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ACADEMICIANUL PROFESOR DR.DOC.DAVID DAVIDESCU, PATRIARHUL AGROCHIMIEI ROMÂNEŞTI

ACADEMIC PROFESSOR DR. DAVID DAVIDESCU, PATRIARCH OF ROMANIAN AGRICULTURAL CHEMISTRY

GH.V. ROMAN

Cuvinte cheie: ştiinţe agricole, învăţământ superior agricol, agrochimie
Key words: agricultural sciences, high education in agricultural sciences, agricultural chemistry

SUMMARY

The work presents Academic Professor David Davidescu ’s life activity, outstanding personality of agricultural sciences in Romania.
Coming from a village in Ialomita country, as the son of a teachers family, Professor David Davidescu graduaded the Agriculture Faculty in Bucharest, in 1940, afterwards working for twenty years in the field of scientific research within the Institute of Romanian Agricultural Research (ICAR). At the age of 35, he became professor at the Agriculture Faculty in Bucharest, where at his initiative it was introduced in the curriculum the agrochemistry subjet, for the firt time in Romania. He is considered rightly speaking, the founder of Agrochemistry school in Romania.
Having an organizing spirit and a professional power Professor David Davidescu was requested and occupied administrative positions in the superior education (dean, pro-rector, rector) but also in the central agricultural administration (state secretary, deputy of Agriculture Ministry), contributing to the development of middle and superior education system and to the growth of Agricultural Institute in Bucharest fame.
He published a lot of works: 400 works titles, treaties, monographs, research, articles which totalize over 16,000 pages, being the author of some remarkable works, outstanding for the Romanian agricultural sciences.
He guided 59 specialists in the elaboration of doctoral thesis.
In 1963, he was elected as an associate member of Romanian Academy, in 1990 as titular member, becoming President of Agricultural and Forest Sciences Section and member of Romanian Academy presidium.

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ÎNCREDEREA ŞI ATITUDINEA FAŢĂ DE AGRICULTURA ECOLOGICĂ ŞI INTERNET ÎN CIPRU

CYPRIOT BELIEF AND ATTITUDES TOWARDS ORGANIC AGRICULTURE AND WEB PORTALS

G. ADAMIDES, S. SAVVIDES, NATALIE BIBERIAN, MARIANTHI GIANNAKOPOULOU, IRENE GEORGIADOU, MARIOS GEORGIADES

Key words: Cyprus, organic agriculture (OA), internet
Cuvinte cheie: Cipru, agricultura ecologică, internet

SUMMARY

The last decades leaded to a significant awareness of the world community to ensure environmental protection and food quality (EU, 2004). These requirements are met for organic farming. In recent years, organic farming has developed significantly in many countries. However, it is still a very small part of total agricultural sector.
Recently there was developed a system (called Bioagro) which will ensure through a single point of access the rigtht information in several languages (English, German, Greek, Romanian), on organic farming, business services online and mobile services for all operators involved in the pathway of organic farming: organic farmers, agricultural businessmen and citizens-consumers. Specialists in Cyprus realised the opportunity to consolidate farming and participating in this project.
The paper illustrates the level of Internet use by farmers and their attitude towards using computer equipment to work the farm.

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PLATFORMA INTERSECTORIALĂ DE ECOLOGIZARE A RESURSELOR ŞI PRODUCŢIEI INDIGENE DE LEGUME PROASPETE

STAKEHOLDERS PLATFORM FOR ECOLOGIZING LOCAL RESOURCES AND INTERNAL FRESH VEGETABLE PRODUCTION

S.L. ŞTEFĂNESCU, M. DUMITRU, MONICA DUMITRAŞCU,
R. LĂCĂTUŞU, MIHAELA LUNGU, V. STERIU

Cuvinte cheie: legume, agricultură peri-urbană, agricultură ecologică, impact agro-ambiental, percepţia consumatorilor
Key words: vegetables, peri-urban agriculture, ecological practices, agri-environmental impact, consumers' perception

SUMMARY

Within a project targeted on increasing the quality of available land for farming and the quality of peri-urban agricultural production delivered to the municipal market, technical investigations have been carried to assess the agri-environmental impact of intensive practices as well the peri-urban farmers and municipal consumers' perception on ecological practices and products.
Intensive agricultural practices undertaken in some sites placed on the city outskirts brought their contribution to the environmental pollution by the unsuitable rates of mineral/organic fertilizers and pesticides use. Study cases revealed soil nitrate, heavy metals and pesticide contents exceeding the maximum allowable limits.
The survey carried among the small scale peri-urban vegetables growers revealed that only 29% of the respondents identified were are that an organic product as one inspected, certified and labelled, while 51% confuse organic with „natural". The large majority, however, still knows nothing about organic regulations. Over half of the respondents, though, would like to undertake a conversion to organic. This interest is directly related to the education level of the farmer. Part of the survey was oriented to consumers at the municipal fresh vegetables market. A similar percentage as the one identified among farmers (29%) was aware of the identification of organic products. 20% of the respondents were willing to buy organic products with a slightly higher price then conventional ones. 77% of the respondents prefer to purchase vegetables produced in Romania rather then imported ones.
The Project actions included also on-farm demonstration and training developments. A platform has been set up, comprising representatives of the commercial oriented peri-urban farmers, research, education and extension units, NGOs, administrative authorities (heads of the public vegetables markets, Municipality departments, environmental and consumers protection agencies). A common action plan was developed towards increasing the quality of the peri-urban agriculture and the quality of municipal food consumption.

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AGRICULTURA ECOLOGICĂ
- ELEMENTE DE TEORIE ŞI PRACTICĂ -

ECOLOGICAL AGRICULTURE
- THEORY AND PRACTICAL ELEMENTS -

D.I. SĂNDOIU, G. ŞTEFANIC

Cuvinte cheie: fertilitatea solului, agricultură biodinamică, agricultură biologică
Key words: soil fertility, biodynamic agriculture, biological agriculture

SUMMARY

Scientific research from the 19-th century and the beginning of the 20-th century, concerning the micropopulation and vital processes in soils, created the premises of understanding the effects that agriculture causes on their evolution. A comprehensive microbiological and biochemical synthesis was published by Waksman (1932). Traditional agriculture achieved some technological progress, among which crop rotation of 3 years with leguminous plant, but spectacular jump, by the increasing of agricultural soil productivity, achieved only after the first World War. In those conditions, as a reaction to physical and chemical degradation of the cultivated soils and mineral fertilized, Rudolf Steiner (1924) elaborated the theory of Biodynamic Agriculture, Ehrenfired Pfeiffer (1937), the chief of biochemistry laboratory from Goetheanum Institute in Dornach - Switzerland (founded by Steiner after 1900), practically applied to different zones of the world. Also, at the same period of effervescence for achieving an agriculture to stop the degradation of soils, Albert Howard (1940) published, to England, his concept concerning Organic Agriculture, then applied in England and USA. After the second World War, in France, Germany and Switzerland, Japan and South Africa, different agricultural technologies appeared, for protecting the soils and environment from degradation, under the name of Biological Agriculture. A large activity is developed for attracting the farmers to practisie an agriculture without chemical treatments proper to soil characteristics, to fertilize the soil with compost, to apply ecological treatments for plant protection, etc. Ecological Agriculture should not be understood as an traditional and primitive agriculture. She is based on the best knowledge of biology, physics and chemistry.

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MĂSURAREA BIODIVERSITĂŢII ÎN SISTEMUL DE AGRICULTURĂ ECOLOGICĂ

MEASURING BIODIVERSITY IN THE ECOLOGIC AGRICULTURAL SYSTEM

M. BERCA, CRISTIANA SILVIA STURZU

Cuvinte cheie: biodiversitate, indicatori, evaluări, măsurători
Key words: biodiversity, indicators, measurement, estimations

SUMMARY

Biodiversity is the first in evaluating the health condition of the population, species, ecosystems, and biosphere as parts or whole. Being the basic measuring indicator for the quality of the environment and life, the objective need for new ways of measuring parameters expressing the quantity and quality measures of biological diversity occurred.
The inventory of the species is one of the oldest method for analyzing biodiversity, which is still struggling issues such as time and number. The special research studied and described a large number of indicators. The present work only shows four of them that are still used by the Romanian researchers to calculate local biodiversity parameters such as: the Shannon – Weaver (H_S) index, the Evennes indicator (E), the Simpson index (D), and the Brillanin indicator. As varieties of those the Jaecard indicator (Sig) and the Sorensen indicator (Sis) can be taken into consideration By calculating and interpreting these one can draw the conclusion that biodiversity may be classified into three types: Alfa, Beta and Gamma. All the three are present in the Romanian space, too.

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SITUAŢIA ACTUALĂ A UTILIZĂRII INTERNETULUI ÎN SECTORUL DE AGRICULTURĂ ECOLOGICĂ DIN ROMANIA

CURRENT STATUS REGARDING THE USE OF INTERNET FOR ORGANIC AGRICULTURE SECTOR IN ROMANIA

GH.V. ROMAN, MARIA TOADER

Cuvinte cheie: agricultură ecologică, Internet, Bio@gro
Key words: organic agriculture, Internet, Bio@gro

SUMMARY

Scopul acestei lucrări este prezentarea situaţiei actuale a utilizării tehnicilor de Internet în cadrul sectorului de agricultură ecologică din România prin portalul Bio@gro (*www.bioagro.ro*).
Acest portal este rezultatul activităţii consorţiului proiectului Bio@gro, finanţat de Comisia Comunităţii Europene – Direcţia Generală „Societatea Informaţiei". Proiectul Bioagro include patru ţări: Grecia, Cipru, Germania şi România şi şi-a propus să dezvolte un sistem pe Internet (Bio@gro), cu un singur punct de acces, în limbile engleză, germană, greacă şi română, care oferă informaţii privind agricultura ecologică, în general, dar şi servicii de afaceri on-line sau servicii de telefonie mobilă (sms), pentru toţi operatorii implicaţi în filiera agriculturii ecologice: fermieri, comercianţi, procesatori şi consumatori/clienţi.

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CERTIFICAREA PRODUSELOR DE PANIFICATIE

CERTIFICATION OF BAKING ECOLOGICAL PRODUCTS

CLAUDIA-ELENA MOŞOIU

Cuvinte cheie: certificare, produse ecologice, regulamente, legislaţie, agricultură ecologică
Key words: certification, organic products, rules, legislation, organic farming

SUMMARY

Food can be sold as „ecological product" only if its system of production is in accordance with the organic farming legislation. The control of the production is carried out by a specialized Certification Body which checks the conformity and certifies the foods as ecological if the conditions of production are provided.
The processors have to check Annex 3 of HG 917/2001 which contains the list of ingredients and processes allowed for processing bakery products.
There are rules of different certification bodies or associations which are more restricted in comparison with the national and EU organic farming legislation, for instance there can be specific requirements regarding packaging of ecological products, the utilization only of natural materials, baking, the preservation of cereals.

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METODE DE ANALIZĂ ŞI CONTROL A NITRAŢILOR DIN PRODUSE OBŢINUTE PRIN AGRICULTURĂ ECOLOGICĂ

NITRATES ANALYSES AND CONTROL METHODS FOR ECOLOGICAL PRODUCTS

GABRIELA NEAŢĂ, ROXANA MADJAR, VELICICA DAVIDESCU,
VIOLETA DUMITRAŞCU, JANINA CAISÎN

Cuvinte cheie: produse ecologice, analiză calităţii
Key words: ecological products, quality analyses

SUMMARY

Ecological agriculture is an alternative culture which uses an unpolluted technologies of culture to ovoid so the negative effects on the soil and environment. Vegetable products obtained from ecological agriculture must be free from nitrates and pesticides. The security of fresh vegetable products quality use in human consumption were regulated by the Governamental Decision No. 1/3 Ian. 2002.

For ecological products which were on the markets under the name "eco" it is neccesary to check their quality in the culture process but also at products before trading in the markets.

Research aims to establish a modern quick method of analysis with the same characteristics such as the European Community methods. To achieve this aim there were used two methods of nitrate analyses used in our country follow the harmonisation of our methods with the European Community. The methods were tested on some vegetables obtained from ecological individual farms.

The results of research show that the methodology of analysis from Romania could be adapted to the methodology used in the European Community countries.

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PERTURBĂRI ÎN ECOSISTEMUL AGRICOL NUMAI PÂNĂ LA PRAGUL DE REGENERARE

PERTURBATIONS IN THE AGROECOSYSTEM ONLY TO THE REGENERATION THRESHOLD

GH. ŞT. BUDOI., D. I. MARIN, NARCISA BĂBEANU,
GABRIELA MIHALACHE, ANCA VOICULESCU

Cuvinte cheie: perturbări, prag de regenerare
Key words: perturbations, regeneration threshold

SUMMARY

The research was performed in the 1999-2001 period, at the Moara Domnească experimental field. To test the ecological influence of the S-metolachlor herbicide, 0.5 kg/ha, together with mechanical cultivations between the rows has been the main objective of the experiment.
The analysis of the results conducts to the following conclusions: 1) The method determines about 85% weed control and a soyabean yield closed to that of the check treatment. 2) During the first 3-4 weeks, the number of the soil bacteria is reduced. In our case $14.2x10^6$ g/soil remained that is quite enough to regenerate and establish the equilibrum in the soil. After 9 weeks, no important differences compared the check treatment. Until autumn (wheat sowing time), the herbicide phytoxicity disappeared.

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AGRICULTURA DURABILĂ ŞI PROCESE IREVERSIBILE ÎN SOLURI

SUSTAINABLE AGRICULTURE AND IRREVERSIBLE PROCESSES IN SOILS

GH. GÂŢĂ, S. UDRESCU, M. MIHALACHE, L. ILIE

Cuvinte cheie: tehnologii agricole, procese ireversibile din sol, faeoziomuri
Key words: agricultural technologies, irreversible soil processes, griziom

SUMMARY

In order to investigate the influence of agricultural technologies on the chemical and mineralogical properties of the soils were selected some forest and tilled griziom from the Central part of Moldavia. The reaction of clay translocation, oxidation, desaturation, accumulation of potassium at the profile surface, translocation reaction smectite ↔ illite and influence of agricultural technologies on these equilibria were also investigated.

The clay translocation from Am to Bt takes place in the condition of base saturation increase with the depth and it is more accentuated at forest soils than tilled soils due to the lower pH and the lower texture of Am and Ame of forest soil horizons.

The smectite content of clay fractions increase with the depth because of the diminution of accumulation and fixation of potassium with the depth and also the increase with the depht of calcium and magnesium in colloidal complex and of the strata pressure. In these conditions the illite concentration of clay fractions decrease with the depth.

The agricultural technologies produce irreversible reactions due to the oxidation processes especially in ploughing horizon which release lattice cations of clay minerals as silicium, aluminium, iron, magnesium a.s.o. diminish their particle size and decrease the organic matter content especially its fulvic components.

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INFLUENŢA AGRICULTURII ORGANICE ASUPRA POTENŢIALULUI PRODUCTIV AL SOLURILOR

INFLUENCE OF ORGANIC AGRICULTURE UPON THE SOIL PRODUCTIVE POTENTIAL

L. ILIE, M. DUMITRU, M. MIHALACHE

Cuvinte cheie: compost, proprietăţile solului, potenţial productiv, analiză micromorfologică
Key words: compost, soil properties, productive potential, micro-morphological analysis

SUMMARY

Research was carried out on the luvosol of Albota, and was aimed at emphasizing the influence of compost fertilization on the soil properties, on the maize and soybean yield.
Luvosol is a compact soil with insufficient aeration and high content in clay. At the same time, the soil has low fertility, high acidity and high content in aluminium.
The micro-morphological analysis has emphasized the positive effects of the compost upon the aero-hydric condition of the soil; this is well integrated into the soil matrix, starting with the first year of application.
The conclusion on the experiment point the compost fertilization of maize and soybean results in higher yields and improve the soil properties (pH, organic mater content, bulk density, etc).

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CERCETĂRI PRIVIND OBŢINEREA UNUI COMPOST ŞI INFLUENŢA LUI ASUPRA PRODUCŢIEI DE PORUMB

RESEARCH ON CREATING A TYPE OF COMPOST AND ITS INFLUENCE REGARDING MAIZE PRODUCTION

MIRABELA ELENA GRAPĂ, MIHAELA OLĂNUŢĂ, RODICA CRISTEA

Cuvinte cheie: compost, porumb, agricultură, ecologie
Key words: compost, maize, agriculture, ecology

SUMMARY

The 30 t compost/ha fertilisation generates some extra output profit ≈ 52.7% when compared with the unfertilised variant and with 33.4% extra output profit, when compared with $N_{160}P_{80}K_{80}$ variant.
TURDA SU 210 proved to be the most productive hybrid with some extra output profit-15.3% compared with the Dana hybrid and the best thickness per sector was that of 60 thousand plants with some profit 6.9% compared with the thickness of 48 thousand plants per sector.
The combination fertiliser*hybrid*thickness being 30t/ha compost*Elan hybrid*the thickness 60 thousand plants per sector, with a production of 7785.5 kg/ha, with a profit of 69.5% compared with unfertilised variant*Dana hybrid* the 48 thousand plants per sector, a very important difference.

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EXPERIMENTĂRI CU UN SORTIMENT DE ÎNGRĂŞĂMINTE NOI CU ÎNSUŞIRI ECOLOGICE, APLICATE LA TOMATE CULTIVATE ÎN SERĂ

EXPERIMENTS WITH AN ASSORTMENT OF NEW FERTILIZERS WITH ECOLOGICAL FEATURES APPLIED TO TOMATOES GROWN IN GREENHOUSE

IULIA DAMIAN, P. NICULIŢĂ, A. DORNEANU,
CARMEN SÂRBU, DANIELA DANA

Cuvinte cheie: îngrăşăminte lichide, tomate, seră
Key words: liquid fertilizers, tomatoes, greenhouse

SUMARRY

The paper is deals with experimental data obtained in glasshouse by applying an assortment of new liquid fertilizers with ecological features produced in INCDPAPM-ICPA, Bucharest.
Research was carried out in the SC SERE SA, Codlea, Braşov, on tomatoes, June-December cycle, on phaeozem soils.
The tested fertilizers generically called FERTEC (FERTEC B, FERTEC C) are obtained from non-polluting mineral compounds with N, P, K, as well as extracts from plants or marine algae, suitable for use in ecological agriculture.
The obtained results emphasized the fact that the FERTEC fertilizers with ecological features are efficient assuring yield increases over 20%.
The FERTEC fertilizers applied by foliar way are well assimilated; the used quantities are low of order of tens of litters per hectare.
The translocated and accumulated elements in the main products are under the maximum allowable levels for the ecologically considered products, due to the intensive vegetative increase, stimulated by the complex effects of fertilizer components.
The FERTEC fertilizers constitute a means to intervene in the fertilization of vegetable crops in the glasshouse in order to partially replace the classical fertilizers with foliar ones for assuring the fertilization under ecological protection conditions.

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CERCETĂRI PRIVIND IMPACTUL SISTEMELOR TEHNOLOGICE CONSERVATIVE ASUPRA STĂRII CHIMICE A SOLULUI

RESEARCH ON THE IMPACT OF CONSERVATIVE TECHNOLOGY SYSTEMS OVER THE CHEMICAL STATE OF THE SOIL

MARIANA BURCEA

Cuvinte cheie: sisteme de lucrare conservative, tehnologie clasică, cernoziom, fosfor, potasiu, conservarea solului
Key words: conservative tillage systems, classic technology, chernozem, Phosphorus, soil conservation, Potassium

SUMMARY

A very much discussed problem in the last years is the impact of agricultural technologies over the soil, because of the numerous agricultural processes made within conventional technologies goes to a decrease in soil fertility and a change in physical-chemical and biological soil indicators. In spite all of these, the experiences showed and the practice confirmed that, on the same type of soil, the production capacity increases if rational works are applied. Through the science and the art of working the soil, done in full harmony with vegetative factors, it could lead to a favorable evolution of soil properties.
This paper shows the results of research on the effect of application of long time soil working systems over the state of the chernozem soil from the South - Eastern part of the country, considered to be the most fertile soil. Having as control the classic technology of working the soil, made by reverse furrow tilling, there have been taken under study types of soil with less works and direct seeding on unworked soil, in a stationary experience created more than 20 years ago.

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CERCETĂRI PRIVIND INFLUENŢA FERTILIZĂRII ŞI A LUCRĂRILOR SOLULUI ASUPRA ACTIVITĂŢII BIOLOGICE A PRELUVOSOLULUI ROŞCAT

RESEARCH CONCERNING THE INFLUENCE OF FERTILIZATION AND SOIL TILLAGE ON BIOLOGICAL ACTIVITY OF REDDISH PRELUVOSOL

NICULINA GHEORGHIŢĂ, G.V. GHIŢĂ,
NICOLETA DUMITRESCU

Cuvinte cheie: lucrările solului, fertilizare, activitate biologică a solului, preluvosol roşcat
Key words: soil tillage, fertilization, soil biological activity, reddish preluvosol

SUMMARY

The aim of the research has been to put in evidence the modifications brought by fertilization and soil tillage on the biotical and enzymatical activities of redish preluvosol.
The biotic soil activity has not been influenced by soil tillage, which it means that the level of biotical activity has been almost the same in all variants. The enzymatic activity reacts to the way in which the soil was tilled. Taking ploughing as the control, catalase and saccharase soil activities increased in the variants where the soil was tilled by disking 15 cm and cizel 20 cm. The urease activity registered a slight increase only in the variant tilled by cizel 20 cm while the phosphatase activity was strongly stimulated by disking.
The effects of mineral and organic fertilization on the biotic and enzymatic activities were influenced directly by soil tillage. For example, the application of straws 5 t/ha + N_{50} determined the following values of soil respiration: 22.63 mg (ploughing 20 cm) 12.58 mg (cizel 20 cm) and 12.48 mg Co_2/ 100 g sol d.w. (disking 15 cm)

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CERCETĂRI PRIVIND INFLUENŢA FERTILIZĂRII ŞI A LUCRĂRILOR SOLULUI ASUPRA ÎNSUŞIRILOR CHIMICE ŞI FIZICE ALE PRELUVOSOLULUI ROŞCAT

RESEARCH CONCERNING THE INFLUENCE OF FERTILIZATION AND SOIL TILLAGE ON CHEMICAL AND PHYSICAL PROPRIETIES OF REDISH PRELUVOSOL

NICULINA GHEORGHIŢĂ, G. V. GHIŢĂ, NICOLETA DUMITRESCU

Cuvinte cheie: lucrările solului, fertilizare, proprietăţi chimice, proprietăţi fizice, preluvosol roşcat
Key words: soil tillage, fertilization, chemical proprieties, physical proprieties, redish preluvosol

SUMMARY

The aim of the research has been to put in evidence the evolution of the chemical (total carbon, extractable carbon, carbon from humic acid, carbon from fulvic acid, total nitrogen, organic phosphorus, pH) and physical parameters (bulk density, permeability) of soil in conditions of mineral and organic fertilizer application on different mode of soil tillage.
After five years of mineral and organic fertilizer application and soil tillage by ploughing 20 cm, cizel 20 cm, disking 15 cm the soil humus content (total carbon) have not changed what confirm the fact that this parameter is modified after a long period of time.
The extractable carbon content, which is in fact the humified organic matter, registered the smallest value (0,57%) in variant where were application the mineral fertilizers and the soil was tilled by ploughing 20 cm.
Bulk density and soil permeability are influenced significantly by soil tillage and fertilization.

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LUCRĂRILE SOLULUI – COMPONENT DE BAZĂ AL SISTEMULUI DE MĂSURI PENTRU CONSERVAREA SOLULUI

SOIL TILLAGE – A MAIN COMPONENTM OF THE SOIL CONSERVATION WORKING SYSTEM

GH. SIN, GH.ŞT. BUDOI, D.I. MARIN

Cuvinte cheie: conservarea solului, lucrările solului, lucrări minime, însuşiri fizice, producţia
Key words: soil conservation, soil tillage, minimum tillage, physical properties, crop yield

SUMMARY

Soil, water and biodiversity are the main natural resources of agriculture.
There are numerous causes of soil degradation. In betweeb, tillage - irrationally, intensively and mainly moldboard plowing, plowing deeply, associated with deforestation, excessive herbicide aplications etc., are considered the main cause which had conducted to the release of the negatively procresses, and thus to the reduction of the soil resources and the humanity's future threatening. In addition, tillage influences soil organic matter loss and the climate warming process more and more evidently.
The paper presents some of our research results obtained at the Research and Development Agricultural National Institute – Fundulea and the University of Agronomic Sciences and Veterinary Medicine – Bucharest. For the tillage factor, the experimental treatments were the following:
At Fundulea : 1 – plowing 20-30 cm; 2- one year (y.) plowing (pl.)/ one y. disking (dk.); 3 – one y. pl./2 y. dk.; 4- one y. pl./3 y. dk.; 5- dk. every y.
At Bucharest : 1- pl. 20 cm, 2- pl. 30 cm; 3- paraplaw (ppl.) 20 cm; 4 – chisel (ch.) 40 cm; 5 – dk. 10 cm.
The obtained research results demonstrated that, for the Fundulea cambic chernozem conditions, it is possible to give up classical plowing during a three years period without a yield decrease for wheat, corn or sunflower crops. For the read preluvosol – soil Bucharest University, chiseling is an alternative for the soil conservation tillage system – and this system is better set for maize crop.

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EROZIUNEA SOLULUI ŞI IMPLICAŢIILE ECONOMICE ÎN DEZVOLTAREA DURABILĂ A ZONEI COLINARE A ŢĂRII

SOIL EROSION AND ECONOMIC IMPACT ON THE SUSTAINABLE DEVELOPMENT OF THE HILLY AREA OF ROMANIA

AL. ENE, ALEXANDRA TEODORA RADU, M. MUŞAT

Cuvinte cheie: eroziune, eficienţă economică
Key words: erosion, economic efficiency

SUMMARY

Soil erosion is the most damaging process which triggers unfavorable economic effects in the hilly areas of Romania.
The erosion processes diminishes the production capacity of the slope soils, decreasing agricultural production by 45-75% according to their intensity of manifestation.
On characteristic alignments from the benchmark hydrographic basin Valea Băeşti there could be noticed a decrease of the net corn production to 45-65% when erosion is very strong.
We mention that in totally unfavorable years (with low rainfall) production was prejudiced to the extent of 90-95%.

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COMBATEREA BURUIENILOR LA FLOAREA-SOARELUI ÎN SISTEMUL DE AGRICULTURĂ DURABILĂ ŞI ÎN AGRICULTUA ECOLOGICĂ

WEED CONTROL AT SUNFLOWER IN SUSTENABLE AGRICULTURE SYSTEM AND IN ECOLOGIC AGRICULTURE SYSTEM

I. DRĂGULEASA, D.I. SĂNDOIU, MIHAELA OBRIŞCĂ,
ANTOANELA CIOCAN, NICOLETA DUMITRESCU, M. MARINESCU, A. BOLCHIŞ,

Cuvinte cheie: combaterea buruienilor, agricultură durabilă, agricultură ecologică, profit
Key words: weeds control, sustenable agriculture, ecological agriculture, profit

SUMMARY

Comparative evaluation of preventives and curatives weeds control methods (agrotechnicals, fizicals, chemicals and Biologicals) is based on evaluation system used in SWOT analyses.
Researches with mechanicals and manual hoes and rotations, realized in 3 climatic conditions, shown that passing from drought conditions to normal and favorables conditions, the role of rotation is diminuated. On average, crop rotation has a 14.3% contribution at crop increase, mechanical hoes 15.7%, and manual hoes 18.2%. The aditional effect of nitrification have 3.3% in drought, 10.5% in normal conditions and 6.7% in moistening condition. The crop increase realized by 3 technological conditions have a fluctuation from 887 kg/ha in drought, 978 kg/ha in average and 1397 kg/ha in humid conditions.
Sunflower crop in sustenable agriculture system is profitable at 0.70 RON/kg sale price. In ecological agricultural system the sunflower cultivation is essential dependent on manual work expenses, becoming in june at 0.7 RON/kg sale price. The production results have demonstrated „economically" the necessity of differentiated subvention to the both production systems.

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STRATEGII PRIVIND UTILIZAREA ENERGETICĂ A BIOMASEI PRODUSĂ PE TERITORIUL ROMÂNESC

STRATEGIES REGARDING ENERGETICAL VALORISATION OF BIOMASS PRODUCED ON ROMANIA'S TERRITORY

LENUŢA IULIANA EPURE, GH.V.ROMAN

Cuvinte cheie: biomasă, culturi de câmp, utilizare energetică, biocarburanţi, strategii europene
Key words: biomass, field crops, energetical valorisation, biofuels, European strategies

SUMMARY

Within the VIEWLS European project („Clear Data for Clean Fuels"), research has been conducted on the biomass resources produced in Romania, and their agrofood and energetic potential.
The collected data resulted in scenarios for biomass production and its conversion into biofuels for transport (international freight and urban transport), one of the most important pollutant emission factors.
The Southern Development Region (RO03) has been suggested for biomass production, owing to its tremendous potential for raw matter plant production (cereal grains and oil seeds). Further on, land transport was planned to the Danubian ports or Constanta, where installations will be located for biomass conversion into biofuels – bioethanol and biodiesel. Biofuels will be afterwards transported via naval routes (either intracontinental by the Danube-Rhyne-Main channel network or by sea) or land routes to the Central and Western European users.

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ULEIURILE VEGETALE BRUTE ŞI INDEPENDENŢA ENERGETICĂ A FERMELOR VEGETALE

CRUDE VEGETABLE OILS AND THE ENERGETICAL INDEPENDENCE OF AGRICULTURAL FARMS

P. DOBRE, N. FARCAŞ, O .POPESCU, I. BORUGA, C. IACOMI,
ALINA UDROIU, F. FRUNZĂ

Cuvinte cheie: uleiuri vegetale, vâscozitate, combustibili
Key words: vegetal oils, viscosity, fuels

SUMMARY

The main objective of this paper is the ensurance of energetic independence for vegetal farms, by decreasing environment pollution.
This objective could be possible by replacing conventional fuels with crude vegetale oils, at Diesel engines.

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TOPINAMBURUL – O ALTERNATIVĂ ENERGETICĂ PRIETENOASĂ PENTRU MEDIU

JERUSALEM ARTICHOKE – AN ENVIRONMENTALLY FRIENDLY ENERGETIC ALTERNATIVE

P. DOBRE, N. FARCAŞ, NINA MUŞAT, C. IACOMI, I. BORUGĂ, O. POPESCU

Cuvinte cheie: topinambur, etanol, combustibili
Key words: *Helianthus tuberosus*, ethanol, fuels

SUMMARY

The paper proposes to solve fractionally the problem of power crisis from Romania, through the capitalization of species scilicet *Heliantus tuberosus* known and below the folk name of topinambour, but cultivated sporadically, on small surfaces, for another purposes. Comparative with other plants recommended to obtain ethanol, topinambour is conspicuous through the very high production (50 – 100 t/ha) and through the large content of fermentable sugars on untatea of surface unit (9.3 – 18 t/ha). By the fermentation of sugars and distillation, ethanol, is obtained a substitute of gas but therewith an adductive and ecologic. Also, topinambour owing to the different resistance to agents phytosanitary and the extravagantly conditions climate, is commited very well to ecologic culture, still a reason for a detailed research of this plant and possibly, for its culture on a large scale.

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IRIGAREA PRIN PICURARE – MĂSURĂ TEHNOLOGICĂ CU APLICABILITATE ÎN SISTEMUL AGRICULTURII ECOLOGICE

DRIP IRRIGATION – TECHNOLOGICAL MEASURE WITH APPLICABILITY WITHIN THE ECOLOGICAL AGRICULTURE SYSTEM

V. ION, GEORGETA TEMOCICO, LENUŢA IULIANA EPURE

Cuvinte cheie: Irigare, Picurare, Agricultură ecologică
Key words: Irrigation, Drip, Ecological agriculture

SUMMARY

Drip irrigation is a method which consists in a slowly delivery of water on the ground, drip by drip. The water is delivery punctually to the plants in a small debit and with an almost null pressure by the help of the capillary micro-tubes. Drip irrigation covers the water needs of the plants and assure the protection of both plants and soil, as well as a hidric balance which is favorable to the crop plants within the agricultural ecosystem. By determinations and measurements, it is possible to precisely establish the plants needs in water, and the drip irrigation method is assuring a strict control of using the water factor. In the present paper, there is presented the experimental results regarding the using of drip irrigation at strawberry and potato crops, as well as the effects of this technological method on the soil-plant-technology complex within the ecological agriculture system.

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EXTRACTELE VEGETALE – ALTERNATIVĂ NEPOLUANTĂ ÎN CONTROLUL AGENŢILOR PATOGENI ŞI AL DĂUNĂTORILOR

VEGETAL EXTRACTS – AN UNPOLLUTED ALTERNATIVE IN THE CONTROL OF PATHOGENS AND PESTS

BEATRICE IACOMI, IONELA DOBRIN, ROXANA CICEOI, MARIA CĂLIN

Cuvinte cheie: agenţi patogeni, dăunători
Key words: phatogens, pests

SUMMARY

The application of „natural products" became an alternative for the control of plant diseases and pests, and it seems to be an interesting field and an acceptable method, many cultivators already using plant extracts against some pathogens of plants of economic importance for the crops in protected places.
The interest for the plants used as pesticides is increasing because their multiple qualities, the lack of human toxicity being the most important, environmental protection, selectivity and bio-degradability. Plant species with pesticides effect are very different: aquatic species, trees, tropical plants, succulent plants, desert plants, edible or poisonous.
Our research followed the monitoring of plants with fungicide action for the *Alternaria brassicicola* funghus - one of the three *Alternaria* species disseminated through cruciferous seeds.
As a result, our research proposed *in vitro* testing of the action of some vegetal extracts belonging to different botanical families in the inhibition of mycelian growth and the germination of isolated spores that become resistant to cyclic-imide and fenylpyrol, either natural resistance or laboratory resistance. According to our information, these tests are performed for the first time on the selected strains resistant to fungicides.

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COMBATEREA FOCULUI BACTERIAN AL ROZACEELOR (*ERWINIA AMYLOVORA*) PRIN METODE ECOLOGICE ŞI AGROFITOTEHNICE ÎN VEDEREA PROTEJĂRII MICROBIOTEI FILOPLANULUI SPECIILOR POMICOLE SEMINŢOASE

CONTROL OF FIRE BLIGHT (*ERWINIA AMYLOVORA*) USING ECOLOGICAL AND AGROPHYTOTECHNICAL METHODS TO PROTECT MICROBIOTA OF PHYLLOPLANE IN POME FRUIT TREES

FULVIA – FLORICA VLAD

Cuvinte cheie: focul bacterian al rozaceelor, *Erwinia amylovora*, combatere, *Pseudomonas fluorescens*, *Erwinia herbicola*, Blight Ban A_{506}^{TM}
Key words: fire blight, *Erwinia amylovora,* control, *Pseudomonas fluorescens, Erwinia herbicola*, Blight Ban A_{506}^{TM}

SUMMARY

Fire blight, caused by bacterium *Erwinia amylovora*, is a very destructive disease of pome fruit trees. This disease is very difficult to control worldwide. Most infections are produced in the flowering period. To prevent the attack of this bacteria, trees must be treated with cupric or phosetyl aluminiu compounds or kasugamicyn. Chemical product interaction with *Erwinia amylovora* and with epiphythic bacteria from microbiota of phylloplane. Biological control by using epiphytic bacteria against *Erwinia amylovora* has been considered as an alternative method for controlling the disease.

Not long ago, the biological control of fire blight was considered „purely a speculative subject" because no published field studies demonstrated that bacterial saprophytes could interact with/and suppress populations of *Erwinia amylovora*. One of the antagonists, *Pseudomonas fluorescens* strain A_{506}, is now available commercially for biological control of fire blight (Blight Ban A_{506}^{TM}, Plant Health Tehnologies, Boise, ID). The product Blight Ban A_{506}^{TM} is used to biological control of fire blight, but it also decreases frost injury and fruit russeting by suppressing population of ice-nucleation active and auxin-producing microorganisms, respectively.

Even with an integrated system of chemicals combined with ecological and agrophytotechnical methods, fire blight is almost impossible to eliminate. Fire blight cannot be controlled by any one measure alone.

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DATE ECOLOGICE REFERITOARE LA *ACYRTHOSIPHON PISUM* HARR., IMPORTANT DĂUNĂTOR AL MAZĂRII

ECOLOGICAL DATA REGARDING *ACYRTHOSIPHON PISUM* HARR., IMPORTANT PEA APHID

EMILIA VASILE, P. PAŞOL, GR. MĂRGĂRIT

Cuvinte cheie: ecologie, mazare, afid, *Acyrthosiphon pisum* Harr.
Key words*:* echology, pea, aphid, *Acyrthosiphon pisum* Harr.

SUMMARY

From all the enviromental factors, the biotic ones are the main ecological category that influences the pest population level.
Ecological studies on *Acyrthosiphon pisum* Harr. (green pea aphid) were carried out in the research made upon tilled plants pests, moreover green pea.
Our research was done in 2000, 2001 and 2002, on the field belonging to U.S.A.M.V.-Bucharest and continue the series of research made in Romania by Cândea (1979).
The mentenance under PED (25 adults/plant or 40-50 adults/trap/week) is due also to the intervention of a number of 35 species of which 26 parasitoids and 9 predators.
Parasitoids are represented in the first place by *Aphidius ervi* Hall. with its efficiency of over 85%, and by species like *Praon volucrae* Hall. and *Praon dorsale* Hall. (*Hymenoptera, Aphidiidae*).
From the list of predators, we mention *Coccinella 7 punctata* L., *Adalia bipunctata* L. and *Coleomegilla maculata lengi* L. (*Coleoptera, Coccinellidae*).
Protecting parasitoids and predators species represents the main goal in maintaining the natural balance in the green pea crop in Romania.

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CERCETĂRI PRIVIND ENTOMOFAUNA AGROECOSISTEMULUI DE GRÂU DE LA MOARA DOMNEASCĂ, ÎN CONDIŢIILE APLICĂRII UNOR ELEMENTE SECVENŢIALE ALE CONCEPTULUI DE AGRICULTURĂ ECOLOGICĂ

RESEARCH REGARDING THE ENTOMOFAUNA OF THE GRAIN AGROSYSTEM FROM MOARA DOAMNEASCA, TAKING INTO CONSIDERATION THE SEQUENTIAL ELEMENTS OF THE ECOLOGICAL AGRICULTURE CONCEPT

RADA ISTRATE, D. I. MARIN, GR. MĂRGĂRIT

Cuvinte cheie: faună, dăunători, insecte utile, grâu
Key words: fauna, pests, beneficial insects, grain

SUMMARY

The ecological basis in the time lasting agriculture, is ensured by reducing or eliminating pesticides, chemical fertilizers inputs, rebuilding, maintaining or improving the quality of the soil, but also by stimulating the natural processes, that control the populations of the different organisms considered to be damaging (prejudicial). Thus, control is increased by using some parazitoizi, predators, the use of the autocidie methods, or selecting and using of the plant species that can resist the attack of the prejudicial agricultural insects.

The grain crops are considered stabile ecosystems, with specific inter-dependences between the different trofic chains, in which natural factors play a very important role. The lack of balance between the components of different populations, some considered by humans as damaging, others considered as useful, usually called „natural enemy of the prejudicial insects", determines a change in the strategy, in the control of the prejudicial insects, which takes into consideration the maximum natural control factors, but also diverting the intervention measures towards un-polluting methods.

The purpose of the research on which this paper is based consists in: establishing the fauna structure of the arthropod communities from the plants; dividing the arthropod species into damaging and useful; the characterization of the invertebrate communities from the viewpoint of abundance and dominance.

Within the collected fauna structure, the largest share was registered by the tysanopterous (91.1%), followed by dipterous (2.96%), homopterous (2.34%), heteropterous (1.24%), coleopterous (1.22%) and hymenopterous (0.46%).

The useful fauna was well represented by the dipterous (35.04%) and aranea (31.98%). The parasite species, represented by the species of the hymenoptera order, registered a relative abundance of 21.61%.

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BIOPREPARATELE PE BAZĂ DE VIRUSURI ENTOMOPATOGENE – O ALTERNATIVĂ NEPOLUANTĂ ÎN PROTECŢIA PLANTELOR PENTRU REDUCEREA POPULAŢIILOR DE INSECTE DĂUNĂTOARE

BIOPRODUCT WITH ENTHOMOPATHOGENIC VIRUSES – A NON-POLLUTION ALTERNATIVE IN PLANT PROTECTION FOR REDUCING POPULATIONS OF PEST INSECTS

FULVIA-FLORICA VLAD, I. GEAMĂN, MINODORA TUDOSE, IONELA DOBRIN

Cuvinte cheie: baculovirus, biopreparate, protecţia plantelor, insecte dăunătoare
Key words: baculovirus, bioproduct, plant protection, pest insects

SUMMARY

Baculoviruses are pathogens that attack insects and other arthropods. The majority of baculoviruses used as biological control agents belong to the genus *Nucleopolyhedrovirus*. These viruses are excellent candidates for species-specific, narrow spectrum insecticidal applications. They have been shown to have no negative impacts on plants, mammals, birds, fish, or even on non-target insects. This is especially desirable when beneficial insects are conserved to aid in an overall IPM program, or when an ecologically sensitive area is treated. The USDA Forest Service currently uses bioproduct Gypchek (*LdNPV*) to aerially spray thousands of acres of forest each year, against gypsy moths (*Lymantria dispar*) but leaves all other animals unharmed [8].
In this paper we present some aspects of bioproduct with enthomopathogenic viruses, which are registered in the world.

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SPECTRUL ŞI STRUCTURA ENTOMOFAGILOR DIN COLONIILE DE AFIDE PE PIERSIC ÎN ZONA BUCUREŞTI-BĂNEASA

ENTOMOPHAGOUS RANGE AND STRUCTURE IN THE APHID COLONIES OF PEACH-TREES GROWN IN THE BUCHAREST-BĂNEASA AREA

CONSTANTINA CHIRECEANU, VIORICA BĂLAN, SONICA DROSU, C. SIVU

Cuvinte cheie: structură, prădători, paraziţi, afide, piersic
Key words: structure, predators, parasites, aphids, peach trees

SUMMARY

At present when insect resistance to classic insecticides is a problem for integrated production, the use of beneficial insects as a mean for regulation the density of pest populations is a necessity. Specific composition of predators and parasites associated with aphid colonies were studied on peach orchards in Băneasa area in 2004. Four aphid species colonized peaches in Băneasa: *Myzus persicae*, *Hyalopterus pruni*, *Myzus varians* (Davidson) on the growing shoots, and *Pterochloroides persicae* (Cholodk.) on the bark. The predators were represented by the species of *Coleoptera-Coccinellidae*, *Neuroptera-Chrysopidae* and *Hemerobiidae*, *Diptera-Syrphidae* and the parasites belonged to *Hymenoptera*. *Adalia bipunctata*, *Coccinella septempunctata*, (*Coleoptera*: *Coccinellidae*), and *Chrysopa carnea* (*Neuroptera: Chrysopidae*), were the most abundant species in the aphid colonies on peach. By the abundance and frequency, entomophagous species impose themselves as natural factors with an important role in the limitation of aphid population in peach tree orchards.

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SOIUL REZISTENT – IMPORTANT MIJLOC BIOLOGIC, NEPOLUANT PENTRU PREVENIREA ATACULUI DE BLACK-POINT LA GRÂU

RESISTENT VARIETIES – AN IMPORTANT BIOLOGICAL, NON-POLLUTING FACTOR FOR PREVENTING WHEAT BLACK-POINT

C. GHEORGHIEŞ, BEATRICE IACOMI,
STELICA CRISTEA, O. GROZA, N. DINCĂ, C. GUTUE

Cuvinte cheie: grâu, black-point, rezistenţa soiurilor
Key words: wheat, black-point, variety resistance

SUMMARY

Being the first research on wheat kernels black-point in Romania, an important step was to monitor the presence of the attack in seed plots, in order to reveal the variety resistance. Data showed that black-point occurred in all 600 seed plots examined during the 3 years. The average of black-point frequency was 18.88% (9.5% in 2003; 16.19% in 2004 and 30.95% in 2005). High levels of black-point were favoured by frequent rainfalls during ripening season in the year 2005.

The main biological factor involved in black-point occurrence proved to be the microorganism *Alternaria alternata* (average frequency – 59.06%), followed by the fungus *Fusarium roseum* (F-12.92%). The fungus *Drechslera* (*Bipolaris*) *sorokiniana* occurrence with a low frequency (below 3%). We detected also the fungus *Khuskia* (*Nigrospora*) *oryzae* on the wheat kernels affected by black-point, during 2003, with a frequency of 3.06%.

Results show that some varieties (Arieşan, Crina, Moldova 83, Gabriela, Serina, Alex) proved to have good resistance to black-point. Black-point intensity depends to a large extent on the variety. On the 0-6 intensity scale, Arieşan variety had lowerst intensity (grade 1), while the most sensitive was the variety Dor (grade 3-5). Black-point intensity depends, also, on weather conditions during the ripening stage of the wheat plants.

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CERCETĂRI PRIVIND COMPOZIŢIA ÎN SPECII A ENTOMOFAUNEI UTILE DIN CULTURA DE GHIZDEI

INVESTIGATION CONCERNING THE USEFUL ENTOMOFAUNA COMPOSITION IN SPECIES FROM THE *LOTUS CORNICULATUS* L. CROP

ANA-MARIA BADEA, I. PĂLĂGEŞIU

Cuvinte cheie*:* ghizdei, himenoptere, coleoptere, dinamică
Key words: birds-foot trefoil, *Hymenopta* order, *Coleoptera* order, dynamics

SUMMARY

This paper presents results concerning the useful entomofauna collected from the Lotus corniculatus L. crop cultivated in the Western Plain of the Romania.
From this crop, 15 insects species belonging to the *Coccinellidae*, *Byrrhidae*, *Ichneumonidae*, *Torymidae*, *Pteromalidae* and *Chalcididae* families were collected.
We noticed the existence of a 30% ratio between the zoophagous and pest species, which gives emphasis to mantaining in large measures the studied agrobiocenosis balance who had been protected.

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STUDII PRIVIND MECANISMELE DE ACŢIUNE ALE LEVURILOR ANTAGONISTE FAŢĂ DE FUNGI DE DEPOZIT

STUDIES REGARDING THE MECHANISMS OF ACTION OF ANTAGONISTIC YEASTS TOWARD FUNGAL SPOILAGE

IRINA GREBENIŞAN, CĂLINA PETRUŢA CORNEA,
LILIANA AURORA ŞTEFAN, F. OANCEA, CARMEN LUPU,
CARMEN CÎMPEANU, VIOLETA OLTEANU

Cuvinte cheie: fungi de depozit, levuri antagoniste, caracter killer, competiţia pentru substanţe nutritive
Key words: postharvest spoilage fungi, antagonistic yeasts, killer, competition for nutrient

SUMMARY

Losses from postharvest pathogens on fruit and vegetables have been principally managed by synthetic fungicides. Consumer concerns about possible risks associated with the use of fungicides, along with development of pathogen resistance to certain fungicides have resulted in an intensive search for safer, more effective control options that pose minimal risk to human health and the environment. Significant progress has been made in developing potential biological alternatives to synthetic fungicides for the control of postharvest spoilage and toxin producing fungi of fruits and vegetables. The use of microorganisms, particularly yeasts occurring naturally on the surface of fruit or vegetables, usually has been preferred for the control of postharvest diseases. Yeasts are suitable as biocontrol agents of postharvest diseases because they rapidly colonize and survive on fruit surfaces for long periods of time under different conditions, use available nutrients to proliferate rapidly, limiting nutrient availability to the pathogen and generally unaffected by fungicides used commercially.

We isolated three yeasts strains in our laboratory, one strain from orange surface and two stains from grapevine surface designated as: L_{27}, L_{28}, L_{29}. These stains were screened for in vitro antifungal activity against five different strains of *Penicillium* spp. isolated also in our laboratory from mandarin (F_{40}), cucumber (L_{42}), orange (L_{43}) and citrus (L_{45}, L_{46}). Strains L_{28} and L_{29} can inhibit the growth of *Penicillium* spp. spoilage fungi very well. Mechanisms of yeast antifungal activity were also studied.

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CERCETĂRI PRIVIND IDENTIFICAREA UNOR ALTERNATIVE CHIMICE ŞI NECHIMICE PENTRU DEZINFECŢIA SOLULUI ÎN SPAŢIILE PROTEJATE ÎN VEDEREA ÎNLOCUIRII BROMURII DE METIL – COMPUS CHIMIC CU ACŢIUNE DISTRUCTIVĂ ASUPRA STRATULUI DE OZON

RESEARCH CONCERNING THE IDENTIFICATION OF CHEMICAL AND NON CHEMICAL ALTERNATIVES FOR SOIL DISINFECTION IN ORDER TO REPLACE THE METHYL BROMIDE - CHEMICAL COMPOUND WITH DESTRUCTIVE ACTION OVER THE OZONE LAYER

MINODORA TUDOSE, FULVIA-FLORICA VLAD,
CONSTANŢA ALEXE, M. BOGOESCU, IONELA DOBRIN

Cuvinte cheie: bromură de metil, patogen de sol, dăunători, tomate, alternative, nematod, tomate altoite
Key words: methyl bromide, soil borne pathogen, pests, tomato, alternatives, nematode, grafted tomato

SUMMARY

The biotical and non biotical environmental factors from the greenhouse offer optimum breeding conditions for numerous species of pathogenic agents causing great production damage.
At present, vast research programs are developed both in developed and developing countries, in order to find new alternatives to the soil disinfection with methyl bromide. Besides the negative effects over the ozone layer, disinfection with methyl bromide is expensive and not always efficient. That is why it is very important to identify, as soon as possible, new measures of alternative fighting against soil pathogenic and harmful agents, compatible with the principles of ecological horticulture.
In order to eliminate methyl bromide from the Romanian horticulture, research was carried out in the demonstrative plots of the companies: SC Berser SA, SC Leoser SA, SC Brasov SA. The following tomato types were used: Cindella, Profilo, Precisa, Jana, Petula, Schirley and Barbados, in standard variants and in grafted plants. The demonstrative plots were formed of the following experimental variants: standard steam (SS), standard methyl bromide (SMB), not treated grafted plants (NTGP), not treated standard plants (NTSP), standard dasomet (SD) and standard sodium methane (SSM), and combinations of these ones. The studies were made under conditions of natural infection.
Following the results obtained, the substance sodium methane was homologated again with the commercial denomination of Nemasol 510 for fighting soil pathogens and nematodes. Also, the variant with non treated soil and grafted plants (NTGP) is a non polluting alternative to the ecological vegetable culture.

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IMPACTUL SOCIO-ECONOMIC AL DĂUNĂTORILOR ASOCIAŢI PARCURILOR ŞI GRĂDINILOR ORNAMENTALE – DIFICULTĂŢI ŞI POSIBILITĂŢI DE COMBATERE

SOCIO-ECONOMIC IMPACT OF PEST FROM PARKS AND GARDENS – DIFFICULTIES AND CAPABILITIES IN PEST CONTROL

MINODORA TUDOSE, IONELA DOBRIN, FULVIA-FLORICA VLAD,
ROXANA CICEOI, VASILICA PALANCIUC, C. GUTUE

Cuvinte cheie: dăunători, parc, grădini, plante ornamentale, impact, daune, acarian, insectă
Key words: pests, parks, gardens, ornamental plants, impact, damages, mite, insect

SUMMARY

In the last years, many changes in climatic conditions have occured. As a consequence, many pests from parks and gardens have increased their number: tetranychid mites, eriophyid mites, gall-forming aphids, lepidopters, coleopters, hymenopters and dipters.
This paper presents some pests identified on different ornamental plants, the damage that they produce, their socioeconomic impact, and, last but not least, the difficulties in pest management.
We hope that this paper will be an alarm sign for plant protection specialists and all the other people.

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CERCETĂRI PRIVIND EFECTUL INOCULĂRII CU *RHIZOBIUM* SP. ASUPRA PRODUCŢIEI DE SEMINŢE LA GENOTIPURILE DE LUPIN

RESEARCH REGARDING THE INOCULATION EFFECT WITH *RHIZOBIUM* S. ON THE SEED YIELD TO LUPIN GENOTYPES

LIZICA SZILAGYI, HELLENE CASIAN, VALENTINA GHEORGHE,
O. CHIHAIA, F. SZILAGYI

Cuvinte cheie: *Lupinus angustifolius* L., *Lupinus luteus* L., *Bradyrhizobium* sp. *Lupinus*, producţia de seminţe, substanţă uscată
Key words: Narrow-leafed lupin, Yellow lupin, *Bradyrhizobium* sp. *Lupinus,* seed yield*,* yield components, shoot dry weight

SUMMARY

Field experiments were conducted during the 2004 and 2005 growing season in the University of Agronomic Sciences and Veterinary Medicine, Bucharest, to explore the application of Danish lupin varieties in the Romania environmental conditions and to find out the efficiency of the symbiotic nitrogen fixation in increasing the yield of *Lupinus angustifolius* and *Lupinus luteus*. We included in this study six lupin lines from Denmark.
A factorial experiment with three replicates was used. Each plot was divided in to two. The experiment had one control and one inoculant treatment with *Bradyrhizobium sp. Lupinus*. In general, inoculation with the rhizobium under investigation positively increased the number of nodules. Analyses showed the rhizobial inoculation significantly improved growth and biomass production and seed yield. Plant height increased by 15.2 %, nodules number by 76.2% and also shoot dry weight by 43.8 %, and seed yield by 32.7 % compared to the non-inoculated plants.

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AUTOFERTILITATEA ŞI NECESITATEA POLENIZĂRII ENTOMOFILE LA HIBRIZII ROMÂNEŞTI DE FLOAREA-SOARELUI

SELF-POLLINATION AND NECESSITY OF ENTOMOPHILOUS POLLINATION IN THE ROMANIAN SUNFLOWER HYBRIDS

V. ION, NICOLETA ION, GH.V. ROMAN, LENUŢA IULIANA EPURE

Cuvinte cheie: autopolenizare, polenizare entomofilă, floarea-soarelui
Key words: self-pollination, entomophilous pollination, sunflower

SUMMARY

Sunflower is a plant with allogam – entomophilous pollination, but self-pollination is still possible and it determines different grades of fertility in the sunflower hybrids, depending on their biological and morphological characteristics, the evolution of the flowering process and characteristics of the fertile flowers respectively. It is important for farmers to know the grade of self-pollination of the sunflower hybrids because they have to pay attention to the pollination process in sunflower by the help of melliferous bees, especially to the hybrids where this is strongly necessary. The spontaneous entomophauna is taking part to the pollination process of the sunflower, especially within the ecological agro-ecosystems, which are favourable to the developments of the pollination insects, but only these are not able to assure the pollination in sunflower, and that is why the presence of the melliferous bees is obligatory. In the present paper, there are presented the experimental results which were obtained at 10 Romanian sunflower hybrids (Favorit, Festiv, Alex, Romina, Performer, Select, Justin, Splendor, Hercule şi Felix), in the period 2002-2004.

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PREMIZELE APLICĂRII AGRICULTURII ECOLOGICE ÎN ROMÂNIA, CU EXEMPLIFICAREA SPECIALĂ A ZONEI PÂRSCOV-PIETRARU, JUDEŢUL BUZĂU

PREMISES OF APPLYING THE ECOLOGICAL AGRICULTURE IN ROMANIA, IN THE SPECIAL EXEMPLE OF THE PÂRSCOV-PIETRARU AREA, BUZAU DISTRICT

M. SAVA, IONELA DOBRIN, B. SAVA

Cuvinte cheie: agricultură ecologică, culturi ecologice, protecţie naturală, produse animaliere ecologice
Key words: ecological agriculture, ecological crops, natural protection, ecological animal products

SUMMARY

On the marveleous valley of the Buzau river, on the right side, just after it passes by the Scarisoara forrest, in the village Parscov and Pietraru area, many traditional habitats and works are left in the domain of the plants and animal breeding, and also in the utilisation of several products resulting from those activities.
The same breeds of regional hens, sheeps, the tigaie and birsana breeds, of cows, Romanian baltata breed, are grown only on natural products. The poultry, for being resistent to diseases and for good development, receive, as chicken of one - two days to one month and more, mixtures of dry maize flour, stinging nettle, podbal and common celandine, to which cow or sheep milk are added. For clothes, painting is utilised till our days, by traditional methods, which utilises the moistures of tinctorial plants. All this shows clearly that, in this area based on the millenary experience of the people, real ecological agriculture is practised.

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SECVENŢE TEHNOLOGICE APLICATE ÎNTR-UN ECOSISTEM POMICOL ÎN SCOPUL CONVERSIEI SPRE POMICULTURA ECOLOGICĂ

TECHNOLOGICAL SEQUENCES APPLIED TO A FRUIT-TREE ECOSYSTEM AIMING AT CONVERSION TO ECOLOGICAL FRUIT-TREE GROWING

VIORICA BĂLAN, D. I. MARIN, IONELA DOBRIN, NARCISA BĂBEANU,
M. MIHALACHE, GEORGETA TEMOCICO, NICULINA GHEORGHIŢĂ,
VALERICA TUDOR, MIHAELA DOGARU, MARIA OPREA,
CONSTANINA CHIRECEANU, S. ŞTEFAN

Cuvinte cheie: ecosistem pomicol, conversie, soiuri rezistente la boli, protecţie fitosanitară, controlul buruienilor, fertilizare
Key words: tree growing ecosystem, conversion, disease resistant varieties, disease and insect control, weed control, fertilization

SUMMARY

The interdisciplinary and interinstitutional research included in the paper „Technological sequences applied to a fruit-tree ecosystem aiming at conversion to ecological fruit-tree growing" was devised from the necessity to apply environmentally-friendly technologies to agriculture.
Starting from the basic ecological principle of horticulture, and subsequently of alternative fruit-tree growing, referring to the interrelation between "to live, "to feed" and "to get food for other living organisms", framework technological sequences were experimented. The paper recommends sequences regarding the best use of local resources of the lowest economic and ecological risk, combining traditional knowledge with the latest information from the fields of genetics, physiology, biochemistry, soil science, microbiology, plant biology, plant protection, ecology, current fruit-tree techniques.
The effect of the anthropogenetic factors (extreme temperatures, rainfalls, water quality) were evaluated, pointing out the deviations affecting the biological activity of various wildlife components of the fruit-tree ecosystems of Băneasa and Moara Domnească. The study of the local entomofauna existing in the fruit-tree ecosystems of apple-tree biocenosis (resistant varieties: Prima, Pionier, Generos, Surprize, Florina), apricot-tree biocenosis (Rareş, Valeria, Carmela, Viorica varieties), peach-tree biocenosis (Amalia, Antonia, Dida, Congres varieties), plum-tree biocenosis (fat Tuleu, Stanley, Anna Spath varieties) resulted in the identification of useful entomofauna and pathogen antagonists.

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EFICACITATEA SISTEMULUI DE IRIGARE ÎNCHIS ÎN COMBATEREA BACTERIEI *RALSTONIA SOLANACEARUM* LA CULTURA DE *PELARGONIUM* SP.

EFFICACY OF CLOSED IRRIGATION SYSTEMS IN THE FIGHT AGAINST *RALSTONIA SOLANACEARUM* BACTERIUM IN *PELARGONIUM* SP. CULTURE

T. ŞCHIOPU

Cuvinte cheie: sisteme de irigare închisă, filtrare lentă, agenţi fitopatogeni, bacterie
Key words: closed irigation sistems, slow filtration, phytopatogen agents, bacterium

SUMMARY

Ralstonia solanacearum is a microorganism quarantine existing in Europe. Research about this bacteria was made in the attacked potato cultures. The symptoms produced before contamination are similar with that of *Xanthomonas campestris* bacterium's. The damage produced by this imposed the finding of a prevention and fighting against method. At this point, the behaviour of *Xanthomonas campestris* bacterium in running water and efficacity of the filtrating system used in its control. Slow filtration is a simple method, it is adapted for any culture, does not modify the chemical composition of the nourising solutions.

Lucrări ştiinţifice, U.Ş.A.M.V.B., Seria A, Vol. XLIX, 2006

CERCETĂRI PRIVIND SPECIILE SPONTANE DE PLANTE MEDICINALE ŞI AROMATICE DIN FAMILIA *LAMIACEAE* ÎN ZONA PRELUVOSOLULUI ROŞCAT ŞI ALUVIOSOLULUI DIN CÂMPIA ROMÂNĂ

RESEARCHES ABOUT SPONTANEOUS SPECIES OF SPICES AND MEDICINAL PLANTS FROM *LAMIACEAE* (*LABIATAE*) FAMILY IN THE HAPLIC LUVISOL AND ALUVIOSOL AREA OF ROMANIAN PLAIN

OANA CORNELIA STĂNESCU, GH.V. ROMAN

Cuvinte cheie: plante medicinale şi aromatice, frecvenţă, abundenţă
Key words: medicinal and spices plants, frequency, plenty

SUMMARY

The main objective of this paper is constituting by the spontaneous species of medicinal and spices plants study, from *Lamiaceae* (*Labiatae*) family, comparative study about the frequency and plenty of these plants in different pedoclimatic conditions.
Phytoterapy is the oldest medical attendance way, representing all possibilities to warn and cure sicknesses using medicinal plants.
The world plants vastness impress with their beauty and smell and also with their contents of active matter. The active matter have been kept, preserved and specially improved.
Lamiaceae (*Labiatae*) family consist of about 200 genera, with more than 4000 species of spices, herbaceous plants, bushes, arborescents plants and liana, meeting in the whole world. This family is representative in the haplic luvisol and aluviosol area of Romanian Plain. The medicinal, melliferous, ornamental importance of these plants makes to increase the attention about their studies.
In this paper, from the spontaneous medicinal and spices species, are presenting 3 genera: *Ajuga*, *Glechoma* and *Lamium* with their representatives: *Ajuga reptans*, *Ajuga genevensis*, *Glechoma hederacea*, *Lamium purpureum* and *Lamium amplexicaule*.

Lucrări ştiinţifice, U.S.A.M.V.B., Seria A, Vol. XLIX, 2006

STUDIU PRIVIND SPECIILE SPONTANE DE PLANTE MEDICINALE ŞI AROMATICE DIN FAMILIA *ASTERACEAE* (*COMPOSITAE*) ÎN ZONA PRELUVOSOLULUI ROŞCAT DIN PARTEA CENTRALĂ A CÂMPIEI ROMÂNE

STUDY ABOUT SPONTANEOUS SPECIES OF MEDICINAL AND SPICES PLANTS FROM *ASTERACEAE (COMPOSITAE)* FAMILY IN THE HAPLIC LUVISOL AREA FROM CENTRAL PART OF ROMANIAN PLAIN

OANA CORNELIA STĂNESCU, GH.V. ROMAN

Cuvinte cheie: plante medicinale şi aromatice, frecvenţă, abundenţă, densitate
Key words: medicinal and spices plants, frequency, plenty, density

SUMMARY

The main objective of this paper is constituting by the spontaneous species of medicinal and spices plants study, from *Asteraceae (Compositae)* family which are presented in the analysed area.

From the humanity beginning, plants has been constituted a real possibility of nature for health carry and secrets of this treatment way was send from generation to generation until nowadays; in this time, research was confirming their importance useful in the traditional medicine. Medicinal plants and teas are use from a long times like adjuvant from basic medicine and with the physician approval; in this way could bee shorten the sickness and, also, the time spend in the hospital.

Asteraceae (Compositae) is one of the biggest families. This family consist of about 1000 genera, with more than 20000 species meeting in the whole world. In our country is represented by 92 genera with 481 species spontaneous and cultivated.

This family is representative in the haplic luvisol area from central part of Romanian Plain. The medicinal, melliferous, ornamental importance of these plants makes to increase the attention about their studies.

In this paper, from the spontaneous medicinal and spices species, are presenting the following: *Achillea millefolium*, *Artemisia absinthium*, *Artemisia vulgaris*, *Cichorium intibus*, *Erigeron canadensis*, *Matricaria chamomilla*, *Taraxacum officinale*.

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EnTecNet - UN CURS DE ÎNVĂŢARE A LIMBII GERMANE ADRESAT CELOR CE STUDIAZĂ PROBLEMELE MEDIULUI ÎNCONJURĂTOR ŞI PROTECŢIA ACESTUIA

EnTecNet - A GERMAN LEARNING COURSE FOR THOSE WHO STUDY ENVIRONMENTAL ISSUES AND PROTECTION

ALINA SĂCĂLEAN, GH.V. ROMAN

Cuvinte cheie: învăţarea de tip informal, tehnologia mediului înconjurător, networking
Key words: informal learning, Environmental Technology, networking

SUMMARY

Taking care of the environment is directly connected with the European standards of living. Commerce and industry, the whole economic life has to be responsible for environmental issues in order to keep growing. German speaking countries play a leading role in Environmental Technology. To keep up with the latest developments in Environmental Technology, it is vitally important to know German.
Therefore Finland, France, Germany, Austria, Czech Republic and Romania have produced a web-based multimedia language course: „German in Environmental Issues and Technology", which can be used both offline (CD-ROM) and online (Internet), in classroom teaching or as self-study material.
Overall, our presence can be considered an ardent interest for the environmental-science and particularly to allow learners from different countries to work together in a common language and to exchange information about development trends in the field of Environmental Technology.
In the following paper, based on our work and experience, we will underline the aims of the EnTecNet project, we will describe the partnership, the multimedia language training package, the EnTecNet training modules, the pilot course and the networking concept.

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STRATEGII DE ORGANIZARE, CONSERVARE ŞI RECONSTITUIRE A STOCULUI GENETIC NAŢIONAL LA RASA DE GĂINI GÂT GOLAŞ DE TRANSILVANIA, CA BAZĂ DE MATERIAL BIOLOGIC PENTRU FERMELE ECOLOGICE DIN ROMÂNIA

STRATEGY OF ORGANIZATION, CONSERVATION AND RECONSTITUTION OF THE NATIONAL GENETIC STOCK OF TRANSYLVANIAN NAKED NECK BREED, AS BIOLOGICAL MATERIAL FOR ECOLOGICAL FARMS IN ROMANIA

ELENA POPESCU-MICLOŞANU, VIORICA BOBOC, I. CUSTURĂ,
MINODORA TUDORACHE, CONSUELA ROIBU

Cuvinte cheie: strategie, conservare, reconstituire stoc genetic, Gât Golaş de Transilvania, ferme ecologice
Key words: strategy, conservation, reconstition genetic stock, Transylvanian Naked Neck, ecological farms

SUMMARY

Ecologically poultry, beside the imputes from ecologically agriculture, needs houses and adequate biological material, well adapted to the characteristics of this production systems and who differs much from the intensive one. Because in intensive husbandry on exploits a little number of breeds, with middling productive results in other systems and the number of the poultry from other breeds diminished very much, it is difficult to assure the stock needed for ecological rearing. Therefore are imposed immediately measures of conservation and reconstitution of the genetic national stock of all poultry breeds, inclusively from certain breeds, well adapted at closed to nature rearing systems, like the Transylvanian Naked Neck.
The Transylvanian Naked Neck constitutes no only a national breed, recognized as exhibition breed in all countries of the world, but also a breed of great interesting for the professional poultry activity which products ecological poultry under quality mark. From this point of view, the Transylvanian Naked Neck has the perspectives to be one of the 7-8 breeds who determinates the poultry production of the world. So, it is more than justified to grant, in the origin country, the greatest attention.
The strategy of organization the national genetic stock of the Transylvanian Naked Neck breed starts from the association of the breeders in a breed club, stage accomplished in march 2006. It continues by creating a national genealogical register. The present paper proposes a structure for the genealogical register of this breed, in the first stage introductory, then provisional and definitive and also a model of organization the writing down in the register, starting from the health and exterior appreciation, conforming to a original project of the breed standard, until the production performances control and the prove for the poultry origin.

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EVALUAREA PARAMETRILOR DE ANALIZĂ GENETICĂ PENTRU POPULAŢIA DE CAI DE RASĂ LIPIŢANĂ DE LA SÂMBATA DE JOS

EVALUATION OF THE PARAMETERS OF GENETIC ANALYSIS APPLIED TO THE LIPIZZANER POPULATION AT SÂMBATA DE JOS

M. LECHKUN, R. A. POPA, H. GROSU

Cuvinte cheie: resurse genetice, analiză genetică, înrudire, consangvinizare, mărime efectivă
Key words: genetic resources, genetic analysis, average relationship, average inbreeding, genetic size

SUMMARY

The Lipizzan horse known as „Baroque horse" [6] is considered at present a cultural heritage. But, under the influence of several factors they run the risc of becoming an endangered species, as any other population of domestic animals. Compared to oher populations under the same conditions, the most important factor and apparently the most prone to influence the Lipizzan at present is *economic inefficiency* [3]. Therefore, the Lipizzan horse breed at the Sâmbăta de Jos Stud offers numerous cultural, genetic, zootechnic, and scientific reasons that justify its choice as an object of study within the Management of Genetic Resources field. As any other attempt involving *MGR* (Management of Genetic Resources), the first step to take is acknowledging the status of the population.

This study focuses on the evaluation of the most important parameters of genetic analysis applied to the population of Lipizzan horses bred at Sâmbăta de Jos Stud. The study takes into consideration five-generation genealogical data. These data refer to the original breeding stock in July 2004 (10 stallions and 73 brood mares).

We used the recursive method (tabulation) elaborated by Henderson and Cunningham (*The Numerator Relationship* Matrix, 1976) in order to undergo this genetic analysis of the active population of Lippizzaner horses bred at Sâmbăta de Jos Stud. This method was presented for the first time in Romania by Grosu et al. in „Modele liniare utilizate în ameliorarea genetică a animalelor", 1997 (*Liniar models used in animal breeding*). The method was used for the first time in 2004 by Al. Popa et al. on horse population in order to obtain the important parameters of the genetic analysis for the Hutzul Carpathian ponny horse from Lucina.

The research mainly focused on the actual level of reproductive isolation, genetic relations with other populations, important ancestors, average relationship, average inbreeding and actual genetic size of the population.

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CERCETĂRI PRIVIND EVOLUŢIA CERNOZIOMURILOR DIN BAZINELE HIDROGRAFICE AFLUENTE SLĂNICULUI DE BUZĂU

RESEARCH CONCERNING THE EVOLUTION OF CHERNOZEMS IN THE HYDROGRAPHIC BASINS AFFLUENT TO SLĂNIC-BUZĂU

M. MUŞAT, ALEXANDRA TEODORA RADU, AL. ENE

Cuvinte cheie: bazin hidrografic, studiu pedologic, proprietăţi morfologice şi fizice
Key words: hydrographic basin, pedological studies, physical and morphological properties

SUMMARY

Research was done on a surface of 1336.5 ha in six hydrographic basins of Slănic-Buzău (figure 1), situated in the area of SubCarpathians de Curbură and consisted of undergoing a pedological mapping according to the ICPA methododology.
After having undergone the pedological mapping, nine soil types were identified, the highest percentage (52%) being represented by chernozems (typical, cambic, argic). The soils chosen for the study were: argic chernozem, and cambic chernozem in the Valea Tătarului hydrographic basin, cambic chernozem in the Valea Mereului hydrographic basin and typical chernozems in the Valea Băeşti hydrographic basin.
The morphological description of the opened profiles is presented in figures 2, 3, 6, 8 and 9.
Human intervention and the agricultural exploatation of the land in the studied area triggered alterations of the physical (texture), chemical (humus content) and hydrophysical (wilting point, field capacity and available water capacity) properties of the soil profiles.
The alternation of the physical and hydrophysical properties are presented in figures 4, 5, 7, 10 and 11.

Lucrări ştiinţifice U.Ş.A.M.V.B., Seria A, Vol. XLIX, 2006

VERTISOLURILE ŞI SOLURILE CU PROPRIETĂŢI VERTICE DIN CÂMPIA BOIANU – CARACTERIZARE ECOPEDOLOGICĂ ŞI BONITARE – REFERIRE LA GRUPUL DRĂGĂNEŞTI – OLT ŞI POTCOAVA – SINEŞTI

VERTISOLS AND THE VERTIC PROPERTIES SOILS FROM BOIANU PLAIN - ECOPEDOLOGICAL CHARACTERIZATION AND LAND EVALUATION – REFERENCE TO DRAGANESTI-OLT AND POTCOAVA-SINESTI AGRARY GROUP

CLAUDIA ANDREIAŞI, A. BASARABĂ, N. ANDREIAŞI, I. IOAN

Cuvinte cheie: rentabilitatea terenului, structură tubulară a reliefului, cernoziomuri argice, orizont „y", evoluarea terenului, P_N – profit net
Key words: field profitability, tube structure relief, argic chernozems, y horizon, field evaluation, P_N- net profit

SUMMARY

Vertisols and vertic properties soils from Potcoava-Sinesti are a continuation of those from Boianu Plain.
Geomorphologically, the region is a tabular plain with clayey foundation, located at the limit between Cotmeana platform, in the North, and Gavan-Burdea Plain, in the South.
The type of soils from this area show the powerful influence of rock as a solification factor, approx. 78.1 % from the surface being represented by vertisols.
The soils properties are under lithology influence, especially the physical features (clay texture, the presence of montmorillonit, high bulk density, decreased total porosity, bad hydrophysic indicators).
Ecopedological land evaluation was based on the pedologic information and the study of environment factors.
Agroeconomic evaluation was made at this moment, by using the acquisition price for agrary products in 2005.

Lucrări ştiinţifice, U.Ş.A.M.V.B., Seria A, Vol. XLIX, 2006

CARACTERIZAREA ECOPEDOLOGICĂ ŞI BONITAREA GRUPULUI DE FERME RADOMIREŞTI ŞI BUCŞA-MIHĂILEŞTI DE LA S.C. „POIANA" S.A. – JUD. OLT

ECOPEDOLOGICAL CHARACTERIZATION AND LAND EVALUATION FOR RADOMIRESTI AND BUSCA-MIHAESTI FARMS FROM S. C. „POIANA" S.A. – OLT COUNTY

A. BASARABĂ, CLAUDIA ANDREIAŞI, N. ANDREIAŞI, LILIANA MIRON

Cuvinte cheie: rentabilitatea terenului, vârstă pleistocenă, circuit geochimic, preluvosoluri roşcate, bonitare cadastrală
Key words: field profitability, ice age, geochemical circuit, reddish preluvosols, cadastral soil evaluation

SUMMARY

The researched area is part of Gavanu-Burdea Plain northern extremity, being located nearby some important communication lines (National Road Bucuresti-Caracal-Craiova).
The present reserch goal was: the adaptation to the new cadastral situation according to Law 18, data recorrelation from past research studies in order to synchronize them to SRTS/2003 and finally, the establishing of land evaluation potential.
Pedological cover at ″Poiana″ – S.A. farms is represented by 2 classes - Cernisols and Luvosols (according to SRTS/2003); these classes include faeozoms (205 ha) and reddish preluvosols (757 ha). These soils are easily recognized for their clayey texture (loamy-clay), a characteristic which requires numerous improvement measures, such as: drainage, loosening of soil, scarifying of soil, fertilizers applying.
Natural land evaluation classes show a IV-III class potential and improvement measures refer to correction of low acid pH and, as a consequence, the increasing of saturation base, as well as micro and macroelements providing.

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ECOPEDOLOGIA PĂRŢII DE SUD A REGIUNII ODESSA, PERIMETRUL KITAI – IZMAIL – KATALBUG (REPUBLICA UCRAINA)

SOUTH ODESSA REGION ECOPEDOLOGY, KITAI-IZMAIL-KATALBUG PERIMETER (UKRAINE REPUBLIC)

CLAUDIA ANDREIAŞI, A. BASARABĂ, N. ANDREIAŞI,
IRINA MOISE, LILIANA PANAITESCU

Cuvinte cheie: rentabilitatea terenului, japşe, analiza geochimică, platformă peneplenizată, supoziunea în loess, evidenţă funciară
Keywords: field profitability, geochemical analysis, peneplain platform, loess degradation due to carbonates washing, landed situation (evidence)

SUMMARY

This region extraterritorial research is the result of a scientific collaboration convention between Chisinau and Odessa universities, on one side, and Romania's universities on the other side, colaboration which refers to methodological guidance for Ukraine students who were studying in our country.
The farms territory from south Basarabia area, Izmail, is located in the Budgeaului steppe, all around Katlabug Lake.
Geomorphologically, this region represents a hillocky tableland, with a platform base, covered by loess deposits. The whole relief is afected by erosion.
Ecopedological cover belonging to south Basarabia province is unlimited connected by geographic position between Prut and Nistru, by Danube presence in the south and by neighbourhood with Black Sea maritime space.
The soils in the area are: chernozems (cernisols), approx. 50% from the territory, followed by hydrosols, 33% from the territory and unevoluated soils (entisols), approx. 13%.

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CERCETĂRI PRIVIND EFECTUL CUMULAT HIBRIZI X ÎNGRĂŞĂMINTE LA PORUMBUL CULTIVAT ÎN ZONA PODIŞULUI CASIMCEA

RESEARCH REGARDING THE CUMULATED EFFECT HYBRIDS X FERTILISERS ON THE MAIZE CROP CULTIVATED AT CASIMCEA PLATEAU ZONE

D. CAIMACAN POPESCU

Cuvinte cheie: hibrizi de porumb, îngrăşăminte
Key words: corn hybrids, fertilizers

SUMMARY

Researches was performed during 2003 and 2004 years at the experimental field Sarighiol de Deal, located at the Casimcea Plateau. The soil was of Kastanoziom type, and the annual rainfall average was 458 mm. Three maize hybrids were tested – F376, Olt and Oituz and three types of fertilizations - unfertilized, $N_{150}P_{50}$ and 20 t manure/ha.
The analysis of the results conducted to the following conclusions:

1) In the region, the yield level is highly influenced by the rainfalls. It is low in the droughty year as 2003 was (1400-2600 kg/ha);
2) From the tested hybrids, Olt gives the highest yield; Oituz has low productivity but because it has a shorter vegetative period it permits better soil preparation for the winter wheat that follows in rotation;
3) Regarding fertilisation, 20 t manure/ha give the best results.

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INFLUENŢA ÎNGRĂŞĂMINTELOR CHIMICE, ERBICIDELORŞI PRAŞILELOR MECANICE ASUPRA ELEMENTELOR MORFOLOGICE ALE PLANTELOR ÎN CULTURĂ LA SOIUL DE TOMATE ROXANA

INFLUENCE OF CHEMICAL FERTILIZERS, HERBICIDES AND MECHANICAL HOEINGS ON THE PLANT MORPHOLOGICAL ELEMENTS IN THE ROXANA TOMATO VARIETY CROP

REALTA VASIESCU, LAVINIA MICU

Cuvinte cheie: tomate, elemente morfologice, fertilizare
Key words: tomato, morphological elements, fertilizers

SUMMARY

The paper refers to the establishing of morphological elements in the Roxana tomato variety concerning the fertilizing level and the weeds controlling method.
The morphological measures observed the steam diameter and heght, the number of leaves concerning each plant, the shootlet number, the inflorescence number and the number of fruit which are on the plants.
The morphological elements are the variety characters and these present near values in the variety frame, being influenced by the technology applied in the frame of each experimental variant.
The interpretation of the obtained results was made concerning the fertilizing level and the weeds controlling method.

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MODIFICĂRI ASUPRA SPECTRULUI DE ÎMBURUIENARE ÎN ZONA PRELUVOSOLULUI ROŞCAT DE LA MOARA DOMNEASCĂ

OVER-WEEDING RANGE CHANGES ON THE REDDISH PRELUVOSOL OF MOARA DOMNEASCA

C. CIONTU, M.GÎDEA

Cuvinte cheie: îmburuienare, constantă, participare
Key words: over-weeding, presence, participation

SUMMARY

The knowledge of the weed populations and their dynamics is a prerequisite for the evaluation of the integrated weed control systems. The exact information in this field allows the grower to foresee the crop over-weeding risk and intensity in due time and, based on this, to draw out specific strategies of weed control.
The analysis of the weed populations and their dynamics, over 10% in presence in the area under study, has pointed to a varied number of weed species according to the crop group, i.e. 30 species in winter crops and 24 species in summer crops, respectively.
In the winter crops, a higher presence in the analysis sites was recorded by: *Setaria pumila, Veronica hederifolia, Amaranthus retroflexus, Polygonum aviculare*, *Chenopodium album, Galium aparine, Convolvulus arvensis, Cirsium arvense, Polygonum convolvulus, Fumaria schleicheri, Thlaspi arvense, Xanthium italicum* and *Solanum nigrum*, whereas in the summer crops, more present were: *Setaria pumila, Chenopodium album, Amaranthus retroflexus, Convolvulus arvensis, Xanthium italicum, Cirsium arvense, Solanum nigrum* and *Hibiscus trionum*.
Compared with 1991-1993, an alarming rise in the presence of extremely damaging weed species was recorded in 2001-2003: *Convolvulus arvensis* and *Cirsium arvense* (over 20.0%), and *Xanthium italicum* (10.0%) in the winter crops; and *Cirsium arvense* (22.3%), *Xanthium italicum* (17.6%), *Convolvulus arvensis* and *Solanum nigrum* (over 14.0%), and *Coniza canadensis* and *Sorghum halepense* (over 7.0%) in the summer crops.
In the winter crops, the over-weeding participation was provided by the presence of the yearly dicotyledonous plants (over 78%), while in the summer crops, the yearly monocotyledonous plants were present (over 60.0%).
The over-weeding participation of the perennial weed species was growing, both numerically and gravimetrically, as it was influenced by three species: *Cirsium arvense, Convolvulus arvensis* and *Sorghum halepense.*

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SOIA MODIFICATĂ GENETIC CULTIVATĂ ÎN SISTEMUL NO-TILLAGE LA AGROFAM HOLDING FETEŞTI

GENETICALLY-MODIFIED SOYBEANS GROWN IN NO-TILLAGE SYSTEM OF AGROFARM HOLDING FETEŞTI

ŞT. POIENARU, N. ŞARPE

SUMMARY

Genetically modified plants, especially soybeans, are considered to be THE MOST IMPORTANT SCIENTIFIC REVOLUTION of the 20th century that helped human beings from the entire PLANET. This fantastic discovery of the American scientists consists in introducing the *Agrobacterium tumefancies* bacterium in the genome of soybean and making this plant more resistant to the action of glyphosate herbicide – a total herbicide capable of destroying tens of thousands of species of annual and evergreen weeds growing now on the EARTH. We must also specify that *Agrobacterium tumefaciens* is a bacterium that can be found in the soil and is harmless for the health of both humans and animals. Another important specification refers to the glyphosate herbicide that decomposes rapidly in the soil, so that any agricultural plant or any vegetable can be cultivated the second day.

Thus, the genetically modified soybeans treated with glyphosate (Roundup Ready) herbicide represent the most ECOLOGICAL culture.

According to the provisions of Law no. 214/2004 our country approves the cultivation of about 14 types of genetically modified soybeans, Romania being thus the only European country (until 2005) allowed to cultivate genetically modified soybeans.

The paper will present the results of the tests made with genetically modified soybean that was cultivated in the no-tillage system, this being the most economic system of contemporary modern agriculture.

We must specify that 87 liters of diesel gas/hectare were consumed when using the classical technology based on tillage and other soil works, while only 7 liters of diesel gas/hectare were used in the no-tillage system.

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CONTRIBUŢII PRIVIND CULTIVAREA PORUMBULUI HIBRID ÎN SISTEMUL NO-TILLAGE ÎN CONDIŢIILE DIN LUNCA DUNĂRII, LA S.C. AGRO-CHIRNOGI ŞI AGROFAM HOLDING FETEŞTI

CONTRIBUTIONS TO THE CULTIVATION OF THE HYBRID MAISE UNDER NO-TILLAGE SYSTEM IN THE CONDITIONS OF DANUBE VALLEY, AT AGRO-CHIRNOGI AND AGROFAM HOLDING FETEŞTI SOCIETIES

N. ŞARPE, ŞT. POIENARU

SUMMARY

The no-tillage system could be applied to the corn culture only after synthesizing the herbicides capable of fighting against all annual and evergreen weeds. For making this possible, the American companies (as John Deer, Masey Ferguson etc.) manufactured special seeders able to seed the corn on a soil that was not tilled.

Corn cultivation in the no-tillage system presents some technical and very important advantages for all farmers from both America and Romania, because:

1. it reduces the fuel consumption;
2. it reduces the number of agricultural equipments (as the plough, the disks, the harvesters, the rollers, the weeders, etc.) and the farmers need only a harvester and a device for spreading herbicides;
3. it solves the soil erosion problem. We must specify that Romania registers about 5-6 million of hectares affected by erosion;
4. the ton of corn is produced at a lower price;
5. the economic efficiency of this technology is incomparable higher compared to the classical system.

The results obtained after the tests made by the specialists of Chirnogi and Feteşti companies show that the corn production was practically equal when using the no-tillage technology, compared to the corn obtained when using the classical tillage system.

The fuel consumption and the price of one ton of corn in the no-tillage system were incomparable lower compared to the fuel consumption and the production price of corn cultivated according to the classical tillage technology.

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PERFECŢIONAREA ORGANIZĂRII ŞI FUNCŢIONĂRII SERVICIILOR DE MECANIZARE LA S.C. AGRO-CHIRNOGI, JUDEŢUL CĂLĂRAŞI

IMPROVEMENT OF MECHANIZATION SERVICES ORGANIZATION AND FUNCTIONING IN C.S. AGRO-CHIRNOGI S.A., CĂLĂRASI DEPARTMENT

N. FARCAŞ, P. DOBRE, I. BORUGĂ, C. IACOMI, O. POPESCU, M. GÎDEA

Cuvinte cheie: mecanizare, dotare, optimizare, perfecţionare
Key words: mechanization, endowment, optimisation, improvement

SUMMARY

The effected research follows the development of farming societies for agricultural mechanization, societies specialized in providing agriculture mechanization services.
The stations presented in 1990, a material basis which compressed both agricultural machines and workshops, specialized in repairs and service. These agricultural societies provided the mechanized agricultural works for the state cooperational societies. Together with the change of the propriety form upon the agricultural fields, the agricultural mechanization societies, were forced to restructure their transformation in shares stock commercial societies, by the employees participation.

Lucrări ştiinţifice, U.Ş.A.M.V.B., Seria A, Vol. XLIX, 2006

CERCETĂRI PRIVIND INFLUENŢA VITEZEI DE DEPLASARE ŞI A PRESIUNII DE LUCRU ASUPRA CALITĂŢII LUCRĂRII DE ERBICIDAT

INFLUENCE OF SPEED AND PRESSURE ON QUALITY OF SPRAYING

N. FARCAŞ, P. DOBRE, O. POPESCU, I. BORUGĂ,
C. IACOMI, ALINA UDROIU, F. FRUNZĂ, M. GÎDEA

Cuvinte cheie: viteza de lucru, presiune, calitate erbicidat
Key words: speed, pressure, spraying quality

SUMMARY

For a good quality yield, control of weeds using chemicals is a key factor. The efficiency of applying chemicals means:

- the right quantity on the hectare;
- the right time of application;
- the uniformity of spraying;
- terrain levelling.

Lucrări ştiinţifice, U.Ş.A.M.V.B, Seria A, Vol. XLIX, 2006

IMPORTANŢA CULTIVĂRII ŞOFRĂNELULUI ÎN CONTEXTUL ORIENTĂRII PRODUCĂTORILOR AGRICOLI SPRE DEZVOLTAREA DURABILA A SECTORULUI AGROALIMENTAR

THE IMPORTANCE OF THE SOFFLOWER GROWING IN THE CONTEXT OF ORIENTATING THE AGRICULTURAL PRODUCERS TOWARDS DURABLE DEVELOPMENT OF THE AGROFOOD SECTOR

O.CHIHAIA, ANIŞOARA CHIHAIA, LIZICA SZILAGYI

Cuvinte cheie: şofran, dezvoltare durabilă, sector agroalimentar
Key words: sofflower, durable development, agrofood sector

SUMMARY

The sofflower (*Carthamus tinctorius* L.) is an oil plant cultivated yearly on the globe on 1.1-1.2 million hectare surfaces with a pharmaceutical uses, food industry, chemist industry and cosmetics.
In Romania this plant may represent a very important cultivation in the drying sectors with low fertility, where it assures productions comparable with the sunflower ones.

Lucrări ştiinţifice, U.Ş.A.M.V.B., Seria A, Vol. XLIX, 2006

STUDII PRIVIND COMPORTAREA UNOR LINII DE OREZ DE LA CENTRUL ORIZICOL CHIRNOGI LA ATACUL AGENŢILOR PATOGENI

STUDIES CONCERNING THE BEHAVIOUR OF RICE LINES FROM RICE CENTER CHIRNOGI AT PATHOGEN AGENT ATTACK

E. GEORGESCU, STELICA CRISTEA, A. GHEORGHE, M. BORDEI

Cuvinte cheie: orez, soi, conditii naturale, patogen
Key wordds: rice, varieties, natural condition, pathogen

SUMMARY

Rice is a crop attacked by a series of diseases, the most important being *Magnaporthe grisea* (Hebert&Barr) f.c. *Pyricularia oryzae* (Briosi et Cav.), producing rice blast, *Cochliobolus miyabeanus* (Ito&Kuribayashi) f.c. *Helminthosporium oryzae* (Breda de Haan) causing rice brown spot, *Gibberella fujikuroi* (Saw.) Wr., f.c. *Fusarium moniliforme* (Scheld) provoking bakane disease.

The first reference to rice disease in Romania was effected by Olga Săvulescu in 1936-1937 in Vasilati place. Along time a series of pathogen who attack this crop, was signaled provoking quantitative and qualitative yield losses.

Because it followed the introduction of new rice varieties resistant to maladies, the author's collective observed the behaviour followed bearing in natural condition of some perspective lines to different pathogen agent attack. 10 lines were studied: Tomoemasari × Speranţa, Tomohikari × Chirnogi, Bega × Akitokomaki, Topolea 64/76 × Speranţa, Franţa 3 × Ci 1166, F38 × Oryzella, HG 249 × Oki 3, Nucleoryza × Ci 1166, F 46 (F31 × IRI 365), F 45 (HG 249 × F 38). Two observations were madewhen rice plant was in bloom-fecundation stage, and maturity stage. Frequency and intensity of the attack were observed and the attack degree for each pathogen was calculated.

It has identified *Cochliobolus miyabeanus* in all rice lines take in observation, with a frequency bigger than 55% in all lines and an attack degree between 0.07% and 1.11% at first observation, and 0.39% and 6.43% at second observation.

Gibberella fujikuroi pathogen was identified in some lines but the attack degree was insignificant.

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COMPORTAREA UNOR SOIURI DE OREZ LA INFECŢIA ARTIFICIALĂ CU PATOGENUL *COCHLIOBOLUS MIYABEANUS* (ITO & KURIBAYASHI)

BEHAVIOUR OF SOME RICE VARIETIES AT ARTIFICIAL INFECTIONS WITH *COCHLIOBOLUS MIYABEANUS* (ITO & KURIBAYASHI) PATHOGEN

E. GEORGESCU, STELICA CRISTEA, A. GHEORGHE, M. BORDEI

Cuvinte cheie: orez, soi, rezistenţă, patogen
Key wordds: rice, varieties, resistance, pathogen

SUMMARY

Occupying over 15% from the globe arable surface, rice (*Oryza sativa*) is one of the most important cereals (alongside wheat, maize). Both as part of modern rice crop and subsistence rice crop, each year there are quantitative and qualitative losses because of pathogens attack, in some cases (if climatic conditions are favorable for the growing and developing of pathogen agents), the crop can be totally damaged. In Romania, the brown spot caused by *Cochliobolus miyabeanus* is one of the most frequent diseases of this crop, caused quantitative and especially qualitative losses in the years with humid summer. In the context of modern agriculture, varieties resistant to pathogen attack, have priority and less to fungicides uses. This paper presents of some rice varieties (Polizeşti 28, Dunărea, Zefir, Elida, Magic) and one perspective line (Basmati × Cristal) at artificial infection with this pathogen. The experience was placed in USAMV greenhouse. Artificial infection was effectuated, when rice plant were in maximum tillering stage, through spraying on leaf at one spore suspension. Two notations, were made, marking frequency, intensity and pathogen attack degree. The most sensible variety at *Cochliobolus* pathogen was Polizesti 28, and the most resistant was Magic varieties, and Basmati × Cristal line had an attack degree close to the Polizesti 28 varieties.

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EVOLUŢIA ATACULUI DE BLACK-POINT ÎN PERIOADA POST-MATURARE ŞI INFLUENŢA FERTILIZĂRII ASUPRA FRECVENŢEI BOLII, LA CÂTEVA SOIURI DE GRÂU DE TOAMNĂ

BLACK-POINT ATTACK EVOLUTION IN THE POST-MATURATION PERIOD AND THE INFLUENCE OF FERTILIZATION ON THE DISEASE FREQUENCY, IN SEVERAL WINTER WHEAT CULTIVARS

C. GUTUE, C. GHEORGHIEŞ

Cuvinte cheie: grâu, black-point, evoluţie post-maturare, influenţa fertilizării
Keywords: wheat, black point, postmaturation evolution, fertilization influence

SUMMARY

Black-point has occurred with a high frequency in the last years, causing the decrease of crop quality, with serious consequences on the seed germination and the possibilities to valorize the crop, an aspect that is often seen in delayed harvesting due to frequent rainfalls.
During the year 2005, in an experiment with 9 winter wheat cultivars, at the University of Agronomic Sciences and Veterinary Medicine – Bucharest, we have studied the evolution of wheat diseases and the influence of fertilization over the attack level. In this paper, we present the results obtained concerning the evolution of black-point on wheat grains, in the period from maturation until the late harvesting. Kernels were analyzed weekly, during the period 11th of July – 1st of August. The data obtained from the three wheat cultivars show that the percentage of the grains with black-point increases gradually after maturation, harvesting is delayed. The maximum level of attack was recorded for the Dor variety (the frequency of black-point affected grains increased from 53.25% to 73.75%), compared to Dropia variety (the frequency increased from 27.5% to 48.25%) and to Crina variety, where the frequency of black-point grains was the lowest (the frequency increased from 20% to 41%).
The fertilization with nitrogen and phosphorus at an optimum level ensured a lower percentage of attacked seeds, compared to the non-fertilized plots, in all nine wheat varieties in the experiment. This is a consequence of the fact that, in non-fertilized lots, the maturation was ten days earlier, the wheat plants being this way exposed a longer period of time to non-biotic factors (high humidity) and to biotic factors (microscopic fungi like *Alternaria alternata*, *Fusarium roseum*, etc), that favored the expansion of black-point on the kernels.

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CERCETĂRI PRIVIND SPECTRUL FAUNISTIC AL INSECTELOR DIN FAMILIA *ELATERIDAE* (*COLEOPTERA*) DIN ZONA MOGOŞOAIA – TEREN ÎNIERBAT

RESEARCH CONCERNING THE FAUNISTIC SPECTRA OF THE *ELATERIDAE* FAMILY INSECTS (*COLEOPTERA*) FROM MOGOŞOAIA AREA–BARREN LAND

MARIANA RĂDESCU, V. CIOCHIA, I. ROŞCA, GR. MĂRGĂRIT

Cuvinte cheie: viermi sârmă, *Elateridae,* sondaje, teren înierbat
Key words: wireworms, *Elateridae*, samples, barren land

SUMMARY

Lately, the wireworms group (*Elateridae* Fam.) have presented a major problem for the majority of cultures with agronomic importance; this problem has led to economic losses that sometimes have been greater than 40% from production.
It is known that the favorable biotop of these pests of major importance is represented by barren lands, during 2004-2005 collections were made from Mogosoaia area in a barren land of 1400 m^2. It was used soil samlpes method with 25/25/30 cm dimensions.
The collected material was made of 3 types: *Agriotes* Esch., *Limonius* Esch., and *Melanotus* Esch., with 7 species totally.
The dominant species is *Agriotes sputator* L. With a relative abundancy of 31.26%, followed by *A. ustulatus* Schall. with 18.75 % and by *Melanotus brunnipes* Germ. with 15.63%.
Less represented were the species *A. obscurus* L. with 12.50%, *A. elongatus* Marsh. with 9.37% and *Limonius pilosus* Leske. with 9,37%.
A. lineatus L. species was lost with 3.12% relative abundancy.

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CERCETĂRI PRELIMINARII PRIVIND SPECIILE DE *CERAMBYCIDAE* DIN JUDEŢUL BUZĂU

PRELIMINARY RESEARCH REGARDING CERAMBICIDAE SPECIES FROM BUZAU COUNTY

V. UNGUREANU

Cuvinte cheie: *Cerambycidae*, judeţul Buzău, specii rare
Key words: *Cerambycidae*, Buzau conty, rare species

SUMMARY

This paper presents *Cerambicidae* fauna collected by the author in the Buzău county, fauna being included 4 subfamilies *Prioninae, Lepturinae, Cerambycinae* and *Lamiinae*. Till the present, in Buzău county, only 14 species were registered considering that in Romania over 200 species were reported. From those 4 families, dominant is subfamily Lepturinae with 21 species, followed by Lamiinae with 18 species, *Cerambycinae* with 15 species and *Prioninae* with 2 species, in total 54 species of *Cerambicidae*. It is noteworthy that there is a big number of rare species, with few observed in literature: *Cortodera humeralis* (Sachaller, 1783), *Cortodera femorata* (Fabricius, 1787), *Anoplodera sexguttata* (Fabricius, 1775), *Stenopterus flavicornis* (Kuster, 1846), *Lampropterus femoratum* (Germar, 1824), *Calamobius filum* (Rossi, 1790).

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CERCETĂRI PRIVIND DIVIZIUNEA MITOTICĂ LA UNELE SOIURI DE GRÂU DE TOAMNĂ IRADIATE CU RAZE X, IN DIFERITE GENERAŢII DE TRATAMENT

RESEARCH UPON MITOTIC DIVISION IN SOME X – RAY IRRADIATED WINTER WHEAT VARIETIES ON THE DIFFERENT GENERATION TREATMENT

VALENTINA GHEORGHE, LIZICA SZILAGYI,
HELLENE CASIAN, O. CHIHAIA

Cuvinte cheie: kilorad (Kr), diviziune mitotica, anafaze aberante, martor
Key words: kilorad (Kr), mitotic division, aberant anaphases, control

SUMMARY

The Romanian and foreign wheat varieties were irradiated with X rays in four variants. In each variant the aberant anaphases in 100 anaphases of the first mitotic division in the root tip were studied for 3-6 generations.

By analysing the percentage of aberant anaphases in the mitotic division it was found that the influence of the X rays upon this character depends on the genotype, the irradition dose and the irradition generation.

In all varieties, variants and irradiation generations, the percentage of aberant anaphases showed higer values than the untreated control.

As the irradiation dose was increased, the percentage of aberant anaphases increased as well, the highest value recorded in all varieties and all variants in the first irradiation generation, with the exception of the varieties Iulia, Flamura 85 and Rapid, where chromosomal aberrations appeared even in advanced generations (V, VI).

In the various irradiation generations the anaphases anomalies were represented by micronuclei, fragments, chromatic bodies not integreted in the division, cells with 1-10 chromosomal bridges, 1-4 chromoatidic bridges.

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CERCETĂRI PRIVIND INDUCEREA HAPLOIDIEI EXPERIMENTALE LA FLOAREA-SOARELUI

RESEARCH REGARDING THE INDUCTION OF EXPERIMENTAL HAPLOID IN SUNFLOWER

HELLENE CASIAN, LIZICA SZILAGYI, VALENTINA GHEORGHE,
O. CHIHAIA, F. SZILAGYI

Cuvinte cheie: *Helianthus annus*, antere, calusare
Key words: *Helianthus annus*, anthers, callusation

SUMMARY

Sunflower haploidization research, using the *in vitro* antheres culture provides a series of advantages: it allows rapid preparation of homozygots, thus shortening the time required to prepare the new consanguineous lines and therefore speeding the breeding process; moreover, some characteristics expressed by plasmagenes can be proved which ensures great genetic diversity of the homozygous lines produced by androgenesis, which can be used as raw material in breeding.
Though useful, sunflower haploidization has not recorded remarkable progress so far, due to the difficulties encountered at the embryos differentiation level.

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CERCETĂRI PRIVIND CONTROLUL GENETIC AL CARACTERELOR CANTITATIVE LA DIFERITE LINII DE SOIA

RESEARCH REGARDING THE GENETIC CONTROL OF THE QUANTITATIVE FEATURES IN DIFFERENT SOYBEAN LINES

O. CHIHAIA

Cuvinte cheie: soia, erbicid, caractere cantitative, control genetic
Key words: soybean, herbicide, quantitative features, genetic control

SUMMARY

The vegetarian products obtained from soybean seeds have a nutritive and dietetic value much more in comparison with the animal ones, owing to the presence of many vitamins and the lack of cholesterol.
The negative effects of the genotype - environmental interaction may be diminished by technological and genetic methods.
The origin of the quantitative features are appreciated by the help of the origin coefficient.

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CERCETĂRI PRIVIND AMELIORAREA CARTOFULUI PRIN TEHNICILE CULTIVĂRII IN VITRO

RESEARCHES REGARDING THE POTATO AMELIORATION BY THE IN VITRO GROWING TECHNIQUES

O. CHIHAIA, VALENTINA GHEORGHE,
LIZICA SZILAGYI, HELLEN CASIAN

Cuvinte cheie: cartof, ameliorare, "in vitro"
Key words: potato, amelioration, "in vitro"

SUMMARY

By the stopping of the diseases and enemies of the potato we ask for modern multiplying techniques of plants, so that such a technique is represented by the in vitro growing which are the main bases of the agricultural biotechnologies.
The in vitro growing allow the multiplication of many valuable genotypes from the genetic and production point of view.
The regeneration of the potato plants may be done by using growing tops. The rate of the multiplication of the potato plants is superior in comparison with the conventional methods.
The in vitro growing has restrictive demands regarding the space and it shortens with two or three years the multiplying plants process.

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CERCETĂRI PRIVIND BIOLOGIA VIERMELUI VESTIC AL RĂDĂCINILOR DE PORUMB (*Diabrotica virgifera virgifera* Le Conte)

RESEARCH REGARDING THE BIOLOGY OF WESTERN CORN ROOTWORM (*Diabrotica virgifera virgifera* Le Conte)

I. ROŞCA, T. PETRACHE

Cuvinte cheie: Viermele vestic al rădăcinilor de porumb, porumb, biologie
Key words: Western Corn Rootworm, corn, biology

SUMMARY

In Romania, the pest was spread, from the first recording (1996), in 16 counties, toward east and north-east, being recorded damages in corn fields. Research aimed to give more knowledge about the biology of pest in Romanian conditions. There are no differencences between pest biology in Romania and data known from literature.

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STUDIU PRIVIND APRECIEREA RISCULUI VIERMELUI VESTIC AL RĂDĂCINILOR DE PORUMB (*Diabrotica virgifera virgifera* Le Conte)

RESEARCHES REGARDING RISK OF WESTERN CORN ROOTWORM (*Diabrotica virgifera virgifera* Le Conte)

T. PETRACHE, I. ROŞCA

Cuvinte cheie: Viermele vestic al rădăcinilor de porumb, porumb, aprecierea riscului
Key words: Western Corn Rootworm, corn, risk assessement

SUMMARY

The most suitable moment for stopping spreading of pest was lost at the first record of WCR in Romania (1996-1998), now the pest is widely distributed all over the western half of the country and spreading of WCR toward the east it seems that be impossible to be stopped. No vector is required. Adults are very mobile and strongly dispersive WCR is a free living organism. Referring to our experience for WCR survey methods the most suitable, in farmers case, plant check seems to be cheaper and easy to be doe by farmers themselves and the most relevant method and data for decision making by farmers on rotating their corn, because the farmers could learn field risk assessment, only by doing themselves, counting of pest in their own fields, evaluating larval attack on Iowa scale, appreciating losses and connecting these with WCR population or attack, discovering unexpected fact which influence the pest. Till now the possibilities of informing farmers about the risk of presence and importance of pest are limited and what is more important there are, in generally no funds to offer to the farmers with corn monoculture an alternative crop subsidized by state. The cost of controlling the pest is high and till now there are no registered pesticides for larvae.

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STUDIU PRIVIND UTILIZAREA PROGRAMULUI EXCEL ÎN MANAGEMENTUL LUCRĂRILOR DE PROTECŢIA PLANTELOR

STUDY REGARDING THE USE OF MICROSOFT EXCEL PROGRAMME IN MANAGEMENT OF PLANT PROTECTION WORKS

A. M. RAŢIU, I. ROŞCA

Cuvinte cheie: protecţia plantelor, planificare, program EXCEL
Key words: plant Protection, planning, programme EXCEL

SUMMARY

It is presented an application referring to the uses of Microsoft EXCEL programme, in the works of developing the planning of plant protection activities, based on estimated yield/ha, plant density, frequency of attacked plants, losses, crop value, exchange rate, pesticide costs/treatment, pesticide transport cost, applying pesticide cost, efficacy, taking into consideration a study case (western corn rootworm, *Diabrotica virgifera virgifera* Le Conte), underlying that this kind of programme applicable could be extended to different pest diseases or other plant protection activities. Results, depending on the input data introduced in the programme, shows total production and production of unattacked and attacked plants, total losses, the value of lost and saved production, phytosanitary treatment cost, the productivity of treatments/1 invested RON.

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CERCETĂRI PRIVIND MACROMICETELE DIN PĂDUREA TREAPTURI-HOREZU (JUD. VÂLCEA)

RESEARCH ON THE MACROMYCETES IN THE TREAPTURI-HOREZU FOREST (THE COUNTY VÂLCEA)

MARIANA NICULESCU, SONIA CRUCERU, ALISA IONELA NICA,
ŞT. A. CIUPITU, GH.I. LAZĂR

Cuvinte cheie: pădure, macromicete, forme biologice, grupe ecologice.
Key words: forest, macromicetes, biological forms, ecological groups

SUMMARY

On the ocasion of certain botanical research made in the Treapturi-Horezu forest (the County of Vâlcea), between 2001-2003, we found 21 species of macromycetes that we will present in this paper. For each species of macromycetes is mentioned the ecological group, the biological form, the underground layer, the period of collection, if they are edible, non edible or poisonous.
Talking into account the biological forms, the results show that the highest percentage is recorded by the xilical mycetoepiphytes (60,14%), followed by mycetogeophytes (36,28%). From the ecological groups point of vieu we noticed the prevalence of the lignical saprophytes (48,32%), mycorisantes species, followed by the humical saprophytes (18,34%) and by the lignical saproparasites (14,45%). Amoung the researched species a higest number comes to the non edible species (57,14%), followed by the edible species (57,14%). The poisonous species are found into a smaller number (9,52%).

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CONTRIBUŢII PRIVIND STUDIUL CLASEI *JUNCETEA TRIFIDI* KLIKA ET HADAČ 1944 ÎN BAZINUL SUPERIOR AL LUNCAVĂŢULUI

CONTRIBUTIONS REGARDING THE STUDY OF THE *JUNCETEA TRIFIDI* KLICA RT HADAČ 1944 CLASS IN THE UPPER BASIN OF THE LUNCAVĂŢ RIVER

MARIANA NICULESCU

Cuvinte cheie: bazin superior, asociaţie vegetală, clasă, ecologie, corologie, fizionomia şi compoziţia floristică
Key words: upper basin, vegetal association, class, ecologie, corologie, fisionomie and floristical composition

SUMMARY

The territory under research is located along the upper course of the Luncavăţ River and it covers an area of about 450 square kilometres. From the geo-morphological point of view, the upper basin of the river includes two, well-defined levels of relief: the mountain region, belonging to the Căpăţânii Mountains, in the Southern Carpathians, and the Horezu SubCarpathian Depression, which is part of the SubCarpathian region of Oltenia.
The present paper aims at presenting the associations of the ***Juncetea trifidi*** Klika et Hadac 1944 Class, met in the upper basin of the Luncavăţ River. In the territory under research, there were identified three vegetal associations as being part of this class: *Primulo-Caricetum curvulae* Br.-Bl. 1926 em Oberd. 1957, *Oreochloo-Juncetum trifidi* Szafer et al. 1927 and *Potentillo chrysocraspedae-Festucetum airoidis* Boscaiu 1971 *(*Syn. *Festucetum supinae* Domin 1933).

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REPERE MICROECONOMICE ALE ACTIVITĂŢII ÎNTREPRINDERILOR MICI ŞI MIJLOCII. DIMENSIUNI, STRATEGII ŞI DINAMISM ÎN JUDEŢUL ILFOV

MICROECONOMIC MARKS ON THE ACTIVITY OF SME's. SIZE, STRATEGY AND DYNAMISM IN ILFOV COUNTY

A.B. MOISESCU, VALENTINA TUDOR

Cuvinte cheie: microîntreprinderi, întreprinderi mici, întreprinderi mijlocii, clasă de mărime, sector de activitate, dimensiune economică, profit brut.
Key words: small enterprises, medium enterprises, enterprise's size class, activity sector, economic dimension, gross profit

SUMMARY

The development of the Ilfov county through SME's activity is a trend which allows economic development not only in size, but also functional and behavioral. The structural analysis made on different fields of activity within the enterprise's size class underlined the necessity to develop the SME's, mentioning: the industry-construction sector which is in a new phase of development; trade - logistics sector as intermediaries on the market, offering new services to other enterprises in Bucharest. The gross medium profit on enterprise's size class shows a successive level of development from small enterprises to larger enterprises. The qualitative aspect was underlined concerning the correlation of the economic size of the enterprise with the medium profit of the enterprise's size class. With special concern on this qualitative aspect, by the level of profitableness per enterprise, we may see that the SME's activity is much more profitable than the activity of large enterprises.