

**STUDIES CONCERNING THE FACTORS THAT DECIDE THE QUALITY OF
RED WINES, OBTAINED IN OLTENIA'S VINEYARDS**

Marta Diszy, Popa A., Dunoiu A., Janina Onescu

KEY WORDS: Factors, Vocation, High Quality Wines, Controlled Appellation of Origin

ABSTRACT

For each viticultural wine growing habitat from Oltenia-Romania, we established the profile of the predominant soil, and we determined the physical-chemical characteristics of the obtained wines. Using the methodology of multicriterial delimitation in ecological concept of the viticultural areals of obtaining high quality COD products we traced in Oltenia-Romania, the habitats of five names of controlled origin: Banu Maracine, Segarcea, Mehedinti, Dragasani, Samburesti.

TOTAL PHENOLS AND ANTIRADICAL ACTIVITY (DPPH) OF RED AND WHITE WINES FROM DIFFERENT REGIONS OF GREECE

Nicolaos Gougoulas, Alexandros Papachatzis,
Ioannis Vagelas, Nicolaos Chouliaras

KEY WORDS: wine, total phenols, antiradical (DPPH) activity, effective concentration (EC₅₀)

ABSTRACT

In the present research chemical analysis was made in 18 Greek wines, red and white wines, selected from different regions of Greece. The results showed that for all wines the total phenols (presented as Gallic acid equivalents or catechin) varies from 215 up to 3800 ppm. Antiradical activity for the red wines it was found higher with a mean value 4,64 μ M, while the antiradical activity for the white wines it was found lower with a mean value 0,42 μ M. The effective concentration (EC₅₀), concerning the phenols has a high value for all types of wines. Phenolic antioxidant index was higher for the red wines with values 153 up to 596 and lower for the white wines with values 14 up to 30. We concluded that phenolic antioxidant index it can be used as indicator of antioxidants force of wines.

**THE EVOLUTION OF THE INFLORESCENCES IN THE BUD OF
THE 4TH ORDER DEPENDING OF VARIETY AND CLIMATIC CONDITIONS,
IN THE VEGETATION PERIOD IN 2007, IN THE WINEGROWING
CENTER “BANU MARACINE”**

Olteanu I., Cismaru Gabriela Adina Maria,
Daniela Cichi, Costea D.C.

KEY WORDS: bud of fruitage, differentiation, inflorescence, sprout

SUMMARY

This work proposes to watch the thoroughgoing study of the aspects watching the inflorescences in buds, in the vegetation period in 2007 (June-September), at the varieties of Riesling Italian, Feteasca neagra and Cabernet Sauvignon, cultivated in the winegrowing area Banu Maracine. It was made a series of studies and observations on the buds, through chronological analyses of the phenomena, watching in dynamics the evolution of the principal reference point stasis.

The differential process of the buds was studied in correlation with the climatic conditions of the year under consideration and the genetically particularities of the analyzed varieties.

**APPEARANCES CONCERNING THE DIFFERENTIATION
THE BUDS OF FRUITAGES TO SOME KINDS OF VINE**

Olteanu I., Cismaru Gabriela Adina Maria,
Daniela Cichi, Costea D. C.

KEY WORDS: bud of fruitage, differentiation, inflorescence, sprout

SUMMARY

This work proposes to stand out the way the differentiation of the buds of fruitages to vines, with a direct role in the adhibition of the growing works and fructification. In the winegrowing plantations, the application of correct technologies (cuttings, operations in green), assures optimal conditions for the growing and the development of the plants, in the aim of utilization of the potential of productions to maximum. The differences were watched to what concerns the molding of the inflorescences depending on variety to the beginning of 2008 facing the end of the vegetation period in 2007.

**STUDIES REGARDING THE DELIMITATION OF THE AREALS WITH
VOCATION FOR OBTAINING HIGH QUALITY WINES HAVING
CONTROLLED ORIGIN DENOMINATION IN DRAGASANI VINEYARD**

Popa A., Dunoiu A., Dicu C., Genoiu C.

KEY WORDS: Controlled Appellation of Origin, High Quality Wines, Vocation, Climate, Soil

ABSTRACT

Dragasani vineyard is considered, honestly speaking, hospodar vineyard of Oltenia, where were the origins ancient vineyards of Banii Craiovesti and Buzesti Brothers. Many plantations slopes of three rows of hills parallel with river Olt, being situated on brown and brown - reddish forest soils, some of them medium podsol, rich in limestone, situated on alluvial gravel. In a special manner are recognized by special quality of aromatic wines of Tamaioasa Romaneasca of Dragasani and of Sauvignon. Also, red wines like Pinot Noir and Cabernet Sauvignon have been always noticed.

THE ECOCLIMATIC CHANGES IN THE VITICULTURAL AREA OF NORD-EASTERN MOLDAVIA

Liliana Rotaru

KEY WORDS: global reheating, green house effect, septentrional vineyards, grapevine

ABSTRACT

The reheating total of the climate put out of order the natural evolution of the factors within the framework of the wine ecosystems: be became more still torrid and drynesses , the autumns longer and wet and the winters shorter and with the extreme temperatures. Records more frequents alternation of the periods of drynesses prolong with the excessive periods rainesses and umides. The consequences have are for the vines are obvious: prolonged the active period of vegetation, and the physiologic vine entree unprepared rest of winter. The atypical autumns climatic carry out to the defection maturation of the grapes, these poorly have in components natural these which gives the quality of the wines. In this work followed the evolution of the climatic factors in the vineyards septentrionale in Moldavie (Iasi, Cotnari, Husi), over one 60 years period (1896-1955), comparative to the values record in last 10 years (1898-2007). To establish it the influence of deregulations on the vegetative cycle of the vine have follows principal wine type of vines cultivated in these areales wine, the unfolding of the phenophases, the quantity and the quality of production of grapes.

**THE AGROBIOLOGICAL AND TECHNOLOGICAL VALUE FOR VICTORIA
GRAPEVINE VARIETY IN VINEYARD AREA OF IASI**

Liliana Rotaru

KEY WORDS: the Victoria grapevine variety, vineyard of Iași, agrobiological and technological value

ABSTRACT

The table grape variety Victoria, constitute one of the most valuable Romanian creation. It was obtain at SCDVV Drăgășani in follow hybridation Cardinal x Afuz Ali, and his meeting hetherosis character (Victoria Lepădatu and colab., 1978). It meet a very large spreading in other countrys, greats cultivators of table grapes: Italy, Spain, Portugal, where is it prove his especial quality. In this paper, the authors present the behaviour of table grape Victoria in area ecoclimatic condition of Copou vineyard, where it constitute one of most valuable variety, which allows obtain greats and best quality productions in NE of Moldavia area.

**STUDIES ON THE BEHAVIOUR OF VARIETY *GOLGEN STEFANESTI* IN
VINEYARDS STEFĂNEȘTI AND BANU MARACINE**

Camelia Popa, Daniela Cichi, Cezarina Necula

KEY WORDS: blossom, crispy, blooming, such diseases, variety

ABSTRACT

The activity of viticulture improvement from the last years at the National Research and Development wanted to get new varieties, more productive and to give more quality. These ones should resist to the main diseases and pests. The studies started in 1995 at NRDIBH Stefanesti and that materialized by the homologation in 2007 of the Stefanesti Golden table grapevine. The new creation come out from the controlled hybridization tests between Beautiful White x Augusta. For the adjusting determination at the different pedoclimatic conditions, the variety is studied in two growing centres from Dolj and Arges

FETEASCA NEAGRA 6 STEFANESTI – A NEW CLONAL SELECTION FOR RED WINES CREATED AT STEFANESTI

Ion Radulescu, Camelia Popa, Anca P. Onache

KEY WORD: variety, clonal selection, such diseases, grapes quality

ABSTRACT

Many grapevine varieties from our day culture do not have economic value, and others degenerate in the same time with their heterogenic multiplication. The Feteasca Neagra variety was cloned for the genetic stabilisation and the fastening of their valuable productivity and quality characteristics. At the National Research and Development Institute for Biotechnology in Horticulture Stefanesti, Arges, was selected the clone Feteasca Neagra 6 St. After it has passed through 3 specific stages of clone selection scheme it was homologated in 2007. This clone proved to be superior from the point of view of the quality and quantity to the base variety

PHYTOTHERAPEUTICAL METHODS FOR PREVENTING AND CONTROLLING THE PATHOGENS IN THE ECOLOGICAL TOMATOE CROPS

Ion Țița, Adriana Streinu

KEY WORDS: ecological culture, nettle cold soaking , infusion, alcoholic extract, conversion period

SUMMARY

*In the experimental plot, located at INCDBH Stefanesti Arges, on an ecological tomato culture, there have been obtained remarkable results with the following products applied simply or in combinations: nettle cold stipeeng of *Urtica dioica* (1 kg plant), infusion of *Equisetum arvense* (1 kg plant), alcoholic extract 2% from minced leaves of *Rhus typhina* (1 kg plant), wet housemade soap (150 gr.) infusion of *Dryopteris filis mas* (1 kg plant), dissolved in 10 litres water. The treatments have been performed preventively and curative at an interval of 5-7 days until the riping period of the crop. The extracts had insecticide effects on aphids, tetrachnide spiders and other insects, repellent for snails, zools as well as for the larvae of specific pests of hothouse cultures ans stimulative for the growth and development of tomato plants. The use of the respective mixture ensured a healthy foliage over the whole period of vegetation of tomato and greenpepper cultures. In the case when insect attacks have been recorded, an additional tratment of concentrated extract of *Rhus typhina* leaves combined with wet soap administered only on affected plants an don the soil around them.*

**THE ROLE OF THE PREMULTIPLICATION NUCLEUS IN THE NATIONAL
SYSTEM OF CERTIFYING THE GRAPEVINE PROPAGATION
MATERIAL IN ROMANIA**

Adriana Streinu, Ion Țița, Ion Rădulescu

KEY WORDS: initial propagating material, premultiplication nucleus, biological category, the ameliorator's material

ABSTRACT

The strategy of developing the viticultural sector implies the restructuring of the national nursery system, as a result of implementing the European legislation, namely by placing the premultiplication nucleus at the head of the viticultural channel as a guarantee of ensuring the biological traceability and retraceability of the certified propagation material.

Also, in the nucleus hothouse, the ameliorator transfers the results of clone selection, sanitary and creation of new genotypes activity which can be finalized by homologation.

These stipulations which should be controlled and respected during the maintenance period with a view to prevent the biological degradation and the reinfection with pathogens of the propagating material, are obligatory during premultiplication and transfer period in the nursery.

**RESEARCHES CONCERNING THE FEASIBILITY OF AN INVESTMENT
PROJECT FOR SETTING UP A MODERN PLANTATION OF VITIS VINIFERA
USING NEW VARIETIES OF CERTIFIED CATEGORY FOR TABLE GRAPES**

Agatha Popescu, Cristina Simion, Gabriel Tabăran, Ion Simion

KEY WORDS: investment project, vine plantation, feasibility

ABSTRACT

The paper aimed to determine the feasibility of an investment project for setting up a modern vine plantation using new varieties of certified category for producing table grapes. The experiment was organized in the Experimental Polygon of Bujoru Research Station in the period 2002-2008 on 0.58 ha, using 2,450 high quality vines. Based on the technological sheets, each cost category was calculated. The feasibility of the investment project was appreciated based on Present Value and Internal Rate of Return Methods. The total costs required for setting up such a plantation totalized Euro 7,645 in the period 2002-2004. The grape Production was planned to reach 20,230 kg grapes during the period 2005-2008 and to bring Euro 21,588 incomes to the farmer. The Net Present Value registered a positive value of 1.18 and Internal Rate of Return was 12.52 % showing the project proposal could be accepted and recommended to be implemented by other viticulturists.

A COMPARATIVE STUDY CONCERNING THE ECONOMIC EFFICIENCY IN THE PRODUCING OF GRAFTED VINES

Agatha Popescu, Cristina Simion, Gabriel Tabaran, Ion Simion

KEY WORDS: economic efficiency, producing grafted vines

ABSTRACT

The paper aimed to present a comparison concerning the economic efficiency in producing grafted vines. Three experimental variants were organized in the nursery of Bujoru Research Station as follows: V1 – surface cultivated with new vine varieties of certified category for table grapes, V2- surface cultivated with standard varieties for table grapes and V3 – surface cultivated with wine varieties. For each experimental variant, both the technological and economical parameters were determined. The variant V1 recorded the highest performance; 31,253 grafted vines, Euro 5,789 production cost, Euro 19,325 income, Euro 13,536 profit and 233.82 % profit rate per ha . On the 2nd position comes the variant V3 and on the 3rd one the variant V2. All the variants assure profit . As a conclusion , certified grafted vines are high value seeding material useful for horticulturists to develop high performance plantations according to the EU standards .

**INFLUENCE OF FOLIAR FERTILIZATION WITH BORON ORGANIC
COMPOUNDS AND OF TREATMENTS NUMBER UPON SOME BIOCHEMICAL
INDEXES IN VINEYARDS ON SANDY SOILS**

Răţoi I., Croitoru Mihaela

KEY WORDS: vines, sandy soil, boron, biochemical indexes

ABSTRACT

The treatments with boron natural compounds applied in vineyard, in different vegetative stages were influenced the activity of some biochemical indexes. The chlorophyll content, in stage of intense increasing of offshoots, registered the best results in variant which was applied Bor complex (2,23 mg/1 g fresh substance after 2 treatments and 3,09 mg/1 g s.p. after 4 treatments). The content of caroten presented the big variations between variants.

The content of NPK from leaves was relative influenced by treatments with boron. The biggest contents registered in variant treated with Bor complex, after 4 treatments (3,12-3,20% Nt, 0,16-0,19% Pt, 0,52-0,58% Kt).

The application of some boron natural compounds in vineyard was influenced different the grapes quality. The content of T.D.S. (total dry substance) presented values of 17% in variant treated with Cupribor, 5 l/ha, 4 treatments and 20,8% in variant treated with Bor complex, 5 l/ha, 4 treatments.

**THE OENOLOGIC POTENTIAL STUDY OF NOVAC AND NEGRU DE
DRAGASANI VARIETIES IN DRAGASANI VINEYARD**

Daniel-Grigorie Dinu

KEY WORDS: oenologic potential

ABSTRACT

There were taken into study two varieties of grapes for red choice wines created at SCDVV Dragasani, Novac and Negru de Dragasani.

The researches were made at the Dealu Olt plantation belonging to SCDVV Dragasani and part of Dragasani vineyard,,in 2007 .

There were studied total weight, 100 grapes weight, total acidity, sugar as well as anthocyanins on must and on wine alcohol, total acidity, volatile acidity, sugar, total dry extract and unreduce dry extract.

The analyses revealed that on the upper third of the slope, the wines are DOC-CMD wines, and on the lower third of the slope the wines are VS.

**A CLIMATOLOGICAL STUDY OF THE BANU MARACINE VITICULTURAL
CENTRE FOR AN OPTIMAL USE OF THE ECOLOGICAL FRAMEWORK
THROUGH GRAPEVINE CULTIVATION**

Mărăcineanu L.C., Giugea N., Olteanu I., Cichi Daniela, Costea D.C.

KEY WORDS: agro-ecosystem, viticultural ecology

SUMMARY

The study shows the results of the multiannual climatological studies obtained within the viticultural agro-ecosystem arranged on site at Banu Maracine. They emphasized the vocation of the viticultural echo-system under study for the practising of a quality-oriented viticulture, the optimal climatic factors and the climatic constraints, as well as the connections between the sub-systems of the viticultural ecosystem.

RESEARCHES CONCERNING THE EVALUATION OF THE ECONOMIC IMPACT OF GRAFTED VINES TESTING IN AN EXPERIMENTAL POLYGON

Cristina Simion, Agatha Popescu, Gabriel Tabăran, Ion Simion

KEY WORDS: economic impact, vines testing, experimental polygon

ABSTRACT

The paper aimed to present a case study concerning the producing and testing of standard grafted vines of certified category in the Experimental Polygon I within Bujoru Research Station for Viticulture and Vinification during the period 2001-2003. From an experimental surface of 0.22 ha, a number of 4,825 grafted vines was obtained, of which 62.33 % were sold to other farmers and the remaining was transferred to the Experimental Polygon II. In the analyzed period, the cumulated income was Euro 5,016, of which 94.56 % came from standard grafted vines of certified category marketed to other viticulturists. As a conclusion, grafted vines producing and testing is an important activity destined to support farmers to create modern vine plantations and increase income both of the research units and viticulturists .

**CLONAL SELECTION RECENTLY HOMOLOGATE OF TRADITIONAL
ROMANIAN VARIETIES (FETEASCĂ REGALĂ, FETEASCĂ ALBĂ,
FETEASCĂ NEAGRĂ)**

Onache Anca, Rădulescu Ion, Popa Camelia

KEY WORDS: grapevine, clone top-notches, traditional varieties, wine, analysis

ABSTRACT

Clonal selection it's necessary if we want to make sure genetic stability and to obtain new genotypes of grapevine with advanced characteristics. Current method is used in vegetative propagation of grapevine and this way is avoided the degeneration of traditional romanian varieties (Fetească Regală, Fetească albă, Fetească Neagră) which are important in wine production . To obtain high quality and quantity of wine production the attention of wine growers and the wine makers was pointed to a systematic application of individual selection of traditional romanian varieties with high potential in wine production.

**THE STUDY ON NATURAL ENVIRONMENT OF THE YEASTS
FROM THE MAIN VITICULTURAL REGIONS OF OLTENIA**

Oaie Lenica, Popa Aurel, Gheorghe Mirela

KEY WORDS: yeasts, natural environment, insulating, identification

SUMMARY

In this study there are presented the results of research on issues, that have concerned the study of natural environments of yeasts, from viticultural areas: Stârmina-Mehedinți and Sâmburești-Olt which is the subject of a doctoral thesis inscribed in the Faculty of Horticulture, University of Craiova.

**YEASTS STRAINS DISTRIBUTION
IN MAINFOLD NATURAL ENVIRONMENTS FROM
WINE-GROWING CENTRE SÂMBUREȘTI OLT**

Oaie Lenica, Popa Aurel, Gheorghe Mirela

KEY WORDS: natural environment, distribution, yeast strains, wine-growing centre.

SUMMARY

A synthesis of the results obtained at Wine-Growing Centre Sâmburești Olt by studying the wine growing microflora of this region during the 2004 – 2005 period is presented. The investigations that had been carried on, revealed, by means of the selected yeasts separated (in soil, grapes and must), that the wine growing microflora of these vineyards are divided into 7 genders (Saccharomyces, Candida, Pichia, Kloeckera, Hanseniaspora, Metschnikowia, Rhodotorula). The prevailfog specie is Saccharomyces. The identified yeast strains belong mostly to the Kloeckera apiculata, Saccharomyces cerevisiae var. ellipsoideus and Saccharomyces oviformis.

IMPROVEMENT OF GRAPEVINE VIRUS A (GVA) DIAGNOSIS BY ELISA TESTING

Elena-Cocuța Buciumeanu, Ionela Cătălina Guță, Emilia Vișoiu

KEY WORDS: grapevine, GVA, detection, DAS-ELISA–biotin, OD_{405 nm}

ABSTRACT

In order to establish the distribution of grapevine virus A (GVA) in plant, different organs and tissues (leaf blade, petiole, tendril, root, dormant cutting, green shoot, shoot tip, inflorescence, bunch) collected from infected grapevines belonging to Servant variety were used as source of antigen. The samples were tested by DAS-ELISA-biotin method with commercial antiserum to detect the virus and also to estimate the level of infection. The virus was detected over the course of the entire year, both in the vegetation and dormancy; the best sources of virus were basal mature leaf and phloem tissue from mature cane, respectively. GVA was not reliably detected in young material and bunch. The efficiency of detection of grapevine viruses based on ELISA tests depends on the source of the virus and the time of the year in which the sampling is performed.

QUALITATIVE AND QUANTITATIVE YIELD OF CHASSELAS DORE VARIETY IN CONDITIONS OF THE DIDACTIC STATION TIMIȘOARA

Drăgunescu Aneta Anca, Podrumar T., Becherescu Alexandra, Taru O.

KEY WORDS: chasselas doré, fruit formation load, works and operations in the green period, grapes yield, quality of yield

ABSTRACT

The objectives of the experiment were concerned on establishing the best fruit formation loadings and the most efficient works and operations in the green period to the table grapes variety Chasselas doré, cultivated in conditions of the Didactic Station Timisoara, in order to obtain superior qualitative and quantitative. The researches started from the premise that correct pruning, made according to the variety and culture technologies, will determine a good balance between growth and fruiting, high yields and improved quality harvest. The grapes yield obtained for table grapes is given in the yield per vine, yield per hectare and commercial yield. The values of vine and hectare yield obtained from Chasselas doré variety have been different along the years and in the same year among the experimental variants. Concerning grapes quality there were made determinations on: the weight of a grape, sugars content, total acidity and commercial yield.

RENOVATION OF FRUIT GROWING IN THE REPUBLIC OF MOLDOVA

Balan V., Babuc V., Barbaroş M., Bucarciuc V., Cimpoieş Gh.,
Caraman I., Comanici I., Donica I., Rapcea M., Ţurcan I.

Key words: species, variety, productivity, plantation, harvest.

ABSTRACT

The fruit growing inheritance surface was reduced from 251 thousands ha in 1993 to 108, 4 thousands ha in 2008. Based on a complex research, performed for the first time under market economy conditions in the Republic of Moldova, a program of sustainable development of the pomiculture branch has been development, as it constitutes a competitive economic sector, based on advanced technologies complying with European standards.

The abovementioned program provides for an increase in the shares of the crops demanded in the market (drupaceous, juglandaceous and baccate crops). This program has been included in the “Strategy of development of the agro-industrial sector in the time span 2006-2015”, approved through the Resolution of Government of the Republic of Moldova.

**MORPHOLOGICAL VARIATION IN THE LEAVES OF PLUM CULTIVAR
STANLEY AFTER REJUVENATING PRUNING**

Hristina Dinkova

KEY WORDS: plum, leaves, stomata and palisade cells

ABSTRACT

The trial was carried out in IMSA Troyan to study morphological variation in the leaves of plum cultivar Stanley after manual and mechanized rejuvenating pruning.

Vigorous growth was found accompanied by sprouting of leaves with greater area, without regularity in the variation of stomata number and size depending on the strength of rejuvenating pruning.

The rejuvenating pruning of the plum trees of cv. Stanley provoked more pronounced changes in the length of palisade cells in the year of its conducting. The same cells were longer in mechanized rejuvenating pruning than in the manual one.

SYSTEMS FOR SOIL FERTILITY MAINTENANCE IN MOUNTAIN CONDITIONS

Penka Mihaylova, Hristina Dinkova

KEY WORDS: plums, sloping terrains, erosion, systems for soil maintenance, major nutrients

ABSTRACT

During the 1961-2007 in IMSA of Troyan a number of field and laboratory trials were carried out for soil protection from erosion and increase of its fertility through growing of plums and forage undercrops. It was found that the complex of cultural measures including pre-planting preparation of areas with reserve organic fertilizing and anti-erosion systems for soil surface maintenance increased biological activity of soil microorganisms, conserved soil fertility and provide high and regular plum fruit yields. On the basis of the conducted trials technologies were worked out including cultural anti-erosion measures during establishment of perennial plantations on sloping terrains.

PLUM CULTIVARS BRED IN BULGARIA DESERVING GREATER ATTENTION

Ivan Minev, Teodora Stoyanova, Stancho Hristov

KEY WORDS: plums, cultivars, morphology, phenology, chemical composition

ABSTRACT

Some morphological characteristics of trees and fruits of plum cultivars Gabrovska, Strinava, Baleva Sliva, Ranna Sinya Sliva (Early Blue Plum) were studied. Time of flowering and fruit ripening was determined. The trees were cultivated in the region of Central Balkan Mountains, which is typical of plum production in Bulgaria.

Among the studied cultivars, cv. Baleva Sliva has the largest fruits, their weight reaching to 40 g. Ranna Sinya Sliva is earliest to ripen (08.-15.08). Its flowering is the latest. The quality of cv. Gabrovska fruits is closest to that of Kyustendilska Sinya Sliva fruits.

The values of total sugars in fruits of the four cultivars are similar to those of Stanley that ripens in the studied region in late August.

PHOMA STEM BLIGHT OF OLIVE PLANTS CV. ARBEQUINA

Alexandros Papachatzis, Ioannis Vagelas

KEY WORDS: Olea europea, Stem blight, Phoma

ABSTRACT

Olive (Olea europea L.) is an economic important crop in Greece. In spring 2008, one year old trees (cv. Arbequina) were observed with stem blight symptoms. The symptoms were associated with leaf chlorosis, defoliation, twig dieback and eventual plant collapse. A Phoma sp., were isolated from the infected plants. All isolates were produce gray-green mycelium on PDA with typical conidia and brown chlamydo spores in chains. Sporulation and obsulance of pycnidia were observed on oatmeal medium three days after inoculation. Pathogenicity was assessed by inoculating healthy one year old olive plants (cv Arbequina) with spore (1×10^6 conidia/ml) suspensions. Control plants were treated only with water. One month after inoculation inoculated plants were observed with leaf chlorosis, defoliation and twig dieback. Two months later clear stem blight symptoms were observed. Stem blight of olive plant seedlings (cv Arbequina) caused by Phoma species is a first report in Greece.

**FICUS CARICA ROT ROT DISEASE CAUSED BY ARMILLARIA MELLEA AND
ROSELLINIA NECATRIX IN GREECE**

Alexandros Papachatzis, Panagiotis Eliopoulos,
G. Statharas, Ioannis Vagelas

KEY WORDS: Ficus carica, Rot rot disease, Armillaria mellea, Rosellinia necatrix

ABSTRACT

Armillaria mellea and Rosellinia necatrix were observed as the most aggressive rot pathogens of Ficus carica cultivar (Smyrna) in central Greece. Both pathogens cause fig rot root, stress old trees and kill young plants. Common symptoms shown by infected trees are, yellowing of the leaves, early leaf fall, premature autumn color, splitting of the bark, plant defoliation and plant death. Both diseases are confirmed by the presence of white mycelium found under the bark and on the infected roots. Infections are common in fig cultivars near the forest.

**INFLUENCE OF THE ROOTSTOCK ON THE AUTUMN-WINTER
DEVELOPMENT OF THE DIFFERENTIATING FLOWER BUDS IN TWO
SWEET CHERRY CULTIVARS**

A. Papachatzis, V. Lichev, M. Botu

KEY WORDS: Prunus avium, rootstocks Gisela and Weiroot, flower bud formation, flower primordia, double pistils

ABSTRACT

The studies were conducted in 2003-2007 on 7-11 year-old trees of the cultivars 'Bigarreau Burlat' and 'Stella' grafted on the rootstocks P 1 (seedling of P. mahaleb L.), Gisela 5, Gisela 4, Weiroot 13 and Weiroot 72. From the beginning of September till the flowering the next year (every 7 days) spurs were collected from the two-year-old wood and their lateral buds were disclosed under a stereomicroscope. After the observations in the autumn it was established that under the influence of Gisela 5 there is the greatest number of flower primordia in one flower bud. Between 68 and 93% of the flower primordia initiated in winter in the separate variants have developed as flowers in spring, whereas the remaining ones have slowed their development or suffered frost damage. The greatest number of double pistils in the differentiating flower primordia have been observed in the trees on Gisela 5, Weiroot 72 and Gisela 4.

ECOLOGICALLY FRIENDLY SYSTEMS FOR MAINTENANCE OF SOIL SURFACE IN RASPBERRY AND BLACK CURRANT PLANTATIONS

Petko Minkov, Penka Mihaylova

KEY WORDS: raspberries, black currant, ecologically friendly systems, cultural anti-erosion measures, anti-erosion efficiency

ABSTRACT

Raspberries and black currant are ones of the main fruit crops in the fore-mountain and mountain parts of our country. Most of these plantations are located in areas with considerable slopes. In addition, there are heavy rainfalls in these regions that are a prerequisite for intensive water erosion. From 1976 to 2008 in IMSA, Troyan several field trials were carried out in raspberry and black currant plantations to determine the most suitable ecologically friendly systems for their growing. It was found that they possess high anti-erosion efficiency. The cultural anti-erosion measures contribute to conserve natural fertility and create favourable conditions for expression of vegetative and reproductive characteristics of small-fruited species. Artificial grassing of inter-row spacings maintained through mowing, mulching in place and live mulch showed a very good effect against the weeds and created good conditions for development of raspberry and black currant plants and increase of their yields. The necessity for tillage was avoided, the quantity of used herbicides decreased and hence the danger of environment pollution.

***ROOT ROT ON ALMOND SEEDLINGS IN GREECE, CAUSED BY ROSELLINIA
NECATRIX PRILL.***

Ioannis K Vagelas, Alexandros A. Papachatzis

KEY WORDS: Rosellinia necatrix, Dematophora necatrix, almond root rot disease

ABSTRACT

In spring 2008, almond seedlings in the region of Thessaly, central Greece, were infested by a soil borne pathogen that formed a white cottony mycelium and mycelia strands on the seedlings stem base or on the main roots of older plants and caused suddenly death. The pathogen was identified as Rosellinia necatrix Prill. This is the first record in Thessaly of R. necatrix on almond seedlings in Greece.

PLUM CULTIVAR HANITA IN THE TROYAN CONDITIONS

Boryana Stefanova, Hristina Dinkova, Kalin Dragoyski

KEY WORDS: plum, cultivar, rootstock, growth, fruit bearing

ABSTRACT

The study was conducted during the 2003-2007 period. In the Troyan conditions the plum cv. Hanita grafted on rootstocks SJ A, Fereley and Mirobolan has normal growth and fruit-bearing.

The tree shows moderate to vigorous growth, the branches sprout at acute angle towards the leader, the wood is very brittle inclined to breaking, which is the main disadvantage of cv. Hanita and requires developing of special prunings for short training.

The plum cv. Hanita has pox virus tolerance, early fruit-bearing, high fertility. The fruits are dark violet to blue coloured, covered with a wax coating. The stone is medium large (1.58 g) and is not completely free. The fruit flesh is golden yellow, thick, succulent, with a pleasant aroma and very good taste. It is suitable for fresh consumption and drying.

The cultivar deserves wider spread.

REPRODUCTIVE CHARACTERISTICS OF RASPBERRY CULTIVARS GROWN IN THE REGION OF CENTRAL BALKAN MOUNTAINS

Teodora Stoyanova, Stancho Hristov, Ivan Minev

KEY WORDS: raspberry, cultivars, morphology, chemical composition

ABSTRACT

The raspberry cultivars Shopska Alena, Samodiva, Balgarski Rubin, Newburg, Willamette, Meeker, Marlborough cultivated in the Central Balkan Mountain region characterized by favourable soil-climatic conditions for raspberry production, were studied. The study was conducted at 937 m altitude in nonirrigated areas. The time of ripening was found. The chemical composition of fresh fruits and yield in different cultivars were determined. Results from morphological studies of fruits, their weight and size were presented.

In 2008 the earliest ripening time (20.06) was found for Balgarski Rubin and the latest one (01.07) for Meeker.

Under the soil-climatic conditions and applied cultural practices the most suitable cultivars for growing are the cultivars Samodiva, Shopska Alena, Willamette.

EVALUATION OF QUALITATIVE PERFORMANCES OF FRUIT SAMPLES FROM THE ECOLOGICAL AREA OF OLTENIA

I. Botu, S. Preda, C. Predescu, A. Baci, M. Botu, E. Matei, G. Achim,
S. Cosmulescu, I. Ștefănescu, I. Călinoiu, A. Durău, I. Tudor, M. Tudor

KEY WORDS: fruits, cultivars, quality, fruit trees and small fruits

ABSTRACT

Oltenia region is one of the most favorable for temperate fruit tree crops (apple, plum, peach, apricot, walnut, etc.) This region has numerous micro zones (fruit tree areas) with optimal ecological conditions and tradition in fruit crop growing. There is economical and social interest in achieving qualitative and commercial performances at international level in the case of fruits grown in farms. Establishing of micro zones, of valuable cultivars assortments and applying of superior techniques allow the obtaining of high yields per hectare and high quality fruits. In the case of analyzed fruits from different species and cultivars the emphasize of the quality performances from point of view morphology, taste, heavy metals (Cd, Pb and Cu) and residues from certain pesticides (Alpha-HCH, Gamma-HCH, PCB₅₂, PCB₂₈, PCB₁₈₀, HCB, Heptaclor, Aldrin, Epsilon-HCH, Heptaclor-epoxyd, Beta-Endosulphan, PP'-DDE, etc). The quality elements were followed in comparison with those used in E.U. and in the international trade. The apples, plums, peaches, apricots and walnuts obtained into the fruit growing areas of Oltenia correspond from morphological point of view because the fruit size, weight, color and uniformity are achieved when growing into fruit tree micro zones and when using quality orchard management. The taste of fruits of Oltenia is superior to similar fruits from other growing areas. The fruits from Oltenia are commercially and health conform because the heavy metal content (Cd and Pb) is way below the maximum level accepted for E.U. fruits and the pesticide residues level is under the international levels accepted or residues are not present at all (Alpha-HCH, Aldrin, Epsilon-HCH, PCB 180). Other residues can be found in very low quantities in fruits and have no influence on the consumers. In order to assure high quality fruits in Oltenia a constant and responsible monitoring is required.

A NEW INTENSIVE PLUM CULTURE SYSTEM WITH MULTIPLE ECONOMICAL AND PRODUCTION ADVANTAGES

M. Botu, Ion Botu, A. Vicol, A. Neagoe

KEY WORDS: plum, intensive culture, cultivars, fruit trees

ABSTRACT

*The European plum culture (*Prunus domestica*) passes a critical period on world scale due to the low production level and fruit quality. The general tendency is to find technological elements and valuable new plum cultivars with commercial perspectives. During the 2004 – 2008 period new culture systems with technological and biological elements (plum cultivars, rootstocks, planting distances, summer pruning) have been tried. The planting distances used were 5.0 by 4.0 m (500 trees/ha) and 4.0 by 2.0 m (1250 trees/ha). Pruning in the orchard has been carried out during early spring and summer (beginning of June). The biological material used consisted in 5 plum cultivars ('Andreea', 'Centenar', 'Minerva', 'Tuleu gras' and 'Stanley') budded on 2 rootstocks ('Oteşani 8' and 'Mirobolan galben'). After 5 years from planting it was observed that cultivars budded on 'Oteşani 8' rootstock achieve 30% lower vigor (from point of view trunk-cross sectional area) than those budded on 'Mirobolan galben'. Summer pruning of one year old wood (shoots were cut at 5 leaves at beginning of June) assured the coming into bearing fruits in the 3rd leaf, especially for trees budded on 'Oteşani 8' and a cumulative yield (3rd to 5th leaf) of 38.7 t/ha and 20.4 t/ha respectively for plum trees budded on 'Mirobolan galben'. The average fruit yield was 12.9 t/ha in the case of trees on 'Oteşani 8' and 6.8 t/ha for plum trees on 'Mirobolan galben'. Comparative with the intensive system without summer pruning, the new growing system yields 14.1 and 7.1 t/ha respectively. Fruit quality in the case of the 2 systems is good and there is no difference between them. When over crop occurs, fruit thinning is required, in this manner small fruits and branch breaking are avoided. The intensive culture system for plum completed with summer pruning has multiple advantages and can be used in all types of plum orchards, no matter the size of those.*

THE DISTRIBUTION AND THE INCIDENCE OF THE PLUM POX VIRUS ON THE PLUM TREES IN THE SOUTH CARPATHIAN AREAS OF ROMANIA

Silvia Preda, Maria Isac, Silvia Poenaru

KEY WORDS: Plum Pox, plum, virus

ABSTRACT

Plum Pox virus (PPV) is the most detrimental virus of plum trees because of its increasing virulence and of its possibilities of quick propagation and spreading. Among PPV biggest viral effects we note : the decreasing of the production and of the fruits size, the depreciation of the taste qualities and the generally debility of the trees. Through researches carried out during 10 years and from the laboratory analyses on the viral strains PPV-M, PPV-D si PPV- Rec resulted that the Plum Pox virus (PPV) was present in the majority of the plum orchards in the south carpathian areas of Romania.

Regarding the infection with PPV in natural and isolate conditions over 63 plum cultivars and rootstocks were investigated. From these evaluations resulted that the cultivars Andreea, Scolduş – 1, Mirabelle de Nancy, Vânăţ românesc – 4 si Miroval were not infected, the cultivars Centenar, Valor, Diana, Dâmboviţa, Gras românesc, Tuleu timpuriu si Minerva showed PPV symptoms on the leaves and the cultivars Carpatin, Vâlcean, Agen 110, Record, Călugăreşti T2, Troianu 9 showed no symptoms on the fruits. The biological and the serological tests showed quickly and precisely the presence of the PPV on the infected biological material. For the propagation of the plum material free of PPV, in Romania, it is necessary to control the sanitary state of the trees from the mother plantations and from the nurseries.

APPLE TREE BREEDS AND ELITES OBTAINED BY INDUCED MUTAGENESIS, SUITABLE FOR ECOLOGICAL CULTURES

Valeria Petre

KEY WORDS: apple breeds, genetic disease resistance, induced mutagenesis, gamma and X radiations

ABSTRACT

The researches performed at the Research and Development Station for Tree Growing Voinești, with the use of some physical mutagenic factors (gamma radiations, X rays) on the biological material formed by apple pollen and seeds in repose or after maturity has materialized with a lot of sorts and apple picks and flowers with genetic disease resistance, with great economic value.

Redix sort (synonym 3/73-83 V) obtained from sexuate hybridization of Goldenspur and Prima (irradiated pollen with 1000 R), homologated in 2004.

Iris sort (synonym 8/94-82 V), obtained from Prima and natural pollination with the irradiation of dry seeds in dose of 8000 R, homologated in 2005.

Irsem sort (synonym 2/1-90 V) obtained from Prima and natural pollination with the irradiation of after maturity seeds in dose of 5000 R, homologated in 2006.

Real sort (synonym 9/78-82 V), obtained from Prima and natural pollination with the irradiation of dry seeds in dose of 8000 R, homologated in 2007.

THE PRODUCTION OF QUALITY APPLES BY PROMOTING OF SPECIFIC TECHNOLOGICAL SEQUENCIES

Gh. Petre, Valeria Petre

KEY WORDS: Specific and technological sequences, chemical and manual thin out, foliare fertilization, quality.

ABSTRACT

The fruit quality, obtained according to the trading standards - and the size uniformity of those in the tree crowns is obtained through supplementary application of some specific and technological measures: chemical and manual thinning out of the fruits, foliare fertilization technological sequences which have to be part of the fruits production technology.

Through the chemical and the manual thin out of the fruits, with the help of five treatments with foliare fertilization, the production (profit) was with 36%-43% bigger for the Generos breed and with 27%-40% for the Florina breed. The weight of the fruits was much higher, exceeding the control weight with 8-34g at the Generos breed and with 18-24g at the Florina breed.

Over 90% (percent) of the production was obtained as extra quality and as first quality.

**THE ECONOMICAL AND ECOLOGICAL IMPORTANCE OF THE BREEDS
WITH GENETIC RESISTANCE AGAINST DISEASES IN THE APPLE TREE
PLANTATIONS**

Gabriela Unchiasu, Cecilia Bolbose

KEY WORDS: apple breeds; resistance against diseases; pollution; production cost

ABSTRACT

Jonathan, Golden delicious and Red delicious make up the majority in the present apple orchards. These old apple breeds showed a good yield potential and a high level of fruits qualities but in the same time, a very high sensibility to the main diseases (scab and mildew). Both field diseases, especially “ the scab” affect quantitative and qualitative the harvest, until to compromise it, in very favourable climatic conditions. The means used against the apple scab or the powder mildew, different pests and mites, include crop sanitation, biological, biotechnical, chemical and genetic measures. The assortment of used pesticides (12-20 formulations each year) and a high number of applied treatments (12-14 in a year), assure the fruits quality, but they have some bad effects: very high yield prices and an important pollution level in the soil or in the trees.

ELIMINATION OF PPV VIRUS THROUGH *IN VITRO* CULTURE IN SOME VARIETIES OF PLUM

Plopa Catița, Butac Madalina, Ancu Sergiu

KEY WORDS: Plum pox, virus, culture media, plum tree

ABSTRACT

In the experiments established at I.C.D.P. Pitesti-Mărăcineni, to find the optimal parameters that would lead to efficiency in vitro culture in eliminating the virus PPV varieties tested. The use M & S, WPM and Fossard culture media has thrown emphasized that the varieties Grase romanesti, Negre de toamna, Vanat romanesc Busuioace de Geoagiu, Gras ameliorat, Pescarus, Stanley, French improved, Agen 707, and Hamanova Svetska cultivars have responded different from concentration macro and microelements. An important factor in the ability regenerativon as well as the elimination of the virus has been a size explant. The regenerative capacity is inversely proportional to the level of virus free plant obtained: the explants size of 0.2-0.3 mm is made of a number less than plants differentiated case against when used explants with the size of 0.8-0.9 mm, but a larger number of virus-free plants.

**THE INFLUENCE OF THE LATE FROSTS IN SPRING UPON THE FRUIT
BINDING DEGREE OF SOME APRICOT VARIETIES IN BANAT'S PLAIN
CONDITIONS**

Iordănescu Olimpia Alina, Micu Roxana Elena,
Drăgunescu Anca, Ghiță Alina

KEY WORDS: apricot, phenophases, fruit binding degree, late frosts

ABSTRACT

The apricot varieties in our country are diversified, including at the same time local and foreign varieties, varieties having quality fruits, very productive, some of them having a good resistance to low temperatures during pause period, but also to late spring frosts, which, in the past years, are more frequent in the western Romania.

By this paper work we present 12 studied apricot varieties, cultivated at the Didactic Station Timisoara: Earlyryl, Dana, Neptun, Saturn, Cea mai bună de Ungaria, Venus, Callatis, Sulina, Favorit, Selena, Silvana and Olimp, varieties having different maturation periods. There were observed the deployment of phenophases and the behavior of the varieties, concerning the fruit binding degree in the climatic conditions of Timisoara.

**GEOGRAPHIC CONSIDERATIONS OF THE POMICULTURE IN ROMANIA
CONCERNING THE PERIOD BETWEEN 1938-2006**

Costela Iordache

KEY Words: pomiculture, geographic repartition, Romania

ABSTRACT

The present study has as purpose the analyze causal-evolutional of Romanian pomiculture in the last 7 decades. It tails to emphasize the mutations which interfered in fruiter surface, in pomiculture structure and in fruits production. Also, there are analyzed the frequency of the fruiter species on the districts and their production. The pomiculture zonation, the fruits industrialization, the evolution of the fruits consumption per habitant constitute the objectives of this article.

**THE STRUCTURE, EVOLUTION AND REPARTITION OF
THE CATEGORIES OF AREASES'S USE IN DESNĂȚUI PLAIN**

Costela Iordache

KEY WORDS: agricultural areas, land fund, structural dynamics, Desnatiu Plain

ABSTRACT

Desnățui Plain have been shaped a place which order important land resources generated by favorable physic geographic conditions. In 2005, the agrarian resources of Desnățui Plain counts 357.374 ha and there were prevailing formed by land fund followed, in almost equal proportions, by buildings terrains, roads, waters, unproductive spaces and the difference of 10,1% represents the forest surface. The article presents the dynamics of how the fields are used in Desnatui Plain in the transition period.

**HERITABILITY OF QUANTITATIVE TRAITS OF INTEREST FOR
PRODUCTION OF JUICE IN AUTUMN - AND WINTER APPLE CULTIVARS AS
TO THE CONDITIONS AT CLUJ-NAPOCA**

Roman Ioana

KEY WORDS: Heredity, juice production, autumn apple, winter apple, genetic effects

ABSTRACT

The experimental study carried out aimed at establishing the heritability coefficients in broad sense (H) for thirteen traits of interest in juice production. Traits were analyzed in view of nominalization of variants with which the genetic effects are highest in the phenotypic expression.

**GENERAL- AND SPECIFIC ABILITY OF COMBINATION FOR
QUANTITATIVE TRAITS OF INTEREST TO JUICE PRODUCTION
WITH THE F₁ APPLE POPULATIONS UNDER STUDY**

Roman Ioana, M. Ardelean

KEY WORDS: Genitors, juice production, genetic determinism, general and specific combination capacity

ABSTRACT

The main objectives pursued by the researches are materialized in the following aspects:

- Computation of CGS and CSC effects on the traits taken into study in view of elucidating some aspects regarding the genetic determinism of the respective traits and the ways of utilizing such improvement scope.*
- Formulation of conclusions and recommendations for the apple improvement programmes in view of obtaining new cultivars of high fruit qualities fit for fresh consumption (dessert fruit), as well as for juice production.*

**RESEARCHES REGARDING THE ESTABLISHMENT OF THE INTENSIVE AND
SUPER-INTENSIVE CULTIVATING TECHNOLOGY OF THE PEACH-TREE
IN ORADEA FRUIT-GROWING AREA**

Bucurean Eva

KEY WORDS: Peach-tree, varieties, planting distances, the behaviour of the flower buds, thick growing of the trunk, fruit production

SUMMARY

The peach-tree is one of the most appreciated fruit-growing to the special qualities of the fruit and to the biological possibilities of the tree.

The intensive and super-intensive peach-tree growing raises a number of questions regarding the possibility of applying the system, because in the case of the peach-tree, there are no reduced vigour varieties or mother plants in production, which could easily allow the appliance of those systems on a large scale.

Taking into account the general tendency of intensifying the tree-growing, it is raised the problem of trying and finding solutions of making possible, in the case of peach-tree, too, the planting of more trees on a hectare, promoting the intensive and super-intensive cultivating system.

This way, researches were performed in Oradea, using varieties and planting distances, on their basis being decided the intensifying degree of the peach-tree.

THE BEHAVIOUR OF SOME VARIETIES OF BEANS GROWN IN THE CLIMATIC CIRCUMSTANCES OF ORADEA REGION

Bucurean Eva

KEY WORDS: variety, beans, climatic circumstances, area, productivity

SUMMARY

The research paper studied the behaviour of certain varieties of beans under the climatic circumstances specific to Oradea region. The varieties of beans tested in Oradea in 2006 are characterized by a great biological and productive potential. The experiment with the varieties of beans emphasizes their behaviour from the angle of the measurements obtained which are related to the production. The productive capacity of the species is closely related to the appearing of the climatic elements which influences it. In spite of this, there are certain species which respond better or less better to those specific circumstances, being pointed out from the others through the production differences. Choosing the best – adapted variety for the climatic conditions of specific geographical area proves to be mostly influential upon the economical efficiency of that variety, besides the other technological elements which should be regarded for.

**THE MAIN BIOLOGICAL AND AGRICULTURAL-PRODUCTIVE
CHARACTERISTICS OF SOME NUT-TREE HYBRIDS FROM OLTENIA'S SUB-
CARPATHIAN AREA**

Stăncioiu Eliane Teodora, Godeanu Ioan

KEY WORDS: Juglans regia, Juglans nigra, nut tree, germoplasma

ABSTRACT

In Romania, the establishment of nut tree plantations is continuously expanding, yet the seeding material production has never raised up to the level of cultivators requirements.

*In our country, although the mother plants are confirmed as Targu Jiu 1, Secular and recently Portval, because of lack of seed tree materials, at present, most of the varieties are being grafted on saplings proceeded from a mixture of genotypes belonging to the species of *Juglans regia*.*

By studying the rich stock of germoplasma, present in the district of Gorj, 20 hybrids, that have appropriate features to their formation as mother plants have been collected, so that they might improve the existing variety.

**PARTIAL RESULTS REGARDING THE SELECTION OF SOME NUT TREE
HYBRIDS IN ORDER TO OBTAIN GENERATIVE MOTHER PLANTS**

Stăncioiu Eliane Teodora, Godeanu Ioan

KEY WORDS: Juglans regia, Juglans nigra, nut tree, grafting

ABSTRACT

The majority of countries cultivating the nut tree has reached to the conclusion that multiplying the nut tree by using vegetative methods is the right way to produce intensive plantations for these kind of species.

The improvement of nut tree grafting technique has raised the problem of using genuine mother trees.

Although the research regarding this very subject is rather recent and continuously developing, no country has managed so far to define the most favorable methodes for the developing of the nut tree and of its rootstock.

RESEARCH ON THE GENETIC VARIABILITY OF WALNUT THE NORTH OF OLTENIA

Iuliana Svetlana Flondor

KEY WORDS: Juglans regia, walnut, populations, variability, biotypes

ABSTRACT

During 2006-2008 period observation have been carried in the walnut populations from the Northern area of Oltenia. This area of Oltenia contains 3 counties: Valcea, Gorj and Mehedinti; there walnut trees are wide spread (over 240 thousands plants). The highest number of walnut trees is found in Gorj county (94503 trees), followed by Mehedinti (74913 trees) and Valcea counties (72570 trees). The walnut populations are from genetic point of view natural hybrids, growing on their own roots. The growth vigor of the walnut trees is large or very large in all the populations studied. Low vigorous walnut trees were not found in the area. The walnut populations are easily differentiated in accordance with the main characteristics of the fruits. The variability is very large regarding the size of fruits (25 mm - 39.6 mm), the fruit weight (6 g - 15.3 g), the kernel weight (2 g - 6.6 g), the kernel percentage 33.3 – 47.1%), etc.

*The trees from the walnut populations have terminal bearing and different degrees of resistance at *Xanthomonas campestris* pv. *juglandis* (bacteriosis). The general characteristic of the walnut tree from this area is given by the element that refers to the type of shell closure. Over 70 - 75% from the total number of the walnut trees analyzed have easy cracking fruits and easy removal kernel; the rest of 25 - 30% of the walnuts trees have hard shell and difficult to use kernels.*

**THE INFLUENCE OF CELLULOSIC NUTRITIVE MIX WITH PAPER
SUPLIMENT OVER THE BIOLOGICAL POTENTIAL OF THE PLEUROTUS
HK-35 MUSHROOM**

Chilom Pelaghia, Navolan Calin, Bica Alin, Ratoi R.

KEY WORDS: Pleurotus mushrooms, nutritive mix, biological potential

ABSTRACT

Within the researches carried regarding the realisation of the biological potential of Pleurotus HK-35 correlated with the nutritive celulosic mix consisting of sawdust, barley straws and paper, in different proportions, some aspects were observed such as incubation and fructification by harvest waves, high differences being noticed, the best results coming from the combination of: sawdust 50% , barley straws 25% and paper 25%. A high productive potential was achieved surpassing the witness (sawdust 50% and straws 50%) with up to 47,2%. The biological production per 100 kg of celulosic material was of 28,3-36,0%.

**MODIFICATIONS ON THE LEVEL OF GROWTH AND FRUITING ELEMENTS
FOR CUCUMBERS CULTIVATED IN NURSERIES – IN CORRELATION WITH
ORGANIC MATERIALS USED FOR FERTILIZATION**

Palaghia Chilom, Nicolae Raducanu

KEY WORDS: cucumbersi, nurseriesi, organic materials, growth, fructification

ABSTRACT

By using five types of organic materials for cornichon cucumbers, Capricorn hybrid, culture, in nurseries, some aspects were followed regarding the influence of these materials over the growth and fruiting rates.

Increased values were recorded concerning the height of the plants - 22,13%, diameter - 23,4% and number of leaves - 25,22% .

The medium number of fruits and their weight presented variations depending on variants, and the production gains are up to 44,68% - for earliness and 20,5% - for total production per I-st cycle of 2008.

The best results were obtained for the variants that contained garden and leaf mould.

RESEARCHES REGARDING THE INFLUENCE OF LIGHT ON THE GERMINATION OF SEEDS AT SOME VEGETABLE SPECIES

Gheorghita Hoza

KEY WORDS: germination, light, vegetable species

ABSTRACT

The germination of some vegetable seeds is a process which, regularly, takes place in dark, in soil. Exceptionally, there are some vegetable species which germinate in it conditions of light.

For this research there were used 5 species, respectively: carrot, celery, parsley, salad and radish which were seeded during 3 phases (periods of time), in hot greenhouse, in small boxes. The first period of time was the beginning of December, the second one, mid of March and the last one, the end of March.

The germination process was different at each specie depending on the seeding moment.

In the first stage, the salad and radish seeds germinated after 3 days, having a percentage of 43% and 75%. The other species needed 5 days to germinate in a percentage of 46% at carrot, 1% at celery and 3% at parsley.

In the second and third stage, the percentage of germination was higher due to the softer environmental conditions provided by March.

RESEARCHES REGARDING THE INFLUENCE OF CULTIVARS ON THE QUANTITY AND QUALITY OF CARROT PRODUCTION

Gheorghita Hoza

KEY WORDS: cultivar, carrot, production

ABSTRACT

The cultivar used to found a culture represents an essential item in the culture technology. In the present experience were used 6 carrot cultivars, with different periods of vegetation as it follows: Nantes, Chantenay redcore, Nantes 3, Toucho, Mohre and Chantenay de Corazon rojo 2.

The culture was founded in the mid of March, throughout direct seedling, on unshaped field, in 4 rows equally distant at 25 cm which formed bands equally distant at 50 cm.

The harvesting of roots was executed in 2 stages: the first one in 100 days after rising and the second one in 120 days after rising.

In the first stage, the production of roots was significant at Chantenay redcore and Nantes 3 while at the other cultivars it was insignificant or weaker than at control. The production of roots was of 43.9 t/ha at Nantes 3 and 39.7 t/ha of Chantenay redcore.

In the second stage of harvesting, the most significant production was registered at Nantes 3 (50.1 t/ha) and Ch. Redcore (49.7 t/ha, followed by Ch rojo2 (45.1 t/ha).

**S.C. UNISEM S.A. – ORIGINATOR, MAINTAINER AND CULTIVATOR OF
VEGETABLES VARIETIES FOR DURABLE AGRICULTURE**

Gheorghe Glăman, Zoia Tudor

INTRODUCTION

The durable agricultural is a concept and a target of the present period as the over using of chemicals by unreasonable utilization of chemicals, fertilizers and other stimulus have the unique aim the production and the maximum profitableness.

The cultivator must know and observe these mechanisms, making allies the birds, animals and insects that can help him in using the particular technologies of durable agriculture.

Near the traditional methods pf plants crop: hand hoeing, weeding, organic fertilizers application, treatments with sulphur and copper, juice of nettle or tobacco etc, the vital concerns of the humanity, aiming not to loose the genetic dower, was the rigorous crop rotation, keeping the valuable species and varieties of vegetables, fruits, cereals, forages, ornamentals plants.

In this context, S.C. UNISEM S.A. sets up in 1996 the first private laboratory of research in vegetables viewing to create , to maintain and to cultivate plants for seeds of traditional vegetables varieties. The laboratory accomplishes researches of improvements and specific activities of conservative selection in his branches from the country: Alba, Bihor, Ialomița, Ilfov, Neamț and Sibiu.

**RESEARCHES CONCERNING EXTRACTION AND DOSAGE TECHNOLOGY
OF HYDROSOLUBLE B COMPLEX VITAMINS BY USING SOME GARDEN
AND AGRICULTURAL CROP PLANTS AS RAW MATERIAL**

Palcu S. E., Zamfir Alina, Mureşan Claudia

KEY WORDS: fertilizers with microelements, pea, hydrosoluble vitamins, experimental parcels

ABSTRACT

Vitamins are organic substances which in small or very small quantities are indispensable for normal growth and development of living organisms. The experiments carried out using garden pea, Börđi variety, in order to study influence of physical and chemical factors on hydrosoluble vitamins content had been implemented in Munar locality, Arad County, during 2005-2007 period of time. Fertilization of experimental plots cultivated with pea was realised using two different microelements fertilizers: Universol Blue and Ferticare I, radically applied in the same time with irrigation water (fertirrigation). The use of Universol Blue and Ferticare I complex microelements fertilizers during vegetation period produces an increasing of hydrosoluble vitamins B₁, B₂ and B₆ content in peas. Appliance of Ferticare I fertilizer causes an important increase of vitamin B₆ quantity in green pea.

**MORPHOLOGICAL AND PRODUCTIVE MODIFICATIONS FOR FIELD
CULTIVATED TOMATOES UNDER THE INFLUENCE OF CROPMAX AND
VITAFLOA STIMULENT PRODUCTS**

Maria Dinu, Savescu P., Raducanu N.

KEY WORDS: Cropmax, Vitaflora, treatments, tomatoes, ecological

ABSTRACT

By using Cropmax and Vitaflora stimulent products it has been tested the possibility of increasing the productive potential of tomatoes. The purpose for using these products was not only to increase the productivity but also to protect the environment and of the soil in particular because it is well known that in the vegetables culture, the soil is very stressed due to the intensive character of the cultures. The Cropmax product is 100 % natural, being recommended to be used into the ecological vegetables culture.

In this paper preliminary results are presented, while the final results are to be communicated as soon as possible. Two cultivars of tomatoes were taken into study, Ioana and Rada that behaved very well in field culture conditions.

Significant differences were recorded regarding the characteristics of the plants as well as regarding the number of flowers and fruits per plant, compared with the untreated witnesses.

**THE RESEARCH CONCERNING THE PHYSIOLOGICAL BEHAVIOUR OF
YELLOW MELON CULTIVARS IN UNHEATED GREENHOUSE**

Maria Dinu, Cimpoiasu Vily Marius, Savescu Petre

KEY WORDS: Yellow melon, foliar surface, photosynthetic radiation

ABSTRACT

The dynamical process of agricultural enhancement, corroborates with human society developments implies the augmentation of importance of new sorts and hybrids with high productive potential and nutritional role comparative with old species because of high efficiency in transformation of energy in fruitful mass.

The enhancement of yellow melon sort cultivated in open field and in greenhouse is the constant preoccupation of many researchers, but is necessary to test this new sots and hybrids in specific conditions of our country.

**STUDIES REGARDING THE INFLUENCE OF THE FOLIAR
FERTILIZATIONS WITH ORGANIC COMPOUNDS OF THE BORINE UPON
SOME MORPHOLOGICAL AND PRODUCTION ELEMENTS FOR THE
GARDEN BEAN**

Florentina Badea, Lascu N., Daniela Popa, Scorei R.
Ramona Căpruciu, Giorgota M.

KEY WORDS: foliar fertilizers, boron, garden bean, quality, production

SUMMARY

The boron is an essential micronutrient for the growing of the plants. Following the experiments made regarding the foliar fertilizations with organic compounds of the boron, it has been noticed that the average height of the plants showed a significant grow for the treated variants, the values being between 15-45%. The average number of ramifications on the plant was higher for the variants to which there have been applied stimulators for fertilization comparing to the mark. The average length of the pods as element of production and quality presented a slight decrease in absolute values by administrating foliar fertilizers. The average number of pods on the plant, the main production elements, has increased with 18-45% for the variants foliar fertilized comparing to the mark.

**CONSIDERATIONS REGARDING THE WATERING NORMS AND
IRRIGATIONS NORM ON THE VEGETATION PERIOD OF THREE
TOMATOES HYBRIDS CULTIVATED IN SOLARIUM AREA AND DRIPPING
IRRIGATED, IN EXPERIMENTAL YEAR 2006**

Hoban Adriana

KEY WORDS: irrigation, tomato, irrigation norm

SUMMARY

The paper represents the results of the watering norms and the irrigation norm, at three tomatoes hybrids cultivated in solarium area and dripping irrigated. The researches started in the experimental year 2006 further on three years until, this year, 2008. The experimental hybrids take-in studies are Astona hybrid (H_1), Falcato hybrid (H_2) and Sprinte hybrid (H_3); hybrid it was the first factor of the experiences. The second factor was irrigation with three graduations: irrigation on minimum humidity level of 50 %(I_1), 70% (I_2), and 90 % (I_3) from the active humidity interval (A.H.I.).

**RESEARCHES REGARDING THE WATER CONSUMPTION OF THREE
TOMATOES HYBRIDS CULTIVATED IN SOLARIUM AND DRIPPING
IRRIGATED, ON THREE IRRIGATION LEVELS, IN THE
EXPERIMENTAL YEAR 2006**

Hoban Adriana

KEY WORDS: irrigation, tomato, irrigation norm

SUMMARY

The results of the water consumption of three tomatoes hybrids cultivated in solarium area and dripping irrigated, at the different irrigation levels. The researches started in experimental year 2006 during three years of study until current year, 2008. The experimental hybrids are: Astona (H_1), Falcato (H_2) and Sprinter (H_3); and the experimental irrigation levels: 50 % from AHI (I_1), 70 % (I_2) and 90 % (I_3) from AHI. These are the information dates base of the experiences that was make to arrive at the results of the water consumption, for every each of the irrigation levels.

THE INFLUENCE POT TYPE ON THE BIOLOGICAL ACTIVITY OF THE SUBSTRATE AND THE SEEDLINGS GROWTH

M. S. Manole, M. Roșu, E. Dobrin, R. Ciofu, N. Gheorghită

KEY WORDS: cabbage, salad, respiration, transplants, root

ABSTRACT

Numerous researches doing in those domains accentuating that actually in Romania is more used at transplant production, nutritive pot, realized through pressing from different earth mixtures like plastic material rigid or bendable flowerpot, but not degradable. Recently it has expanding alveolus blade using by different dimensions. Like comparison in countries great producer of vegetables it has used other types of pots, especially biodegradable materials that present advantage of the unpolluted soils, create optimum conditions for growing of the transplants, facile planting and transplanting success percent growing as result of transplanting stress elimination. Very good results are signalized in case of Jiffy stripe pots type uses.

**THE INFLUENCE OF SELECTIVE PHOTO FOILS ON PATHOGENIC AGENTS
ALTERNARIA SOLANI AND *FULVIA FULVA* IN PROTECTED PRODUCTION OF
TOMATOES**

Mali Sanda Manole, Ruxandra Ciofu

KEY WORDS: tomatoes, selective photo foils, pathogenic agents, early crops, cultivars

ABSTRACT

Tomatoes crops, especially in the early growth stage are confronted with a complex of diseases, which produce considerable losses, especially in greenhouse conditions. Therefore an important condition for preventing the emergence of these diseases consists in providing the necessary measures to reduce the number of treatments to obtain higher quality yields.

*This research presents results obtained in the University of Agricultural Sciences and Veterinary Medicine – Bucharest greenhouse, Department of Vegetable Crops. We studied the influence of PVC photo selective sheets on the emergence and the incidence of early blight (*Alternaria solani*) and leaf mold (*Fulvia fulva*) on two different varieties of tomatoes.*

THE REDUCED SIZE PLANTS – CONCEPT, ASSORTMENT, CULTURAL METHODS

Anton Doina, Nicu Carmen, Manda Manuela

KEY WORDS: reduced size plants, classification, cultural methods, assortment

SUMMARY

The reduced size plants (RSP), frequently called „miniplants”, have appeared throughout Europe in the last 20 years. They are used in the floral arrangements (miniature gardens), in flower pots and flower stands, in the indoor, terraces and balconies decoration, for gifts or shopping for oneself.

In this paper are presented: the classification of the reduced size plants, the main plants from our collection (38 species from 21 botanical family) and the systematization of the cultural methods from the speciality literature, which can lead to obtaining of low height plants.

Depending on our classification, this species are divided in: microplants (5-10 cm height), miniplants (10-20 cm) and proper reduced size plants (20-30 cm).

STUDIES REGARDING THE BEHAVIOUR OF *Salvia splendens* IN FOLIAR FERTILIZATIONS CONDITIONS

Draghia Lucia, Chelariu Elena Liliana, Delinschi Violeta, Birescu L.

KEY WORDS: Salvia splendens, foliar fertilization, Folisof F212

ABSTRACT

*Modern durable agriculture have diversified priorities as fertilization and environment protection, the use of bio stimulators and organic-mineral fertilizers foliar applied, keeping the efficiency level of fertility and preventing the residual pollution. There were organized experiments with *Salvia splendens* to test foliar fertilizers action. Cultures were established with nursery transplants. We used foliar fertilizer Folisof F212, 0.2, 0.4 and 0.6 % concentration. Treatments started two weeks after the cultures were established and were repeated at ten days intervals (4 treatments in total). The determinations and the observations consisted of four biometric measurements and morph-anatomical analysis during plants vegetation period.*

THE VALUATION OF SOME TULIP CULTIVARS IN ORDER TO DIVERSIFY THE ASSORTMENT

Carmen Nicu, Manuela Manda, Doina Anton

KEY WORDS: rustic bulbous, morphological characteristics, decorative qualities, landscapes

SUMMARY

The tulips are beside the hyacinth and the narcissus, the principal rustic "bulbous" species, perennial plants which bloom in spring, in March-April and they are used both in the area of the landscapes, in flower beds, groups of plants on the lawn and for cut flowers.

The behaviour of some tulip cultivars in the conditions of the Craiova town, was studied in 2003-2006 period. The biological material came from Holland and it was composed of seven cultivars (Candela, Golden Apeldoorn, Negrita, Pink Triumph, Red Triumph, Upstar, Red Giant) and a „botanical" tulip (Tarda). The principal phenophases (spring, the appearance of the flower bud, the period of blooming) and the morphological and decorative characteristics of the plants and the flowers of the cultivars introduced into assortment were studied.

It was established the decorative period and the utilization of the studied cultivars.

**STUDIES AND RESEARCHES CONCERNING THE CONTAINERIZED
CULTURE OF POINSETTIA PULCHERRIMA Grah. PLANTS**

Fl. Toma, Ileana Cantaragiu, Sorina Petra

KEY WORDS: Poinsettia, containerized culture, substrate, fertilizers

SUMMARY

The aim of our experiences was to establish the best variant of fertilization on the Poinsettia pulcherrima plants cultivated on peat substrate. We tested more fertilizers variants (mineral and organic) and we observed that the best results were obtained on the variant fertilized with Vitaflora 0,3 %, administrated weekly.

**STUDIES AND RESEARCHES CONCERNING THE IN VITRO PRODUCTION
OF TUBEROSE PLANTING**

Fl. Toma, Sorina Petra

KEY WORDS: tuberose, micropropagation, explants, culture media, planting

SUMMARY

*The aim of our researches was to establish the possibilities of the in vitro micropropagation of one of the most appreciated flowers plant – tuberose (*Polyanthes tuberosa* L.). In this reason we tested more explants tips, culture media and season of explants inoculation.*

The best results were obtained on the variant of buds bulbs explants inoculated in April on the Murashige & Skoog 1962 culture media supplemented with 2 mg/l NAA + 0,5 mg/l KIN + 2 mg/l BAP.

**DETERMINATION OF ASCORBIC ACID THROUGH
THE 2,6-DICHLOROPHENOL-INDOPHENOL METHOD FROM
THE ANGIOSPERMATOPHYTA SPECIES**

Dumitru Condrat, Florian Harja, Alfa Xenia Lupea

KEY WORDS: medicinal plant extracts, 2,6-dichlorophenol-indophenol, antioxidant activity

ABSTRACT

This research is aimed to elucidate the chemical composition of the researched vegetal extracts, chemical composition that was previously slightly researched and the quantitative determination of the ascorbic acid through the 2,6-dichlorophenol-indophenol method.

The researched plant species were: Agrimonia eupatoria – sticklewort, Viscum album – European mistletoe and Veronica officinalis – Heath Speedwell.

**DETERMINATION OF THE TOTAL CONTENT IN ANTHOCYANIDINS FROM
THE ALCHEMILLA VULGARIS, ALLIUM URSINUM, ACORUS CALAMUS
AND SOLIDAGO VIRGA-AUREA SPECIES**

Dumitru Condrat, Florian Harja, Alfa Xenia Lupea

KEY WORDS: medicinal plant extracts, UV-VIS spectra, anthocyanidins

ABSTRACT

The purpose of this paperwork is to establish the total content in anthocyanidins from the anatomical parts of several plants that have shown antioxidant potential. We have used spectrophotometric methods of research, in which the total percentage of anthocyanidins is determined by analyzing the solution extracts at wavelengths characteristic to anthocyanidins (490-540 nm), the choosing of the wavelength being made in accordance with the extraction solvent used

The tested plant species were: Alchemilla vulgaris –Lady’s Mantle, Allium ursinum – Wild Garlic, Acorus calamus – Sweet Flag , Solidago virga-aurea – Golden Rod.

USING THE MORDANTS EXTRACTED FROM NATURAL SPECIES *RUMEX PATIENTIA* L. AND *STELLARIA MEDIA* (L.) VILL. FOR DYEING OF THE NATURAL FIBRES OF SILK AND FLAX WITH THE EXTRACTS OF *RUBIA TINCTORUM* L. AND *COSMOS SULPHUREUS* CAV.

Elena Săvulescu, Vasilica Luchian

KEY WORDS: mordant, tinctorial plant, silk, flax, fibre

ABSTRACT

The use of plants for obtaining tinctorial extracts in order to mordant dyeing of textile fibres and coloring for food remains a concern of an increasingly large in the context of reducing the use of chemical dyes and pollution.

*In the studies conducted were tested two species *Rumex patientia* and *Stellaria media* from which were obtained extracts used for mordanting of flax fibre and silk, to colour the fibres with extracts obtained from species *Rubia tinctorum* and *Cosmos sulphureus*. It was obtain similar colors at the treated of the natural fibres with plant extracts like the chemical mordants. Resistance to the dry friction and high temperatures of natural fibres, were close to the level of the chemical mordants.*

The results obtained support the possibility to use the natural mordants in the painting process of natural fibres with the same characteristics like the chemical mordants. The advantages of plant extracts are to minimize pollution and the negative effects of chemicals products on health and the environment.

**ASPECTS REGARDING MULTIPLICATION OF
SAINTPAULIA IONANTHA WENDL.
ON DIFFERENT TYPES OF SUB – LAYERS MIXTURES**

Silvia Osiceanu

KEY WORDS: Saintpaulia ionantha Wendl., sub – layers

SUMMARY

For experiments, there has been used young and adult Saintpaulias, from the collection of „Al. Buiu” Botanical Garden in Craiova.

There have been grown on different sub-layers mixtures in different periods and there was studied the evolution of the plants in order to establish the most favorable growing sub-layers mixtures and the most favorable time from multiplication.

THE INFLUENCE OF THE ORGANIC COMPONENTS IN “*IN VITRO*” CULTURE ENVIRONMENT FOR THE GREENHOUSE CARNATIONS

Halaciuga Mirabela – Luminita, Popa Aurel

KEY WORDS: carnations, culture environment, vitamins, in vitro, glucides

SUMMARY

The experience was performed on three carnation breeds Amapolla, Tanga și Katya, with the purpose of establishing the vitamins' influence (thiamine, pyridoxine, nicotinic acid and biotine), and the carbohydrates upon the organogenic reaction of the carnation meristem. The effect of these organic compounds arises both on the qualitative aspect and quantitative aspect, by a modification of the percentage of meristems which new forms the new plants, this path representing the main manner of orientation and guiding the organogenic reaction of the meristem.

From our studies it results that the vitamins favor the growth and evolution of the “ in vitro” meristems, and the hormones have a well-known role of growing regulators upon the carnation meristems. For the carbohydrates we used the saccharose and glucose which drive upon the metabolism of the regulative substances of endogenous growth with major implications in the growth process.

THE INFLUENCE OF THE CLIMATIC CONDITIONS IN CULTIVATING MERISTEMS FOR CARNATIONS

Halaciuga Mirabela – Luminita, Popa Aurel

KEY WORDS: Meristems, carnations, temperature, effect of the light, in vitro

SUMMARY

The climatic conditions under which an "in vitro" culture is performed represents a limitative factor along with the cultivating and explant environment, with major implications in the evolution of the explant and the success of obtaining the carnation new plants. Out of the 3 more important climatic factors – light, temperature and humidity – from our experience, only the first 2 were taken into study, with a direct influence over the cultivating conditions.

From our studies, it results that:

- by studying the effect of the illumination duration over the number of new plants formed and rooted and the cultivating period, it was found out that the 16 hour photo-period is an optimum one, without affecting the quality of the obtained biological material.*
- the temperature effect over the formation of new plants was proven to be significant*

“IN VITRO” VEGETATIVE REPRODUCTION THROUGH MINI-CUTTINGS OF THE GREENHOUSE CARNATION

Halaciuga Mirabela- Luminita, Popa Aurel

KEY WORDS: Carnations, vegetative reproduction, in vitro, mini-cuttings

SUMMARY

For the reproduction of carnations through mini-cuttings we have used plants identified as lacking viruses belonging to the Katya breed, thus they have established 7 alternatives according to the position of the mini-cutting on the mother plant, from the 6th mini-cutting on the top to the 6th mini-cutting at the base of the plant.

After approximately 4 to 6 weeks of vegetation “in vitro” the new plants were used either for a new reproduction through mini-cuttings or they were passed to acclimatization.

The plants reproduced through mini-cuttings represented a good genetic stability maintaining the color typical for their variety and a natural environment.

**RESEARCHE REGARDING THE MONITORIZATION AND CONTROL OF THE
ERWINIA AMYLOVORA (BURILL) WINSLOW BACTERIA IN THE APPLE
ORCHARDS FROM THE OLT COUNTY TERRITORY**

Mitreă Rodi, Nicolae Tomita, Ștefan Cămelina

KEY WORDS: apple, Erwinia amylovora, monitorization, Romania

ABSTRACT

Signalized for the first time in America (1817) „fire blight” has extend in Canada, Mexic and other countries from the west of Europe (England 1957, Netherland 1966, Poland 1966, Denmark 1968, West Germany 1971, France 1972, Belgium 1972, Est Germany 1974). In Romania the disease has been signalized for the first time in 1992, in the following years spreading in almost all the fruitgrowing area from our country.

The losses produced by the fire blight are immeasurable. The pathogen agent present a high capacity of spreading, many of the spreading ways can be controled by man.

ESTABLISHING THE TROPICAL CHAINS FROM THE VINEYARD SUSCEPTIBLE TO BE MODIFIED THROUGH POLLUTION

C. Stan, Rodi Mitrea, O. Tuca, I. Mitrea, Daniela Ciupeanu, Cremeneanu V.

KEY WORDS: viticultural ecosystem, trophic pyramid

ABSTRACT

The vine from the vineyards influence direct and indirect the environment through a series of changes (the modification of the atmosphere composition by raising the oxygen; reducing the amplitude of the daily, monthly, annually temperature; the modification of the atmospheric humidity; reducing the soil erosion, preventing the decrease of the soil fertility, etc.), which reflect on the vine. During the time, the viticultural ecosystem has suffered major modification due to the intervention of some new factors (diseases, pests, new varieties, tillage etc.) which have determined the change of the cropping system initially established function of the environmental conditions and cropping means. Unfortunately, the changes have not been always in the benefit of obtaining better products or the environment.

The pesticides mass application make that the impact, the contact between them and the environment to be very high. In the vineyard from the Didactical Station Banu Maracine during 2007-2008, within the low risk technology for controlling the harmful organisms there has been used a series of pesticides, in order to study the effect of these pesticides on the content and reports within the viticultural ecosystem.

**THE DEVELOPMENT STAGES MORPHOLGY OF
THE CYDIA POMONELLA L. SPECIES**

Tuca O., Mitrea I., Stan C., Cremeneanu C.

KEY WORDS: Cydia pomonella L., adult, egg, larva, pupa

ABSTRACT

The codling moth Cydia pomonella L. (formerly Laspeyresia pomonella and Carpocapsa pomonella); Order Lepidoptera, Family Tortricidae is one of the most serious pests of apples, but the larvae may also attack pears, walnuts, quince, and other fruits. The larva is the familiar "apple worm."

The codling moth butterflies are distinctive because its wings are crisscrossed with lighter gray lines, and there is a bronze or copper-colored patch near the outer margins of the forewings that distinguishes this moth from others found in apple orchards. The butterflies are 8 mm long, when it is at rest with its wings folded, and has a 17-19 mm wingspan.

The egg have a diameter of 1,0-1.2 mm, whitish, circular, flattened, slightly swollen in the middle. Milky-white at first, then, a few days later, with presence of a reddish ring at the periphery.

The newly hatched larva is yellowish-white with a black head, the fully grown larva is 18 to 21 mm long, body pale pink to reddish, and has a dark brown head.

The pupa is 10 to 12 mm long, yellow-brown to dark brown. Occuring in silky cocoon.

OBSERVATIONS ON THE EFFICACY OF SOME INSECTICIDES IN *DELIA ANTIQUA* MEIG. PEST CONTROL

Ioana Marius, Loredana Beatrice Frăsin

KEYWORDS: Delia antiqua Meig., efficacy, control.

ABSTRACT

*The insect *Delia antiqua* Meig is one of the dangerous pests of onion, producing crops damages of until 20 – 30%, which is the reason why this insect control has a special importance. Among the 30 tested products, very good results, with over 90% efficacy, had those based on fosmet 50% (Imidan 50 WP – 0.1%), phosalone 30% (Zolone 30 PM – 0.2%) și phosalone 35% (Zolone 35 EC – 0.2%).*

**OBSERVATIONS ON THE EFFICACY OF SOME INSECTICIDES IN
HOPLOCAMPA MINUTA CHRIST. PEST CONTROL**

Ioana Marius, Loredana Beatrice Frăsin

KEY WORDS: Hoplocampa minuta Christ., efficacy, control

ABSTRACT

Among the tested insecticides, the following products had the best results in Hoplocampa minuta Christ. pest control (with an efficacy of over 90%): FRV 37 PU – 0.05% (90.25%); Sinoratox 35 CE – 0.15 % (95.30 %); Decis 25 WG – 0.003% (94.30%); Faster 10 EC – 0.02% (92.86 %); Decis 2.5 EC – 0.03% (97.20%) and Fastac 10 CE-RV – 0.015% (92.40%).

RESULTS FOOD CONCERNING TO CONTROL OF CODLING MOTH (CYDIA POMONELLA L.) IN THE CONDITIONS OF FRUIT GROWING VOINESTI

Bolbose Cecilia

KEY WORDS: concerning; codling moth; pheromone; insecticides biological; efficiency

ABSTRACT

Codling moth (Cydia pomonella L.) remains to be a very important pest in most apple orchards. This paper presents the results performed between 2005 - 2008 with home new insecticides for pest control in field plots. The results were interpreted comparatively for biological products, chemical insecticides and untreated check. The main results obtained were the following: -with two treatments/each generation, Carpovirusine conc. 0,1% had the maximal efficacy in controlling the all stages of Cydia pomonella L. -the insecticide TREBON 30 EC conc. 0,03 % was very effective in controlling the pest.- the importance of the pheromone traps in establishing the spreading are of the pests was remarked, the appreciation of the opportunity of treatments applying according to population level and establishing the optimal time for treatment warning.

**POPULATIONS OF BENEFICIAL AND PEST ARTHROPODS UNDER
DIFFERENT CONTROL SYSTEMS IN APPLE ORCHARDS**

Sonica Drosu, Constantina Chireceanu, Maria Ciobanu
Grigore Margarit, Ioan Rosca

KEY WORDS: arthropods, diversity, control systems, apple orchards

ABSTRACT

The comparative study on the beneficial fauna and the pests under two treatment systems (low polluting treatment system and conventional system) in 2 apple orchards was carried out. Three sampling methods were used to catch the arthropods between April–September in 2007 and 2008: beating branches of trees into entomological funnel, yellow sticky traps and pitfall trapping. The beneficial fauna was represented mostly by Heteroptera (Fam. Miridae-Deraeocoris lutescens Sch.), Hymenoptera (Fam. Calcididae and Braconidae) and Coleoptera (Fam. Coccinellidae-Coccinella spp., Adalia bipunctata L., Fam. Carabidae-Bembidion properans L.). The main pests belong at following: Thysanoptera (Fam. Thripidae-Thrips spp.), Homoptera (Fam. Aphididae, Cicadelidae), Coleoptera (Fam. Chrysomelidae- Chaetocnema tibialis Illig., Aphthona spp., Nitidulidae-Meligethes aeneus F.).

BEAUVERIA BASSIANA (*Bals.*)Vuill. CONIDIOGENESIS PROCESS IN STATIONARY CULTIVATION CONDITIONS

Cristina Fătu, Viorel Fătu, Ana-Maria Andrei, Maria Tudorache

KEY WORDS: Beauveria bassiana, culture media

ABSTRACT

The capacity of entomopathogenic microorganisms Beauveria bassiana to use different nutritional substrates represent one of the factors that influence their effectiveness in biological control of harmful insects. Different B. bassiana isolates vary in their requirements for nutrition, pH, incubation period.

In this paper are presented investigations performed on laboratory scale regarding the effect of some parameters during the fungal cultivation period, mainly the influence of carbon and nitrogen source on B. bassiana sporulation. The fungal strains used in experiments are originating in different Romanian habitats.

**OBSERVATIONS ON THE SELECTIVITY OF SOME INSECTICIDES
AGAINST THE INSECTS WHICH PARASITIZE
THE *HYPHANTRIA CUNEA* DRURY. PEST**

Loredana Beatrice Frăsin

KEY WORDS: Hyphantria cunea Drury., selectivity, insecticides

ABSTRACT

*The main limiters of *Hyphantria cunea* Drury are the following parasites: *Drino inconspicua* Meig. (Diptera, Tachinidae), *Brachymeria intermedia* Nees. (Hymenoptera, Chalcididae), *Psychophagus omnivorus* Walk. (Hymenoptera, Pteromalidae). The highest degree of parasitism had *Drino inconspicua* Meig. species (29%). In regard to the insecticides selectivity against the useful fauna, the biological product based on *Bacillus thuringiensis* and the Onevos 35EC – 0.2% product had a high selectivity, the average degree of parasitism being 19%.*

**STUDIES ABOUT THE BEHAVIOUR OF SOME APPLE TREES CULTIVARS ON
THE LEAF MINER - *PHYLLONORYCTER CORYLIFOLIELLA* HB.
(*GRACILLARIIDAE, LEPIDOPTERA*) ATTACK IN THE CLIMATIC
CONDITIONS OF MĂRĂCINENI - ARGESŢ FRUIT-GROWING AREA**

Loredana Beatrice Frăsin

KEY WORDS: Phyllonorycter corylifoliella Hb., degree of attack, cultivars

ABSTRACT

Jonathan and Idared apple trees cultivars had resistance on the leaf miner attack, the degree of attack being of 8.55%, and 10.15% (average values). Prima and Pioneer apple trees cultivars were the most affected, with a degree of attack of 6.15% and 51.95%, with 53.60% and 43.30% more than for Jonathan apple trees cultivar. The average density of mines on a leaf is different in terms of cultivar. The lowest measured value was for Jonathan apple trees cultivar, with an average density of mines on a leaf of 0.79 in 2003 and 0.42 in 2004.

THE EFFICIENCY IN USING THE NEGOTIABLE PERMITS IN ACHIEVING SUSTAINABLE DEVELOPMENT

Vuță Mariana, Trică Carmen, Lazăr Paula

KEY WORDS: efficiency, negotiable permits, environment, sustainable development

ABSTRACT

The economy of exhaustible resources is a fascinating problem because it mixes economic and ecology matters (Hotelling, 1931) that should be solved through global activities that should be a mix between the public policies with administrating externalities and the public goods. In this context, the Brundland Report (1987) states that the term "sustainable development" is the development that can answer to the present needs of development without compromising the capacity of the future generation to exist, respective to realize a correlation between economic growth and usage of natural resources. Nevertheless the economic analysis of the environment is showing a subevaluation of the usage of the natural resources by refering to their social cost from, at least, three reasons: the property rights are not defined, the existance of externalities and the state intervention through subventions. These problems can be solved, according to the specialits, through a Coase or Pigou approach.

CONSUMPTION OF VEGETABLES IN ROMANIA

Raluca Andreea Ion, Dan Boboc
Adrian Turek-Rahoveanu, Magdalena Turek-Rahoveanu

KEY WORDS: vegetables, consumption

ABSTRACT

The present paper presents a detailed analyse of the consumption of vegetables, in Romania. The consumption is analysed in time, for different species of vegetables and for different categories of households.

The results show that the consumption of vegetables increased in the last years. It is higher than the level of consumption recommended by the World Health Organisation and than the average of the European Union level. Romania is one of the larger consumers of vegetables among European Union countries.

Another conclusion is that differences result between the quantities purchased, which are lower, and the quantities effectively consumed, which are higher, meaning that not all the amount of vegetables is ensured from the market, but by self production in family farms.

**THE ESTIMATION OF VEGETABLES' EFFICIENCY.
CASE STUDY OF A FARM OF ILFOV AREA**

Raluca Andreea Ion, Adrian Turek-Rahoveanu
Victor Manole, Nicolae Istudor

KEY WORDS: vegetables, efficiency

ABSTRACT

The present paper presents a case study of a farmer who owns 2.6 hectares of arable land in the area closed to Bucharest. The land is cultivated with different vegetables, for which economical performance is calculated.

The results show that the vegetables crops are efficient from the economical point of view, because the rates of profit have values between 8% and 50%. Tomatoes, pepper, salad, cauliflower and cabbage are the most efficient vegetables. The crops cultivated in green houses are more efficient than those cultivated in open field.

ENVIRONMENTAL RISKS EVALUATION ON MICROECONOMIC LEVEL

Trică Carmen Lenuta, Negrei Costel, Vuță Mariana

KEY WORDS: Environmental risk, pollution environmental, quantification, degradation process, environmental management

ABSTRACT

The environmental pollution, through its implications on quality of life, becomes a global phenomenon which requires special attention from decision makers (managers, business men). Moreover, we must understand that any neglect of our responsibility will deepen the environmental degradation process, thus the sustainable development principle becomes a simple syntagma.

The direct pollution effects on the environment may be made through the application of a performant management of environmental risks for any level, in this paper at the microeconomic level. The paper regarding the implementation of a complex system used methods and techniques in the social-economic domain from environmental risk quantification.

**THE ROLE OF THE PERENNIAL PLANTS CONCERNING
THE PROTECTION OF THE PLACES AFFECTED
BY THE ASH RESULTED FROM THE POWER STATIONS**

C. Cotigă, L. Olaru

KEY WORDS: ash, layer, thermo-electric

SUMMARY

The thermo-electric power station from Oltenia produces altogether approximately six million tones of ash every year. If these were to be spread across the whole surface of the district Dolj, a five-centimeter-layer of ash would form.

The ash resulted from the combustion of the lignite is transported through metallic pipes above the surface of the earth in the special tanks where.

**RESEARCHES CONCERNING THE PRODUCTIVITY AND BIODIVERSITY OF
THE PASTURES USED IN ECOLOGICAL SYSTEM ON THE ASH LAYERS**

C. Cotigă

KEY WORDS: layer, pasture, ash, productivity

SUMMARY

The impoverishment of the agricultural ecosystems is due not only to the industrial objectives of the arc and coal mining industry up to date, but also to the deposit of waste and ash from the coal-fired power-station.