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VEGETABLE GROWING

THE BEHAVIOR OF SOME "MANGETOUT" PEA CULTIVARS IN THE SOUTH PART OF ROMANIA

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Key words: *Pisum sativum L., cultivars* "mangetout" pea, trellis culture

ABSTRACT

"Mangetout" pea is known in Romania more due to its existence in collections without rather than its extension in culture.

Les productive, this species is sporadic cultivated because of its particular technology. It can be found in areas where different species are cultivated. The professional farmers of these areas palisade the plants of mangetout pea in open fields with trellis of 140-150 cm height.

In countries such as: England and France, the mangetout pea finds the best conditions for development, and its regard as an early culture in private gardens.

With the aim to introduce and spread in culture this species in the near future, we decided to test the behavior of some cultivars from Western Europe and North America, in the conditions of the south part of Romania.

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BIOLOGICAL PECULIARITY AND SPECIFIC ECOLOGICAL REQUIREMENTS OF SOME "MANGETOUT" PEA CULTIVARS, CULTIVATED IN ROMANIA

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Keywords: mangetout pea, cultivars, crop technology, biological peculiarity

ABSTRACT

The "mangetout" type of pea is a species of vegetable for the assortment diversification, well – known by the consumers of the advanced agricultural technology countries and cultivated on respective areas.
In the present paper, the results of tree cultivars: Giganton and Oregon Sugar Pod – mangetout pea and Sugar Snap – crispy pea are presented for the first time in Romania following the test in production conditions in the South of Romania.
The results presented in extensor, which are very interesting and unique, represent both a theoretical and a practical guide for those who wants to cultivate in the future the mangetout type of pea.

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THE MECHANIZATION TEHNOLOGIES OF THE VEGETABLE HARVESTS BY USING THE MOTOVEHICLES IN THE SMALL HORTICULTURAL EXPLOATATION

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Keywords: motovehicle, motohoe, the usage of the fuel, the usage of working people, organized work capacity.

ABSTRACT

The motovehicles are low-powered monoaxis tractor used for the mechanization of the works from the small area agricultural exploitations.

There were followed in the proper the achievement of some mechanical technologies of the tomatoes cultivation, and also of cucumbers, green beans and the autumn cabbage only by using a 3.7 kw - powered motohoe, from a private farming exploitations from the southern part of the country with an are of 0.8 ha. There were established and calculated the following appreciation indices for the achieved technologies: the hour capacity of working of the equipments, the specific fuel usage and the specific usage of the mechanized working force.

The usage of a 3.7 Kw motohoe and of the additional groups of equipment allows the mechanization of the majority of the low-fuel works but with a higher usage of the working force compared to classical tractors.

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IRON NUTRIENT DISORDERS IN SOIL – PLANT – ANIMAL - HUMAN SYSTEM

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Keywords: iron, deficiencies, symptoms, photos, favorizing conditions, human health, diseases

ABSTRACT

This paper deals with the iron alongside the full chain (every component) of the soil-plant-animal-human-system. First presents the main forms of Fe in soil and the form absorbed by roots. A special attention is payee to iron in plant: iron functions; causes and factors favorizing Fe deficiency and toxicity; visual symptoms of Fe deficiency – descriptions, how to avoid the confusions, 24 original photos (fruit trees, grapevine, flowers, and ornamental trees). Interesting considerations concerning Fe and animal and human health: functions in body, need of Fe, iron deficiency and recommended sources of Fe.

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MANGANESE NUTRIENT DISORDERS IN SOIL – PLANT – ANIMAL - HUMAN SYSTEM

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Keywords: manganese, deficiencies, toxicities, symptoms, photos, favorizing factors and conditions, human health, diseases

ABSTRACT

The paper deals with the manganese alongside the full chain of the soil-plant-animal-human-system (SPAHS). It presents the main forms of Mn in soil and the form absorbed by roots. Than, a special attention is payed to manganese in plant: Mn functions; factors and conditions favorizing Mn deficiency and toxicity; visual symptoms – descriptions, keys to avoid the confusions between Mn deficiency and Mg or Fe deficiency, relevant original photos of Mn deficiencies and toxicities in fruit trees, vegetables, field crops and ornamental plant species. Interesting considerations concerning Mn and animal and human health are also presented: functions in body, needs of Mn, mangnese deficiency and recommended sources of Mn.

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RESEARCHES CONCERNING THE ELABORATION OF SOME NEW METHODS FOR STUDYING CALCIUM DEFICIENCIES IN PLANTS

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Keywords: soil, calcium, ammonium oxalate, precipitation, plants, deficiency

ABSTRACT

The paper presents a part of the results belonging to a research project which aim is to elaborate new original methods for the study of the plant nutrient deficiencies. These consist in applying some chemical compounds in the culture medium (soil, substrate) in order to selectively block only the desired nutrient; consequently, the deficiency will start, at the desired species and vegetation stage, allowing to get visual descriptions in the species to whom these are missing. The researches have been carried out in the greenhouse in a monofactorial experiment, the test species being: winter wheat, flax, mustard, fodder rape, red clover and celery. The *in situ* blocking of the calcium was done using ammonium oxalate in the presence of ammonium chloride. As a consequence of precipitation of a part of the accessible calcium for plants, typical deficiency symptoms have been observed: young leaves failed exit from sheaths in winter wheat; stem bending down in flax; dying of the growing point in mustard or characteristic "clawlike" hooking of the young leaves in rape. There are also emphasized the experimental difficulties in the elaboration of a method for calcium blocking and the limits of the tested method.

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COMPARISON BETWEEN *IN VITRO* AND *EX VITRO* GERMINATION ON WITLOOF CHICORY (*CICHORIUM INTYBUS* L.)

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Keywords: germination rate, dynamics, F1 hybrids

ABSTRACT

The main objective for this research was to determinate the influence of the *in vitro* and *ex vitro* culture medium on the witloof chicory seeds germination. For hybrids were studied: Bea, Turbo, Zoom and Totem. The *in vitro* culture medium was represented by the Quoirin&Lepoivre medium and the *ex vitro* one was a compost and perlite mixture. Both the germination rate and dynamics proved to be superior when the seeds were sown on the *in vitro* medium.

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THE EFFECT OF THE TREATMENT WITH AGROBACTERIUM RHIZOGENES ON THE GROWTH AND DEVELOPMENT OF THE TOMATO PLANT

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Keywords: the productive potential, *Agrobacterium rhizogenes*, the ecological culture, bonitat.

ABSTRACT

The productive by of the tilled plants has always been of great importance for farmers.

Among the measures which have offered results to the researches there is the treatment with *Agrobacterium rhizogenes* (AR), which determines the alteration of different features of the treated plants. These alterations influence the growth and development of the plants, alterations which may be considered positive or negative according to the species.

In conducting our experiment the AR wild type bacterium strain has been used for treating the seeds of the tomato plants. In order to observe the effect of the treatment there has been organized an experiment in the vegetable field ASAMV where an ecological technology has been applied.

As for as the biological material is concerned there have been used three breeds, of early tomatoes and there breeds of semi-early tomatoes each of these in two variants: treated and not treated ones. The differences in the vegetative growth of the plants have been observed by biometry measurements and for the evaluation of the fructification potential of the plants, for each variety, the bonitat method has been used The obtained results have shown that the effect of the treatment has been shown in the growth and the developments of the fructification potential.

So, for both groups of varieties (breeds) kinds the growth of the plants in cm.(height) has been diminished (thing) that is in agreement with the literature information from the referring to other species. The diminution of the plants height has been smaller for the early breeds (ie 5.2%) and higher for the semi – early (ie 14.8 %) ones.

The growth of the plants which have expressed eventually through the average value of the bonitat for the total of fructification points, this growth has been slowed more in the case of the early breeds, the average difference of the bonitat. For the treated variants has been of 24% while the semi-early breeds, under the influence of the treatment, have registered a growth of the bonitat of 2 % in comparison with the values registered for the non treated breeds. Furthermore it is necessary ,to test the efficiency of the treatment whith AR on other groups of vegetable species.

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RESEARCH CONCERNING THE ADAPTATION OF THE PRECISION SEEDER SPC – 6 TO THE ONION CULTURE INITIATION BY DIRECT SOWING

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Keywords : onion, adaption, precision, distances between rows,

ABSTRACT

Some import precision seeders are well adapted to the initiation of vegetable crops, and for onion culture as well, but the price of them is inaccessible for most of the producers and farmers.

In these conditions, it is needed the use of local seeders, akin to precision seeder SPC-6, usually used by most of the Romanian producers for cultures initiation. But to carry out the distance between the rows, it is necessary to realize some constructive adjustments regarding the frame, which will be presented in the present work.

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THE ESTIMATION OF THE PRODUCTIVITY OF SOME KINGS OF PUMPKIN GIVEN THE CONDITIONS OF THE ECHOLOGICAL CROP

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Keyword: Cucurbita maschata, ecological crop, productivity.

ABSTRACT

The cultivation of the pumpkin especially in food purpose brings a lot of advantages to the agricultural producers. Although this crop is well known in Romania, neither the cultivators nor the consumers have enough information regarding the real value of this plant. Through the experiments made by us, we tried to show especially the productive potential that the cultivated kings of pumpkin can have in the conditions of ecological technologies cultivation.

Among the comparative crops, there were tested five king of pumpkin which was part of the cucurbita maxima L and the cucurbita maschata L. species. The results we obtained allowed us to distinguish only two kings as being distinctly valuable.

Among the specific features of these kings of pumpkin, beside their very good culinary and taste qualities (proved by the organized tasting meeting) and their higher performance of using the Ware hause space, there was also registered a relative growth productivity: over 50 tones/hectares.

The vegetation period of these kings of pumpkin allows their framing in the category of the early time kinds taking into consideration that beginning with the growing and until the physiological maturity of the fruit (harvesting) they need 100-110 days.

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RESEARCHES REGARDING THE INFLUENCE OF NITROGEN FERTILIZATION ABOVE GROWTH, DEVELOPMENT AND FRUCTIFICATION OF IH – 50 TOMATO HYBRIDS, CULTIVATED IN SOLARIUM

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Keywords: consumption, mineral, organic, cultivar, production

ABSTRACT

In the last years it has been noticed an extension, on a larger scale, of the solarium tomato culture. Due to the small amount of money required by this kind of vegetable technique and also minimal investment funds, more and more farmers choose this way of producing tomatoes over the traditional one. Another argument sustaining their option is that the level of production is higher, the tomatoes cultivated this way, are "done" 2 or 3 weeks earlier than the ones cultivated using traditional means. The high consumption of minerals used by the solarium cultivars, constrain the producers to fertilize the crop and combine organic fertilizers with mineral ones. The best results concerning the total production (39.87 t/ha) were obtained at variant fertilized just with usual manure.

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ASPECTS REGARDING THE VARIETY INFLUENCE ON ROOTING SYSTEM DEVELOPMENT IN LETUCE

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ABSTRACT

The current study carried out in the didactic field of the Vegetable-Growing Department of the Agriculture and Veterinary Medicine University of Bucharest, between 2003-2004, on 11 lettuce varieties (head, leaf and cos lettuce) followed the radiculary system's development and the size of the edible mass, in the greenhouse and in the high tunnel.

We have noticed that the radiculary system of the greenhouse plants has less developed compared to the high tunnel plants. The average edible mass differences were relatively close.

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THE INFLUENCE OF FITPOL-C ON THE LETTUCE SEEDLING CHEMICAL COMPOSITION

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Keywords: lettuce transplants, Fitpol C product, chemical analyzed.

ABSTRACTS

This study was made in 2003 at the USAMV- Bucharest and had as goal the possibility to use superabsorbant and nonpolluting products in nutritive mixture, in order to create the nutritive holes and to improve conditions for better development of hole transplants. We used salad transplants. In the nutritive mixture we had adding FITPOL C in different doses, 0% (Control), 0.25%, 0.50%, 0.75% and 1%.

The transplants obtained were chemically analyzed, using plasma analysis for each variant. Also, we made determination regarding the respiration intensity, SUT, water and chlorophyll contents. We had noticed some differences in the transplants' chemical content.

We have made correlations between the biomass, the mineral content and the FITPOL C product's concentration.

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STUDIES REGARDING QUALITY CHANGES ON TOMATO FRUITS DEPENDING ON THEIR POSITION IN BLOSSOM LEVELS.

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ABSTRACT

The study was carried in the Vegetable Crops greenhouse of the Horticulture Faculty of Bucharest on the Khatherine tomato hybrid, planted in the 1st culture cycle.

The tomato fruits were harvested at physiological maturity, from 5 inflorescences levels. We have determined the average mass of fruits, acidity, vitamin C content, dry soluble substance (DSS) content, total dry substance (TDS) content and mineral substances for each fruit on each of the 5 levels of inflorescences.

We have noticed that there were differences regarding the average mass of the fruits, acidity (0.24% for the 1st inflorescence and 0.35% for the 2nd inflorescence), vitamin C (19.2 mg/100g on fruits at 2nd level of inflorescence and 22.27 mg/100g for those at the 4th inflorescence level), DSS (45% at the 2nd inflorescence and 5% for level 1), TDS (5.79% at the 4th inflorescence and 6.54% for level 1) and mineral substances (0.99% for fruits at level 2 and 1.63% for fruits at level 1).

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RESEARCH REGARDING THE INFLUENCE OF THE CONSTRUCTIVE AND FUNCTIONAL PARAMETERS OF THE ACTIVE PARTS (COMPONENTS) OF THE GREEN PEA HARVESTERS ON THE QUALITY OF THE CROP (HARVEST)

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Keywords: providing flow, grain purity, smashing degree of grains

ABSTRACT

The experience was realised at the S.C."Contec" S.A. tin (need) factory of Tecuci. The cultivated pea variety (sort) was Frilla. The green pea harvesting was realised in one phase (stage) with the help of the self-propelled combine FMC-879. The experience contained 15 variants, the experiments resulting from the combine trial at five speeds of beaters (170, 180, 190, 200, 210 revolution/minute with three providing flows (4,0, 5,0, 6,0 kg/s). The best results were obtained in the variant where the beater revolution was 190 revolutions/minute and the providing flow of 6 kg/second.

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PRELIMINARY STUDIES REGARDING TOMATO FRUITS OBTAINED IN AN OUTSIDE NON POLLUTED ENVIRONMENT

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Keywords: *Lycopersicon esculentum*, variety, residue, quality

ABSTRACT

Producing vegetables using other techniques than the traditional ones represent an alternative way to protect the consumer, to reduce the pollution of the environment, to decrease the rhythm of illnesses among people due to the consumption of products obtained with the help of chemical substances.

The preliminary results of this research show that by using natural products, for fertilization as well as for fortification, leads to tomatoes of very good quality, with a higher level of nutritive elements, dry and soluble substance, acidity, etc. Moreover, the fruits obtained in this system have a very low level of hard metals (Pb,Ni,Co,Cu,Zn,etc) and they do not contain triazinic herbicide residues. From the vegetative growing point of view, at the same hybrid cultivated in classical conditions and throughout non-polluting technologies, there have not been registered noticeable differences. Though, the production of fruits is lower in comparison with the one in classical culture.

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THE USE AS FERTILIZER OF MANURE TREATED WITH ZEOLITE ON TOMATOES AND PEPPER FIELD CULTURES

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Keywords: zeolite, tomatoes, pepper

INTRODUCTION

The ecological approach of specific problems in a farm must involve the prevention of soil and underground water pollution which can be affected by the infiltration of liquid wastes from manure platforms and the use of this organic fertilizer on some cultures, mainly vegetables.

In the case of manure stocked in traditionally made platforms, liquid wastes infiltrate the soil and in time they reach underground water which will be contaminated.

To avoid this kind of contamination in countries with high technologies, manure is stocked in a superficial septic pile. The pile is build from impermeable material, in which liquid wastes are fixed by introduction in these platforms of some strong absorbent materials (zeolite).

These materials, fix the liquid wastes contributing to the growth of total contain in nitrogen of the fertilizer obtained from the treated manure, in contrast with the total contend in nitrogen of classical manure.

In this way is prevented the contamination of soil and underground water, and the fertilizer obtained (with zeolite) has a high contain in total nitrogen, that has good effects on soil fertilization on which this organic fertilizer is applied.

This work presents the behavior of some vegetable species – tomatoes and pepper in cultures made in Stefan Voda, county of Calarasi. This experiment is a component of a project financed by The World Bank, entitled "**Complex Technology for Valorification of Manure in Zootechnical Farms for promoting sustainable agriculture in Romania"**.

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RESEARCHES CONCERNING THE INFLUENCE OF THE FERMENTATION TEMPERATURE AND THE PRESSING ON VOLATILE COMPOUNDS OF WINE FLAVOUR

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Keywords: Sauvignon variety, ethyl capronat, ethyl caprilat, ethyl caprinat, fat acids, fat alcohols, acetate β-phenyl-ethylic

ABSTRACT

The fermentation of mist in different temperature system shoes the biggest influence on flavour volatile compounds and on organoleptics characters of wine, too. The pressing like a technological operation in primary vinification, lead at the intensify of volatile compounds of the wine flavour. Fermentation temperature had an important influence on volatile compound contents of the wine and also on their quality.

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RESEARCH CONCERNING EARLY POTATO CROPS AROUND BUCHAREST AREA

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Keywords: *Solanum tuberosum,* solarium, field, density, Ostara, Agata, Kondor, Impala

ABSTRACT

The research was made to the Department of Vegetable Growing of Horticulture Faculty belonging to the University of Agronomic Sciences and Veterinary Medicine of Bucharest, in 2004. The purpose was to find the most favourable technological and economical variants between varieties and culture density so that to be obtained high and early yields. Biological material used represented by the early potato varieties: Agata, Ostara, Kondor, Impala. Culture systems were: covered solarium with transparent polyethylene and open field, who represented control variant. There we are used three densities of culture: 15/60, 20/60, 25/60.

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PYRAMID EFFECT ON CERTAIN MORPHOLOGICAL ELEMENTS REGARDING SALAD PRODUCTION (*CORA* VARIETY)

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Keywords: pyramids, active water, salad, germination, production,

ABSTRACT

The ecological agriculture presumes above others measures a reduction in using chemical products of synthesis. Above all methods, used by the ecological agriculture, physical methods hold an important place.

The pyramid effect was less studied but enough mentioned in literature, with favorable effects both for vegetable kingdom and animal kingdom.

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THE DIFFERENCE WETTING INFLUENCE ON HUMIDITY DYNAMICS, YIELD AND ECONOMIC EFFICIENCY ON CUCUMBERS CROP IN SOLARIUM

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Keywords: watering by drop, watering on beds, cucumbers crop in solarium

ABSTRACT

The paper presents the influence of two drippng watering methods on cornichon cucombers in the solarium.

It can by remarked the favorable effect of the driping watering method, which reduced the water consumtion per plant by 43.6% and the increase of watering efficiency by 61%compared to the beds watering method.

The production obtained showed distinct significant differences (8.6 t/ha) for the dripping watering method and an increase of the method incame by 37%.

The hybrids that were studied reacted in a different manner to watering methods the most influenced beeing Pasarebo F_1 and Pasamonte F_1 for which were the production was incresed by 18-19% for the dripping watering method compared with the bed watering method.

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THE DYNAMICS OF DIFFERENTIAL HUMIDITY AND ITS INFLUENCE OVER PRODUCTION AND ECONOMIC EFFICIENCY IN SOLARIUM GROWN TOMATOES

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Keywords: watering by drop, watering on bed, hybrid tomatoes in solarium, economic indexes.

ABSTRACT

The paper presents the effect of the watering methods (dripping and beds watering) on water use efficiency, production and economics of tomato growth in solarium.

The results highlighted the superiority of the dripping method, which compared with the bed watering method, generated de reduction of water consumption by 44% per plant and by 69% for vegetation period and an increase of water use efficiency by 31%.

The dripping watering method largely influenced the production obtained, a the differences between the two methods being very significant (11.8t/ha).

The studied hybrids had specific responses to the watering method, the biggest difference was obtained for Celaya F_1. The watering methods influenced the economic indexes. The dripping method for watering induced an increase by 33% of the income, and the decrease of the costs by 21% and increase of the net income by 41.3% compared with the watering method.

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THE INFLUENCE OF ORGANIC FERTILIZATION TO THE PEPPER YIELD, CULTIVATED IN AN 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 2004.

The influence of compost types and organic mixtures on peppers was investigated. Nikita and Cleor cultivars were used under the following variants: V_0control – hybrid Cleor, non-fertilized, V_2 - hybrid Cleor, fertilized with litter compost, V_3 - hybrid Cleor, fertilized with chopped branch wine compost, V_4 - hybrid Cleor, fertilized with mushrooms compost, V_5 - hybrid Cleor, 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 litter compost, V_1control – hybrid Nikita, non-fertilized. The experimental design was organized as three repetition plots.

On 15 April 2004 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 (4.28 kg/ha to Nikita and 5.24 kg/ha to Cleor) and chopped branch wine compost (3.67 kg/ha to Nikita) had the best results.

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STUDIES ABOUT THE BIOLOGICAL AND TECHNOLOGICAL CHARACTERS OF SOME F1 ASPARAGUS HYBRIDS IN ORDER TO KNOW THEIR ADAPTABILITY IN OUR COUNTRY

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Keywords: Asparagus officinalis, studies, hybrids, characters, adaptability, our country

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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FLORICULTURE & DENDROLOGY

THE BEHAVIOUR STUDY OF SOME OF THE PERENNIAL HERBACEOUS FLOWER SPECIES IN THE ENVIRONMENTAL CONDITIONS OF CRAIOVA

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Keywords: phenophases, morphologic characteristics, decorative qualities

ABSTRACT

We observed for this study the behavior of 10 species of perennial herbaceous flowers in the environmental conditions of Craiova. The species are: *Chrysanthemum maximum L., Coreopsis tinctoria Nutt., Gaillardia hybrida Hort., Geum coccineum Sibth., Lupinus polyphyllus Lindl., Penstemon barbatus Nutt., Phlox paniculata L., Physostegia virginiana Benth., Primula auricula L., Rudbeckia bicolor Nutt.* We determined the main phenophases: the vegetative growing, the blooming period and the decorative period and the main morphologic characters and decorative qualities: the height and the diameter of the bush, the dimensions of flowers or inflorescences, type and colour of flowers; considering all those characteristics we established the using way for each and every of the flower species.

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ASPECTS OF *IN VITRO* MICROPROPAGATION OF *ROSA HYBRIDA*, *FUCHSIA HYBRIDA* AND *PELARGONIUM PELTATUM*

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Key words: *Rosa hybrida*, *Pelargonium peltatum*, *Fuchsia hybrida*, growth regulators, organogenesis, adventitious shoots.

ABSTRACT

The aim of the present study was to develop an efficient system to regenerate adventitious shoots from in vitro stem sections of ***Rosa hybrida, Fuchsia hybrida*** and ***Pelargonium peltatum*** at high frequencies by manipulating growth regulator requierments and culture conditions.

Three different variants of culture medium with various concentrations of 6-benziladenine (BA), Kinetin (Kin) and α- naphtalenacetic acid (NAA) were used for each species.

The best results were obtained when excised explants from *Rosa hybrida* and *Pelargonium peltatum* were incubated on Murashige and Skoog (MS) (1962) induction medium with 1mg/l BA and 1 mg/l Kin respectively (V3).

The optimum in vitro media for *Fuchsia hybrida* was MS standard medium plus 3 mg/l BA (V1).

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RESEARCH CONCERNING THE SUBSTRATE PH MODIFICATION USED IN ORNAMENTAL PLANTS CULTURE

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Keywords: substrate, pH variation, acid reaction, ammonium chloride acidifying substance.

ABSTRACT

The technology of producing ornamental plants in containers and pots used the substrates of culture obtained frequently from mixed mineral and organic materials (compost, peat, manure, sand, perlite, etc.). Among the chemistry of the substrate in our nutrient contents, pH represents a very important agrochemical index, because the cultivated species are very numerous and their exigencies concerning the pH value in substrate are very different, it is obligatory to maintain in progress vegetations the pH value between the limits requested by each species. The research aim was to find solutions of maintaining the pH substrate during the vegetation period, in natural limits for each species of plant, by testing easy technical solutions which do not disturb the plant cultivated in the container.

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THE STUDY AND PROPOSALS FOR SOLVING OF SOME PROBLEMATICS IN RELATION WITH THE GREEN AXIS OF BUCHAREST - THE ANALYSES OF THE TRANSOM: BANEASA AIRPORT - VICTORIA SQUARE, AS FIRST STAGE OF THE STUDY -

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Keywords: green urban space, analysis, integration, revitalization, reorganization, modernization and maintenance.

ABSTRACT

The paper presents a proposal for the union at the landscape level of the Bucharest's two green poles (North and South) and the social revitalization of the quarters. The objectives of this study are the analyses and the possibility for a coherent development of an important green strip within the capital, which can become part of the urban space with the view to a future enhancing of the green space ratio for each inhabitant, according to European standards (at the present 3,73 m^2/inhabitant referred to 12-18 m^2/inhabitant in accordance with the European standards) (Table 1.).

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HELLENIKON METROPOLITAN PARK AND URBAN DEVELOPMENT IN ATHENS

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Keywords: negotiation, landscape, ecology, recycling

INTRODUCTION

The transfer of Athens airport from Hellenikon to the Mesogeia plain, in 2001, made available a large piece of prime land close to Athens, ten kilometers from the Acropole and very close to the Saronic Coast. The planning and management of this extensive area, of some 530 hectares, is a unique opportunity for Athens to reclaim a green area badly needed to improve the quality of the city's environment.

The programme makes provision for housing, offices and social services (infrastructures, hotels, conference centers) on one hundred hectares of the site as well as a vast park which will include green areas, cultural, sports and leisure facilities along with the infrastructures associated with these different sectors. The restoration of some existing buildings, amongst which 1930's modernist villas and the terminal designed by Eero Saarinen in 1960, will also have to be considered as well as the integration of a number of existing or planned facilities or infrastructures. The economic feasibility of the whole operation must be ensured in relation to the income accrued from the urban development of the site, which should also secure an allowance for regeneration of additional zones within the metropolitan area of Athens.

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RESEARCHES REGARDING THE INFLUENCE OF ZEOLITES TUFF UPON *HIBISCUS ROSA-SINENSIS* AND *FICUS ELASTICA* GROWTH AND ORNAMENTAL CHARACTERS

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Keywords: *zeolite, ficus, hibiscus, substrate, fertilizer*.

ABSTRACT

Zeolites are volcanic rocks which composition and size pore depend upon the minerals involved. These natural minerals can adsorb harmful toxic elements, catalyze dehydratation-rehydratation and can be used in different purposes, for instance in agriculture, industrial products, radioactive waste, water treatment. In horticulture they are used in nurseries, greenhouses, floriculture, tree and shrub transplanting, vegetables, medium for hydroponics growing. As well as potting medium, they increased the soil retention capacity for nutrients and water. This study deals with the utility of zeolites tuff to ornamental plants pots. The Mirsid zeolites tuff used in waste water purification from leather industries become ammonium-enriched and then they are added to the nutritive substrate. By disintegration of their crystal lattice they liberate the ammonium ions which are used as nutrient source. We used zeolites tuff with particle size 0.5-3 mm, added in mixture of potting substrate of ornamental plants (*Ficus elastica* Roxb.*, Hibiscus rosa-sinensis* L.). Our results showed that vegetative growth and ornamental characters were comparable with those fertilized with NPK.

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THE INFLUENCE OF FOLIAR FERTILIZERS USED AT ORNAMENTAL PLANTS

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Keywords: *cyclamen, foliar fertilizer,*

ABSTRACT

It is well known the complex effect of stimulating substances and foliar fertilization upon plants. The new foliar fertilizers, with a complex content of nutrients, macro and microelements protein-bound, are considered ecological products. That is why, they represent modern means, alternative and non-conventional use for quantitative and qualitative improvement of agricultural production. Moreover, they improve the decorative aspects of ornamental plants.

These products have a high solubility are involved in mineral nutrition, chlorophyllian assimilation and plants metabolism, influencing the energetic and photosynthetic efficiency of plant. Applied in the period of vegetation, they *ensure* increased yields, but do not substitute the chemical and organic fertilizer. The work concerns a series of experiments designed to test the effect of four liquid compounds: three with protein sources in the form as amino acids and ureides (CLAAU a_5, CLAAU a_6, CLAAU a_7) and *Folisof F 212* applied on a *Cyclamen persicum* culture (3, 5).

The experimental results showed the improvement of ornamental characters of tested plants.

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THE BEHAVIOR OF SOME SPECIES AND CULTIVARS OF *FORSYTHIA SP.* TO VEGETATIVE PROPAGATION BY CUTTINGS

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Keywords: *Forsythia sp.*, species, cultivars, vegetative propagation, cuttings

ABSTRACT

The behaviour of eight new species and cultivars of *Forsythia* to vegetative propagation by hardwood cuttings was tested. All species and cultivars investigated have responded well to this type of propagation, developing both roots and shoots. The best rooting percent was obtained at *Forsythia viridissima Lindl* cuttings.

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MICROPROPAGATION OF GARDEN PLANTS: *MISCANTHUS SINENSIS* "YAKUSHIMA", *GENTIANA TRIFLORA*

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Keywords: *in vitro*, ornamental, axillary branching

ABSTRACT

Micropropagation has significant uses in vegetative propagation of horticulturally important species and cultivars. With a few exceptions most ornamentals can be micropropagated, and the need is for more and new basic research approaches. Although many of the techniques involved in the production and manipulation of plant *in vitro* cultures are in themselves relatively straightforward, there are problems in the view of the wide variation in behaviour of different plant species in response to chemical and physical culture parameters.

In the present work an approach to the development of suitable culture conditions has been made for two ornamental plant species (*Gentiana triflora* and *Miscanthus sinensis* "Yakushima") for which detailed protocols were not available.

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IN VITRO STABILIZATION AND MICROPROPAGATION OF SEVEN *CLEMATIS* HYBRIDS

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Keywords: *Clematis*, uninodal fragments, antibiotics, micropropagation.

ABSTRACT

The purpose of this study was *in vitro* stabilization and multiplication of seven *Clematis* hybrids explants, starting from uninodal fragments. The sterilizing agents used were ethylic alcohol 96° and a detergent: DOMESTOS®15%. For stabilizing the culture we tested Murashige&Skoog medium (1962) with active carbon 0.1%, in two variants, the differences between them being represented by the amount of antibiotics substances added to the basal medium (PPM and Gentamicine).

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RESEARCHES REGARDING CUTTING PROPAGATION OF *CLEMATIS* CULTIVARS

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Keywords: *Clematis*, hybrids, cutting, rooting hormons

ABSTRACT

After *in vitro* micropropagation, cutting is one of the main propagation methods for *Clematis* genus. The semi-hardwood cuttings of *Clematis* Multi Blue, *C*. The President, *C*. Hagley Hybrid, *C*. Nelly Moser and *C*. Rouge Cardinal were treated with Rhizopon AA(20%) and Rhizopon B(10%) tablets and Rhizopon AA(1%) powder. The rooting substrates were mixtures of turbe and perlite. The rooting percentage and the quality of the formed roots were strongly influenced by the hybrids, the cutting moment and the rooting hormons. Success percentage varied between 46% and 70%. For *C*. Rouge Cardinal, the cutting moment was unsuitable, all cuttings died before rooting.

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CONTRIBUTIONS AT THE DESIGN METHODOLOGY FOR AN ORNAMENTAL PLANT NURSERY PROJECT

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Keywords: production categories, technology, surface estimation, efficiency

ABSTRACT:

In this work we have approached the methods for drawing up a nursery project in Bucharest City area. The complex structure of a tree and shrub nursery implies detailed studies as to the efficiency of each production field, taking into consideration sensible investments and correct management to ensure long-term development. The proposed methodology comprises the criteria for choosing the types of planting material and the necessary steps to elaborate the project.

In the paper are given examples of ground surfaces calculation for each growing stage. Also it is shown how to draw estimations as essential aspects in building up the project. On the basis of cost analysis we have provided the efficiency of each nursery culture as guidelines for the investor.

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ASPECTS RELATED TO THE DETERMINATION OF THE ANTIOXIDANTS IN THE CASE OF SOME EATABLE FLOWERS

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Keyworks: free radicals, antioxidants, anthocyans, polyphnols, catechins, eatable flowers

ABSTRACT

In Romania there is no data concerning the chemical structure of the eatable flowers, either part of the spontaneous flora, or of the cultivated one, however tests have been made on the plant: leaves, stems, roots. The flowers of these species are surely eatable, depending on the extent to which receipts are known. This works deals with the above-mentioned species.

The analysed chemical constituents are just a few of the big group of the proanthocyans, notably: total polyphenols, anthocyans and catechins.

Taking into account the diversity of the structures of the phenolic constituents, still undefined completely, the dozing methods are not perfect, but they are often sufficient for measuring the quantity of the existing molecules, in this case, in the extract of the eatable flowers petals.

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RESEARCHES RELATED TO THE DETERMINATION OF SOME EATABLE FLOWERS COLOUR BY CHEMICAL AND BIO-CHEMICAL METHODS

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Keywords: optic density, colour intensity, pigments, , chromo-therapy

ABSTRACT

We are all asking the following question: „What determines the colour of the petals?". In other words: „What determines the yellow, the red, the blue, the purple, or the aesthetic mixtures of the colours of the petals?" The answer is: the pigments, natural colouring substances, which colour the petals.

The present work aims to contribute to the study of pigments of the flowers' corolla, which, apart from their role played in the metabolic process of the plant, represents bio-stimulating substances. The study consists in a spectrophometric analysis of the colour.

From the point of view of the spectrum, the colour can be assessed by the inclusion of three constituents: red, yellow and blue. Each constituent is given by pigments with well-defined chemical structure.

The colours of the objects that we see are often described by means of terms like red, orange, yellow, etc., to which we add their shades. Visually speaking, the shades are hard to separate, but from the spectrophotometric point of view, they can be separated in terms of values.

The obtained information will be more precise if one compares the full range of wavelength perceived by the human eyeball (380-770 nm). That is why a method that uses the full spectrum shall supply, in principle, larger and more precise information about the colour. It is exactly the case of CIELab system, because the determination of the values of the chromatic characteristics in CIELab system represents a better variant in the separation of the colours' shades. This makes possible an objective assessment of the colour.

The medicine proved that the colours of the flowers could lead to different states of mind. Due to their sanogenetic characteristics, the eatable flowers are used in the chromo-therapy.

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SALINITY RESISTANCE TESTING ON SOME ORNAMENTAL SPECIES: *TAMARIX TETRANDRA* AND *SYMPHORICARPOS X DOORENBOSSII*

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Keyword: substrate, pH, salinity, ornamental plants

ABSTRACT

Containerized plants of *Tamarix tetrandra* and *Symphoricarpos x doorenbossii* were fertilized with nutritive solutions (with alkaline pH) from May to August. Due to the salts accumulation in substrates, differences among the variants regarding the plant growth and development were observed.

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RESEARCH REGARDING *HYDRANGEA MACROPHYLLA* SER. POTS CULTURE ON DIFFERENT SUBSTRATE

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Key words: *Hydrangea macrophylla* Ser. plants, container culture, substrates, leaves compost

ABSTRACT

Hydrangea macrophylla Ser. is an ornamental plant, nice for its decorative flowers. Experiment made in glasshouse of University of Agronomical Science and Veterinary Medicine- Bucharest tries to obtain these plants in container culture using different substrates formed with different waste materials.

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STIMULATION OF THE RHIZOGENESIS AND THE FORCING OF *HYDRANGEA MACROPHYLLA SER.* FOR CONTAINER PRODUCTION

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Keywords: *Hydrangea*, cuttings, containers, blueing

ABSTRACT

Producing pot plants of *Hydrangea macrophylla* needs to use a special techniques to obtain earlier blossom, large inflorescences and a diversity of colours. Our first series of experiments resulted in the stimulation of the cutting rhizogenesis from mature plants and the growth of the plants potted in a deep 4 L containers using an intensive programme of the fertilisation and foliar feed. In addition we tried blueing the sepals by $Al_2(SO_4)_3$ treatments using the commercial recommendations. We concluded also the importance of cold treatment of the young plants during winter, concerning the plant ability to come in blossom, on the height and quality of the flowers. For blueing, the treatments have to be conducted by a rigorous control of the level of Al and pH in the substrate and the plant.

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A PRELIMINARY STUDY CONCERNING THE RESTORATION AND THE REVITALIZATION OF THE HISTORICAL PARKLAND OF BONȚIDA

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Keywords: French baroque style, romantic style, planning, discreet interventions, geophysical survey

ABSTRACT

One of the most important castles surrounded by parklands in Romania is the Banffy Castle in Bonțida. Both, the castle and the parkland were built in three stages. The periods related to these stages are: the medieval period, the baroque period and the romantic period. In our days one can observe some traces from the three stages in the area of the park. The parkland needs to be restored and revitalised and Transylvania Trust foundation that is already restoring the castle has initiated a landscape study in this direction, which will be developed on several years. We were invited by this foundation to take part of the study and to create a pilot layout for the park. We studied archive documents (maps, engravings and époque photographs), we searched *in situ* for more traces of the former designs of the park (alleys, vegetal compositions, gloriettes, grottoes, lakes and waterfalls) and we analyzed the impact of the strong environmental elements upon the parkland (electricity line, the old mils, the former stables, the old churches in Bonțida and Răscruci). The geophysical survey was very useful and important to the research in order to elaborate the pilot restoration project. In consequence, the concept for the pilot layout is to preserve the traces of the romantic and baroque stages and to introduce new elements in order to bring more people in the parkland. For the precincts of the castle we elaborated variants in order to respond to the new function of the castle that is a cultural centre.

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STUDY OF THE EVOLUTION OF CAROL PARK IN BUCHAREST. POINT OF VIEW ON THE PLACEMENT OF THE PEOPLE'S SALVATION CATHEDRAL IN CAROL PARK

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Keywords: Romantic, historical monument, art monument, main alley, axis, law.

ABSTRACT

Carol Park was built in 1906 for "The Jubilee Exposition" and it was transformed several times till now, when the People's Salvation Cathedral is going to turn the park in the Cathedral's appendix. This approach was determined by the decision of erecting the Cathedral in the place of or behind the heroes' monument, ignoring that Carol Park is a historical monument, and taking the political decision of the monument exclusion from the List of Romanian Monuments. This paper wants to demonstrate that to build the People's Salvation Cathedral in Carol Park and to demolish "The Heroes Struggle for the People and Country Liberty for Socialism" Monument means to ruin the park value as historical monument. The decision of erecting The People's Salvation Cathedral in the place of or behind the monument had a great impact on us, as being implicated in the landscape educational process. We felt obliged to express our opinion and to argument it, on this subject, in order to preserve one of the three historical parks in Bucharest (Cişmigiu Garden, Herăstrău Park and Carol Park). By means of a profound analyse we demonstrate that the place of The People's Salvation Cathedral is not in Carol Park. We hope that the observance of Romanian laws in landscape and historical monuments field will be binding upon all of the citizens - politicians, clericals, the military, and us, those implicated in landscape architecture.

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THE REVITALIZATION OF THE "VILLAGE AND FOLK ART MUSEUM" IN BUCHAREST – A MATTER OF LANDSCAPE

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Keywords: Countryside, authentic, slope, lakeside, stream, surroundings.

ABSTRACT

The "Village and Folk Art Museum" in Bucharest represents the cultural part of Herăstrău Park, which was included in the Official List of Romanian Historical Monuments, in 1978, 1980 and then in 2004. The impact of the "Village and Folk Art Museum" upon those who walk along the alleys of Herăstrău Park and along the avenue Kiseleff decreased on account of some public and private interests which come into conflict, on account of some negative images, on account of some obnoxious surroundings, on account of some much bigger buildings placed here, on account of the technological progress and on account of the uncontrolled vegetation growth. Some specious of trees and shrubs doesn't feet at all with the Romanian village. Some areas are very flat in contrast with another too matched sloppy, almost like a precipice, along the border of the lake, witch cannot be seen from the museum. In the same time, the museum cannot be seen from the island placed in front of its lakeside and from the avenue Kiseleff, on account of the vegetation. We have analyzed these disadvantages and our conclusion is: Yes, we can solve these problems by landscape methods, in connection with their causes, which are landscape matters. We think that the presence of the water is very important for the Romanian village air, so we inserted two little streams in our design, in order to obtain an authentic Romanian village atmosphere inside the urban space. Our concept for this design is to get the feeling that you are in the countryside, in the very moment you will pass throw the museum gate.

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THE IMPROVEMENT OF TECHNOLOGY FOR *IN VITRO* PROPAGATION OF *LAVANDULA ANGUSTIFOLIA*

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Keywords *Lavandula angustifolia*, *in vivo* rooting, microcutts, rooting stimulators, micropropagation

ABSTRACT

This article presents the realizations of technology of producing biological material with rapidly clonal multiplication with reference at the phase of aseptically rooting, the obtained results showed that changing the in vitro rooting phase with in vivo rooting phase let as to establish a new improved technology more efficient.

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LANDSCAPE ANALYSIS AND VALUATION METHODOLOGY TESTING – CASE STUDY: THE TOURING ZONE OF CHEIA – PRAHOVA COUNTY

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Keywords: characteristic indicators, rating system, landscape categories, functional landscape value, general valuation of the landscape

ABSTRACT

The work presents a control study of the methodology thought out within the Landscaping Department, regarding the analysis and valuation of the areas with landscape potential (landscape concern territories).

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RESEARCHES CONCERNING THE IN VITRO PRODUCTION OF POLYANTHES TUBEROSA L. PLANTING

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Keywords: bulbs, in vitro cultures, multiplication coefficient

ABSTRACT

Tuberose is undoubtedly one of the most appreciated flowers, called of some authors, the Queen of the summer – autumn flowers assortment. But this beautiful flower has major difficulties concerning the flowers bulbs production (it is necessary about three years for the flower bulbs production). Also, the flowers bulbs no flowering if the temperature in the rest period is under 20 – 22 ºC. In this reason we initiated ample researches of in vitro production of the planting, following which is the effect upon the revigoration of biological material. We used bulbs from an aboriginal population in the Bucharest area, very appreciated for the quality of its flowers. The culture media was the M&S' 62 with NAA, KIN and BAP in different ratio. The explants were represented by buds from bulbs with 1 cm diameter, these being inoculated in April. We followed the evolution of the explants for each variant by biometrical observations and physiological determinations, too. The best results – also for the multiplication coefficients and physiological determinations – were obtained for the variant with 0,2 mg/l NAA + 1,5 mg/l KIN + 2,0 mg/l BAP. The plants obtained in vitro were planted in pots on substrate composed from manure 1/3 + tourbe 1/3 + perlit 1/3. In these pots the plants were maintained in vegetation until November, when the plants were passed in rest period. The rest period for the bulbs was assured in two different conditions: one half of bulbs were maintained in 20 – 22 ºC + 75 – 80 % UR and the other half of bulbs were maintained in 8 – 10 ºC + 55 – 60 % UR.

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FRUIT GROWING & TECHNOLOGY

STUDIES REGARDING THE BIOCHEMICAL COMPOSITION OF SOME INTERSPECIFIC CHERRY HYBRID ROOTSTOCKS

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Keywords: *Prunus sp.* hybrids, protein, glucide accumulation, peroxides activity

ABSTRACT

The relationship established between the scion and the rootstocks in the graft process is a complex one. There are a lot of factors which intervene and contribute to the compatibility or incompatibility. The biochemical factors are very important because a simple presence or a bigger amount of the responsible substances could determine the incompatibility. We propose in this study to observe the influence of protein and soluble glucides concentration, the peroxides activity upon the grafted cherry hybrid plants. There was made determinations in three different zones: under the graft point, trough the graft point and upper the graft point. The dates showed that the protein concentration was bigger in all variants upper the graft point, the soluble glucide concentration in almost all variants was bigger at the graft level, also the activity of the peroxides.

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STUDIES REGARDING THE BEHAVIOUR OF SOME INTERSPECIFIC CHERRY HYBRID ROOTSTOCKS IN NURSERY

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Keywords: rootstocks, *Prunus sp.* hybrids, comparative, biometry

ABSTRACT

Concerning the requirements imposed by the modern pomiculture upon the cherry rootstocks, it was achieved a lot of hybrid creations which later became the main rootstocks used in tree production. Those, has to own a much larger scale of favourable features from nursery point of view. In this paper are presented the results of a comparative research regarding the behaviour of some interspecific cherry hybrids in the first field of nursery. There was made a series of biometric measures and observations which showed that all studied rootstocks presented a good resistance upon the foliage specific diseases but they were affected by the temporary exceed of humidity. The root system is superficially localized and well ramified. The most vigorous rootstocks were *Prunus subhirtella* x *Prunus canescens* which also presented a lot of ramifications. All variants recorded the optimal thickness in the grafting moment.

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RESEARCHES REGARDING THE NEW PLUM VARIETIES WHICH WILL CHANGE THE ASSORTMENT IN THE BANAT AREA

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Keywords: quality, profitable, the times am period of growth, resistant, productivity

ABSTRACT

In the hillocky area from Banat, the plum tree has favourable conditions for growing. As a result of this fact and also as a result of the market economy, the assortment at this species was diversified and extended in accordance with the economic result, being easily accepted in growth the new sorts of plums for consumption in fresh conditions.

From the growth of 25 sorts and plum hybrids was distinguished through exquisite quality of the fruits and output with highest quality the sorts: Centenar (32,2 t/ha), Record (28,6 t/ha), Stanley (26,0 t/ha), Tita (25,3 t/ha), Alina (24,3 t/ha), Pescarus (21,8 t/ha), Gras ameliorat (20,6 t/ha) and Baragan 17 (20,3 t/ha).

By spreading of these sorts, the ripening spread time of this area is advanced by 25 days, but the excellent quality of the fruits (weights comprised between 43,0 gr. and 62,3 gr.) as well as the acquired benefit (64,8 mill/ha respectively 193,8 mill/ha) has facilitated as these sorts to become a large income source for many a man fruit growers from zone, the market being enriched by fresh fruits of exceptional quality.

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RESEARCH CONCERNING THE POSSIBILITY TO OBTAIN NEW HYBRIDS ROOTSTOCKS FOR PEACH

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Keywords: peach dwarf, nectarine dwarf, cross breading, auto pollination, hybrid fruits

ABSTRACT

The researches were done during the period 2003-2004 in the experimental field of the Department of Fruit Growing, University of Agronomic Sciences and Veterinary Medicine of Bucharest. The biological material was represented by hybrids of dwarf peach and dwarf nectarine: VT-GB-sel.86 N.O., VT-84-M-R10P11, VT-83-B-B-01, VT-F-sel.89 P.O., VT-GD-P11 sel.90 and VT-84-G-08.

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RESEARCH CONCERNING THE BEHAVIOR OF DIFFERENT ROOTSTOCKS IN THE NURSERY

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Keywords: seedling, resistance diseases, peach dwarf, nectarine dwarf, hybrids

ABSTRACT

The researches were done during the period 2003-2004 in the experimental field of the Department of Fruit Growing, University of Agronomic Sciences and Veterinary Medicine of Bucharest. The biological material was represented by hybrids obtaining from artificial pollinations, where the mother genitors were the dwarf peach and the dwarf nectarine, and the father genitors were species: *Amygdalus communis, Armeniaca vulgaris, Prunus cerasifera* and *Prunus tomentosa.*

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MORPHO-PRODUCTIVE PARTICULARITIES OF A LOCAL POPULATION (PGO) OF *ASIMINA TRILOBA* (L.) DUNAL, FROM ROMANIA.

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Keywords: *Asimina triloba* (L.)Dunal, pawpaw, local population-PGO.

ABSTRACT

At present the diversification and improving of the range of species and varieties of fruit trees are basic concerns for breeders. In this context, our results had in view the testing of the performances of a species that is barely known in Romania- whose popular name is "pawpaw" or "Northern banana".

The asimina fruit are used for multiple purposes: eaten fresh or as cream, juices, ice-creams; as a source of secondary metabolites with pharmaceutical and pesticide effects, as well as an ornamental species for public parks and gardens.

In the interval 1999-2004, the present research team performed a survey for gathering information regarding the biological characteristics of *Asimina triloba* (L.)Dunal in the Romanian climatic and edaphic conditions. In september 2004 we made also same biochemical analyses in 4 stage of ripening of pawpaw fruit from one 8 years old tree (V2).

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THE EFFECT OF CALCIUM TREATMENTS ON SOME TOMATO FRUIT QUALITY PARAMETERS

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Keywords: firmness, quality, respiration rate, soluble solids, calcium treatment

ABSTRACT

Mature green tomato fruit (*Lycopersicon esculentum cv. Arleta*) were treated with different calcium based products, stored at 8^{o}C and analyzed on day 12 for some physical, physiological and biochemical parameters such as: firmness, tissue electrical conductivity, total electrolyte content, respiration rate, soluble solids, vitamin C content. Firmness decreased during fruit storage, in interrelation with membrane permeability, but calcium treatments assured a preservation of the integrity of the cell wall as well of membrane selectivity. This prolonging of cell structure integrity was reflected in the biochemical processes evolution.

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ASPECTS REGARDING FOOD SAFETY AND TRACEABILITY

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Keywords: food safety, traceability, risk

FOOD SAFETY AND FOOD SECURITY

Food safety became a quality component of food earlier to be conceptual formulated, appearing from the normal necessity to consumers' protection.

This means that to be able to sell food, products must to be safe, a requirement that is found out at the communitarian, as well as at the national level, in a series of generally or specifically regulations, on groups' products (ex. Dir.92/59 CEE, Dir.93/43 CEE, Reg.178/2002 UE, respectively HG 1198/2002, Low 150/2004, etc. in Romania).

Initial, the food safety notion appeared under the name of *food security* (not as food safety). But often, in the specialty literature it is also used the name food security, with the significance of food safety. In fact, food security represents to assure corresponding nourishment for all the earth population, with a view to be able to perform an active and sound life. Food security conceptually developed in time and space too, accepting different connotations, in function of its elements peculiarities. Thus, for developed countries the accent of food security is beyond on food quality, referring to the food safety, respectively to assure people sound conditions on a long time. For undeveloped and many of those in course of development, food security is specially oriented on social protection of the disadvantageous people groups, by all people access to nourishment.

We can say that food security represents a life quality component, while food safety may be defined as a component of food quality, so, between the two notions being an inclusion relation.

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RESEARCHES CONCERNING THE GRAY MOLD (*BOTRYTIS CINEREA*) CONTROL ON APRICOT FRUITS BY POST HARVEST HEAT TREATMENT

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Keywords: inoculated, *Botrytis cinerea*, fruit quality

ABSTRACT

Apricot (Olimp variety) were inoculated with gray mold conidia (*Botrytis cinerea* Pers.) and were subjected to post harvest heat treatment by dipping in water at various temperatures for 20 min. Heat treatment delayed *Botrytis* proliferation, but using dips at ≥ 49°C caused fruit to soften and develop an atypical pink pigmentation. Fruit treated at 45 or 47 °C showed the best retention of firmness and maintained initial quality, developing neither an off-colour nor an off-flavour.

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RESEARCHES ON PEAR ORCHARD ECOSYSTEM ENTOMOFAUNA IN BANEASA-BUCHAREST AREA
I. Pest and Beneficial Insect Populations in Pear Orchard Ecosystem in Baneasa-Bucharest Area

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Keywords: *Pyrus communis*, community structure, abundance, faunistic study

ABSTRACT

The aim of the research was to know the current situation of insect community in pear orchard ecosystem (annual treated with insecticides) of Research-Development Institute for Plant Protection, in Baneasa-Bucharest, by determine the range, structure and abundance of the pest and beneficial insect species. It were sampled a total of 26031 individuals of insects, 22194 pests and 3837 beneficials. Pear psyllids group, (specialy *Cacopsylla pyri*) fallowed by leaves weevils group (*Phyllobius oblongus* and *Polydrusus inustus*) were the most abundant pests. Within beneficial insects, predatory bugs *Anthocoris nemoralis* and *Orius sp*. were dominant, they being the specific natural enemies of pear psylla, fallowed by *Chalcididae* group. The biological material was collected weekly using the branches beating method.

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THE INFLUENCE OF FOLIAR FERTILIZATION UPON APPLE TREE GROWING AND FRUCTIFICATION

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Keywords: *foliar, fertilizers, apple, yield, unpolluting*.

Our researches made between 1996-2002 aimed to establish the most efficient technology and fertilizers used in apple fruit growing.

Compared to the conventional fertilization methods applied on the soil, foliar fertilization brings supplementary small nutrients amounts that act stimulating the leaf metabolism and determining increased absorption of soil nutrient elements.

The experiment was placed in a high-density apple *Idared* variety orchard, and totalized 16 variants, placed into randomized blocks of 8 trees/variant.

The foliar fertilizers were applied 3 times: immediately after blossom and every 2 weeks after.

The experimental variants totalized 15 types of Romanian and foreign foliar fertilizers (*F 231, Folifag, Plant power, Nutrivit, Nutricamp 10-20-40, Cropmax, ICPA 6288, Amestec, Nutrient expres, Calmax, PPCF, Stimucrop 10-10-10, Stimucrop 15-3-3, Kristalon start, Kristalon pold*) compared to the control group without any foliar fertilizers (1, 2).

After these treatments the yield raised with 1.6 t/ha (7%) using *F231* and 7.4 t/ha (32.4%) using *Stimucrop 15-3-3* compared to the control.

The foliar fertilization determined the increase of the photosynthetic efficiency and stimulated leaf metabolism.

Total assimilating pigments increased from 2.0518 mg/g fresh leaves in control to 2.5423 mg/g using *Cropmax* solution 0.1 % and to 2.6711 mg/g with *Stimucrop 15-3-3* 1% concentration.

Foliar fertilization determined increasing yields using small quantities of nutrients, vitamins, stimulatory substances that are totally absorbed, preventing environmental and fruit contamination (3).

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STUDIES REGARDING THE REACTION OF SOME APRICOT TREE VARIETIES TO THE GREEN PRUNING

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Keywords: *Prunus armeniaca*, thinning, fruit, quality

ABSTRACT

The green cutting of the apricot gives the possibility for a better counting of the fruits production, assures the compensation of the damages caused by cold and a better healing of the wounds. The summer cutting can be done after the tied fruits or after harvesting. The choice for the cutting moment is 100% dependent on the tied fruits. As a result, at a high level of tied fruits the cutting must be done after the process is completed, otherwise the cutting is conducted after harvesting in order to preserve all the fruits. At the 6 varieties studied it was proved that the summer cutting determines an easier pass of the tress over the winter and a decrease of damages caused by freezing with 20-25%.

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THE EFFECT OF SOME FACTORS ON SHOOT REGENERATION FROM MERISTEM CULTURE OF *RUBUS* IDAEUS L.

VALENTINA ISAC

Key words: raspberry, *in vitro*

ABSTRACT

The influence of 4 different media and 9 moments for explants inoculation on the differentiation ability of explants was tested in 11 genotypes of raspberry. Murashige-Skoog (1962) medium supplemented with 0.5 mg/l AG, 0.1 mg/l BA, and 10.0 mg/l ascorbic acid, allowed the most favorable conditions for the regeneration process. August and September proved to be the most favorable periods for buds harvest with high capacity of differentiation in plantlets.

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THE INFLUENCE OF TOMATOES RIPENESS DEGREE ON THEIR STORAGE BEHAVIOUR

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ABSTRACT

The study was carried out in the Vegetable Crops greenhouse of the Horticulture Faculty of Bucharest. Plants at different aging degrees have been harvested (green, ripening and physiological maturity) from L 112586. We have tracked the ability to maintain the tomato fruits at different environment conditions (variant 1 – temperature 23^{o}C and relative humidity 70%; variant 2 – temperature 12^{o}C and relative humidity 85%). We have noticed that for variant 1, the number of days for keeping the fruits was of 4 (for fruits harvested at physiological maturity) and 7 for green fruits. For variant 2, the number of days for keeping the fruits was 7 (for fruits harvested at physiological maturity) and 19 for green fruits. The green fruits did not reach the physiological maturity.

There were differences regarding the acidity, the vitamin C content, dry soluble substance (DSS), total dry substance (TDS) and mineral substances.

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RESEARCHES CONCERNING THE INFLUENCE OF HIGH PRESSURES ON THE DYNAMICS OF THE FRUITS CANDY PROCESS

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Keywords: apples, cherries, infusion, syrup, equipment

ABSTRACT

The paper includes the results following the establishing of the increase of the fruits dry soluble mater on a step of the candy process at the application of some high pressures (200 – 600 bar) on the fruits immersed in sugar syrup, comparatively with the increase obtained in the same conditions at atmospheric pressure. Also, it is presented the equipment for the study of high pressure influence on the food product, realized at University of Craiova, which has as main element an hydraulic cylinder specially blueprint to obtain a pressure of ~ 1 kbar. The compression strength is obtained by means of a test machine, utilized for the determination of the mechanic features for the metallic materials. The research studies made pointed out the possibility of speeding of the fruits infusion in the fruits candy process through the application of some high pressures (200 – 600 bar), which is required by production reasons. The increase of the infusion speed is dependent, on the one hand by the fruits features – texture, thickness and features of the epidermis, size of the fruits, way of preliminary processing – and on the other hand by the conditions of pressure application – level of the pressure and time of application.

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RESEARCHES REGARDING NUTRIENT SOLUTION FERTILIZATION ON ACTINIDIA DELICIOSA

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Keywords: Kiwi, green cutting, nutrient solution.

OBJECTIVES

- Finding out the best nutrient solution type for shortening the necessary time to obtain plants ready for planting in the field
- Finding out the optimum substrate for planting the cuttings obtained through green cutting
- Studying the effect of the nutrient solutions treatment on the rooted cuttings on *Actinidia deliciosa*

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THE BEHAVIOUR OF SOME PERSIMMON'S VARIETIES IN THE ROMANIAN PLANE

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Keywords: grafting, scion, rootstock, budding, shoots.

INTRODUCTION

The introduction of some subtropical fruit-growing species (paw-paw, kiwi, fig-tree, date tree) represented the idea that other subtropical species can also adapt and normally fructify in the climate of Romanian Plane.

In the autumn of 1999, in the field of the Fruit Growing Department from U.S.A.M.V. Bucharest, a field was sowed with *Diospyros lotus*.

The seedlings of *Diospyros lotus* grew and fortified for grafting. In 2004 these rootstock have been grafted in spring budding and late summer budding.

The spring budding was made at the beginning of May and the late summer budding at the end of August, using *D. lotus* as rootstock.

The aims followed in this research are:

- The establishment of the compatibility for the grafting in spring budding and late summer budding.
- The appreciation of the adaptability capacity of some persimmon's varieties from different areas of Asia, North America and Europe.
- The precocity in fruit bearing of some persimmon's varieties.
- The registration of some phenophases regarding the prediction of the necessary vegetation time for the wood ripeing.
- The behaviour of some persimmon's varieties in the Romanian Plane.

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INFLUENCE QUANTIFICATION OF THE FACTORS IMPLIED IN THE *IN VITRO* KIWI FRUIT ORGANOGENESIS

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Keywords: *Actinidia deliciosa*, *Actinidia arguta,* explants, culture media, shoots, callus, regeneration,

ABSTRACT

Using four different explants: root segments, internode, petiole and leaf blade, excised from a kiwifruit hybrid (*Actinidia deliciosa* Chev. x *Actinidia arguta* Sieb. et Zucch.) cultured *in vitro*, the effects of culture medium, pH and subculture's number on callus production were studied. Zeatine used in 1 mg/l concentration, determined the callus formation, in all types of hybrid *Actinidia* explants used. The explants had a different reaction and the largest callus production was realised by petiole and leaf blade. The culture medium pH influenced the callogenetic process, the highest callus production being registered at the pH 7. The callus quality could be appreciated by the consistence and colour. The most consistent callus of dark green colour or glassy green with pink spots had a great growing speed and a superior organogenetic potential. Callus organogenetic ability was not constant during the studied subcultures: after one subculture with high callus production, followed another with high organogenetic potential, materialised in shoots and roots formation. The data was statistically analysed using the Pearson coefficient for parametric correlation and Kendall coefficient for non-parametric correlation. The results obtained, confirm the high indirect organogenetic capacity of *Actinidia* species. This depends on explant, culture medium, pH and subculture.

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PROPAGATION OF NORTHERN BANANA (*ASIMINA TRILOBA* (L.) DUNAL) USING DIFFERENT GRAFTING METHODS

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Keywords: asimina, variety, rootstock, bark grafting, chip budding

ABSTRACT

Northern banana or asimina is 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 Paw-Paw, the Indians' banana or northern banana. In our country that fruit specie exists in few Botanical Gardens and in the North-Western part of Transylvania, in private gardens. In 2003, a small collection was established within the Faculty of Horticulture from Bucharest, with varieties and hybrids from America and Italy. The present paper shows the preliminary results of some researches regarding the best grafting methods suitable for nursery material production. The bark grafting method, using waxed scions preserved at 3-4°C was applied to a vigorous, 8 year old rootstock. Success percentage varied between 50% ('Howebat') and 100 % ('Vitroplant 2' and 'Vitroplant 3'). The length of the annual shoots varied between 18.0 cm to 31.5 cm, in the first year and, from 21.5 cm to 74.5 in the second one. The most vigorous was 'Vitroplant 1' selection. Since the first year after grafting, scion shoots formed flower buds, 'Vitroplant 2' being the most prolific. In the second year, this selection formed 9.25 fruits/scion. For 3 years old seedlings, bark grafting, chip budding and occulation methods were used. 100% of the grafted scions started to grow when bark grafting and chip budding were applied. The low average length of the annual shoots was caused by the slow growth of Asimina during the first year after grafting. To speed up the nursery production of grafted trees, chip budding is recommended, while bark grafting may be used for vigorous plants over graft.

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THE EFFECT OF DIFFERENT FERTILIZATION SYSTEMS ON PLUM NUTRITION

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Keywords: fertilizers, soil, leaves, macroelements, microelements, yield, fruit.

ABSTRACT

Research was carried out during the period 2001-2003, at the Fruit Research Station Bistrita, in a plum orchard with Silvia, Carpatin and Renclod Althan cultivars. The subject of the research was to evaluate the effect of different fertilization systems on plum nutrition in the pedoclimate conditions of Bistrita. The influence of different fertilization systems on the concentration of elements in soil and leaves, on the biochemical composition of fruit, yields and average weight of fruit was evaluated. The fertilization system with manure, in plum orchards with high soil acidity and low content of soil nutrients, influenced the nutrition processes of the trees through modification of the supply of plant nutritive elements. Fertilization systems with soil applied manure and mineral fertilizer had positive effects on plum fruit production. The fertilization of plum orchards without correcting the acidity of soil is not enough for an optimum nutrition of trees. Plum production on soil with high acidity is decreased and fertilization systems that do not protect the soil characteristics worsen plum nutrition.

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VITICULTURE & OENOLOGY

EVALUATION OF THE PRESENT POTENTIAL OF SMALL PRODUCERS IN THE VRANCEA-BUZAU AREA: THE FIRST EDITION OF THE CONTEST „VINUL PODGOREANULUI"

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Keywords: viticulture, winemaking, small producers, wine contests

ABSTRACT

The paper presents the basic facts regarding the wine contest for small producers "VINUL PODGOREANULUI" which took place at Odobeşti between 15 and 17 of April 2004, in the frame of the project BM 2521/2003 "Active promotion of the quality criteria in the fields of production, control and marketing of horti-viticultural products aimed at regaining the internal market and improving export competitivity", financed by the Ministry of Agriculture and the World Bank. The event's first edition was an opprtunity for 120 independent producers and 13 associations of producers from Vrancea and Buzau counties to have their wines evaluated by a professional jury, in an official contest organized under the same principles with contests reserved for the large companies.

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INFLUENCE OF THE MATERIAL OF THE STORAGE CONTAINER (GLASS, STAINLESS STEEL) ON THE CONTENT OF CHROMIUM AND NICKEL IN WINES

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Keywords: wine storage containers, metal content, heavy metals, chromium, nickel

ABSTRACT

The effect of the material of the storage container on the metal content of wines was investigated, with emphasis on the accumulation of heavy elements such as chromium and nickel. Values of the metal concentration in wines aged at least 1 year in glass and stainless steel containers were determined. In different experiments, glass powder and stainless steel blades were added to wines, in order to artificially increase the contact surface, and thus speed up the process of metal intake for study purposes. It was found that the content of chromium and nickel in wines is influenced by the characteristics of the material of the container wall, the duration of contact, as well as by the pH and the presence of other chemicals in wines.

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THE CHARACTERISATION OF THE SANDY SOILS FROM THE VINE PLANTING OF DABULENI

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Keywords: sandy soils, vine planting, Dabuleni

ABSTRACT

There were made soil profiles on the sandy soils from the Dabuleni vine centre both on dunes and interdunes uncropped as well as on soils cropped with vine.

There also taken soil samples in order to determine the main physical and chemical soil features. As a results of the analyzing the data there was established the suitability of the vine crop on these soils.

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UNCONVENTIONAL AGRO-TECHNIQUE VITICULTURE IN THE STEFANESTI-ARGES VINEYARD

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Keywords: grape marc, wine distillation residue, minim tillage, green fertilizers.

ABSTRACT

The improvement in the relative short time of the hydro-physics characteristics of soil and the improvement its nutrition dowry by renunciation at classic methods of chemical fertilization and mechanic maintenance by repetition mobilization of soil from the interval between the rows of grape-vine.

Reconstruction and improvement of micro-flora and micro-fauna from soil, supplementation reserve mineral-organic of soil and improvement features hydro-physics by the impact of system “no tillage” and or “minim tillage” a maintenance of soil.

Reaffirm the concept of ecological viticulture at the place which must to occupy in the framework of viticulture technology used viticulture producers of viticulture from Romania.

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RESEARCH CONCERNING THE DRY MATTER ACCUMULATION AT GRAPEVINE AND ITS INFLUENCE ON GRAPE QUALITY

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Keywods: *Vitis vinifera*; Fetească regală cultivar; pruning; bud load; biomass, leaf area.

ABSTRACT

The experiments were realized in 2003-2004 with Fetească regală cultivar, 21 Bl clone, grafted on Kober 5 BB, usind five types of pruning (multiple Guyot; Guyot with periodically renewed arms; Guyot on demi-high stem; Cazenave cordon and spur-pruned cordon) and three bud loads (10; 15 and 20 buds/m^2). The productivity of the leaf area was proven to be optimal at values of 7-12 cm^2/gram fruit, corresponding to a dry matter quantity of 4 500-6 000. The greatest sugar accumulation at grape maturation in 2003, were registered at renewable dry matter values of 3 500-4 500 kg/ha.

Lucrări ştiinţifice U.Ş.A.M.V.B., Seria B, Vol. XLVII, 2004

ASPECTS CONCERNING THE SOME FACTORS WHICH DETERMINED THE EROSION PROCESSES IN THE VITICOL PLANTATIONS PLACED ON SLOPING AREAS, WITH REFERENCE AT THE "DEALU BUJORULUI" VINEYARD, DISTRICT GALATI

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Keywords: rainfall, intensity, soil, viticultural, terraces, grassing bands.

ABSTRACT

The paper presents the research obtained in 2001-2002 period, in the Bujoru vineyard, with reference by the some factors which determined the erosion process. After the observations and determinations effectuated, it my draw the conclusion that the erosion process is determined in principal, by the: a) rainfall intensity and spot of the torrent core; b) area with the slopes between 12-18%; c) slope protection system (grassing bands, terraces with horizontal platform). The rainfall, through fall frequency, intensity and quantitative various and also the manner of soil working in experimental plots, determined a erosion of the soil in the wine vegetative period. In the examined period of time a monotonous distribution of rainfall can be mentioned, with short periods of rains and long periods of pluviometrical lean. The rainfall in the examined period had a strong critical aspect, especially about their repartition uniformity, uncorrelated with vegetation phenophases. The pluviometrical lean cumulated with different intensity of the rainfall had evil effects on erosion processes.

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THE BEHAVIOUR OF SOME VARIETIES AND HYBRIDS FROM THE EXPERIMENTAL VINEYARD FROM SC DVV MURFATLAR AT THE DOWNY MILDEW, OIDIUM AND BOTRYTIS IN THE NATURAL INFECTIONS CONDITIONS

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Keywords: vine varieties, phitosanitary status, main diseases attacks

ABSTRACT

In the 2004 year, in SCDVV Murfatlar centre was made studies on some varieties from the experimental plots and from ampelographic collection, concerning their behaviour of the downy mildew, oidium and botrytis attacks – in natural conditions of the infection. After the attack degree on the each variety and using own method for to appreciate the level of resistance and/or sensibility, the behaviour of the varieties had 6 estimation levels, as following: OR – variety or hybrid with some resistance, MR – variety or hybrid medium resistant, PR - variety or hybrid few resistant, MS - variety or hybrid medium sensible, FS - variety or hybrid very sensible. Following these classes of appreciation was obtained results concerning the behaviour of these variety or hybrid at the downy mildew, oidium and botrytis attacks. In the table group (new variety or perspective hybrids) was remarked the varieties Victoria, Azur, Silvana, Greaca, Cuzovski, Splendid, Sevka, Tamina, Dobrogea and hybrids: Italia x Perlette, Coarna alba x Afuz Ali, Alphonse L. x Italia, Cardinal x Afuz Ali, Cardinal x Perlette, Italia x Afuz Ali. In the wine group (new varieties) was remarked with some resistance the varieties: Mamaia, Magaraci,, Blauerzweigelt and Cramposie Selection. Concerning the resistant varieties like Brumariu, Chambourcin, Garonnet, Dattier de S. Vallier, Varousset, Roucaneuf, Perla de Zala, Seyve Villard 18402, in the condions of 2004 year was sensible at downy mildew not only on the leafs but also on the clusters, having however a god resistance at oidium and botrytis on the clusters. Between the basis varieties of the vineyard, only varieties Riesling Italian, Sauvignon, Pinot noir and Muscat Ottonel prouved some resistance at the diseases attack and the varieties Feteasca neagra, Cabernet Sauvignon, Merlot, Pinot gris and Chardonnay was very and medium sensible, especially at the downy mildew attack on the leafs and clusters.

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ACCLIMATIZATION OF GRAPEVINE EXPLANTS OBTAINED *IN VITRO*

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

ABSTRACT

In vitro grapevine micropropagation it used for cloning and rapid multiplication of biological material resulting by improvement and virus free plants. It was studied two cultivars of *Vitis vinifera* L. (*Chardonnay*, *Pinot noir*) and one rootstock *Kober 5 BB*. A vegetative material represented by annual shoots was prelevating from the Ampelographic Collection of Viticulture and Oenologie Department - USAMVB. Biological material (meristematic apexes and axillary buds) was subject to many stages of *in vitro* multiplication: preparing, initiation and stabilization, multiplication, rooting and acclimatization.

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RESEARCH REGARDING THE INFLUENCE OF THE DISINFECTING AGENTS ON GRAPEVINE EXPLANTS USED FOR *IN VITRO* CULTURE

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

ABSTRACT

The present paper has been performed with a view to initiate grapevine *in vitro* culture, to establish a method for biological material disinfecting. For this research it was used: ethanol 70º, mercury clorure 0,05% and a detergent - DOMESTOS® 20% (the active substance being natrium hypochlorite) The were used the following cultivars : *Pinot Noir, Chardonnay* and the *rootstock Kober 5 B*B. The vegetative materials have been obtained from the Ampelographic Collection of the Viticulture and Oenology Department - USAMVB.

The following experimental variants have been established: V1- ethanol 70º, 5 seconds + mercury clorure (HgCl) 0,05%, 6 minutes; V2- ethanol 70º, 3 seconds + DOMESTOS® 20%- 2 minutes.

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BIOCHEMICAL MODIFICATION INDUCED BY THE PRESENCE OF GRAPEVINE LEAFROLL ASSOCIATED VIRUS 3 ON MATURE PLANTS *(V. VINIFERA* L., FETEASCA NEAGRA CV.)

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Keywords: polyphenols, assimilating pigments, glucides, dDAS-ELISA, GLRaV-3

ABSTRACT

In order to study the biochemical and morpho-anatomical modifications of the grapevine in the presence of virus infection, a comparative investigation between healthy and GLRaV-3 infected mature plants belonging to Feteasca neagra cv. has been done. Virus infected grapevines showed perturbances of the growth concerning in down-rolling and reddning of the mature leaves on the low part of the bunches. No significant modifications of biochemical composition of infected leaves have been found. The quality of the grapes has occurred in correlation with the presence of the virus. Low amount of sugar in juice and higher acidity have been registered with virus infected grapes.

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SELECTION OF *SACCHAROMYCES ELLIPSOIDEUS* STRAINS FOR WINEMAKING USING A COMPARATIVE STUDY OF THEIR GROWTH AND FERMENTATION CAPACITY ON VARIOUS CULTURE MEDIA, INCLUDING GRAPE MUST

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Keywords: yeasts, strain selection, wine production, must fermentation, liquid and solid growth media

ABSTRACT

Modern winemaking requires the use of carefully selected yeast strains, which must be chosen based on thorough laboratory work, after extensive characterization of the strains' behavior on various growth media and under various conditions. In this work a study was performed to characterize the fermentative capacity of 8 strains of *Saccharomyces ellipsoideus* on two kinds of artificial growth media as well as on grape must. The performance of the yeast strains was evaluated based on various criteria: shape and size of the yeast cells, colony aspect on liquid and solid growth media, metabolism and fermentation of sugars, fermentation rate, biomass accumulation and the analytical parameters of the fermented musts obtained. The study allowed the identification of strains with valuable properties, which recommend them for use in winemaking technologies.

Lucrări ştiinţifice U.Ş.A.M.V.B., Seria B, Vol. XLVII, 2004

RESEARCH WORKS ON THE INFLUENCE OF GRAPEVINE CUTTINGS OVER SOLAR ENERGY

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Keywords: illumination, foliar covering, caloric power.

ABSTRACT

This paper includes the results of research studies made regarding the way that elements defining the foliar covering may influence the accumulation of organic substances at this level. The study points out the influence of the vine stem height, the cuttings and the illumination level of the vine shoots. It was noticed the superiority of the variants with semi-tall stem and the short cutting system with the highest values of the accumulated dry substance, caloric power and potential chemical energy. Also, the correlation existing between those elements was established.

Lucrări ştiinţifice U.Ş.A.M.V.B., Seria B, Vol. XLVII, 2004

MERLOT CULTIVAR BEHAVIOUR IN VITICULTURAL ECOSYSTEM OF TOHANI PRAHOVA DEPARTMENT

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Keywords: Merlot, bud load, production, quality.

ABSTRACT

The Merlot cultivar cultivated on big surfaces within the assortment for the production of black grapes used for the red wines behave slightly different in the continental temperate climate conditions from the Romanian vineyard. They have been choose for fortifying out of charges from 13,8 buds /m^2 to 18,5 v/m^2. The cutting type was Casenave cordon. Out of the experimental data, it results that the Merlot cultivar can support higher load than 18,5 buds/m^2.

Considering the requirements for the wines quality it is recommended the charge of 15,0 buds /m^2 which can allow a sugar concentration of about 210 g/l in must as a necessary condition for a superior wine.

Lucrări ştiinţifice U.Ş.A.M.V.B., Seria B, Vol. XLVII, 2004

STUDY CONCERNING THE CONTENT IN RESVERATROL AND ANTOCYAN AT THE VARIETY MERLOT OBTAINED IN BANU MARACINE AND TAMBURESTI VITICULTURAL CENTRES

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Keywords: phytoalexin, phenolic componds, cis and trans-isomer forms, pathologenic attach, system HPLC.

ABSTRACT

Resveratrol has been fond in a multitude of dietary plants, and it is present in relatively hight concentrations in grape juice and especially, in red wine.

Several clinical studies have demonstrated that phenolic componds such as resveratrol (especially trans-resveratrol) are responsable for the health benefits of red wine.

The researce was undertaken to evaluate a comparativ study between resveratrol content of grape and wine the variety Merlot from Banu Maracine and Tamburesti viticultural centres in 2003.

As well, it well be determined the antocyans contents and it will be established the corelations between two componds (antocyan and resveratrol).

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THE RESPONSE OF FETEASCA NEGRA VARIETY TO DIFFERENT WINTER-EYES CHARGES AS A RESULT OF A DRY-CUT

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Key words: Feteasca Neagra, winter-eyes charge, production, quality

ABSTRACT

The main goal of the experiments it was to establish the influence of the fertility charges on the production level and its quality in correlation with the Feteasca Negara variety requirements. It was statistically established that the optimal eyes charges touch the value of approximately 15,0 eyes/ m^2, arriving to a production of 10,0 t/ha, waging the obtained wines in the DOCC category. In most of the study years, the sugar accumulations did not decrease lower than 225 - 227 g/l, even if the fertility charges were amplified until 19 - 20 eyes/m^2.

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AN ANATOMICAL SURVEY OF STEMS IN SOME *VITIS VINIFERA* L. CULTIVARS

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Keywords: *Vitis*, stem, anatomy, grapevine cultivars, Cabernet Sauvignon, Feteasca Neagra, Afuz Ali, Cardinal, taxonomic characters.

ABSTRACT

Stem anatomy is compared for several *Vitis vinifera* L. cultivars. The range of variation within cultivars of *Vitis* (*Vitaceae, Rhamnales*) is described for a number of stem characters including the cortex, colenchyma, pericycle, primary and secondary vascular systems and pith. The results provide important taxonomic characters (variables) for the separation within grapevine cultivars. One synoptic table with anatomical character's similarity in *Vitis* cultivars, several graphs and original anatomical photos are shown.

Lucrări ştiinţifice U.Ş.A.M.V.B., Seria B, Vol. XLVII, 2004

THE IMPORTANCE OF EQUALIZING YEAR FOR THE EXPERIMENTAL TECHNIQUES IN VITICULTURE

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Keywords: fructification load; cutting type

INTRODUCTION

The factors which may influence the yield results may be divided this way: genetically factors - belonging to the variety; ecological factors determined by climate or microclimate and agrotechnical factors presented by the vine cultivator.

In order to make obvious the influence of the latter factors (agrotechnical) one feels the need that the experiments be watched for a good number of years. The results of the first year or even of the first two years may be taken out, taking into account especially the data of the last years which meet a more important precision degree; these are used for the yield recommendations.

In the perennial plants generally and in the vine especially, in order to organize experiences or specialization scientific studies, one can see, multiple influences which are important for the achieved results.

This phenomenon covers at least the contribution of agrofitotechnical measures adopted by the cultivator. That's why, by the present work, we try to underline the importance of equalizing year (or many years, just for being able to distinguish the problems of each factor of influence upon the experimental results.

The introduction of data, from the first year of experience, as consequence of the statistical calculus may lead to errors which are due to influence factors in the previous years.

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SUPERABSORBANTE FITPOL-C USED TO OBTAIN THE MATERIAL VITICULTURE

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Keywords: super absorption, Fitpol-C, aerohidric regime, root system, copse and leafs of grape-vine plants.

ABSTRACT

Reduction of some expensive elements concerning the financial aspect from the nutritive mixture (fallow land, peat) is representing the main objective of this research, substitution which is made with a synthetic product named Fitpol, characterized through a large capacity of storing water (1:80) which it can give up in the moments of hydrical stress of the root system of grafting cutting of grape vine. This product, Fitpol, is creating in the nutritive mixture a favorable condition for a good growing and developing of plants, both at level of root system as well as at the level of copse and leafs.

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STUDY ON THE POTENTIAL IN PHENOLIC COMPOUNDS OF SOME PINOT NOIR CLONES UNDER THE CONDITIONS OF THE VITICULTURAL CENTER STEFANESTI-ARGES IN 2002-2003

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Keywords: viticulture, winemaking, phenols, grapevine clones, quality wines

ABSTRACT

In a former paper a first batch of experimental data has been presented concerning the potential of phenolic compounds of some Pinot noir clones grafted on the rootstock SO_4-5 (a) in the vineyard Stefanesti. This work presents the same issue under the same conditions, except that the clones were grafted on a different rootstock (3309-111). The experiments indicated that, among the three clones studied, the one denominated as 115 stands out from the others as far as the quantity of phenolic compounds is concerned, but also from the viewpoint of the quality of the harvest.

Lucrări ştiinţifice U.Ş.A.M.V.B., Seria B, Vol. XLVII, 2004

RAPID TESTING METHOD FOR SCION – ROOTSTOCKS COMPATIBILITY USING IN VITRO MICRO GRAFTING

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Keywords: micro propagation, *in vitro*, viticulture, vine varieties, micro grafting

ABSTRACT

The goal's research was to obtain directly grafted and rooted vine grape plants.

INTRODUCTION

Studies regarding this topic (Martino, 1991; Ozzambak and Schmidt, 1991; Ben Abdalah and all., 1996) showed that this method was inefficient because the percentage of the obtained plant was reduced. Another inconvenience appeared because the proprieties of the plants were not in concordance with STAS. Seeing all the results we tried to find out which is the role of the grafted point in micro grafting.

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VALUABLE VINE VARIETIES AND ROOTSTOCKS FOR SUPERIOR WINES OBTAINED BY *IN VITRO* MULTIPLICATION

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Keywords: micro propagation, *in vitro*, viticulture, vine varieties, rootstocks, vine

ABSTRACT

The goal's research was to see the regenerative potential through *in vitro* culture method of some valuable varieties of vine grape and rootstocks in order to use this technique to produce planting material.

Lucrări ştiinţifice U.Ş.A.M.V.B., Seria B, Vol. XLVII, 2004

RESEARCH WORKS CONCERNING THE LEAD CONTENT OF WINES IN SOME WINE-GROWING CENTERS OF TÂRNAVE VINEYARDS

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Keywords: lead, content, soil, wine.

ABSTRACT

The problem of the heavy metals presence in the environment and particularly the lead in wine-growing area is a major problem of the ecological research. Generally the lead content in wines of Târnave vineyards has been found to be quite low, and the results show that a high pollution degree is reached in the Copşa Mică area and the pollution level diminished with the distance from the source. In view to obtain good wines for consumer is also important to know the lead content in soil. This one is an important source of lead in the wine because represent the nourishing medium for vineyard.

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BOTANY & PHYSIOLOGY

THE DYNAMIC OF SOME BIOCHEMICAL CONSTITUENTS IN THE SEABUCKTHORN (*HIPPOPHÄE RHAMNOIDES* L.) BERRIES DEPENDING ON THE CULTIVAR

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Keywords: seabuckthorn, berries, flavonoids, carotene, dry weight, ripening

ABSTRACT

The quality of cultivated seabuckthorn plants depends on the cultivars, climatic characteristics during the maturation and, not in the last order, the applied technology. This paper is a study concerning the evolution of the *dry weight, carotene* and *flavonoids* contents during the growing stages in the four seabuckthorn (*Hippophäe rhamnoides* L.) cultivar berries. The flavonoids concentration decreases during berries growth, while the carotene level increases until the full maturation. Moldova Orange and Delta GOM cultivars have the highest accumulation of carotene at full maturation, at the beginning October. The results showed that the accumulation of the dry weight is a specific feature of the cultivar.

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PHYSIOLOGICAL PARTICULARITIES OF THE SEABUCKTHORN (*HIPPOPHÄE RHAMNOIDES* L.) LEAVES

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Keywords: seabuckthorn, leaves, photosynthesis, transpiration, chlorophyll pigments, permeability indices

ABSTRACT

The aim of this study is to investigate the variation of *photosynthesis, transpiration* and *assimilating pigments* content during the growing stages on the wild seabuckthorn leaves *(Hippophäe rhamnoides L.).* The photosynthesis rate varied between 1.44 and 6.42 µmol $CO_2/m^2/s$ and the transpiration was 1.32 mmol $H_2O/m^2/s$, depending on the harvest time. The highest intensity of the photosynthesis was registered in May, when leaves almost had the maximum size and the temperature was about 27 ^oC, correlated with a low level of transpiration. In August, when the temperature was over 30 ^oC, the intensity of photosynthesis decreases to 1.44 µmol $CO_2/m^2/s$ and in September increases to 4.06 µmol $CO_2/m^2/s$ at temperature about 30 ^oC.

The *total chlorophyll* content has a small variation from May to September (from 212.9 to 240.50 mg/100g f.w), but the *chlorophyll a / chlorophyll b* ratio increases in July then decreases till September.

Lucrări ştiinţifice, U.Ş.A.M.V.B., Seria B, Vol. XLVII, 2004

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.

Lucrări ştiinţifice, U.Ş.A.M.V.B., Seria B, Vol. XLVII, 2004

PHYSIOLOGICAL AND BIOCHEMICAL CHANGES DURING THE RIPENING PROCESS IN *CUCUMIS MELO CV.*

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Keywords: melon, respiration, carotene, soluble solids

ABSTRACT

Maturity and quality in melon are usually evaluated from different point of views by consumers, farmers and traders. Usually, consumers recognise good fruits regarding their corresponding shape, colour and weight and appreciate them for their sweetness, flavour and flash texture. Other features like skin resistance, some components biosynthesis and biodegradation and pest resistance are of major interest for traders, but for the farmers the quantitative and qualitative efficiency, precocity and pest resistance are also important. In this research paper we discuss the physiological and biochemical changes during the last days of maturation and the increasing or decreasing manner of the content in total dry matter, water, soluble dry matter, β carotene, ascorbic acid and respiration intensity.

Lucrări ştiinţifice, U.Ş.A.M.V.B., Seria B, Vol. XLVII, 2004

VARIATION OF PHOTOSYNTHESIS INTENSITY AND CHLOROPHYLL PIGMENTS CONTENT IN SOME PLUM CULTIVARS

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Keywords: plum, cultivars, rootstocks, physiology

ABSTRACT

This paper has the aim to study variation of photosynthesis intensity and chlorophyll pigments content in plum. Four cultivars were studied (‘Tuleu gras’, ‘Centenar’, ‘Anna Späth’, ‘Stanley’), and were grafted on 3 rootstocks (‘Oteşani 8’, ‘Pixy’, ‘Miroval’). Variation of chlorophyll pigments content was found out, depending on phenophase, cultivar, and on cultivar-rootstock combination.

It was also studied the relationships between photosynthesis and chlorophyll pigments content. An increase was recorded in photosynthesis process intensity, at the same time with the increase in chlorophyll content, up to a certain value, after which the intensity of that process remained constant.

Lucrări ştiinţifice, U.Ş.A.M.V.B., Seria B, Vol. XLVII, 2004

INFLUENCE OF METHANOL TREATMENTS ON CABBAGE SEEDLINGS VIGOR

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Keywords: *Brassica oleracea*, greenhouse, grown, physiological parameters

ABSTRACT

An experiment was conducted to examine the effect of methanol application on cabbage seedlings vigor, by measuring the growth parameters: leaf area, leaf and root fresh and dry weight. Photosynthetic pigments (chlorophylls a, b and carotenoids) content, the rate of CO_2 fixation, transpiration rate, stomata conductance as well as membrane permeability were investigated in response to the different foliar sprays of aqueous methanol (0,10,20,30%). A progressively increase of seedlings vigor, positively correlated with increasing methanol concentration and in the same time the physiological parameters were improved.

Lucrări ştiinţifice U.Ş.A M.V. B., Seria B, vol. XLVII, 2004

RESEARCHES CONCERNING THE INFLUENCE OF THE IRRIGATION METHOD ON THE PHYSIOLOGICAL AND BIOCHEMICAL PROCESSES IN THE CUCUMBER PLANTS

A. DOBRESCU, D.BĂLAN, R. CIOFU
U.S.A.M.V. Bucharest

Keywords: drip irrigation, photosynthesis, respiration, perspiration, chlorophyll, permeability of cell membranes

ABSTRACT

The aim of the performed researches was to establish the influence of the irrigation method on the intensity of the physiological and biochemical processes, which have role in the metabolism of the cucumber plants cultivated in solarium. There were applied different irrigation methods: irrigation on the furrow, drip irrigation and underground irrigation at Salinas cucumber hybrid.

There were analysed in dynamics the main physiological and biochemical indicators: photosynthesis, respiration and perspiration rate, permeability of the plasmatic membranes, content in assimilatory pigments.

The obtained results emphasized remarkable differences between these indicators at the experimental cultures irrigated using the described methods, revealing the influence of the irrigation method on the metabolism of the plants, determinant for the growth and development of plants.

Lucrări ştiinţifice U.Ş.M.A.V.B., Seria B, Vol.XLVII, 2004

THE INFLUENCE OF POSITIVE CORONA DISCHARGE ON PHYSIOLOGICAL PROCESSES IN MUSTARD PLANTLETS

D. GIOSANU, B.OPRESCU, M. FLEANCU

Keywords*:* positive corona discharge, mustard plantlets

ABSTRACT

In this study it was observed the influence of positive ions upon mustard plantlets. It was remarked a different evolution for the mustard plantlets (5 days old) irradiated with different doses. We analysed the respiration intensity, the length of plants, the surface of leaves and the intensity of photosynthesis. In conclusion, we can say that the positive corona discharge had a negative influence upon the evolution of mustard plantlets.

Lucrări ştiinţifice U.Ş.A.M.V.B., Seria B, Vol. XLVII, 2004

THE INFLUENCE OF HIGH DOSE FERTILIZATION WITH WASTE COMPOST UPON THE ACTIVITY OF SOME OXIDASES IN THE TOMATO FRUITS

S. POPESCU, D. BĂLAN, R. TAMBA-BEREHOIU,
G. NEAȚĂ, R. CIOFU

Keywords: peroxidase, catalase, enzymatic activity, fertilization.

ABSTRACT

Our researches concerning the dynamics of the enzymatic activity (the activity of peroxidase and catalase) in tomato fruits fertilized with waste compost resulted from purification mud in unique dose of 90 tones/ha. The tomato fruits were harvested in different stages of vegetation (the green maturity, the beginning of ripening and the red ripe maturity).

As the fruits ripened (from the green maturity to the red ripe stage), we noticed the reducing of the activity of peroxidase and the increasing of the catalase activity, both in the unfertilised and in the fertilised variants.

Lucrări ştiinţifice U.Ş.A.M.V.B., Seria B, Vol. XLVII, 2004

THE ANTIOXIDANT ACTIVITY OF FLAVONOIDS FROM THE MEDICINAL PLANT, ST.JOHN'S WORT

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Faculty of Horticulture
The University of Agronomic Sciences & Veterinary Medicine, Bucharest
Prof. Dr. A. CROZIER
Department of Plants' Products and Nutrition
University of Glasgow, Great Britain

Keywords: ferric reducing antioxidant power (FRAP), free radicals, flavonols, reactive oxygen species, high pressure liquid chromatography, mass spectrometry

ABSTRACT

Hypericum perforatum is a herbaceous perennial plant, belonging to Hypericaceae family, distributed in Europe, Asia, Northern Africa and naturalized in USA. The plant is also known as St.John's wort in Anglo-Saxon medicine because it blooms on 24 th June, the birth of St. John. It has been used medicinally since classical Greek times. The most well known actions of the plant are: ulcers, gastritis, burns, depression, treatment against bacteria and fungus, cancer, inflammation.

The active constituents in the plant include hypericin and pseudohypercin, flavo-noids, tannins and procyanidins. In the present study, the focus is on the antioxidant activity of the flavonoids and in the same time the determination of the total phenol content. Flavonoids are a group of naturally occuring plyphenolic compounds found in fruits, plants and vegetables. Flavonoids have shown potential health benefits ari-sing from the antioxidative effects of these phytochemicals, whose properties are attributed to the phenolic hydroxyl groups attached to the flavonoid structure. Scavenging of free radicals is an important property of the flavanoids compounds. In this study is shown that St.John's wort has many compounds with antioxidant activity, which has a pharmacological importance.

CARTEA INTELIGENTA

MIJLOC EFICIENT DE PREDARE SI STUDIU

AUTORI:

LECT. DR. CRISTEA BOBOILA
CORNELIA BOBOILA
ING. MARIAN VELCEA

STUD. SIMONA BOBOILA
STUD. GEORGE IORDACHE
ALEXANDRU VELCEA

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.

Procesul de instruire – doua aspecte :

- Predare
- Studiu si evaluare

APLICATIA EVALINFO

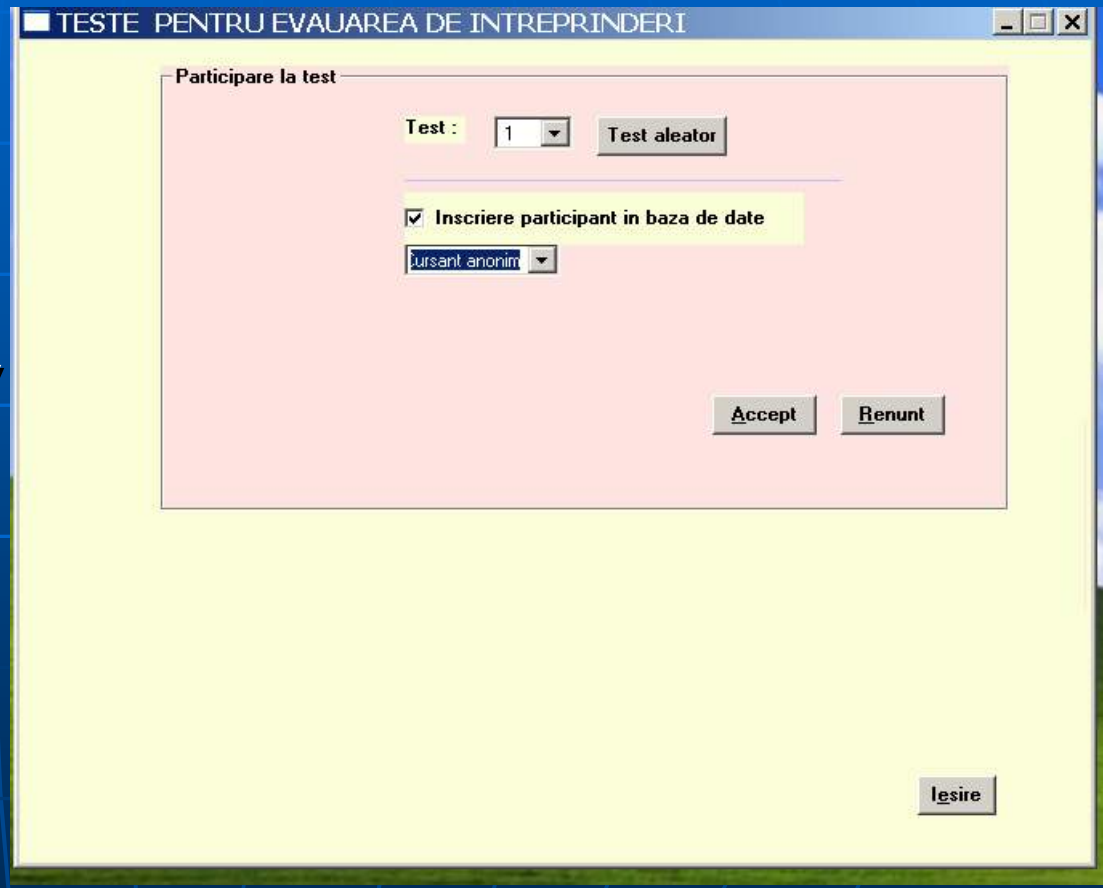
- Poate fi folosita cu eficienta in procesul de instruire
- Gandita sa raspunda ambelor laturi ale procesului de instruire

PREZENTARE APLICATIE

- Studentul poate parcurge anumite teste si apoi poate evalua raspunsurile.
- Se face o comparatie intre raspunsurile la testul curent si testul anterior pentru a se vedea evolutia in timp a pregatirii studentului

INSCRIEREA STUDENTULUI LA TEST

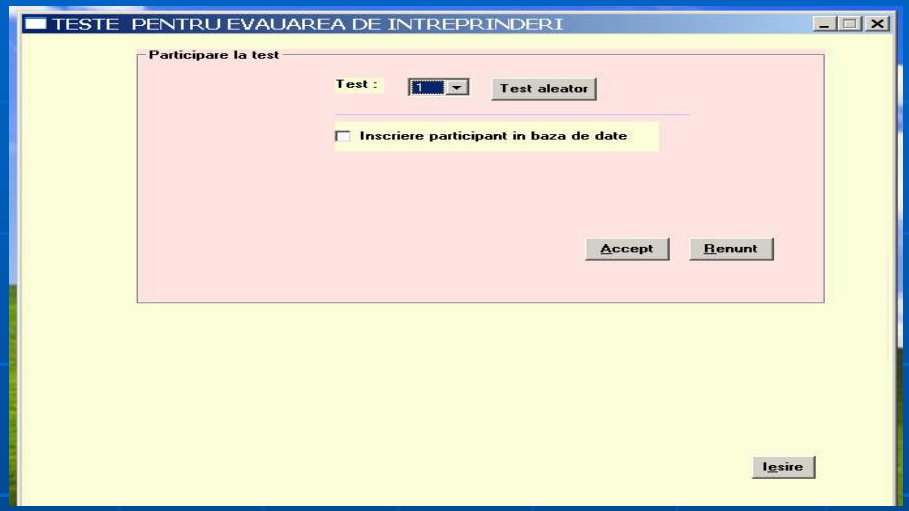
Implicit, studentul parcurge testele cu numele “Cursant anonim”, dar se poate si inscrie cu un anumit nume in baza de date

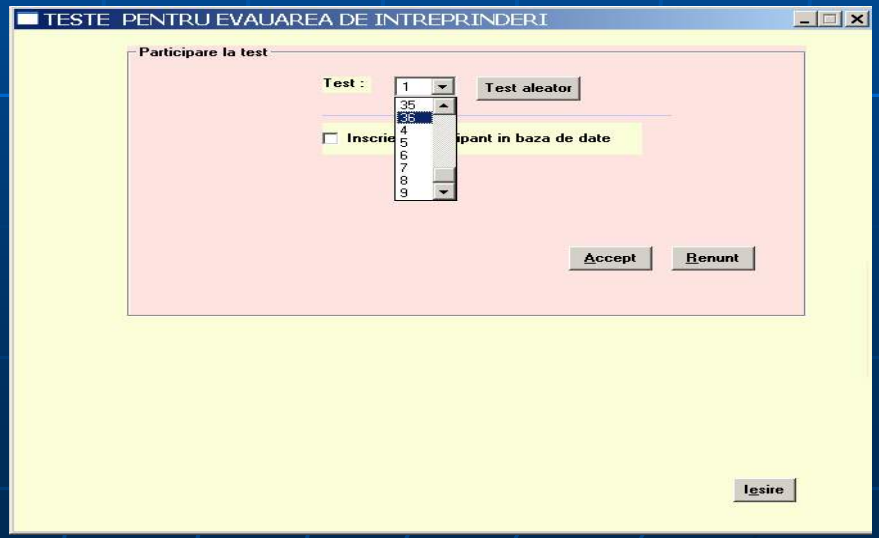


ALEGERE TEST

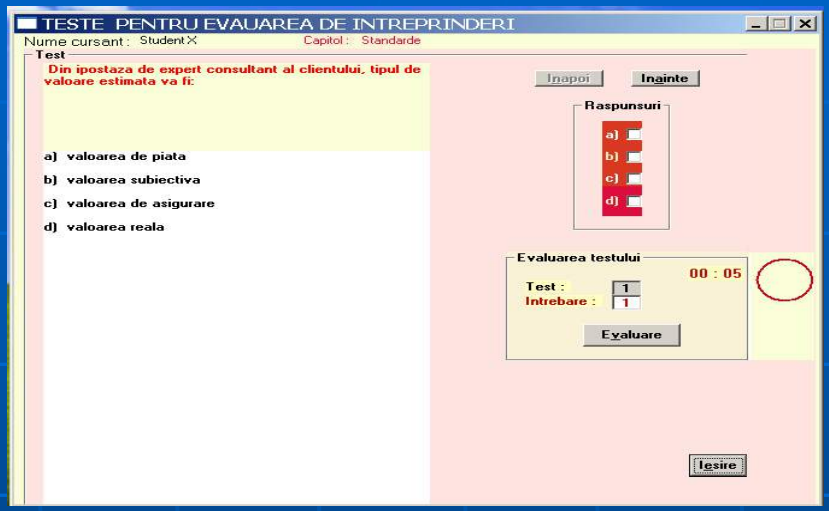
Cartea cuprinde un numar de teste care pot fi alese prin doua metode:

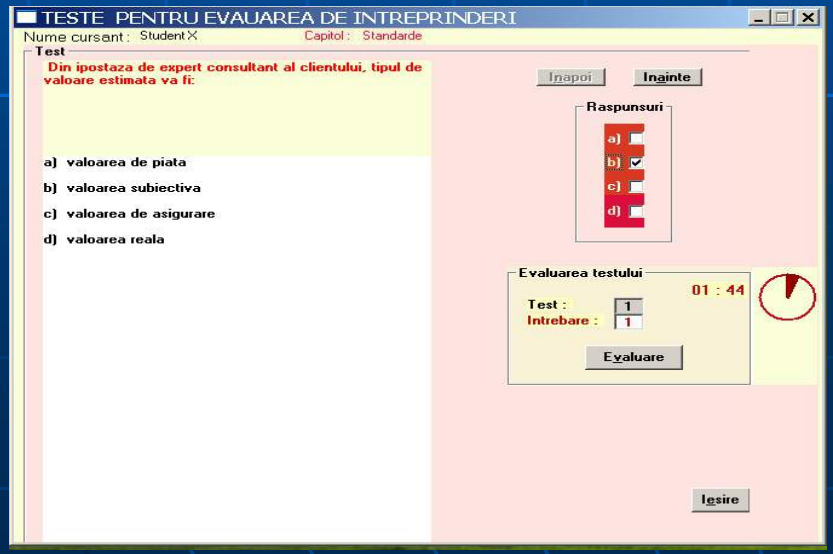
1. aleator conform unui algoritm care apeleaza ceasul sistemului de calcul
2. prin selectie din lista





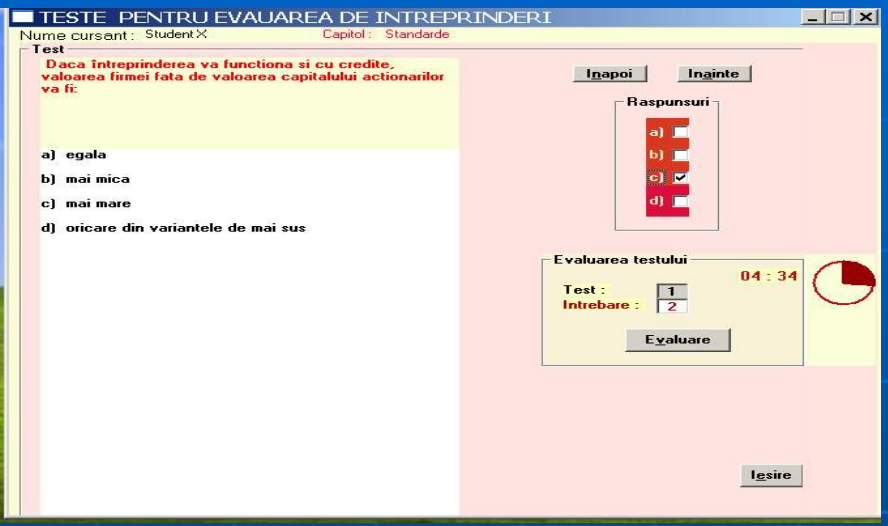
RASPUNSURILE LA TEST

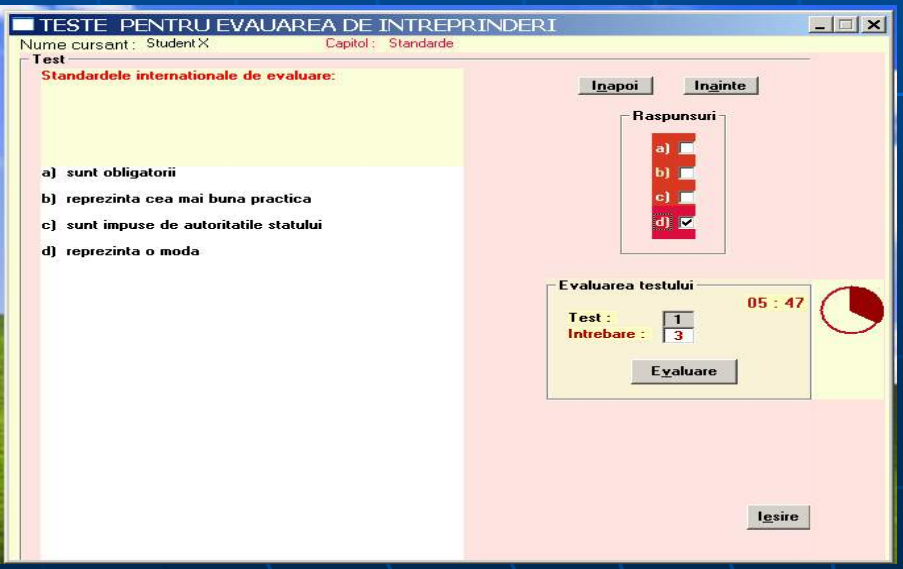




- La fiecare test se afiseaza intrebarile si la fiecare intrebare variantele de raspuns
- Intrebarile se pot parcurge inainte sau inapoi

RASPUNSURILE LA TEST

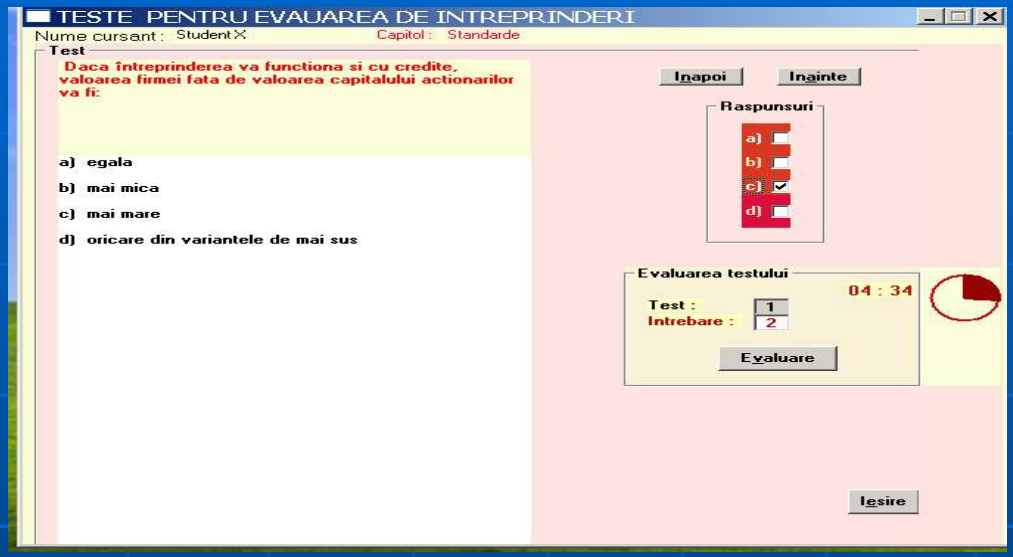


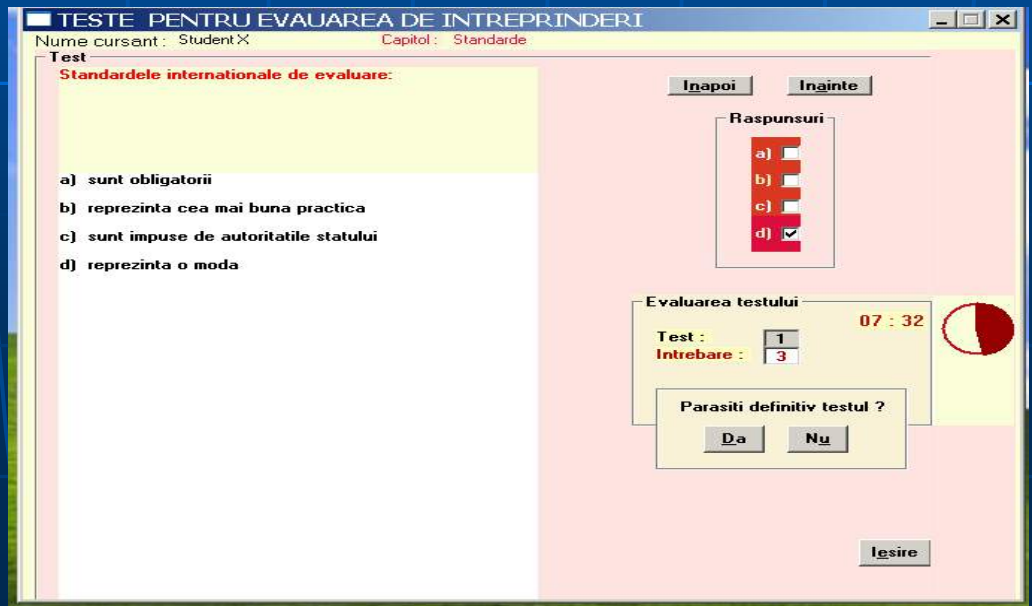


- Raspunsurile se dau prin bifarea in casetele “checkbox”
- Timpul de raspuns se cronometreaza

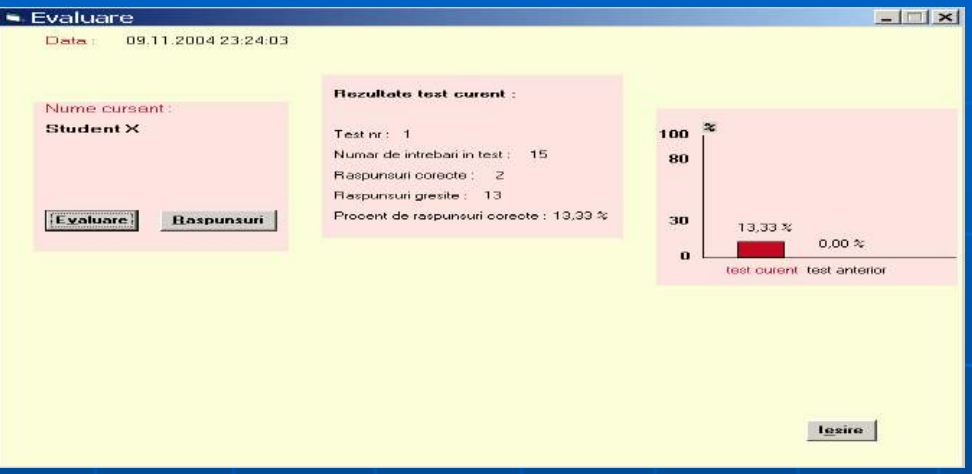
EVALUAREA TESTULUI

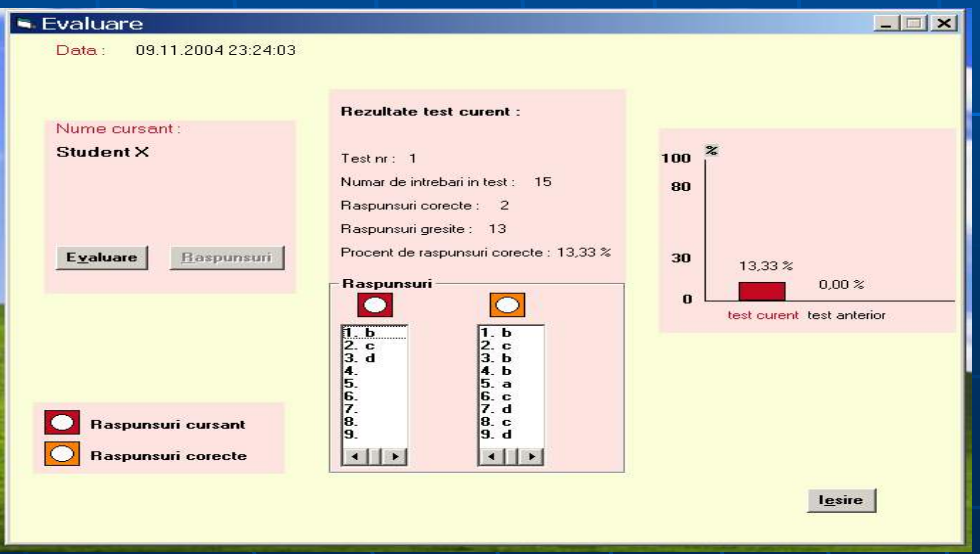
Evaluarea se face apeland butonul “EVALUARE”





EVALUAREA TESTULUI





- Se afisaza numarul de intrebari din test , numarul de raspunsuri corecte si procentul reprezentat de acestea
- Se face un grafic pentru doua teste consecutive
- Se detaliaza raspunsurile corecte sau gresite pe fiecare intrebare din test

EDITARE DE TESTE

- Posibilitatea de a crea un test selectand anumite intrebari sau selectand aleator intrebarile din diferite capitole
- Posibilitatea de a seta :
  - ponderea fiecarei intrebari la punctajul total
  - timpul de evaluare
- Posibilitatea de a printa testul pe hartie

EDITARE DE TESTE

- Utilitate :
  - Cadrelor didactice
  - Firmelor care doresc sa testeze cunostintele viitorilor angajati
  - Autoevaluare
- Flexibilitatea bazei de date – se pot introduce:
  - Alte tipuri de teste
  - Imagini
  - Grafice

Mărcile – instrument de afaceri

Ing. Ştefan COCOŞ
OSIM, şef serv. mărci

Ing. Marian VELCEA
Consilier Propr. Ind.

Obiectele proprietății intelectuale

- **Dreptul de autor**
- **Proprietatea industrială**
  - **creații cu caracter tehnic**
  - **creații cu caracter estetic**
  - **semne asociate produselor în activitatea comercială**
  - **reprimarea concurenței neloiale**

Proprietatea industrială ; creații cu caracter tehnic

- **Invențiile**
- **Modelele de utilitate**
- **Topografiile de circuite integrate**

Toate aceste creații au o funcție tehnică şi au ca sop rezolvarea unor probleme tehnice!

Proprietatea industrială ; creații cu caracter estetic

- **Desene industriale - aspect exterior al unui produs plan, având o funcție utilitară;**
- **Modelele industriale - aspect exterior al unui produs tridimensional, având o funcție utilitară;**

Proprietatea industrială ; creații cu caracter estetic

- **Caracteristici:**
  - **aspect exterior al unui produs;**
  - **produsul are o funcție utilitară;**
  - **aspectul exterior are rol estetic;**
  - **aspectul exterior nu are rol functional;**

Proprietatea industrială ; semne asociate produselor în activitatea comercială

- **Mărci**
- **Indicații geografice**
- **Numele comercial**

Proprietatea industrială ; semne asociate produselor în activitatea comercială

- **Funcţii principale:**
  - **indică (direct sau indirect) sursa de proveniență a produselor şi / sau serviciilor;**
  - **permit consumatorului să identifice produsele şi / sau serviciile;**
  - **cele două funcţii - de indicare a sursei şi de identificare - au ponderi diferite, după cum vorbim de mărci, indicaţii geografice sau nume comercial;**

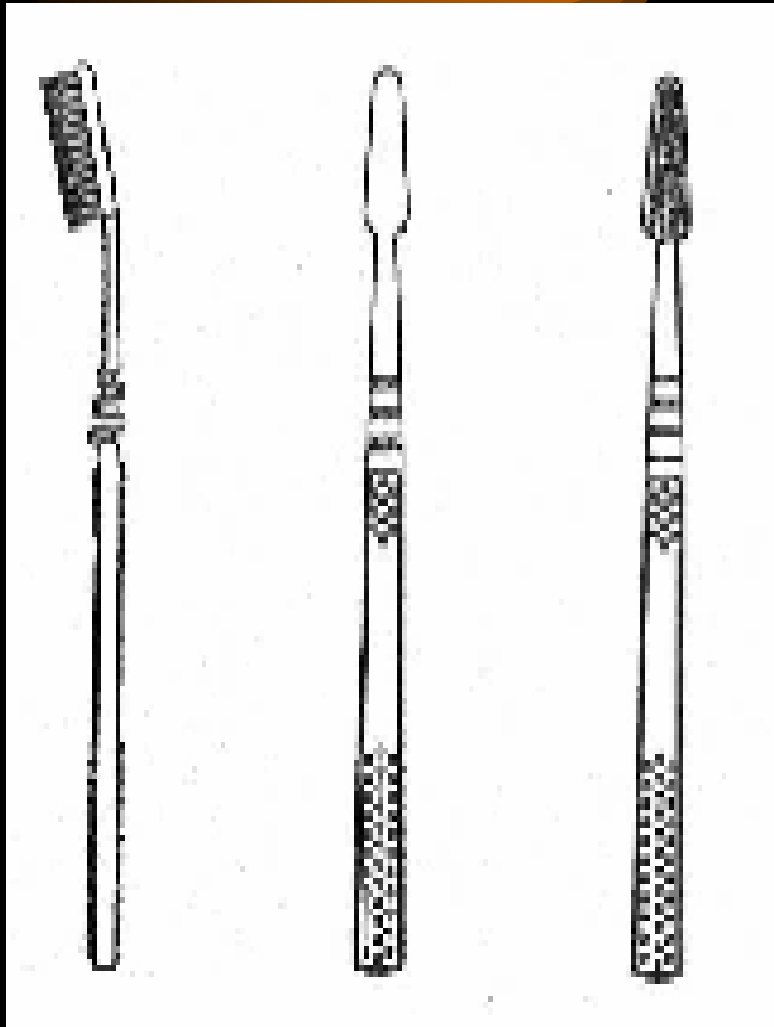
Probleme de interferență între obiectele proprietății industriale

- Periuța de dinți din imagine poate fi analizată ca:

- **invenție?**

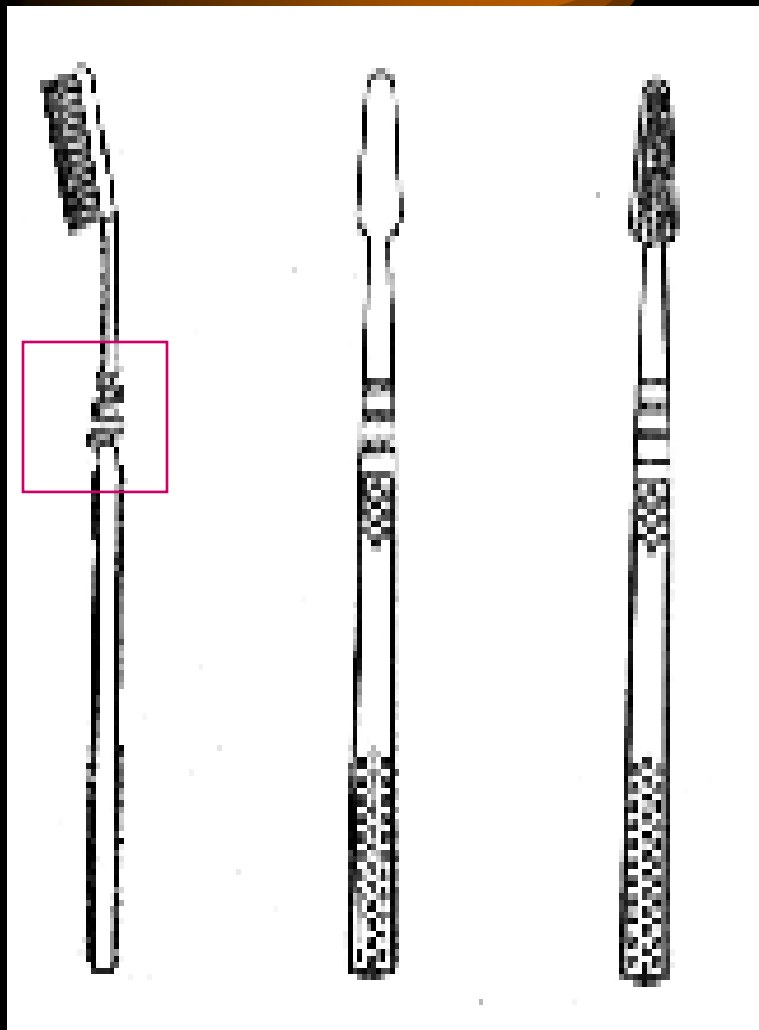
- **model industrial?**

- **marcă?**



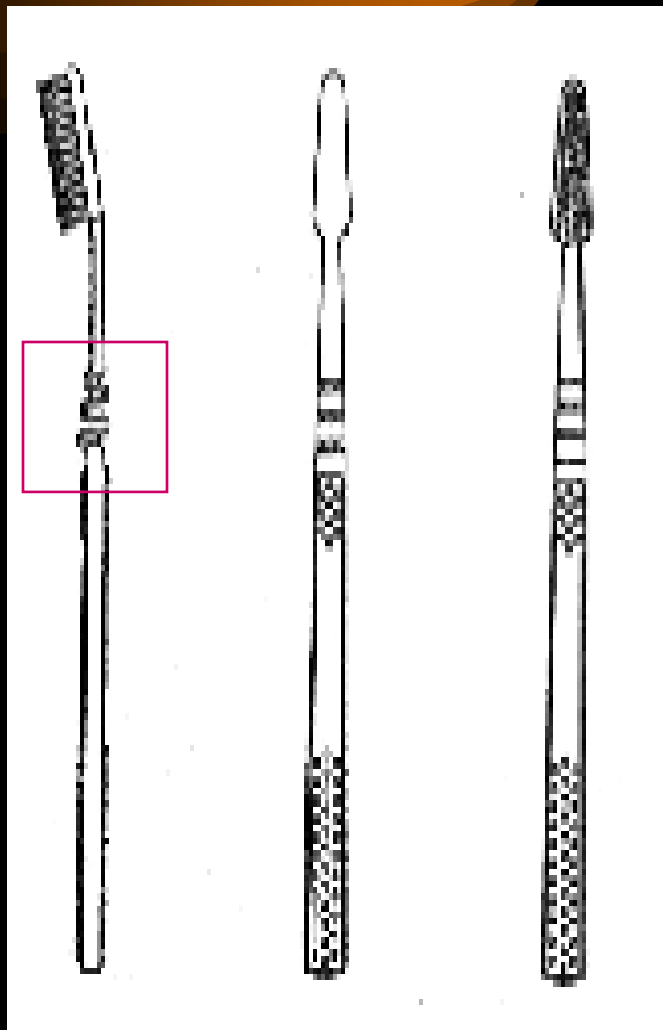
Probleme de interferență între obiectele proprietății industriale

- Onduleurile, de pe mânerul periuței, din chenarul roşu:
- **sunt elastice,**
- **permit flexarea capului periuței,**
- **prin aceasta, limitează presiunea pe dantură când sunt periați dinții;**
- **Funcție tehnică; INVENȚIE!**



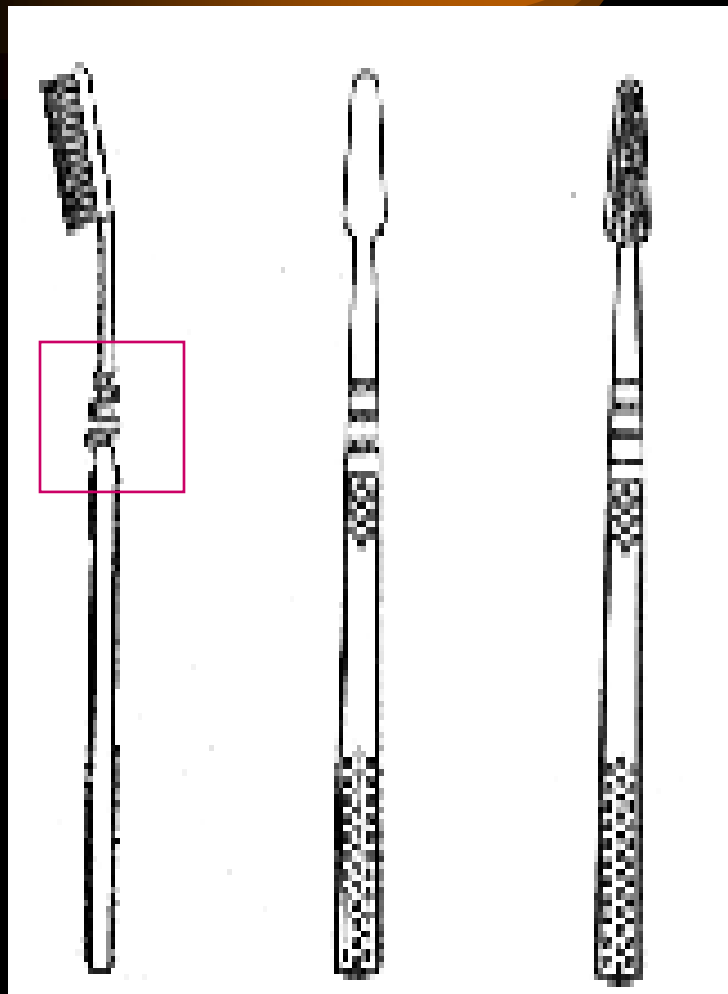
Probleme de interferență între obiectele proprietății industriale

- Onduleurile, de pe mânerul periuței, din chenarul roşu:
- **sunt rigide, periuța are funcția utilitară "clasică"; onduleurile nu aduc o funcție suplimentară,**
- **se apreciază că, prin această formă, periuța e "mai frumoasă";**
- **Funcție estetică; model industrial!**



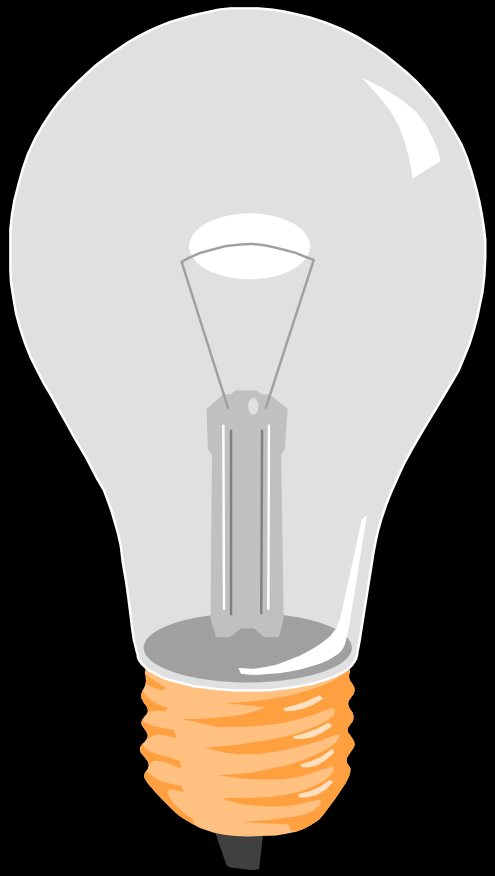
Probleme de interferență între obiectele proprietății industriale

- Onduleurile, de pe mânerul periuței, din chenarul roşu:
- **sunt rigide, periuța are funcția utilitară “clasică”; onduleurile nu aduc o funcție suplimentară,**
- **prin această, formă periuța “poate fi deosebită”de alte periuțe de către cumpărător;**
- **Funcție de identificare; marcă!**



Mărcile şi protecţia acestora

Am acumpărat becul din imagine

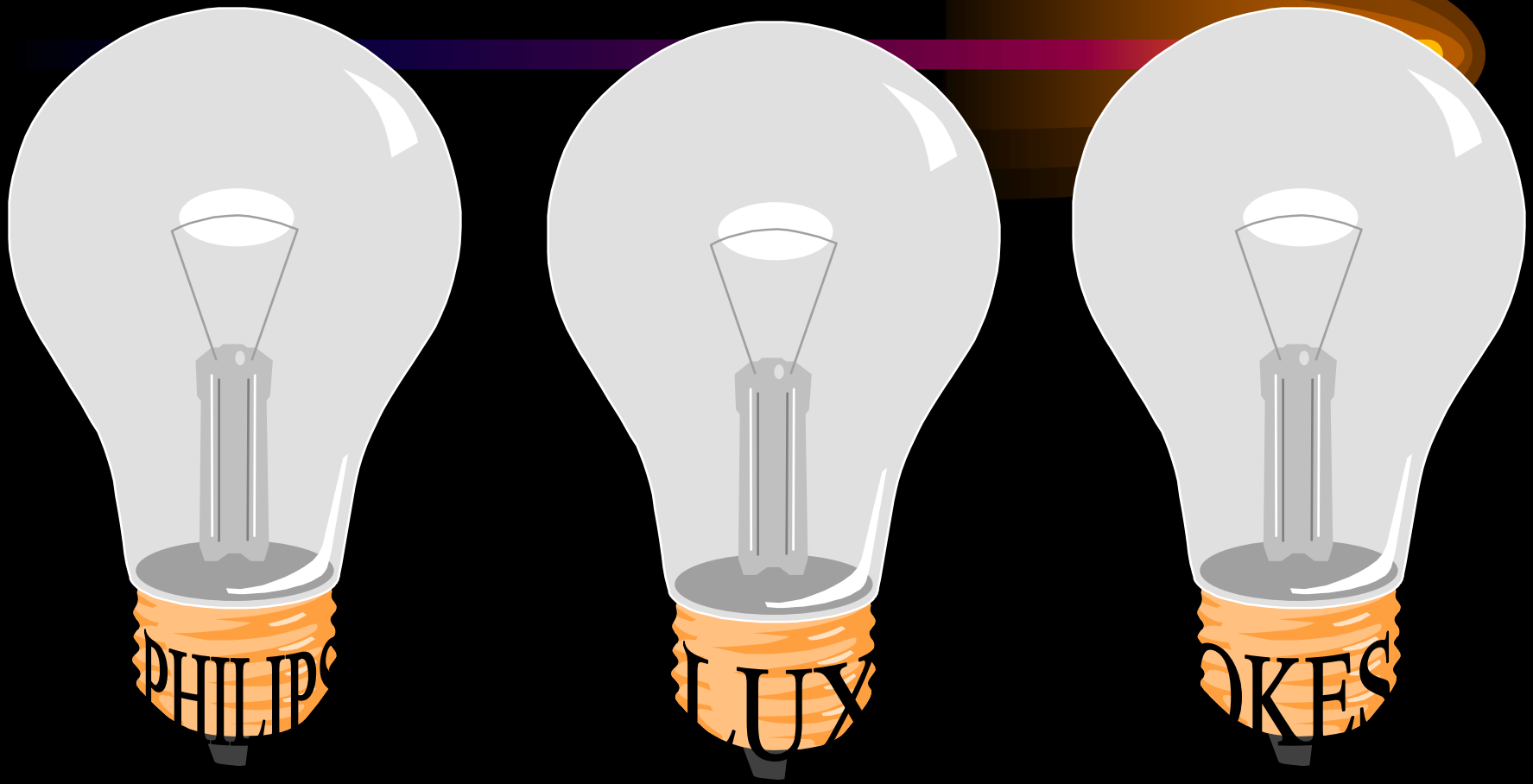


- După 10.000 de ore de funcționare s-a “ars”...
- şi dorind să-l înlocuim cu unul “la fel de bun”…
- mergem în magazin să cumpărăm altul.

În magazin surpriză… găsim 3 tipuri de becuri, identice ca aspect şi performanţe

Pe care îl algem?

Constatăm că fiecare are o …
“marcă”: PHILIPS, LUX, OKES;



Şi problema este ca şi rezolvată!
Alegem marca ….

Dar ce este marca MARCA?

- **Însemn, caracteristică suplimentară,**
- **asociat(ă) produselor şi / sau serviciilor,**
- **care permite consumatorului să deosebească produsele şi / sau serviciile identice sau similare;**
- **Pe această bază, consumatorul poate să aleagă produsele şi / sau seviciile care îi satisfac exigenţele şi care provin dintr-o anumită sursă;**

Tipuri (tradiționale) de mărci

- **Vizuale**
  - În general, însemne perceptibile vizual: etichete, forme, etc.
- **Sonore**
  - Însemne perceptibile auditiv: cuvinte, fragmente muzicale, etc.
- **Tactile**
  - Forme în relief, tridimensionale;
- **Olfactive**
  - Mirosuri (de ex. al unei coli de scris);
- **Organoleptice**
  - Gusturi - de ex. vin spumant cu aromă de căpşuni;

Pentru consumator, MARCA

- **Nu este însemnul în sine, ci însemnul asociat produselor sau serviciilor;**

- **Pentru consumator, marca are două funcții principale:**
  - **funcția de diferențiere - permite consumatorului să deosebească între ele produsele / serviciile identice sau similare;**
  - **funcția de indicare a sursei - chiar dacă nu cunoaşte deținătorul mărcii, consumatorul ştie că produsele realizate de acesta îi satisfac exigențele;**

Pentru deținător, MARCA

- **Este elementul de legătură între produse / servicii şi deținătorul acesteia,**
- **Permite titularului investiții în publicitate,pentru a-i fi cunoscute produsele şi în calitate, pentru a creşte încrederea consumatorului în acestea;**
- **pe această bază titularul îşi poate recupera investițiilor făcute în calitate şi publicitate şi îşi poate creşte profiturile.**

DE CE PROTECȚIA MĂRCII?

- Pentru a interzice terților utilizarea acesteia fără consimțământul titularului
- Prin aceasta titularul obține:
  - protejarea investițiilor în publicitate,
  - evitarea situației în care alții profită de investițiile făcute de acesta în publicitate,
  - protejarea profiturilor obținute din utilizarea mărcii,
  - reducerea riscului de "degenerare" a mărcii.
  - crearea posibilității de "contabilizare" a valorii acesteia şi de creştere a valorii mărcii în cazul cesionării sau licentierii.