UNIVERSITATEA DE ŞTIINȚE AGRICOLE ŞI MEDICINĂ VETERINARĂ "ION IONESCU DE LA BRAD" IAŞI

FACULTATEA DE HORTICULTURĂ

ASAS - FILIALA IAŞI

SOCIETATEA ROMÂNĂ A HORTICULTORILOR

CENTRUL DE CERCETĂRI HORTICOLE IAŞI

PROGRAM

SIMPOZIONUL ŞTIINȚIFIC INTERNAȚIONAL

"HORTICULTURA – ŞTIINȚĂ, CALITATE, DIVERSITATE ŞI ARMONIE"

100 DE ANI DE ÎNVĂȚĂMÂNT SUPERIOR AGRONOMIC LA IAŞI

24-26 MAI 2012
IAŞI

Consiliul Profesoral al **Facultății de Horticultură Iaşi** are deosebita plăcere de a vă invita la Simpozionul ştiințific internațional ***"HORTICULTURA – ŞTIINȚĂ, CALITATE, DIVERSITATE ŞI ARMONIE"***, care se va desfăşura în perioada **24-26 mai 2012.**

DECAN,
Prof. dr. Lucia DRAGHIA

PRODECAN,
Prof. dr. Gică GRĂDINARIU

PRODECAN,
Prof. dr. Liliana ROTARU

The Academic Board of the ***Faculty of Horticulture Iaşi*** *takes great pleasure in inviting you to International Scientific Symposium "HORTICULTURE – SCIENCE, QUALITY, DIVERSITY AND HARMONY", which will be held on* ***May 24-26, 2012****.*

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Ph. D. Prof. Lucia DRAGHIA

PRO DEAN**,**
Ph. D. Prof. **Gică GRĂDINARIU.**

PRO DEAN,
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- Tuscia University ,Viterbo, Italy
- Agricultural University of Athens, Greece
- Aristotle University, Thessaloniki, Greece
- Universidad de Castilla-La Mancha, Albacete, Spain
- Technical University of Moldova, Chişinău, Republic of Moldova
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- Instituto Agroforestal Mediterráneo, Universidad Politécnica de Valencia, Spain
- Liquor Control Board of Ontario (LCBO), Toronto, Canada
- Zonal Scientific Research Institute in Wine and Fruit Growing in the North Caucasus, Krasnodar, Russian Federation
- Institute of Genetics and Plant Physiology, Chişinău, Republic of Moldova
- Research and Practical Institute for Horticulture and Food Technologies, Chişinău, Republic of Moldova
- Institute of Pedology, Agrochemistry and Soil Protection “N. Dimo”, Chişinău, Republic of Moldova
- Institute of Plant Protection and Ecological Agriculture, Chişinău, Republic of Moldova
- Botanical Garden (Institute) of the Academy of Sciences of Moldova, Chişinău, Republic of Moldova
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- Stațiunea de Cercetare - Dezvoltare pentru Pomicultură Constanța
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- Spitalul de Boli infecțioase "Sfânta Parascheva", Iaşi
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- TVR Iaşi
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- RADIO Iaşi
- Revista "LUMEA SATULUI"

PROGRAMUL SIMPOZIONULUI

• JOI 24 MAI 2012

AULA MAGNA „HARALAMB VASILIU”

08^{30}-10^{00} - Primirea şi înregistrarea participanților

10^{00}-10^{45} - Deschiderea festivă a simpozionului şi cuvântul invitaților

10^{45}-12^{00} - Prezentarea lucrărilor în plen

10^{45}-11^{05} – Kallithraka Stamatina şi colab. - "*CORRELATIONS OF SENSORY DATA WITH ANALYTICAL POLYPHENOLIC COMPOSITION OF GREEK WINES*" - Department of Food Science and Technology, Agricultural University of Athens, Greece

11^{05}-11^{25}- Economou Athanasios şi colab. - "*SPEEDING UP FLOWER STEM PRODUCTION AND HARVEST BY VARIOUS PRUNNING PRACTICES IN GREENHOUSE ROSES*" - Faculty of Agriculture, Aristotle University, Thessaloniki, Greece

11^{25}- 11^{45} - Stachowiak Aleksander - "*RESEARCH AND ACHIEVEMENTS OF THE DEPARTMENT DENDROLOGY AND NURSERY AT THE POZNAŃ UNIVERSITY OF LIFE SCIENCES*" - Departament of Pomology, University of Life Sciences of Poznan, Poland

11^{45}- 12^{00} - Veliksar Sofia şi colab. - APPLICATION OF TRACE ELEMENTS AND MICROORGANISMS FOR GRAPE SEED GERMINATION AND GROWTH OF CUTTINGS - Institute of Genetics and Plant Physiology Moldavian Academy of Sciences, Chişinău, Republic of Moldova

12^{00} – 12^{30} – Moment artistic

12^{30} – 14^{00} - Pauză de masă

ACTIVITĂȚI PE SECȚIUNI

14^{00} - 19^{00} - Prezentarea referatelor (oral/poster) pe secțiuni

19^{00} - 19^{30} – Discuții, concluzii

20^{00} - Masa festivă (Restaurant Moldova)

• VINERI 25 MAI 2012

8^{30} – 10^{30} - Prezentarea lucrărilor pe secțiuni (oral/poster).
Prezentare carte de specialitate (secțiunea III şi IV)

10^{30} – 12^{00} - Workshop cu tema "*Metode de investigare a stresului abiotic asupra plantelor horticole*". Moderator Dr. Liliana Sfichi Duke (Department of Physiology, University of Kentucky, Lexington, KY, USA)

12^{00} – 13^{00} – Concluzii. Închiderea lucrărilor simpozionului

13^{00} - 14^{00} - Pauză de masă

14^{00} - **16^{00}** - Vizitarea laboratoarelor de cercetare şi a câmpurilor didactice

CONFERENCE PROGRAMME

• THURSDAY, MAY 26, 2011

AULA MAGNA "HARALAMB VASILIU"

08^{30} a.m. – 10^{00} a.m. - Symposium registration

10^{00} a.m. – 10^{45} a.m. - Opening ceremony, guests speech

10^{45} a.m. – 12^{00} p.m. – Plenary session

10^{45} a.m. - 11^{05} a.m. – Kallithraka Stamatina et al. "*CORRELATIONS OF SENSORY DATA WITH ANALYTICAL POLYPHENOLIC COMPOSITION OF GREEK WINES*" - Department of Food Science and Technology, Agricultural University of Athens, Greece

11^{05} a.m. - 11^{25} a.m. - Economou Athanasios et al. "*SPEEDING UP FLOWER STEM PRODUCTION AND HARVEST BY VARIOUS PRUNNING PRACTICES IN GREENHOUSE ROSES*" - Faculty of Agriculture, Aristotle University, Thessaloniki, Greece

11^{25} a.m. - 11^{45} a.m. - Stachowiak Aleksander "*RESEARCH AND ACHIEVEMENTS OF THE DEPARTMENT DENDROLOGY AND NURSERY AT THE POZNAŃ UNIVERSITY OF LIFE SCIENCES*" - Departament of Pomology, University of Life Sciences of Poznan, Poland

11^{45} a.m. - 12^{00}p.m - Veliksar Sofia et al. - APPLICATION OF TRACE ELEMENTS AND MICROORGANISMS FOR GRAPE SEED GERMINATION AND GROWTH OF CUTTINGS - Institute of Genetics and Plant Physiology Moldavian Academy of Sciences, Chişinău, Republic of Moldova

12^{00} p.m. – 12^{30} p.m – Artistic moments

12^{30} p.m. – 2^{00} p.m - Lunch

ACTIVITIES SECTION

2^{00} p.m. – 7^{00} p.m. - Oral and poster presentations

7^{00} p.m. – 7^{30} p.m. - Comments upon papers, posters and conference subjects

8^{00} p.m. - Gala dinner (Moldova Restaurant)

• FRIDAY, MAY 27, 2011

8^{30} a.m. – 10^{30} a.m. - Oral and poster presentations
Specialty books presentation (section III and IV)

10^{30} a.m - 12^{00} p.m - Workshop "Methods of investigation at abiotic stress on horticultural plants" - Dr. Liliana Sfichi Duke (Department of Physiology, University of Kentucky, Lexington, KY, USA)

12^{00} p.m. - 1^{00} p.m. – Closing ceremony

1^{00} p.m. – 2^{00} p.m - Lunch

2^{00} p.m. – 4^{00} p.m. - Visit of research laboratories and teaching fields

SECȚIUNEA I - ***DISCIPLINE FUNDAMENTALE, ECONOMICE ŞI UMANISTE***

1.1. ***Laborator Legumicultură – etaj II***

Botanică
Fiziologie vegetală
Genetica
Ameliorarea plantelor
Chimie - Biochimie
Biofizică şi agrometeorologie
Informatică
Statistică biologică şi matematică aplicată în biologie

1.2. ***Sala seminar S_8 – etaj II***

Pedagogie şi metodică
Limbi străine
Ştiințe economice

SECȚIUNEA a II-a - ***TEHNOLOGII HORTICOLE***

2.1. ***Amfiteatrul A_6 – etaj II***

Legumicultură
Pomicultură
Floricultură
Arboricultură ornamentală
Construcții horticole
Horticultură ecologică

2.2. ***Laborator Viticultură – etaj II***

Viticultură
Oenologie
Tehnologia produselor horticole

SECȚIUNEA a III-a – ***ŞTIINȚELE SOLULUI. PROTECȚIA PLANTELOR ŞI A MEDIULUI***

3.1. ***Laborator Imbunătățiri funciare - parter***

Agrochimie
Agrotehnică
Fitotehnie
Pedologie
Îmbunătățiri funciare
Topografie şi cadastru agricol
Mecanizarea agriculturii

3.2. ***Amfiteatrul A_4 – etaj II***

Fitopatologie
Entomologie
Microbiologie
Biologia solului
Ecologie
Ingineria mediului

SECȚIUNEA a IV-a – ***PEISAGISTICĂ***
Laborator Floricultură – etaj II

1st SECTION – FUNDAMENTAL, ECONOMIC AND HUMANISTIC SCIENCES

1.1. Vegetable Growing Laboratory, second floor

Botany
Vegetal physiology
Genetics - Plant breeding
Chemistry – Biochemistry
Biophysics and agro-meteorology
Computer science
Biostatistics and Biomathematics

1.2. Lecture room (S_8), second floor

Pedagogy
Foreign Languages
Economic Sciences

2nd SECTION - HORTICULTURE TECHNOLOGIES

2.1. 6th Lecture room (A_6), second floor

Vegetable Growing
Fruit Growing
Floriculture
Ornamental Arboriculture
Horticultural constructions
Ecological horticulture

2.2. Viticulture Laboratory, second floor

Viticulture
Oenology
Postharvest Technology of Horticultural Products

3rd SECTION - SOIL SCIENCES. PLANTS AND ENVIRONMENT PROTECTION

3.1. Land amelioration Laboratory, ground floor

Agrochemistry
Agrothechnycs
Phytothechnycs
Pedology
Land ameliorations
Topography and Agricultural cadastre
Mechanization of Agriculture

3.2. 4th Lecture room (A_4), second floor

Phytopathology
Entomology
Microbiology
Soil biology
Ecology
Environmental engineering

4th SECTION - LANDSCAPE ARCHITECTURE
Floriculture Laboratory, second floor

Plenary session

Kallithraka Stamatina[1], Kim D.[2], Tsakiris A.[3], Paraskevopoulos I.[3], Kotseridis G[1]., Kyraleou Maria[1], Soleas G.[2] ([1]Department of Food Science and Technology, Agricultural University of Athens, Greece; [2]Liquor Control Board of Ontario (LCBO), Toronto, Canada; [3]Department of Œnology & Beverage Technology, Technological Educational Institute of Athens, Greece)

CORRELATIONS OF SENSORY DATA WITH ANALYTICAL POLYPHENOLIC COMPOSITION OF GREEK WINES

The purpose of this study was to measure the astringency of selected Greek red wines and to assess the relationship between sensory and chemical data. Nine red wines produced by three native Greek grape varieties (Agiorgitiko, Xinomavro and Mandilaria) were used and their astringency and bitterness was assessed by a trained panel. In addition, their astringency was estimated chemically employing the ovalbumin precipitation method. The sensory data showed that mandilaria was the most astringent variety whereas Agiorgitioko the least. Statistical analysis of the results indicated that the chemical data obtained for astringency significantly correlated with the sensory determinations. In addition significant correlations were obtained between sensory data and wine polyphenolic composition.

Tsanakas George[1], Economou Athanasios[1], Patraş Antoanela[2] ([1]Faculty of Agriculture, Aristotle University, Thessaloniki, Greece; University of Agricultural Sciences and Veterinary Medicine of Iasi, România)

SPEEDING UP FLOWER STEM PRODUCTION AND HARVEST BY VARIOUS PRUNNING PRACTICES IN GREENHOUSE ROSES

Shoot-bending is the prevailing growing technique in roses today for producing cut flower stems worldwide. At the same time, reducing the required time between two consecutive flower stem harvests, without altering flower stem quality, is of high importance economically. In this work, young rose plants (Rosa sp. 'Red Horizon') were established in winter, applying the shoot-bending technique, in 10 L containers filled with coir and grown hydroponically. In the first experiment, the effect of the removal of the terminal flower bud in the bent shoot on the time required for the production and harvest of the first wave of flower stems and their commercial and physiological characteristics were studied. It was found that removal of the flower bud delayed production and harvest of flower stems by 6 days in comparison with the non-removal flower bud in the control plants. There were no differences between the two treatments in the number of flower stems produced, their length and fresh weight and their lignin concentration and photosynthetic rate. In another experiment, the influence of the point of cutting flower stems (above 2nd 5-leaflet, 1st 5-leaflet or 1st 3-leaflet leaf) on the required time for the subsequent flower stem production and harvest and their commercial and physiological characteristics were investigated in two periods (summer and winter). It was found that when the point of cutting was above the 2nd 5-leaflet leaf, then the harvest of the subsequent flower stems was sped up by 9 and 19 days, in summer and winter, respectively. No differences were found concerning fresh weight, lignin concentration and photosynthetic rate of flower stems, whereas, the length of the flower stems was longer when cutting was made above the 1st 3-leaflet leaf in winter than in summer and the other treatments. In the third experiment, the effect of the treated 5-leaflet leaf (attached, detached or bent petiole) below the point of cutting on the required time of the subsequent production and harvest of flower stems and their commercial and physiological characteristics were studied during summer and winter. In the treatment of the bent petiole of the 5-leaflet leaf, the time to the subsequent flower stem harvest was reduced up to 11 days in comparison to the other two treatments. There were no differences in the length and the fresh weight of the harvested flower stems and their lignin concentration and photosynthetic rate among the three treatments applied. In conclusion, the time for the production of rose flower stems, without altering their quality, could be reduced by keeping the terminal flower bud in the bent shoot and by cutting the flower stems above the 2nd 5-leaflet leaf which in turn should be bent.

Stachowiak Aleksander (Department of Pomology, University of Life Sciences of Poznan, Poland)

RESEARCH AND ACHIEVEMENTS OF THE DEPARTMENT DENDROLOGY AND NURSERY AT THE POZNAŃ UNIVERSITY OF LIFE SCIENCES

Department of Dendrology and Nursery is the youngest unit of the Faculty of Horticulture and Landscape Architecture at the Poznań University of Life Sciences. The unit has been separated from Department of Seed Science and Technology and Horticultural Nursery on January 1, 2005. In the

Department over 40 varieties of Maidenhair Tree (Ginkgo biloba), and about 130 varieties of vine (Vitis vinifera) had been collected. The educational collections of angiosperms and gymnosperms plants, Lilacs, and miniature and ground cover roses cultivars had been established. To 2006: 4 cultivars of cherries, 3 cultivars of Apple trees, 11 cultivars of Maidenhair Tree, 1 cultivar of European Barberry (Berberis) and one rootstock for the Lilac cultivar (Syringa) Syringa x henryi had been bred and registered. Currently breeding of new rootstocks for apple, pear, peach and cherries is conducted. The experiments on the mycorrhiza fungi for ornamental and orchard species are also conducted from a few years. The head of the Department is Prof. Stanisława Korszun.

Veliksar Sofia, Lemanova Natalia, Toma Simion, Brațco D., David Tatiana (Institute of Genetics and Plant Physiology Moldavian Academy of Sciences, Chişinău, Republic of Moldova)

APPLICATION OF TRACE ELEMENTS AND MICROORGANISMS FOR GRAPE SEED GERMINATION AND GROWTH OF CUTTINGS

APLICAREA MICROELEMENTELOR ŞI MICROORGANISMELOR PENTRU GERMINAREA SEMINȚELOR VIȚEI DE VIE ŞI CREŞTEREA BUTAŞILOR

Reproduction *of vine by seeds is of great importance in the selection for new hybrid varieties creation. Vine seeds have low germination energy such as some species of trees and shrubs. Research conducted in the 2010-2011 under controlled conditions and production ones have shown the possibility to increase seed germination rate of the grape and to improve the quality of planting material by applying trace elements complex Microcom-V and suspension of microorganisms Pseudomonas fluorescence (for hybrid seeds obtained by crossing) and Azotobacter chroococcum (for seeds of standard varieties). Soil application of microorganisms and foliar fertilization of rooted cuttings during vegetation by trace elements and metabolites of microorganisms increased the roots and shoots growth, which is very valuable to increase the quantity and quality of seedlings in vine nursery.*

1st SECTION

FUNDAMENTAL, ECONOMIC AND HUMANIST SCIENCES

1.1. BOTANICĂ, FIZIOLOGIE VEGETALĂ, GENETICĂ, AMELIORAREA PLANTELOR, CHIMIE, BIOCHIMIE, BIOFIZICĂ, INFORMATICĂ, STATISTICĂ BIOLOGICĂ ŞI MATEMATICĂ APLICATĂ ÎN BIOLOGIE

1.1. BOTANY, VEGETAL PHYSIOLOGY, GENETICS, PLANT BREEDING, CHEMISTRY, BIOCHEMISTRY, BIOPHYSICS, COMPUTER SCIENCE, BIOSTATISTICS AND BIOMATHEMATICS

Moderatori:
Prof. univ. dr**. Servilia OANCEA**
Prof. univ. dr**. Sofia VELIKSAR**
Conf. univ. dr. **Culiță SÎRBU**
Conf. univ. dr. **Carmen Lucia TRINCĂ**

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Asist. dr. Adina **CĂPRARU**
Asist. drd. Florin **CURA**

LUCRĂRI PREZENTATE ORAL
ORAL PRESENTATIONS

BOTANICA
BOTANY

Grigore Marius-Nicuşor[1], Toma Constantin[1], Boşcaiu Monica[2], Zamfirache Maria-Magdalena[1], Ivănescu Lăcrămioara[1] ([1]„Al.I.Cuza" University of Iaşi, [2]Instituto Agroforestal Mediterráneo, Universidad Politécnica de Valencia, Spain)

ANATOMICAL AND ECOLOGICAL OBSERVATIONS ON PSAMMO-HALOPHYTES SPECIES (EASTERN PART OF SPAIN).
OBSERVAȚII ANATOMO-ECOLOGICE LA SPECII DE PSAMO-HALOFITE (PARTEA ESTICĂ A SPANIEI).

In this work, we included preliminary data regarding anatomical and ecological adaptations in species collected from sea shore in Spain, during 2010. Species we have anatomically investigated are: Crithmum maritimum L. (Apiaceae), Plantago coronopus L. (Plantaginaceae), Sporobolus pungens (Schreb.) Kunth (Poaceae), Cakile maritima Scop. (Brassicaceae), Bassia hyssopifolia (Pall.) Kuntze, Salsola kali L. (Chenopodiaceae) and Frankenia laevis L. (Frankeniaceae). We focussed mainly on those relevant morphological and anatomical features closely related to environmental factors imposed by maritime littoral: hydric deficit, high salinity and sun exposure. Thus, several taxa have a deep rooting system (Cakile, Salsola) and others display shoot succulence (Crithmum, Cakile); these features should be regarded as an adaptation to xeric conditions. Species like Sporobolus and Frankenia posses salt glands, special devices involved in removal of concentrated salts.

Răduțoiu Daniel[1], Popescu Maria Ionela[2] ([1]University of Craiova, [2]Secondary School "Radu Selejan" of Sibiu)

RESEARCH ON THE VASCULAR FLORA FROM VIIŞOARA MARE AREA - DOLJ (ROMANIA).
CERCETĂRI ASUPRA FLOREI VASCULARE DIN ZONA VIIȘOARA MARE – DOLJ (ROMANIA)

Investigated area is situated at a distance of about 40 km from the city of Craiova, with the following coordinates: N 44^{0}14'553" and E 24^{0}08'549". In terms of geomorphology, High Viişoara locality is situated in the central southern Piedmont Plateau, south-western limit Olteț piedmont in its contact area with the passage Olt. Most of the area is occupied by relief units resulting from the action of the river and especially Teslui stream. Presence in the investigated a wide variety of flora is mainly due to the variety of soil types in this area. Among the many species and taxa are rare vascular floras in Romania: Lathyrussphaericus, Oenantheaquatica, Camelinarumelica, Thlaspialliaceum and Valerianellalasiocarpa. Also in this part of the country was recently described a variety new to science: Muscarineglectum var. sparsiflora.

Răduțoiu Daniel[1], Popescu Maria Ionela[2] ([1]University of Craiova, [2]Secondary School "Radu Selejan" of Sibiu)

CONTRIBUTIONS TO THE KNOWLEDGE OF ANATOMY AT SPECIES *VERONICA PERSICA* FROM ROMANIAN FLORA.

CONTRIBUȚII LA CUNOAȘTEREA ANATOMIEI SPECIEI *VERONICA PERSICA* DIN FLORA ROMÂNIEI

Veronica persica is one of the few species with solitary flowers that there is an abundant rooting in the main stem nodes. Plant physiognomy is variable depending on the substrate on which develops exhibition and competition with other species. The lack of studies of anatomy at the plant prompted us to address this aspect in order to contribute to a better understanding of how this plant. Anatomical data were included in an identification key process for determining the species.

FIZIOLOGIA PLANTELOR
VEGETAL PHYSIOLOGY

Barbu Cătălina ("Ştefan cel Mare" University of Suceava)

PHOTOSYNTHETIC PIGMENTS (CHLOROPHYLL *a*, CHLOROPHYLL *b*) DINAMICS IN SILVER FIR TREES NEEDLES INFECTED BY MISTLETOE

DINAMICA PIGMENȚILOR ASIMILATORI (CLOROFILA *a* ȘI CLOROFILA *b*) ÎN ACELE ARBORILOR DE BRAD DIN DIFERITE CLASE DE PARAZITARE CU VÂSC

In silver fir stands of Bucovina located on the eastern border of silver fir distribution area, the presence of a pathogen agent with an important role in fir decline - mistletoe (Viscum album ssp. abietis) – has been noticed. The mistletoe infections are located in mature and aged stands wherein the proportion of silver fir exceeds 40%, located below the elevation of 700 meters. Our objective was to evaluate the intimate transformation that occure in silver fir needles because of mistletoe infection. To determine whether there were differences of photosynthetic pigments (chlorophyll a and b) in needles of trees from different infection classes we colected samples for analysis from three trees in each infection class. Photosynthetic pigments were extracted from needle material with 80% acetone. The amount of clorophyll increases with needle age but decreases with infection degree. The clorophyll a / clorophyll b ratio decreases from the healthy to the very infected trees..

Rotaru Vladimir (Institute of Genetics and Plant Physiology Moldavian Academy of Sciences, Chisinau, Republic of Moldova)

THE INFLUENCE OF PHOSPHORUS AND RHIZOBACTERIA ON SOYBEAN (*GLYCINE MAX., L.*) ROOT GROWTH UNDER SUBOPTIMAL MOISTURE REGIME

ACȚIUNEA FOSFORULUI ŞI RIZOBACTERIILOR ASUPRA CREŞTERII SISTEMULUI RADICULAR LA SOIA (*GLYCINE MAX., L.*) ÎN CONDIȚII SUBOPTIMALE DE UMIDITATE

The effect of phosphorus and suspension of microorganisms Azotobacter chroococcum and Pseudomonas fluorescens on root growth and phosphorus concentration of soybean plants exposed to a short drought stress was studied in a greenhouse experiment. The suspension of microorganisms was administrated in soil without or with P supply. Control plants were grown at normal moisture conditions 70% WHC (water holding capacity) and other part of plants at flowering stage was subjected to water deficit - 35% WHC. The results shown that drought reduced the morphological root parameters irrespective of level of P. Dry mass of roots, total root length, specific root length and fine roots increased in treatments with microorganisms application, in particular in treatment without P. The content of total P in soybean organs din not change significantly but it was observed an increase of Pi concentration. Hence, the application of rizobacteria could contribute to root vigor and provide a tolerance of plants to drought conditions.

GENETICA ŞI AMELIORAREA PLANTELOR
GENETICS AND PLANT BREEDING

Ciobotari Gheorghii, Efrose Rodica, Brînza Maria, Sfichi-Duke Liliana (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

cDNA-AFLP ANALYSIS OF GENE EXPRESSION IN RED RASPBERRY (*RUBUS IDAEUS* L.) DURING WATER STRESS

ANALIZA EXPRESIEI GENICE LA ZMEUR (*RUBUS IDAEUS* L.) ÎN CONDIȚII DE STRES HIDRIC PRIN TEHNICA cDNA-AFLP

Water stress has negative effects on plant growth and productivity. A cDNA-AFLP (amplified fragment length polymorphism) analysis was performed to identify differential gene expression in response to water stress in red raspberry (Rubus idaeus L.) plants. The expression profile was compared between well-watered control plants (100±10% field capacity) and stressed plants (40±5% field capacity) cultured in

greenhouse conditions. Screening 64 primer combinations identified multiple transcript-derived fragments (TDFs) that are differentially expressed in water stress conditions. The differences between control and stressed plants were qualitative when TDFs were either present or absent or quantitative when TDFs showed different levels of expression. The results show that cDNA-AFLP is a valuable technique for studying expression patterns of genes involved in sensitivity/tolerance mechanisms to water stress in red raspberry.

Mihalte Lucica, Vîlcan Alina, Feszt Gyorgy (University of Agricultural Sciences and Veterinary Medicine of Cluj Napoca)

THE STUDY OF THE VARIABILITY OF THE MAIN PLANTS AND SEEDS CHARACTERS OF DIFFERENT SPECIES BELONGING TO *CACTACEAE*

STUDIUL VARIABILITĂTII PRINCIPALELOR CARACTERE ALE PLANTELOR ŞI SEMINȚELOR LA DIFERITE SPECII DE *CACTACEAE*

At Cactaceae family the characters relied on a botanical classification (systematic method) are: plant diameter, number of spines/areoles, and length of spines, flower diameter, and flower colour. The analysis of the plants peculiarities showed a relatively low variability of biological material according to genus and species. Within the 180 studied species, the coefficient of variability of the seeds weight was recorded being high. In this study it has been revealed a poor germination of seeds, many of the species analyzed proved refractory in this respect (55 species had germination percentages 0.0%).

CHIMIE-BIOCHIMIE
CHEMISTRY- BIOCHEMISTRY

Andrițoiu Călin Vasile, Prisăcaru Anca Irina ("Gheorghe Asachi" Technical University of Iaşi)

IMPLICATIONS OF APITHERAPY REGARDING THE EVOLUTION OF MINERALS IN ACETAMINOPHEN INDUCED INTOXICATION

IMPLICAȚIILE APITERAPIEI PRIVIND EVOLUȚIA MINERALELOR ÎN INTOXICAȚIA MEDICAMENTOASĂ CU ACETAMINOFEN

Acetaminophen is one of the most used analgesic and antipyretic substances in Europe and United States. Found in over 100 pharmaceutical products, it is one of the most common drugs with liver and kidney toxicity potential. The drug-induced affection was achieved by gavage administration of acetaminophen (100 mg/100 g), for 2 weeks. Administration of apitherapy preparations to the group with drug-induced toxicity, in comparison with the unprotected group, determined: decrease of iron (242±48.23 versus 73.6±6.29), decrease of potassium (6.24±0.43 versus 5.41±0.15), increase of serum calcium (7.96±0.4 versus 9.68±0.47) and increase of ionized calcium (3.86±0.24 versus 4.35±0.18). Supplementation of apitherapy diet with Royal Jelly determined a less important decrease of iron and a more significant increase of serum and ionized calcium compared to the group treated only with apitherapy diet. In conclusion, administration of apitherapy products proved to be efficient in improving the levels of iron, potassium, serum and ionized calcium.

Prisăcaru Anca Irina, Andrițoiu Călin Vasile, Hurduc Nicolae ("Gheorghe Asachi" Technical University of Iaşi)

EVALUATION OF THE OXIDATIVE STRESS STATUS AND HEPATIC DETOXIFICATION FUNCTION AFTER THE INTAKE OF FOODS CONTAINING HIGH ACRYLAMIDE LEVELS

EVALUAREA STRESULUI OXIDATIV ŞI A FUNCȚIEI DE DETOXIFIERE HEPATICĂ ULTERIOR INGESTIEI DE ALIMENTE CU UN CONȚINUT BOGAT ÎN ACRILAMIDĂ

The present experiment evaluates the pathological changes in oxidative stress and hepatic detoxification function after the intake of foods containing high acrylamide levels, by the means of biochemical analysis (superoxide dismutase, catalase, free sulfhydryl groups). The experimental model included 4 groups of Wistar rats: reference group (standard food), control group (the drinking water was replaced by an acrylamide solution), FP group (fried potatoes and standard food), T group (toast and standard food). The results reveal that the intake of foods containing high acrylamide levels leads to the following modifications: decrease of CAT for control group, FP group, and T group; decrease of SOD for control group, FP group, and T group; decrease of free sulfhydryl groups for control group, FP group, and T group. In conclusion, the intake of foods with high acrylamide levels has an important negative impact upon the oxidative stress status and hepatic detoxification function.

Prisăcaru Anca Irina, Andrițoiu Călin Vasile ("Gheorghe Asachi" Technical University of Iaşi)

THE INVOLVEMENT OF FOODS CONTAINING HIGH ACRYLAMIDE LEVELS IN THE PROTEOSYNTHETIC FUNCTION OF THE LIVER

IMPLICAȚIILE ALIMENTELOR CU UN CONȚINUT BOGAT ÎN ACRILAMIDĂ ÎN FUNCȚIA DE PROTEOSINTEZĂ A HEPATOCITULUI

Acrylamide is a process-induced food toxicant found in fried, roasted, baked and grilled foods. The present experiment evaluates the hepatic proteosynthesis function after the intake of foods containing high

acrylamide levels (fried potatoes and toast), by determining total proteins, albumins, and cholinesterase. The experiment included 4 groups of Wistar rats: reference group (standard food), control group (standard food and acrylamide solution 0.1 µg/L), FP group (fried potatoes and standard food), T group (toast and standard food). The results reveal that the intake of foods containing high acrylamide levels leads to: decrease of total proteins for control group, FP group, and T group; increase of albumins and cholinesterase for control group, FP group, and T group. In conclusion, the intake of foods with high acrylamide levels has a negative impact upon total serum proteins, the results not being sustained by the albumin and cholinesterase activities, unless a nephrotic syndrome is present.

Tucaliuc Roxana Angela[1], Cotea V. Valeriu[1], Niculaua Marius[2], Mangalagiu Ionel[3] ([1]University of Agricultural Sciences and Veterinary Medicine of Iaşi, [2]Research Center for Enology, Romanian Academy, Branch Iasi, [3]„Al.I.Cuza" University of Iaşi)

PYRROLOPYRIDAZINE DERIVATIVES: SYNTHESIS AND FLUORESCENT PROPRIETIES
DERIVAȚI PIROLOPIRIDAZINICI: SINTEZĂ ȘI STUDIUL PROPRIETĂȚILOR FLUORESCENTE

Recent studies proved that 1,2-diazines derivatives are invaluable materials in the fields of medicine (such as anti-HIV, antiviral and anticancer, antibacterial and antifungus medicines), opto-electronics (compounds with liquid crystal properties and highly fluorescent derivatives: sensors and biosensors, electroluminescent materials, lasers) and agriculture (herbicidal activity and the grow up factor for plants). 1,3-Dipolar cycloaddition is one the most important methods of constructing the pyrrolopyridazine. For some pyrrolopyridazine derivatives was studied the absorption and emission spectra, in ethanol, chloroform and cyclohexane solutions at room temperature.

BIOFIZICĂ
BIOPHYSICS

Oancea Servilia[1], Cazacu Ana[1], Oancea Andrei Victor[2] ([1]University of Agricultural Sciences and Veterinary Medicine of Iaşi, [2]„Al.I.Cuza" University of Iaşi)

THE EFFECTS OF MAGNETITE ON GROWTH DYNAMICS OF CORN PLANTS
EFECTUL MAGNETITEI IN CRESTEREA PLANTELOR DE PORUMB

The aim of this paper is to evaluate the effects of magnetite on corn plant growth. Seeds of corn (Zea mais) were put into Petri dishes on double filter paper together with suspensions from anionic clay with Mg, anionic clay containing Fe and magnetite. In addition we performed a treatment with pure magnetite on corn seeds. The seeds were kept here for 3 days. The dynamic of germination and the growth has been monitorized during the first phenophase of growth. After that the germinated seed were planted in soil where they continued to growth. The content of photosynthetic pigments has been obtained spectrophotometrically. The stimulator treatment from point of view of plant growth was the clay containing Mg, and magnetite. Therefore a slow release of the active substance from nanocomposite material can be exploited for control release formulation of some plant growth stimulator.

Oancea Servilia[1], Oancea Andrei Victor[2] ([1]University of Agricultural Sciences and Veterinary Medicine of Iaşi, [2]„Al.I.Cuza" University of Iaşi)

CHAOS CONTROL FOR TWO CHEMICAL SYSTEMS
CONTROLUL HAOSULUI A DOUA SISTEME CHIMICE

Over the last years, there has been considerable progress in generalizing the concept of synchronization to include the case of coupled chaotic oscillators especially technical reasons. When the complete synchronization is achieved, the states of both systems become practically identical, while their dynamics in time remains chaotic. Many examples of synchronization have been documented in the literature, but currently theoretical understanding of the phenomena lags behind experimental studies. The main aim of this paper is to study the synchronization of two chemical chaotic systems (described by Willamowski–Rössler model) based on the adaptive feedback method of control. The transient time until synchronization depends on initial conditions of two systems and on the control strength. Then we can control these chemical chaotic systems in accordance with recent debates of Wang and Chen about full global synchronization and partial synchronization in a system of two or three coupled chemical chaotic oscillators.

LUCRĂRI PREZENTATE POSTER
POSTER PRESENTATIONS

BOTANICA
BOTANY

Grigore Marius-Nicuşor[1], Toma Constantin[1], Zamfirache Maria-Magdalena[1], Boşcaiu Monica[2], Ivănescu Lăcrămioara[1] („Al.I.Cuza" University of Iaşi, Instituto Agroforestal Mediterráneo, Universidad Politécnica de Valencia, Spain)

HISTO-ANATOMICAL INVESTIGATIONS ON MEDICINAL SPECIES (*LAMIACEAE*) FROM MEDITERRANEAN CLIMATE.
INVESTIGAȚII HISTO-ANATOMICE LA PLANTE MEDICINALE (*LAMIACEAE*) DIN CLIMATUL MEDITERANEEAN.

In the present study we discuss several structural features regarding three medicinal species from Lamiaceae: Lavandula dentata L., Rosmarinus officinalis L. and Thymus vulgaris L. These taxa have been collected from Spain in 2010. Within all histo-anatomical characteristics, attention should be paid on protective and secretory hairs, having a large structural diversity. Thus, at the level of lamina in L. dentata protective hairs are multicellular, intensely branched, while secretory hairs have a multicellular gland covered by a prominent cuticle. In R. officinalis, secretory hairs are conspicuous, and different in their length. Their stalk consists of one, two or three cells and their unicellular gland is spherical. The basal cell of tri-cellular stalk has thick wall and could be branched on its length. Protective hairs noticed at lamina' level of T. vulgaris are very short, unicellular like-aculeus, with strongly enlarged basal part; other hairs are longer, usually unicellular, but may also consist of two or three cells.

FIZIOLOGIA PLANTELOR
VEGETAL PHYSIOLOGY

Ifrim Camelia,[1] Jităreanu Carmen Doina[2], Slabu Cristina[2], Marta Alina Elena[2], Toma Liana Doina[2] ([1]Botanical Garden of Iasi, [2]University of Agricultural Sciences and Veterinary Medicine of Iasi)

MORPHO-ANATOMICAL RESEARCHES IN SHOOT INTERNODE ON SOME GRAPEVINE CVS. CULTIVATED IN IASSY AND COTNARI VINEYARDS
CERCETĂRI MORFO-ANATOMICE ÎN AXUL LĂSTARULUI LA UNELE SOIURI DE VIȚĂ DE VIE CULTIVATE ÎN PODGORIILE IAŞI ŞI COTNARI

The morphology and anatomy of the shoot and root are criteria for the classification of taxonoms in the vine. Moreover, the anatomical variability of different genotypes is in direct relationship with the efficiency of water use. The adaptation to water stress is based on the hydraulic conductance of the plant, which is determined by the diameter and density of vessels in the xylem. In the study we analyze the morpho-anatomical structure of the shoot internode in the flowering phenophase at Frâncuşă, Fetească albă, Grasă de Cotnari and Tămâioasă românească vine varieties cultivated in Iasi and Cotnari vineyards, under the conditions of 2011. The differences between the varieties are visible in the secondary structure which result from the activity of cambium and phelogen meristems, especially in conducting tissues and refers to the number of layers of collenchyma, number of conducting beams (vascular bundles), presence of concentric beams and calotte of lignified cells in the liberian parenchyma.

Marta Alina Elena, Jităreanu Carmen Doina, Slabu Cristina, Toma Liana Doina (University of Agricultural Sciences and Veterinary Medicine of Iasi)

ECOPHYSIOLOGICAL RESEARCHES ON SOME GRAPEVINE CVS. CULTIVATED IN IASSY AND COTNARI VINEYARDS IN 2011 YEAR
CERCETĂRI ECOFIZIOLOGICE LA UNELE SOIURI DE VIȚĂ DE VIE CULTIVATE ÎN PODGORIILE IAŞI ŞI COTNARI ÎN ANUL 2011

In the context of climatic changes that take place on the planet and that are felt more and more in our country, the vines in areas of Moldova have to deal with two major problems: drought and excessive temperatures.Although vine has a great capacity to adapt to extreme conditions of hydrophily or xerophily, the water deficit during the dry years disturbs the main plant physiological processes, having negative effect on vine stock vegetation and their production capacity. In the Iasi and Cotnari vineyards, the growing season of 2011 was characterized by drought conditions caused by strong water deficit in May and July to September. This study analyzed the effect of climatic conditions on quantitative and qualitative parameters

of grape production and the dynamics of chlorophyll content in leaves of Frâncuşă, Fetească albă, Grasă de Cotnari and Tămâioasă românească vine cvs.

Stratu Anişoara, Timofte Elena, Costică Naela („Al.I.Cuza" University of Iaşi)
INFLUENCE OF SOME AQUEOUS EXTRACTS FROM *ANETHUM GRAVEOLENS* L. ON THE GERMINATION
INFLUENȚA UNOR EXTRACTE APOASE DE *ANETHUM GRAVEOLENS L.* ASUPRA GERMINAȚIEI

The paper presents the results of a study regarding the influence of aqueous extracts obtained from different organs (stems, leaves, inflorescences, fruits) of Anethum graveolens on seeds germination and seedlings growth in Raphanus sativus L. (Roşioară variety) and Cucumis sativus L. (Mapamond variety) species. The following parameters have been determined: the pH value of aqueous extracts; the pH value, the germination percentage between 24-72 hours, and the average length of the root and the hypocotyl. The results of the investigations that were carried out reveal the germination percentage and the average length of the root and hypocotyl present specific value variations according to the extract's concentration, the type of extract and the test species that was used.

GENETICA ŞI AMELIORAREA PLANTELOR
GENETICS AND PLANT BREEDING

Efrose Rodica, Ciobotari Gheorghii, Morariu Aliona, Paşcu Dragos, Brânză Maria, Sfichi Duke Liliana (University of Agricultural Sciences and Veterinary Medicine of Iasi)
THE USE OF qRT-PCR APPROACH FOR COMPARATIVE PHENYLPROPANOID GENE EXPRESSION STUDIES IN TWO *RUBUS* SPECIES
UTILIZAREA METODOLOGIEI qRT-PCR IN STUDII DE ANALIZA COMPARATIVA A EXPRESIEI GENELOR IMPLICATE IN METABOLISMUL FENILPROPANILOR LA DOUA SPECII DIN GENUL RUBUS

Rubus sp. is economically-important crops worldwide and represents an invaluable source of healthy-related compounds, being used traditionally for therapeutic purposes. In berries, development of fruit quality traits is critically dependent on flavonoids-derived metabolites. Moreover, these compounds are often involved in resistance against biotic and abiotic stress. Better knowledge and understanding of the flavonoid biosynthetic pathway and its regulation is crucial for identifying strategies for enhancement product accumulation and quality, in specific environments. In the present study, a qRT-CR approach was performed in order to assess the accumulation in the transcript level of several genes (PAL, CHS, 4CL1, 4CL2, 4CL3), involved in flavonoid biosynthesis pathway. Comparative transcriptional profiling was carried out in raspberry (Ruvi cv.) and blackberry (Lochness cv.) plants grown under controlled, greenhouse conditions. The determination of the relative expression levels of PAL and CHS genes showed that in raspberry, these transcripts were 3- and 150-fold, respectively more abundant than in blackberry. Similar, the accumulation level of the three genes encoding 4-coumarate: CoA ligase (4CL1, 4CL2 and 4 CL3) in raspberry was higher than in blackberry. The importance of qRT-PCR in studies of secondary metabolism in raspberry and blackberry is discussed.

Lazăr (Nechita) Adriana, Leonte Constantin, Lupu Elena-Ancuța, Spânu Oana, Slabu Cristina (University of Agricultural Sciences and Veterinary Medicine of Iasi)
PHYSIOLOGICAL RESPONSE OF SUNFLOWER HYBRIDS TO *SCLEROTINIA SCLEROTIORUM* ARTIFICIAL INFECTION IN CLIMATES CONDITIONS IN 2011 AT EZĂRENI IAŞI
REACȚIA FIZIOLOGICĂ A UNOR HIBRIZI DE FLOAREA-SOARELUI LA INFECȚIA ARTIFICIALĂ CU *SCLEROTINIA SCLEROTIORUM* ÎN CONDIȚIILE CLIMATICE 2011 LA EZĂRENI IAŞI

Sunflower adapts to large swings of temperature, developing normally at high temperature of 25-30 degrees and at bellow temperatures of 13-17 degrees, and in this case delaying flowering and ripening. The negative influence of excessive temperatures, manifest differently depending on the further development of plants. Sunflowers tolerance to high temperatures was associated by with the stability of chlorophyll. Chlorophyll stability index was defined as the difference between light transmission through chlorophyll sample taken from leaves exposed or not to heat stress of 65^0C. The aim of research was to study the physiological response of sunflower hybrids to pathogen Sclerotinia sclerotiorum, in the climatic conditions of 2011, grown on the farm Ezăreni of University of Agricultural Science and Veterinary Medicine Iasi. It was intend, in particular, photosynthetic activity assessed by foliar pigments chlorophyll content and resilience to stress, assessed by the content of flavonoid pigments.

Luca Mihai Alexandru, Leonte Constantin (University of Agricultural Sciences and Veterinary Medicine of Iasi)
REQUIRED OPTIMAL CONDITIONS FOR PLANT ANDROGENESIS INDUCTION
CONDIȚII OPTIME NECESARE PENTRU INDUCEREA ANDROGENEZEI LA PLANTE

The totipotency of the male reproductive cells was revealed by Guha and Maheshvari (1964), allowing the development and improvement of haploid plants breeding methods and their use in fundamental and applied research. Among the methods for haploid production, the androgenetic ones have the advantage

of chromosome doubling during the first mitotic division and producing fertile plants with complete doubled chromosomes, compared with the ginogenetic ones, where the egg cell is difficult to access, the embryo representing often the first stage in which a treatment for chromosome doubling may be applied. The literature review made by us shows general aspects of androgenesis and the genetic, physiological and physical factors that influence plant androgenesis. The following aspects were investigated: different androgenetic methods for haploid production, the processes that the microspore undergoes during sporophytic development and the optimal conditions for androgenesis induction.

Lupu Elena-Ancuța, Leonte Constantin, Crețu Lucian, Lazăr (Nechita) Adriana, Spânu Oana (University of Agricultural Sciences and Veterinary Medicine of Iasi)

THE EFFECT OF CHEMICAL MUTAGEN AGENTS ON SOME MORPHOLOGICAL CHARACTERS TO *CORIANDRUM SATIVUM* L.

EFECTUL AGENȚILOR MUTAGENI CHIMICI ASUPRA CARACTERELOR MORFOLOGICE LA CORIANDRU (*CORIANDRUM SATIVUM* L.)

Coriandrum sativum L.is an annual herb of Near East origine, belongs to the Apiaceae family, and has genom 2n = 22 chromosomes. In this paper we present some biometrical data obtained during vegetation period of coriander, for seeing the effect of some mutagen agents on the coriander plants. The M_1 generation of plants was obtained from treated seeds with three types of chemical mutagen agents, like: ethidium bromide, colchicine and DMS, in concentration of 0,02%, 0,04%, 0,06%, 0,08%, each concentration having four and six hours for action time. Thus, it was determined: plant height, number of branches and number of umbels. Thus, the wealth of new biological material can be isolated useful forms for use in the process of creating new varieties.

Lupu Elena-Ancuța, Leonte Constantin, Crețu Lucian (University of Agricultural Sciences and Veterinary Medicine of Iasi)

SOME ASPECTS ABOUT USING OF MUTAGENIC AGENTS ON CORIANDER (*CORIANDRUM SATIVUM* L.)

ASPECTE PRIVIND FOLOSIREA UNOR AGENȚI MUTAGENI ASUPRA CORIANDRULUI (*CORIANDRUM SATIVUM* L.)

When selecting and breeding medicinal herbs with economic importance the first step is obtaining a very diverse biological material by inducing a very large individual variability. For the plant breeding, both spontaneous mutation and induced mutation by using mutagens are important. Thus, the mutagen factors increase the variability coefficient among cultivated species, and from this new biological material it can be isolated useful forms for using them in the creation process of new hybrids and varieties. The purpose of this paper is to present the mutagenesis researches done until today, which have helped to the enriching of the coriander seed material.

Spânu Oana, Leonte Constantin, Crețu Lucian, Lazăr (Nechita) Adriana, Pomohaci Traian Ioan (University of Agricultural Sciences and Veterinary Medicine of Iasi)

ASPECTS OF BIOLOGICAL CHARACTERS AND THE BENEFITS OF SOME VARIETIES OF GROUNDNUT (*ARACHIS HYPOGAEA* L.) CULTIVATED IN ROMANIA

ASPECTE PRIVIND CARACTERELE BIOLOGICE ŞI BENEFICIILE UNOR VARIETĂȚI DE ARAHIDE (*ARACHIS HYPOGAEA* L.) CULTIVATE ÎN ROMÂNIA

Arachis hypogaea L. is an annual herb belongs to the Fabaceae family, native to South America origin and has 2n = 40 chromosomes genome. Seeds and groundnut butter are high in protein, fat, vitamins and minerals. Unsaturated fats contained are mainly beneficial for the human body by reducing the blood cholesterol levels and also the risk of cardiovascular disease. Unrefined groundnut oil and the refined one can be used in culinary techniques that require high temperatures of cooking. In this study are exposed the general aspects on the biological characters of groundnut varieties grown in Romania, namely: Arachis hypogaea L. ssp fastigiata var. fastigiata, Valencia type and Arachis hypogaea L. ssp fastigiata var. vulgaris, Spanish type.

Spânu Oana, Leonte Constantin, Crețu Lucian, Lupu Elena Ancuța (University of Agricultural Sciences and Veterinary Medicine of Iasi)

RESEARCH ON THE USE OF MUTAGENIC AGENTS ON GROUNDNUT (*ARACHIS HYPOGAEA* L.)

CERCETĂRI PRIVIND UTILIZAREA UNOR AGENȚI MUTAGENI LA ARAHIDE (*ARACHIS HYPOGAEA* L.)

The importance of mutations for plant breeding lies in their hereditary character and from the fact that, along with genetic recombination, represents the main source of variability of organism. Knowing the characters variability and traits of a species is particularly important in choosing the best germplasm sources and specifying ways forward in the process of plant breeding. After treatment of biological material with different physical or chemical mutagens, very heterogeneous populations are produced in terms of improvement value. In this literature review we present recent researches concerning mutagenesis in groundnut.

CHIMIE-BIOCHIMIE
CHEMISTRY- BIOCHEMISTRY

Andrițoiu Călin Vasile[1], Prisăcaru Anca Irina[1], Andriescu Corina[2], Popa Ionel Marcel[1] ([1]"Gheorghe Asachi" Technical University of Iaşi, [2]"Sf. Parascheva" Clinical Hospital of Infectious Diseases)

EFFECT OF A PHYTOTHERAPY OIL PREPARATION UPON THE CUTANEOUS ERYTHEMA
EFECTUL UNUI PREPARAT FITOTERAPIC ULEIOS ASUPRA ERITEMULUI CUTANAT

Cutaneous erythema appears frequently as a reaction of immune-sensitization due to industrialization and pollution, use of chemical substances for housekeeping, use of body care products. The present experiment evaluates the efficiency of a topical treatment of cutaneous chemically induced erythema in Wistar rats, using a phytotherapy oil preparation. The experimental model was achieved with 85% aqueous solution of lactic acid. The preparation used to treat the cutaneous lesions for 7 days included: olive oil (Oleum olivarum), linseed oil (Oleum lini), corn oil (Oleum maydis), sea buckthorn oil (Oleum hipopphaë), grape seed oil. Macroscopic, clinical and histopathological evaluations were performed. The results emphasize the efficiency of oil preparation in cutaneous erythema, with evident improvements from the third day of treatment. In conclusion, the oil preparation may be used with good results in the treatment of cutaneous erythema, as it is biocompatible, and can be included in dermatology and cosmetic products.

Prisăcaru Cornelia (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

STUDIES REGARDING THE THERAPEUTICAL EFFECT OF THE EXTRACT FROM THE BARK OF *PINUS MARITIMA*
STUDII PRIVIND ACȚIUNEA TERAPEUTICĂ A EXTRACTULUI DE SCOARȚĂ DE *PINUS MARITIMA*

The studies by J.A. Masquqlier, professor at the University from Bordeaux, regarding the bark of the maritime pine (Pini Maritimae Cortex) emphasized, in 1947, the content in proanthocyanidins, soluble substances with a strong antiradicalic potential. The standardized extract from the bark of the maritime pine from the French mediterranean region, known in the medical field under the commercial name of Pycnogenol®, is used in cardiovascular diseases, cancer, Alzheimer's disease, glaucoma etc. The present experiment evaluates the antioxidant potential of different pharmaceutical formulations of the extract in acrylamide intoxication. The toxicity of acrylamide is based on a free radical, derivative of the free metabolite, glycydamide. The experiment was unfolded on 4 groups of Wistar rats: the reference group, the group intoxicated with acrylamide and other 2 experimental groups that, besided the daily dose of acrylamide, received treatment with hydro alcoholic solution of Pycnogenol, and tablets of Pycnogenol, respectively. After 6 weeks of treatment, blood samples were collected in order to perform the biochemical investigation: serum catalase, superoxide dismutase, glutathione peroxidase and serum concentration of free sulfhydryl groups. The obtained results reveal the significant antioxidant effects of the standardized extract from the bark of Pini maritima.

Trincă Lucia Carmen[1], Căpraru Adina Mirela[1], Arotăriței Dragos[2], Volf Irina[3], Călin Marius[1], Chiruță Ciprian[1] ([1]University of Agricultural Sciences and Veterinary Medicine of Iaşi, [2]University of Medicine and Pharmacy "Gr. T. Popa" of Iaşi, [3]"Gheorghe Asachi" Technical University of Iaşi)

RESEARCH ON WATER CONTENT OF JONATHAN APPLES BY CLASSICAL AND INNOVATIVE METHODS
CERCETĂRI PRIVIND DETERMINAREA CONȚINUTULUI DE APĂ PENTRU MERELE DIN SOIUL JONATHAN PRIN METODE CLASICE ŞI INOVATIVE

This paper presents results on the moisture determination on the Jonathan apples by oven drying method and lyophilization. Statistical interpretation of experimental results allowed the comparison of the two methods, selection of the most convenient in terms of simplicity, speed and cost as well as achieving a hypothetical model on the percentage variation of water forms with applicability for the conservation of food substrates.

Trincă Lucia Carmen[1], Căpraru Adina Mirela[1], Arotăriței Dragos[2], Călin Marius[1], Chiruță Ciprian[1] ([1]University of Agricultural Sciences and Veterinary Medicine of Iaşi, [2]University of Medicine and Pharmacy "Gr. T. Popa" of Iaşi)

STUDY CONCERNING BIOCHEMICAL AND STATISTICAL CORRELATIONS BETWEEN FREE AND DIFFUSION WATER IN BELL - PEPPER (*CAPSICUM ANNUUM* GROSUM VARIETY*)*
STUDIU PRIVIND CORELAȚII BIOCHIMICE ŞI STATISTICE ÎNTRE APA LIBERĂ ŞI APA DE DIFUZIE LA ARDEI GOGOŞAR *(CAPSICUM ANNUUM* VARIETATEA GROSUM*)*

Water is the most important biochemical component (by % weight) of all food substrates. However, the scientific literature has limited and controversial data both in terms of efficiency and methods for determining water content based on the conditions considered in the study. This paper presents the results of a study conducted on the bell-pepper (Capsicum Annuum. Grosum Variety), which monitored the free and diffusion water. Processing of data for statistical correlations between highlighted free water and water

diffusion will provide the basis for the use of results in various technological studies on the models for the conservation of food substrates

Trofin Alina[1], Oniscu Corneliu[2], Pintilie Lucia[3], Ungureanu Elena[1] ([1]University of Agricultural Sciences and Veterinary Medicine of Iaşi, [2]"Gheorghe Asachi" Technical University of Iaşi, [3]National Institute for Chemical – Pharmaceutical Research and Development, Bucharest)

SYNTHESIS AND CHARACTERIZATION FOR SOME PHENOXYACETIC ACID'S SULPHONAMIDE DERIVATIVES

SINTEZA SI CARACTERIZAREA UNOR DERIVATI SULFONAMIDATI AI ACIDULUI FENOXIACETIC

In the phenoxyacetic acid derivatives class, the introduction of sulfonamide group into the nucleus determined pronouncedly decreased products toxicity and in conjunction with the existing substitutes offered a wide range of biological actions. Many derivatives containing sulfonamide group have revealed other interesting effects due to the number, position and nature of substitutes into the aromatic or heterocyclic nucleus. We aimed to obtain new derivatives with sulfonamide group with broad spectrum, including stimulating and auxinic, growth regulator effects, non-cumulative and biodegradable, with no toxicity towards humans, bees and fish. A new class of compounds was obtained, with auxinic, growth stimulators activity, represented by sulfonamides of the chloro – phenoxy - alkyl carboxylic acids, with very low toxicity. The derivatives were synthesized and characterized further by physical - chemical analyses. Different soluble forms were tested on cultures of sugar beet, tomato, carrot, wheat, with significant results

STATISTICĂ BIOLOGICĂ ŞI MATEMATICĂ APLICATĂ ÎN BIOLOGIE
BIOSTATISTICS AND BIOMATHEMATICS

Bulgariu Emilian (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

A NON-STANDARD PROBLEM FOR POROUS MEDIA

O PROBLEMA NESTANDARD PENTRU MEDII POROASE

The aim of this paper is to study the alternative spatial growth and decay behavior for the motion of a finite or semi-infinite cylinder composed of a non-homogeneous anisotropic linear porous elastic material, subject to null supply terms and null lateral boundary conditions. The motion induced by displacement and volume fraction field prescribed on the base is constrained to have the displacement, velocity, volume fraction and the derivative with respect to time of volume fraction at a given time proportional to their respective initial values. Neither initial data nor the asymptotic behavior at large axial distance are specified. The estimates that are either exponentially grow or decay are derived from a differential inequality depending on cross-sectional energy flux. An explicit bound, in terms of the problem data, is constructed for the amplitude in each decay estimate

1.2. PEDAGOGIE ŞI METODICĂ, LIMBI STRĂINE, ŞTIINȚE ECONOMICE
1.2. PEDAGOGY AND METHODOLOGY, FOREIGN LANGUAGES, ECONOMIC SCIENCES

Moderatori:
Prof. univ. dr. **Ştefan COLIBABA**
Conf. univ. dr. **Mihai STANCIU**
Conf. univ. dr**. Stejărel BREZULEANU**

Secretari:
Drd. **Ioana ARHIP**
Stud. **Paula TUPU**

LUCRĂRI PREZENTATE ORAL
ORAL PRESENTATIONS

PEDAGOGIE ŞI METODICĂ
PEDAGOGY AND METHODOLOGY

Colibaba Anca Cristina[1], Colibaba Cintia[2], Mihoci Oana[3] ([1]University of Medicine and Pharmacy "Gr. T. Popa" of Iaşi, [2]University of Agricultural Sciences and Veterinary Medicine of Iaşi, [3]EuroEd Foundation Iaşi)
EQUAL OPPORTUNITIES EMPLOYMENT: THE UEMPLOY PROJECT SOLUTIONS
PENTRU ŞANSE EGALE PE PIAȚA MUNCII: PROIECTUL UEMPLOY ŞI SOLUȚIILE SALE

Many companies realize that inclusive employmentis an effective strategy to meet their social responsibility but themajority of employershave no real experience of employing a disabledperson. Proactive cooperation with employers is needed to counter act stereotypes and encourage them to understand skills and capacities of people with disabilities. For disabled the project will facilitate greater involvement in their organizations' strategic planning; improvein dependence, self-confidence, accountability, flexibility and sociability; improve employment inclusion and ensure full equality in employment practices; gain positive experiences from the process; receive better services from service providers.

Colibaba Anca Cristina[1], Vlad M., Colibaba Ştefan ([1]University of Medicine and Pharmacy "Gr. T. Popa" of Iaşi, [2]EuroEd Foundation Iaşi, [3]"Al. I. Cuza" University of Iaşi)
LANGUAGE PROFILES IN EUROPE: AN OVERVIEW OF NATIONAL LEVEL AND EUROPEAN LEVEL RESEARCH
PROFILE LINGVISTICE ÎN EUROPA: O PERSPECTIVĂ LA NIVEL NAȚIONAL ŞI EUROPEAN

This article presents a research carried out in the framework of the Language Rich Europe project with the goal to create an overview of the situation of national and minorities' languages in European countries and to illustrate policies and good practices initiated for the promotion of multilingualism. The research is not finalized at this stage and the article thus presents the research methodology and the envisaged results.

Gheorghiu Irina[1], Gheorghiu Elza[2], Colibaba Ştefan[3], ([1]"Albert Ludwigs" University of Freiburg, Germany, [2]"Vasile Alecsandri" Highschool Iasi, [3]"Al. I. Cuza" University of Iaşi,)
BILINGUALISM AND FAMILY LANGUAGE LEARNING
BILINGVISM ŞI ÎNVATAREA DE LIMBI STRĂINE ÎN FAMILIE

This article aims at describing an innovative educational model based on family language learning as applied in Romania by Euroed Foundation, Iasi, inside a European funded project under the Lifelong Learning Programme: BILFAM (Bilingual Families). The model also gives bilingualism another dimension, which is in tune with EU main objective because it best serves work mobility. Scientific literature has found out that foreign language learning before the age of 8 in the context of informal education (learning by doing) can develop native speaker competence. Moreover, research on the Narrative Format methodology (done by the psycholinguistic faculty from the Sapientia University in Rome) has shown that the affective relationship between the adult as model and children has a great contribution to the foreign language learning process. Grand/parents with no or little foreign language competences are involved in their children's foreign language acquisition, being provided with necessary tools and strategies. The process, showing a dramatic impact on everybody's foreign language acquisition (children and adults), works well due to the fact that grand/parents spend a lot of time with their children and can follow their development throughout the years, offering them input. They will also feel encouraged to learn the language they are teaching their children. The family foreign language learning will also create a positive attitude towards multilingualism, creating better contextual conditions for multilingual education.

Gheorghiu Irina[1], Colibaba Ştefan[2], Cleminte Andreea[3], Munteanu Nicoleta[4] ([1]"Albert Ludwigs" University of Freiburg, Germany, [2]„Al. I. Cuza" University of Iaşi, [3]EuroEd Foundation Iaşi, National College Iasi)

STRATEGIES TO OPTIMIZE THE EDUCATIONAL PROCESS: TACKLING EARLY SCHOOL LEAVING AND BULLYING
STRATEGII DE OPTIMIZARE A PROCESULUI INSTRUCTIV-EDUCATIV: LUPTA ÎMPOTRIVA ABSENTEISMULUI ŞI A VIOLENȚEI ŞCOLARE

A common challenge for the European school systems is the prevention of early school leaving and prevention of the bullying phenomenon. Many surveys carried out at European level highlight how the phenomenon of bullying and early school leaving is involving an increasing number of pupils. This situation describes a scenario where two fundamental rights of pupils are menaced: educational rights and personal security rights. Two European projects: Stay @ School and I am not scared have set out to find solutions to these stringent problems.

Petrescu Elena Lucia[1], Colibaba Stefan[2], Colibaba Anca Cristina[3] ([1]EuroEd Foundation Iaşi, [2]„Al. I. Cuza" University of Iaşi, [3]University of Medicine and Pharmacy "Gr. T. Popa" of Iaşi,)

INCENTIVES FOR LIFELONG LEARNING MYSTORY, ESEDI AND CVE PROJECTS
MOTIVARE PENTRU INVATARE PE TOT PARCURSUL VIETII PROIECTELE MYSTORY, ESEDI AND CVE

Motivation is a key ingredient to ensure constant and relevant Life long Learning activities. Motivating beneficiaries with in the same age category or at intergenerational level becomes efficient only when benefits can be easily illustrated. Practical activities are most of ten convincing examples and represent in centives for Life long Learning.

Stanciu Mihai (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

REFLEXIVITY IN DIDACTIC DESIGN
REFLEXIVITATE ÎN PROIECTAREA DIDACTICĂ

The research conducted on the issue of teacher training showed a significant contradiction in what concerns the paradigm of initial and continuous training, on the one hand, and the very complex world we live in, on the other. We live in a context of globalization and the most often used metaphors to describe this phenomenon are "global village" and "flat world" (Yong Zhao, 2010). Paradoxically, the teacher training programs are anchored in particular in local needs and less anchored in this comprehensive approach of the world. Nowadays, the paradigm underpinning the teacher education programs is the reflective type. Our study makes practical suggestions regarding the design of curriculum type f the didactic activity, addressed in a reflective framework. We intend, especially, to offer methodological suggestions to those in the initial training as well as for teachers who enroll on continuous training.

ŞTIINȚE ECONOMICE
ECONOMIC SCIENCES

Ciornei (Grădinariu) Liliana, Badale Aurelia (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

STUDY ON PROSPECTS FOR THE DEVELOPMENT OF VAMA COMMUNE AS AGRITOURISTIC AREA OF BUCOVINA
STUDIU PRIVIND PERSPECTIVELE DEZVOLTĂRII COMUNEI VAMA CA ZONĂ AGROTURISTICĂ DIN BUCOVINA

In recent years more and more talk about the development of agritourism in Bucovina. In this direction were initiated several projects and programs with national and international impact for the promotion of this region, their results are best experienced by the pension administrators. However, in relation to the real potential of the area, the exploitation of tourism resources is still_quite at a low level, this being demonstrated by the small number of agritourim pensions approved, and by the agritouristic potential areas. In fact, agritourism is unequal developed throught Bucovina focusing on major tourist attractions. Therefore, to support tourism development in the entire region should be analyzed and identified local tourism resources and finding the most optimal solutions in common use. Vama is located in the center of Bucovina, is an example for models and strategies for developing tourism, starting from the ideas mentioned above.

Onea Angelica Nicoleta[1], Georgeanu Vlad Alexandru[2] ([1]"Al. I. Cuza" University of Iaşi, [2]"Carol Davila" University of Bucharest)

FACTORS GENERATING DISSATISFACTION IN THE EMERGENCY HOSPITALS IN ROMANIA
FACTORI GENERATORI DE INSATISFACȚIE ÎN SPITALELE DE URGENȚĂ DIN ROMÂNIA

Against the general dysfunctionalities of public health, physicians from the emergency hospitals accuse various reasons of dissatisfaction. Some are based on material factors; others are caused by a number of

psychological factors. Our analysis emphasizes these factors as well as their consequences. Furthermore, we suggest some recommendations for improvement in emergency hospitals, by providing the appropriate importance to the human factor.

Tătăruşanu Maria ("Al. I. Cuza" University of Iaşi)

STUDY CONCERNING THE EMPLOYMENT IN THE ROMANIAN TOURISM AND TRAVEL INDUSTRY
STUDIU PRIVIND OCUPAREA ÎN INDUSTRIA TURISMULUI DIN ROMÂNIA

The increased development of tourism in recent years has been a major concern among researchers, institutions and others interested in this field: what is the real contribution of tourism to the overall development of the countries, regions and the contribution to the increase of employability of the working population. This paper aims to analyze the types of vacancies created in the tourism industry in Romania. The raised objectives relate to: a critical analysis of literature regarding employment and tourism; studying the number and type of vacancies created by this sector in Romania, based on statistical analysis and interpretation of recruitment notices posted on specialized web sites, from February to December 2011. The results indicate a wide variety of the created job types, the importance of experience when filling certain vacancies and of some evidence of a qualification (tourism certificate). Such information is useful in formulating policies on tourism in a certain region / country, according to the aimed objectives.

LUCRĂRI PREZENTATE POSTER

POSTER PRESENTATIONS

PEDAGOGIE ŞI METODICĂ
PEDAGOGY AND METHODOLOGY

Durbaca Nicoleta[1], Stratu Anişoara[2] ([1]„Petru Rareş" School Group, Botoşani, [2]„Al. I. Cuza" University of Iaşi)

CURRICULUM ELABORATED IN THE SCHOOL – THE POSSIBILITY OF ADAPTATION OF EDUCATION TO THE LOCAL CONTEXT
CURRICULUM-UL ELABORAT ÎN ŞCOALĂ - POSIBILITATE DE ADAPTARE A OFERTEI EDUCAȚIONALE LA CONTEXTUL LOCAL

The Curriculum elaborated in the school is a part of the curriculum school boards decision and involve different types of optional courses. Starting from high school profile (Natural resources and environmental protection) and considering the importance of water and its current problems we proposed a draft curriculum for an optional course titled „Water in nature." The optional course aims to study various aspects referring to water: properties, classifications, importance, sources of pollution, types of pollutants, ecological consequences of water pollution, water protection.

Ghiurcă Ana-Andreea, Lămăşanu Andreea, Mihai Florin-Constantin („Al. I. Cuza" University of Iaşi)

ENVIRONMENTAL EDUCATION IN RURAL AREAS - A REAL SUPPORT FOR SUSTAINABLE DEVELOPMENT
EDUCAȚIA ECOLOGICĂ ÎN SPAȚIILE RURALE – UN SUPORT REAL PENTRU DEZVOLTAREA DURABILĂ

Natural fertilisers were used in agriculture since ancient times and are still the best method of fertilization of the soil. Chemical fertilisers in Romania are used in larger amounts for fertilisation of agricultural land than natural fertilisers. However, statistics show that in the EU the amount of chemical fertilizers used is far superior than in our country, which demonstrates a conversion of Romanian agricultural land to organic agriculture. Traditional agriculture practiced in rural areas of Romania contributes to the maintenance of soils fertilization ecological practices. Our research shows the evolution of the quantity of natural fertilizers used in the past 20 years at the national level and at the level of Neamț County captures the evolution over the 7 years of natural fertilizers areas. In the analyzed period, the quantity of natural fertilizers on agricultural land is growing, but fertilized land record low values, showing that it has increased the average quantity of natural fertilizers per hectare.

Petrescu Elena Lucia[1], Colibaba Anca Cristina[2], Dinu Claudia Elena[2] ([1]EuroEd Foundation Iaşi, [2]University of Medicine and Pharmacy "Gr. T. Popa" of Iaşi,)

ISPY - GAMES FOR LEARNING FOREIGN LANGUAGES
ISPY - JOCURI PENTRU INVATARE DE LIMBI STRAINE

ISPY is a Partnership Project which aims to develop an Online Networking Platform for Language Learning. Apart from teachers and lecturers who can access the database, the Platform is also designed for beginners (A1-A2) and learners involved in general and vocational training programs. The project takes in to account not only the interactive flash application environment that assists the language acquisition, but it has also in view the educational aspects to ensure full integration of best practices.

ŞTIINȚE ECONOMICE
ECONOMIC SCIENCES

Brezuleanu Stejărel, Ungureanu George, Brezuleanu Carmen Olguța, Ignat Gabriela, Boghiță Eduard (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

IMPROVING THE HUMAN RESOURCES QUALITY WITHIN APIA SUCEAVA
ÎMBUNĂTĂȚIREA CALITĂȚII RESURSELOR UMANE DIN CADRUL APIA SUCEAVA

For any successful organization, human resources is the kernel around which revolve all other resources (material, financial, information) and issues concerning the recruitment, selection, training, development, evaluation, reward and motivation are the main directions of research of human resource management of any organization. Implementing an efficient management in the system of public administration acquires major values, since this will lead to professionalizing the developed activities in the public administration authorities, at changing the values and way of action of the public personnel, at developing some managerial conceptions characteristic of modern public administration. In this context in the paper was

made an ample analysis in integrity way of the human resources management, as a result of which the problems have been highlighted and made concrete proposals, reasons for implementing and development of this in the public service. The financial aid granted to the farmers under the form of the unique payment scheme, both under the form of the historic model and of the regionalized one, is based in a greater or less measure on a past reference period (in present established to be between 2007 – 2013). Therefore is intended the update of this to take into account the changes produced meantime in the European agricultural landscape.

Ungureanu George, Brezuleanu Stejărel, Brezuleanu Carmen Olguța, Ignat Gabriela, Boghiță Eduard
(University of Agricultural Sciences and Veterinary Medicine of Iaşi)

MARKET CAPITALIZATION OF FRESH HORTICULTURAL PRODUCTION ON IASI TRADE
VALORIFICAREA ÎN STARE PROASPĂTĂ PE PIAȚA IEŞEANĂ A PRODUCȚIEI HORTICOLE

Valorized agricultural products in general, and horticultural products, in particular, represent aspects from organizational activities, technical, economic and legal, through which the increased value of production and circulation of goods, from fruit farms as producers, representatives from various consumer direct beneficiaries (the stores), commercial companies, enterprises and industrial processing of fruits etc. The purpose of this work is that for finality of fruit production must be planned character. In Iasi, exist 8 farmers' markets through which supplies over 400,000 customers, take advantage of the fresh horticultural products and fruits – vegetables processing and preserved. Depending on the number of places of sale, employment and the volumes traded, Iasi markets are divided into two categories: large markets: market Alexandru cel Bun, Nicolina Square, Central Market Hall, Independence Square.; Small Markets: Dacia, CUG, Tatarasi; Pacurari. Based on the analysis of balance sheets of companies that sell fruits and vegetables (about 43 companies), 7 are companies that have more than 84% of total turnover. Most wholesalers in this category of transactions are the sale of bananas and citrus, as there Iasi market wholesalers to sell only vegetables and fruits indigenous kind.

2nd SECTION

HORTICULTURE TEHNOLOGIES

2.1. LEGUMICULTURĂ, POMICULTURĂ, FLORICULTURĂ, ARBORICULTURĂ ORNAMENTALĂ, CONSTRUCȚII HORTICOLE, HORTICULTURĂ ECOLOGICĂ

2.1. VEGETABLE GROWING, FRUIT GROWING, FLORICULTURE, ORNAMENTAL ARBORICULTURE, HORTICULTURAL CONSTRUCTIONS, ECOLOGICAL HORTICULTURE

Moderatori:
Prof. univ. dr**. Maria CANTOR**
Prof. univ. dr**. Gică GRĂDINARIU**
Prof. univ. dr**. Lucia DRAGHIA**
Prof. univ. dr**. Neculai MUNTEANU**

Secretari:
Drd. **Oana CÎRSTEA**
Drd. **Alina ZAHARIA**
Drd. **Teofil DASCĂLU**

LUCRĂRI PREZENTATE ORAL

ORAL PRESENTATIONS

LEGUMICULTURĂ

VEGETABLE GROWING

Avasiloaiei Dan Ioan[1], Munteanu Neculai[1], Stoleru Vasile[1], Iurea Dorina[2], Călin Maria[3] ([1]University of Agricultural Sciences and Veterinary Medicine of Iaşi, Biologica Research Institute of Iaşi, Vegetable Reasearch and Development Station of Bacău)

THE INFLUENCE OF SOME NATURAL BIOREGULATORS SUBSTANCES APPLICATION ON THE GROWTH AND DEVELOPMENT OF TOMATO CROP CULTIVATED IN POLYTUNNELS INTO AN ECOLOGICAL SYSTEM

INFLUENȚA APLICĂRII UNOR SUBSTANȚE BIOREGULATOARE NATURALE ASUPRA CREȘTERII ȘI DEZVOLTĂRII CULTURII DE TOMATE ÎN SOLAR ÎN SISTEM ECOLOGIC

The paper aims to determine the influence of three different natural substances with glycoside structure (Pavstim, Ecostim and Moldstim) on tomatoes grown in polytunnel into an organic system. The efficacy of the treatments was assessed by observations and biometric determinations on plant height, number of inflorescences, number of flowers and fruits and average fruit weight for each variant. The results revealed the following variants: Pavstim. 0.001% (with a total production of 54.14 t/ha), Pavstim 0.0015% (with a yield of 59.82 t/ha) and Moldstim 0.0015% (with a yield of 58.35 t/ha), reported to the control variant (44.65 t/ha). The yield differences were significant positive for the first version, respectively distinctly significant for the second and third version.

Balcău Simina[1], Apahidean Maria[1], Zaharia Adrian[1], Bărbuță Iulia[1], Muntean Delia[2] ([1]University of Agricultural Sciences and Veterinary Medicine of Cluj Napoca, [2]University of Agricultural Sciences and Veterinary Medicine of Iași)

RESEARCH CONCERNING THE GERMINATION CAPACITY FOR *BRASSICA OLERACEA VAR. ACEPHALA* SEEDS UNDER THE INFLUENCE OF CERTAIN TECHNOLOGICAL FACTORS

CERCETĂRI PRIVIND CAPACITATEA GERMINATIVĂ A SEMINȚELOR *DE BRASSICA OLERACEA VAR. ACEPHALA* SUB INFLUENȚA UNOR FACTORI TEHNOLOGICI

The researches that were carried out aimed to establish the germination capacity of the seeds from the control samples of the vegetable species Brassica oleracea var. acephala, with decorative and practical features.The experiences aimed to determine the effect of several factors on germination including: the origin of seeds, their age and various chemical treatments applied to them. In the conducted research, it was found that the source of seeds leads to significant differences in the germination of kale seeds. Different results were obtained for seed germination due to the chemical treatments applied.

Dascălu Teofil[1], Gutierrez Patricia[2], Munteanu Neculai[1] ([1]University of Agricultural Sciences and Veterinary Medicine of Iaşi, Tuscia University, Viterbo, Italy)

RESULTS REGARDING „*IN VITRO*" MICROPROPAGATION OF JERUSALEM ARTICHOKE (*HELIANTHUS TUBEROSUS* L.)
REZULTATE PRIVIND MICROPROPAGAREA „*IN VITRO*" LA TOPINAMBURUL LEGUMICOL (*HELIANTHUS TUBEROSUS* L.)

In vitro, clonal micro propagation of the Jerusalem Artichoke, (Helianthus tuberosus L.) „Violleto" cultivar was realized by isolating the explants right from the level of the young sprouts, that have been formed on the tuber, after they have been forced to grow kept in dark conditions for three days. The inoculation of the explants was realized on 12 types of MS medium; differentiate among themselves by the concentration of cytokinins, gibberellins, auxins, and the presence of active carbon. Measurements and plant determinations have been taken during the experiment, keeping track of the initial and final number of sprouts, the height of the plants as well as some morphological aspects: color and length of leaves, length of the internodes as well as the appearance of the senescent phenomenon. The results have relieved the superiority of the version having P6 medium of culture, which is recommended in the technology of "in vitro" micro propagation.

Galan Cătălin, Cotianu Răzvan, Bololoi Mihaela, Eremia Florentina („Bioterra" University of Bucharest)

STUDY OF SOME TOMATO VARIETIES ORIGINATING IN ENGLAND IN THE PEDOCLIMATIC CONDITION OF SOUTH-EASTERN ROMANIA, RESPECTIVELY BRAILA COUNTY
STUDIUL ADAPTABILITĂTII UNOR SOIURI DE TOMATE DIN ANGLIA ÎN CONDITIILE PEDOCLIMATICE DIN SUD-ESTUL ROMÂNIEI, RESPECTIV JUDETUL BRĂILA

The study has as the main target the testing of some Tomato varieties originating in England in the pedoclimatic condition South-Eastern Romania from Braila region. For this first stage of the project htey are not of special interest the technical economical parameters (costs, productivity, profit etc.), theese following to be the object of a different study. They have been studied six ,,cherry" tomatos varieties. (Solanum lycopersicum var. cerasiforme): Cherry White (C.W.), Cherry Black (C.Bk.), Cherry Brown Berry (C.Br.), Cherry Gold Nugget (C.Gn.), Cherry Cerise (C.Cr.), Cherry Riesentraube (C.Rs.) The biotechnical parameters of the cultivated varieties were monitorized along the whole vegetative period, ierespectively May 29th 2011, the planting date in open field, and until October 22nd, the date of the experimental plot land clearing.

Iliev Petru[1], Lemanova Natalia[2], Ilieva Irina[1] ([1]Scientific-Practical Institute for Horticulture and Technologies, Republic of Moldova, [2]Institute of Plant Protection and Ecological Agriculture at Sciences Academy of Moldova)

MICROORGANISME RASSE USED IN POTATO PRODUCTION IN REPUBLIC OF MOLDOVA
RASE DE MICROORGANISME UTILIZATE ÎN CULTIVAREA CARTOFULUI ÎN REPUBLICA MOLDOVA

In the results of studies of same microbiological microorganisms where established that this organisms increased the yield and quality of the potato, improve the immune system against different diseases. Mechanism of acting of this microorganism in ambiance with plant roots eliminations, produce growing and fungicides substances, improve pathological capacities of the roots, atmosphere nitrogen accumulation, increasing of plants immunity and productivity.

Munteanu Neculai[1], Dascalu Teofil[1], Gutierrez Patricia[2] (University of Agricultural Sciences and Veterinary Medicine of Iaşi, [2]Tuscia University, Viterbo, Italy)

PRELIMINARY STUDIES FOR THE INTRODUCTION OF THE JERUSALEM ARTICHOKE (*HELIANTHUS TUBEROSUS* L.)
STUDII PRELIMINARE PENTRU INTRODUCEREA ÎN CULTURĂ A TOPINAMBURULUI LEGUMICOL (*HELIANTHUS TUBEROSUS* L.)

The paper is based on a documentary as well as on a field study regarding the importance of the culture, the biological and ecological characteristics of the Jerusalem artichoke species (Helianthus tuberosus L.). Moreover, some extremely important information regarding the importance of the Jerusalem artichoke in man's diet, the risk factors of the culture has been detailed, which provides a more thorough documentation of a growth technology for this species in Romania's climate.

Țibulcă Constantin Laurențiu[1], Munteanu Neculai[1], Bireescu Lazăr[2], Stoleru Vasile[1], Ghițău Carmen[1] ([1]University of Agricultural Sciences and Veterinary Medicine of Iaşi, [2]Biological Research Institute of Iaşi)

THE ASSESSMENT OF THE SOIL QUALITY FUND USING ECO-PEDOLOGICAL DIAGNOSIS OF EFFECTIVE TROPHICITY OF SOIL RESOURCES FROM TÂRGU FRUMOS MICROREGION
EVALUAREA FONDULUI CALITATIV AL SOLULUI PRIN UTILIZAREA DIAGNOZEI ECO-PEDOLOGICE A TROFICITĂȚII EFECTIVE A RESURSELOR DE SOL DIN MICROZONA TÂRGU FRUMOS

The research was carried out in the vegetable ecosystem of Târgu Frumos microregion in 2010 - 2011. The assessment of soil quality in Târgu Frumos microregion was performed using the ecopedological diagnosis matrix of soil trophicity resources (EPDETSR). To characterize the trophicity effective of soil resources for the studied stationary, AF Maxim and A.F. Vavilov in vegetable ecosystems exploited in a

conventional system. The value of synthetic indicator and soil quality fund Eco-Pedological Diagnosis of Effective Trophicity of Soil Resources (EPDETRS-points), was obtained by summing the score of each of the 10 indicators of quality. The results of the analysis and evaluation of ecopedological diagnosis using these matrix of soil resources demonstrates a high fertility potential of the analized microregion, highlighting the effects of uncontrolled and negative human impact in a conventional culture system.

POMICULTURĂ
FRUIT GROWING

Bogdan Ion (Scientifico-Practical Institute of Horticulture and Food Technologies, Chişinău, Republic of Moldova)

NEW AGROTEHNICAL PROCEDURES FOR IMPLEMENTATION IN ORCHARDS
PROCEDEE AGROTEHNICE NOI PENTRU APLICARE ÎN LIVEZI

In the article it described the new processes: of the directional formation of the roots is provided by the limitation of their blocking off their expansion through with a plastic film and their cutting, cultivation of the soil by using stimulation of the cutting of the roots.

Istrate Mihai[1], Cârdei Eugen[2], Dascălu Marius[1], Prisecaru Lucian[2] ([1]University of Agricultural Sciences and Veterinary Medicine of Iaşi, [1]Research and Development Station for Fruit Tree Growing of Iaşi)

STUDY ON RATIONAL USE OF HERBICIDES IN INTENSIVE PLANTATIONS OF APPLE
STUDIU PRIVIND UTILIZAREA RAȚIONALĂ A ERBICIDELOR ÎN PLANTAȚIILE INTENSIVE DE MĂR

Experience were organized during 2009 - 2010, the SCDP Iasi research base (Velnița) in intensive apple plantation, located on land with low slope, on cambic chernozem soil type. Dicotyledonous weed species with highest frequency are: Amaranthus retroflexus, Chenopodium album, Convolvulus arvensis, Taraxacum officinale, Sonchus arvensis, Polygonum ssp, Stellaria media and Cirsium arvense. Monocotyledonous species of very high frequency meet: Elynes repens, Echinochloa crus-galli, Sorghum halepense, Digitaria sanguinalis, Cynodon dactylon and Settings glauca. The selective herbicides used and studied was: Roundup, Touchdown Sanglypho and were well tolerated by apple species. There were no reported symptoms of phytotoxicity in any variant or variety (note 1 EWRS scale). In terms of effectiveness (degree of destruction of weeds) best results has the experimental variants were noted V3- herbicide + -mechanical works, where weed control was 94.6% grade 1-2 EWRS scale and V6 herbicide Touchdown System with 3 l / ha

Iurea Elena[1], Grădinariu Gică[2], Corneanu Gelu[1], Sîrbu Sorina[1], Pandele Alin[2] ([1]Research and Development Station for Fruit Tree Growing of Iaşi, [2]University of Agricultural Sciences and Veterinary Medicine of Iaşi)

THE CHERRY TREE VARIETY VAN AND ITS DESCENDANTS
SOIUL DE CIREŞ VAN ŞI DESCENDENȚII LUI

This paper presents the value of Van's variety used as maternal or paternal genitor in the amelioration works at SCDP Iaşi. As result of these works, 14 of 24 new cherry varieties obtained at SCDP Iaşi have as genitor the variety Van. In 34 years of existence of The Research and Development Station for Fruit trees culture Iaşi, the improvers had as main concern the replacement of the inferior varieties, with new, superior varieties, created in the station or introduced from the worldwide assortment. The new cherry varieties got remarked through extra youthfulness (Cetățuia), youthfulness (Cătălina), auto fertility (Maria), low strength (Golia and Tereza), productivity and high quality of fruits (Golia, Bucium, Iaşirom, Ştefan, Ludovic, Lucia, Iosif), lateness (Margo) and resistence to stress (Oana, Radu)

Paşcu Dragos, Morariu Aliona, Căuleț Raluca Petronela, Efrose Rodica, Sfichi Duke Liliana (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

WATER DEFICIT AND LIGHT INTENSITY EFFECTS ON THE ACCUMULATION OF TOTAL PHENOLICS AND ANTHOCYANINS IN SEVERAL RASPBERRY AND BLACKBERRY CULTIVARS
INFLUENȚA DEFICITULUI HIDRIC ŞI A INTENSITĂȚII RADIAȚIEI SOLARE ASUPRA ACUMULĂRII COMPUŞILOR FENOLICI TOTALI ŞI A ANTOCIANILOR LA UNELE SOIURI DE ZMEUR ŞI MUR

In the field cultures drought is often accompanied by high light intensities, which may significantly affect plant growth and development. Both water and light may decrease the capacity of plants for carbon assimilation by stomatal closure and photoinhibition. Angiosperms can prevent excessive light absorption by spatial repositioning of leaves or synthesis of photoprotective pigments such as carotenoids or anthocyanins. The aim of this work was to investigate the effects of water stress and light intensity on the accumulation of total phenolics and anthocyanins in several cultivars of raspberry (Opal, Cayuga si Ruvi) and blackberry (Thornfree si Lochness) cultured in field conditions. The experiments were perfomed from June to October 2011. Plants have been divided in two categories; one category was used as control and maintained in optimal water conditions; a second category was exposed to water stress. In each category, 50% plants were exposed to 100% sunlit and 50% plants were shaded and exposed to 25% sunlit. In all cultivars, total phenolics content was sensitive to light conditions and tolerant to poor water conditions. A

combination of water stress and low light intensities decreased the anthocyanin content in raspberry cultivars. Contrary, the accumulation of anthocyanins increased in all blackberry cultivars when exposed to water stress, irrespective of light conditions. The relative importance of these phenolic compounds to the protection of raspberry and blackberry plants against abiotic stress is discussed.

Sava Parascovia (Scientifico-Practical Institute of Horticulture and Food Technologies, Chişinău, Republic of Moldova)

ROOTS DEVELOPMENT CAPACITY OF RASPBERRY PLANTS
CAPACITATEA DE DEZVOLTARE A RĂDĂCINILOR LA PLANTELE DE ZMEUR

Investigations on capacity development and location of raspberry root system growing in new conditions were performed in the experimental field plantation located in the Institute of Horticulture in 2008. Study of the objectives was to evaluate the development length and location of root mass in soil on raspberry varieties Delbard Magnific. Strain of raspberry plant is steeped in the soil up to 4 cm, followed by about 7 cm height root, which then directs lateral and in depth. Most roots penetrate the soil to a depth of 45-60 cm. The location of raspberry on the horizon of most roots, the stem in part, on the side is for a radius of 30 cm, diameter 1-2 mm roots extend further a range of 40-50 cm. The total length of roots of the raspberry cultivar studied was taken as the value of 2121,7 cm and 381,8 g mass.

Sîrbu Sorina, Iurea Elena, Corneanu Margareta (Research and Development Station for Fruit Tree Growing of Iaşi)

BIOLOGICAL PROPERTIES OF NEW SWEET CHERRY CULTIVARS
PROPRIETĂȚI BIOLOGICE LA SOIURI NOI DE CIREŞ

Biological properties of 4 new sweet cherry cultivars ('Alex', 'Andrei', 'Ludovic' and 'Mihai', homologated in 2011), grafted on Prunus mahaleb L. rootstock, were studied in the North Eastern Romania region during a five-years period (2007, 2008, 2009, 2010, 2011). Investigation has included phenological properties (flowering and ripening time), pomological properties and biochemical composition of fruits. The highest fruit weight was found in 'Alex' (over 10 g). 'Alex' is also the earliest as the flowering time, wheareas 'Mihai' is the latest flowering cultivar. All cultivar taken under study has a medium ripening time (8-25 June). The soluble solids content ranged from 16,8 °Brix ('Ludovic') and 17,9 °Brix ('Andrei'). The highest reducing sugars content was found in 'Alex' and 'Andrei' (16 g/100 g fruit weight) and the lowest in 'Ludovic' (14 g/100 g fruit weight).

FLORICULTURĂ, ARBORICULTURĂ ORNAMENTALĂ
FLORICULTURE, ORNAMENTAL ARBORICULTURE

Buta Erzsebet, Cantor Maria, Buta Mihai, Horț Denisa (University of Agricultural Sciences and Veterinary Medicine of Cluj-Napoca)

THE UNILATERAL INFLUENCE OF SUBSTRATE ON THE DEVELOPMENT OF ROSEMARY CUTTINGS
INFLUENȚA UNILATERALĂ A SUBSTRATULUI ASUPRA DEZVOLTĂRII BUTAŞILOR DE ROZMARIN

The increasing the demand on the market of aromatic species determine more detailed study of rosemary propagation. This species is not only a seasoning plant; it is used in alternative medicine, but also modern and rustic gardens, balconies, terraces and sills. This paper makes some recommendations on the best substrate for rooting of Rosmarinus cuttings. During the experiments were made some morphological observations, were recorded dates regarding the growth and development of Rosmarinus cuttings in different rooting substrates. The dates were statistically interpreted by LSD test (Least Significant Difference) to illustrate the significance of differences. The best results concerning the total length of the cuttings and root systems were recorded in the substrate consist in peat and perlite. The number offshoots per cuttings was influenced most favorable by the substrate consist in peat with sand. Perlite of 0.02 mm favorably influenced the diameter of rosette and the number of leaves.

Cantor Maria, Buta Erszebet, Horț Denisa (University of Agricultural Sciences and Veterinary Medicine of Cluj-Napoca)

EVALUATION OF POTENTIAL MORPHO-DECORATIVE IN SOME VARIETIES OF FREESIA HYBRIDA
EVALUAREA POTENȚIALULUI MORFO-DECORATIV LA UNELE SOIURI DE FREESIA HYBRIDA

Freesia Flowers have always been used to represent all nice feelings towards other people. Studies have shown that flowers play a significant role in brining down the anxiety levels and induce a sense of calmness and bliss and joy. Freesia originates from South Africa and got its name in honour of Friedrich Heinrich Theodor Freese. Freesia hybrida is the member of the Iridaceae family. This paper presents six varieties of Freesia hybrida and the importance of these flowers in our life. This plant is one of the most famous one for the majority of people. It is available in white, yellow, lavender, mauve, orange, gold, pink, red, velvet shades colors. The biological materials were studied in didactical greenhouse at Floriculture

department of UASVM Cluj-Napoca. The next varieties 'El Dorado', Apollo', 'Corona', 'Romany', 'Balerina' and 'Margaret' *were analysed concerning their main morpho-decorative characteristics, following to be recommended for promoting in our country. The observations and measurements were made in the years 2010-2011 on 30 plants from each variety. Were analyzed the next characteristics: colors of flowers, height of plant, length of stem, number of florets/inflorescence and the number of simultaneous flower open. The statistical analyze of the characters was do using LSD.*

Chelariu Elena Liliana (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

ASPECTS REGARDING CULTIVATION OF *FESTUCA GLAUCA* IN THE PEDO-CLIMATIC CONDITIONS OF N-E AREA OF ROMANIA

ASPECTE PRIVIND CULTIVAREA SPECIEI *FESTUCA GLAUCA* ÎN CONDIȚIILE PEDOCLIMATICE DIN N-E ROMÂNIEI

In the current paper are presented the experimental results regarding cultivation of Festuca glauca „Elijah Blue" *as ornamental grass, in the pedo-climatic conditions of Iaşi County, Romania. Were made researches regarding producing of planting material from seeds, using different substrates (V1 – garden soil, V2 – peat, V3 – 1 part garden soil + 2 parts peat, V4 - jiffy-pots) and regarding the behaviour in cropping of the obtained biological material. The best results regarding seedlings production were obtained at variant V3, and in crop at variant V3, followed by V1 and V2.*

Kentelky Endre, Magyari Katalin (Sapientia–Hungarian University of Transylvania, Târgu-Mureş)

STUDY OF APPLYING DIFFERNT TREATMENTS ON CUT ROSES VARIETY 'BLIZZARD' AND THEIR INFLUENCE ON SHELF LIFE

CERCETĂRI PRIVIND INFLUENȚA UNOR TRATAMENTE ASUPRA DURATEI DE PĂSTRARE ÎN VAZĂ A FLORILOR TĂIATE DE TRANDAFIR SOIUL 'BLIZZARD'

Everyone loves fresh roses in their home, and one of the main expectations would be, to keep them as long as possible fresh. Unfortunately just a few people know about how long it takes to get the roses from the grower, and then into your home. Transport and storing takes a lot of time. This is the reason why vase life has such an important role in today's growing. A few years back it really did not matter how long a rose can live in a vase, because they were grown right next to the consumers, and did not have to travel the whole world to get into their homes.

Objectives: To extend the vase life of cut roses; Study the biological process; Study and compare the efficiency of preservatives; Compare the vase life extending solutions that can be found on the market and the ones you can make at home with just regular tap water

Kentelky Endre, Magyari Katalin (Sapientia–Hungarian University of Transylvania, Târgu-Mureş)

STUDY OF APPLYING DIFFERNT TREATMENTS ON CUT ROSES VARIETY 'HAPPY HOUR' AND THEIR INFLUENCE ON SHELF LIFE

CERCETĂRI PRIVIND INFLUENȚA UNOR TRATAMENTE ASUPRA DURATEI DE PĂSTRARE ÎN VAZĂ A FLORILOR TĂIATE DE TRANDAFIR SOIUL 'HAPPY HOUR'

The objectives of the paper is: To extend the vase life of cut roses; Study the biological process; Study and compare the efficiency of preservatives; Compare the vase life extending solutions that can be found on the market and the ones you can make at home with just regular tap water

Popescu Liana (Bistrița municipality - Department of public services)

RESEARCH ON *CANNA INDICA* L. SEED GERMINATION

CERCETĂRI PRIVIND GERMINAREA SEMINȚELOR DE *CANNA INDICA* L.

This study aims to test the influence of constant temperature and gibberellic acid GA_3, on seed germination of five Canna indica L. cultivars. The seeds were exposed to constant temperature (30°C) for 24h and 72h. Both, variable (15-22°C) and constant temperature (30°C) provided the necessary heat to activate the embryo. In order to study the effect of gibberellic acid GA_3, the seeds were treated with GA3 solution in three levels: 150 ppm, 300 ppm, 450 ppm. The highest percentage of germination was obtained at 450 ppm concentration, on 'Tropical Bronze Scarlet' cultivar.

Sandu Tatiana, Trofin Alina Elena, Bernardis Roberto (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

AN ANALYSIS OF ORNAMENTAL WOODY VEGETATION EXISTING IN IAŞI COUNTY'S GREEN SPACES

ANALIZA STRUCTURII VEGETAȚIEI LEMNOASE ORNAMENTALE EXISTENTE ÎN SPAȚIILE VERZI DIN MUNICIPIUL IAŞI

Iasi has approximately 912 hectares of planted green areas, representing about 23% of the total area of the city. Following assessments conducted periodically since 2002 and so far, we observed some aspects of plant qualitative development and vegetal structure of the urban and suburban green spaces in Iasi city. This paper seeks to present an assessment of structural components for the main plant units of green space and a study of the detection possibilities of improving the value of these green spaces by introducing appropriate arrangement of species in terms of environmental aspect , proper behavior,

ornamental and especially the resistance to urban pollution. According to the general structure's evaluation we found that from all the green areas in Iaşi, approx. 15% are occupied by resin tree, 47% by deciduous trees, 9% by resin shrubs and 29% by deciduous shrubs.

Zaharia Adrian, Balcău Simina, Buta Erszebet, Zaharia Dumitru (University of Agricultural Sciences and Veterinary Medicine of Cluj-Napoca)

RESEARCH RIGARDING THE INFLUENCE OF THE DRAINAGE AND THE FERTILIZATION ON *SEMPERVIVUM* PLANTS CULTIVATED IN POTS

CERCETĂRI PRIVIND INFLUENȚA DRENAJULUI ŞI A FERTILIZĂRILOR ASUPRA PLANTELOR DE *SEMPERVIVUM* CULTIVATE ÎN GHIVECE

The research has been focused on the behaviour of Sempervivum montanum plants, grown in pots, to which were applied three graduations of fertilization and drainage. The purpose of the research was to determine the need for an asset drainage that ensures that the excess water is eliminated. On the other hand it was aimed at establishing the effect of fertilizer application to ensure normal growth and development of crops in a limited substrate volume and nutrient reserves. The results established that the variants which the drainage were unsatisfactory, water accumulated in excessive quantities, so the plants had suffered and eventually died, but the plants couldn't be saved even if they were taken from the harmful culture medium. The second factor applied proved to be beneficial, but the effect did not lead to significant differences. These results lead to the conclusion that Sempervivum plants are not demanding of the physico-chemical characteristics of the soil if drainage is performed properly.

LUCRĂRI PREZENTATE POSTER

POSTER PRESENTATIONS

LEGUMICULTURA

VEGETABLE GROWING

Avasiloaiei Dan Ioan, Munteanu Neculai, Stoleru Vasile (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

INFLUENCE OF PAVSTIM ON THE GROWTH AND DEVELOPMENT OF ORGANIC TOMATO CROP FROM POLYTUNNELS

INFLUENȚA PAVSTIMULUI ASUPRA CREȘTERII ȘI DEZVOLTĂRII TOMATELOR ECOLOGICE ÎN SOLAR

Pavstim is a natural bioregulator substance with steroidal glycoside structure extracted from Foxglove plant (Digitalis purpurea). The paper aims to evaluate the influence of this bioactive substance, used in two concentrations (0.001% and 0.0015%) on two tomato hybrids: Winona F1 and Primadona F1. The variants were compared with the experiemental average. The results highlighted the V_1 and V_4 variants (the untreated variants), with negative differences distinctly significant (-7.7 t / ha), respectively significant (-5.2 t / ha) and the V_6 variant (Pavsim applied in 0.0015% conc. on Winona F1 hybrid) with significant positive difference (6.31 t / ha).

Brezeanu Creola, Brezeanu Petre Marian, Ambăruş Silvica, Călin Maria (Vegetable Reasearch and Development Station of Bacău)

ASSESMENT OF VEGETABLE RESOURCES CONSERVATION WORK AT VEGETABLE RESEARCH STATION BACAU ROMANIA

EVALUAREA ACTIVITATII DE CONSERVARE A RESURSELOR GENETICE LEGUMICOLE LA STATIUNEA DE CERCETARE DEZVOLTARE PENTRU LEGUMICULTURA BACAU

The aim of this study is to present our research activity for: identification, collection, evaluation and conservation of germplasm resources useful in breeding works; creation and patenting of new cultivars, with high production capacity and quality, suitable for organic and conventional system and diversification of vegetables assortment by introducing of species, varieties and local populations. More than forty-nine plant varieties developed in Vegetable Research and Development Station Bacau have been patented by State Office for Inventions and Trademarks (OSIM). Part of our cultivars can be successfully cultivated in ecological culture system. The paper presents information about our accessions and some new genotypes created by our researchers.

Brezeanu Petre Marian[1], Brezeanu Creola[1], Ambăruş Silvica[1], Munteanu Neculai[2] ([1]Vegetable Reasearch and Development Station of Bacău, [2]University of Agricultural Sciences and Veterinary Medicine of Iaşi)

THE STUDY OF INITIALLY BREEDING MATERIAL WITH HIGH GENETIC VARIABILITY, IN ORDER TO OBTAIN NEW TOMATO VARIETIES, SUITABLE FOR ORGANIC FARMING

STUDIUL MATERIALULUI INIȚIAL DE AMELIORARE CU VARIABILITATE GENETICĂ RIDICATĂ, PENTRU OBTINEREA UNOR SOIURI NOI DE TOMATE PENTRU AGRICULTURĂ BIOLOGICĂ

The main purpose of research was to develop a new semi early cultivar of tomato for industrialization and fresh consumption, with a broad genetic base: increased productivity (2.0-3.0 kg/plant), with improved quality of fruit (high content of in soluble solids, uniformity of fruit's shape and color), shape index between 0.98-1.02, average weight 120 g/fruit, with tolerance and / or resistance to pathogen attack, adapted to specific environmental conditions, with increased chances of achieving, screening and selection biotype. Thus, we proceeded to identify and collect useful sources of germplasm for tomato breeding program.

Burnichi Floarea (Vegetable Reasearch and Development Station of Buzău)

„MENUET", BUSH BEAN CULTIVAR WITH YELLOW POD OBTAINED AT VEGETABLE REASEARCH AND DEVELOPMENT STATION OF BUZĂU

„MENUET", SOI DE FASOLE PITICĂ CU PĂSTAIE GALBENĂ OBȚINUT LA S.C.D.L. BUZĂU

For enriching and diversifying the Romanian bean species, in 2009 at S.C.D.L. Buzau a new bean variety "MENUET" was homologated and started being cultivated. "MENUET" is a garden bean with extrasoft, cylinder shaped, yellow pods. As a result of the amelioration works that have been done for a long time the L13 cultivar proved itself to be superior to „Maxidor", the control variant, in which regards productivity, quality and genetic stability. The research carried out emphasizes the high production potential of the „MENUET" cultivar (over 15t/ha), surpassing the control variant with 8.5t/ha. Because of its particular ecological flexibility the "MENUET" variety can be cultivated throughout the country, as a base/successive

crop, and it can precede with success most of the vegetable crops. The special genetic potential of this variety allows mechanized harvesting, adapting crop technology to the machine system, manual harvesting of bean pods and recommends it for ecological cultivation.

Burnichi Floarea[1], Popa Mona Elena[2], Rapa Maria[2] ([1]Vegetable Reasearch and Development Station of Buzău, [2]University of Agricultural Sciences and Veterinary Medicine of Bucharest, INCERPLAST Bucharest)

BIODEGRADABLE COMPOSITE MATERIALS IN AGRICULTURAL APPLICATIONS - CASE STUDY: TRANSPLANTING POTS AND TOMATO YARN

MATERIALE BIOCOMPOZITE CU MATRICI POLIMERICE BIODEGRADABILE CU APLICAȚII ÎN AGRICULTURĂ – STUDIU DE CAZ: GHIVECE DE TRANSPLANTARE ŞI SFOARĂ DE PALISAT

Within the framework of the FORBIOPLAST (Forest Resource Sustainability through Bio-Based-Composite Development) Project no. 212239–FP–KBBE one topic of the research activity was focused on the use of wood derived fibers as a component in composites materials with biodegradable polymeric matrices for application in agriculture sector. Prepared prototype (tomato yarn, transplanting pots) have been used in greenhouse and open field trials in Romania throughout the 2011 year, by the Research and Development Station for Vegetables Growing Buzau to evaluate their performance in comparison with similar products on the market. One experiment was realized in classical greenhouse with tomato yarn from biodegradable wood fibers on "SIRIANA F1", tomato hybrid obtained at RDSVG Buzau. Another experiment was realized in open field, by testing lifecycle and compostability after its use of 2 variants of transplanting pots, bio- and non-biodegradable type and one of alveolar pallets on "MONTOP F1", broccoli hybrid from Syngenta.

Cenuşă Ana Emilia, Popescu Victor (University of Agricultural Sciences and Veterinary Medicine of Bucharest)

COMPARATIVE STUDY OF SOME FRENCH BEAN CULTIVARS CONCERNING THE SEEDS YIELD QUALITY AND QUANTITY

STUDIUL COMPARATIV AL UNOR SOIURI DE FASOLE DE GRĂDINĂ CU PRIVIRE LA CALITATEA ŞI CANTITATEA PRODUCȚIEI DE SEMINȚE

The paper presents the results concerning the study of the optimum plant density obtained in the comparative culture of some garden bean cultivars for seed production. The researches has been done during the 2011 year. The variants were placed in the experimental field according to the method of randomised blocks disposed in four replications. The observation and determination concerning the plants phenology and morphologic characters (the number of pods per plant, length of pod, MMB) permit the studied varieties characterisation and the sowing schemes recommendation. The experimental dates obtained with regard to seed yields have been statistic calculated according to the method of variant analyze. The maximum seed yields have been obtained at the variant with 3 rows on bed at 37 cm apart, but we recommend the variant with 2 rows on bed at 70 cm apart, considering the necessity to ease the mechanical hoeing and harvesting.

Hobincu Marlena, Munteanu Neculai (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

QUANTIFYING THE INFLUENCE A SOME DIFFERENT ORGANIC SUBSTRATES ON SEED GERMINATION OF *ORIGANUM VULGARE* L.

CUANTIFICAREA INFLUENȚEI UNOR SUBSTRATURI ORGANICE ASUPRA GERMINĂRII SEMINȚELOR DE *ORIGANUM VULGARE* L.

Germination is one of the most important technological phases, in order to get a quality harvest. Knowing that the oregano seeds present a low germination, this study aims to find the best organic substrate whose formula is best suited to a level as high germination. Thus, was used seven mixing formulas which have in their composition, peat, manure, perlite and sand in different proportions. Quantifying the influence of organic substrates on seed germination of oregano was estimated through the rate of germination (emergence, dynamic of germination rate, dynamic of germination velocity and germination velocity coefficient).

Hobincu Marlena, Munteanu Neculai (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

ASSESSMENT OF AGROBIOLOGICAL POTENTIAL OF THE *ORIGANUM VULGARE* L. SPECIE UNDER THE INFLUENCE OF THE DIFFERENT DENSITIES OF CULTIVATION

EVALUAREA POTENTIALULUI AGROBIOLOG AL SPECIEI *ORIGANUM VULGARE* L. SUB INFLUENTA DIFERITELOR DENSITATI DE CULTIVARE

The paper aims to analyze the results obtained from the different densities of cultivation on the Origanum vulgare specie. The study also aims to highlight the influence of density of cultivation on the agrobiological potential of the specie analyzed. The main characteristics considered in this experiment were: plant height, bush diameter, number of shoots/bush, number of inflorescences/shoot, number of leaves/shoot, the weight of the aerial fresh part, the weight of the aerial dry part,the weight of underground fresh part, the weight of underground dry part. Analyses show that the density of cultivation of 60 cm between rows and 30 cm between plants in turn, is most appropriate to achieve good results in terms of culture of oregano. Influence of the densities cultivation was determined by calculating the coefficient of variability.

Muntean Delia[1], Munteanu Neculai[1], Balcău Simina[2], Lazăr (Nechita) Adriana[1] ([1]University of Agricultural Sciences and Veterinary Medicine of Iaşi, [2]University of Agricultural Sciences and Veterinary Medicine of Cluj Napoca)

MORPHOLOGICAL AND PHENOLOGICAL ASPECTS OF SOME ORNAMENTAL KALE FORMS
ASPECTE MORFOLOGICE ŞI FENOLOGICE ALE UNOR FORME ORNAMENTALE LA VARZA DE FRUNZE

This paper presents a short morphological and phenological characterization of a variety of eight hybrids of ornamental cabbage as kale forms. The research was conducted at the Faculty of Horticulture, University of Agricultural Sciences and Veterinary Medicine, in the experimental field of vegetables, in 2011. Purpose of the research was to highlight the value of ornamental forms studied to enrich knowledge of these varieties as a premise for introduction and using them in landscape. The results revealed morphological and phenological diversity of the hybrids studied. Thus, in November, plant height ranged from 80.5 cm (White Peacock hybrid) to 97.2 cm (Crane Bicolor hybrid); ornamental rosette diameter ranged from 22.8 cm (Crane Red hybrid) to 31.7 cm (Red Peacock hybrid). At the same time vegetative mass ranged from 654 g (Crane Pink hybrid) to 870 g (Red Peacock hybrid). Concerning to ornamental foliage color, it was: cream with pink accents, red, pink, white and violet with purple accents. Vegetation period lasted to all the cultivars from time emergence until the cancellation culture.

Munteanu Neculai[1], Ţibulcă Constantin Laurenţiu[1], Bireescu Geanina[2], Bireescu Lazăr[2], Stoleru Vasile[1] ([1]University of Agricultural Sciences and Veterinary Medicine of Iaşi, [2]Biological Research Institute of Iaşi)

THE ASSESSMENT ON THE FERTILITY POTENTIAL OF VEGETABLES CULTIVATED SOIL FROM TÂRGU FRUMOS MICROREGION
EVALUAREA POTENȚIALULUI DE FERTILITATE A TERENURILOR CU VOCAȚIE LEGUMICOLĂ DIN MICROZONA TÂRGU FRUMOS

The research was carried out in the vegetable ecosystem of Târgu Frumos microregion in 2010 - 2011. The assessment of the fertility potential of vegetable cultivated soil from Târgu Frumos microregion was evaluated using synthetic biological indicators of soil fertility as expressed through: potential indicator of enzyme activity (IPAE%), potential indicator of vital activity (IPAV%) and synthetic biological indicator (ISB%) (Ştefanic et al 1994). In this study were analyzed two vegetable microfarms from Târgu Frumos such as A.F. Maxim and A.F. Vavilov. The results reveal a high fertility potential of analyzed soil from Târgu Frumos, which provides a high suitability regarding sustainability of the vegetable crops and also stabilize the production process.

Stoleru Carmen, Stoleru Vasile, Munteanu Neculai, Avasiloaiei Dan Ioan (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

THE INFLUENCE OF CULTIVAR AND DENSITY ON EARLY CABBAGE
INFLUENȚA CULTIVARULUI ȘI A DENSITĂȚII LA VARZA ALBĂ TIMPURIE

Organic farming is the main goal the conservation of ecosystems and obtains healthy products for consumers. Growing early white cabbage, in optimal conditions, means primarily satisfying the requirements under best plants to ambient factors. The topic under study aims at establishing the most appropriate varieties for area of the Romanian and the most appropriate density in the organic. The highest early cabbage production during 2006-2008 were obtained from cultivar K001 F1, respectively 32,00 t/ ha. Regarding the influence of planting density on total production in early cabbage, the highest yield were carried out in variant when it was planted 47,619 pl. / Ha, where 31.76 t / ha. Regarding the influence of combinations of cultivar and planting density can be said that the highest yields were obtained when K001 F1 cultivar planted at distances of 70 cm x 30 cm, carried out the production of 33.54 t / ha.

Stoleru Vasile, Munteanu Neculai, Maftei Adriana (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

CONSUMER PERCEPTIONS OF ORGANIC VEGETABLES, IN IASI
PERCEPTIA CONSUMATORILOR FATA DE LEGUMELE ECOLOGICE, IN IASI

This study presents the results of a survey regarding consumer perceptions of organic vegetable in Iasi. The survey was conducted to determine consumer attitudes towards organic vegetables and the reasons for consumption or non-consumption of organic vegetables.A total of 100 consumers from different occupational groups living in Iasi participated in the research. The results of the survey revealed that more than half of the survey participants had knowledge about organic vegetables. The majority of the participants were positive towards organic vegetable and purchased them as well. The results of crosstabulation analysis showed that the consumption of organic foods varied with respect to income, profesion and education. The results of the survey also indicated that the participants confidence in organic vegetable was at moderate level. About 21% of the participants was found to rely on organic vegetable Organic vegetable were purchased because they were perceived as healthy, environmentally friendly and more nutritious than conventional foods.

Stoleru Vasile, Stan Teodor, Munteanu Neculai, Stoleru Carmen (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

THE INFLUENCE OF TECHNOLOGICAL FACTORS ON EARLY WHITE CABBAGE PRODUCTION IN NE OF ROMANIA

INFLUENȚA UNOR FACTORI TEHNOLOGICI ASUPRA PRODUCȚIEI LA VARZA ALBĂ TIMPURIE ÎN NE ROMÂNIEI

The concept of organic farming aims mainly agricultural ecosystems conservation and getting healthy products for consumers. The premise of obtaining them is influenced primarily by biotope and applied technology. Making crop system of early white cabbage, in optimal conditions, means first satisfying the requirements under best plants to environmental factors. The study aims to address an older problem related to growing white cabbage, but in the implementation of those measures and technological resources in a sustainable system growing, namely, the organic system. The highest early cabbage production during 2006-2008 were obtained from cultivar K001 F1, respectively 32,00 t/ ha. Regarding to planting time on early cabbage production, we can say that for the NE area influenced very slightly production, , best results were obtained when planting took place at 07 April, yield being 31,01 t / ha. The best results regarding to the influence of cultivar and planting time, were obtained when K001 F1 cultivar, planted on 07 April (32.84 t / ha).

Teodorescu Eliza[1], Munteanu Neculai[2], Stoleru Vasile[2], Vînătoru Costel[1], Zamfir Bianca[1] ([1]Vegetable Reasearch and Development Station of Buzău, [2]University of Agricultural Sciences and Veterinary Medicine of Iaşi)

RESEARCH CONCERNING THE MAIN CHARACTERISTICS OF SOME LOCAL BEAN POPULATION FROM BUZĂU VEGETABLE AREA

STUDIUL PRINCIPALELOR CARACTERE ALE UNOR POPULAȚII LOCALE DE FASOLE DIN BAZINUL LEGUMICOL BUZĂU

The study is part of an extensive conservation and utilization program of germplasm sources at common bean (Phaseolus vulgaris L. convar. nanus) from traditional vegetable areas in Romania. The research were organized in 2010 – 2011 at V.R.D.S. Buzău, using a collection of 5 local populations from Buzău vegetable area having the purpose to mark out the main morphological and physiological characteristics, and also agro productive. The results obtained were compared to a control variety – Ioana. Thus, was dignified a great variability of the studied cultivars, and also the productive superiority of 2 local populations (B_z 11 and B_z 40) that surpasses with over 10% the control variant.

Țibulcă Constantin Laurențiu[1], Munteanu Neculai[1], Bireescu Lazăr[2], Stoleru Vasile[1], Ghițău Carmen[1] ([1]University of Agricultural Sciences and Veterinary Medicine of Iaşi, [2]Biological Research Institute of Iaşi)

RESEARCH ON THE BIOTIC AND ENZYMATIC POTENTIAL OF SOIL FROM TÂRGU FRUMOS MICROREGION

CERCETARI PRIVIND POTENTIALUL BIOTIC ŞI ENZIMATIC AL SOLULUI DIN CADRUL MICROZONEI TARGU FRUMOS

The research was carried out in the vegetable ecosystem of Târgu Frumos microregion in 2010 – 2011. The biotic potential level illustrate an physiological activity of the totality of soil microbiota (microflora, edaphic mezofauna) which is involved in biochemical transformation of organic matter, humus and mineral soil material. The assessment of potential biotic and soil enzyme from Târgu Frumos microarea was possible with quality indicators in terms of pedobiological ecoclimatice of the year 2010 from the research stationary studied AF Maxim and A.F. Vavilov in vegetable ecosystems exploited in conventional system. The biological analysis of soil including the determination of soil physiological microflora (soil respiration and celulozoliza) and enzyme activity (catalase, invertase, urease and phosphatase) (Nannipieri et al. 2002; Gianfreda et al., 2005).

Vînătoru Costel, Teodorescu Eliza, Zamfir Bianca (Vegetable Reasearch and Development Station of Buzău)

CUCUMIS METULIFERUS, A NEW ACCLIMATIZED AND BREEDED SPECIES AT V.R.D.S. BUZĂU

CUCUMIS METULIFERUS, O SPECIE NOUĂ, ACLIMATIZATĂ ȘI AMELIORATĂ LA S.C.D.L. BUZĂU

There were more activities concerning the acclimatization and breeding of this new species in different geographical areas from the origin, whereas intensively after 1980, when the first concrete results were given to publicity. In our country the first research on studying this species started after 1990 at V.R.D.S. Buzau. During 20 years of studies and research of Breeding Laboratory in the station, the proposed objectives were reached. The station presently disposes of genetical adapted and diversified material for our country, specific crop technologies were elaborated both for protected areas and open field. Also it detains a rich germplasm source composed of 8 distinct lines, genetical stabilized and an enhanced amount of information concerning this species. L 1 was registered at I.S.T.I.S. Romania towards approval and patenting in 2012.

POMICULTURĂ
FRUIT GROWING

Dascălu Marius, Căuleț Raluca, Morariu Aliona, Negrea Roxana, Paşcu Dragos, Sfichi Duke Liliana (University of Agricultural Sciences and Veterinary Medicine Iaşi)

SHOOT AND LEAF GROWTH RESPONSES TO LIGHT MICROENVIRONMENT AND SUBSTRATE IN RASPBERRY AND BLACKBERRY CULTIVARS

INFLUENTA LUMINII SI SUBSTRATULUI ASUPRA PROCESELOR DE CRESTERE A LASTARILOR SI FRUNZELOR LA SOIURI DE ZMEUR SI MUR

The dependence of shoot behavior and leaf area on light microenvironment and substrate was examined in three cultivars of red raspberry (Opal, Cayuga and Ruvi) and two cultivars on blackberry (Thornfree and Lochness), growing on an experimental field from June to October 2011. Plants were cultured in two conditions of light, namely 100% sunlight and 25% sunlight and two conditions of growth substrate, namely soil and a soil/peat mixture. Several parameters such as leaf area, number of shoots, and number of leaves per shoot, photosynthetic pigments and photosynthetic capacity were analyzed. All raspberry cultivars developed larger leaves on a soil/peat mixture than on soil. Contrary, blackberry cultivars showed smaller and less leaves on a soil/peat mixture than on soil, mainly in shade conditions. Among raspberry cultivars, Opal showed the highest number of shoots in full sunlit on a soil/peat mixture. Genotypic variations in the accumulation of photosynthetic pigments and photosynthetic capacity in response to substrate and light in response were also found. The significance of light and substrate conditions on raspberry and blackberry growth and development is discussed.

Dascălu Marius, Istrate Mihai, Grădinariu Gică, Zlati Cristina, Bernardis Roberto, Prodan Nicu, Sfichi Duke Liliana (University of Agricultural Sciences and Veterinary Medicine Iaşi)

SOIL MOISTURE STUDY AND ITS INFLUENCE ON RASPBERRIES AND BLACKBERRIES CULTURE FOR NORTH EAST MOLDOVA COUNTY

STUDIU PRIVIND UMIDITATEA SOLULUI SI INFLUENTA ACESTEIA PENTRU CULTURA ZMEURULUI SI MURULUI IN ZONA DE NE MOLDOVEI

Raspberries and blackberries, soil moisture -sensitive species, found in the hilly area inappropriate growth and development conditions. Because the root system explores a small volume of soil, especially in the profile depth, these species suffer from drought during the summer , imposing providing moisture deficit by irrigation. In "V. Adamache" farm was established an experimental plot with three varieties of raspberries (Opal, Cayuga and Ruvi) and two varieties of blackberries (Thornfree and Lochness) in order to study the behaviour of this speies under stress conditions. Plants are grown both in soil and in a mixed soil : peat (50 : 50) with unirrigated and irrigated conditions. Considering the behaviour of the two species to water factor, biometric measurements were made on plants, in conjunction with determining soil moisture by gravimetric method.

Iurea Elena[1], Grădinariu Gică[2], Morariu Aliona[2], Corneanu Gelu[1], Sîrbu Sorina[1] ([1]Research and Development Station for Fruit Tree Growing of Iaşi, [2]University of Agricultural Sciences and Veterinary Medicine of Iaşi)

THE EVALUATION OF POLLEN'S VIABILITY AND THE GERMINATION CAPACITY FOR SOME CHERRY VARIETIES CREATED AT SCDP IAŞI

EVALUAREA VIABILITĂȚII POLENULUI ŞI CAPACITATEA DE GERMINARE LA UNELE SOIURI DE CIREŞ CREATE LA SCDP IAŞI

In this paper we decided to evaluate the pollen's quality for some varieties of cherry tree (13 varieties) obtained at SCDP Iaşi, to establish their posibility of use as pollinators. The pollen's germination was realised on solid nutritive medium. The pollen's viability was determined through the carmine-acetic method. The most cherry tree species (10 of 13 varieties taken for study) had a high range of pollen germination of above 40%, a percent considered by other authors as satisfying for a normal fructification for the cherry species, so, from this point of view they can be recommended as potential genitors for future amelioration works. The pollen's viability was bigger than the germination concerning all the studied varieties, the values of this indicator varied between 80,56% for the Tereza variety and 99,33% for the Oana variety, all the varieties could be used from this point of view as genitors in artificial hybrid works.

Negrea Roxana, Zlati Cristina (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

RESEARCH ON THE ORNAMENTAL TREE SPECIES SANOGEN IMPACT UPON URBAN ECOSYSTEMS

CERCETĂRI PRIVIND IMPACTUL SANOGEN AL SPECIILOR POMICOLE ORNAMENTALE ASUPRA ECOSISTEMELOR URBANE

Meta studied landscape spaciousness throughout this paper, can be configured as bringing closer the artistic essence of urban space and industrial space in which most urban areas are planted with "sad" shrubs, "ornamental" trees that are not native to these areas and which need too much water, and annual

flowers planted in organized rows. Therefore this paper presents the positive influence on the population that a city may have, city in which apple, pear, cherry, walnut trees and shrubs grow along the streets and create a well-deserved shade around parking spaces and in parks but also, offering fruits to those who wish to collect thus, combining the local gastronomic movement with the beauty of the neighborhood, consolidating communities and feeding them at the same time.

Opriță Vlăduț Alexandru (Research and Development Station for Fruit Tree Growing of Constanța)

RESEARCH ON HYBRID VT 95.03.49 IN ORDER TO IMPROVE THE ASSORTMENT OF APRICOT IN DOBROGEA

CERCETĂRI ASUPRA HIBRIDULUI VT 95.03.49 ÎN VEDEREA ÎMBUNĂTĂȚIRII SORTIMENTULUI DE CAIS ÎN DOBROGEA

Fruit quality is a whole of features and specific characteristics wich stands for the selection and promotion of cultivars according to the market demand and destination. In the breeding work, this characteristic is a major objective in the selection of new genotypes. The studies were carried out between 2008 – 2011 at the Research Station for Fruit Growing Constanta, within the Breeding Apricot Lab. on a number of 11 crossbreeds. In terms of fruit quality: ripening period, weight of fruit, shape, skin colour, taste and nutritive characteristics, according to the present demands on the European market. The study of these hybrids has as aim the obtaining of new varieties with superior qualities, that are considered perspective for apricot assortment improvement in this area.

Opriță Vlăduț Alexandru (Research and Development Station for Fruit Tree Growing of Constanța)

RESEARCH ON THE VT 92.01.10 PERSPECTIVE HYBRID FOR THE AMELIORATION OF APRICOT IN DOBROGEA

CERCETĂRI ASUPRA HIBRIDULUI DE PERSPECTIVĂ VT 92.01.10 ÎN VEDEREA ÎMBUNĂTĂȚIRII SORTIMENTULUI DE CAIS IN DOBROGEA

Creşterea consumului de caise depinde de comercializarea, calitatea fructelor la recoltare cât şi costul acestora. Tendințele pieței care au impact asupra consumului de caise sunt globalizarea şi necesitatea suplimentări cu produse proaspete tot timpul anului, costurile cu forța de muncă, difersificarea pesticidelor folosite şi contaminarea bacteriană a produselor proaspete. Aceste presiuni au reânoit interesul în sistemele de producție pentru a extinde perioada de recoltare, pentru a reduce imputurile chimice, precum şi pentru a asigura o calitate superioară a fructelor. Prin urmare eforturile noastre s-au concentrat pe dezvoltarea de noi soiuri de cais cu calitate superioară a fructelor, niveluri de producție ridicate, o diversitate mai mare de tipuri de fructe pe piață si adaptarea la schimbările climatice care au apărut în ultimul timp. In această lucrare am studiat caracteristicile calitative ale hibridului VT 92.01.10 având ca martor soiul CR 2-63 determinarile experimentale s-au efectuat la SCDP Constanța în perioada 2008 – 2011. Hibridul VT 92.01.10 s-a evidențiat față de martor prin greutatea fructelor, fermitate, substanță uscată, culoarea fructelor. Conform rezultatelor obținute putem susține introducerea hibridului pentru omologare in vederea extinderi perioadei de consum, deoarece potențialul calitativ mare pe care îl are față de soiurile deja existente, îl recomandă.

Zlati Cristina, Grădinariu Gică, Istrate Mihai, Negrea Roxana (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

FORMATION OF GRAFT UNION IN PLUM: A HISTOLOGICAL STUDY BY USING LIGHT MICROSCOPY

INVESTIGATII ALE ZONEI DE ALTOIRE LA PRUN: STUDIU HISTOLOGIC FOLOSIND MICROSCOPIA OPTICĂ

During grafting, phenolic compounds from the cut surface cells oxidize and produce necrotic layer isolating the surfaces. Callus cells formed from the xylem medullar ray and secondary shell cells destroy the necrotic layers on the cut surfaces. Then, the cavity between the rootstock and scion is filled and reestablish the connection between them. After this stage, the transport of water and nutrients through the grafting area occurs. For a successful grafting it is important to pursue the anatomical development between tissue of scion and rootstock after grafting. The anatomical structure of graft unions was investigated in plum varieties 'Stanley', 'Centenar', 'Tuleu gras' and 'Pescarus' grafted on cherry plum (Prunus cerasifera Ehrh) seedlings. This research was aimed to determine the anatomical structure of graft union in some graft combinations of plum using chip-budding grafting technique. The study was carried out in 2007-2009 in University of Agricultural Sciences and Veterinary Medicine Iasi Experimental orchard. Tissue samples from graft unions were taken one year after grafting and fixed in formalin/glacial acetic acid/ethanol solution. Scattered brown necrotic layers were identified, as a result of enzymatic reactions in the junctional tissue. By analysing the pattern of the development of vascular tissues we can estimate the compatibility of the graft combination and control the grafting process. The results are beneficial in nursery plant production for new rootstocks selections.

FLORICULTURĂ, ARBORICULTURĂ ORNAMENTALĂ
FLORICULTURE, ORNAMENTAL ARBORICULTURE

Buta Erzsebet, Cantor Maria, Buta Mihai, Horț Denisa (University of Agricultural Sciences and Veterinary Medicine of Cluj Napoca)

AQUATIC FLOATING PLANTS WITH POTENTIAL USE IN PHYTOREMEDIATION
PLANTE ACVATICE PLUTITOARE CU POTENȚIAL DE UTILIZARE ÎN FITOREMEDIERE

Fast industrialization, increasing urbanization, growing living standards, development of sustained way chemicals administration in the current century require a greater consumption of water and implicitly increased charging with different residues and contaminants. Therefore, studies concerning the treatment of contaminated water are presents interest and impetuous necessary. The contamination of waste waters with toxic heavy metals is a major environmental issue, much debated on nationally and internationally level. Many aquatic plants (hydrophytes) have the capacity to decontaminate water (called hyperaccumulators) through phytoremediation. For this purpose, the floating aquatic species are used with great success: Azolla pinnata R. Br., Eichhornia crassipes L., Hydrocharis morsus ranae L., Lemna minor L., Lemna gibba L., Pista stratiotes L., Salvinia natans Kunth. They are used in different aquatic landscapes for decorate ponds and lakes. It creates real floating islands to remediation of contaminated wastewater and biomonitoring. This paper presents some measures to filter wastewater with aquatic plants and the assortment of widely used aquatics for this purpose.

Cantor Maria, Buta Erzsebet, Horț Denisa, Andriescu Ioana (University of Agricultural Sciences and Veterinary Medicine of Cluj Napoca)

RESEARCH CONCERNING VEGETATIVE MULTIPLICATION AT CACTUS
CERCETARI PRIVIND ÎNMULȚIREA VEGETATIVĂ LA CACTUŞI

Cacti inhabit diverse regions, from coastal plains to high mountain areas. Cacti have a variety of uses: some species are used as ornamental plants; others are grown for fodder or forage, others for food (particularly their fruit). The studies and researches conducted in this work has tried to highlight the technological and environmental factors influence the rooting of cuttings cactacee genre: Opuntia, Mamillaria, Cereus taking into account their length, the substrate used in planting and processing with different rizogene products containing substances to stimulate root seedlings. Throughout the research were aimed to ensure the optimum environmental factors that influenced rooting cuttings. Both the foundation of experience, and at its dissolution, has been a number of observations and measurements necessary to characterize the biological material used for interpreting the results of rooting cuttings, in 2010-2012, on 30 plants from each variety. The study found that the results best results were obtained for seedlings using short in perlite + sand substrate of sand, making root of 17 seedlings 30. Average was calculated for the statistical analyze using LSD.

Cârstea Oana Mariana (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

ASPECTS CONCERNING BEHAVIOR OF LILIUM HYBRIDS IN DIFFERENT CULTURE SYSTEMS
ASPECTE PRIVIND COMPORTAREA UNOR HIBRIZI DE *LILIUM* ÎN DIFERITE SISTEME DE CULTURĂ

This paper presents three asian Lilium hybrids: Gironde, Lolly Pop and Crimson Pixie grown in different culture systems, namely: tunnel and pots. The research was conducted at the Faculty of Horticulture, University of Agricultural Sciences and Veterinary Medicine Iasi, in the experimental field of floricultural. Based on these hybrids have made studies on plant height, flowering bud appearence and their behavior was monitored solar and pots.

Chelariu Elena Liliana, Lucia Draghia (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

SPECIES FROM *CYPERACEAE* FAMILY WITH ORNAMENTAL POTENTIAL AS ORNAMENTAL GRASSES FROM IAŞI COUNTY, ROMANIA
SPECII DIN FAMILIA *CYPERACEAE* CU POTENȚIAL DE CULTIVARE CA IERBURI ORNAMENTALE ÎN JUDEȚUL IAŞI, ROMÂNIA

Iaşi County is placed in the 5th area of rusticity, with minimum temperatures between -29^{0}C and -23^{0}C. In this area ornamental grasses are less used in landscape designs. This is the reason why in the current paper is presented an assortment of species belonging to Cyperaceae family whose ecologic demands and placement in rusticity area recommend them as possible for a future utilization in vegetal landscape compositions.

Dan Valentin Sebastian, Andriescu Ana Maria (University of Agricultural Sciences and Veterinary Medicine of Cluj Napoca)

THE USE OF CERTAIN TYPES OF GEOTEXTILE MATERIALS AS SUPPORT FOR PROLONGING THE USAGE PERIOD OF CONIFEROUS BARK MULCH IN LANDSCAPING
UTILIZAREA UNOR TIPURI DE MATERIALE GEOTEXTILE ÎN VEDEREA PRELUNGIRII DURATEI DE UTILIZARE A MULCIULUI DIN SCOARȚĂ DE CONIFERE, ÎN CADRUL AMENAJĂRILOR PEISAGERE

The article refers to the results of a landscaping experiment that used various geotextile materials as support for the stratum of mulch made of coniferous bark laid in between species of dendro-floral species. For comparison,

the experiment used a situation without geotextile material (witness); for geotextile materials it used two different types, and for mulch, it used two distinctive kinds, both from coniferous species (pine and spruce). The article deals with both the advantages of using mulch in landscaping and the concrete results of the described experiment

Mitră Mihai, Mitrea Ioan, Botu Ioan (University of Craiova)

PROSPECTS FOR THE USE OF MULTIANNUAL PLANT (LIGNEOUS) TO THE CONTAINER
PERSPECTIVELE UTILIZĂRII UNOR PLANTE MULTIANUALE (LEMNOASE) LA CONTAINER

In the last two decades have appeared widely in our country, fruit and dendrological plants on the container.These species are used for decorative effects, fruit and even research.Research carried out along 10 years have proposed to establish the most effective types of containers, mixtures of nutrients and different types of fruit and dendrological plants. The variants with plastic containers of 90 liters capacity and nutrient composed of 1/3 peat, 1/3 sand and 1/3 ground celery with 3-4 kg barbel have achieved the highest growth and highest number of fruits at the studied plants. (Thuja occidentalis, Ginko biloba, Juglans regia cv. Student, Corylus avelana cv. Vâlcea 22, Malus floribunda cv. Everest, prunus domestica cv. Stanley şi Tuleu gras, Prunus cerasifera cv. Red Castle şi Prunus tomentosa cv. Orient).Growth differences were recorded in all species where the containers were buried in the soil (SSTx- = 53 cm^2 and crown volume = 6,2 m^2) comparative with the aboveground container (SSTx- = 17,1 cm^2 and crown volume = 0,83 m^2) where the plants grew much less.For the fruit plants was found that fruit yield were from 0.5 to 7.6 kg / plant for containers buried in the soil.Benefits of plants fruit and dendrological grown in 90 liters containers and buried in the soil are superior to those grown in aboveground containers, also through increasing the quantities of fruit and the strength gives for the root systems during the winter frost (-12^0 C, -20^0 C) and even in summer (40^0 C).Multiannual plants grown in containers are successfully used in yards, gardens and even on street alignments.

Popescu Liana (Bistrița municipality - Department of public services)

RESEARCH ON *CANNA INDICA* L. RHIZOMES SPROUTING, UNDER THE INFLUENCE OF STORAGE CONDITIONS AND CULTIVAR
CERCETĂRI PRIVIND PORNIREA ÎN VEGETAȚIE A RIZOMILOR DE *CANNA INDICA* L., SUB INFLUENȚA CONDIȚIILOR DE PĂSTRARE ȘI A CULTIVARULUI

It was studied the influence of storage conditions of Canna indica L. rhizomes, on the start of their vegetation. Were selected two locations, with different climate values: a warehouse and a greenhouse. Four cultivars were used in the experiment: 'Sémaphore', 'Tropical White', 'Austria' and 'Firebird'. The best results regarding the number of highlighted shoots per rhizomes were obtained at 'Austria' and 'Firebird' cultivars, stored in the greenhouse.

Sandu Tatiana, Trofin Alina Elena, Bădeanu Marilena (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

ASPECTS REGARDING THE EFFECT OF RADISTIM GROWTH STIMULATOR ON GERMINATION POWER, GROWTH AND DEVELOPMENT OF THE *THUJA ORIENTALIS* AND *THUJA OCCIDENTALIS* PLANTLETS
ASPECTE PRIVIND EFECTUL STIMULATORULUI RADISTIM ASUPRA GERMINABILITĂȚII, CREŞTERII ŞI DEZVOLTĂRII PLANTULELOR LA SPECIILE *THUJA ORIENTALIS* ŞI *THUJA OCCIDENTALIS*

Radistim is used to stimulate a faster multiplication and with a more efficient multiplying rate both for generative and vegetative process. Key findings and determinations wanted to highlight any differences between seedlings from seeds treated with Radistim and the untreated control variant. Observations and measurements in the range of observation 02.2008 - 05.2009 showed a clear influence of Radistim on the germination process and the subsequent Thuja orientalis and Thuja occidentalis plant growth and development Thus, between the variants treated with Radistim and the control variants there was a difference of approx. 20% for T. orientalis to 18% for T. occidentalis in the germination power of the seeds, signaling significant differences in root system development also, between treated and control variants.

Stan Ion, Petre Ion, Vulpe Mihai (University of Craiova)

VEGETATIVE PROPAGATION OF SOME ORNAMENTAL SHRUBS (*PYRACANTHA COCCINEA* ROEM., *KERRIA JAPONICA* (L.) DC., *BERBERIS VULGARIS* L.)
ÎNMULȚIREA VEGETATIVĂ A UNOR ARBUŞTI ORNAMENTALI (*PYRACANTHA COCCINEA* ROEM., *KERRIA JAPONICA* (L.) DC., *BERBERIS VULGARIS* L.)

With the expansion of cities and creating new green oasis for the environment as clean and beautiful, woody ornamental plant propagation need to become more important in order to know the best and faster procedures for obtaining new plants in a most quickly and in as good condition, identifying themselves as independent plants from the processes used. In the present study were studied three species of ornamental plants (Pyracantha coccinea Roem., Kerri japonica (L.) DC., Berberis vulgaris L.) from two families (Fam. Rosaceae, Fam. Berberidaceae).

Teleuță A., Alexandrov Eugeniu (Botanical Garden (Institute) of the Academy of Sciences of Moldova, Republic of Moldova)

MODELING GROWTH TREES AND SHRUB (TOPIARY)
MODELAREA CREŞTERII ARBORILOR ŞI ARBUŞTILOR (TOPIARY)

In Joint Operational Programme Romania - Ukraine - Moldova 2007-2013, EU-funded program, was developed the "Cross-border initiative for developing playful topiary art for education and leisure (TopArt)". The partner in this project are the Botanical Garden "Anastasie Fatu" the University "Al. I.Cuza", Iasi, Romania and Botanical Garden (Institute) of the Academy of Sciences of Moldova. This project aims to improve cooperation between the two botanical gardens on both sides of the Prut River in order to increase their capacity to provide cultural, educational and relaxation to the final beneficiaries: young children, the elderly and increasing public awareness on cross-border cooperation between Romania and Moldova, through this program in order to find solutions for common problems series and/or similar._Visitors will be able to spend time in a space with natural light and lovely shapes, anthropomorphic and zoomorphic, very suitable for organizing educational activities profile, culture and relaxation: shows, competitions, television broadcasting, etc.

Zaharia Alina, Draghia Lucia (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

ASPECTS REGARDING THE BEHAVOIR OF SOME SPECIES FROM SPONTANEOUS FLORA BROUGHT IN CULTURE IN PEDOCLIMATIC CONDITIONS IN THE IASI AREA
ASPECTE PRIVIND COMPORTAREA UNOR SPECII DIN FLORA SPONTANĂ INTRODUSE ÎN CULTURĂ ÎN CONDIȚIILE PEDOCLIMATICE DIN ZONA IAŞI

This paper presents some aspects of introducing in the culture of some species with ornamental characters from spontaneous flora of Romania (Centaurea orientalis L., Melica ciliata L. and Silene nutans L.) related to the adaptability mannerin the pedoclimatic conditions in Iasi area. The study followed the evolution and maintenance of ornamental morphological characters. Observations have shown that all theree species studied indicated a good adaptability to pedoclimatic conditions in this area by mainaining ornamental characteristics.

Zamfir Vâşcă Diana, Bălan Daniela, Luță Gabriela, Gherghina Evelina, Drăghici Elena (University of Agricultural Sciences and Veterinary Medicine of Bucharest)

INFLUENCE OF THE RIZOGENE SUBSTANCES ON ROOTING AND ON BIOCHEMICAL COMPOSITION OF *PELARGONIUM PELTATUM* PLANTS
INFLUENȚA UNOR SUBSTANȚE RIZOGENE ASUPRA ÎNRĂDĂCINĂRII ŞI ASUPRA COMPOZIȚIEI BIOCHIMICE LA PLANTELE DE *PELARGONIUM PELTATUM*

The present researches were focused on the effect of stimulating products on the rooting process of the cuttings on various specific substrates and on post rooting morphological development in Pelargonium peltatum plants. Also, some biochemical parameters were analyzed to show if the substances used to stimulate rooting influence the biochemical composition of leaves formed on shoots. Rooting percentage values and morphological indicators were minimal in untreated cuttings (control plants). The maximum percentage of rooting cuttings and the highest number of leaves on the shoot was determined in stimulated variants. The stimulation of the roots growth determined an increased accumulation of dry matter in the leaves, so that also the content in proteins and lipids registered high values in the analyzed leaves.

2.2. VITICULTURĂ, OENOLOGIE, TEHNOLOGIA PRODUSELOR HORTICOLE

2.2. VITICULTURE, OENOLOGY, POSTHARVEST TECHNOLOGY OF HORTICULTURAL PRODUCTS

Moderatori:
Prof. univ. dr**. Valeriu COTEA**
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Drd. **Diana HARAS**
Drd. **Cristina MIHALACHE**

LUCRARI PREZENTATE ORAL

ORAL PRESENTATIONS

VITICULTURA
VITICULTURE

Cucu Valentina (Research and Practical Institute for Horticulture and Food Technologies, Republic of Moldova)

AGROBIOLOGICAL PARTICULARITIES AND TEHNOLOGICAL ELEMENTS OF CULTIVATION OF TABLE GRAPE VARIETY GUZUN

PARTICULARITĂȚILE AGROBIOLOGICE ŞI ELEMENTELE TEHNOLOGICE LA CULTIVAREA SOIULUI DE MASĂ GUZUN

Taking into account the actual preoccupation in the world regarding the extension of table grape varieties cultivation using new valuable and highly appreciated by consumer varieties, the present paper have the objectives: selection of new varieties for completion of actual assortment and ensuring more superior production quantity and especially quality with the purpose of its promotion in production; efficient application of inflorescences rate setting in combination with the number of buds after cutting

Donici Alina[1], Ţârdea Constantin[2] ([1]Vine and Wine Research and Development Station Bujoru, [2]University of Agricultural Sciences and Veterinary Medicine of Iaşi)

IMMATURE EMBRYO RESCUE OBTAINED BY INTRASPECIFIC HYBRIDIZATION PERFORMED ON THE GRAPEVINE

RECUPERAREA EMBRIONILOR IMATURI OBȚINUTI PRIN HIBRIDĂRILE INTRASPECIFICE EFECTUATE LA VIȚA DE VIE

In contrast to conventional breeding methods, biotechnological approaches in recovery in ovules embryos rescue opening new perspectives in grapevine varieties. Works were performed the optimization of recovery paths for immature embryos from 4 genotypes hybrid vines in the collection of Research Station for Development Viticulture and Oenology Bujoru. Culture medium and genotype that participated in hybridization has strongly influenced the viability of eggs inoculated. Use of liquid culture medium under the bridges of filter paper showed a higher rate of egg viability. Supplementation of medium with 100 mg ascorbic acid and citric acid 100mg resulted in greater potential results favorable. Un viable eggs was obtained from hybrid combinations Madeleine Angevine x Afuz Ali si Apiren alb x Kişmiş alb.

Haras Diana Gabriela, Rotaru Liliana (University of Agricultural Sciences and Veterinary Medicine Iaşi)

THE BEHAVIOR OF SOME GRAPEVINE VARIETIES FOR WHITE WINES REGARDING FROST RESISTANCE ON 2011/2012 WINTER IN IAȘI AND COTNARI VINEYARDS

COMPORTAREA UNOR SOIURI DE VIȚĂ DE VIE PENTRU VINURI ALBE PRIVIND REZISTENȚA LA GER ÎN IARNA ANULUI 2011/2012 ÎN PODGORILE IAȘI ȘI COTNARI

In this paper we present the behavior of some grapevine varieties for white wines from Iaşi and Cotnari vineyards: Fetească albă, Grasă de Cotnari, Frâncușă, Tămâioasă românească, Risling italian, Fetească regală și Băbească gri at low temperatures that ocurred during 2011/2012 winter. It was discovered that a large amount of principal winter buds have been afected by the harmful low temperaturesencountered durinthe 2011/2012 winter.

Kyraleou Maria, Kallithraka Stamatina, Proxenia N., Kotseridis Y. (Department of Food Science & Technology, Agricultural University of Athens, Greece)

THE INFLUENCE OF TRELLISING SYSTEM ON PHENOLIC COMPOSITION OF GRAPES AND WINES FROM GREEK VARIETY XINOMAVRO

INFLUENȚA SISTEMULUI DE CONDUCERE A VIȚELOR ASUPRA CONȚINUTULUI DE COMPUŞI FENOLICI ÎN STRUGURII ŞI VINUL SOIULUI GRECESC XINOMAVRO

The effects of three trellising systems Guyot, Royat and Lyre on phenolic composition in grapes and wines from Vitis vinifera var. Xinomavro have been studied. Total phenolic and anthocyanin content, tannin content, anthocyanin extractability (AE%) and antioxidant activity were measured in berries. Individual monomeric anthocyanins of skin extracts and wines were determined by high performance liquid chromatography. The results showed that the grapes derived from the Lyre system were richer in anthocyanins and total phenols in comparison with the grapes derived from the other two training systems studied. Moreover, it was observed, that grapes from the Lyre system were characterized by higher anthocyanin extractability. Statistical significant differences were also observed among wine anthocyanin content. However, the training system did not affect significantly wine total phenolic and tannin content.

Savin Gheorghe, Cornea Vladimir, Nofit Daniela (Research and Practical Institute for Horticulture and Food Technologies, Republic of Moldova)

SEEDLESS VARIETIES IN REPUBLIC OF MOLDOVA: ASCERTAINMENT AND PERSPECTIVES

SOIURI APIRENE ÎN REPUBLICA MOLDOVA: CONSTATĂRI ŞI PERSPECTIVE

Traditionally in Carpathian-Danubian-Pontic region, inclusively in Republic of Moldova, in grapevine assortment did not existed seedless varieties, they having geographical origin from Proles orientalis Negr. The researches, testing of some introduced seedless varieties denoted the absence of any prospect for its cultivation in industrial vineyards: they are seriously affected by critical winter temperatures and have a low crop capacity. In this context it was expressed an opinion that in our region is not possible the cultivation of seedless varieties. Following amelioration researches disproved the skepticism regarding the possibilities to create a seedless assortment, adapted to the specific of climate conditions. Stable harvest and advanced resistance of new created genotypes during more than 20 years cultivation without protection during the winters, inclusively of varieties already included in register, are a convincing argument. At the same time accumulated biological material represents a significant genotypic diversity: diverse degree of seedlessness, earliness, quality, productivity, diverse utilization, resistance to abiotic unfavorable factors, and the presence of these properties in diverse combinations at diverse genotypes allows the creation of newly competitive varieties.

OENOLOGIE
OENOLOGY

Colibaba Cintia[1], Cotea V. Valeriu[2], Rotaru Liliana[2], Nechita Bogdan[2], Niculaua Marius[3], Zamfir Cătălin[2], Lacureanu Gabriel[2], Tudose-Sandu-Ville Stefan[2] ([1]"Gheorghe Asachi" Technical University of Iaşi [2]University of Agricultural Sciences and Veterinary Medicine of Iaşi, [3]Oenology Research Center – Iasi Branch of the Romanian Academy)

TECHNOLOGICAL AND OENOLOGICAL VALUE OF GRAPE VARIETIES AND WINES FROM COTNARI VINEYARD IN 2011

VALOAREA TEHNOLOGICA SI OENOLOGICA A SOIURILOR DIN PODGORIA COTNARI IN CONDITIILE ANULUI 2011

Cotnari vineyard is one of the benchmarks of Romanian viticulture and wine-making. The four grape varieties of the vineyard, Tămâioasă românească, Fetească albă, Grasă de Cotnari and Frâncuşă are undried resources of worldwide famous wines. This study wants to present from an ampelographic (technological) and oenological point of view the grapes and wines of the vineyard.

Gherciu-Musteaţă Lidia, Colun Cristina, Arpentin Gheorghe (Technical University of Moldova, Republic of Moldova)

MODERN PROCESSES RESEARCH OF ACCELERATED AGING INTO RED WINES PRODUCED IN „VALUL LUI TRAIAN" WINE REGION

CERCETĂRI PRIVIND PROCEDEELE MODERNE DE MATURARE ACCELERATA A VINURILOR ROŞII PRODUSE ÎN REGIUNEA VITIVINICOLĂ „VALUL LUI TRAIAN"

In present work there were studied two technological procedures of accelerated aging into red wines by mentaining of wine on oak chips from different geographical region and by adding of oenological tannin and their influence on poliphenolic complex of red wine, produced in „Valul lui Traian" wine region. It was noticed that Romanian and French chips using allow the best stabilisation of colour substances, but using the american chips increases the flavour. The adding of oenological tannin at aging period has the effect of colour intensity and total polyphenolic index increasing and in consequence colour stabilisation by antocian-tannin complex forming, the aromatic profile has assessed insignificant.

Morari Boris, Țăran Nicolae, Soldatenco E., Stoleicova S., Soldatenco Olga (Scientific-Practical Institute for Horticulture and Technologies, Republic of Moldova)

INFLUENCE OF TECHNOLOGICAL TREATMENTS ON PHENOLIC COMPLEX AND COLORS INDICES IN RAW RED WINES

STUDIUL INFLUENȚEI TRATĂRILOR TEHNOLOGICE A VINURILOR ROŞII SECI ASUPRA COMPLEXULUI FENOLIC ŞI INDICELOR DE CULOARE

For clarification and stabilization of wine in the winemaking is used technological treatment process with adjuvant materials. This process is an important tool for modern winemaker and like any tool it must be used wisely, especially for production of raw red wines. While technological treatment with adjuvant materials not only clarify and stabilize, red wines, but also decrease quantity and quality of phenolic complex and color parameters. This is due to the particular proprieties of adjuvant materials that absorb phenols molecules on its active surface, which eventually settles and are removed from the system with sediment. In this research work was studied influence of technological treatment, with different adjuvant materials, on the content of phenolic substances and color parameters in raw red wines.

Moraru Ioan[1], Niculaua Marius[2], Cotea V. Valeriu[1], Codreanu Maria[1], Măluțan George[1] ([1]University of Agricultural Sciences and Veterinary Medicine of Iaşi, [2]Oenology Research Center – Iasi Branch of the Romanian Academy)

ANALYSIS OF THE PHENOLIC COMPOUNDS THROUGH HPLC IN SOME RED WINES IN IAŞI VINEYARD OBTAINED THROUGH DIFFERENT TECHNOLOGICAL METHODS

ANALIZA UNOR COMPUȘI FENOLICI PRIN METODE HPLC, LA UNELE VINURI ROȘII DIN PODGORIA IAȘI, OBȚINUTE PRIN DIVERSE METODE TEHNOLOGICE

In the production year 2010-2011, wines were obtained from four black grape varieties through different wine-making technologies. Basic physical-chemical characteristics were evaluated as well as a series of phenolic compounds: resveratrolul, shikimic acid, hydroxycinnamic acids, hydroxybenzoic acid, hydrolisable and non-hydrolisable tannins. Comparing the wines obtained from the 4 technologies, it was registered that the sample from the microwave technology had a huigher quantitz of phenolic compounds, compared to the other variants.

Rusu Emil, Obadă Leonora, Covalciuc Olga (Scientific-Practical Institute for Horticulture and Technologies, Republic of Moldova)

RESEARCH ON IMPROVING THE PRODUCTION TECHNOLOGY OF THE RED WINE OBTAINED FROM THE LOCAL SPECIES CODRINSCHI IN REPUBLIC OF MOLDOVA

CERCETĂRI PRIVIND AMELIORAREA TEHNOLOGIEI DE PRODUCERE A VINULUI ROŞU DIN SOIUL AUTOHTON CODRINSCHI ÎN REPUBLICA MOLDOVA

Are presented research results on the influence of different technological processes used in domestic Codrinschi species of grapes, harvested in the central region of Moldova on the extraction of phenolic compounds and chemical composition of wine: maceration-fermentation of the pulp at a temperature of 25-28 °C (control); adjusting the ratio of solid and liquid phase by separating the wort preventively in the proportion of 10% (variant 1) and 20% (variant II); thermal treatment of pulp at a temperature of 70 °C with maceration within 30 min (variant III); using Color Enovin enzyme preparations (version IV) and Trenolin Color (variant V) and wine produced from the same species harvested in the South, Purcari wine center, Crocmaz village by maceration-fermentation of the pulp at 25-28 °C (version VI).

Soldatenco Olga (Scientific-Practical Institute for Horticulture and Technologies, Republic of Moldova)

APRECIEREA TEHNOLOGICĂ A SUȘELOR DE LEVURI PENTRU PRODUCEREA VINURILOR ALBE SECI

TECHNOLOGICAL APPRECIATION OF YEAST STRAINS FOR THE PRODUCTION OF DRY WHITE WINES

For dry white wines, it is necessary to select strains of yeast able to ferment in specific conditions: no release of hydrogen sulfide, which directly influence on the organoleptic properties; in short time; with the ability to flocculent precipitate, that does not require additional technologies for clarification or filtration of wine; with maximum and medium foam, as an indicator of the presence of surface active substances and fermentative power.

Țăran Nicolae, Soldatenco Olga (Scientific-Practical Institute for Horticulture and Technologies, Republic of Moldova)

INFLUENCE OF YEAST STRAINS ON AROMATIC POTENTIAL OF DRY WHITE WINES

INFLUENȚA SUŞELOR DE LEVURI ASUPRA POTENȚIALULUI AROMATIC A VINURILOR ALBE SECI

In recent years, consumers considerthat thetaste and aromaof wineare the maincharacteristicsin the choice ofwine,that define it quality. Flavour is the most important distinguishing characteristic of wine. Wine flavour is classified according to thesources of the different compounds contributing to it. This is includes varietal flavour, fermentative flavour and post fermentative flavour. In order to study the influence of yeast strains on the aromatic potential in dry white wines were determinedsomevolatilesubstances by gas chromatography method. The obtained results show that the content of volatile substances in dry white wines vary, depending on the strain of yeast used

TEHNOLOGIA PRODUSELOR HORTICOLE
POSTHARVEST TECHNOLOGY OF HORTICULTURAL PRODUCTS

Andrei Corina[1], Ţârcă Felicia[2], Barcan (Băetu) Alina[1], Băetu Marius[1] ([1]University of Agricultural Sciences and Veterinary Medicine Iaşi, [2]The National Sanitar Veterinary and Food Safety, Iaşi)

STUDIES ON THE DYNAMICS OF PESTICIDE RESIDUES CONTENT DURING THE TECHNOLOGICAL PROCESS OF OBTAINING TOMATO JUICE AT SC CONTEC FOODS SRL TECUCI
STUDII ASUPRA DINAMICII CONŢINUTULUI UNOR REZIDUURI DE PESTICIDE PE PARCURSUL FLUXULUI TEHNOLOGIC DE OBŢINERE A SUCULUI DE TOMATE LA SC CONTEC FOODS SRL TECUCI

The purpose of this study was to monitor residues of organochlorine pesticides (DDT and its metabolites, the total HCH and its metabolites) and residues of organophosphorus pesticide (ethion, diazinon, methyl parathion) on tomatoes as raw materials for industrialization at SC Contec FOODS SRL Tecuci. The performed analyses were aimed at evaluating the dynamics of the level of pesticide residues in raw materials, the samples taken during the technological process and the finished good. Pesticide residues were quantified by using the gas-chromatographic method. The content in tomatoes of γ-HCH and pp'-DDT was below the detection limit before processing. In the seed and skin residues were found the highest levels of (op'+pp') DDT namely 0,0056 mg/kg. The boil at 60-70^{0}C and the concentration process followed by pasteurization at 94-96^{0}C resulted in increased levels of pesticide residues in the finished good. Concentrations obtained were below the maximum limit admitted by law.

Anghel Roxana Mihaela (University of Agricultural Sciences and Veterinary Medicine Iaşi)

COMPARATIVE STUDIES REGARDING THE INFLUENCE OF FILM TREATMENTS ON APPLE FRUIT QUALITY OF GENEROUS AND STARKRIMSON VARIETIES STORED REFRIGERATED
STUDII COMPARATIVE PRIVIND INFLUENŢA UNOR TRATAMENTE PELICULARE ASUPRA CALITĂŢII FRUCTELOR DE MĂR DIN SOIURILE GENEROS ŞI STARKRIMSON PĂSTRATE FRIGORIFIC

Among the newest procedures to prevent quality degradation during storage of horticultural products include the treatments with coating film. Films are edible and provide external tissue fortifications protecting the original product structure and texture can prevent loss of moisture, are semi-permeable to gas, allowing controlled gas exchange between the product and the external environment. Also, provides a sterile surface, preventing losses due to pathogen attack. After harvest, before refrigerated at 2^{0}C, the apples of varieties Generous and Starkrimson were treated with three types of film: film of wax, film of carboxymethylcelullose and chitosan film. Physico-chemical analysis, after seven months of cold storage, have demonstrated that fruits treated has a higher quality compared to the control, with better firmness and high dry soluble substance and organic acids.

Barcan (Băetu) Alina, Patraş Antoanela, Anghel Roxana, Andrei Corina, Băetu Marius, Mihalache Cristina (University of Agricultural Sciences and Veterinary Medicine Iaşi)

INFLUENCE OF THE TECHNOLOGICAL PROCESS ON THE ASCORBIC ACID CONTENT IN BEETROOT SALAD
INFLUENŢA PROCESULUI TEHNOLOGIC ASUPRA CONŢINUTULUI ÎN ACID ASCORBIC LA SALATA DE SFECLĂ

The vitamin C content of fruits and vegetables can be influenced by various factors such as genotypic differences, climatic conditions and agricultural practices, maturation and harvesting techniques, and also by postharvest handling procedures. The purpose of this study is to monitor the dynamics of ascorbic acid during the technological flow. The analyses were performed on a single variety of beetroot: red beet - raw, red beet samples from the technological process and the finished product. There were determined simultaneously other parameters that influence the content in ascorbic acid: the pH, acidity, the reductones, and sodium chloride concentration. The result of analyzes is that ascorbic acid content decrease in the finished product to 62-63 mg/100g product.

Filimon V. Răzvan[1], Niculaua Marius[2], Coţovanu Roxana[1] ([1]University of Agricultural Sciences and Veterinary Medicine Iaşi, [2]Oenological Research Center – Romanian Academy, Iaşi)

ANALYSIS AND CHARACTERIZATION OF ANTHOCYANINS IN *MORUS NIGRA L*. FRUITS, HARVESTED FROM IASSY AREA, ROMANIA
ANALIZA ŞI CARACTERIZAREA CONŢINUTULUI ÎN ANTOCIANI AL FRUCTELOR SPECIEI *MORUS NIGRA L*. RECOLTATE DIN ZONA IAŞI, ROMÂNIA

*Used for centuries in folk medicine worldwide, black mulberries have an important content of anthocyanins, still unused to their real technological potential. Were analyzed the ethanolic extracts of Morus nigra L. fruit (mulberry) harvested from the experimental field of UASVM Iaşi, being determined spectrophotometrically total content of anthocyanins and phenolic compounds. The anthocyanin profile of the extracts was performed by HPLC-DAD technique and for an objective assessment of extracts color, were calculated chromatic parameters (L*a*b*), based on VIS spectrum. It was found a high anthocyanins content (159.26±0.17 mg/100 g fruit, expressed as equivalent of cy-3-gl), the main representative of*

anthocyanin profile was cyanidin-3-O-glucoside, with a rate of participation over 70% of total area. Knowing the type and quantities of pigment available in horticultural products, can be appreciate the technical and functional qualities (preventive and curative) of fruits, and also the structure and stability of the color obtained.

Mihalache Arion Cristina, Filimon V. Răzvan, Barcan (Băetu) Alina (University of Agricultural Sciences and Veterinary Medicine Iaşi)

STORAGE INFLUENCE ON THE ANTIOXIDANT ACTIVITY OF DIFFERENT PLUM CULTIVARS
INFLUENȚA PĂSTRĂRII ASUPRA ACTIVITĂȚII ANTIOXIDANTE A DIFERITE SOIURI DE PRUNE

The antioxidant properties of different plum cultivars during storage were studied.Total phenolics and total anthocyanins content were also determinated.Total phenolics ranged from 60.54 mg/100g GAE (BN68) to 364.21mg/100g GAE (Record)in the case of fresh samples and from 128.67mg/100g GAE (BN68) to 563.88 (Blue free) in the case of samples kept at 4°C during 10 days. The antioxidant activity of the samples was evaluated through several biochemical assays: DPPH (2.2-diphenyl-1-picrylhydrazyl) radical scavenging activity, ORAC (oxygen radical absorbance capacity). The plum cultivars with high antioxidant potential are Carpatin, Stanley, Blue free and Joris plum. There were obtained good correlation among the antioxidant activities measured by ORAC and DPPH, suggesting that these methods have similar predictive capacity for antioxidant activities of plum samples.Antioxidant activity varied greatly among the plum cultivars used in this study and during the storage.

Nechita Chereş Diana (Department for Agriculture Vaslui County)

STUDY REGARDING THE YEAR OF PRODUCTION'S INFLUENCE FOR THE APPLES MEANT FOR CONCENTRATED APPLE JUICE AT SC AGRANA JUICE SRL VASLUI
STUDIU PRIVIND INFLUENȚA ANULUI DE PRODUCȚIE ASUPRA CALITĂȚII MERELOR–MATERIE PRIMĂ PENTRU OBȚINEREA SUCULUI DE MERE CONCENTRAT ÎN CADRUL SC AGRANA JUICE SRL VASLUI

Researches were carried out in both USAMV Iassy and SC Agrana Juice SRL Vaslui –company specializes in production of concentrated apple juice. This study aims to determine the quality of the raw material used by the firm knowing that for industrialization they used fruits that do not exhibit a quality satisfactory to be delivered in the market for consumption. Qualitative indicators of the raw material- fresh apples for industry , as such as specific values ot tritating acidity or dry soluble substance content, are also nedeed in order to assure the suitability for processing. Climate conditions vary from one year to another and taking into account the technological features of apples at the harvest time, it may have a negative influence upon these qualitative indicators.

Nechita Chereş Diana (Department for Agriculture Vaslui County)

STUDY REGARDING THE QUALITY OF CONCENTRATED APPLE JUICE OBTAINED AT SC AGRANA JUICE SRL OF VASLUI
STUDIU PRIVIND CALITATEA SUCULUI CONCENTRAT DE MERE OBȚINUT LA SC AGRANA JUICE SRL VASLUI

Researches were carried out in both USAMV Iassy and SC Agrana Juice SRL of Vaslui –company specializes in production of concentrated apple juice. This study aim is to determine the quality of concentrated apple juice obtained at SC Agrana Juice SRL and the compliance with the to european market requirements. For this purpose, samples of concentrated apple juice were taken and analysed during period of study. Physical-chemical determinations were made in order to evaluate if the final product obtained at SC Agrana Juice SRL Vaslui meets the quality requirements imposed by standards in force.

LUCRĂRI PREZENTATE POSTER

POSTER PRESENTATIONS

VITICULTURA

VITICULTURE

Bosoi Marioara, Mihu Ghică, Bosoi Ionica, Stoian Ileana (Vine and Wine Research and Development Station Odobeşti)

PRELIMINARY RESEARCHES CONCERNING THE INFLUENCE OF MAINTENANCE ON THE SOIL ON THE BEHAVIOUR OF GROS SAUVIGNON VARIETY IN THE CONDITIONS OF VINEYARD ODOBESTI
CERCETĂRI PRELIMINARE PRIVIND INFLUENȚA SISTEMULUI DE ÎNTREȚINERE A SOLULUI ASUPRA COMPORTĂRII SOIULUI GROS SAUVIGNON ÎN CONDIȚIILE PODGORIEI ODOBEŞTI

This paper aims to address a comparative study concerning the response of the variety Gros Sauvignon on some agro biological and productive characteristics, by application of the various soil maintenance systems in the conditions of vineyard Odobesti. To ensure an optimal balance between growth and production in the conditions to achieve optimal quality, in the period 2009 - 2011, at SCDVV Odobesti has experienced the influence of the soil maintenance system on characteristics and productive agrobiological of Gros Sauvignon variety.

Coțovanu Filimon Roxana, Rotaru Liliana, Căuleț Raluca, Filimon Vasile Răzvan (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

VARIATION OF PHOTOSYNTHETIC PIGMENTS CONTENT UNDER THE INFLUENCE OF TREATMENTS WITH BIOSTIMULATING SUBSTANCES AT SOME TABLE GRAPE VARIETIES GROWN IN IAŞI VINEYARD AREA
VARIAȚIA CONȚINUTULUI ÎN PIGMENȚI FOTOSINTETICI SUB INFLUENȚA TRATAMENTELOR CU SUBSTANȚE BIOSTIMULATOARE LA UNELE SOIURI PENTRU STRUGURI DE MASĂ CULTIVATE ÎN AREALUL PODGORIEI IAŞI

This study aims to determine the chlorophyll (a and b) and carotenoid content, using spectrophotometric methods, from leaves of Chasselas doré and Gelu table grape varieties (Vitis vinifera L.), grown in Iasi vineyard, treated with two organic fertilization products, Cropmax and Kelpak, in different doses. Physiological role of assimilating pigments is complex, being involved in oxidation-reduction and photosynthesis processes, fructification and protection against ultraviolet radiation. Following the study was observed statistically significant differences between experimental variants, which confirm the suitability of using these products in sustainable viticulture.

Coțovanu Filimon Roxana, Rotaru Liliana, Filimon Vasile Răzvan (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

INFLUENCE OF SOME TREATMENTS WITH BIOSTIMULATING SUBSTANCES ON PRODUCTIVITY OF GELU TABLE GRAPES VARIETY, GROWN IN THE VINEYARD AREA OF IASI
INFLUENȚA UNOR TRATAMENTE CU SUBSTANȚE BIOSTIMULATOARE ASUPRA PRODUCTIVITĂȚII SOIULUI DE STRUGURI DE MASĂ GELU, CULTIVAT IN AREALUL PODGORIEI IAŞI

By introducing in the table grapes cultivation technology of the biostimulating hormonal treatments can beprovide outstanding increases of production that contributes to the quality of marketed production. This paper aims to establish the optimal doses of biostimulating substances that can be applied to obtain an increase production yield of table grapes and improve their quality parameters. Were used commercial products Cropmax, Kelpak, Gibberellinic Acid (GA_3), in different concentrations and was found that Gelu variety react differently depending on the biostimulating substance, dose and moment of application. The best option was variant two, treated with 50 ppm of GA_3.

Cristea Cristian Claudiu, Comşa Maria, Cudur Florina, Comşa Anton, Cudur C.F. (Vine and Wine Research and Development Station Blaj)

REACTION IN PRODUCTION OF ELITE HYBRID DERIVED FROM S.C.D.V.V. BLAJ
COMPORTAREA ÎN PRODUCȚIE A ELITELOR HIBRIDE OBȚINUTE LA S.C.D.V.V. BLAJ

An improved variety of vine from S.C.D.V.V. Blaj is tradition and has continuity. Sexuate hybrids have been carried out with a view to obtaining new varieties of very good quality, with the concentration of sugar accumulation and high acidity, which ensures the quality of the wine. From hybrids were selected elite hybrids, which today can be found in comparative plantations of contest, one out of every 200 hubs. Elites have studied hybrid 5-26; 6-10; 6-4-4 and 110 compared to witness Royal Feteasca-21 Bj. (Elites 6-10, 6-110, 4-4) and witness PinkTraminer-60 Bj. (Elite 5-26). As a result of the study was done on the hybrid elites versus witnesses remember, it was found that the elites have a good sugar/acidity. Hybrid elites are distinguished 5-26 and 6-110.

Damian Doina, Calistru Gheorghe, Nechita Ancuța, Savin Costică (Vine and Wine Research and Development Station Iaşi)

MARA, NEW VARIETY OF VINE FOR TABLE GRAPES, WITH INCREASED GENETIC RESISTANCE, CREATED AT S.C.D.V.V. IASI

MARA, SOI NOU DE VIȚĂ DE VIE DE STRUGURI PENTRU MASĂ, CU REZISTENȚĂ GENETICĂ SPORITĂ, CREAT LA S.C.D.V.V. IAŞI

Scientific research in the field of improving vines, with the permanent role of innovating and diversificating the assortments of vine, by creating new genotypes that are qualitatively and productively valuable, with a better resistance to diseases and stress factors, has an open way for the expansion and completion of the assortment of table grapes from the country's vineyards. As an answer to this, at SCDVV Iasi, through works of directed sexual hybridization between the interspecific hybrid Seyve-Villard 12303 and Ozana, has been obtained and homologated in 2011 the assortment called Mara. The new creation is characterized by medium-sized grapes (230 g), medium to large grains (3.7 g), with crisp core and black-cyan coloured skin. The average grape production is about 4.95 kg / vine, respectively 18.75 tons / ha calculated production, of which 90% is the commodity production. It has a good biological resistance to the mildew and powdery mildew and a middle one to the grape's gray rot. The assortment matures the grapes in their IV-V age.

Donici Alina (Vine and Wine Research and Development Station Bujoru)

RESEARCHES REGARDING *IN VITRO* REGENERATION CAPACITY OF THE GRAPEVINE VARIETY

CERCETARI PRIVIND CAPACITATEA DE REGENERARE *IN VITRO* A UNOR SOIURI DE VITA DE VIE

Research has been conducted to determine the capacity in vitro multiplication of seedless grapevine varieties, defining the basic conditions for initiating, maintaining, proliferation regeneration and rooting explants. Biological material investigated was represented by two genotypes of grapes, Otilia and Călina, and biological material to initiation in vitro cultures was the apexes and meristems. A higher potential for regeneration was obtained from variety Călina. Viable plants were obtained by cultivating Murashige – Skoog medium (1962) supplemented with AIA and GA3.

Enache Viorica, Donici Alina (Vine and Wine Research and Development Station Bujoru)

ASPECTS OF BEHAVIOR OF WINE GRAPES IN THE DEALU BUJORULUI VINEYARD IN TERMS OF CLIMATE CHANGE

ASPECTE PRIVIND COMPORTAREA UNOR SOIURI DE STRUGURI DE VIN IN PODGORIA DEALU BUJORULUI IN CONDITII DE SCHIMBARI CLIMATICE

Recent years have seen a trend of climate change, with impacts on vine behavior. Climatic data analysis showed an increase in mean annual temperature. They observed changes in thermal regime of extreme values. Following the more pronounced warming and a growing deficit in the summer hydric intensified aridity phenomenon. Amid the trend of climate change in a study on the behavior of wine grapes in the Dealu Bujorului vineyard.

Pavlidis M.[1], Kyraleou Maria[1], Kallithraka Stamatina[1], Proxenia N.[1], Koundouras S.[2], Kotseridis G.[1] ([1]Department of Food Science and Technology, Agricultural University of Athens, Greece; [2]Laboratory of Viticulture, School of Agriculture, Aristotle University of Thessaloniki, Greece)

INFLUENCE OF SOME VITICULTURAL PRACTICES ON THE POLYPHENOLIC CONTENT OF GRAPES AND WINES PRODUCED FROM CV. AGIORGITIKO (*VITIS VINIFERA* L.)

The aim of this work was to investigate the consequences of some commonly applied viticultural practices on the polyphenolic content of cv. Agiorgitiko, an indigenous Greek grape variety. Two viticultural practices (leaf removal, irrigation as well as combination of both) were applied on cv. Agiorgitiko in the Nemea wine region and the phenolic content of the grapes and wines produced was compared. The results showed that when irrigation was combined with leaf removal a significant increase in the anthocyanin extractability was observed. Leaf removal caused a significant increase of the grape anthocyanin and tannin content. As far as the wines were concerned, color intensity, tannin content and antioxidant activity were increased due to leaf removal. The combination of irrigation and leaf removal resulted in wines with the highest individual anthocyanin concentration. The study showed that increasing bunch sun exposure of Agiorgitiko vignes may be beneficial to the quality of the wine.

Petrea Traian Mihail, Rotaru Liliana, Căuleț Raluca (University of Agricultural Sciences and Veterinary Medicine Iaşi)

INTENSITY VARIATION OF PHOTOSINTHESYS AND RESPIRATION OF THE VARIETY FETEASCA NEAGRA, UNDER THE INFLUENCE OF APPLYING A SET OF MEASURES AGROPHYTOTEHNICAL

VARIAȚIA INTENSITĂȚII FOTOSINTEZEI ŞI A RESPIRAȚIEI LA SOIUL FETEASCĂ NEAGRĂ, SUB INFLUENȚA APLICĂRII UNUI COMPLEX DE MĂSURI AGROFITOTEHNICE

Introducing a new variety in a vineyard requires detailed studies regarding its behavior in physiologically to vineyard conditions. Through photosynthesis, carbon dioxide is fixed from the atmosphere by green plants (with chlorophyll) in the presence of sunlight, with the elimination of oxygen and formation of organic compounds (carbohydrates, lipids, proteins) very varied, hence the importance of tracking parameters of registering it. Measurements were made of respiration and photosynthesis intensity for each variant of

experience in the field mounted.Interpretation of values found, indicating the best solution is recommended to agrophytotechnical measures.

Petrea Traian Mihail[1], Niculaua Marius[2], Rotaru Liliana[1], Andor Iosif[3] ([1]University of Agricultural Sciences and Veterinary Medicine Iaşi, [2]Oenological Research Center – Romanian Academy, Iaşi, [3]S.C. Cotnari)

DETERMINATION OF ANTHOCYANINS CONTENT IN BLACK FETEASCA VARIETY GROWN IN THE VINEYARD COTNARI, AFTER APPLYING SOME WORKS AND OPERATIONS IN VEGETATION PERIOD

STABILIREA CONTINUTULUI DE ANTOCIANI LA SOIUL FETEASCA NEAGRA CULTIVAT IN PODGORIA COTNARI, IN URMA APLICARII UNOR LUCRARI SI OPERATIUNI IN VERDE

One of the signs of quality red wines is the intensity of coloring in the sense that red wine the more colorful the better appreciated with a crucial role in this case the quantity of anthocyanins accumulated in grain husks of grapes. Quantitative measurements were made of the content of anthocyanins from grapes harvested from each field mounted version of the experience. Version that anthocyanins are found in highest amount, recommend the final selection of works and operations complex in vegetation period optimal.

Pîrcălabu Liliana, Tudorache Aurelia, Şerdinescu Adrian, Ion Marian (Research and Development Institute for Viticulture and Winemaking, Valea Călugărească)

METHODOLOGY FOR DELIMITING THE VITICULTURAL TERROIR UNITS BY THE ECOPEDOLOGICAL FACTORS IN VALEA CALUGAREASCA VITICULTURAL CENTER

METODOLOGIA DE DELIMITARE A UNITĂȚILOR TERROIR VITICOL FUNCȚIE DE FACTORII ECOPEDOLOGICI ÎN CENTRUL VITICOL VALEA CALUGAREASCĂ

The viticultural terroir represents the unit for managing the national viticultural patrimony. The spatial entity with which the methodology operates is the viticultural plot identified by a numerical code "UT" (territorial unit). The stapes of the methodology were the following ones: extraction of the thematic maps for soil and the subsequent storage of this information in a file of Shapefiles type and an attribute table; extraction of the information specific for the physical environment (geology, soil) from the attribute table, the attribute being a parameter for the soil characterization. Coded information was quantified in a system of points by assigning a number for the class and the attribute, each datum corresponding to a score given by the product of them. The table of the attribute points was subject to analysis in the main components, which aims at diminishing the dimensionality of the data and at grouping the close values into classes. Considering the classes established by analyzing the main components, the viticultural terroir units were identified and the map of their delimitation was accomplished for the Valea Calugareasca viticultural center.

Savin Costică, Damian Doina, Mănțăluță Alina (Vine and Wine Research and Development Station Iaşi)

FETEASCA REGALĂ CL.1 IŞ - A VALUABLE CLONE FOR WHITE WINES OBTAINED AT S.C.D.V.V. IASI

FETEASCĂ REGALĂ CL.1 IŞ – O CLONĂ VALOROASĂ PENTRU VINURI ALBE OBȚINUTĂ LA S.C.D.V.V. IAŞI

The clonal selection carried out between the vine assortments aims to improve the agro biological and technological characteristics of the local, domestic and valuable varieties, and of the foreign ones introduced in the culture, that make up the traditional assortments of the country's vineyards. By the clonal selection work applied to Feteasca Regala in 2011 resulted the homologation of a new clone, which is characterized by average yields of 4,78 kg/vine, respectively 18,1 tons/ha calculated production, 16 % higher than the population assortment. The potential accumulation of sugars in the must of 208 g/L provides an increase of about 22 % compared to the reference assortment. The wines resulted from processing the grapes is characterized by an alcoholic potential between 11,3 and 12,2 % vol, non reducing extract of 24,6 g/L and 7,9 g/L glycerol, with a typical specific of the Feteasca Regala assortment.

Şerdinescu Adrian, Pîrcălabu Liliana (Research and Development Institute for Viticulture and Winemaking, Valea Călugărească)

THE INFLUENCE OF ROOTSTOCK ON GRAPEVINE NUTRITIONAL DISORDERS INDUCED BY THE INCREASE OF SOIL CHLOROSANT POWER

INFLUENȚA PORTALTOIULUI ASUPRA DEREGLĂRILOR NUTRIȚIONALE LA VIȚA DE VIE INDUSE DE CREŞTEREA PUTERII CLOROZANTE A SOLULUI

Under controlled conditions, using calcareous soils with $CaCO_3$ contents between 30 and 70% were studied the nutritional disorders induced by the increase of soil chlorosant power on three vinifera varieties grafted on seven rootstocks having a different resistance to iron chlorosis. The leaf diagnosis showed an increase of P, K, Mn and B contents and a decrease of N, Ca, Mg and Fe contents in the leaves of vinifera varieties in accordance with the increase of soil chlorosant power. This aspect determined a modification of global nutrition and especially of the nutritional equilibrium and of the nutritional ratio between macro and micronutrients related with rootstocks characteristics. Iron immobilization at the mesophyll level of leaves was correlated with the ratio P/Fe > 12, the ratio Fe/Mn near one value and with high ratio between K/Mg, K/Fe and K/Ca which expressed a potassium excess in the chlorotic leaves inducing an increase of leaves ash alkalinity and a high pH at the appoplast level causing an iron precipitation at this level.

Zaldea Gabi, Damian Doina, Petrea Gabriela, Savin Costică, Nechita Ancuța (Vine and Wine Research and Development Station Iaşi)

INFLUENCE OF THE ABSOLUTE MINIMUM TEMPERATURES RECORDED IN THE PERIOD OF JANUARY-FEBRUARY 2012 ON THE VINE PLANTATIONS IN THE COPOU-IASI VINEYARD CENTER.
INFLUENȚA TEMPERATURILOR MINIME ABSOLUTE ÎNREGISTRATE ÎN PERIOADA IANUARIE - FEBRUARIE 2012 ASUPRA PLANTAȚIILOR DE VIȚĂ DE VIE DIN CENTRUL VITICOL COPOU-IAŞI

The analysis of the absolute minimum temperatures below freezing resistance limit of the vine for a period of 50 years (1961 - 2010), shows that their frequency is of 28% and that they have a periodicity of 3.6 years. These temperatures have led to recording large losses of the main buds, annual and multiannual wood damage and, thus, lower grape production.During the period of January-February 2012 have been recorded absolute minimum temperatures of -26,7ºC in the air and -33,0ºC at the soil surface. The influence of these temperatures on the vine plantations and the rehabilitation measures will be presented in this paper.

OENOLOGIE
OENOLOGY

Brînduşe Elena, Tudorache Aurelia, Fotescu Laura (Research and Development Institute for Viticulture and Winemaking, Valea Călugărească)

SELECTED AUTOCHTONOUS YEAST STRAINS WITH INFLUENCE ON WINE QUALITY
TULPINI DE DROJDII AUTOHTONE SELECTIONATE CU IMPACT ASUPRA CALITATII VINURILOR

The aim of this work was to study the influence of some autochthonous yeast strains on the wines quality. For this purpose grape must from the Cabernet Sauvignon grapes, during 2 harvest years (2009 - 2010), was used. The selected autochthonous yeast strains are part from the microbiota collection created at the Research Institute for Viticulture and Enology, Valea Calugareasca, during 2007 – 2009 periods. The strains were isolated from the vineyard, from the grape and during different phases of alcoholic fermentation and were identified as belonging to Saccharomyces genus. The selection of yeast strains was performed after metabolic evaluation (period of latency, fermentation kinetics, features of fermented mash, tolerance to alcohol, fermentation temperature), and oenological evaluation (compositional profile, sensory profile). From a total of 30 wine yeast strains, three strains (SC 46, SC 62 and SC 23) have been kept the production of wines with improved varietal characteristics. SC 58 strain is destinated for the production of qualitative dried red wine. Because of alcohol resistance (up to 17.5% vol/vol) the strain can be used, also, to restart the alcoholic fermentation.

Brînduşe Elena, Tudorache Aurelia, Fotescu Laura (Research and Development Institute for Viticulture and Winemaking, Valea Călugărească)

INFLUENCE OF ECOLOGICAL CULTURE SYSTEM ON THE DYNAMICS AND BIODIVERSITY OF NON-*SACCHAROMYCES* AUTOCHTOUNOUS WINE YEASTS
INFLUENTA SISTEMULUI DE CULTURA ECOLOGIC ASUPRA DINAMICII SI BIODIVERSITATII DROJDIILOR AUTOHTONE DE VINIFICATIE NON-*SACCHAROMYCES*

This study evaluated the dynamics and diversity of non-Saccharomyces yeast species during spontaneous fermentation of musts obtained from grapes harvested from ecological and non-ecological plantations. The studies were performed during 3 harvest years, respectively 2008, 2009 and 2010 in Dealu Mare vineyard, Valea Calugareasca centre, on the Cabernet Sauvignon variety. A total of 119 yeasts representing 18 species were isolated. The dynamics of non-Saccharomyces yeasts isolated from musts obtained from ecological and non-ecological grapes was similar with a difference of about 3.0 log CFU/ml, in a negative way in the fermentations performed with grapes obtained from non-ecological plantation. In ecological plantation, on the grape surface and in the first fermentation phase the dominant species has been Candida utilis, while in non-ecological plantation the dominant species is Candida famata. In the middle and in the end of fermentation non-Saccharomyces yeasts belonging to Candida, Klavispora, Pichia and Torulaspora were identified.

Buburuzanu Cristian[1], Cotea V. Valeriu[1], Niculaua Marius[2] ([1]University of Agricultural Sciences and Veterinary Medicine of Iaşi, [2]Oenology Research Center – Iasi Branch of the Romanian Academy)

STUDY OF SOME PHYSICAL AND CHEMICAL PARAMETERS OF ROMANIAN WHITE GRAPE VARIETIES AND THE EFFECT ON WINE QUALITY
STUDIUL UNOR PARAMETRI FIZICO-CHIMICI LA SOIURI DE STRUGURI ALBI ROMÂNEŞTI ŞI EFECTUL ASUPRA CALITĂȚII VINURILOR

This study is based on Romanian white grape varieties used in wine-making in Iasi vineyard. A discussion was made based on the comparison of photosynthesis parameters (a and b chlorophyll and carotenoids) from grapes (total acidity) and the non reducing extract of wine with the purpose of achieving grape varieties specific correlations.

Ciubucă Aurel, Postolache Elena, Bîrliga Nicolae (Vine and Wine Research and Development Station Bujoru)

PRINȚESA COVURLUIULUI, THE WINE WITH PRINCELY VALENCIES OBTAINED AT SCDVV BUJORU

PRINȚESA COVURLUIULUI, VIN CU VALENȚE DOMNEŞTI OBȚINUT LA SCDVV BUJORU

This type of wine falls into the category of sweet wines such minimum reducing sugar of 50 g/L, with an alcoholic strength exceeding 12% vol. alcohol, with a color straw-yellow to golden - yellow, the smell of wood with taste of toast and floral nuances. I tried to use all technological possibilities that we have to develop this type of wine, which is our symbol to represent us in the area and not only here but also the panoply of international wines. The experimentation and implementation of technology for obtaining the The Princess of Covurlui wine started in the 2006 year when we established the strategy of making of this collection wine from matured grapes of Italian Riesling variety, ennobled by noble rot.

Fotescu Laura, Tudorache Aurelia, Brînduşe Elena (Research and Development Institute for Viticulture and Winemaking, Valea Călugărească)

THE EVALUATION OF THE INTEGRATED SYSTEM FOR RED WINES PRODUCING AT ICDVV VALEA CALUGAREASCA

EVALUAREA SISTEMULUI INTEGRAT DE PRODUCERE A VINURILOR ROSII LA ICDVV VALEA CALUGAREASCA

The integrated system represents the most efficient production system, responding to the current requirements regarding the achievement of quality products, safe in consumption, in a clean and safe environment. The production of red wines is suitable to this system. The studies were realised at the Research and Development Institute for Viticulture and Enology, Valea Calugareasca, during 2006-2010, in order to evaluate the integrated system for red wines producing based on a specific methodology. For defining the competitiveness level of the production system, a number of 45 parameters/indicators were evaluated, from which 2 parameters/indicators for wine quality, 32 parameters/indicators for alimentary safety of wines and 11 parameters/indicators for the protection of the vitivinicultural environment. The integrated systems for red wines production was compared with the classical system (used before implementation). The general profile of the classical/integrated production systems is presented into a graphic under radial shape. Analyzing the general profile of the two classical/integrated systems, a quality improvement of most parameters / indicators specific to the integrated system for producing red wines has been noticed.

Fotescu Laura, Tudorache Aurelia, Brînduşe Elena (Research and Development Institute for Viticulture and Winemaking, Valea Călugărească)

THE PROJECTION OF THE ANALYTICAL DATE BANK ASSOCIATED TO CONTROLLED APPELLATION OF ORIGIN WINE'S «MILLESIME» IN DEALU MARE-VALEA CALUGAREASCA VINEYARD

PROIECTAREA BANCII DE DATE ANALITICE ASOCIATE MILEZIMEI VINULUI DOC DEALU MARE VALEA CALUGAREASCA

The "millésime" of a wine is defined as the year of wine production, represented at the quality level associated with it. In order to evaluate the quality of wine's vintage, the database associated to the controlled appellation of origin wine's "millésime" of Dealu Mare-Valea Calugareasca vineyard was designed. The informations to related wine's "millésime" were specific organized in a relational database type, in which all these informations were collected, inventoried and organized. The database is a homogeneous collection of databases, each database representing a way of the informations storing on hard disk, with rapidly retrievable information. Six databases were designed, namely: control plots, vineyard climate, wine phenology and maturation of grapes, grape harvest and controlled appellation of origin wine production. The analysis of information associated to databases was performed by using specific methods (the comparison and the reference to normal "millésime" and/or based of same indicators) for each group.

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DIMETHYL SULFIDE: AN ENHANCER OR AN IMPORTANT COMPOUND OF VARIETAL AROMA?

In this study, dimethyl sulfide (DMS) quantification was performed in red (VQPRD Naoussa) and rosé wines from Xinomavro variety. The research was carried out with wine samples of different vintages from wineries of North Greece located in Naoussa and Amyntaio. Potential dimethyl sulfide (PDMS) content was also quantified since it is considered to be transformed into the free form, after ageing. The quantification of the wine DMS and PDMS (estimated indirectly after the release of free DMS by heating in alkaline conditions) content was accomplished by solid-phase microextraction (SPME) followed by gas chromatography coupled to mass spectrometry (GC-MS). The ageing effect, according to wine type and vintage was studied. The results showed that DMS and PDMS were characterized by a tendency to increase and decrease respectively, with ageing.

Luchian Camelia Elena[1], Cotea V. Valeriu[1], Patraş Antoanela[1], Niculaua Marius[2], Seftel Elena[3] ([1]University of Agricultural Sciences and Veterinary Medicine Iaşi, [2]Oenology Research Center – Iasi Branch of the Romanian Academy, [3]University of Antwerpen, Laboratory of Adsorption and Catalysis, Belgium)

REDUCTION IN PHENOLIC COMPOUNDS LEVEL IN RED WINE, FOLLOWING TREATMENT WITH MICRO- AND MESOPOROUS MATERIALS

REDUCEREA CONŢINUTULUI DE COMPUŞI FENOLICI DIN VINUL ROŞU LA TRATAREA CU MATERIALE MICRO-ŞI MEZOPOROASE

Phenols represent a large and complex group of compounds, with great importance, determining the characteristics and quality of red wines in particular. In wine there are several types of phenolic compounds and their concentrations are in a range of 100 - 200 mg / L in red wine and 10 - 20 mg / L in white wine. In this paper we tested the action of micro- and mesoporous materials on the concentration of phenolic compounds in red wines. We performed such experiments, which have demonstrated that micro- and mesoporous materials retain phenolic compounds from wine. Taking into account the maximum rate of retained phenolic compounds on the three studied materials, SBA-15, MCM-41, KIT-6, the results show that all three retain phenolic compounds from wine, the material with the maximum efficiency being SBA-15, with a rate of 19.15% retained phenolic compounds to a 8.04 g adsorbent / L wine.

Mănăluță Alina[1], Cojocaru Dumitru[2], Savin Costică[1], Nechita Ancuța[1], Paşa Rodica[1] ([1]Vine and Wine Research and Development Station Iasi, [2]"Al. I. Cuza" University of Iaşi)

TESTING GELAN-GUM BIOPOLYMER AS MATRIX FOR INCLUSION OF YEAST USED IN THE SPARKLING WINES PREPARATION

TESTAREA BIOPOLIMERULUI GELAN-GUM CA MATRICE PENTRU ENTRAPAREA LEVURILOR UTILIZATE ÎN PREPARAREA VINURILOR SPUMATE

Obtaining sparkling wines through the champenoise method, using free yeast cells, is made through several stages, from which the operation of riddling requires greater time and qualified staff. The operation of riddling can be removed using different biocatalysts obtained by immobilization in different matrices such as alginate, carragenan, polyvinyl alcohol. However, producers of sparkling wines show reluctance to using the obtained biocatalysts, arguing the possibility of some residues from the matrices used as support for inclusion of yeasts involving in the wine. We believe that this can be overcome by using the gelan-gum biopolymer as a matrix, which is allowed by FAO in food, pharmaceuticals and cosmetics. In this paper, we present the efficiency of biocatalysts obtained with gelan-gum biopolymer used as a matrix, in the preparation of sparkling wines through the champenoise method.

Musteață Grigore[1], Furtuna Natalia[1], Le Fur Yves[2] ([1]Technical University of Moldova, Republic of Moldova, [2]Université de Bourgogne, France)

CHARACTERIZATION OF ODORANT AREAS IN THREE WINES FROM LOCAL GRAPE VARIETIES FROM REPUBLIC OF MOLDOVA USING GAS CHROMATOGRAPHY–OLFACTOMETRY

CARACTERIZAREA ZONELOR ODORANTE A TREI VINURI DIN SOIURI AUTOHTONE DIN REPUBLICA MOLDOVA UTILIZÂND GAZ CROMATOGRAFIA–OLFACTOMETRIA

Three wines from local grape varieties from Republic of Moldova were submitted to both sensory and gas chromatography – olfactometry analyses (GC-O). Through descriptive analysis, a set of aroma attributes has been described, but the volatile compounds responsible for the characteristic sensory notes have not been investigated. In order to identify these odor active compounds, the wines were evaluated using qualitative detection frequency analysis (n=7). The panelists generated in total 697 descriptions distributed in 126 odorant areas (OAs), but only 565 (81 %) distributed in 45 OAs were validated as being representative.

Nechita Ancuța, Cotea V. Valeriu, Nechita Bogdan (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

STUDY OF ACTIVITY ANTIRADICAL OF POLYPHENOLIC EXTRACTS OBTAINED FROM *VITIS VINIFERA*

STUDIUL ACTIVITĂȚII ANTIRADICALICE A UNOR EXTRACTE POLIFENOLICE OBȚINUTE DIN *VITIS VINIFERA*

Many polyphenolic compounds from medicinal plants and foods have an antiradical role mainly in the digestive tract by inhibiting enzymes that catalyze formation of reactive oxygen species and/or capture their beneficial role in preventing degenerative diseases of aging and improve, that poor immunity, brain dysfunction and nervous system, etc. In this context antiradical activity was studied three polyphenolic extracts obtained from seeds varieties Negru de Drăgăşani, Arcas and Chambourcine. Antiradical properties were evaluated by their ability to inhibit organic radical 1,1-diphenyl-2-picril-hidrazil (DPPH). Thus, it was found that the antiradical activities of extracts studied are generally high, to very large, standing Negru de Drăgăşani variety.

Nechita Ancuța[1], Cotea V. Valeriu[1], Niculaua Marius[2], Nechita Bogdan[1] ([1]University of Agricultural Sciences and Veterinary Medicine of Iaşi, [2]Oenological Research Center of Romanian Academy – Iaşi Branch)

PRELIMINARY CHARACTERIZATION OF POLYPHENOLIC EXTRACTS FROM SKIN GRAPE

CARACTERIZAREA PRELIMINARĂ A UNOR EXTRACTE POLIFENOLICE OBȚINUTE DIN PIELIȚELE DE STRUGURI

In order to characterize the polyphenolic extracts obtained from grape skins with role in maintaining metabolic balance and health of human body, was performed HPLC analysis (high performance liquid

chromatography) and have been identified and quantified several phenolic acids, stilbene (trans-resveratrol) some unhydrolysed tannin (catechin and epicatechin). It was also realized an anthocyanin profile of each polyphenolic extract. Were studied polyphenolic extracts obtained from skins of grapes of seven grape varieties, including four local varieties (Fetească neagră, Băbească neagră, Arcaş, Negru de Drăgăşani), two of the international range (Cabernet Sauvignon, Merlot) and the variety Chambourcine, a resistent variety. The results justify further research on the biological properties of polyphenolic extracts studied (antiradical, antioxidant, cytostatic and cytotoxic).

Obadă Leonora, Mîndru A., Rusu Emil, Golenco Lidia, Cibuc Mariana, Grosu Olga (Scientific-Practical Institute For Horticulture and Technologies, Republic of Moldova)

STUDY ON MATURATION DYNAMICS AND POTENTIAL OF THE PHENOLIC COMPOUNDS IN THE LOCAL VARIETIES OF RED GRAPES

STUDIU PRIVIND DINAMICA MATURĂRII ŞI POTENȚIALUL COMPUŞILOR FENOLICI ÎN SOIURILE AUTOHTONE ROŞII

The aim of researches is the study of the dynamics and the evaluation of the phenolic compounds potential of the grain black grapes of local varieties namely: Rară Neagră, Bătută neagră, Brează, Ciorcuță neagră, Fetească neagră, Kopceac, Negru de Akerman, Negru de Căuşeni, Seină and Tămâioasă de Bohotin the harvest of 2011 grown in the Central region of the Republic of Moldova. The Codrinschi variety grown in the central region (the land Stăuceni) and South (the land Căuşeni) has also been studied. The variety Merlot served as a control. Carbohydrates, organic acids and phenolic complex potential at different stages of maturation process were determined. It was determined that after the phenolic complex potential and compared with control variety Merlot the investigated varieties may be classified as follows: varieties with high content in phenolic compounds varieties with medium content and varieties whith low content in phenolic compounds.

Rusu Emil[1], Obadă Leonora[1], Dumanov V.[1], Cibuc Mariana[1], Gugucichina T.[2] ([1]Scientific-Practical Institute For Horticulture and Technologies, Republic of Moldova, [2]Zonal Scientific Research Institute in Wine and Fruit Growing in the North Caucasus of Russian Agricultural Academy, Krasnodar, Russian Federation)

STUDY ON AROMA COMPLEX OF WINES OBTAINED FROM NEW MOLDAVIAN SELECTION VARIETY FLORICICA

STUDIU PRIVIND COMPLEXUL AROMATIC AL VINURILOR OBȚINUTE DIN SOIUL NOU DE SELECȚIE MOLDOVENEASCĂ FLORICICA

The aroma complex of new variety of Moldavian selection Floricica was researched. The eulent analysis was made at the gas chromatograph with mass spectrometer Clarus 600 T. were determined and identified 115 compounds. The identification of chromatographic peaks was made according to the general library of mass spectrometer NIST. The research demonstrated that the composition of wine aroma from variety Floricica is very complex and is constituted from compounds of different categories: aldehydes, ketones, higher alcohols, esters, terpenes, organic acids, lactones etc. The higher alcohols isoamyl and 2-feniletanol are the main aroma compounds, and their percentage share is 54.5%. This compounds form the basis (nucleus) of the wine aroma, which is completed by other aroma compounds like esters, terpens, acetals etc. We consider that the floral character of investigated wine aroma is determined more by the interaction of aroma compounds, which are present in a fairly significant number on the background of the main constituents - isoamyl and 2-feniletanol alcohols.

Țârdea Constantin (University of Agricultural Sciences and Veterinary Medicine Iaşi)

ON THE PECTIC POLYSACCHARIDES IN WINE

POLIZAHARIDELE PECTICE DIN VIN

The pectic polysaccharides in wine, wich belong in the ramnogalacturonan class, are characterized by a low degree of polymeriyation (~30) and a molecular mass of 5.3 KDa. They form chelatic bonds with the metal cations in wine and yield stable insoluble chemical compounds. They are little known in our literature and their technological implications for wine are commonly ignored.

Ursu Sorina, Musteață Grigore, Popov Vasilina (Technical University of Moldova, Republic of Moldova)

CORRELATION BETWEEN OXIDATION-REDUCTION POTENTIAL VALUES AND WOOD MATURATION PROCESSES OF RED WINES

RAPORTUL DE CORELARE ÎNTRE VALOAREA POTENȚIALULUI OXIDO-REDUCĂTOR AL VINURILOR ROȘII ȘI PROCESUL DE MATURARE

Following the study perfomed has proved that there is a strong correlation between the content of phenolic compounds and redox potential value of red wines during wood maturation proceses. The best correlation was shown between the oxidation-reduction potential value and the amount of tannins in wine. Our results treated by mathematical method indicate that multiple coefficient of determination R2 = 0.9684, shows that, 96.84% of the variance indicator is determined by studied factors: duration of contact (X1) and dose of chips (X2)

TEHNOLOGIA PRODUSELOR HORTICOLE
POSTHARVEST TECHNOLOGY OF HORTICULTURAL PRODUCTS

Andrei Corina[1], Ţârcă Felicia[2], Barcan (Băetu) Alina[1], Băetu Marius[1] ([1]University of Agricultural Sciences and Veterinary Medicine Iaşi, [2]The National Sanitar Veterinary and Food Safety, Iaşi)

STUDIES ON THE DYNAMICS OF HEAVY METALS CONTENT DURING THE PROCESS FLOW FOR OBTAINING TOMATO JUICE AT SC CONTEC FOODS SRL TECUCI

STUDII ASUPRA DINAMICII CONŢINUTULUI ÎN METALE GRELE PE PARCURSUL FLUXULUI TEHNOLOGIC DE OBŢINERE A SUCULUI DE TOMATE LA SC CONTEC FOODS SRL TECUCI

The purpose of this study was to monitor the concentrations of Pb, Cd, Cu, Zn, Fe and Mn (essential elements) by physico-chemical determinations on raw material samples within the technological and the finished product to assess the dynamics the levels of metals. Analyses were performed by atomic absorption spectrophotometry with flame (SAAF), after wet digestion with nitric acid. The results of this study showed that the average concentrations detected ranged from 0.41 ± 0.74, 0.01 ± 0.09, 16.6 ± 20.15, 19.15 ± 25.07, 88.87 ± 98.37 and 82.15 ± 103.07 mg/kg for Pb, Cd, Cu, Zn, Fe and Mn. The highest average levels of essential elements and/or potentially toxic samples were detected in seed and skin and tomato juice finished product. Processing of raw tomatoes has increased the level of these elements in the finished product without exceeding the maximum allowed by applicable law.

Anghel Roxana Mihaela (University of Agricultural Sciences and Veterinary Medicine Iaşi)

STUDIES REGARDING THE INFLUENCE OF HEAT WATER TREATMENT ON APPLE FRUIT QUALITY OF GENEROUS AND STARKRIMSON VARIETIES STORED REFRIGERATED

STUDII PRIVIND INFLUENŢA TRATAMENTUL TERMIC CU APĂ CALDĂ ASUPRA CALITĂŢII FRUCTELOR DE MĂR DIN SOIURILE GENEROS ŞI STARKRIMSON PĂSTRATE FRIGORIFIC

Treatment with hot water is used by increasing numbers of organic fruit producers, to prevent the development of pathogens in storage. Also, by exposing the fruit to high temperatures, are diminishes some maturation processes, was reduced ethylene production due to inhibition of enzymes. Before refrigerated at 2^0C, the apples of varieties Generos and Starkrimson were treated hot water. For not suffer a thermal shock, fruits were initially immersed in water at 30^0C for 5 minutes, then in water at 50^0C for 3 minutes. After seven months of cold storage were analyzed physico-chemically, the results were compared with untreated fruit. Qualitative parameters analyzed indicated that treatment with hot water has a significant influence in maintaining quality of apple fruits in cold storage.

Atodiresei Gh. Virgil[1], Tulbure Elena Ancuţa[1], Ischimji Nicolae[2], Mocanu Anca Mihaela[3] ([1]University of Agricultural Sciences and Veterinary Medicine Iaşi, [2]Technical University of Moldova, Republic of Moldova, [3]"Gh. Asachi" Technical University of Iaşi)

NATURAL DYES, OF VEGETAL ORIGIN, USED IN THE FOOD INDUSTRYE

COLORANŢI NATURALI, DE ORIGINE VEGETALĂ, UTILIZAŢI ÎN INDUSTRIA ALIMENTARĂ

Research undertaken over the past decades have shown that due to the antioxidant capacity of natural pigments, their use in the food industry represents an immeasurable therapeutic potential for maintaining human health by preventing cardiovascular diseases, the risk of cancer and other imbalances caused by daily stress and by the disorganized lifestyle of modern man. Plants are established sources of industrial, pharmaceutical and aromatic compounds, which have been for millenniums the main source for obtaining bio products essential for the survival of the fauna. Dyes are natural or synthetic organic coloured substances, which absorb light in the visible part of the spectrum and have the property of colouring the substrate they are applied to.

Atodiresei Gh. Virgil[1], Mocanu Anca Mihaela[2], Tulbure Elena Ancuţa[1], Ischimji Nicolae[3] ([1]University of Agricultural Sciences and Veterinary Medicine Iaşi, [2]"Gh. Asachi" Technical University of Iaşi, [3]Technical University of Moldova, Republic of Moldova)

VEGETAL PIGMENTS WITH THERAPEUTIC POTENTIAL IN COSMETOLOGY

PIGMENŢI VEGETALI CU POTENŢIAL TERAPEUTIC ÎN COSMETOLOGIE

Replacing synthetic dyes with natural dyes, extracted from plants or other natural resources and used in the cosmetic, food and pharmaceutical industry, has become a priority worldwide and the solution of which will largely influence environmental health and therefore human health. The current trend of fighting against skin diseases caused by the harmful effects of free radicals show an encouraging growth of cosmetic products that only use natural ingredients, including vegetal pigments, in preventing and preserving health. Owing to the properties of these natural antioxidants, the immune system is able to more quickly and effectively neutralize aggressions from both internal and external environment and thus prevent imbalances, diseases or inflammations.

Barcan (Băetu) Alina, Anghel Roxana, Patraş Antoanela, Băetu Marius, Mihalache Cristina, Filimon Răzvan (University of Agricultural Sciences and Veterinary Medicine Iaşi)

CHANGES OF THE ASCORBIC ACID CONTENT IN CABBAGE AS RESULT OF PROCESSING
MODIFICAREA CONȚINUTULUI ÎN ACID ASCORBIC LA VARZĂ CA URMARE A PROCESĂRII

Ascorbic acid, an important antioxidant for human diet, can be found in many horticultural products and its content depends on the interaction with other chemical compounds, correlated with the duration and conditions of maturation, storage and processing. The analyse of vitamin C was performed on one variety of cabbage, cabbage - raw, cabbage samples taken from the technological process and the final product. The vitamin C content was determined by reflectometry method using Reflectoquant meter. There were also measured other parameters such as pH, acidity, salt content. The processing involves a lacto-fermentation process. It is known that this process reduces the ascorbic acid content and this is confirmed by our results: the vitamin C decrease from 172.4 mg/100 g raw material to 16.4 mg/100g final product.

Filimon V. Răzvan[1], Niculaua Marius[2], Coțovanu Roxana[1], Arion Cristina[1], Barcan (Băetu) Alina ([1]University of Agricultural Sciences and Veterinary Medicine Iaşi, [2]Oenological Research Center – Romanian Academy, Iaşi, Romania)

ASSESSMENT ON THE POLYPHENOLIC BIOACTIVE POTENTIAL IN FRUITS OF SOME BLACKCURRANT (*RIBES NIGRUM* L.) VARIETIES GROWN IN IASSY AREA, NE OF ROMANIA
EVALUAREA POTENȚIALULUI BIOACTIV POLIFENOLIC AL FRUCTELOR UNOR SOIURI DE COACĂZ NEGRU (*RIBES NIGRUM* L.) CULTIVATE ÎN AREALUL MUNICIPIULUI IAŞI, NE ROMÂNIEI

In recent years a large number of epidemiological studies have suggested remarkable benefits to human health by a high intake of fresh or processed (juice, jam etc.) blackcurrants. Fruits of Ribes nigrum L. are an important source of biologically active compounds, mostly belonging to the class of polyphenols, especially anthocyanins, which give the red-violet color of the fruits epicarp. The purpose of the study is the determination the total amount of anthocyanins and polyphenols, identification of the main anthocyanins (HPLC-DAD) and the participation percentage of each representative to the anthocyanin profile of ethanolic extracts obtained from fruits of two blackcurrant varieties, grown in the NE area of Romania. Measurements have revealed important anthocyanin content in both analyzed varieties (319.97±1.89 mg cy-3-gl/100 g fruit, at Ronix variety and 286.41±1.19 mg cy-3-gl/100 g fruit, at Abanos variety), being identified four major anthocyanins, delphinidin and cyanidin with their glycosidic forms, glucoside and rutinoside.

Mihalache Arion Cristina, Filimon V. Răzvan, Barcan (Băetu) Alina (University of Agricultural Sciences and Veterinary Medicine Iaşi)

ANTIOXIDANT ACTIVITY OF EXTERNAL AND INTERNAL LEAVES OF WHITE AND RED CABBAGE CULTIVARS DURING STORAGE
ACTIVITATEA ANTIOXIDANTĂ A FRUNZELOR EXTERNE ŞI INTERNE A SOIURILOR DE VARZĂ ALBĂ ŞI ROŞIE ÎN TIMPUL PĂSTRĂRII

This study was carried out to determine the changes in the antioxidant activity and phenolic content of the external and internal leaves of different cabbage cultivars during storage. It is also evaluated the anthocyanins content of the red cabbage. The methods used for the determination of antioxidant capacity were:DPPH (2.2-diphenyl-1-picrylhydrazyl) radical scavenging activity and ORAC (oxygen radical absorbance capacity). Trolox, a vitamin E analog, was used as standard antioxidant. Among the cabbage cultivars, red cabbage showed the highest antioxidant potential and the highest phenolic content, both cases, fresh samples and samples kept at 4°C during 10 days. There were not found significant differences between antioxidant activity of the external and internal leaves of the cabbage cultivars studied.

Patraş Antoanela, Băetu Alina Loredana (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

BIOCHEMICAL MODIFICATIONS IN SOME HORTICULTURAL PRODUCTS AS CONSEQUENCE OF TERMICAL PROCESSING
MODIFICARI BIOCHIMICE IN UNELE PRODUSE HORTICOLE CA URMARE A PROCESARII TERMICE

In all horticultural products, the majority of biochemical characteristics change as consequence of processing, especially of termical processing. In the present article, we present red pepper and cauliflower. Among the studied characteristics, we mention total acidity, content of ascorbic acid and ascorbatoxidase activity.

3rd SECTION

SOIL SCIENCES, PLANTS AND ENVIRONMENT PROTECTION

3.1. AGROCHIMIE, AGROTEHNICĂ, FITOTEHNIE, PEDOLOGIE, TOPOGRAFIE, CADASTRU AGRICOL, ÎMBUNĂTĂȚIRI FUNCIARE, MECANIZAREA AGRICULTURII

3.1. AGROCHEMISTRY, AGROTECHNICS, PHYTOTECHNICS, PEDOLOGY, TOPOGRAPHY, AGRICULTURAL CADASTRE, LAND AMELIORATION, MECHANIZATION OF AGRICULTURE

Moderatori:
Prof. univ. dr**. Valeriu MOCA**
Prof. univ. dr. **Ioan ȚENU**
Conf. univ. dr**. Feodor FILIPOV**

Secretari:
Drd. **Mihai Marius BĂETU**
Drd. **Diana Elena BOLOHAN**

LUCRĂRI PREZENTATE ORAL

ORAL PRESENTATIONS

AGROCHIMIE
AGROCHEMISTRY

Bolohan Diana Elena, Volf Mariana, Anghel Roxana (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

INFLUENCE OF FERTILIZATION AND CLIMATE ON APPLE FRUITS RIPENING UNDER AGROECOPEDOLOGICAL CONDITIONS OF "V. ADAMACHI" FARM, IAŞI
INFLUENȚA FERTILIZĂRII ŞI A UNOR INDICI CLIMATICI ASUPRA GRADULUI DE MATURARE A FRUCTELOR LA MĂR, IN CONDITIILE AGROECOPEDOLOGICE ALE FERMEI „V. ADAMACHI”, IAŞI

In the present study was monitored the level of apples maturity at harvest for two years consecutively. Experience was conducted in "V. Adamachi" Farm, Iasi, by application of mineral and foliar fertilizers in an apple trees orchard, Idared variety. The optimal time for fruit harvesting is determined by their destination. Assessing the level of starch hydrolysis through iodine test and fruit firmness, are two tests used to estimate the optimal timing of harvesting. Differences were observed between the fertilization variants through the level of fruit maturity during the two years of study. Lowest values were recorded the control variant and foliar application fertilized variants only. Apple fruits firmness at harvest was generally lower in 2011 compared to 2010, and so starch content, fact that rushed harvest time.

FITOTEHNIE
PHYTOTECHNICS

Andrieş Iuliana, Ciuruşniuc Ana-Maria, Coteanu Andrei Gheorghe (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

THE EFFECT OF CHEMICAL FERTILIZERS AND REMANING EFFECT OF ORGANIC FERTILIZERS UPON THE PRODUCTION AT WINTER WHEAT IN SUGAR BEET – WHEAT – CORN ROTATION
EFECTUL ÎNGRĂŞĂMINTELOR CHIMICE ŞI REMANENȚA CELOR ORGANICE ASUPRA PRODUCȚIEI GRÂULUI DE TOAMNĂ, ÎN ROTAȚIA SFECLĂ PENTRU ZAHĂR – GRÂU – PORUMB

In bifactorial experience placed after the method of subdivided plots at Ezăreni station, Iaşi has watched the effect of nitrogen fertilizers (N_0, N_{40}, N_{80}, N_{120}, N_{160}) applied on the next agrofunds: $P_{64}K_{64}$; manure 30 t/ha applied on pre-plant (sugar beet) and chaff 5 t/ha + the rest from sugar beet applied to winter wheat. It found that the greatest production of 7940 kg/ha was obtained in chemically fertilized variant followed by organic fertilized with 7055 kg/ha. The fertilization with chemical fertilizers, on average, determined in N_0 variant a production of 6228 kg/ha and 8411 kg/ha in the variant fertilized with N_{160}, production increase being 35,53%. The interaction of factors highlighted variant fertilized with $P_{64}K_{64}$ x N_{160}, who obtained a maximum production of 8788 kg/ha, with an increase of 42,75% compared to variant control.

Ciurușniuc Ana-Maria, Robu Teodor, Saghin Gheorghe, Andrieș Iuliana, Coteanu Andrei Gheorghe (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

CONTRIBUTIONS REGARDING THE MORPHOLOGICAL CHARACTERS OF *MONARDA CITRIODORA* CERV. EX LAG. IN FIELD CONDITIONS

CONTRIBUȚII PRIVIND INFLUENȚA CONDIȚIILOR PEDO-CLIMATICE ASUPRA UNOR CARACTERE MORFOLOGICE LA SPECIA *MONARDA CITRIODORA* CERV. EX LAG.

This paper brings new contributions to the knowledge of morphological characters belonging to the species Monarda citriodora Cerv. ex Lag. (family Lamiaceae) cultivated in the climatic conditions in three areas of Moldova: Iasi, Vaslui and Pojorâta (Suceava). Research focused on species growing Monarda citriodora Cerv. ex Lag. in different climatic conditions, followed by observations and measurements of plants, as established by seed crops as well as those established by seedling. It should be noted that the differences were found between plants grown in three locations and the establishment of methods of culture.

Coteanu Andrei Gheorghe, Andrieş Iuliana, Ciuruşniuc Ana-Maria (University of Agricultural Sciences and Veterinary Medicine of Iaşi,)

THE NUTRITION AREA AND FERTILISATION EFFECT ON THE PRODUCTION OF ACHENES ON SOME OF THE SUNFLOWER HYBRIDS

EFECTUL FERTILIZĂRII ŞI SPAȚIULUI DE NUTRIȚIE ASUPRA PRODUCȚIEI DE ACHENE LA CÂȚIVA HIBRIZI DE FLOAREA-SOARELUI

In a trifactorial experiment such as fertilisation x plant density x sunflower hybrids, the achenes production was taken under observation during the 2009-2010 agricultural year, on a cambic chernozem, in sunflower friendly ecological conditions. The maximum plant height was that of 175,3 cm on the $N_{120}P_{60}K_{120}$ fertilisation, 174,6 cm for the density of 70000 plants/hectare and 171,8 cm for the PR63A90 hybrid. Taking into consideration the studied factors in the analysis of achenes production, the following were found : the $N_{96}P_{48}K_{96}$ fertilisation has determined the highest production of 3762,43 kg/hectare; the density of 70000 plants/hectares led to the highest production of 3745,8 kg/hectare; the PR64A83 hybrid achieved the maximum production of 3609 kg/hectare. The highest production of achenes(4546 kg/hectare) was obtained through interacting $N_{64}P_{36}K_{72}$ x 70000 plants/hectare x PR64A83, followed by the interaction of $N_{120}P_{60}K_{120}$ x 55000 plants/hectare x Favorit with 4484 kg/hectare.

PEDOLOGIE
PEDOLOGY

Basaraba Adrian[1], Cotianu Răzvan Daniel[2], Nedianu Cristina Elena[2], Grigore Violeta[2] ([1]University of Agricultural Sciences and Veterinary Medicine of Bucharest, [2]Bioterra University Bucharest)

AGRY AND PEDO-MOUNTAIN SPECIFICITY IN ALBA COUNTY

SPECIFICITATI AGRO SI PEDOMONTANE IN JUDETUL ALBA

Alba County of Romania mountain area of research took place in a broader context of the entire shape of the Apuseni Mountains. Land use in different agro-forestry purposes with predilection, was based onknowledge-support rock and soil edaphic on vegetation composition but also the influence of socio-economic factors. Landscape features, lithologic diversity and soil coating; have based the current uses and productive vocation ecomontane units. Capacity and forest-pastoral agricultural fertility was assessed by reliability. In terms of eco-trees resettlement, the mountain areas have conducted research in terms of: altitude, exhibit slope and useful edaphic volume (UEV) of soil. Culture shrubs (like blueberry, raspberry, and so on) was a priority, considering the specific natural and always increased market demand for berries.

Filipov Feodor, Bădeanu Marilena, Tomiță Octavian (University of Agricultural Sciences and Veterinary Medicine Iaşi)

INFLUENCE OF INTENSIVE FLOWER CULTIVATION ON SOME SOIL RESOURCES CHARACTERISTICS FROM GREENHOUSE VÂNĂTORI NEAMT

INFLUENȚA CULTIVĂRII INTENSIVE A SPECIILOR FLORICOLE ASUPRA UNOR ÎNSUŞIRI ALE RESURSELOR DE SOL DIN SERA VÂNĂTORI NEAMȚ

Genesis and evolution of soils in greenhouses are influenced to a greater extent by human intervention than the soils developed in the field. Positive temperature values associated with the absence of freezing and mass air flow winds that favour soil air renewal requires the application of special technologies for plants growing in in order to prevent soil compaction. Intensive exploitation of greenhouse determine the degradation of morphological, physical and chemical characteristics of soil resources, and diminishing of obtained yield and therefore lower profits. A case study started in Vanatori-Neamt greenhouse showed that the under ploughed soil layer is moderately compact and prevents plant roots penetration. Water stagnation over the compacted soil horizon requires amelioration works without reversal soil horizons. In this paper are presents the execution steps of amelioration work.

Filipov Feodor, Radu Oprea, Chiorescu Esmeralda (University of Agricultural Sciences and Veterinary Medicine Iaşi)

PHYSICAL PROPERTIES OF SOIL RESOURCES DEGRADATION AFTER INTENSIVE EXPLOITATION OF GREENHOUSES DUMBRAVA-NEAMT

DEGRADAREA UNOR ÎNSUŞIRI FIZICE ALE RESURSELOR DE SOL DIN SOLARIILE DUMBRAVA-NEAMȚ DUPĂ EXPLOATARE INTENSIVĂ

Getting early production, plant protection against natural risk factors (hail, frost, frost, etc.) are the main advantages of planting vegetables in greenhouses. Implementation of modern technologies for growing plants without knowing the soil characteristics determines degradation of soil resources and reduces the qualitative and quantitative obtained yields. Researches carried out on greenhouses soils allowed us to detach some conclusions: (i) soil cover with plastic favored increasing compaction within the area between rows, (ii) reduce the aeration porosity, (iii) decrease plant vigor and production obtained.

TOPOGRAFIE, CADASTRU AGRICOL, ÎMBUNĂTĂȚIRI FUNCIARE
TOPOGRAPHY, AGRICULTURAL CADASTRE LAND AMELIORATION

Moca Valeriu[1], Oniga Valeria Ersilia[2], Cârdei Mihaela ([1]University of Agricultural Sciences and Veterinary Iaşi, [2]„Gh. Asachi" Technical University Iaşi)

GEOREFERENTIATION OF THE GRAPHIC FUND FOR TOPOGRAPHIC PLANS DRAWN UP ON GEODESIC TRAPEZIA AT GENERAL CADASTRAL WORKS

GEOREFERENȚIEREA FONDULUI GRAFIC AL PLANURILOR TOPOGRAFICE ÎNTOCMITE PE TRAPEZE GEODEZICE, ÎN LUCRĂRILE DE CADASTRU GENERAL

For a precise integration of raster data into the national projection system, the affine transformation method was used; this method provides a satisfactory precision in this case. Fat the same time for the accurate georeferentiation of raster data the graphic fund of the basic cadastral plan was used. It was created at a scale of 1:5 000 using the Stereographic projection system – 1970. The cadastral sheet (geodesic trapezium) included the incorporated and unincorporated area from the administrative unit of the Bilca commune – Suceava County. The evaluation of the georeferentiation accuracy was analyzed using the mean squared error that was established according to the differences of the vectorial coordinates of the control points and respectively, the corresponding points from the topographic surface of the field.

Oniga Valeria Ersilia, Crengăniş (Bargan) Loredana („Gh. Asachi" Technical University Iaşi)

REPREZENTAREA 3D A SUPRAFEȚELOR TOPOGRAFICE PENTRU REABILITAREA ŞI DEZVOLTAREA IAZURILOR PISCICOLE

3D REPRESENTATION OF THE TOPOGRAPHICAL SURFACES FOR THE REHABILITATION AND DEVELOPMENT OF THE STOCK PONDS

The article presents the methodology for creating the terrain 3D digital model based on topographic surveys, documents and information related to the organization and functionality, and also for using it to carry out some preliminary calculations of the design process, to reduce the damage caused by floods and land arrangement occupied by water. The 3D digital terrain model allows users to perform a series of operations such as viewing, analyzing, measuring, querying and others.

Radu Oprea (University of Agricultural Sciences and Veterinary Medicine Iaşi)

CONSEQUENCES OF THE UNREASONABLE GRAZING ON THE SURFACES WITH DRAINING WORKS, OF THE DRAINAGE AREA OF MOLDOVA RIVER, SUCEAVA COUNTY

CONSECINȚE ALE PĂŞUNATULUI NERAȚIONAL PE SUPRAFEȚELE AMENAJATE CU LUCRĂRI DE DESECARE-DRENAJ, DIN BAZINUL HIDROGRAFIC AL RÂULUI MOLDOVA, JUDEȚUL SUCEAVA

The draining improvements were performed on the fields of Moldova River meadow, Suceava County, in order to remove the excess water, from the soil surface and from its upper horizons, deriving from rainfall, ground water and from the surface runoffs on the higher bordering areas. The operation and exploitation of the drainage network produce mainly banks erosion and the silting of channels bottom. Banks erosion and the silting of channels sections are influenced by the speed of the water, banks stability, their degree of coverage with grass and, last but not least, by the category of use of the surfaces serviced by channels. This paper highlights the fact that the unreasonable grazing and the uncontrolled channels crossing by animals over the periods with highly wet soil, lead to the acceleration of bank erosion and, implicitly, to channels silting, this one occurring with an average annual rate of 3-4 cm, almost double compared to the channels servicing the surfaces used as arable and grass land. The silting of channels sections in a higher ratio than 60-70% leads to the overflow of the water collected over the periods with abundant rainfall, the flooding of the bordering fields, the extension of the humidity excess, the settlement of the higrophile vegetation and the disturbance of the drainage network operation in the neighboring areas.

Radu Oprea, Filipov Feodor (University of Agricultural Sciences and Veterinary Medicine Iaşi)

EXCESS WATER REMOVAL OF BAIA AGRICULTURAL DRAINS EXPERIMENTAL FIELD, SUCEAVA COUNTY, AFTER 34 YEARS OF OPERATION

ELIMINAREA EXCESULUI DE APĂ DIN CÂMPUL EXPERIMENTAL DE DRENAJE AGRICOLE BAIA, JUDEȚUL SUCEAVA, DUPĂ 34 ANI DE FUNCȚIONARE

The exploitation of the production capacity of the agricultural fields and mainly of the arable areas was performed over the time by their improvement with drainage, banking-regulation, underground drainage, soil erosion control and other types of works. According to the data supplied by A.N.I.F., in Suceava County, there is a surface of 44,904 ha with drainage works, of which 27,455 ha with drain works. The results of the research carried out within the pedoclimatic conditions of the drainage area of Moldova River showed that within 48 hours from the rainfall, in the case of the absorbing drain lines disposed at a distance of 15 m, the higher water content of the soil was obtained on the draining ditch, the content increasing once with the depth, thanks to the water inflow created towards the drain filter and to the permeability of the filter layer at 34 years of operation. At the absorbing drains disposed at a distance of 20 m, the higher value was obtained at the mid-distance between the drains. In both cases, the lowest average water content of the soil was recorded in the checkpoint located at 2 m from the absorbing drain lines. Modeling the field in ridge bands at the drains located at a distance of 20 m leads to a better removal of the excess water; the values of the average water content of the soil decrease from the drain line towards the mid-distance between them.

MECANIZAREA AGRICULTURII

MECHANIZATION OF AGRICULTURE

Băetu Mihai Marius, Ţenu Ioan, Cârlescu Petru, Pahoni Corneliu, Barcan (Băetu) Alina Loredana (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

RESEARCH ON EXPERIMENT THE HYDROCYCLON SLV02 FOR THE PARTIAL SEPARATION OF THE MUST

CERCETĂRI PRIVIND EXPERIMENTAREA HIDROCICLONULUI SLV02 PENTRU SEPARAREA PARȚIALĂ A MUSTULUI

In the wine-making industry are cases in which the must has a high content of suspensions with density exceeded by far the density of the liquid phase. A solution for removing these impurities is to use hydro-ciclons which are part of centrifugal separators category. The experiment is to test a new type of hidrociclon with a special construction and has pursued the efficiency the partial separation process from must impurities, depending on the change of speed in suspension equipment. Research has been carried out in "Vasile Adamachi" Teaching Experimental Farm, Iaşi. Following the obtained results interpretation, has been established the experimental version that is leading to a optimal process improvement

Murad Erol, Culamet Aylyn Gârleanu, Cezar Dragomir Florian (Polytechnic University of Bucharest)

INCREASING ENERGY INDEPENDENCE OF GREENHOUSE MODULES BY PLANTS FOR CROP WASTES MICRO-GASIFICATION

CREŞTEREA INDEPENDENTEI ENERGETICE A MODULELOR DE SERĂ CU INSTALAȚII DE MICRO-GAZEIFICARE A BIOMASEI REZIDUALE

Increasing energy independence based on local resources provides increased safety and reduced production costs in greenhouses. We analyzed the use of greenhouses crop wastes to produce heat in micro-gasification plant with an efficiency of at least 85% and emissions well below standards. He designed a heating and ventilation system that uses energy modules TLUD, simple, safe, efficient, clean and whit complete energy independence. They can produce and about 12% biochar is a valuable soil amendment for greenhouse. He developed a complex mathematical model of a greenhouse module equipped with heating system proposed, with which experiments were performed simulated operation frosty days. It is found that the thermal regime imposed achieved at low cost to, produce biochar and ensure necessary CO2 concentration. Using micro-gasification of crop wastes to produce heat in greenhouses is possible technologically, economically and environmentally efficient. Key words: greenhouse, heating, biomass, micro-gaseification, simulation

Pahoni Corneliu, Ţenu Ioan, Băetu Mihai Marius (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

RESEARCH REGARDING THE DETERMINATION OF THE WORKING INDEXES FOR THE GRAIN COMBINES HARVESTERS IN WHEAT AND BARLEY HARVESTING

CERCETĂRI PRIVIND DETERMINAREA INDICILOR DE LUCRU AI COMBINELOR DE RECOLTAT CEREALE PĂIOASE LA RECOLTAREA CULTURILOR DE GRÂU ȘI ORZ

This work presents the results of laboratory experiments and field studies in harvesting wheat and barley by two combine harvesters: Claas Lexion 560 and Claas Lexion 750, both made in Germany. There are differences between this two combines at both constructive level and the degree of automation. This work

has tracked the impact of the existing automation elements in the construction of the combines on the growth of their performance, by determining the work quality indexes and the energetic and operating indexes of the combines studied. The major difference has been done by both the values of the working capacity indexes and the values of the operating coefficients, which were higher for the Claas Lexion 750 combine, to the values obtained by the Claas Lexion 560 combine. Overall, the Claas Lexion 750 combine has been proven better performance; the higher level of automation of this combine had done the difference.

Ţenu Ioan, Roşca Radu, Cârlescu Petru (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

RESEARCHES REGARDING THE DESIGNING, ACHIEVEMENT AND TESTING OF A LABORATORY TEST RIG FOR DRYING AGRICULTURAL AND FOOD PRODUCTS

CERCETĂRI PRIVIND PROIECTAREA, REALIZAREA ŞI EXPERIMENTAREA UNUI STAND DE LABORATOR PENTRU USCAREA PRODUSELOR AGROALIMENTARE

The drying process is affected both by the complex thermo physical processes (diffusion, thermal diffusion etc.) that take place inside the particles forming the product which is dehydrated and by the mass and heat transfer in the boundary layer that separates the surface of the solid body from the thermodynamic agent, also called drying agent. In order to study the drying process of the agricultural and food products and to optimize the parameters of the dehydration process a laboratory test rig was designed and built. The rig allows the surveillance of the parameters involved in the drying process of the solid state agroalimentary products. The following parameters are continuously measured and recorded: ambient air temperature and humidity, the temperature and humidity of the drying agent, the weight of the sample to be dried. The unit is equipped with a specialized microprocessor which allows the continuous adjustment of the speed of the drying agent and also the administration of the working process data, including their transfer to an external PC.

LUCRĂRI PREZENTATE POSTER

POSTER PRESENTATIONS

AGROCHIMIE
AGROCHEMISTRY

Bolohan Diana Elena, Volf Mariana, Anghel Roxana (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

INFLUNCE OF FERTILIZATION ON NITROGEN AND POTASSIUM CONTENT IN LEAVES AND QUALITATIVE INDICES OF APPLE FRUITS

INFLUENȚA FERTILIZĂRII ASUPRA CONȚINUTULUI DE AZOT ŞI POTASIU DIN FRUNZE PRECUM ŞI ASUPRA UNOR INDICI CALITATIVI LA FRUCTELE DE MĂR

Fruit quality is influenced by climate factors, biological factors and applied agrotechnics - fertilization is an important part of crop technology. Two qualitative indices that participate together in achieving the main organoleptic particularities in fruits are soluble solids (°Bx) and titratable acidity (g malic acid /100g acid product). Variants were fertilized with mineral fertilizer (NPK 15.15.15) and foliar fertilizer (Cropmax and Pentakeep-G), applied in various doses. Nitrogen and potassium content of leaves were positively influenced by the doses of fertilizer. It has noticed that variants fertilized with a larger amount of potassium recorded an increase of total acids content in fruits. There were also variations of soluble solids content. Application of fertilizer had the effect of changing the ratio sugar / acidity, which led to a change in taste fruit.

Iancu Dragoş (University of Craiova)

RESEARCHES ON THE INFLUENCE OF PERENNIAL LEGUMES IN INCREASING THE EFFICIENCY OF TEMPORARY MEADOW

CERCETĂRI PRIVIND INFLUENȚA LEGUMINOASELOR PERENE ÎN SPORIREA RANDAMENTULUI PAJIȘTILOR TEMPORARE

At the Experimental Center for Meadow Culture, Preajba, Gorj County, was located a bi factorial experience of 4 x 4 type, in 3 repetitions (4 mixes and 4 doses of nitrogen). In the mixture formed only from 3 grasses (in equal parts), productions were 1,69 - 5,57 D.M. t/ha. In the mixture composed of grasses (60%) and Trifolium pratense (40%) were made 6,63 - 2.65 d.s. If with grasses (60%) has been added Lotus corniculatus (40%) the production was 2.57 - 6,16 t/ ha D.M. When in the mixture has occurred Trifolium repens (40%) with grasses (60%) were observed productions of 3.20- 6,30 t/ha D.M

Siuris Andrei (Institute of Pedology, Agrochimistry and Soil Protection "Nicolae Dimo" Chişinău, Republic of Moldova)

UTILIZATION OF ORGANIC FERTILIZERS ON ERODED SOILS FROM THE REPUBLIC OF MOLDOVA

UTILIZAREA ÎNGRĂŞĂMINTELOR ORGANICE PE SOLURILE ERODATE DIN REPUBLICA MOLDOVA

Chernozem soils with high fertility prevail in the Republic of Moldova. Yet, 500.000 hectares are exposed to erosion of high and moderate degree, a fact which decreases their fertility and the economic potential by 30-60% compared to non-eroded soils. Measures to improve soils affected by erosion by means of organic fertilizers are suggested in the present paper. The application of organic fertilizers impacts on soil fertility and the increase of crop yields.

FITOTEHNIE
PHYTOTECHNICS

Andrieş Iuliana, Ciuruşniuc Ana-Maria, Coteanu Andrei Gheorghe (University of Agricultural Sciences and Veterinary Medicine of Iaşi,)

THE EFFECT OF CONCENTRATION OF SOME BIOSTIMULATORS UPON THE CARYOPSES OF THREE WHEAT CULTIVARS – A RESEARCH STUDY CARRIED OUT AT EZARENI STATION, IAŞI

EFECTUL CONCENTRAȚIEI UNOR BIOSTIMULATORI ASUPRA PRODUCȚIEI DE CARIOPSE LA TREI SOIURI DE GRÂU, ÎN CONDIȚIILE FERMEI EZĂRENI – IAŞI

In climatic conditions of the agricultural year 2010-2011 at Ezareni station, Iaşi on cambic chernozem soil was followed the effect of BCO – 4DMA, BCO 4 K and BCO 4K + Zn acetate biostimulators in concentration of 12,5 ppm, 25 ppm and 50 ppm upon the cariops production of three wheat cultivars - Arieşan, Crina and Boema. BCO 4K + Zn acetate biostimulator determined the highest production of 8213 kg/ha with 15,77% higer than the control variant – BCO – 4DMA; compared with control variant which was trated with water increase production was 31,57%; between concentrations of biostimulators were not found significant differences; Boema variety has ranked first with a production of 7997,8 kg/ha. Interaction of factors highlighted variant BCO 4K +Zn acetate x 50 ppm x Boema with 9007 kg/ha, increase production is very significant.

Coteanu Andrei Gheorghe, Andrieş Iuliana, Ciuruşniuc Ana-Maria (University of Agricultural Sciences and Veterinary Medicine of Iaşi,)

THE EFFECT OF PLANT FERTILISATION AND DENSITY ON SOME OF THE PHYSICAL PROPERTIES OF ACHENES ON A FEW SUNFLOWER (*HELIANTHUS ANNUUS L.)* HYBRIDS
EFECTUL FERTILIZĂRII ŞI DESIMII PLANTELOR ASUPRA UNOR ÎNSUŞIRI FIZICE ALE ACHENELOR LA CÂȚIVA HIBRIZI DE FLOAREA-SOARELUI (*HELIANTHUS ANNUUS L.)*

Considering a cambic chernozem, in the ecological conditions of the agricultural year 2009-2010, at the Ezăreni – Iaşi farm, two physical sunflower parameters of quality were taken under observation, under the influence of fertilisation, plant density and cultivated hybrids. The value of 59,13 g was the highest for the Thousand Grain Weight, under the $N_{64}P_{36}K_{72}$ fertilisation; taking the influence of plant density into consideration, the highest Thousand Grain Weight of 59,12 was obtained on 40000 plants/hectare; the Performer hybrid achieved a Thousand Grain Weight of 60,88 g, which is the highest of all studied hybrids. The highest mass per storage volume was: 41,84 kg/hectolitre for the $N_{120}P_{60}K_{120}$ fertilisation, 40,5 kg/ hectolitre for the 40000 plants/hectare density, 41,2 kg/ hectolitre for the Performer hybrid. The interaction between $N_{120}P_{60}K_{120}$ x 40000 pl/ha x Performer resulted into the highest mass per storage volume of 42 kg/hectolitre.

Rîşnoveanu Luxița, Cioromele Alina Gabriela ("Dunărea de Jos" University of Galați)

STUDIES REGARDING THE INFLUENCE OF THE DOSE OF FERTILIZER AND THE TYPE OF SOIL ON THE PRODUCTION OF CORN GRAINS
STUDII PRIVIND INFLUENTA DOZEI DE FERTILIZARE SI A TIPULUI DE SOL ASUPRA PRODUCȚIEI DE PORUMB BOABE

In order to accomplish the objectives proposed there have been conducted several field experiments in the crop year 2011, on the territory of Braila county, in two locations characterized by different types of soil. In the climatic conditions of the crop year, which was favorable in terms of rainfall for the maize culture, the influence of the dose of fertilization with nitrogen and of the soil type on the production of PR37Y12 hybrid was monitored. From the registered results, it has been found that by the soil type, has an important role to play in the production increase, obviously influencing the production obtained in comparison with the doses of fertilized applied differentially. The biggest production increase has been registered on chernozem soil on which 43kg of nitrogen active substance has been applied. This meant an increase of 45% in comparison with the unfertilized variant, the difference being extremely significant.

TOPOGRAFIE, CADASTRU AGRICOL, ÎMBUNĂTĂȚIRI FUNCIARE
TOPOGRAPHY, AGRICULTURAL CADASTRE LAND AMELIORATION

Mihalache (Ficiuc) Raluca, Popia (Ilica) Mădălina ("Gh. Asachi" Technical University of Iasi)

COORDINATE TRANSFORMATIONS IN ORDER TO INTEGRATE LOCAL MAP INFORMATIONS IN THE NEW GEOCENTRIC EUROPEAN SYSTEM
TRANSFORMĂRI DE COORDONATE ÎN SCOPUL INTEGRĂRII INFORMAȚIEI CARTOGRAFICE LOCALE ÎN NOUL SISTEM GEOCENTRIC EUROPEAN

The concept of "geodetic datum" was recently assimilated by geodetic specialized Romanian literature, and through it, we can operate in the more complex space of coordinate systems along with the reference surface specifications to which they relate. The necessary correspondence between local and global-geocentric data constitutes a current problem which is resolved under the accuracy terms, claimed in general by the terrestrial measurement works and in particular by the cadastral survey works. Thereby its aims the validation of currently using existing space data in the Local-Iasi area and the integration in the European new coordinate system, adopted in 2009, for the local information, for the urban real-estate works. The conducted study is linked to the final transition, of our country, to the national geodesic satellite network and the achievement of a new digital city plan.

MECANIZAREA AGRICULTURII
MECHANIZATION OF AGRICULTURE

Băetu Mihai Marius, Țenu Ioan, Pahoni Corneliu, Barcan (Băetu) Alina Loredana (University of Agricultural Sciences and Veterinary Medicine of Iaşi)

RESEARCH ON OPTIMIZING THE PRESSING PROCESS ON THE VERTICAL BELLOWS HYDROPRESS
CERCETĂRI PRIVIND OPTIMIZAREA PROCESULUI DE PRESARE A HIDROPRESEI VERTICALE CU BURDUF

The research has the purpose to highlight the pressing process efficiency by swelling the bellows press with water under pressure in the first variant, and swelling the bellows with compressed air in the second variant. The yield of the must at pressing pulp it's according to the pressure, depending on growth speed of the specific pressure on the thigh of pulp and the time pressing process. Rapid increase of pressure

working on grape pulp is not permitted, because it causes the local compaction and powerful kicks, increasing loss of hydraulic pressure in the layers of flesh and membrane separation. All these lead to the enrichment of must with suspensions and phenolic substances. By analyzing the results on yield indices obtained by varying the values of pressure and the process duration, it was established the optimal variant of using vertical bellows hydropress.

Fetea Marius, Zaharia Adrian (University of Oradea)
STATIC ANALYSIS OF CONTINUOUS BEAM WITH NUMERICAL METHOD (FEM)

Finite element method is a method of analysis and simulation of current real phenomena. This paper focuses on this method, applied through finite element analysis program Matlab, presenting a structural analysis application useful in the field of forest, mechanical and structural engineering. Program designed by the authors using the finite element tool engineer put in hand work necessary to optimize the design, with positive effects on the complete analysis of stress and tensions in continuous beams.

Pahoni Corneliu, Ţenu Ioan, Băetu Mihai Marius (University of Agricultural Sciences and Veterinary Medicine of Iaşi)
RESEARCH REGARDING THE DETERMINATION OF THE WORKING INDEXES FOR THE NEW HOLLAND TC 5050 COMBINE HARVESTERS IN CORN AND SUN-FLOWER HARVESTING
CERCETĂRI PRIVIND DETERMINAREA INDICILOR DE LUCRU AI COMBINEI NEW HOLLAND TC 5050 LA RECOLTAREA CULTURILOR DE PORUMB ŞI FLOAREA-SOARELUI

This paper presents the results of laboratory experiments and field studies in harvesting corn and sunflower with the New Holland TC 5050 combine harvester. The combine's harvesting performance was monitored on the level and slope field by determining the work quality indexes and the energetic and operating indexes of the combine studied. When movement was along level curves, the grain loss had registered values close to maximum allowed limit (3%), being therefore the recommended method. Fuel consumption has increased considerably when driving on sloping land compared with driving on the level field. In order to achieve a quality harvesting work, combine harvesters should be adjusted and operated in accordance with land condition and with the agrobiological characteristics of the crops.

Popovici Constantin Iulian, Vîntu Vasile, Samuil Costel, Stavarache Mihai, Ciobanu Ciprian (University of Agricultural Sciences and Veterinary Medicine of Iaşi)
INFLUENCE OF DETHATCHING ON TURFGRASS DENSITY
INFLUENŢA SCARIFICĂRII ASUPRA DENSITĂŢII GAZONULUI

Lawns are subjected to thatch development due to dry shoots, stolons, rhizomes or clippings. A thin layer of thatch is desirable, protecting rootzone from extreme heat, but a layer thicker than 1.5 cm has a negative influence on turf, as water and fertilizer does not infiltrate as easily in soil. The aim of this study was to evaluate the effect of different types of dethatching methods on turfgrass density. The experiment was established at Ezareni farm from city of Iasi. The evaluation of turfgrass density was done using the visual rating scale elaborated by the National Turfgrass Evaluation Program from USA. The best dethatching treatment was AA+AS where the biggest differences were observed compared with control. Among varieties, the most significant changes were registered at Poa pratensis species where turf density increased in average from 6.5 to 8.1.

Vlad Constantin, Tunaru Daniela, Dinu Ştefan, Sârbu Adrian (Vegetable Reasearch and Development Station of Buzău)
RESEARCH CONCERNING MAKING A SEED EXTRACTING MACHINE FROM PEPPER RECEPTACLES
CERCETĂRI PRIVIND REALIZAREA UNEI MAŞINI PENTRU EXTRAGEREA SEMINŢELOR DIN RECEPTACULELE DE ARDEI

Pepper fruits are made of receptacle and pulp. Riped mature fruits made for seed production are subjected to pulp-receptacle separation process, manually action made by tube processe done end sharped devices. Therefore, by pressing the superior part of thefruit, the pulp is penetrated and the receptacle is detached. Pepper pulp isexploited by canneries or market sold, andreceptacles are directed to seed extraction place. The problem which this research solve consists of making a machine which can operate a group of releasing seed from receptacle sand a group of seed separation from receptacles.

3.2. MICROBIOLOGIE, BIOLOGIA SOLULUI, FITOPATOLOGIE, ENTOMOLOGIE, ECOLOGIE, INGINERIA MEDIULUI

3.2. MICROBIOLOGY, SOIL BIOLOGY, PHYTOPATHOLOGY, ENTOMOLOGY, ECOLOGY, ENVIRONMENTAL ENGINEERING

Moderatori:
Prof. univ. dr**. Ioan MITREA**
Prof. univ. dr**. Mihai TĂLMACIU**
Prof. univ. dr. **Eugen ULEA**

Secretari:
Şef lucr. dr. **Marinela BĂDEANU**
Drd. **George RACU**

PREZENTARE CARTE DE SPECIALITATE

TRATAT DE VIROLOGIE
(4 volume)

Autor **Ion V. POP**
Lucrare apărută în anul 2009, Editura Printech, Bucureşti

TRATAT DE ENTOMOLOGIE
generală şi specială

Autori: **Ioan ROŞCA** (coordonator)**, Ion OLTEAN, Ioan MITREA, Mihai TĂLMACIU, Doru Ioan PETANEC, Horia Ştefan BUNESCU, Rada ISTRATE, Nela TĂLMACIU, Cătălin STAN, Lavinia Mădălina MICU**
Lucrare apărută în anul 2011, Editura Alpha MDN

MICROBIOLOGIE

Autori: **Eugen ULEA, Florin Daniel LIPŞA**
Lucrare apărută în anul 2011, Editura Ion Ionescu de la Brad, Iaşi

LUCRĂRI PREZENTATE ORAL

ORAL PRESENTATIONS

FITOPATOLOGIE
PHYTOPATHOLOGY

Calistru Anca – Elena[1], Leonte Constantin[1], Lăzărescu Eduard[1], Lipşa Florin[1], Fitt B. D. L.[2], Hall Avice[2] ([1]University of Agricultural Sciences and Veterinary Medicine Iaşi, [2]University of Hertfordshire, United Kingdom)

RESEARCHES REGARDING THE ATTACK OF *SCLEROTINIA SCLEROTIORUM* ON COTYLEDONS OF SOME *BRASSICA NAPUS* L. CULTIVARS

CERCETĂRI PRIVIND ATACUL AGENTULUI PATOGEN *SCLEROTINIA SCLEROTIORUM* ASUPRA COTILEDOANELOR LA CÂTEVA CULTIVARE DE RAPIȚĂ (*BRASSICA NAPUS* L.)

Sclerotinia sclerotiorum is a major pathogen for the rapeseed crop (Brassica napus L.) and for that reason, worldwide, there is a high interest to identify Brassica genotypes with resistance to this pathogen (Sarahan et al., 2008). Field testing to identify resistance in the rapeseed germplasm can be difficult and expensive regarding the necessary time and costs. We aimed to examine the reaction of 40 rapeseed cultivars to the attack of Sclerotinia sclerotiorum, on cotyledons, in controlled enviromental conditions. For this, we have artificially incoluated the cotyledons, with a solution of macerated mycelium (10^4 mycelial fragments / ml), in liquid PDB media (Garg et al., 2008), from an isolate of the pathogen. The rapeseed cultivars responded with a distinct hypersensitive reaction. The results were statistically analysed. The cotyledon assay proved to be a rapid and useful method to identify the reaction of the Brassica napus cultivars to the attack of Sclerotinia sclerotiorum.

Creţan Ana- Maria, Grudnicki Margareta ("Ştefan cel Mare" University of Suceava)

THE EVOLUTION OF THE SPATIAL STRUCTURE OF CANCER ATTACKS PRODUCED BY FUNGI OF THE *NECTRIA* SP IN SUCEAVA PLATEAU

EVOLUȚIA STRUCTURII SPAȚIALE A ATACURILOR DE CANCER PRODUSE DE CIUPERCILE GENULUI *NECTRIA* SP DIN PODIȘUL SUCEVEI

The research was made in a virgin beech forest in Suceava Plateau (Old growth beech forest of Humosu), based on two successive inventories. The first one was made in 2006 and the second one in 2011. The purpose of this paper is to capture the spatial structure evolution of cancer produced by fungal attacks of the Nectria genus. To carry out this object were made three punctual processes composed from healthy trees (H), medium affected trees (M) and severely affected trees (S). In the first instance spatial organization of the stand was judged only by the relative position between trees, quantification the spatial structure requiring a higher approach.

Petrea Gabriela, Zaldea Gabi, Damian Doina, Savin Costică (Research and Development Station for Viticulture and Vinification Iasi)

EVALUATING THE EFFECTIVENESS OF CERTAIN PLANT PROTECTION PRODUCTS USED TO PROTECTING THE VINES IN THE ECOSYSTEM VINEYARD COPOU IAŞI-2011

EVALUAREA EFICACITĂȚII UNOR PRODUSE FITOSANITARE UTILIZATE ÎN PROTECȚIA VIȚEI DE VIE ÎN ECOSISTEMUL VITICOL COPOU IAŞI-2011

The type of action of certain chemical products for combating pests and diseases requires a thorough knowlodge of the nega tive consequences that can arise after using them an the vineyards. Lately, the focus has increased upon the use of some bio-preparation with non-toxic effects on the environment and on the grape production. The 2011 wine year for the ecosystem vineyard Copou-Iasi is considered to be, in terms of climate conditions, convenient for the culture of the vine. In this way, the treatment schemes have been planned following the forecast and warning bulletins that had been issued. The treatments have been performed at different times of the vegetation, depending on the evolution of the climate conditions, on the biology of the pathogens and on the development of the phonological stages of the analyzed assortment.

Petrescu Eugenia[1], Şesan Tatiana Eugenia[2] (Research and Development Institute for Plant Protection, Bucharest, University of Bucharest)

IN VITRO RELATIONSHIPS BETWEEN FUNGI ISOLATED FROM *RIBES NIGRUM* L. PLANTS

RELAȚIILE *IN VITRO* DINTRE UNELE SPECII DE CIUPERCI IZOLATE DE PE PLANTE DE *RIBES NIGRUM* L.

Fungal isolates from Ribes nigrum L. have been screened in vitro for antagonism against the two pathogens Botrytis cinerea Pers. and Alternaria tenuissima (Kunze) Wiltshire. Among saprophytic isolates tested, strains of Trichoderma sp. were the most competitive against B. cinerea and A. tenuissima

pathogenic isolates. The other fungi - Trichothecium roseum Link, Epicoccum nigrum Link and Clonostachys rosea (Link) Schroers, Samuels, Seifert & W. Gams have showed a very slight antagonistic action or lack of antagonism towards the two phytopathogens of blackcurrant.

ENTOMOLOGIE
ENTOMOLOGY

Bădeanu Marinela, Filipov Feodor, Şuteu Daniela, Sandu Tatiana (University of Agricultural Sciences and Veterinary Medicine Iaşi)

CONTRIBUTIONS TO THE STUDY OF EASTERN CARPATHIANS EARTHWORMS (*OLIGOCHAETA-LUMBRICIDAE*) - BIODIVERSITY RESEARCH TO EARTHWORMS IN SOIL FOR VEGETABLE CULTURE SIHLA NEAMT MONASTERY

CONTRIBUȚII LA STUDIUL LUMBRICIDELOR DIN CARPAȚII ORIENTALI - CERCETĂRI PRIVIND BIODIVERSITATEA LUMBRICIDELOR DIN SOLUL DESTINAT CULTURII DE LEGUME DE LA SCHITUL SIHLA-NEAMȚ

Cultivated soil biodiversity study of Sihla Neamt county is part of a complex program of study amd monitor the role of earthworms species in the soil, the diversity of existing species, correlated with plant elements from different levels and types of existing soil, with the final goal to establish a fauna of soil type and soil biological diagnosis.In this diagnosis is study the earthworms species from the mountains Neamt, in cultivated soils with vegetables in unsafe conditions by monks hermitage Sihla.Earthworms were collected with soil and vegetation studies. Monastery Sihla is located in Subcarpathians Great Eastern, 1000 m altitude, in a remote area, rich in fauna and flora elements, but with poor soils, difficult to cultivate. Little land available for cultivation has proved rich in species of earthworms, whose development was certainly favored by the species richnes of plants and trees in the area that provided organic material for food and the excess moisture

Grădinariu Florin Marcel, Tălmaciu Mihai, Bodescu Ionel Ciprian (University of Agricultural Sciences and Veterinary Medicine Iaşi)

RESEARCH ON THE EFFICIENCY OF THE METHODS OF COMBATING THE HARMFUL ENTOMOFAUNA THAT ARE CURRENTLY APPLIED IN FOREST NURSERIES IN THE NE OF MOLDOVA

CERCETĂRI PRIVIND EFICIENȚA METODELOR DE COMBATERE A ENTOMOFAUNEI DĂUNĂTOARE APLICATE ÎN PREZENT ÎN PEPINIERELE SILVICE DIN NE MOLDOVEI

When you want to realize a sustainable management of the forests it's absolutely necessary to resolve some important problems like assuring high quality wood saplings. For this reason, it's mandatory that beside the technical works that must be done and that are foreseen by the existing instructions, to apply modern methods of preventing and controlling the pests existing in the forest nurseries and forest cultures. The research has as a purpose to determine the efficiency of current pest control methods applied in nurseries of the Forest Directorate Botosani and Iasi. ROMSILVA National Administration of Forests records now a weak point in terms of production of seedlings and pest control, control methods applied are outdated, and substances used are highly toxic and ineffective.

Lupăştean Daniela[1], Ciornei Constantin[2], Andrei Ana Maria[3] ([1]"Ştefan cel Mare" University of Suceava, [2]Institute for Research and Management Planning in Forestry, Bacău, [3]Research Development Institute for Plant Protection, Bucharest)

ASPECTS UPON FOREST PROTECTION FOLLOWING THE PROCESS OF FOREST MANAGEMENT CERTIFICATION ACCORDING TO FSC STANDARDS

ASPECTE PRIVIND PROTECȚIA PĂDURILOR ÎN CONTEXTUL CERTIFICĂRII MANAGEMENTULUI FORESTIER CONFORM STANDARDELOR FSC

The paper evaluates the situation developed in the forest protection activity in Romania, as a consequence of the certification of an important forest area according to FSC standards. The FSC standards adopted in forest management resulted in strong restrictions in using the majority of the pesticides authorised for forestry application. In the present paper are displayed the solutions adopted in other member countries of the European Union, in similar situations, and the possibility to adjust them to the local conditions are discussed. An additional task consists in identification of some pesticides with low toxicity and remanence, according to the sixth FSC principle, in order to apply them for the limitation of the damages caused by the phytophagous insects in mature stands.

Măciucă Anca, Lupăștean Daniela ("Ştefan cel Mare" University of Suceava)

ASPECTS REGARDING THE MANAGEMENT OF PROTECTED AREAS AFFECTED BY BARK BEETLE OUTBREAKS

ASPECTE REFERITOARE LA MANAGEMENTUL ARIILOR PROTEJATE AFECTATE DE ÎNMULȚIRI ÎN MASĂ ALE GÂNDACILOR DE SCOARȚĂ

The paper presents the evolution of bark beetles (Curculionidae family, Scolytinae subfam.) outbreaks in four European protected areas as a result of different strategies adopted according to the specific ecological, social, and economical conditions. These strategies analysis reveals the necessity of embracing a proactive approach; the protected areas management plans should include some main action directions in case of natural perturbation (e.g. windthrow).

Rîşnoveanu Luxița, Cioromele Alina, Burtea Carmen Mariana ("Dunărea de Jos" University, Galați)

SOME ASPECTS OF POPULATION CONTROL *MELIGHETES AENEUS* IN WINTER RAPESEED UNDER AGRICULTURAL AREA BĂRĂGANUL DE NORD-EST

UNELE ASPECTE PRIVIND CONTROLUL POPULAȚIEI *MELIGHETES AENEUS* IN CULTURA DE RAPIȚĂ DE TOAMNĂ ÎN CONDIȚIILE AREALULUI AGRICOL BĂRĂGANUL DE NORD- EST

Meligethes aeneus is one of the most dangerous pests of rape, the agricultural area Bărăganul de nord-est, accounting for 50% of this crop pest. In the 2004-2011 there were a series of researches on control of this dangerous pest of winter rape by use of insecticides with minimal effects on the environment. There are significant differences between different mode of action of insecticides according to the active substances entering their composition, their mode of action of this pest on the frequency, intensity and degree of attack and combat efficacy of protection substances Melighetes aeneus, particularly the damaging culture of winter rape

MICROBIOLOGIE
MICROBIOLOGY

Ciupeanu Călugăru Eleonora Daniela (University of Craiova)

THE IDENTIFICATION OF SOME YEAST SPECIES FROM THE SEGARCEA AREA

IDENTIFICAREA UNOR SPECII DE LEVURI DIN ZONA SEGARCEA

Over the years numerous studies have been conducted for understanding ecological dynamics, quantification and composition of microflora responsible for spontaneous fermentation of grape must.Yeasts are unable travel, their dispersion in the biosphere is dependent on certain vectors: aerosols, air movement, the activity of biological vectors (insects, animals), human activities. If most of the yeast populations are distributed in soil, water and air, they are not randomly distributed in the biosphere. Because different species of yeast require certain organic carbon sources (selective feeding), their dispersion in the biosphere is well determined, by type of species.

Constantinescu Florica, Sicuia Oana, Dinu Sorina (Research Development Institute for Plant Protection, Bucharest)

MICROBIOLOGICAL MEANS OF PLANT PROTECTION, SUSTAINABLE ALTERNATIVE AT CHEMICALS

MIJLOACE MICROBIOLOGICE DE PROTECȚIA PLANTELOR, ALTERNATIVĂ DURABILĂ LA PRODUSELE CHIMICE

Large use of pesticides triggered several negative effects including harmful agents resistance to active ingredients. The researches focused on selection and formulation of some bacterial strains with beneficial qualities for crops and fungicides reduction in „damping –off" soil borne fungi control in vegetables. Selection of the strains was based on their antagonistic activity in vitro, capacity to produce enzimes, like cellulase, amylase and lactonase, swimming and swarming mobility and in vivo efficacy against targeted phytopathogens. The strains were formulated as retard microorganisms release granules and microemulsion. The results showed good efficacy of the bioproducts (65-90%) in controlling the diseases

Lemanova Natalia[1], Chisnicean Vasile[2], Iliev Petru[2], Vasilachi Iuliana[2] ([1]Institute of Plant Protection and Organic Agriculture Republic of Moldova, [2]Scientific-Practical Institute for Horticulture and Food Technologies, Republic of Moldova)

THE USE OF METABOLITES OF SOIL BACTERIA FOR PROCESSING BEFORE SOWING VEGETABLE CROPS

UTILIZAREA METABOLIȚILOR BACTERIILOR DIN SOL PENTRU PRELUCRAREA ÎNAINTE DE SEMĂNAT A CULTURILOR LEGUMICOLE

Results of tratment on the seed of vegetables with strains nonpathogenic rhizosphere bacteria of 3 generas in order to determine the energy of growth were evaluat. Productivity and weigth of peppers and

tomatos fruits were best after interaction in time of plants extension of two strains one after other Agrobacterium radiobacter-Azotobacter chroococchum. Others pairs of straims increased too there indexes if compare the distingtions with nontraitement control. Resulrs of stady will support the creation of technology of utilization bacterials strains for biopreparates.

ECOLOGIE
ECOLOGY

Leah Tamara (Institute of Pedology, Agrochemistry and Soil Protection "N. Dimo", Chisinau, R. Moldova)

STUDIES ON TRANSFORMATION OF HEAVY METALS IN ERODED CARBONATIC CHERNOZEMS
STUDII ASUPRA TRANSFORMĂRII METALELOR GRELE ÎN CERNOZIOMURI CARBONATICE ERODATE

It presents the results concerning the content and transformation of chemical forms of Co, Ni, Cu, Zn in eroded carbonatic chernozems. The total content of heavy metals is directly proportional to the soil erosion degree. The transformation of chemical forms of heavy metals in eroded soils depends on the quantity of organic mater, carbonates, Fe-Mn oxides and clay minerals.

INGINERIA MEDIULUI
ENVIRONMENTAL ENGINEERING

Androne Roxana, Eremia Florentina, Marica Mariana Daniela, Popârlan Alina Maria ("Bioterra" University of Bucharest)

INFLUENCE OF PATHOGENS ON FOOD SAFETY AND QUALITY OF CROP PRODUCTS
INFLUENȚA AGENȚILOR PATOGENI ASUPRA SECURITĂȚII ALIMENTELOR ȘI A CALITĂȚII PRODUSELOR DE ORIGINE VEGETALĂ

Scientific research and practice shows that currently is not news to anyone that the globe, agriculture suffers significant losses each year quantitative and especially qualitative, due to the action of various pathogens. The disease is any disorder that occurs in morpho-physiological structures of the body and disturbs the normal functions affecting growth and development. Problems is fundamental to any so-called "disease pyramid" consists of: host, pathogen, environmental conditions and time (Popescu Gh., 1993). Is the host plant, and time refers to the period from infection to manifest disease incubation

Pîrvulescu Mihaela ("Bioterra" University of Bucharest)

CONTRIBUTIONS TO THE ENVIRONMENT IMPACT ASSESSMENT DUE CONSUD COMPANY
CONTRIBUȚII LA EVALUAREA DE IMPACT ASUPRA MEDIULUI, COMPANIA S.C. CONSUD

Environmental policy is a driver for implementation and improvement of EMS by which company S.C. CONSUD can maintain and improve environmental performance. It is therefore recommended that the environmental policy to reflect the economic leadership commitment at the highest level, to comply with applicable laws and seeking continuous improvement of environmental performance. Environmental policy is the basis on which the organization in order to set environmental objectives and targets. It is recommended that environmental policy is sufficiently clear to be understood by stakeholders, both within and outside the entity, and be reviewed and revised periodically to reflect changing conditions and information.

LUCRĂRI PREZENTATE POSTER

POSTER PRESENTATIONS

FITOPATOLOGIE
PHYTOPATHOLOGY

Burlacu (Arsene) Mădălina-Cristina, Leonte Constantin, Lipşa Florin, Lăzărescu Eduard (University of Agricultural Sciences and Veterinary Medicine Iaşi)

PRELIMINARY RESULTS REGARDING VIRULENCE TEST OF SOME *VERTICILLIUM LONGISPORUM* STAINS ON *BRASSICA NAPUS*

REZULTATE PRELIMINARE PRIVIND TESTAREA VIRULENTEI UNOR TULPINI DE *VERTICILLIUM LONGISPORUM* LA *BRASSICA NAPUS*

Verticillim longisporum is soil-borne vascular fungal pathogens with host specify to cruciferous plans such oilseed rape (Eynck et al.2008). The fungus is able to survive in soil for several years through the production of microsclerotia and because there are no approved fungicides for this disease, it is important to cultivate some resistant cultivars. The aim of this study was to test the virulence of 3 Verticillium longisporum isolates, in order to identify which is the most aggressive isolate for Brassica napus. For this purpose we used two oilseed rape cultivars one which is less susceptible to the disease (Express) and one which is highly susceptible to the disease (Falcon). The plants were artificial infected which each V.longisporum isolate by root deep inoculation under controlled conditions. For four weeks the plants were scored for the symptoms using an assessment key with nine classes. Based on the obtained results the most aggressive stain proved to be VL43.

Calistru Anca – Elena, Leonte Constantin, Lăzărescu Eduard, Lipşa Florin, Lupu Ancuța Elena (University of Agricultural Sciences and Veterinary Medicine Iaşi)

RESEARCHES REGARDING THE ATTACK OF *SCLEROTINIA SCLEROTIORUM* ON THE RAPESEED LEAVES (*BRASSICA NAPUS* L.)

CERCETĂRI PRIVIND ATACUL AGENTULUI PATOGEN *SCLEROTINIA SCLEROTIORUM* PE FRUNZELE DE RAPIȚĂ (*BRASSICA NAPUS* L.)

Sclerotinia sclerotiorum is one of the rapeseed pathogens that causes important yield losses (Saharan et al., 2008). Until now, there weren't identified resistant cultivars to this pathogen. There were examined 20 rapeseed cultivars, in controlled enviromental conditions, using the detached leaf assay (Bradley et al., 2006), with mycelium cultivated on PDA, from 2 diferent isolates of the pathogen. The diameter of the leasions was measured, and the results were statistically analysed. The cultivars responded differently, depending on the isolate used.

Comşa Maria, Tomoiagă Liliana, Cudur Florina, Cudur Claudiu, Cristea Claudiu (Vine and Wine Research and Development Station Blaj)

RESEARCH ON PATHOGENIC FUNGI INVOLVED IN THE PROCESS OF BIOLOGICAL DECLINE AT VINE, GROWING IN CENTER BLAJ

CERCETĂRI PRIVIND CIUPERCILE PATOGENE IMPLICATE ÎN PROCESUL DE DECLIN BIOLOGIC AL VIȚEI DE VIE, ÎN CENTRUL VITICOL BLAJ

This paper presents aspects related to the action of pathogenic fungi lignicole play a role in the decline of the vine. The experiments were performed in the vineyards of Vine and Wine Research and Development Station Blaj, between 2009 to 2011. Were followed vineyards where there is often known as pathogenic fungi (Eutypa) broad, Phomopsis viticola and Stereum hirsutum. They are wound fungus that enters the plant through wounds existing hubs and strings. Generally the infected vines (mushrooms) mycosis vegetates weak. Spring, portions of the hub not start in vegetation, has dead branches, dezmuguritul is delayed, and sometimes there is a strong proliferation of shoots, with an abnormal evolution during the growing season.

Petrescu Eugenia, Oprea Maria (Research and Development Institute for Plant Protection, Bucharest)

DIVERSITY OF FUNGI ASSOCIATED WITH *RIBES NIGRUM* L. CROP IN THE SOUTH OF ROMANIE

DIVERSITATEA CIUPERCILOR ASOCIATE CULTURII DE *RIBES NIGRUM* L. ÎN SUDUL ROMÂNIEI

Black currant (Ribes nigrum L.) is one of the most valuable medicinal plants. From organs of the black currant were isolated some species of pathogenic fungi and some mycotoxicogenic fungi which could alter the quality of the raw material. Fungi with antagonistic potential were identified too. This isolates of fungi may be further investigated in order to establish which of them will be suitable for biological control.

Preda Silvia, Giorgota Andreea, Alecu Anca, Mitrea Ioan (University of Craiova)

RESEARCHES REGARDING THE LEAVES DISEASES AT WILLOW IN SRC CROPS – MEASURES OF PREVENTION AND CONTROL IN ECOLOGICAL CONDITIONS OF SOUTH WEST OF OLTENIA

Lately in our country, the wilow culture intensified as a result of increasing requests for obtaining biomass. The intensification of culture, as of any other plants determined the mass propagation of pathogens, which sometimes contributes to undermining culture. In the South-western Oltenia conditions, were identified pathogens that cause staining black leaf willow (Marssonia salicicola), rust (Melampsora salicicola) and willow tar spot fungus (Rhystima salicinum). Phytosanitary treatments applied to the earliest stage of the attack with fungicides as: Dithane M 45 – 0,2%, Topsin WP - 0,1 %, Alert SC - 0.1%, Merpan 50 WP – 0.2%, have ensured the phytosanitary protection of plants.

ENTOMOLOGIE
ENTOMOLOGY

Bancă Gheorghe, Mitrea Ioan (University of Craiova)

RESEARCH REGARDING THE BIOLOGY AND ECOLOGY OF THE *EURYTOMA SCREINERI* SCHR. AT S.C.D.P. VÂLCEA

CERCETĂRI PRIVIND BIOLOGIA ŞI ECOLOGIA SPECIEI *EURYTOMA SCHREINERI* SCHR. LA S.C.D.P. VÂLCEA

Eurytoma screineri Schr. is one of the most dangerous species encountered in the plum orchards in Romania. Pest is present in all areas of culture of plum, damage can reach 90% of the fruit. Within the integrated pest control, knowing the biology and ecology is an essential component without which can not be made the schemes for control treatment. In the climate of Romania Eurytoma Schreiner Schr. has one generation per year hibernating as larva in plum stones. In the climatic conditions at S.D. Valcea, the larvae transform to pupae takes place in late March and early adult emergence occurred in the third decade of April, after the temperature exceeded 15^0 C.

Bădeanu Marinela (University of Agricultural Sciences and Veterinary Medicine Iaşi)

RESEARCH ON EARTHWORM BIODIVERSITY (*OLIGOCHAETA-LUMBRICIDAE*) IN DECIDUOUS FOREST SOILS UNDER THE ECOLOGICAL CONDITIONS IN THE YEAR 2011

CERCETĂRI PRIVIND BIODIVERSITATEA SPECIILOR DE LUMBRICIDE (*OLIGOCHAETA- LUMBRICIDAE*) DIN SOLURILE PĂDURILOR DE FOIOASE, ÎN CONDIȚIILE ECOLOGICE ALE ANULUI 2011

Knowing the species of animals that compose a given area requires fauna of observations extending over many years. In the previous year (2010) I started the investigation of earthworm soil fauna in deciduous forests in the Eastern Carpathians. Observations and analyses have continued in 2011 and will continue, the target being to accurately determine the earthworms species that inhabits these soils, tracing the dynamics of population of each particular species and species evolution, referencing the evolvement of environmental factors and specific food source, represented by organic material provided by deciduous species that make up the dominant vegetation. Associations include deciduous up to 10 species, dominant being: Fagus sylvatica; - Fraxinus excelsior and Carpinus betulus. As regards the structure of the earthworms species identified, it includes 9 species, 6 species existing in the previous year and 3 species identified for the first time in such research

Beşleagă Ramona[1], Cîrdei Eugen[1], Tălmaciu Mihai[2] ([1]Research and Development Station for Fruit Tree Growing Iaşi, [2] University of Agricultural Sciences and Veterinary Medicine Iaşi)

RESEARCH INTO THE BIOLOGY AND CONTROL OF SAN JOSE SCALE AT S.C.D.P. IAŞI

CERCETĂRI CU PRIVIRE LA BIOLOGIA ŞI COMBATEREA PĂDUCHELUI ȚESTOS DIN SAN JOSE LA S.C.D.P. IAŞI

In period of 2010-2011, at the SCDP Iasi, organizated research on the biology and control tests in San Jose scale (Quadraspidiotus perniciosus Comst). The experiments effectuated on the plantations, of apple cultivars: Idared, Golden deliciosus si Florina. In development of complex control has been considered to determine the effectiveness of insecticides: Reldan, Novadim, Pyrinex, Movento, Proteus and Decis 25 WG.

Bodescu Ciprian Ionel, Tălmaciu Nela, Tălmaciu Mihai (University of Agricultural Sciences and Veterinary Medicine Iaşi)

OBSERVATION REGARDING THE EFFICACY OF PYRINEX 25 CS PRODUCT TO FIGHT AGAINST *DIABROTICA VIRGIFERA VIRGIFERA* LE CONTE SPECIES FROM MAIZE CROPS

OBSERVAȚII CU PRIVIRE LA EFICACITATEA PRODUSULUI PYRINEX 25 CS ÎN COMBATEREA SPECIEI *DIABROTICA VIRGIFERA VIRGIFERA* LE CONTE DIN CULTURILE DE PORUMB

The experiments were made at INCDA Fundulea and Agricultural Research and Development of the ASAS resorts, where there were applied 1-2 treatments in a corn crop during the growing season.The

treatments were applied when there was a warning, during the sign of panicle, having a density over 10 adults/square m, density determined after performing the survey and 7 adults/yellow trap nonspecific/day. In all stationary of testing, the efficiency was very good, with values between 89.4% and 90.7% at a dose of use of 1.5 l/ha of commercial product. At the untreated subject, the efficiency values were between 12.3% and 27.6% and the average in the three stationary were 19.5%. No recorded of phytotoxicity phenomena affecting crop.

Bodescu Ciprian Ionel, Tălmaciu Nela, Tălmaciu Mihai (University of Agricultural Sciences and Veterinary Medicine Iaşi)

OBSERVATION REGARDING THE EFFICACY OF THE SEEDOPRID 600 FS PRODUCTS TO COMBAT *DIABROTICA VIRGIFERA VIRGIFERA* LE CONTE SPECIES FROM MAIZE CROPS

OBSERVAŢII CU PRIVIRE LA EFICACITATEA PRODUSULUI SEEDOPRID 600 FS ÎN COMBATEREA SPECIEI *DIABROTICA VIRGIFERA VIRGIFERA* LE CONTE DIN CULTURILE DE PORUMB

The experiments have been organized at INCDA Fundulea, at the Agriculture Development Research Stations Livada, Lovrin and Oradea. The efficacy of the Seedoprid 600 FS product was analysed in comparaison with the Cruiser 350 FS product, for the seed treatment at a dose of 10 l/t and 18 l/t. The assesment of the efficacy was made in comparaison with the version control, without seed treatment. This was very good at those two products, the average being 7,37 at Seedoprid 600 FS product and 7,17% at Cruiser 350 FS product. At the untreated control, the frecquency of the attack was about 23,36%, and there are significantly loss of production. There weren't recorded any phytotoxicity phenomena that affects the crops

Cardaş Gabriel[1], Ciornei Constantin[2], Lupăştean Daniela[1], Badouin A.[3], Purnelle B.[3] ("Ştefan cel Mare" University of Suceava, Institute for Research and Management Planning in Forestry, Bacău, Université Catholique de Louvain, Belgia)

GENETIC DIVERSITY STUDY OF SPECIES *APROCEROS LEUCOPODA*

STUDIU PRIVIND DIVERSITATEA GENETICĂ A INSECTEI *APROCEROS LEUCOPODA*

The paper consists in a study on the establishment and dispersal of the adventive sawfly Aproceros leucopoda Takeuchi, 1939. The objective of this work was to assess the genetic diversity present in four populations of A. leucopoda in Romania. In addition, we were able to compare the genetic diversity of specimens from Romania with the individuals in Hokkaido, Japan. ITS2 sequencing and RAMS shows almost no diversity, both within populations or between different populations. This suggests that Romania experienced a unique place, with some individuals from the start. This lack of genetic variability could be explained by the recent introduction of A. leucopoda in Romania, and so the population had no time to change significantly.

Fătu Ana-Cristina[1], Ciornei Constantin[2]., Fătu Viorel[1], Lupăştean Daniela[3], Pavel Otilia[4], Andrei Ana-Maria[1] ([1]Research Development Institute for Plant Protection, Bucharest, [2]Institute for Research and Management Planning in Forestry, Bacău, [3]"Ştefan cel Mare" University of Suceava)

INOCULATIVE BIOLOGICAL INSECTICIDES FOR ROOT PESTS CONTROL

INSECTICIDE BIOLOGICE INOCULANTE DESTINATE PROTECȚIEI PLANTELOR FAȚĂ DE ATACUL DĂUNĂTORILOR DE RĂDĂCINĂ

Entomopathogenic microorganisms isolated from natural outbreaks were tested both in laboratory and field conditions in order to evaluate the possibility of their use as inoculative bioinsecticides for root pests control. The laboratory results lead to selection of some autochthonous Beauveria brongniartii strains with bio-ecological potential, adapted to Romanian pedoclimatic conditions and identified as the principal source of biological material for the bioinsecticides production. Field tests were conducted in Suceava district forest nurseries located in different site conditions and infested with Melolontha melolontha. In the paper we present the results regarding the method of entomopathogenic bioinsecticides application and their biological efficacy in European cockchafer control.

Fîciu Lidia, Dejeu Liviu (University of Agricultural Sciences and Veterinary Medicine of Bucharest)

BIOLOGICAL SOLUTIONS TO PREVENT AND DECREASE THE ATTACK PHYLLOXERA (*PHYLLOXERA VASTATRIX*)

SOLUȚII BIOLOGICE DE PREVENIRE ŞI DIMINUARE A ATACULUI DE FILOXERA (*FILOXERA VASTATRIX*)

To prevent and decrease the attack of phylloxera was tested a technology based on amplifying the suppressive properties of soil on phylloxera attack by improving the fertility and biological activity of the soil. Biopreparats with Beauveria sp. fungi have been used in granular form on organic support (grains of wheat and barley) as an active substance for Beauveria. The organic fertilizer such as manure and compost introduced in soil represent the support used for fungal strains multiplication and spread. The results obtained showed that the symptoms produced by the phylloxera on roots, are more numerous in the case of compost (20 t/ha) used as organic supports compared to the manure (20 t/ha), mixed with 50 kg/ha biopreparat administered at a depth greater than 20 cm. In the case we used a quantity of 20 t/ha manure mixed with 200 kg/ha biopreparat introduced in soil at 10 cm depth, the frequency of symptoms has been greatly reduced.

Iamandei Maria, Cioloca Mihaela Adriana, Mărgărit Grigore, Daniela Livia Donescu, Tăuş R. (Research and Development Institute for Plant Protection, Bucharest)

STUDY OF HARMFUL AND USEFUL ARTHROPOD FAUNA OF POTATO CROPS IN BRASOV COUNTY
CERCETARI PRIVIND FAUNA DE ARTROPODE UTILE ŞI DĂUNĂTOARE DIN CULTURILE DE CARTOF DIN JUDEȚUL BRAŞOV

Comprehensive studies on the arthropod fauna of the potato crops in Brasov County have been sporadic, and they usually approached aspects regarding one or another of the taxonomical groups. Our study, conducted during 2008 – 2010 has allowed revealing the complex of the epigeic fauna which includes more than 47 species belonging to 14 families in 2008 in comparison with 2009 when includes 67 species belonging to 12 families and 2010 when we found 69 species belonging to 15 families. In this complex we should pay attention to harmful component having high densities: Leptinotarsa decemlineata Say, dipterous from the Cecidomyidae families, and the aphid species Aphis fabae and Aphis frangulae. The useful fauna complex was dominated by reprezentatives from Aranea folowed by representatives on the coleopteran families Carabidae, Coccinellidae and Staphylinidae. The knowledge of the report between the useful fauna and the harmful fauna allows us to anticipate the potential attacks of the pests and the opportunity of control measures in potato crops.

Păduraru Laurențiu Bogdan, Tălmaciu Mihai, Tălmaciu Nela (University of Agricultural Sciences and Veterinary Medicine Iaşi)

CONTRIBUTIONS TO THE STUDY OF BEETLES ENTOMOFAUNA IN ANALYZED ORCHARDS USING THE BEATING METHOD
CONTRIBUȚII LA STUDIUL ENTOMOFAUNEI DE COLEOPTERE DIN CADRUL PLANTAȚIILOR POMICOLE ANALIZATE PRIN APLICAREA METODEI FRAPAJULUI

The research was conducted in 2008-2010 using beating method and observations were made in four stationary belonging to Iasi and Vaslui counties.In three of these stationarys chemical treatments were performed as follows: stationary V. Adamachi Iasi – treated, Miroslava Iasi and stationary Deleşti Vaslui, untreated apple orchard were performed in Iasi stationary V. Adamachi - untreated. Beating method samples were collected were the sudden shaking of the branches of trees trunks with a rubber stick, which was previously under the trees placed a tarpaulin. To collect useful and harmful entomofauna tree crown, beating method consisted of shaking suddenly two branches of 10 trees in each stationary. For each sampling time of 5 trees was kept constant and marked with distinctive signs early in the season and five randomly chosen trees. After harvesting the biological material it was made in the laboratory where he was recording and then the samples were cleaned and collected insects were determined.

Păduraru Laurențiu Bogdan, Tălmaciu Mihai, Tălmaciu Nela, Herea Monica (University of Agricultural Sciences and Veterinary Medicine Iaşi)

CONTRIBUTIONS TO THE STUDY OF BEETLES ENTOMOFAUNA IN ANALYZED ORCHARDS USING THE METHOD TYPE BARBER SOIL TRAPS
CONTRIBUȚII LA STUDIUL ENTOMOFAUNEI DE COLEOPTERE DIN CADRUL PLANTAȚIILOR POMICOLE ANALIZATE PRIN APLICAREA METODEI CAPCANELOR DE SOL DE TIP BARBER

The research was conducted in 2008-2010 using the method type Barber soil traps and observations were made in four stationary belonging to Iasi and Vaslui counties. In three of these stationarys chemical treatments were performed as follows: stationary V. Adamachi Iasi – treated, Miroslava Iasi and farm plots stationary SC Service Deleşti SRL Vaslui, untreated apple orchard were performed in Iasi stationary V. Adamachi - untreated. For Barber method we used plastic boxes, with a volume of 500 ml, with a diameter of 10 cm and height 8 cm, and the fixing liquid formaldehyde solution was used in concentrations of 4% in 2009 and in 2010 was used as a fixing liquid salt solution at a concentration of 25%. Sampling was done periodically according to the research method applied during the growing season over two years as research took place. In studied stationarys, six traps were placed each on a row of trees at the edge inward in a straight line at a distance of 20 m from the edge and from 6 to 8 m between traps at a time.

Țucă Ovidiu Andrei, Stan Cătălin, Mitrea Ioan (University of Craiova)

BENEFICIAL ENTOMOFAUNA FROM THE CABBAGE CROP FROM THE BANU MARACINE, CRAIOVA AREA
ENTOMOFAUNA UTILA DIN CULTURA DE VARZĂ DIN ZONA BANU MARACINE, CRAIOVA

Knowledge of beneficial species, their density and behavior is essential to the integrate pest control. Following our research, conducted at SD Banu Maracine, Craiova cabbage crop, we identified 37 species of beneficial insects which has intervening in the cabbage pest density. Beneficial fauna identified in SD Banu Maracine consists of predators, parasites and few pantofagi. Parasites and predators feed on eggs, larvae and adult insects present in cabbage crops. The beneficial fauna comprised species framed in two classes: Insecta, Arachnida; six orders: Neuroptera, Heteroptera, Coleoptera, Hymenoptera, Diptera, Araneae.

ECOLOGIE
ECOLOGY

Huzum Ramona, Prundeanu Ionuț Mihai, Iancu Ovidiu Gabriel ("Al. I. Cuza" University of Iaşi)

HEAVY METALS IN SOILS FROM SOME HORTICULTURAL AREAS: SÂRCA AND HUŞI (ROMANIA)
METALELE GRELE DIN SOLURILE UNOR AREALE HORTICOLE: SÂRCA ŞI HUŞI (ROMÂNIA)

Geochemical contents of seven heavy metals (Cd, Co, Cr, Cu, Ni, Pb, Zn) in soils (haplic and calcaro-calcic chernozems) from Sârca apple orchard and Huşi vineyard area were determined in this study. Heavy metal contents were obtained using AAS and EDXRF methods, the average values being between 0.12-0.88 mg/kg Cd, 11-12 mg/kg Co, 14-128 mg/kg Cr, 26-61 mg/kg Cu, 37-41 mg/kg Ni, 21 mg/kg Pb and 67-71 mg/kg Zn. Measurements of pH and carbonate contents were also recorded, the dominant soil reaction is neutral to weak alkaline with an average content of 1.16% $CaCO_3$ for the soil sampled from Sârca area and 5.27% $CaCO_3$ for the Huşi vineyard area.

INGINERIA MEDIULUI
ENVIRONMENTAL ENGINEERING

Pătruşcă (Cepoi) Daniela Alina[1], Popa Daniela[1], Pătroescu Viorel[2] ([1]University of Craiova, [2]National Research & Development Institute for Industrial Ecology, Bucharest)

COMPOSTING OF URBAN SLUDGE BY MIXING WITH PLANT RESIDUES
COMPOSTAREA NĂMOLURILOR URBANE PRIN AMESTECUL CU REZIDUURI DE PLANTE

Sludge arising from municipal treatment plants is a valuable source of trace elements and N, P, K for plants, while improving physical and chemical properties of soil. The purpose of this study was to evaluate the possibility of composting biodegradable waste through anaerobic digestion mixed with plant residues. The results showed the suitability of applying the composting process from a chemical point of view. The study highlights the environmental impact of compost derived from sewage mixed with vegetable scraps that leads to improved resource utilization, conservation and reduction of pollutants.

4th SECTION

LANDSCAPE ARCHITECTURE

Moderatori:
Conf. univ. dr. **Doina Mira DASCĂLU**
Şef lucr. dr. **Ioan VÎNĂU**
Şef lucr. dr. **Andrei SLONOVSCHI**

Secretari:
Drd. **Oana POHOAȚĂ LUPU**
Drd. **Mirela MURARIU COJOCARIU**

PREZENTARE CARTE DE SPECIALITATE

CURS DE PEISAGISTICĂ, vol. I *Peisajul*

Autori: **Mircea GRIGOROVSCHI, Vlad RĂCHIERU**
Lucrare apărută în anul 2011, la Editura Societății Academice Matei Teiu Botez, Iasi

LUCRĂRI PREZENTATE ORAL

ORAL PRESENTATIONS

Andriescu Ioana, Cantor Maria, Dan Valentin Sebastian, Horț Denisa (University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca)

GREEN ROOF OR ROOF GARDEN?
ACOPERIS VERDE SAU ACOPERIS GRĂDINĂ?

Far from being news to civilized countries, green roofs are slowly starting to spread in Romania as well. Vegetation up high becomes a necessity because of the spread of built areas, which diminishes green areas. This can be a solution in the attempt to compensate for the loss caused by the inevitable urban development. There are two concepts available,"the green roof" and the "garden roof". There are several differences between the two, such as place and placement mode, the type of system chosen and adequate vegetation for each. This paper will make an analysis of the two concepts, ending with a set of conclusions and recommendations concerning the purpose and the benefits of each.

Chiriac Horia-Costin (Postdoctoral Grant Recipient, Romanian Academy, Iasi Branch)

NATURE BETWEEN IMAGINARY AND REALITY IN POSTMODERN AGE
NATURA ÎNTRE IMAGINAR ŞI REALITATE ÎN ERA POSTMODERNĂ

The present paper aims to discuss the problematic of nature within the Postmodern Age, starting from the fact that Postmodernism questions intensively the concept of reality. Therefore, the concept of nature evolves into a new context, being simultaneously associated with imaginary and reality, while the old and somehow exclusive link that modernity traced between nature and rationality seems to be no longer satisfactory.

Ciobanaşu Corneliu ("Gheorghe Asachi" Technical University Iaşi, Faculty of Architecture)

THE PUBLIC PARK OF NATIONAL THEATRE "VASILE ALECSANDRI" IASI – UPGRADING AND REHABILITATION
MODERNIZAREA ŞI REABILITAREA PARCULUI PUBLIC AL TEATRULUI NAȚIONAL "VASILE ALECSANDRI" IAȘI

In the center of Iasi is the public park of the National Theatre "Vasile Alecsandri", located inside the protected perimeter of historical and architectural urban values. This area is now quite degraded. The proposed solution of rehabilitation take into consideration the evolution and characteristics of the site, solving specific functional and stylistic needs, offering a harmonious urban and landscaping solution.

Ciolacu Dragoş ("Gheorghe Asachi" Technical University Iaşi), **Răchieru Vlad** (landscape engineer)

LANDSCAPING THE EASTERN ORTHODOX ECCLESIASTICAL SPACE: NATION'S CATHEDRAL BUCHAREST

PEISAGIZAREA SPAȚIULUI ECLEZIASTIC ORTODOX: CATEDRALA MÂNTUIRII NEAMULUI BUCUREŞTI

Eastern Orthodoxy has preserved unaltered the tradition as it was defined by the seven Holy Councils, not only in doctrine but in spacial organization. Church is the interface between the sacred and profane, which is a complex relationship between the discharges aesthetic experiences, custo-mary practices and rational solutions. The key to the deciphering of this maze of information is the Faith. The example attempted a reconciliation of na-ture with architecture. The proposed location for the Nation's Cathedral was the Arsenal Hill in Bucharest. The landscaping concept was to transpose the physical Cathedral into a metaphysical one in Nature, obtaining an inver-ted image. The reconciliation between landscape and architecture was sym-bolized when drawing a parallel axis to the Cathedral's main axis as a symbol of a spiritual becoming trough the church: The progress-ion Earthly - Celestial is mediated by Church.

Dascălu Doina Mira (University of Agricultural Sciences and Veterinary Medicine Iaşi, Faculty of Horticulture)

ARCHITECTURAL LANDSCAPE CREATIONS IN THE MIDDLE OF AGRICULTURAL CROPS

CREAȚII PEISAGISTICE ÎN MEDIUL AGRICOL CULTIVAT

At first sight, cultivated agricultural environment does not provide a convenient ambience to landscape design. However, some landscape creations, located right in the middle of farmland fields, succeed to prove the virtues of such pioneering facilities. Important psycho-physical effects are created by combining both romantic-rural and modern atmosphere.

Fabian Claudia, Dobrescu Elisabeta (University of Agricultural Sciences and Veterinary Medicine Bucharest, Romania)

THE IMPORTANCE OF LANDSCAPE POLICIES IN THE TERRITORIAL DEVELOPMENT

IMPORTANȚA POLITICILOR DE PEISAJ ÎN DEZVOLTAREA TERITORIALĂ

Landscape in recent years has become an importent element of territorial policies. This has a priority role in the functional adaptation and harmonization of the European Landscape Convention with national legislation. The landscape holds the identity symbol as a mark of authenticity that allows it on the region. Using landscape as a motor of territorial development led to the adoption of policies to conserve and value the diversity of landscapes. These new policies will influence the remarkable as well as the ordinary landscapes apparently without an evident aesthetic charge (load). Finally, this study aims to identify both the preservation policy as well as valorization policy of landscape in all his complexity and opens new possibilities on local level.

Grigorovschi Mircea, Gheorghiță Constanța Carmina ("Gheorghe Asachi" Technical University Iaşi, Faculty of Architecture)

THE IMPACT OF LANDSCAPE IMPROVEMENTS ON THE URBAN SPACE

IMPACTUL AMENAJĂRILOR PEISAGISTICE ASUPRA SPATIULUI URBAN

This study aims to be a synthesis of case studies of small landscape improvements in the city of Iași and highlightsthe quality factors of these urban improvementsunder the following criteria: urban, morphological, structuring, plant usage and identity, while examining the impact of these criteria on public space and the urban image.

Nica Răzvan Mircea, Petrovici Liliana - Mihaela ("Gheorghe Asachi" Technical University Iaşi, Faculty of Architecture)

EPHEMERAL SPATIAL STRUCTURES IN PARKS AND GARDENS – PERCEPTION AND MEANING

STRUCTURI SPAȚIALE EFEMERE ÎN AMENAJAREA PARCURILOR ŞI GRĂDINILOR – PERCEPȚIE ŞI SEMNIFICAȚIE

Ephemeral spatial structures located in public spaces such as squares, gardens and urban parks may constitute complementary compositional elements in the contemporary landscaping. These temporary and reversible interventions on the landscape are counting on the psychological and perceptive impact and on an amplification of social contact, without creating, from the viewer, an instinctual denial of the novelty. Ephemeral spatial structures, which are simultaneously architectural and artistic, are not perceived as aggressions or alterations of the familiar space, but rather as urban furnishings that mark a certain event in the daily city life. In the case of the outdoor spaces design, these objects with a temporary existence are conceived as an integral part of the landscaping creation. Being detached from constraints of the perennial, these objects offer the opportunity of a new sensorial experience of the space.

Nica Răzvan Mircea, Petrovici Liliana - Mihaela (“Gheorghe Asachi” Technical University Iaşi, Faculty of Architecture)

TRIDIMENSIONAL PARAMETRIC STRUCTURES IN CONTEMPORARY LANDSCAPE DESIGN
STRUCTURI PARAMETRICE TRIDIMENSIONALE UTILIZATE ÎN AMENAJĂRILE PEISAGISTICE CONTEMPORANE

A novelty of the contemporary landscape architecture is represented by urban furnishings generated exclusively through digital techniques. For these objects the software is not only a way to visualize a tridimensional model, but an integrated part of the design process. In the parametric design the algorithm controlled by the software platform is meant to develop a spatial structure based on the geometric elements interconnection, resulting free form objects, with a micro-organic infinite repetitive development.The parametric design in the case of the landscape design does not aim to satisfy a concrete function, but to challenge the viewer’s imagination and to create an unpredictable and playful pause in the gardens and parks landscape. Spatial continuity and fluidity are generally valid concepts for these studies, sustained in theory through scientific terms from mathematics and biology, with references to abstract notions from philosophy and psychology.

Murariu - Cojocariu Mirela, **Pohoață-Lupu Oana**, **Dascălu Doina Mira** (University of Agricultural Sciences and Veterinary Medicine Iaşi, Faculty of Horticulture)

DECORATIONS OF VEGETAL INSPIRATION USED IN THE STYLISTICS OF THE TRADITIONAL ARCHITECTURE OF BUCOVINA
DECORAȚIUNI DE INSPIRAȚIE VEGETALĂ FOLOSITE ÎN STILISTICA ARHITECTURII TRADIȚIONALE BUCOVINENE

The world of plants has been throughout time a permanent source of inspiration for ornamental patterns. Flowers or parts of flowers, trees or just branches, leaves or fruit, alone or associated in various combinations, have been adopted as decorations and represented both trough direct imitation and stylized. Their selection as ornaments has been determined either by the beauty of their form, or by the fact that they have – or they once had – a symbolic value. Usually, the folk ornamentation has adopted the drawings of the most popular plants, that which form the spontaneous or cultivated flora specific to Romania. The tree of life, the oak leaf, the vine leaf, the branch, the wheatear, the grape, clover, spindle, along with many floral patterns such as the tulip, rose, daisy, etc. represent the ensemble of the ornamental motifs of vegetal inspiration and define the entire stylistic universe of the traditional Bucovina house, as seen drawn in great detail and with great art on the decor elements, both inside and outside the house.

Petrovici Liliana - Mihaela, Nica Răzvan Mircea (“Gheorghe Asachi” Technical University Iaşi, Faculty of Architecture)

NATURAL AND ARTIFICIAL MATERIALS IN LANSDCAPE DESIGN - AESTHETIC AND MEANING
MATERIALE NATURALE ŞI ARTIFICIALE ÎN ARHITECTURA PEISAGERĂ - EXPRESIE ŞI SEMNIFICAȚIE

The aesthetical qualities of the finishing materials can be turned to account very diverse in lanscape design, so that they gain multiple meanings and poetic qualities. The new and traditional material, used creatively and adapted to context, brings esthetical and semantic variety in the architecture of park and gardens. Natural materials – such as wood, stone or brick - symbolize tradition and rootedness; they have preciosity and nobleness, warmness and vitality. The stone signifies power, perenniality and prestige. Wood is the symbol of universal substance, it gives the feeling of intimacy and protection. The water and the vegetation create vitality and beauty, harmonizing the relationship between the nature and man-made environment; they are the symbol of regeneration. Artificial materials such as metal, glass, concrete, plastic, symbolize the human control, the control of reason on the environment. The metal signifies flexibility and concentration. The concrete means lastingness and hardness; it is a malleable artificial stone which can generate a large variety of spatial forms.

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FUNCTION AND MEANING IN CONTEMPORARY LANDSCAPE DESIGN
SEMNIFICAȚIE ŞI FUNCȚIUNE ÎN ARHITECTURA PEISAGERĂ CONTEMPORANĂ

The functional meaning in landscape architecture refers primarily to the coherence and readability of the spaces of the parks and gardens and their relationship to the built environment of cities. Secondly, certain morphological elements of landscaping, many of them borrowed from architecture, fall into formal typologies dictated by their utility, and often have symbolic connotations. For example, the stair means the aspiration and ascension; column expresses verticality, support, is a symbol of human or tree of life.The technological development, the evolution of thinking and the need to adapt to the diversity and instability of modern life cause transformation of functional meanings. They are constantly redefined according with the requirements of changing and complex contemporary life. Currently, architects propose innovative ways of dealing with the utility of the urban environment and even novel association of various functions: parks, gardens - building – infrastructure.

Pohoață - Lupu Oana, **Murariu -Cojocariu Mirela**, **Dascălu Doina Mira** (University of Agricultural Sciences and Veterinary Medicine Iaşi, Faculty of Horticulture)

THE COMMUNITY GARDEN – MEANS OF LANDSCAPE AND HUMAN REHABILITATION
GRĂDINA COMUNITARĂ – MIJLOC DE REABILITARE PEISAGERĂ ŞI UMANĂ

The gardens of a communitarian nature have at their origin various motivational motors, fuelled by political, economic, social, humanitarian, educational, psychological, technological, ecological or relaxation-occupational reasons, freely or constrainedly manifested over the last 200 years. Usually located on ground within or next to the city, under the property and management of local or private authorities and offered for individual use or the use of some groups of people, community gardens are today a saving formula for many counties. The ground assigning practice is adopted both in countries with a developed economy (England, Germany, the Netherlands, USA, Canada, Australia, New Zealand), and in those that are in an economical difficulty (Cuba, Vietnam, the Philippines, Venezuela). In this paper, the study of their evolution over time, generates conclusions in comparison to our country.

Purcaru (căs. Grecu) Codrina, Purcaru Andrei ("Gheorghe Asachi" Technical University Iaşi)

NEW SISTEMS FOR BUILDINGS CONFORT
NOI SISTEME PENTRU ASIGURAREA CONFORTULUI ÎN CLĂDIRI

Comfort in buildings is determined by several factors among which we mention the state of thermal comfort, sound, smell, sight and touch, not to mention the psychological or environmental factors. In the beginning of the millennium the world is facing many challenges more or less serious. One of the challenges in buildings domain is just finding the perfect balance between achieving the safety, health and comfort and of course ensuring energy efficiency according to the driving sustainable development. This paper examines some constructive systems that can meet the conditions of hygiene, comfort and efficient energy, and underline the solution of combining two already known and widely used systems: the ventilated facades and Canadian or Provençal well. The ambiental effects can be potentiating by the vegetation, whichmay be located within the newly created space.

Purcaru Andrei, Purcaru (căs. Grecu) Codrina ("Gheorghe Asachi" Technical University Iaşi)

TEMPORARY CONSTRUCTIONS AND LANDSCAPE RECOVERY AFTER DISASTERS
CONSTRUCȚII TEMPORARE SI REABILITAREA PEISAJULUI DUPĂ DEZASTRE

Over time there have been many examples of natural disasters and beyond, from which entire communities were destroyed and people left homeless had to receive help from authorities.
This paper focuses on just this kind of temporary building to house victims, and to what extent these types of construction can contribute to the landscape recovery.

Singureanu V., Dumitraş Adelina, Pop Păunița, Moldovan G. (University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca)

URBAN FURNITURE, DESIGN AND COST PRODUCTION PRINCIPLES USING CAD DEVELOPMENT TOOLS
MOBILIERUL URBAN, PRINCIPII DE PROIECTARE ŞI ESTIMARE A COSTURILOR DE PRODUCȚIE FOLOSIND TEHNICI C.A.D.

Urban furniture viewed as landscape design constitutive element occupies nowadays an increasing prevalent position in systematization and designing principles of urban areas. Used materials and its multifunctionality become pronounced with the advent of economic crisis, when cheap and sustainable solutions represent key factors. The proposed materials for the construction o the urban furniture consisted in imprinted concrete with wood inserts. Urban design models where made with the assistance of SketchUp software. 2D and 2.5D projections where obtained using CorelDraw software. Estimating technical materials, surface and volume calculation was performed using SketchUp. Additional lighting to conceived furniture was done by ArtlantisStudio 3 renderings.

LUCRĂRI PREZENTATE POSTER

POSTER PRESENTATIONS

Ciolacu Dragoş ("Gheorghe Asachi" Technical University Iaşi), **Răchieru Vlad** (landscape engineer)
RESTORATION AND REHABILITATION OF IAŞI METROPOLITAN PARK
RESTAURAREA ŞI REABILITAREA PARCULUI MITROPOLITAN IAŞI

Iaşi Metropolitan Assembly is a milestone both in the history and in the city silhouette. The project attempts to correct certain deficiencies of the current language trough interventions especially on plant composition and in the same time on the mineral component. Well received by the beneficiary, through implementation, this project may be a first step by a much deserved reconsideration of urban space in the centerof the City.

Dascălu Doina Mira (University of Agricultural Sciences and Veterinary Medicine Iaşi, Faculty of Horticulture)
CRITICAL ANALYSIS OF SOME URBAN PLANTATIONS IN IAŞI CITTY
ANALIZA CRITICĂ A UNOR PLANTAȚII URBANE IEŞENE

Urban plantation design constitutes an important chapter in landscape architecture. Beyond their sanitation effect, most often emphasized in the specialized literature, the aesthetic appearance of these plantations should help to combat the subtle urban pollution, namely visual pollution. The exemples chosen and analyzed in this paper tries to highlight some negative aspects of plantations design that contributes to visual pollution in Iasi citty, both by design and execution.

Murariu - Cojocariu Mirela, **Pohoață-Lupu Oana**, **Dascălu Doina Mira** (University of Agricultural Sciences and Veterinary Medicine Iaşi, Faculty of Horticulture)
THE PLACE OF THE GARDEN IN THE ORGANISATION OF THE TRADITIONAL HOUSEHOLD OF BUCOVINA
LOCUL GRĂDINII ÎN ORGANIZAREA LOTULUI GOSPODĂRIEI TRADIȚIONALE BUCOVINENE

The traditional household has been configured over time starting first of all from functional principles to satisfy human needs, while at the same time adapting to the existent natural conditions. The ethno-spatial typology of villages have lead to the occurrence of differences between them in what regards the positioning of the households in the field, the positioning of the buildings within them, and of course, the way the garden is organized. In general, the lot corresponding to the traditional household of Bucovina is divided between the pens enclosure and the utilitarian garden behind the house, the connection between the two being made in various ways, depending on the area. In the mountain area, in the households that are scattered on unlevelled ground, the area of the garden has been reduced. Here, the natural beauty of the grasslands, the forests and glades makes the need for aesthetic vegetal improvements fade. The paper makes a comparative analysis of all these typologies.

Pohoață - Lupu Oana, **Murariu - Cojocariu Mirela**, **Dascălu Doina Mira** (University of Agricultural Sciences and Veterinary Medicine Iaşi, Faculty of Horticulture)
THE FRUIT TREES – VEGETAL ELEMENTS WITH MULTIPLE VALUES OF THE RESIDENTIAL GARDENS
POMII – ELEMENTE VEGETALE PLURIVALORICE ALE GRĂDINILOR REZIDENȚIALE

The residential gardens from the urban or near the urban area represent a mirror of the civilisation and development degree of the inhabitants of a city or suburb, and the attention offered to the aesthetics and functionality of the natural and anthropical elements stretches over the general aspect. The fruit trees, along with the other vegetal elements, through their decorative and utilitarian nature are living organisms that can be modelled, generating not only the structure, but also the binding element of the landscape development. Comparing the two gardens, that within a city and that neighbouring a city, generate distinct landscape de development typologies, and knowing these suggests applicative ideas and methods.

Purcaru (căs. Grecu)Codrina, Purcaru Andrei ("Gheorghe Asachi" Technical University Iaşi)
INFLUENCE OF NATURAL VENTILATION ON BUILT LANDSCAPE
INFLUENȚA VENTILAȚIEI NATURALE ASUPRA PEISAJULUI CONSTRUIT

Strategies and methods for building ventilation, its location in a particular geographical area and climate, hygiene and comfort and their control by the occupants, are important elements that determine built landscape design. Volumetric shape and details of the building facade, coupled with exterior landscaping design, generate multiple benefits in the urban landscape, if designed judiciously. Although it is only a part of a building design, natural ventilation system contribute to its success and need to integrate harmoniously into the overall design of all built ensemble.

Purcaru Andrei, Purcaru (căs. Grecu) Codrina ("Gheorghe Asachi" Technical University Iaşi)

THE PSYCHOLOGICAL IMPACT OF LANDSCAPE REHABILITATION AFTER DISASTERS USING ALTERNATIVE SYSTEMS FOR CONSTRUCTION

IMPACTUL PSIHOLOGIC AL REABILITĂRII PEISAJULUI DUPĂ DEZASTRE PRIN FOLOSIREA UNOR SISTEME ALTERNATIVE PENTRU CONSTRUCȚII

Alternative green buildings can be used for ares destroyed by natural desasters having a significant psychological benefic impact on affected population. These alternative green constructions using landscaping techniques to enhance the positive impact on residents.