

INITIAL RESPONSES TO DROUGHT: APPARENT DIFFERENTIAL STRATEGIES OBSERVED IN AN ARRAY OF *BRASSICA* AND *PISUM* LANDRACES

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Abstract

We investigated the drought stress responses of local Pisum and Brassica landraces cultivated throughout the western region of Romania. In both species, one week without watering lead to significant changes in relative water content values of the plant lines, which allowed for a distinction between cultivars which maintain or lose tissue hydration after water withdrawal. Praline content and aldehyde oxidase (AO) indicate differences between the two species in terms of drought response. In both species, three AO isoforms were isolated, which is a novel finding in cabbage, and the third isoform appears to respond to the drought stress treatment. This work provides valuable data for future studies into the drought stress responses of local landraces, which play a crucial role in the agriculture of western Romanian regions.

Key words: Pisum, Brassica, local landraces, drought stress, praline, aldehyde oxidase isoforms

EFFECT OF GRAFTING ON MUSKMELON ZIELDS AND ON EARLY FRUIT SET

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Abstract

Grafting has by now become an important way of the vegetative propagation of melons. As regards the grafting of the muskmelon, only some initial experiments are under way, while the grafting of watermelon is not alien to growers nowadays.

In our trial we studied the changes in muskmelon yields in response to grafting, as well as the number of early set fruits on different squash rootstocks. We tried to find out whether grafting played any role in altering yields and the number of early set fruits.

In the experiment I grafted three muskmelon varieties (Capri, Gordes, Muskotály) on four different squash rootstocks (Beton, RS 841-Improved, Shitosa-Camelforce, No.3), which were grafted using the so-called Japanese or splice-grafting method. In the experiment quantitative and fruit composition parameters were measured. In the quantitative analysis we evaluated the number of fruits and yields per plot. Based on the quantitative results I concluded that in the case of Capri it was the rootstock RS 841 and No.3 that showed the best effect. With the variety Gordes, it was the RS 841 that proved the most suitable. As regards Muskotály it was the rootstock Beton and Shintosa Camelforce that produced the highest yield increase. Based on the results obtained I concluded that it is very important to make an optimal choice of rootstock –scion combinations with due consideration to the particular growing site also.

Key words: muskmelon, grafting, squash rootstocks

PEPPER PRODUCTION IN GREENHOUSE BY USING PLASTIC TUBES AND BUCKETS FILLED WITH EXPANDED CLAY PELLETS

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Abstract

On the most important issues of greenhouse vegetable production in soil less media is the selection of the growing method (receptacle for the medium) in accordance with medium applied. The objective of the trial was to test the applicability of baked (expanded) clay pellets, a substrate that is not yet very common in the practice, in making a comparison between container and plastic tube culture, using pepper (Hó) as test plants. A good average yield was achieved in all of the treatments in both years, which suggests that the expanded clay pellets tested are a suitable medium to grow the pepper variety 'Hó' in hydroponics. Relative to the two plant growing receptacles tested it can be concluded that both the white plastic tube and the bucket are suitable receptacles for root medium in the case of the 4-8 mm crushed clay spheres. In the two year period of the trial the plastic tube culture seemed more favorable, but it was not possible to reveal statistically significant difference in all of the parameters. Because of limited space, this study is a summary only of the experience gained with new, first used expanded clay pellets, during the repeated use some contrasting results were also obtained, which can mostly contributed to the fact that root remnants of the plants grown previously in the medium might modify some of the physical (and chemical) root medium properties.

Key words: expanded clay pellet, plastic tube, bucket (container)

THE EFFECT OF COVERING ON DIRECT SEEDED SWEET CORN GROWING SEASON

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Abstract

In our trial we compared the effect of propagation time and floating cover on the growing season on the yield and some valuable properties of sweet corn. The following technological variations were compared with the help of the variety Spirit (normal sweet, very early ripening). I direct seeded plants with floating cover (with two sowing dates) and without cover (with two sowing dates). The application of direct seeding and floating cover (P2) increased the earliness by four days respect of the total growing period as compared to the treatment without cover (P1). The covering and earlier sowing time had a negative influence on cob size, but this diminishment didn't influence cobs marketability, whereas in case of filled cobs, as well in case of depth of seeds we observed positive effect. Covering the seedlings in the early season was clearly beneficial for frost protection, as the floating cover provided protection for plants against mild frost. The combination of earlier seeding time and floating cover results a 7 day earlier harvest as compared to the traditional technology.

Key words: sweet corn, vlies, covering, growing period

PRELIMINARY SCREENING WITH A RETROTRANSPOSON-LIKE DNA SEQUENCE OF THE INTERSPECIFIC HYBRIDS (BARLEY DHL x H.BULBOSUM) AND RECOMBINANT DESCENDANTS

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Abstract

*At it is known the development of the interspecific hybrids *H.vulgare* (genome V) x *H.bulbosum* (genome B) is an effective approach for transferring useful genes from the wild species into cultivated barley. At NARDI-Fundulea interspecific diploid (VB, $2n=2x=14$), triploid (VBB, $2n=3x=21$) and tetraploid (VVBB, $2n=4x=28$) hybrids were obtained by in vitro embryo culture. The hybrids were distinguished from *H.vulgare* parents by morphological observations, by cytological analysis of mitosis and meiosis and by pollen and plant fertility (5, 8). The interspecific hybrids represent valuable genetic stocks for the selection of possible substitution or recombinant lines (SLs or RLs). One difficult problem is the identification of rare RLs, obtained through relatively low intergenomic crossing over (13). A retrotransposon-like DNA sequence pSc119.1, cloned from *Secale cereale*, has been used to obtain PCR products which are capable to detect the introgression of *H.bulbosum* chromatin in *H.vulgare* genome. This sequence hybridizes very strongly to *H.bulbosum* DNA and only weakly to *H.vulgare* DNA. In this paper we report the preliminary test with pSc 119.1 sequences for rapid screening of the descendant's plants containing *H.bulbosum* chromatin. This first attempt with pSc 119.1 DNA marker has been done on the parental forms, *H.vulgare* 2x (DHLs) and *H.bulbosum* 2x and 4x, on diploid, triploid and tetraploid hybrids and on several putative recombinant lines.*

Key words: *H.vulgare*, *H.bulbosum*, interspecific hybrids, pSc119.1 DNA marker, chromatin introgression

HAPLOIDS AND DOUBLED HAPLOID LINES PRODUCTION BY ZEA SYSTEM IN TRITICUM DURUM AND TRITICALE

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Abstract

*The paper summarizes the results of several years' researches on haploid induction and doubled haploid lines (DHLs) production in *Triticum durum* and *triticales* by sexual hybridization with maize. It is reported the progress achieved by improvement of the protocol and by applying a specific auxin treatment that increases the rate of embryo formation and in vitro regeneration. The first Romanian winter durum wheat cultivar "Grandur" produced by Zea system was released in 2005.*

Key words: wheat-maize hybridization, plant growth regulators, haploid embryo, doubled haploid lines.

POPULATION GENETICS OF EUROPEAN FHB PATHOGENS AND THEIR IMPACT ON BREEDING FOR RESISTANCE

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Abstract

In the recent years the population genetics of the pathogens responsible for Fusarium head blight of wheat yielded significant new knowledge. The detection of the lineages within Fusarium graminearum revealing geographically different distribution attracted researches to analyze local populations more intensively on the side and put the question, what is the significance of this phenomenon on breeding efforts. In this survey F.graminearum and F.culmorum isolates were tested and compared with international standards. In the test series in vitro aggressiveness tests and toxin profile was tested, of the genotypic methods RAPD, IGS-RFLP and sequence analysis were used. The 30 Hungarian F.graminearum isolates were all DON producers and the same was true for the F.culmorum isolates. Most isolates produced zearalenone. The dendrogram based on combined RAPD and IGS-RFLP listed 27 haplotypes for the 30 Hungarian F.graminearum isolates while F.culmorum had less variability. F.graminearum lineage 7 dominated in Hungary, but F.bothii and a new species, F.vorosii was also identified. F.culmorum could be classified in the three different groups, a Hungarian, a western European and a North American group. They can be considered as lineages with similar parameters that were found at F.graminearum. 20 cultivars lines with different resistance were inoculated with eight lineages of F.graminearum and three representative isolates of the F.culmorum groups. Inoculation was made in full flowering in each of the genotypes. The severity of Fusarium head blight, Fusarium damaged kernels; yield reduction and deoxynivalenol/nivalenol contamination were measured. F.culmorum isolates were in general more aggressive to wheat than those belonging to the F.graminearum species complex. The various wheat genotypes exhibited similar reactions against the different Fusarium isolates, indicating that resistance to F.graminearum sensu stricto was similar to that for the other species of the F.graminearum species complex examinee. This is an important message to breeders as the resistance relates not only to any particular isolate of F.graminearum, but similarly to isolates of other Fusarium species.

Key words: Fusarium graminearum, Fusarium culmorum, Fusarium head blight, wheat.

STATION UNITS OF DEGRADED LAND IN THE HYDROGRAPHIC BASIN OF BISTRA MARULUI AND CONSEQUENCES OF DEGRADATION PROCESSES

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Abstract

The hydrographic basin of Bistra Marului, located on the northern slope of the Tarcu Mountains, is one of the areas affected by torrential phenomena and degradation processes in the historical Banat area.

Key words: ecological group, degraded land, erosion, station type, micro-climate, debris, highlands, berm deposits

OCCURRENCE AND PATHOGENICITY OF *PYRENOPHORA TERES* ON WHEAT IN HUNGARY

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Abstract

During routine surveys of wheat (Triticum aestivum L.) growing areas of Hungary, diseased leaf samples were collected from different wheat cultivars. Macro- and micromorphological examinations of single-spore isolates indicated that besides Pyrenophora tritici-repentis and Septoria species, P. teres occurred frequently on wheat leaves. Species assignment of these isolates was confirmed by sequence analysis of the intergenic transcribed spacer region of these isolates. Pathogenicity tests proved that P. teres can cause leaf damage on wheat. This is the first report on the pathogenicity of P. teres to wheat in Central Europe.

Key words: necrotrophic fungi, Pyrenophora teres, wheat

ON THE CORRELATION BETWEEN THE GROWTH PARAMETERS OF SOME VEGETATIVE APPLE TREE ORGANS AND THE DRIP IRRIGATION NORM IN THE CONDITIONS OF THE LOW BANAT'S PLAIN (ROMANIA)

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Abstract

In this paper, we present some aspects of the growth of the trunk and shoots in young apple trees correlated with the drip irrigation norm in the conditions of the low Banat's Plain. Drip irrigation optimized growth and development processes in young trees, granting them high vigour and quick fructification. The annual increase in thickness of the trunk and the increase in length of the shoots correlated positively and very significantly, isolatedly distinctly significantly with the rate of the irrigation norm at watering rates of 10, 20 and 30 mm. the coefficient of determination R² was very high, with values between 0,71-0,88 in trunk growth, higher in the Jonathan cultivar, and values between 0,79-0,99 in shoot growth, higher in the Delicios de Voinești cultivar. Maximum vegetative growth was in the watering norm of 30 mm, but the general aspect of the curves showed mainly growth potential et unused through irrigation.

Key words: apple tree, drip irrigation, vegetative growth

PERFORMANCE OF ROMANIAN AND HUNGARIAN CEREAL CULTIVARS FOR DISEASE RESISTANCE

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Abstract

Fungal diseases of wheat like leaf and stem rust as well as leaf spots are among the most important diseases of wheat and it's relatives. Development of diseases is influenced by resistance genes, virulence of pathogenes and environment. The climatic conditions in the South-Eastern part of Hungary and in the neighbouring Banat area of West Romania, which are among the most important cereal producing areas of both countries, are very similar. In a cross border cooperation project supported by European Union we initiated cooperations with agricultural institutions of this area. In this study compared the disease resistance of Hungarian and Romanian cereal cultivars, including winter and durum wheats, triticales, ryes and Triticum monococcums, at different locations and years. Winter wheat proved to be the most leaf rust susceptible species almost in all years and locations. It was followed, in order, by rye, durum wheat and triticale. T monococcum with some exceptions showed an unusually low infection. GK Verecke was the best in all years and locations. It was followed by GK Kalasz and Alex. Although the general stem rust infection was very low in all years investigated, some species/cultivars showed marked susceptibility to this disease. Rye was the most sensitive to stem rust as the infection appeared in each year. Out of the 10 winter wheat cultivars only the GK Petur and Alex showed infection in 2006. Considering the winter wheats, every cultivar proved to be susceptible to leaf spot diseases – the most susceptible was GK Verecke. In spite of the slight varietal differences significant location and year effect was observed. The T. monococcum were the healthiest among all species investigated both in Hungary and Romania. To reduce the time to transfer new effective resistance genes into new cultivars a marker assisted selection program was initiated in the Cereal Research Non-Profit Company in Szeged. In this program several resistance genes and winter wheat cultivars including two Romanian cultivars are involved.

Key words: wheat, triticale, rye, Triticum monococcum, leaf rust, stem rust, leaf spots, molecular marker

THE INFLUENCE OF RADIATIONS ON THE MITOTIC DIVISION TO GROUNDNUTS

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Abstract

The chromosomes (and genetic material), unique structures in alive cells, the carrier of the hereditary information can suffer as a result of irradiation treatments many lesions which in their ample determines perturbation in mitotic division unfolded. To the microscopic preparations from 9000 R X radiation variants, the mitotic index values have small differences comparing with 9000 R irradiated variants. Gamma radiations being more penetrate, determined a prolongation of mitosis length, but the mitotic index values are reduced.

Key words: radiations, mitotic division, groundnut, meristems tissue, cells, chromosomes, mitotic index

**STUDIES CONCERNING THE NECESSARY RAINFALL WATER IN AN
INTENSIVE APPLE TREE PLANTATION IN THE CONDITIONS OF THE LOW
BANAT'S PLAIN (ROMANIA)**

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Abstract

In this paper we present some aspects concerning the soil water regime from rainfall in relation to moisture requirements in an intensive apple tree plantation in the conditions of the poorly gleyed cambic chernozem in the Timisoara area. The evolution over 3 year pointed out warm climate features with a tendency to drought as rainfall regime cannot ensure moisture maintenance at the optimal level for intensive apple tree plantation all during the vegetation period which asks for irrigation. Rainfall during vegetation, summing up 164,5 mm in 2000, 483,1 mm in 2001 and 384,0 mm in 2002, resulted in intermittent periods of drought in 2000, in which irrigation became necessary. Biota specific conditions suit drip irrigation.

Key words: apple tree, water consumption, and hydric balance

**THE PRELEVATION EPOCH OF PEAR (*PYRUS COMMUNIS L.*) BRANCHES
AND MERISTEMS**

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Abstract

*A regeneration protocol was developed for ten pear (*Pyrus communis L.*) cultivars: Cure, Argessis, Euras, Carpica, Republica, Daciana, Getica, Ervina, Conference. According to the national and international researches carried out until recently with regard to branches and meristems prelevation epoch which lead to conclusion that the optimum period is vegetative pause, we initiated the experiment between 11-25 November 2005. In order to emphasize the optimum period of meristems prelevation (the beginning and the end of the vegetative pause), another experiment was initiated between 20-25 February with explants drawn directly from the field-grown trees.*

Key words: cultivar differentiation, meristematic dom

**THE EVALUATION OF VARIABILITY INDUCED BY GAMMA RADIATIONS
ON QUANTITATIVE AN QUALITATIVE TRAITS TO GROUNDNUTS
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Abstract

In the last years, it is using a new procedure of amplification of plants variability. It is about the treatment with some physical and chemical mutagen agents. It comes out that these can increase the frequency of mutations, establishing the spectrum diversification making a series of genetic perturbation, which can not do spontaneously. In this study it is presented the influence of gamma radiations and the fact that these can increase the individual variability and the morphological diversity of the groundnut genotypes as concerns some quantitative (one thousand seed mass) and qualitative (fats and protein content) characters of the groundnut.

Key words: induced variability, gamma radiations, quantitative and qualitative traits, groundnut

THE EFFICIENCY OF SOME HERBICIDES FOR CONTROLLING THE HERBS IN FIELD-GROWN TREES OF VOINEȘTI RESEARCH STATION, DAMBOVITA DISTRICT

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Abstract

For establish the efficiency of herbicides and the optimum doses to controlling the herbs from apple orchards, were developed the experiments for testing these. The preemergents herbicides were given before the herbs rising between the trees line, into the field mechanized worked or manually worked with hoe. The post-emergents herbicides were given when the herbs growing (15-20 cm height).

Key words: herbicide, orchard, soil

THE CORRELATIONS BETWEEN MORPHOLOGICAL AND PRODUCTIVITY TRAITS TO SUNFLOWER

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Abstract

There paper describes the correlations which were established between the characters who determine the sunflower productivity. These were established after the calculation of correlation coefficient. The correlation coefficients between the seeds production the MMB, the number of seeds on sunflower capitulum, the diameter of the sunflower capitulum and the number of leaves on stalk, have registered significant positive values. Between the seeds production and the content of oil from seeds was observed a powerful correlation that is distinctly significant, underlining the fact that, there are great chances of selection for the increased content of oil in seeds, if it aimed the continuous improvement of the seeds production. The significant negative correlation between MMB and the content of seeds leads us to the idea that, for improvement must be permanently observed the evolution of the two characters and to promote the genotypes that are not fitted in this correlation to avoid the excessive decreasing of seeds, once with the selection for a raised content of oil in seeds.

Key words: hybrid, sunflower, correlations coefficient, breeding value, genotype

SATURN – THE PROMISING ROMANIAN HYBRID IN SUNFLOWER BREEDING

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Abstract

The researches accomplished in the central area of Oltenia, have demonstrated the different reaction of some Romanian hybrids of sunflower, depending oh the genotype. The most performativ Romanian genotype of experienced sunflower had proved to be Saturn, these being able to be extended in culture and introduced in the programme of improving the sunflower, as parent of the creation, of new productive and sound hybrids.

Key words: hybrid, sunflower, variability, breeding value, genotype, objectives

THE EUROPEAN UNION LEGISLATIVE REFORM PLAN CONCERNING FRUIT AND VEGETABLE SECTORS

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Abstract

EU subsidies for processing fruit and vegetables, as well as export subsidies would be dramatically altered, according to a draft reform proposal authored by EU agriculture Commissioner Mariann Fischer Boel and due to be published on Wednesday. If EU farm ministers agree, the plan would decouple subsidies for producing and processing fruit and vegetables: EU jargon for breaking the link between how much a farmers produces and the amount of subsidy that he receives from Brussels.

Key words: legislation, vegetables, market, trade, regulation, Council, payment

CHALLENGES AND OPPORTUNITIES FOR EUROPEAN WINE'S LEGISLATION

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Abstract

The economic operators (vine growers, wine producers, traders, retailers) are primarily responsible for the adaptation of EU wine production to consumer requirements, in both quantitative and qualitative terms. The wine CMO should provide the regulatory framework to facilitate their action, while preserving the specificity of the product. This should allow the development of a modern and dynamic European wine industry that would be in a position to efficiency market European wines on the internal, as well as on the world market.

Key words: legislation, wine, market, production, Council, retailers, traders

ANALYSE OF THE LEGISLATION REGARDING AGRICULTURAL WATER POLLUTION IN THE EUROPEAN UNION

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Abstract

Agricultural water pollution is becoming a major concern not only in developed regions such as the European Union (EU) but also in many developing countries. The intensification of agricultural practices-in particular, the growing use of fertilizers and pesticides, and the specialization and concentration of crop and livestock production – has had an increasing impact on water quality. The main agricultural water pollutants are nitrates, phosphorus and pesticides. Rising nitrate concentrations threaten the quality of drinking water, while high pesticide use contributes substantially to indirect emissions of toxic substances. Increasing levels of nitrates and phosphorus in surface waters reduce their ability to support plant and animal life and make them less attractive for recreation.

Key words: pollution, quality, nitrates, pesticides, European Union

EFFECTS OF THE LIGHT AND GIBBERELIC ACID ACTION ON α -AMYLASE ACTIVITY TIME DEPENDENCE

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Abstract

In these studies was followed the effects of light and giberelic acid action on time dependence of α -amylase activity based on starch degradation, protein content (water soluble proteins) and specific enzyme activity.

Key words: protein content, giberelic acid, light, α -amylase

RESEARCH REGARDING THE PROTEIN CONTENT VARIABILITY IN SOME AUTUMN BARLEY CULTIVARS

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Abstract

In this experiment two methods were used to investigate the protein content variability of 19 autumn barley cultivars. For distinguishing of this cultivars the extracted protein were separated by SDS-PAGE in 35% acrylamide at pH 8,8 and the protein content using Gornall method showed qualitative differences between cultivars. Values for soluble protein grain content ranged between 76,31 – 82,89%, and for insoluble protein between 17,11-23,69%. The highest total protein content was observed on GK Kunsagi cultivar. The electrophoresis products have shown a high variability between autumn barley cultivars.

Key words: autumn barley, protein content, hordein

THE EFFECT OF CUTTING AT THE APPLE TREE CULTIVATED IN SUPER INTENSIVE SYSTEM REGARDING COPSE CULTIVATION AND FRUIT PRODUCTION IN ORADEA GROWING CONDITIONS

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Abstract

Fruit-bearing cutting at the apple-tree is a very important activity which the current and next year crops depend on, fruit-bearing cutting trying to establish a favorable balance for the growth and fructification of the trees. Even if the fruit-bearing cutting at the apple-tree has been known, as it has been studied by a lot of research and experts in the field of apple-tree growing, the present conditions and the more demanding market for a high-quality fruit production justifies the fulfilling of studies related to the best variants of cutting, so that a good crop should develop the best quality parameters for the fruit. In order to fulfill this requirement, it was considered necessary to perform an experiment of fruit-bearing cutting at the apple-tree, for the Starkrimson variety, in order to find out the best variants depending on the year's conditions and the physiological situation of the trees. The area where this study was carried out is placed inside a fruit-bearing perimeter (Oradea region) characterized as being favorable for the tree-growing. Starkrimson is a variety obtained in the USA the tree presents a medium vigor, of a type bearing the fruit on short fructiferous formations, it can be cultivated at high densities of 3003-5000

trees/hectare. It gives a good, constant production, but it is very sensitive at the scab. The fruit has a medium to big shape of 150-180 grams, in the shape of an elongated truncated cone, with a red and tinted skin. The pulp is white to yellow, greenish shadowed, having a medium, sweet and flavored consistency. Ripening and consumption stage lasts from the end of September until March.

Key words: apple tree, species, cutting, copse, growth, fruits, production, fruits quality, blossom inflorescence

THE BEHAVIOUR OF SOME VARIETIES OF APRICOT TREE NEWLY INTRODUCED IN THE CROP WITHIN ORADEA FRUIT GROWING ECOSYSTEM

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Abstract

Apricot tree is a very important fruit growing species, especially due to fruit quality and tree productivity. Apricots are very appreciated fruits both for fresh consumption and for industrialization. More than 70% of apricots production is used for industrialization, because the products are very flavored and refined. The apricot tree is quite productive, disease and pest resistant, but unfortunately it has a lot of defects that limit the spreading of this valuable species. Some of the defects are:

-the species blossom early and affected by the late spring hoar frost;

-the apricot tree requires: light, warmth, the texture and fertility of soil;

-along with the development of new species, the area of culture has extended and has adapted to a wide range of areas with different weather conditions;

-pedo-climatic factors within Oradea area are favorable for apricot tree growing, having the following characteristics.

The annual decreases and fluctuations in the fruit production determined by the variable climatic conditions from one year to another, being found in interaction with the cultivated varieties, have inspired multiple concerns in the scientific research and practical activities till now. The concept of modern ecology that includes the variety among the means of production as single beneficiary of the whole ecosystem within production, the assortment of varieties has a determining importance. By its dynamic character, the assortment, whether father plant can and must be continuously improved by halting from multiplication of the varieties with a low qualitative and productive potential, and the varieties recommended for multiplication by repetitive conservative selection must be improved and the newly created varieties within our country or newly introduced from the international assortment must be put into practice. For the improvement of the apricot tree assortment within Oradea fruit-growing basin, there have been studied six varieties, newly introduced in this area, some of them being introduced from abroad in comparative competition crop during the period 2003-2005. For comparison, Cea mai buna de Ungaria, was used as a control variety, still widely spread in production.

Key words: apricot tree, species, growth, fruits, production

TRANSITION OF AGRICULTURE/ECONOMY IN THE REPUBLIC OF SERBIA (ACHIEVEMENTS, EFFECTS AND LIMITATIONS)

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Abstract

The authors consider the current issues of the transition of agriculture in the Republic of Serbia, its achievements, effects and limitations. According to their opinion, the transitional reforms, so far, have not had the anticipated positive effects. The causes lie in the system itself. It is manifested in different ways: the developing instability of agriculture; unfavourable agrarian structure and decrease in productivity; decline of competitiveness; inefficiency of agrarian policy; the demographic drain and deterioration of villages; growing resistance to changes. The authors suggest the measures and activities for overcoming the existing conditions, so as to make the transition more efficient and easier to bear.

Key words: transition, crisis, agriculture, agrarian policy, resistance to changes, limitations

STUDIES REGARDING THE BREEDING VALUE OF AN ONION LOCAL LANDRACE COLLECTION

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Abstract

*The main purpose of our studies was to evaluate native biological material in order to establish the parameters of some characters with important role for the plant breeding process. The biological material consisted of 20 onion landraces propagated from bulbils (*Allium cepa*), and collected from Timis, Arad and Bihor counties. In order to compare the experimental results we have considered as control variant – Stuttgart variety. The largest variability was registered for bulbil weight. It has been observed that Satchinez I – TM, Pordeanu –TM, and Seleus – AR landraces presented double mean bulbil weight comparing the control. The studied local landraces can be successfully introduced in onion breeding programs and processed by selection, as parent forms or used for inbreeding.*

Key words: onion, landrace, breeding value

STUDIES REGARDING THE BREEDING VALUE OF HOT PEPPER LOCAL LANDRACE COLLECTION

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Abstract

The main purpose of our research was to evaluate the local biological material along with some bred forms in order to assess the parameters of some characters important for the breeding process and to establish different correlations. Among the studied forms, there were selected the future parental forms in order to initiate the breeding program in hot pepper. The studied hot pepper collection includes different forms that are strongly differentiated in terms of fruit size, immature and mature fruits and earliness. The studied local landraces will be processed by applied selection in order to obtain uniformity.

Key words: hot pepper, landrace, breeding value

THE INFLUENCE OF EXTERNAL ENZYMATIC MIXTURES ON THE PHYSICOCHEMICAL CHARACTERISTICS OF RED WINES FROM MINIS VINEYARD

MURESAN CLAUDIA, CHIS S., PALCU S., IVAN ELISABETA

Universitatea Aurel Vlaicu Arad

Abstract

In this study it was followed the evolution of physical and chemical characteristics of superior red wines from Burgund grapes variety obtained in Minis vineyard. Physicochemical analyses were made for the wine which pass through the maceration – fermentation technology in metallic rotation tanks, by adding external pectolitic enzymatic mixtures. During the hole period of study physical and chemical analyses were done beginning with the end of alcoholic fermentation, malolactic fermentation, at 3 months, 6 months, 9 months, 12 months, 18 months and after two years, as for the wines obtained with external enzymatic mixtures used during the maceration-fermentation process as for the one which weren't treated with enzymes. By adding external pectolitic enzymatic mixtures a positive influence of physicochemical characteristics for superior red wines from Burgund variety. This paper is a part of a vast study realized for superior red wines obtained in Minis vineyard.

Key words: extract, pectolitic enzymes mixtures, red wines

THE COMPARATIVE EVOLUTION OF RED WINES TOTAL POLYPHENOLS OBTAINED FROM BURGUND VARIETY IN MINIS AND MURLFATLAR VINEYARD

MURESAN CLAUDIA, CIUTINA V., CHIS S.

Universitatea Aurel Vlaicu Arad

Abstract

In this paper work it is following the comparative evolution of total polyphenols from superior red wines of Burgund variety obtained in Minis and Murlfatlar vineyard. The technological variant that was adopted was through maceration – fermentation in rotating metallic tanks and adding exogenous pectolitic enzymatic mixtures. The study was extended

for five years period of time, total polyphenols content was analysed from obtained red wines, in different technological process stages. It was concluded that exogenous pectolitic enzymes mixture utilization improve the quality of the obtained high quality red wines, from the viewpoint of the highest content in phenolic compounds. Usage of the external enzymatic mixtures is make up a technological optimisation for red wine obtaining, influencing in a positive way the sensorial features, physical and chemical features and their stability.

Key words: phenolic compounds, enzymatic mixtures, total polyphenols, antocians, red wines

PRODUCTIVITY OF THE APPLE ORCHARD WITH VARIOUS TYPES OF PLANTINGS

PESTEANU A.

Universitatea Agrară de Stat din Moldova

Abstract

It was investigated the influence of various designs of plantings at Idared and Delbard Estival varieties grafted on M 9 on their characteristic and yield average in one row planting, strips from 2 and 3 rows. It is established an opportunity of essential increase of potential of productivity of planting at accommodation of tree and formation of polyconic structure of crones in two-lower case plantings. In 2004 the highest productivity at Idared variety it has turned out at scheme of planting (3,5/l) x 1,5m -25,12 t/ha, and Delbard Estival variety (3,5 +1) x 1,2 m – 30,04 t/ha.

Key words: apple-tree, variety, rootstock, one row planting, strips from 2 and 3 rows, the scheme of planting, density of planting, yield, Moldova

RESEARCH CONCERNING THE HYDRIC BALANCE IN THE WESTERN AREA OF THE ZARAND MOUNTAINS

VANC. F*, PANDA V., ZARIE A.**, POPI-MORODAN C.***

**S.C.D.V.V. Minis, **SC. GEN. Vladimirescu*

Abstract

In the last year, Central Europe has had hydric deficit problems, with particular effects on agriculture, including the forestry ecosystem where drought occurs due to lack of water, along with other pressure factors. The research made has taken into consideration the hydric balance in proportion with the main factors: hydric supply through rainfall and evaporation, determined by the solar energy flux, along with other factors of minimal influence on the hydric balance.

Key words: mineral substances, the hydric balance, thermo-hydric activity

THE ECOLOGICAL FACTOR IN THE FORECAST OF PLANT PROTECTION

VANC F*., PODRUMAR T.*, POPI – MORODAN C(, VANC ANIȚA**, OANA MARIA*, DUMA M*

*S.C.D.V.V. Minis, **Gen. Sc. Vladimirescu

Abstract

Under the aspect of ecological interpretation of the environment factors, I didn't agree (the first author) with the amount of temperature degree, as analysis term and ecological determination. As a succession I referred to another method (1997) with more precise reflections in the eco-philology of the living beings (plants and animals). His interpretation method has its own history (Vanc F. , and colab., 1997), being considered of international originality (Cluj Napoca University, Geography College staff). The method revolves around a single factor - the time factor (in minutes).

Keywords: environment factors, biological balance, ecological interpretation.

RESEARCHES REGARDING THE SELECTION OF THE SPECIES AND VARIETIES OF FRUIT TREES FOR PRIVATE GARDENS

SILIVASAN M., DRAGANESCU E.

U.S.A.M.V.B. Timisoara, Facultatea de Horticultura

Abstract

There were investigated the species and varieties of fruit trees that may be used in landscape arrangements, in terms of the stock vigour, systems of crown and the space available. There is considered that for the green areas are especially interesting not only the crown cuttings to obtain spherical, pyramidal, columnar form which are similar to the natural ones, but, cordon, simple „U” and double „V”, Verrier system, etc.

Key words: low vigour, espalier, artistic forms

RESEARCHES REGARDING THE SUSTAINABILITY OF SPECIES AND VARIETIES FOR TRAINING IN ARTISTIC ESPALIER SYSTEMS

SILIVASAN M.

U.S.A.M.V.B. Timisoara, Facultatea de Horticultura

Abstract

The researches investigated in the sustainability of some species of fruit trees to the operation of cutting in artistic systems, vertical belt types. An artistic trained tree on an espalier, is more than a caprice of the horticulturist. If initially seems to be a laborious technique to obtain a small tree, is actually one of the most practical and recompensing gardening methods ever.

Key words: vertical belt, arching, training, boughs cutting.

RESEARCHES CONCERNING THE EFFECTIVENESS OF HERBICIDES AND MECHANICAL PRACTICES APPLIED TO CONTROL WEEDS FROM GRAPEVINE PLANTATION OF DIDACTIC STATION TIMISOARA

OLARU DANIELA NICOLETA

U.S.A.M.V.B. Timisoara, Facultatea de Horticultura

Abstract

Grapes are one of the most requested fruits among the consumers of all ages. Grapes are known as having increased energetic value as well food and medicinal qualities. The researches that have been performed between 2002-2004, were focused on studying the influence of control measures on weed extension in case of white wine grape variety Italian Riesling in the grapevine plantation of Didactic Station Timisoara. The main objective of the present scientific paper was to follow up the extent of weed control (%) as a result of applying post-emergent herbicides and mechanical soil practice on Italian Riesling.

Keywords: Italian Riesling, grapevine, herbicides, mechanical practices, weed extent.

STUDIES REGARDING PLANTS HIGH VARIABILITY FOR THE CULTIVAR DROPIA'S GAMETOCLONES AND SOMACLONES

DANCI M., NEDELEA G., DANCI OANA

U.S.A.M.V.B. Timisoara, Facultatea de Horticultura

Abstract

The biological material used for experiments was represented by 18 somaclones and 7 gametoclones, obtained though in vitro from two types of explants, anthers and immature embryos. The cultivar Dropia was taken as control. The somaclones and gametoclones of the cultivar Dropia were studied in two comparative cultures as for the randomized blocks by three repetition. Comparing the results obtained for the cultivar Dropia's somaclones and gametoclones on observed that the somaclones high is superior to the gametoclones high, but both are inferior to the control high.

Keywords: plants high, somaclones gametoclones, variability.

STUDIES CONCERNING THE CONCORDANCE BETWEEN DIFFERENT METHODS USED FOR TESTING GOLD TOLERANCE OF SOME BARLEY CULTIVARS

VELICEVICI GIANCARLA, NEDELEA G.

U.S.A.M.V.B. Timisoara, Facultatea de Horticultura

Abstract

In the present paper we have taken into study a collection consisting of autumn barley in order to test cold resistance and to study the concordance of different testing models. The genotype classification for cold resistance may be useful for identification of the best varieties and lines and to assess whether the same variety value is maintained by using laboratory testing methods. The classification of genotypes was done in terms of viable plant percentage in the study year 2003 considering that for this year climate conditions during winter proved to be harsh and allowed true differentiation of genotypes.

Key words: autumn barley, concordance coefficient.

**RESEARCHES CONCERNING THE CONTAMINATION WITH NITRATES,
NITRITES AND AMONIUM OF THE SURFACE AND UNERGRAOUND WATER
IN THE TIMIS AREA**

BALINT S., LAZUREANU A.

U.S.A.M.V.B. Timisoara, Facultatea de Horticultura

Abstract

The causes of the water contamination with Nitrogen compounds are: intensive agriculture, animal farms, precipitations and the levigation of Nitrogen compounds. The fertilization of the agricultural land with manure and sintetic nitrogen fertilizers leads to the growth of the nitrates concentration in soil, vegetation an water sources. The high quantity of nitrates in water produce a severe intoxication at suckling. The residual water and mud produced by the animal farms through the total content of nitrogen, produce the contamination with nitrate and nitrites of surface and underground water.

Key words: contamination, nitrate, nitrite, ammonium, spectrometric method.

**RESEARCHES CONCERNING STRAWBERRY FRUIT QUALITY AND THEIR
BEHAVIOUR UNDER THE ATTACK CAUSED BY VARIOUS DISEASES**

**BANCILA MARIUTA, MARINCA C., SIMERIA G., DAMIANOV SNEJANA,
CHIARITA RAMONA**

U.S.A.M.V.B. Timisoara, Facultatea de Agricultura

Abstract

*In order to renew the strawberry varieties and to re-initiate this crop, which has decreased significantly during the last years at the Fruit-growing Station Caransebes, we have organized in 2004, a strawberry crop including 7 varieties created in Romania or taken from abroad. Beside productivity, we have also supervised fruit quality in terms of their behavior under the attack caused by different disease – a decisional factor in the selection of the new variety. The testing was performed under conditions of abundant rainfall, during May and June; it was very difficult to choose with certainty the resistance group to which the analyzed varieties belong: Magic – slightly attached; Razvan and Miss B – intermediately attacked, varieties which will be surely present within the crop in this region for their quality and productivity, and also for their resistance to the attack caused by the fungi *Botryis cinerea* and *Mycosphaerella fragarie*.*

Key words: strawberry, quality, diseases

STUDIES CONCERNING THE BEHAVIOR OF SOME WINTER WHEAT VARIETIES CULTIVATED IN CRISURI PLAIN

SABAU I.*, NEDELEA G.**

*D.A.D.R. Bihor, ** U.S.A.M.V.B. Timisoara, Facultatea de Horticultura

Abstract

The present paper deals with the study of earliness and foliar disease resistance of an assortment comprising 21 native and foreign varieties in order to assess which prove the best suitability for cultivation in Crisuri Plain. With regard to heading and maturing phases, it has been observed that the period requested for grain formation and grain filling in case of control – Flamura 85 variety was of 41 days while Romulus, Boema and Ariesan were two days earlier than the control and Falnic, Gloria and Greti varieties with three days earlier, respectively. Taking in account both studied foliar diseases, it has been observed that most wheat varieties considered by us showed medium resistance. Dor variety registered superior resistance comparing the control for both diseases, in case of helminthosporiosis attacks the differences being statistically covered.

Key words: wheat, leaf diseases resistance, precocity

RESEARCHES CONCERNING THE YIELDING POTENTIAL AND SOME OF ITS CHARACTERISTICS IN WINTER WHEAT CULTIVATED IN CRISURI FIELD.

NEDELEA G.*, SABAU I.**

*U.S.A.M.V.B. Timisoara, Facultatea de Horticultura, ** D.A.D.R. Bihor

Abstract

The present paper refers to the study of yielding potential, TGW and multiplication coefficient of an assortment comprising 21 native and foreign varieties in order to assess the opportunity of seed propagation considering the ecological conditions of Crisuri Field. The yielding capacity for the studied varieties varied between 2398 kg/ha in Bezostaia and 3873 kg/ha in Gloria variety. The yielding capacity of the studied varieties registered amplitudes of 1475 kg. Thousand grain weight the experiment registered values between 41,90 g in Turda and 54 g in Ariesan variety with an amplitude of 12,10g. The propagation coefficient of the studied varieties presented values comprised between 10,12 in Bezostaia and 18,47 in Boema variety.

Key words: wheat, yield potential, TGW, multiplication coefficient

STUDY UPON THE BEHAVIOR OF NEW STRAWBERRY VARIETIES FOR THE RE-ESTABLISHMENT OF THIS CROP IN BANAT'S AREA

**BANCILA MARIUTA, MARINCA C., SIMERIA G., DAMIANOV SNEJANA,
CHIARITA RAMONA**

U.S.A.M.V.B. Timisoara, Facultatea de Agricultura

Abstract

In order to re-establish the strawberry plantations within Banat's area, with varieties adequate for the new requirements, we have studied in Caransebes 6 new strawberry varieties in comparison with the variety Red Gauntlet (the control variant). Concerning plant vigor and growth phenology, we have not observed many differences between the new varieties and the control variant Red Gauntlet. Fruit ripening begins with the variety Premial (20 May – 10-12 day earlier than the other varieties), and the varieties Idea and Elsanta extend fruit ripening until the end of June. The mean yield achieved from the control variant Red Gauntlet (11,8 t/ha) is overtaken by the yields achieved from the new varieties: Miss B – 19,6t/ha, Razvan – 17,6t/ha and even Elsanta with 12,8t/ha. With regards to fruit size and quality, we may remark the varieties Razvan 21g, Miss B 19g and Idea 18g.

Key words: versatility, yield, quality

DIFFERENT APRICOT PARENT STOCKS REVEALING AND SELECTION OF NEW ROOTSTOCKS FOR THE SPECIES APRICOT

VENIG AURORA

S.C.D.P. Bihor

Abstract

This paper represents a synthesis of research results performed between 1995-2006 at the Research and Production Fruit-growing Station Bihor, regarding the revealing and the selection of new rootstocks for eight selections for the apricot. In apricot, the selection Albe mici with 78 percent emergency, 772 thousand STAS rootstocks per ha, 171,1 cm² trunk growth in diameter, 12,444 m³/ha crown value 23,7 t/ha fruit yield.

Key words: apricot, selection, rootstocks

ESTABLISHMENT OF THE SUITABLE PARENT STOCK FOR PLUM AT S.C.D.P. BIHOR

VENIG AURORA

S.C.D.P. Bihor

Abstract

The obtained results are concerning establishment of the most suitable parent stock for the species plum in the North-Western part of the county, at S.C.D.P. Bihor from the 7 years used for the research: C-5, CPC, Renclod Verde, Scoldus, Rosior de Iasi, Rosior de vara, Albe mici. Regarding the made analysis and the registered information, the best results were obtained at the parent stock CPC homologated by I. Dutu at I.C.P.P. Pitesti and the results were registered at the parent stock Albe mici that was homologated at S.C.D.P. Bihor for apricot species.

Key words: plum, suitable parents

RESEARCHES CONCERNING THE FRUIT YIELD AND QUALITY OF SOME DWARF TYPE PEACH HYBRID PROGENIES

LASLAU AMALIA LAURA

Abstract

Intensive and super-intensive peach culture require reduced tree heights and vigor that insure large tree densities per hectare and total mechanized cultural practices of the species. The experimental results regarding fruit yield for all 13 hybrid progenies of dwarf type selected from Bonanza x Springerest hybrid combination allowed the identification of some highly productive genotypes (5,5-6,2 t/ha) such as Oradea 9 and Oradea 13 in the forms cultivated on own roots and in Oradea 14 grafted on rootstocks . With regard to quality traits, it has been observed that fruit weight is medium to small in own root forms while grafted forms presented medium to large forms In comparison with standard varieties, dwarf forms registered inferior fruit weight. The weight of fruit stones and its proportion in the fruit flesh is smaller in grafted forms in comparison with grafted forms and even comparing with standard variety (mainly Oradea 7, Oradea 3 and Oradea 8 progenies).

Key words: peach dwarf type, fruit yield, hybrid progenies

EXPERIMENTAL RESULTS CONCERNING THE TREE GROWTH VIGOR OF DWARF TYPE PEACH HYBRID PROGENIES

LASLAU AMALIA LAURA

Abstract

The researches concerning the growth vigor of dwarf type peach species were developed in the period 2001-2004 SCP Oradea. The researches concerning growth vigor of trees representing dwarf type peach hybrid progenies, selected from Bonanza x Springerest. Hybrid progenies of dwarf type registered reduced growth vigor (significant inferior values comparing with the experience mean for all studied characters) and they may serve as initial material for elite selection and that could be later used to obtain new varieties of dwarf peach trees with reduced vigor and that enable to increase planting density at surface unit.

Key words: peach dwarf type, growth vigor, hybrid progenies

GROWTH AND DEVELOPMENT OF APPLE TREES IN THE FRUIT NURSERY ACCORDING TO THE METHOD OF CROWN FORMATION

GUDUMAC E.

Universitatea Agrară de Stat din Moldova

Abstract

In the fruit nursery of the mixed industrial unit "Fruit Nurseries" were studied some more methods that stimulate the branching and growth of sylleptic shoots in the fruit tree crown zone, the trees being bench grafted of "knip-baum" type. Knip-baum with free growing (the control variant); knip-baum with the application of biological active Delicious Reinders, Jonagored, and Idared. The distance of plantation is 90x35 cm. It was established that the best method of crown formation on apple trees in the second field is "knip-baum" type with periodical elimination of apical leaves from the axle where the fruit trees have registered a height of 167,9-181,1 cm, the trunk diameter is 15,2-16,0 cm, the average number of sylleptic shoots being 8,6-12,7 cm pieces/tree with an average length of 34,2-54,2 cm.

Key word: fruit nursery, bench grafting, apple tree, knip-baum, sylleptic shoots, growing stimulators.

RESEARCHES CONCERNING GROWTH AND WOOD MATURING OF SOME GRAPEVINE VARIETIES CULTIVATED IN BUZIAS-SILAGIU VITICULTURAL CENTER AFTER A COUPLE OF YEARS FORM PLANTING

DOBREI A., MALAESCU MIHAELA, DARABUS RODICA, GHITA ALINA,
CRISTEA T.

USAMVB Timisoara, Facultatea de Horticultura

Abstract

Researches were done in Buzias-Silagiu viticultural area and were focused on seven table and wine grape varieties, having in view data concerning total annual growth and matured annual growth after a couple of years from planting. At the end of the first year total annual growths vary between 0,31 m/vine in case of Muscat de Hamburg variety and 0,958 m/vine in case of Cabernet Sauvignon variety. At the end of the second year the average matured shoot length vary between 0,39 m at Muscat de Hamburg variety and 0,79 m at Cabernet Sauvignon variety, on this last variety being possible this year even trunk forming.

Key words: wine grape varieties, matured annual growth

RESEARCHES CONCERNING GREEN-PRUNING INFLUENCE UPON APRICOTS SIZE

GHITA ALINA, DRAGANESCU E.

USAMVB Timisoara, Facultatea de Horticultura

Abstract

Positive influence of green-pruning upon apricot tree has been known for long period of time, it's application remaining still reduced due to the fact that requires a lot of work force. The apricot tree in one of the fruit – growing species very appreciated by consumers due to their qualitative features and also to tree precociousness and productivity. Researches had been made on trees planted in the 2000, on three varieties with different ripen epochs: Traian, Mamaia and Litoral upon which has been executed cuttings in different moments of the offshoots growth. We have had in view the influence of these cuttings upon apricots size, fact for which measurements have been made and calculus in order to determine fruit's biometrical elements.

Key words: apricots, green-pruning, offshoot

ON THE EFFICACY OF POST-EMERGENT HERBICIDES ON WEEDS IN *LOLIUM PERENE* CULTIVATED FOR SEED PRODUCTION

ALDA S., LAZUREANU A., CARCIU G., MANEA D., ALDA LIANA

USAMVB Timisoara, Facultatea de Horticultura

Abstract

Weed control with herbicides is a major concern nowadays with a view to crops. During the study period (2005-2006) we tested to see which of these herbicides is best suited for weed control in this crop. The highest efficiency in weed control in 2005 was when treated with the herbicides Lancet 1,25 l/ha (86,48%) and Mustang 0,5 l/ha (85,06%) and in 2006 the maximum percentage in weed control was when treated with the herbicide Mustang 0,5 l/ha (91,94%) and Lancet 1,20 l/ha (89,36%), respectively.

Key words: *Lolium perene*, herbicides, weeding degree

ON THE IMPACT OF SOME HERBICIDES APPLIED AT DIFFERENT TIMES ON EFFICACY AND PRODUCTIVITY IN TWO WINTER WHEAT CULTIVARS

CARCIU G., LAZUREANU A., MANEA D., ALDA S., POPOVICIU LENUTA

USAMVB Timisoara, Facultatea de Horticultura

Abstract

Trial research was carried out in 2006, and aimed at assessing herbicide tolerance in winter wheat cultivars (Dropia and Alex). We testes 6 herbicides applied at 3 different times. Dicamba herbicides had obvious phyto-toxic symptoms in the 2 winter wheat cultivars. Weed control degree had the highest values when herbicides were applied in the union stage – the formation of the first interknot (~95%). The highest yields were when treated in the 2-3 interknot stage, i.e. 5,338-5,530 kg/ha in the Dropia cultivar and 4,839-4,956 kg/ha in the Alex cultivar.

Key words: herbicides, time of application, weeds, production

RESEARCHES CONCERNING THE DETERMINATION OF ANTHOCYANIN FRACTIONS USING THIN LAYER CROMATHOGRAPHY FROM VITIS VINIFERA L. CELL LINES

LAZAR A., NEDELEA G.

USAMVB Timisoara, Facultatea de Horticultura

Abstract

The total anthocyanins extracted from callus cells were analyzed using thin layer cromathography method (TLC). The obtained chromatograms for cell cultures showed the presence of three anthocyanins in different proportions.

Key words: anthocyanin, natural colors, Vitis cell cultures, TLC.

ON THE IMPACT OF SOME AGRICULTURAL TECHNIQUES ON QUANTITY INDICES IN TWO WINTER WHEAT CULTIVARS

ALDA LIANA MARIA, LAZUREANU A.

USAMVB Timisoara, Facultatea de Horticultura

Abstract

Researches were performed in the experimental field belonging to the discipline of Agrotechnology, located at the Didactic Station Timisoara, in 2005 and 2006. The experiment was placed on a cambic chernozem, medium levigated, slightly gleyed, clay-loamy, with a humus content of 3,41%, medium provided with mobile phosphor (17,8 ppm), with a high content in assimilable potassium (187,6 ppm) and neuter reaction (pH 6,85) within the arable horizon. In terms of climate, monthly average temperatures and rainfall recorded in 2005 and 2006 had similar values like the multiannual means. In 2005, the highest yields of 55,66 q/ha and 50,46 q/ha were in the winter wheat cultivars Alex and Romulus in the variants fertilized with $N_{150}P_{60}K_{60}$ and treated with Icedin 1 l/ha. In the experimental year 2006, the highest yields of 44,83 q/ha and 43,05 q/ha were in the winter wheat cultivars Alex and Romulus in the variants treated with $N_{150}P_{60}K_{60}$ and with Icedin 1 l/ha.

Key words: autumn wheat, herbicides, weeding, weeds control degree, yield

RESEARCH CONCERNING THE IMPACT OF HERBICIDES AND TILLAGE ON WEEDING AND YIELD IN GRAIN MAIZE

MOTROC P., LAZUREANU A.

USAMVB Timisoara, Facultatea de Horticultura

Abstract

Research was carried out in 2002 and aimed at monitoring the impact of herbicides and tillage on weeding and grain maize yield. The number of tillage in the control variant was 216,40 weeds/m². Echinochloa crus galii, Setaria glauca, Convolvulus arvensis and Cirsium arvense were predominant weeds. After applying control measures, the control degree had values between 80,16% and 92,25%, while yield oscillated between 59,26 q/ha and 67,92 q/ha, respectively.

Key words: grain maize, weeds, herbicides, tillage, control degree, and yield.

ON THE EFFICIENCY OF HERBICIDES ON WEEDING AND YIELD IN WINTER WHEAT

MUNTEAN DOINA ALEXANDRINA, LAZUREANU A.

USAMVB Timisoara, Facultatea de Horticultura

Abstract

Research was carried out in the agricultural year 2000-2001, and aimed at assessing the efficiency of herbicides on weeding and crop in winter wheat. The most widespread weeds were Cirsium arvense, Galium aparine, and Stellaria media. After applying herbicide treatments, weed control degree had values between 80,03% and the crop oscillated between 38,20% q/ha and 43,84 q/ha, respectively.

Key words: winter wheat, weeds, herbicides, control degree, and yield

CELL BIOMASS PRODUCING TO VITIS VINIFERA IN DIFFERENT SYSTEM CULTURES

BOTAU DORICA, LAZAR A., BUT S.

USAMVB Timisoara, Facultatea de Horticultura

Abstract

We studied the cell biomass growth of three Vitis vinifera genotypes in different system cultures on solid and liquid medium, with a view to isolate some cell lines with high proliferation capacity. The genotype and inocul amount influence the cell biomass producing. The liquid medium promoted a good growth of cell biomass. The Pinot Noir genotype showed the best results of cell biomass growth.

Key words: Vitis vinifera, callus, genotype influence.

THE RESPONSE OF SOME ANNUAL FLOWER SPECIES SEEDLINGS TO DIFFERENT NUTRITIVE SUBSTRATES

ASAFTEI VASILICA IONELA, BALA MARIA
USAMVB Timisoara, Facultatea de Horticultura

Abstract

The nutritive mixture used to produce seedlings plays an important role in obtaining best quality plants and considering this they must meet the following criteria: good structure, permeability and richness in nutritive elements.

Key words: annual flower species, nutritive mixture, seedlings.

RESEARCHES CONCERNING VIGOUR INFLUENCE OF ORNAMENTAL VEGETABLE PLANTS OF BRASSICA GENUS UPON PLACING MANNER IN LANDSCAPING

ASAFTEI VASILICA IONELA, BERAR V.
USAMVB Timisoara, Facultatea de Horticultura

Abstract

The placement of vegetable species within exterior landscape designs is based on the knowledge concerning some landscape characteristics of plants and their biological and ecological requirements.

Key words: landscape designs, ornamental vegetable species.

SEED STANDS OF TIMIS COUNTY

HERNEA CORNELIA, VISOIU DAGMAR, SARAC I., POSTA DANIELA
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Abstract

Seed stands from Timis county cover an area about 961,9 ha, 700,3 ha represent effective area. There have been selected seed stands for silver fir, Norway spruce, Douglas fir, European larch, European black pine, Scots pine and also for oak, durmast oak, Turkey oak, pin oak, beech, ash. This means that seeds with the best quality from a large variety of species can be assured.

Key words: seed stands, broad-leaved trees, silver fir-Norway spruce, genetic resource conservation.

ASPECTS REGARDING INTRAPOPULATION VARIABILITY OF *ACER PSEUDOPLATANUS* STEM CHARACTERISTIC

HERNEA CORNELIA

USAMVB Timisoara, Facultatea de Horticultura

Abstract

Sycamore maple (Acer pseudoplatanus) is common in European beech stands and sessile oak stands from the region of the hill as well as in the fir-Norway spruce stands from the region of mountain and also go up to the limit of the woody vegetation.

The researches made in mixed stand with sycamore maple in composition showed the differences between stem characters.

Key words: sycamore maple, breast height diameter, height, ovality, slenderness index.

ASPECTS REGARDING INTRAPOPULATION VARIABILITY OF *ACER PLATANOIDES* STEM CHARACTERISTIC

HERNEA CORNELIA

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Abstract

Norway maple is covering a spectrum from plain area to the mountain. Is common in plain mixed hardwood forest and hill mixed hardwood forest, sometimes can be found in European beech stands and European beech silver fir-Norway spruce stands.

Research was carried out in mixed stands and showed differences between stem characteristics.

Key words: Norway maple, variability, breast height diameter, height tree, slenderness index.

CORRELATION BETWEEN *ACER PSEUDOPLATANUS* STEAM CHARACTERS

HERNEA CORNELIA

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Abstract

Variability of the character can be express using index of dispersion but we use the correlation analyze to establish mutual influence between characters.

Key words: sycamore maple, correlation, breast height diameter, height, ovality, pruning, crown diameter.

TWENTIETH-CENTURY GARDENS OF BRITAIN

STEFAN CAROLINA, DAGMAR VISOIU, HERNEA CORNELIA, ASAFTEI
IONELA

USAMVB Timisoara, Facultatea de Horticultura

Abstract

Perhaps the greatest influence on modern gardens is the mid-nineteenth-century love of compartments. In the larger gardens of the later nineteenth and earlier twentieth centuries compartmentalisation was a device that enabled their owners to create "themed" sections based on plant type, forms or colors. At latter in particular both the ancient house and the compartmentalized garden produce many both the ideal and idealized English country setting.

Key words: landscape, garden.

POSSIBILITIES OF USING PERENNIAL FLOWER PLANTS IN LANDSCAPING

BALA MARIA, ASAFTEI VASILICA IONELA, JURJ ARIELA

USAMVB Timisoara, Facultatea de Horticultura

Abstract

The vegetation used in landscaping is very varied de from vary tall trees until the beautiful turf. But what is more important is that there should be harmony between all the elements that are used, so that the effect upon human been to be of relaxing and not of aggressing.

Key words: perennial flower plants, green spaces

CYCOGAN TREATMENTS EFFECT UPON GROWTH AND FLOWERING TO SOME PELARGONIUM SPECIES IN CONDITIONS OF FLORICULTURE DEPARTMENT TIMISOARA

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*USAMVB Timisoara, *Facultatea de Horticultura, **Facultatea de Agricultura*

Abstract

The treatments with Cycocel has more effects upon growth and flowering to flower plants, hurries flowering process with 2-3 weeks, increase number of offshoots and flowers on the plants. In this paper we followed the effect o Cycogan treatment upon Pelargonium genus to which the planting material can be obtained relative easy through generative and vegetative methods.

Key words: Cycogan, offshoots capacity, number of flowering

THE INFLUENCE OF SOME CHEMICAL SUBSTANCES USED IN CONTROLLING *CYDIA POMONELLA* ON JONATHAN APPLE TREE VARIETY

IORDANESCU OLIMPIA ALINA*, MICU ROXANA*, SIMERIA G.**,
DAMIANOV SNEJANA**, BLIDARIU AURICA*, AERTS R.***, VER BERNE
A.***

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***Katolieke Hageschool Kempen Geel, Belgia*

Abstract

*Like in most parts of the world, the codling moth *Cydia pomonella* L. is one of the most important pests in apple orchards in the Romanian Banat's region. It damages especially the apple tree and the pear tree and the attack has two forms: primary (when fruits are damaged superficially) and secondary (when fruits are severely damaged and they present galleries and excrements). In first generation the unripe damaged fruits stop growing and they will fall down. The secondary attacks hurry the maturity of fruits and their falling down. The control of this pest is often inadequate and the damage and economic losses are therefore enormous. This lack of control is caused by structural problems such as the absence of an advanced distribution network for phytopharmaceutical products, absolute spraying equipment, the insufficient exchange of knowledge and expertise of those products and the codling moth itself between the local research facilities and the actual apple growers.*

Key words: pheromone traps, chemical substances, codling moths

THE INFLUENCE OF PRUNING UPON VEGETATIVE GROWTH TO JONATHAN APPLE TREE VARIETY IN CONDITIONS OF FRUIT TREE PLANTATION OF THE DIDACTIC STATION TIMISOARA

VER BERNE A.*, AERTS R.*, IORDANESCU OLIMPIA ALINA**, DRAGANESCU
E.**, MICU ROXANA**

**Katolieke Hageschool Kempen Geel, Belgia, ** USAMVB Timisoara, *Facultatea de
Horticultura*

Abstract

Pruning represents taking away some branches of the fruit tree because of the following reasons: first of all to give the wanted shape to the fruit tree; to correlate the growth and fruiting of the tree (these two feature, the growth and the fruiting are opposite one of the other; realizing fruiting pruning we can achieve each year more and more fruits of a better quality and at the same time for a long period); to reduce fruiting (by pruning we want to obtain good and quality harvest, we can also obtain big harvest, but in this case the quality won't be the same); to obtain and maintain the balance of the fruit tree, a balance between fruiting and growth, between the vegetative and fruiting branches and between the central and periphery branches; to take away the wounded and invalid (ill) branches.

Key words: pruning, vegetative growth, apple tree

THE SEASONS SUCCESSION IN FLORAL ART

IODANESCU OLIMPIA ALINA, BALA MARIA

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Abstract

The season succession represent a second principle that importance in Japanese floral art – ikebana. Through this principle, the Japanese demonstrate the veneration and respect for landscape, for nature and for all things who around they. Only using season plant it is possible a harmony with the nature. The seasonal character of flower arrangement is the better emphasize through using a season plants harvests in our garden or surroundings. Out of ikebana styles, Moribana is to suitable for this principle, this style are know “natural style” because represent the often a nature imagine.

Key words: seasons, ikebana, endemic material

RESEARCH CONCERNING THE POLLEN GERMINATION OF SOME NUT TREE BIOTYPES IN BANAT

BLIDARIU AURELIA*, IORDANESCU OLIMPIA ALINA*, DRAGANESCU E.*, MIHUT CASIANA, CHIS S.*****

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Abstract

The group of must species of whose main representative specie is the nut tree Juglans regia is known all around the world and also in our country from ancient times. The main way of nut tree’s multiplication is by seeds and this offers a great genetic variability, which confers a large spreading area for a long time till nowadays.

Key words: pollen, pollination, nut tree, biotypes

STUDIES CONCERNING THE VARIABILITY OF SOME YIELD COMPONENTS OF GARDEN PEA (*PISUM SATIVUM L.*) VARIETIES CULTIVATED IN BANAT’S CLIMATE CONDITIONS

SULEA DIANA, NEDELEA G.

USAMVB Timisoara, Facultatea de Horticultura si Silvicultura

Abstract

*The main purpose of our studies was to evaluate native and foreign biological material in order to establish the parameters of some characters with important role the plant breeding process. The biological material consisted of 17 garden pea varieties and landraces (*Pisum sativum L.*). In order to compare the experimental results we have considered as control variant – Ialomita variety. The largest variability was registered for the yield element –seed weight per plant. It has been observed that if we are to compare the results with those obtained for control – Ialomita variety, most varieties achieved conspicuous yield increase rates for the character – seed production per plant. Considering the agronomical performances of these varieties and local landraces, they could be successfully introduced in garden pea breeding.*

Key words: Garden pea varieties, yield components, seed weight, number of seed, breeding value

CHARACTERIZATION OF THE SPECIES *ALCHEMILLA CRINITA*

BORUZ VIOLETA

Univeristatea din Craiova, Gradina Botanica – “Al. Buia”

Abstract

Alchemilla crinita, a common species in the flora of Romania, is thoroughly analyzed from the taxonomic, ecologic, coenologic, chorologic and even blastogenic point of view.

Key words: Alchemilla crinita, taxonomy, chorology, coenology, Romania

SLIDING REGIMES ON PLANE SIEVES

ILEA R., TONEA CORNELIA, PILOCA L., POPA D., DRAGOI G.

USAMVB Timisoara, Facultatea de Horticultura

Abstract

It is considered the dynamic model for the work of plane sieves, used in a series of agricultural processes, like the separation of agricultural seeds. The model consists in a particle that can move on a plane witch execute vibrations on certain directions. There are considered motions of particle with sliding for witch the conditions of realizing of the regimes are established yet. The motion modes of the particle on the plane sieves are studied in the case of driving by crank and connecting rod assembly. There are determined the extreme values of the dimensionless function, characteristics that delimit the different possible motion regimes. These values are extremely useful in the sieve design.

Key words: plane sieve, dynamic model, sliding regimes

TILLAGE SYSTEM'S INFLUENCE UPON ENERGETICALLY CONSUMPTIONS IN MAIZE CROP IN S.D. TIMISOARA

POPA D., TONEA CORNELIA, ILEA R., DRAGOI G., PILOCA L.

USAMVB Timisoara, Facultatea de Horticultura

Abstract

This paperwork presents the influence of tillage methods upon fuel consumption, one of the basic requirements of a profitable agriculture. Experiments were carried out in the soil conditions of the Didactic Station from Banat's University of Agricultural Sciences and Veterinary Medicine, Timisoara (Timis county) between 2003-2005. We used two soil-working methods: conventionally technology and no-tillage technology.

Key words: fuel intake, direct drill, maize crop

RESEARCH ON THE MIC-500 CHEMICAL SOLID FERTILIZER SPREADER

PILOCA L., TONEA CORNELIA, ILEA R., POPA D., DRAGOI G.

USAMVB Timisoara, Facultatea de Horticultura

Abstract

This paper presents the results of a research concerning the MIC-500 chemical solid fertiliser spreader equipped with a centrifugal fertiliser distributor for different working widths. The study concerns work quality indices, energetic indices, and exploitation indices compared to agro-technical, energetic and exploitation requirements.

Key words: centrifugal solid fertilizer distributor

THE EFFECT OF THE THERMIC DISINFECTION METHODS OF CELLULOSE NUTRITIVE SUBSTRATUM AND OF SYSTEMS OF VENTILATION ON THE PRODUCTIVE POTENTIAL OF *PLEUROTUS* 7 BIS AND H K-35 HYBRIDS

HORGOS A., MEDELEANU A.

USAMVB Timisoara, Facultatea de Horticultura

Abstract

*Thermic disinfection of the cellulose nutritive substratum has as a purpose the destruction of the damaging organical structures and of competitive mushrooms which can be found in the initial cellulose material. This operation needs the highest electric power consumption, but it must be done, in the present the thermic treatment has the supremacy. In this paper ins presented a new method of thermic treatment with a lower consumption of electric power and also the effect of this one on the manifestation of the productive potential at two *Pleurotus*, 7 Bis and H K-35 hybrids.*

Key words: thermic disinfection, nutritive cellulose substratum, electric power consumption, productive potential, hybrid

THE ECONOMIC EFFICIENCY OF THE *PLEUROTUS* MUSHROOMS ON A NUTRITIVE SUBSTRATUM OF FIR SAWDUST WITHIN THE CONDITIONS OF THE DIDACTIC STATION FROM TIMISOARA

MEDELEANU A., HORGOS A.

USAMVB Timisoara, Facultatea de Horticultura

Abstract

*The obtaining a quality production of *Pleutotus* mushrooms needs to be assured some basic conditions regarding the preparation of a quality nutritive cellulose substratum, the assurance of some optimum parameters of the microclimate from the crop building and the use of some stems or performant hybrids. In this paper are presented the experimental results in order to establish the economical efficiency of a *Pleurotus* mushrooms crop using the hybrids 7 Bis and HK-35 under the conditons of searching for an alternative method of disinfections of the nutritive cellulose substratum (method by scalding) to the method by boiling the one recommended by the specialized.*

Key words: productions, nutritive cellulose substratum, microclimate, hybrids, economical efficiency, method

THE INFLUENCE OF FERTILIZATIONS WITH COMPLEX FOIL FERTILIZER OVER THE PRODUCTION OF THE TOMATO HYBRID JEREMY F1 IN GREEN HOUSES WARMED BY GEOTHERMAL WATER

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USAMVB Timisoara, Facultatea de Horticultura

Abstract

The modernization of the technology of the tomatoes crop in industrial green houses of classic Venlo type requires actions of improvement of some overwhelmed technological links from the classical technology, permitted by the mentioned constructive type of green house. One of the technological links that can be improved is the one of the crop fertilization in general. In this paper are being presented the influences over the production after administrating foil to some local complex fertilizers.

Key words: crop technology, green houses, fertilization, complex fertilizer, production

THE MANIFESTATION OF THE PRODUCTIVE POTENTIAL AT THE HYBRID CORNICHON AMOUR F1 UNDER THE INFLUENCE OF THE FERTILIZATIONS WITH COMPLEX FOIL FERTILIZERS IN GREEN HOUSES WITH NOTCONVENTIONAL ELECTRIC POWER CONSUMPTION

HORGOS A., MUNTEANU DOINA, BECHERESCU ALEXANDRA

USAMVB Timisoara, Facultatea de Horticultura

Abstract

The introduction of the cornichon cucumbers crop into the industrial green houses from our country 20 years ago had at the base economical reasons as for exemple to reduce the electric power consumption, the demands every time bigger of the industry, both in internal and external plan, at a price of valorification extremely convenient, etc. At the present time the motivations of cornichon cucumbers crop ar, in general, the same, but bigger productions must be obtained in order to grow the advantageousness of the crop. In this paper are shown the obtained results regarding the growing of the production of cornichon cucumbers as a result of using some local complex liquid fertilizers, with extraradicular application.

Key words: crop, cornichon cucumbers, green houses, energetically consumption, industry, production, fertilization, complex fertilizer

STUDY UPON SOME AUTUMN OAT CULTIVARS RESISTANCE TO CROWN RUST (*PUCCINIA CORONATA* VAR. *AVENAE*)

MURESAN NORA*, NEDELEA G.**

**C.R.-Buzias, **USAMVB Timisoara, Facultatea de Horticultura*

Abstract

Whatever the amelioration method is, we must find the resistance sources. For this , it is essential to study the germoplasm. This study has aimed at the assessment of some autumn oat cultivars with regards to oat crown rust, in order to find out the forms resistant to the pathogen agent spectrum present in the area around Timisoara. This study has been performed on a collection of 73 autumn oat genotypes, in a collection field, under conditions of natural infection. Comparing the attack levels in the three experimental years, we may observe that the highest level was in 2005, and the lowest in 2004; the attack level in 2003 was similar to that in 2004.

Key words: autumn oat, cultivars, crown rust

STUDIES CONCERNING THE VARIABILITY OF PLANT HEIGHT IN A COLLECTION OF AUTUMN OAT GENOTYPES

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*C.R.-Buzias, **USAMVB Timisoara, Facultatea de Horticultura

Abstract

The aim of these tests was to find out short-plant genotypes, falling-resistant. Oat plant stem is correlated to falling-resistance. Its reduction is important, although it does not solve this deficiency. This study has been carried out on 73 autumn oat genotypes, in a collection field under conditions of natural testing, during 3 years. Attack assessment was performed with the help of the qualitative method, with qualificatives belonging to the scale 0-9. The values recorded for plant height range from one year to another depending upon the weather conditions. Comparing the data for the three experimental years, we may notice that the ameliorated varieties maintain their position within the classification, although the values differ from one year to another, but local lines and populations appear in extreme classes only in some of the years. The autumn oat studied includes valuable forms for the process of amelioration. Beside the most acceptable-height plants for a good falling-resistance, there are also some forms with a very short height, that could be used as genitors, even in oat amelioration.

Key words: autumn oats, genotypes, plant height

RESEARCH REGARDING THE SOIL PREPARING SYSTEM FOR PLANTING PEACH TREES

BALAN V.

Universitatea Agrară de Stat din Moldova

Abstract

*The processes of growth and fructification of peach trees, variety Moldavschi joltyi grafted on *Persica vulgaris* L. depend on soil tillage before planting of orchard have been studied. Both trees vigor and fructification depended on training of orchard and tillage of soil before trees planting.*

Key words: peach trees, soil tillage, variety

BASES TO THE NUTRITIVE SUBSTANCES REQUIREMENT DETERMINATION IN PLANTATIONS

BALAN V.

Universitatea Agrară de Stat din Moldova

Abstract

The investigations have been undertaken at Didactic Experimental Station Criuleni and Chetrosu of Agrarian State University of Moldova from 1970 to 2002 using the methods of biological inspection of plantations and initiation of the field experiments. A lot of phytometric, physiological, agrochemical measurements and statistics accompany these studies. A method of estimation for the quantity of the fertilizers based on agrochemical indices and correlation of nutritive elements has been proposed.

Key words: fruit species, fertilization, nutritive element, productivity

MANAGEMENT OF APPLE SCAB (*VENTURIA INAEQUALIS*) IN ROMANIA BASED ON ELECTRONIC WARNINGS

AERTS R.*, HELSEN J.*, IORDANESCU OLIMPIA ALINA**, MICU ROXANA**,
ANGHELACHE I.**, NICORICI N.**, CALIN C.**, BLIDARIU AURELIA**,
SIMERIA G.***, DRAGANESCU E.**, VER BERNE A.*

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Abstract

Apple scab, Venturia inaequalis (Cke) Wint., is a major problem in Romanian apple orchards and is responsible for serious economic losses. The purchase of spraying equipment and phytopharmaceutical products is very expensive in comparison to the income of local apple growers. This is one of the reasons why reduced fungicide sprayings are becoming more and more important. This experiment took place in an orchard of the university of Timisoara (USAMVB), where occurrence of apple scab was very high, and in a well managed commercial orchard, both in the Banat region. In July 2006, a comparative study between a traditional Romanian management program, a calendar-based program and a computerized weather-based management program was conducted. Four test plots were taken. The sprayments in plot 1 happened according to the integrated computerized model. No sprayings took place in plot 2. In plot 3 were some sprayments done with sulphur according to the traditional Romanian program. The sprayings in plot 4 were done following a calendar-based spraying program. The products that were used for the sprayments were all easy to obtain in Romania such as Dodine®, Delan®, Score®, Scala®, Polyram®, Strobby®. The occurrence of scab in plot 1 was very low in comparison to the other plots. Analyzing the data, on average, the treatments done caused about 50% less damage than the traditional sprayings. This indicated that with a relative small amount of well timed sprayings (7 sprayings took place in the weather-based protection plot and there were only 4 high emissions of ascospores in 2006) a enormous amount of damage can be prevented. A calendar-based management program seems to be less effective (more sprayings needed and the results are worse). These results also emphasize the importance of the development of an adequate apple scab management program that should be presented to local apple growers.

Key words: apple scab, Jonathan, disease control

RESEARCHES CONCERNING THE INFLUENCE OF THE SOIL MAINTENANCE SYSTEMS ON FERTILITY AND PRODUCTIVITY, OF THE CREATA AND MUSTOASA DE MADERAT LOCAL VARIETIES

DENES A.

Universitatea din Debrecen, Ungaria

Abstract

The paper pursues the effect of different soil maintenance systems on fertility and productivity of the Creata and Mustoasa de Maderat varieties, tilled in three important Winegrowing Centers in the Western zone, from 2005. Comparing the data from the Winegrowing Centers and the types of soil maintenance, it results that the fertility and the productivity of the varieties are influenced by more factors, thus, establishing of absolute favorable variants, is not possible. In the case of the Creata variety, the soil maintenance types based on land covering (mulching and overgrowing with grass) give better results than the "black field". For the less pretentious variety, the order is different, the positive effect of tilling as "black field" being much stronger, and the 2 variants have a much more unfavorable effect.

Key words: variety, fertility, productivity, zone, soil maintenance types

**RESEARCHES CONCERNING THE INFLUENCE OF THE SOIL
MAINTENANCE SYSTEM ON THE RELATION: FOLIAR
SURFACE/QUANTITY, FOLIAR SURFACE/QUALITY FOR SOME LOCAL
VARIETIES**

DENES A.

Universitatea din Debrecen, Ungaria

Abstract

The paper pursues the influence of different types of soil maintenance on the relation: foliar surface/ quantity and foliar surface/quality, for three local varieties (Creată, Cadarca, Mustoasa de Maderat). The researches took place in the Winegrowing Center Recas, between 2003 and 2005.

Comparing the data obtained in the research years, it can be asserted that, in spite of the different effect of the years, the influence of the types of soil maintenance on the dimensions of the foliar surface and on the production was a notable one.

The largest foliar surface and a quality production were obtained by the maintenance of the soil by mulching. In the case of the lots maintained as "black field" and overgrowing with grass, the quantitative differences are notable, but the quality is alike.

Key words: grapes, foliar surface, production, soil maintenance

**THE ESTIMATION OF THE ECOLOGICAL IMPACT AND OF THE
ATMOSPHERE POLLUTION IN THE SAG-PARTA DEPOSITION AREA**

COZMA ANTONELA*, ALEXA ERSILIA, LAZUREANU A.**, NEGREA
MONICA****

**USAMVB Timisoara, Facultatea de Agricultura, **Facultatea de Horticultura*

Abstract

This study has in view the qualitative and quantitative estimation of the deposition gases released in the atmosphere from Sag-Parta house wastes deposition area, which serves the Timisoara municipality in 2005, being know nature and the quantity of the deposited offals, the capacity of this decay as well as the biochemical processes which take place in the deposition. The obtained results points to the existence of emission noxes in the deposition area, as a result of chemical and biological transformations of the offals in a category which includes these types of pollution: CH₄, CO₂, H₂S, NH₃ but the obtained results are included in a normal value domain for the organic constituents according to the literature data. The risk zone for the element air in the deposition area, is defined on 5 km distance in all directions, but having in view the movement of the air masses, the most exposed zone to atmosphere pollution is situated in the South-West of the deposition, including Sag-Parta.

Key words: house wastes, atmosphere pollution, biochemical processes

IMPROVEMENT OF BIOLOGICAL CROP TECHNOLOGY OF ONION AND GARLIC CONSIDERING THE WEST PART OF HUNGARY

BARNOCZKI A., BARNOCZKINE SZTOILOVA ELENA

Onion Research Centre Mako, Hungary

Abstract

Elaboration of crop technological systems relies on important applicative principles designed to preserve the environment, crop safety of crop maintenance and obtaining of non-polluted crops and free of any contaminants, biologically superior and with high nutritive value. In this regard, the minimum reduction of pollution rising from agricultural activities and standard corresponding food products that provide a healthy nutrition becomes a social demand of consumers. The main element of non-polluting crop technology which means integrated crop control is correct choice of cultivars. On the ground of reports released by farmers and consumers, it is possible to state that Mako type onion and garlic varieties are in accordance with the principles of new crop technologies.

Key words: onion, garlic, biological cultivated, field conditions

RESEARCHES CONCERNING THE YIELD PERFORMANCES OF THE LATE CABBAGE HYBRIDS CULTIVATED IN THE FIELD CONDITIONS

POSTA G., BERAR V.

USAMVB Timisoara, Facultatea de Horticultura

Abstract

The biological material used in our experiment was represented by 6 late cabbage hybrids. These are: Arrivist F1, Daneza Dulce F1, Uniqor F1, Ixxion F1, Green Flash F1 and Tobia F1. The hybrids were studied in terms of their characters and traits: plant weight and head weight, respectively, head height, head diameter, shape index, efficiency, head density and head volume. We have observed that in case of Arrivist F1, Ixxion F1 and Green Flash F1 hybrids head weight and head efficiency are mainly depending on interaction between head density and head volume.

Key words: late cabbage, hybrids, yield performances, field conditions

LANDSCAPE DESIGNING OF A PRIVE GARDEN USING THE GEOMETRICAL STYLE

POSTA DANIELA, VISOIU DAGMAR, HERNEA CORNELIA, STEFAN CAROLINA

USAMVB Timisoara, Facultatea de Horticultura

Abstract

The garden that is going to be designed covers a total area of 1659 m². This garden is specifically designed to follow functionality and to represent a haven for relaxing and spending leisure time and also taking into account the fact that the owners are busy persons and do not have much time to search for other locations with similar amenities. The project idea also includes the building of playground for two children. The garden designing proposes to combine and maintain recreation and decorative functions.

Key words: garden, geometrical style, recreation function

THE AUTOMATIC CONTROL OF THE TECHNOLOGICAL CHAIN OF PRODUCTION FOR THE PLEUROTUS MUSHROOM GENER

CHILOM PELAGHIA, NAVOLAN C.

Universitatea din Craiova

Abstract

A space was arranged, in an abandoned den of the winery sector, in order to produce mushrooms of the Pleurotus gener, according to our own project. We followed to organize a technological flux in a bizonal system, having as objectives the obtaining of cultural mycelium and mushrooms for consumption. The work needed to accomplish these two objectives, regarding the vegetation factors will be controlled automatically. For the future, it is planned to set up the laboratory for the obtaining of mycelium (primary, secondary and tertiary).

Key words: Pleurotus mushrooms, space, automation, mycelium, culture

NEW TOMATOES HYBRIDS FOR EARLY FIELD CULTURES

CHILOM PELAGHIA, ROSCA CAMELIA

Universitatea din Craiova

Abstract

The study of four new tomatoes hybrids destined for early field culture showed essential differences in morphological elements and production capabilities. Otrando, Tolstoi, Sultan and Rada (factor A) hybrids were studied, with two degrees: b1 – not fertilized; b2 – fertilized with Cropmax 0,25% and Vitaflor 0,50% for factor B.

Key words: tomatoes, hybrids, fertilization, Cropmax, Vitaflora

THE PRODUCTION OF CUCUMBER SEEDLINGS BY “FLOAT SYSTEM”

CHILOM PELAGHIA, BALASA M., ROSCA N.

Universitatea din Craiova

Abstract

Based on the results obtained by studying seedlings, as well as full grown cultural plants, it is clear that the growth rate was heavy influenced by their production by “float” system, thus their morphological values at planting were superior to those of seedlings obtained by the classical pot method. The favorable differences were maintained until the end of the vegetation period of the specie, the Pasamonte hybrid.

Key words: seedlings, production systems, cucumbers

GENETIC MAPPING IN ALFALFA (*MEDICAGO SATIVA*) WITH MICROSATELLITES MARKERS

BOLDURA OANA-MARIA*, **MIHACEA SORINA***, **SCHITEA MARIA****, **BADEA
ELENA***

**USAMVB Timisoara, Facultatea de Horticultura, **I.C.D.A. Fundulea*

Abstract

*Simple Sequence Repeats (SSRs) have emerged as the marker system widely used for genetic mapping because they are abundant and informative, PCR-based, co-dominant multi-allelic, highly polymorphic and reproducible. Alfalfa is one of the most cultivated forage crops all over the world. Genetic mapping has a great importance because it makes possible to identify agronomic important genes, leading to an improved breeding process. The first step in alfalfa genetic mapping was to analyze the parental forms, in searching for markers that reveal polymorphism. The polymorphism between the two individuals was evaluated using SSR (simple sequence repeat) markers. SSR markers mapped on the model plant *Medicago truncatula* genetically map were used in our research. Thus the genomic DNA isolated from the both individuals was amplified with 27 SSR primers. The amplification products were analyzed by agarose gel electrophoresis and their length was evaluated using computer software. Nine SSR markers pointed out an obvious polymorphism. The high polymorphisms identified between the two alfalfa individuals justify our decision to use SSR markers in our future mapping studies.*

Key words: alfalfa, genetic mapping, polymorphism, SSR

STUDIES CONCERNING SOME MALTING QUALITY TRAITS IN DIFFERENT TWO-ROWED AUTUMN BARLEY GENOTYPES

CIULCA S.*, **NEDELEA G.***, **MADOSA E.***, **CHIS S.****

**USAMVB Timisoara, Facultatea de Horticultura, ** Universitatea Aurel Vlaicu Arad*

Abstract

The use of two-rowed autumn barley for brewing represents an important approach in agriculture at national and international level considering the thriving business in this domain and the farmer's multiple possibilities to increase benefits. In this regard, great care is given to barley cultivated varieties as well as to barley breeding process in order to obtain new cultivars with indices that can meet gold quality standards. The study has been focused on evaluation malting quality potential of an assortment consisting of 26 two-rowed autumn barley lines in terms of energy and germination potential, protein content, TGW, HW. The TM 171/01, TM 156/01, TM 208/02, TM 125/01 lines proved to be valuable for HW, this index tighly correlating with protein content of approximately 12%. Reduced values of protein content that generates superior malt extract efficiency for the following lines TM 284/02, TM 242/02, TM 350/03, TM 389/03, TM 269/02, TM 235/02. For the studied assortment, it has been assessed that TGW registered the lower variability while germination potential registered opposite values.

Key words: two-rowed autumn barley, malting quality, TGW, HW, germination and energy potential

RAPD ANALYSIS OF THE IN VITRO REGENERATED ALFALFA PLANTS

DRAGOESCU CERASELA, MIHACEA SORINA, BADEA ELENA, NEDELEA G.

USAMVB Timisoara, Facultatea de Horticultura

Abstract

In this study, five alfalfa genotypes Gloria, Selena, Topaz, Sigma and Magnat, cultivated in Romania, were analyzed with reference to their ability to regenerate somatic embryos from callus culture and also were verify genetic identity using RAPD primers, comparing the explant-donors and the in vitro derived plantlets. Preliminary studies indicate that alfalfa in vitro response is strongly genotype dependent. Also, as a rule, growth regulators have a critical importance in inducing somatic embryogenesis in legumes.

Key words: plant biotechnology, in vitro culture, somatic embryos, alfalfa, RAPD primers

PHENOTYPIC VARIABILITY IN THE SUBTERRANEAN ORGANS OF CERTAIN *GENTIANA LUTEA* L. FAMILIES

POP M.R.*, SAND CAMELIA*, BOBIT DANA, BARBU C.H.**

**Univeristatea Lucian Blaga, Sibiu, **ICDCSZ Brasov, Laboratorul de plante medicinale*

Abstract

*The *Gentiana lutea* L. species represents a floristic rarity and is protected by law, being not allowed its cropping from the wild flora. Thus, in order to obtain vegetal material for industrial purposes it is recommended its cultivation. The increased demand for gentian roots asks for the cultivation of this species on large surfaces, to avoid its cropping and extinction. This involves designing an amelioration plan for the creation of varieties suitable for agrotechnical actions. In this respect there were identified ten families that may constitute a source of germplasm for amelioration activities. These have been subject of an analysis of the variability of several quantitative elements. The paper presents the determination and values of the variability coefficient for certain elements: crown diameter, rhizome length, number of ramifications, total weight of the subterranean organs.*

Key words: *Gentiana lutea*, subterranean organs, amelioration, variability coefficient

STUDIES REGARDING SEED PRODUCTION TECHNOLOGY FOR *ANGELICA ARCHANGELICA* L.

POP M.R., SAND CAMELIA, BARBU C.H., TOADER A.

Univeristatea Lucian Blaga, Sibiu

Abstract

*In the north European countries have been found many written evidences reflecting the therapeutic qualities of the *Angelica archangelica* L. (English names: Holy Ghost, Wild Parsnip, Wild Celery and Norwegian angelica), while the folklore of the habitants confirm the believe in the merits of this species in protecting against infections, blood's purification and the use as a prime remedy in poisoning, fever and infectious diseases. It is cultivated in Europe, especially in Germany, France, Belgium, Finland, Hungary and Russia and lately in Romania. Beginning form the fact that the most efficient method for seeding angelica is the direct seeding, the qualities of the seeds, in this case the seeds of *Angelica archangelica* L. is a very important factor to obtain successful harvest of angelica. This study presents the research conducted towards the idea of finding a more efficient technology to produce high quality seeds of angelica.*

Key words: *Angelica*, seed production, optimum density

RESEARCHES REGARDING THE TOXICITY OF SOME PLANT FROM WILD FLORA OF ARAD COUNTY

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Abstract

Among numerous medicinal plants, the aromatic and melliferous plant from wild flora of Arad county, show off in a special way some of them which are considered as being toxic plants. The importance of these species by pharmaceutical and toxicological point of view is determined by their complexity, among those is pointed out in a special way the alkaloids. The present paper is proposing to underline the nature, the toxicity and the actuating mechanism and also the preventing and control actions of alkaloids action on a living organism. There are shown some reactions utilized for alkaloids fast identification and pharmacodynamic action of some of them.

Key words: taxine, atropine, digitaline, scopolamine, urushiol

STUDIES REGARDING THE INFLUENCE OF SOME FACTORS UPON THE PROCESS OF FLOWER INDUCTION TO TIMPURIE DE VIDRA CABBAGE VARIETY

STEFANESCU ELENA, MILOVICI ELENA LILIANA

ICDLF Vidra

Abstract

The studies were made upon 6 vernalization variants in different environmental conditions (field, protected space) and different stages of development. Subvariants represents different technological methods of transplant realization way (replant, nereplant); different thermic treatment and also humidity upon seed, before sowing time; different treatment upon transplant with ccc, AG-3 or H₂O.

Key words: vernalization, treatment

THE STUDY OF QUALITY INDEXES TO ONION SEED (*ALLIUM CEPA* L.)

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Abstract

The study at quality of index was made for establish the dependence between the size of seed and the quality of indexes: germinative energy (GE), germinative faculty (GF), strength of seed. In the studies was used 80 variants, derived from 20 samples of pre-base seed which have one by one 100g and which was each fractioned after size (<1,9 mm, 1,9-2,2 mm, 2,2-2,4 mm, > 2,4 mm) in 4 variants. The obtained results revealed the positive direct correlation between size seed and quality of indexes analized. Following in dynamics the germination of seed was noticed that: seed starts to germinate after 24 h; the maxim germination take place in 3th day, to variants Va (< 1,9 mm), Vb (1,9-2,2 mm), and Vc (2,2-2,4 mm) and in day 4, to variants Vd (>2,4 mm). The strength of seed was determined by uniformity of came up plants, on field, subvariants Va (> 2,4 mm) and Vb (2,2-2,4 mm) had in proportion of 100% an uniform came up; subvariants Vc (1,9-2,2 mm) had an uniform came up although the proportion of came up was 100%; subvariants Vd (< 1,9 mm) had an uniform came up and only in proportion of 20%. From this study it's shown that from the quality point of view, the best seed is the seed with > 2,2 mm diameter.

Key words: onion, quality