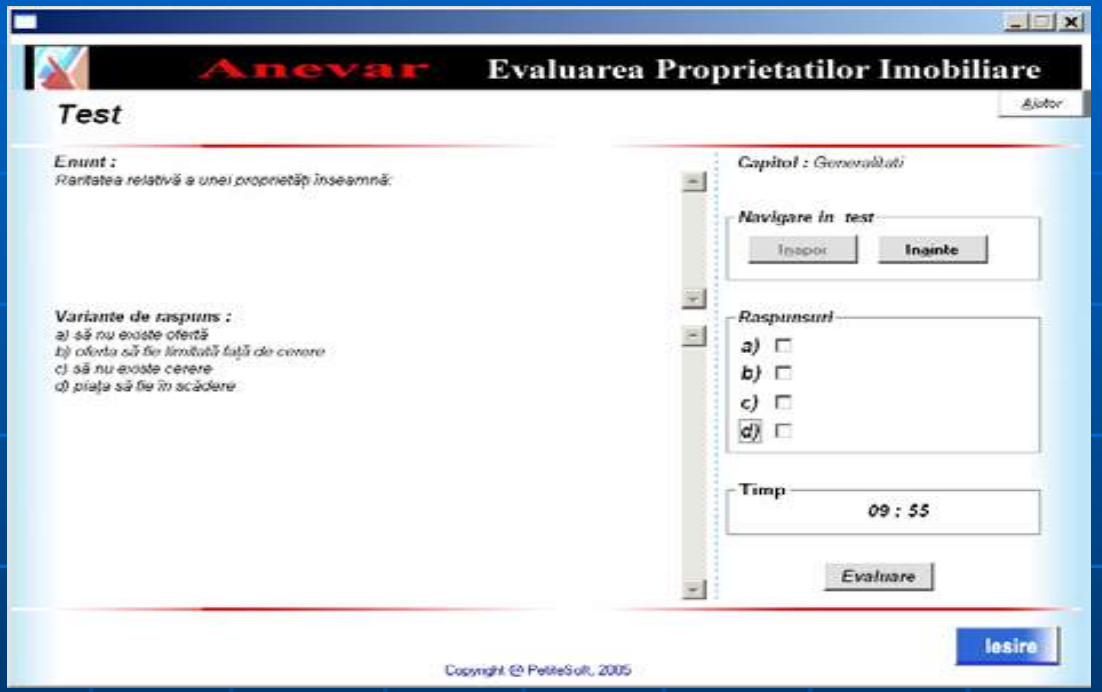
- La fiecare test se stabileste capitolul din care se aleg intrebarile, modul de selectare a intrebarilor (‘aleator’ dupa ceasul sistemului de calcul sau ‘succesiv’ conform cu introducerea lor in baza de date) si timpul de raspuns
- Simularea examenului-construirea testului final se face plecand de la un numar implicit de 50 intrebari, care se distribuie pe capitole; ecranul afiseaza mesaje prin care este asistata aceasta actiune.

RASPUNSURILE LA TEST

- Sunt afisate: enuntul intrebarii si variantele de raspuns (0,1,…)
- Studentul da raspunsurile prin bifarea in casetele “checkbox”
- Timpul de raspuns se cronometreaza
- Actionand butoanele ‘Inainte’ si ‘Inapoi’ se poate reveni la orice intrebare din test
- La final se face evaluarea

EVALUAREA TESTULUI

Evaluarea se face apeland butonul “EVALUARE”



EVALUAREA TESTULUI

- Se afisaza numarul de raspunsuri corecte, numarul de raspunsuri gresite si apoi fiecare intrebare cu raspunsul dat de student si raspunsul corect
- Pentru a vedea fiecare raspuns se apeleaza butoanele 'Inainte' si 'Inapoi'
- Se detaliaza raspunsurile corecte (dreptunghiurile colorate albastru) si cele ale studentului (dreptunghiurile colorate rosu) pentru fiecare intrebare din test

EDITARE DE TESTE

- Posibilitatea de a crea un test selectand anumite intrebari sau selectand aleatoriu intrebarile din diferite capitole
- Posibilitatea de a seta :
  - ponderea fiecarei intrebari la punctajul total
  - ponderea fiecarui capitol din lucrare in evaluarea finala
  - timpul de evaluare
- Posibilitatea de a printa testul pe hartie
  - astfel incat el sa constituie proba juridica a examinarii
- Posibilitatea de a printa grile si de a le evalua

EDITARE DE TESTE

- Utilitate :
  - Cadrelor didactice, permitand elaborarea de teste individualizate
  - Firmelor care doresc sa testeze cunostintele viitorilor angajati
  - Firmelor care supravegheaza pregatirea profesionala prin examene de prelungire a licentei (aeronautica, energetica nucleara, consultanta, evaluare)
  - Autoevaluare: simulare examen pentru studenti
  - Antrenament pentru profesii diverse

EDITARE DE TESTE

- Flexibilitatea bazei de date – se pot introduce:
  - Alte tipuri de teste
  - Imagini
  - Grafice
  - Probleme

INVITATIE

- Editura INVEL MULTIMEDIA realizeaza pentru dumneavoastra cursuri universitare in format ‘CARTE INTELIGENTTA’ utilizand programul EVALINFO

VA MULTUMIM

PENTRU ATENTIE!

Un an fără academicianul David DAVIDESCU

Doamnelor şi domnilor,

Astăzi se împlineşte un an de la trecerea în nefiinţă a academicianului David DAVIDESCU, părintele agrochimiei româneşti. Un an fără sfaturile şi îndrumările sale preţioase. Ne obişnuisem ca la intervale de câţiva ani, sau chiar mai des să avem pe masa de lucru o nouă carte semnată de Domnia sa. Astfel de evenimente nu vor mai fi, dar pentru cele care au fost, profesorul a lăsat o operă ştiinţifică temeinică, care va mai servi mult timp drept pildă pentru urmaşi.

Domnul academician David DAVIDESCU a fost unul din corifeii ştiinţelor agricole româneşti. A pus bazele şi a dezvoltat agrochimia ca ştiinţă de sine stătătoare, în rândul celorlalte discipline din învăţământul agricol românesc.

Anul 1956 este un an de reper în ştiinţa agricolă românească, deoarece atunci a apărut primul tratat românesc de agrochimie, conceput şi scris de profesorul David DAVIDESCU, pe 896 de pagini.

Tratatul de agrochimie prezintă aspectele fundamentale ale noii ştiinţe din ţara noastră. Autorul a conturat legităţile agrochimiei, a pus bazele agrochimice ale fertilizării în raport cu cerinţele plantelor şi cu factorii climatici. Îngrăşămintele chimice sunt prezentate detaliat, atât din punct de vedere al însuşirilor chimice, al modului de fabricare, cât şi din punct de vedere agrochimic, al modului de administrare, al efectului asupra solului, plantelor şi a formării recoltei.

Agrochimia scrisă de profesorul David DAVIDESCU se baza pe cunoştiinţele dobândite, la acea dată, în ştiinţa solului, cu precădere în chimia solului, în nutriţia plantelor şi în folosirea îngrăşămintelor în agricultură, rezultate obţinute în ţări cu tradiţie în domeniu cum erau Rusia, Germania, Franţa, Anglia, S.U.A. Dar nu a uitat să evidenţieze rezultatele specialiştilor români printre care se numără profesorul Theodor Seidel, cel care rămâne în ştiinţă, în special, pentru introducerea metodei potenţiometrice la măsurarea pH-ului. La acest nume, am mai putea adăuga pe cel al dr. Pavlovski, care s-a remarcat prin elaborarea a numeroase metode fizico-chimice de analiză a solului şi a altor produse agricole şi prin studiile referitoare la adsorbţia şi desorbţia în soluri.

Tratatul scris de profesorul David DAVIDESCU a avut un ecou deosebit în epocă, fiind elogiat în sesiunea din februarie 1957, a Institutului de Cercetări Agricole al României, de însuşi directorul general de atunci al celui mai mare for de cercetare agricolă din ţară (astăzi Academia de Ştiinţe Agricole şi Silvice), şi totodată preşedintele Academiei Române, nimeni altul decât academicianul Traian SĂVULESCU.

Tratatul de agrochimie a consitutit şi constituie baza cursurilor de agrochimie care s-au ţinut la toate universităţile cu profil agricol, din ţară. De-a lungul anilor el a fost completat cu noi informaţii ştiinţifice obţinute în ţară şi în străinătate, apărând ediţii revizuite în anii 1963, 1969 şi 1980.

În anul 1982, profesorul David DAVIDESCU publică în limba engleză „Evaluation of fertility, by plant and soil analysis", la Editura Abacuss Press în colaborare cu Editura Academiei Române.

În continuare, în anul 1991, publică în colaborare cu doamna prof. dr. Velicica DAVIDESCU, „Agrochimia Modernă", o lucrare care aduce noi elemente

agrochimice, punând accent pe aspectele de nutriție şi pe fenomenele legate de acestea.

Şirul lucrărilor cu titlu de „Agrochimie” se încheie în anul 1992 cu „Agrochimia horticolă”, o lucrare care este dedicată, în special, aplicării îngrăşămintelor la plantele horticole.

Începând cu anul 1972, academicianul David DAVIDESCU, publică la Editura Academiei Române, un ciclu de lucrări în seria „Chimizarea agriculturii”, în care sunt prezentate pe larg: ”Testarea stării de fertilitate prin plantă şi sol” (1972), „Fosforul în agricultură” (1974), „Azotul în agricultură” (1976), „Potasiul în agricultură” (1979), „Sulful, calciu şi magneziul” (1984), „Microelementele în agricultură” (1988) şi „Protecția chimică în agricultură” (1992). La redactarea acestor cărți şi-a asigurat colaborarea celor mai proeminente personalități ale agrochimiei, din țara noastră. Toate aceste lucrări reprezintă sinteze de o importanță deosebită teoretică şi practică pentru domeniul agrochimiei.

Academicianul David DAVIDESCU a pus la dispoziția celor care lucrează sau vin în contact cu agrochimia, două lucrări de mare utilitate practică „Agenda agrochimică” (1978) şi „Compendium agrochimic” (1999). Ambele lucrări prezintă elemente de chimie analitică adaptată problemelor de analiză a materialelor provenite din agricultură. Capitole speciale prezintă chimia şi agrochimia solului, a plantei, a îngrăşămintelor, a pesticidelor, a fitohormonilor, a substanțelor stimulatoare, a apei de irigație şi a poluării mediului agricol.

Profundele cunoştințe din domeniul ştiințelor biologice şi agricole l-au ajutat pe domnul profesor David DAVIDESCU să aducă contribuții semnificative la progresul agrochimiei prin enunțarea unor legi precum: „Legea ierarhizării factorilor de vegetație”; „Legea autoreglării biologice, a creşterii şi dezvoltării plantelor agricole”. De asemenea, a elaborat „indicele agrochimic al stării potențiale de fertilitate a solului”, „indicele agrochimic de pretabilitate a solului pentru cultura legumelor şi pentru plantațiile de pomi şi viță de vie”.

A elaborat formulele pentru calculul dozelor de îngrăşăminte pe baza indicilor agrochimici, a potențialului genetic şi a factorilor de mediu. Aceste formule au fost stabilite pentru întreaga gamă de plante cultivate, de la plantele de câmp, la pomi, viță de vie, legume sau flori.

În anul 2002, a apărut la Editura Ceres, sub redacția domnului academician David DAVIDESCU şi a doamnei prof. dr. Velicica DAVIDESCU, importanta lucrarea „Secolul XX, performanțe în agricultură”. O pleiadă de colaboratori, din cei mai avizați în domeniul ştiințelor agricole, au prezentat pe 1170 de pagini, realizările din toate domeniile ştiințelor agricole româneşti şi din învățământul agricol.

Opera ştiințifică publicată, a academicianului David DAVIDESCU cuprinde peste 400 de titluri, formate din lucrări ştiințifice, tratate şi monografii, broşuri de popularizare şi îndrumare tehnică. În total peste 20.000 pagini tipărite.

Realizările profesionale de excepție ale profesorului au fost recunoscute atât în țară, cât şi în străinătate. A fost ales membru corespondent al Academiei Române, în anul 1963, iar în anul 1990 a devenit membru titular. În cadrul Academiei Române a fost preşedinte al Secției de Agricultură şi Silvicultură. O dată cu organizarea Academiei de Ştiințe Agricole şi Silvice (1969) a devenit membru titular al acesteia.

În țară a fost distins cu premii, ordine şi medalii: Premiul „Gh. Doja” al Academiei RPR (1957), Premiul Ministerului Învățământului (1959, 1962), Ordinul Muncii clasa a II^{a} (1964), Ordinul Meritul Ştiințific clasa a II^{a} (1966). De asemenea, în anul 1995, i s-a acordat titlul de „Doctor honoris causa” al Universității de Ştiințe

Agricole şi Medicină Veterinară din Cluj – Napoca, iar în anul 2000 Ordinul Național pentru Merit în grad de Mare Cruce.

În străinătate a fost ales membru al Academiei de Ştiințe din New York (1965), membru al Academiei italiene dlle Vite e del Vino (1967), membru al Academiei de Ştiințe Agricole şi Silvice „V. I. Lenin" din Moscova (1970). A ținut prelegeri pe teme agrochimice la Universitatea liberă din Bruxelles (1964, 1966), la Facultatea de Agronomie din Geissen (1971, 1979, 1985), la Universitatea Santa Monica din Brazilia (1973). A făcut parte din colectivul de redacție al revistei „Agrochimica" (Pisa – Italia).

La cele de mai sus se adaugă participarea la aporape 50 de manifestări ştiințifice internaționale şi la foarte multe manifestări ştiințifice interne.

Din străinătate a primit: Medalia „Cosimo Ridolfi a Universității din Pisa (1965), Medalia Universității libere din Bruxelles (1966).

Ca profesor a contribuit la formarea a peste 3000 de ingineri şi a 60 de doctori în ştiințe agricole.

În paralel cu activitatea ştiințifică şi didactică, academicianul David DAVIDESCU a desfăşurat o intensă muncă de conducere administrativă în: învățământul superior, ca decan (1951 – 1954), prorector (1956 – 1959), rector (1959 – 1962), în Ministerul Agriculturii ca secretar de stat şi ministru adjunct (1959 – 1962), respectiv (1962 – 1969), în Ministerul Învățământului (1959 – 1971) ca preşedinte al Comisiei de Agricultură şi Silvicultură pentru atestarea titlurilor, diplomelor şi certificatelor universitare (1992 – 1998) şi în cadrul Academiei Române, ca preşedinte al secției de Ştiințe Agricole şi Silvice (1990 – 1998).

Pretutindeni pe unde a activat domnul academician David DAVIDESCU a lăsat brazde adânci. Sub conducerea sa, s-a revizuit rețeaua şcolară de învățământ agricol preuniversitar, înființându-se noi şcoli profesionale, de maiştri, licee agricole, silvice şi de industrie alimentară. Şcolile au fost dotate cu o foarte bună bază materială, pentru învățământul teoretic şi practic. S-au editat manuale şi cărți de specialitate atât pentru învățământul organizat în şcoli, cât şi pentru învățământul agrozootehnic de masă. Tot prin stăruința profesorului David DAVIDESCU au fost trimişi la specializare, în străinătate, tineri din cercetarea agricolă şi din producție.

Prin tot ce a făcut pe linie profesională şi şcolară, academicianul David DAVIDESCU rămâne o figură marcantă a ştiințelor agricole româneşti din a două jumătate a secolului XX şi de la începutul secolului XXI. El rămâne în memoria noastră ca om model. A obținut satisfacții profesionale, nu doar prin inteligența excepțională, ci mai ales prin eforturi şi dăruire totală profesiei îmbrățişate, pe care a slujit-o până în ultima clipă a vieții.

A fost un om ferm, exigent cu sine însuşi, dar şi cu cei din apropierea sa. Şi aceste trăsături de caracter au contribuit la realizările profesionale de excepție.

A ajutat dezinteresat, în spiritul dreptății, pe cei care apelau la dânsul. Omul David DAVIDESCU a fost o personalitate complexă. La prima vedere prestanța sa, care impunea respect, părea să te țină la distanță. Era numai o aparență. În realitate era un om corect judecător al meritelor fiecăruia.

Echilibrul interior, construit şi pe armonie în viața de familie, la care a contribuit, din plin, soția sa doamna profesoară Velicica DAVIDESCU, colaboratoare apropiată, a constituit un alt pilon de susținere a unei cariere profesionale fără cusur.

Doamnelor şi domnilor,

Rândurile de mai sus reprezintă o mărturie a felului cum l-am văzut noi, cei mai mult sau mai puțin apropiați. Însă felul cum ne-a văzut dânsul este concis prezentat în confesiunile de la sfârşitul volumului „Secolul XX. Performanțe în agricultură" şi care merită să fie ştiute. Citez:

„În îndelungata mea activitate didactică, ştiințifică, în administrația de stat şi în cele ale scrisului în domeniul specialității mele, am avut ocazia să cunosc mulți oameni, cu funcții mai mari sau mai mici. La mulți am apreciat inteligența, puterea de muncă, talentul, caracterul adevărat, corectitudinea şi un comportament moral desăvârşit. În acelaşi timp, mi s-a oferit ocazia să cunosc şi versatilitatea caracterelor, ipocrizia, perfidia, dubla personalitate a unora, virtuțile şi slăbiciunile altora.

Întotdeauna am avut încredere în semenii mei şi în sinceritatea acestora, motiv pentru care le-am acordat întreaga mea apreciere. Am avut ocazia să suprind pe fața unora admirația, iar pe fața altora admirația unită cu invidia.

Pe mulți i-am socotit prieteni, pentru ca, mai târziu, să constat că, de fapt, aveau alte sentimente.

Viața mi-a arătat că de multe ori, în relațiile cu oamenii am greşit şi ar fi trebuit să analizez mai adânc atunci când am acordat încredere unor colegi, care cred că vor recunoaşte printre rânduri portretul celor care au fraternizat cu dubla personalitate şi ipocrizia.

Memorând trecutul, desprindem, prin contemplație, drumul ce trebuie urmat de fiecare în viitor." Am încheiat citatul.

Doamnelor şi domnilor,

Întreaga confesiune, dar mai ales ultima frază reprezintă un adevăr de netăgăduit.

Prof. dr. Radu LĂCĂTUŞU
Membru titular al Academiei de Ştiințe Agricole şi Silvice