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A CD melléklet az előadások és poszterek teljes anyagát tartalmazza.

The CD Issue contains the complete papers of the Conference.

Section 1: Agricultural Economics**A GAZDASÁGI VÁLSÁG ÉS A BIOETANOL- GYÁRTÁS NÉHÁNY
ÖSSZEFÜGGÉSE****CZAGÁNY LÁSZLÓ**

Szegedi Tudományegyetem Mérnöki Kar

Ökonómiai és Vidékfejlesztési Intézet

6724 Szeged, Mars tér 7.

czaglasz@eco.u-szeged.hu**ABSTRACT - Connections between the economic crisis and the ethanol fuel production**

The Union's corn intervention system meant for Hungarian corn producers a good and predictable market environment, but in 2007 a decision was taken to abolish the system. In this situation, the corn producers had high hopes in the dynamically emerging ethanol fuel market. In the last two years these hopes were not fulfilled, and increasing ethanol fuel producing capacities came to a halt. This is mainly in connection with the current economic crisis. As banks become increasingly cautious in providing loans in a financial crisis, they consider ethanol fuel industry riskier. Main reasons for this is the devaluation of alternative energy sources because of the low oil price, the unpredictability of agricultural prices and the unsettled connections between crop producers and crop processors. Planned investments are being hindered also by the arguments against biofuel. The argument is, that using crops to produce ethanol fuel is greatly increasing the price of food prices, contributing to the World-wide food crisis, and that even though ethanol fuel itself is environment-friendly, its production does damage the environment.

Kulcsszavak: kukoricapiac, gabonaintervenció, bioetanol, gazdasági válság, energia

STUDY ON THE FINANCING OF AGRICULTURE BY DIRECT PAYMENTS IN ROMANIA

STUDIUL PRIVIND FINANȚAREA AGRICULTURII PRIN PLĂȚI DIRECTE ÎN ROMÂNIA

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ABSTRACT – Study on the Financing of Agriculture by Direct Payments in Romania

To increase competitiveness and efficiency of farms Member States are empowered to provide funds for agricultural investment. These investments are aimed at increasing production quality, adapt to market demand, improving living and working conditions, lowering production costs and measures for environmental protection.

In this paper financial support of agriculture at the countryside after the Romanian integration into the European Union has been highlighted as well as procedures on how, which will provide support in the direct payments schemes and the prerequisites that must meet the farmer to benefit from them.

The Agency for Payments and Intervention for Agriculture implement support measures for farmers, financed from the European Agricultural Guarantee Fund - as direct payments under the Single Payment Scheme area as well as support financed from the national budget and the European Agricultural Fund for Rural Development - payments for complementary national direct.. Financial support schemes for agriculture and the modernization through the allocation of funds for investment to create a strong European trade, is the minimum necessary to achieve performance in this branch of the economy. Providing an optimal level of performance in this sector remains sustainable solution in the long term to solve problems related to agriculture and rural development.

Keywords: agriculture, payment schemes, approval and direct payments, subsidy

Cuvinte cheie : agricultura, scheme de plata , aprobarea si efectuarea platilor, sprijin financiar

A MAGYAR GAZDASÁGPOLITIKA ÉS A VILÁGGAZDASÁGI VÁLSÁG 2008-2009-BEN

GÓSI JÁNOS

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ABSTRACT –The economic policy of Hungary and the world economic crisis in the year of 2008-2009

The winner MSZP-SZDSZ coalition, led by Gyurcsány, Ferenc, elaborated – even before the municipal elections in the autumn 2006-its programme which includes an extremely serious tax-rise and reduction of expenditure in the state budget, and its significant part was immediately introduced. The most important elements of the programme are the reform of public health and taxation system. On the basis of what has been experienced so far in the execution of the programme it seems that the population and the political opposition tolerate better the significant increase in the already existing taxes, dues and attributions than introduction of new ones which may bring much smaller burden, anyway. On the bases of these experiences, even before the elections of 2010, the daily fee in hospitals and the visit fee was ceased, the tax on property was not introduced, and the government compensated the reduction of attributions in the case of enterprises with the rise of VAT. According to the Treaty of Maastricht only those member states can join the zone of the common money which meet the so-called requirements of Maastricht of which Hungary has not met even one since our joining the European Union. Besides, up to the autumn 2006 we got away from the time of its introduction planned by 2007. In 2008 fulfilment of requirements regarding inflation seemed to be the most difficult one. In addition it appeared rational to reduce deficiency in the state budget under 3%. The international financial and real economy crisis reached Hungary in the autumn of 2008, too. The crisis made the completion of the 2009. yearly state budget difficult very much and the continuation of the convergence program according to its plan, because the balance of the state budget is decaying because of the economical recession.

Keywords: world economic crisis, economic policy of Hungary 2008-2009, convergence programme of Hungary, the European Union, criteria of Maastricht

A TERMELŐI ÉS FOGYASZTÓI ÁRAK MAGYARORSZÁG ÉS EU KÖZÖTTI KONVERGENCIÁJA AZ ÉLELMISZERGAZDASÁGBAN

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ABSTRACT – Convergence of the Hungarian and EU producer and retail prices in the agricultural and food sector

The main objective of our analysis is to examine the differences between the Hungarian and EU producer and retail prices. We aimed at finding out whether in the last 8 years the Hungarian and the EU producer and retail prices closed significantly or not, the topic is timely since Hungary joined the EU four years ago.

The producer prices of the recently joined countries are lower than the producer prices of the EU-15. The difference is the largest in the cases of horticultural and animal products. The data analysed clearly show that on the common market of the EU no unified price can be found. The prices align to a price centre; the band of it may vary significantly. The deviance from the centre might narrow by time; however, no unified price can be expected in the future.

Often the retail food prices do not follow – in terms of rate and tendency – the development of the producer prices. The producer prices determine only partly the retail prices; other factors have a larger effect on the prices. Consequently, the retail prices of the EU-15 vary significantly; the differences can be two- or threefold. Between 2000 and 2007 the Hungarian retail food prices approached gradually to the average prices of the EU. From among the countries, which joined the EU in the same year as Hungary the highest retail food prices can be found in Slovenia, Estonia and Hungary.

Kulcsszavak: termelői ár, fogyasztói ár, konvergencia, áreltérés

A SZŐLŐ-BOR ÁGAZATBAN ALKALMAZHATÓ VERSENYKÉPESSÉGI MUTATÓK RENDSZERE

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ABSTRACT – Methods of measuring the competitiveness in the wine sector

The Accession of Hungary resulted a more significant competition than the earlier one in the wine sector. The increasing of the competitiveness of the sector is of outstanding importance since the Common Agricultural Policy of the next period has set the priority to improve the competitiveness on both the internal and external markets. The competitiveness of the Hungarian agriculture and within it that of the wine sector is rather contradictory. During the last decades the wine producing countries of the world increased the wine export while the Hungarian wine sector of similar favourable conditions is losing gradually its market share. Despite all of these the wine sector is the only sector of the Hungarian food sector, which – by increasing the internal consumption – could increase its domestic sale and in addition significant improvement can also be seen regarding the quality of the wines. In my study I aimed at finding the most suitable approaches and theories in the wine sector.

In the literature various definitions of the competitiveness can be found. These are often contradictory and sometimes highlight only a few elements of the competitiveness. Competitiveness has not been defined yet scientifically. The interpretation of competitiveness is rather complicated; it covers both a definition and a calculation; since the determination of these can only be implemented by integrated data collection, complicated calculations and on the basis of various interpretations.

In my research I collected and categorized the methods, indicators and indices connected to competitiveness. I selected only those methods which can fully or to a definite extent be applied in the wine sector.

Kulcsszavak: szőlő, bor, versenyképesség, mutatószámok, komparatív előny

ROLE OF AGRICULTURAL MODERNIZATION: ECONOMIC DEVELOPMENT

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ABSTRACT - Role of agricultural modernization: Economic development

In earlier debates on economic development, the agricultural sector's role was somewhat controversial. While dualistic models highlighted the importance of agriculture the mainstream literature placed a greater emphasis on the creation of a modern industrial sector. Soon agriculture disappeared from the mainstream development literature to re-emerge recently with a variety of multiple-sector growth models emphasizing the key role of agriculture. This paper is an empirical cross-country analysis of agriculture's role in economic development. The focus is the importance of agricultural modernization as a precondition for convergence in postwar growth rates as well as an indicator for overall growth and wellbeing.

Keywords: agriculture, modernization, convergence, growth, well-being

CASE STUDIES REGARDING CONSUMER PROTECTION BETWEEN THE YEARS 2007 – 2008

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ABSTRACT – Case Studies Regarding Consumer Protection Between the Years 2007 - 2008

After Romania joined The European Union, consumer protection became a permanent preoccupation of the authorities. In the following we will present a number of case studies regarding this matter.

The main risk categories that the consumers are exposed to through these products are:-Lesions – 274 notifications and growing by 25%;-Electric shocks – 270 notifications and growing by 24%;-Fire and burning risks – 194 notifications and growing by 18%;-Suffocation and asphyxiation – 157 notifications and growing by 14%;-Chemical risks – 95 notifications and growing by 9%.

Keywords: consumer protection, economic agents, contravention fines, found misbehaviours, measures taken

ETHICS IN THE CONTEXT OF CONFLICTS OF WORK

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ABSTRACT – Ethics the Context of Conflicts of Work

In each affair conflict situations arise, which detaches from the usual problems of leadership. The ethics allow settling conflict situations, and ethical rules of the corresponding obligations, they take on a voluntary basis each persons in the organization and which are contained in the “Organization Code”.

Following Thomas Hobbes, the social causes of conflict are destructive human actions that can be directed only by a social order. After Karl Marx, the reasons for social conflict are contradictory interests of social classes. Vilfredo Pareto sees a possible resolution of conflicts that are compatible from a social point of view, therefore, we may conclude, conflicts can not be eliminated but can be regulated.

Keywords: ethics conflicts, interest, solution, employees

PRIORITY INVESTMENTS DURING 2008 IN JIMBOLIA, TIMIS COUNTY

INVESTITIILE PRIORITARE ALE ANULUI 2008 IN LOCALITATEA JIMBOLIA, JUDETUL TIMIS

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ABSTRACT – Priority Investments During 2008 in Jimbolia, Timis County

In accordance with the goals to be achieved by the Sustainable Development Strategy for Jimbolia, it was suggested (in the Regional Operational Programme) that the priority investments for 2008 should be: the rehabilitation of the drinking water providing system, the extension of the sewerage and the rehabilitation of the scrubbing plant, the rehabilitation and modernization of the local roads; the building of a new school campus; the building of the Leisure and Treatment Center in the lake area of Jimbolia, the building of the ring road; Infotour Jimbolia – transbordering cooperation in the development of tourism and the creating a new parc in Jimbolia.

Keywords: Jimbolia, priority, investments, parc, development

ARE THE PRESENT AGRICULTURAL POLICY INSTRUMENTS CONTRADICTORY TO THEIR GOALS? THE CASE OF THE CZECH COUNTRYSIDE

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**ABSTRACT – Are the present agricultural policy instruments
contradictory to their goals? The case of the Czech Countryside**

The Czech agriculture has gone through substantial changes since 1989. Despite the positive changes it is possible to observe situations which are contradictory to the environmental and social goals of CAP. This text presents some findings of the qualitative study taken in the 24 farms in 3 regions of the Czech Republic.

Keywords: agricultural policy, marginal areas, rural employment, organic agriculture, landscape

**ABSTRACT – Jsou současné nástroje zemědělsko politiky vsouladu
s jejich cíli? Příklad českého venkova**

Zemědělství v České republice prošlo od roku 1989 významnými změnami. Navzdory pozitivním změnám však můžeme sledovat situace, které jsou v rozporu s environmentálními a sociálními cíli Společné zemědělské politiky. Tento text předkládá některá zjištění kvalitativního výzkumu provedeného na 24 hospodářstvích ve třech regionech České republiky.

Klíčová slova: zemědělská politika, marginální oblasti, venkovská zaměstnanost, ekologické zemědělství, krajina

A TERMÉSÁTLAG ÉS A FELVÁSÁRLÁSI ÁR KAPCSOLATA, MINT A JÖVEDELEMSTABILITÁS MÉRHETŐSÉGÉNEK ESZKÖZE

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ABSTRACT – Relationship between the yield and the producer price as a tool of measuring income stability

Professional literature takes note of so-called natural hedge as one of several income stabilising tools. In essence, if a crop's yield and producer price systematically move in opposite directions, i.e., a lower yield fetches a higher price on the market, and vice versa, the inverse movement of the two indicators expressed by a strong negative correlation between the two may be analogous to the operation of short hedge on equity markets and lead to income equalisation. However, to perform this function other boundary conditions must be met. In addition to natural hedge, the time dispersion (variability) of crop yields, producer prices and revenues must also be examined to gain a reasonable measurement of the rate of income fluctuation. In my presentation I will follow the welfare economy theory and illustrate the operating logic of natural hedge through simple examples, using crop yields and producer prices of major products from the period between 1998 and 2007 to make correlation coefficients and related comparative analyses. As a result of these calculations (establishing a ranking based on the degree of income stability) I will identify activities expected to lead to stability of farms in the current circumstances, i.e., an structure of agricultural holdings entailing the least amount of risk.

Kulcsszavak: árbevéteelingadozás, felvásárlási ár, jövedelemstabilitás, korreláció, natural hedge

MI IS AZ AZ AGRÁRMODELL, AVAGY MI KÖZE VAN KOVÁCS ANDRÁS PÉTERNEK AZ EURÓPAI UNIÓHOZ?

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ABSTRACT – What does „Agricultural Model” mean or what is the Connection between András Péter Kovács and the EU?

I work at the University of Szeged and teach students about the agriculture policy. I wondered which information knows young people connecting to this theme. I wrote some exercises, and ask students to tackle them. I worked out in detail the answers of 100 students. In my work I show the results. In the final conclusion I determined, the students do not know the most important factors of agriculture policy, and the EU.

Keywords: agriculture policy, students, survey

Kulcsszavak: agrárpolitika, egyetemisták, felmérés

Section 2: Animal Sciences and Wildlife Management**HEMATOLOGICAL INDICATORS OF AQUATIC ENVIRONMENT TOXICITY**

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ABSTRACT - HEMATOLOGICAL INDICATORS OF AQUATIC ENVIRONMENT TOXICITY

In this study toxic effects of an acetylcholinesterase inhibitor (organophosphate pesticide *Terbufos*) on hematological parameters of Crucian carp (*Carassius auratus* Gibelio) are presented. For this purpose 40 fish (3 years old, mean body mass 114,68 g, mean fork length 15,54 cm) were randomly divided into 2 groups (20 individuals each) and situated into two identical aquaria (60 liters each) equipped with appropriate filters, heaters and aerators. In one of the aquaria *terbufos* was added in concentrations of 0,133 mg/l. Fish were treated for 15 days. At the end experiment blood was taken by heart puncture in both controlled and treated fish. The following parameters were determined in native blood: number of erythrocytes (RBC), packed cell volume (PCV), Mean Corpuscular Volume (MCV), while surface area of erythrocytes (μm^2), surface area of nucleus (μm^2) and erythrocyte thickness (μm) were estimated on blood smears. The toxic effects of erythrocyte acetylcholinesterase inhibition of treated fish resulted in significant increase of values RBC, PCV, surface area of both erythrocytes and their nuclei and decrease of MCV and erythrocyte thickness.

These results show that haematological parameters of fish are valuable specific and reliable indicators of water toxicity which are easy to perform on live animals.

THE INFLUENCE OF TERBUFOS CONTAMINATED WATER ON *Carassius auratus* Gibelio

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ABSTRACT – The influence of terbufos contaminated water on *Carassius auratus* Gibelio

In this study the effects of water contaminated with *Terbufos* on Crucian carp (*Carassius auratus* Gibelio) are presented. Terbufos is an organophosphate pesticide used in agriculture mostly as insecticide and nematocide which has high toxicity, especially for fish (EPA and WHO data). Terbufos toxicity on Crucian carp was studied experimentally under controlled laboratory conditions. For this purpose 40 fish (3 years old, mean body mass 114,68 g, mean fork length 15,54 cm) were randomly divided into 2 groups (20 individuals each) and situated into two identical aquaria (60 liters each) equipped with appropriate filters, heaters and aerators. In one of the aquaria terbufos was added in concentrations of 0,133 mg/l. This dose was previously experimentally determined as one third of L_{50} after 40 hour exposure. Fish were treated for 15 days. During this period their behaviour was permanently recorded, and compared with untreated fish. At the end of experiment meristic characteristics were determined and blood was taken by heart puncture for the following analyses: haemoglobin concentration (Hb), Mean Corpuscular Haemoglobin (MCH) and Mean Corpuscular Haemoglobin Concentration MCHC. Terbufos treated fish showed uncontrolled swimming, increased breathing frequency and significantly higher Hb values and MCH. Our results proved that even extremely low concentrations of terbufos in waters have toxic effects on Crucian carp, which is known as fish with low susceptibility to water pollution.

A MAGYAR KENDERMAGOS TYÚK REPRODUKCIÓS TULAJDONSÁGAINAK ÉRTÉKELÉSE

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ABSTRACT - The evaluation of reproduction of Hungarian speckled hen

Our Faculty has been dealing with the cross-breeding of Hungarian speckled hen to maintain the species since 1977. We keep two varieties of the Hungarian speckled hen, the bare-neck variant and the feathered-neck type on the pilot farm. The three colour variations of the domestic hen species were bred from the Hungarian lea-land bird by the middle of the 20th Century. Because of the spread of intensive poultry keeping the population of this species has become endangered. Programs supporting ecological-biological farming that began in the last two decades placed the domestically bred birds in the forefront both as purebreds and as candidates in projects for developing merchandisable bio-poultry. Beside the gene preservation, we endeavour to find the best way for the production-purpose utilisation of the speckled hen stock. On the basis of our experiments the laying hens can be used in small scale egg production. We examined the egg production, the eggshell colour and the hatching results

Keywords: Hungarian speckled hen, gene conservation, egg production, hatching results

Kulcsszavak: Magyar nemesített kendermagos tyúk, génmegőrzés, tojástermelés, keltetési eredmények

HOSSZÚ ÉS RÖVID ÉLETTARTAMÚ HAZAI TEJELŐ SZARVASMARHA ÁLLOMÁNYOK TERMELÉSI MUTATÓI

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ABSTRACT – Productivity parameters of Hungarian dairy cattle populations with short and long lifetime

In Hungary, an intensive dairy population has developed in the last few decades as the result of upgrading to Holstein Friesian. Intensive milk production, adjusted with housing and feeding, unfavorably affected functionally traits. The number of days between two calvings has increased remarkably and productive lifetime has decreased drastically. In the interest of profitable milk production, it is important that cows should be able to stay in the herd as long as possible, in order to have great lifetime productivity.

The aim of this paper was to compare the production of cows with eight or more lactations to cows which were culled after their first lactation.

It can be stated that cows with longer herd lives produced more milk in their first lactation than those which were culled after their first lactation and which were born at the same time like the cows with longer herd lives.

According to our analysis, there is no unambiguous connection between the production of first lactation and productive life.

Correlation between age of first calving and milk production quantity traits was found to be poor ($r > -0,10$).

Kulcsszavak: élettartam, tejelő tehén, termelés, holstein-fríz, laktáció

A NAGYÜZEMI MÉHÉSZKEDÉS HAZAI ÉS AMERIKAI EGYESÜLT ÁLLAMOKBELI FELTÉTELEI

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ABSTRACT – Opportunities for large scale beekeeping in Hungary and in the USA

In the last two years I had two major experiences in practical beekeeping. I worked as a trainee from July 2006 to August 2007 in a migrating bee operation, the Honey Land Farms in the US and completed a three month summer practical training in a large non permanent apiary, the Csányi apiaries in Baranya County, Hungary in 2008. Both experience impacted my interest and future studies.

The objective of my paper is to compare the two large scale apiaries according to the following aspects: climatic and geographical circumstances, size and distribution of the bee yards, level of machinery, organization of work and employee, efficiency of production, profile of production, construction and equipment.

The Langstroth bee hive, used in both operations, is discussed in details in respect of applicability for migration and for winterizing. With the yearly continental migrating the Honey Land Farms can cover two honey flow seasons and in the meantime they produce queens and package bees. With permanent beekeeping there is only one big honey flow season in case of the Csányi apiaries. They brought themselves to produce comb honey while the self bred queens insure the strong colonies.

According to my conclusions the climatic, the geographical and economical conditions are determining the production features, such as the continuity or top condition head of colonies and the scale of products.

The paper and my conclusions are based on my practical experiences, and specific data.

Kulcsszavak: méhészet, anyanevelés, nagyüzem, technológia, munkaszervezés

Keywords: beekeeping, queen breeding, large scale, technology, logistic

A MAGYARORSZÁGI ŐZÁLLOMÁNY LÉTSZÁMÁNAK MEGHATÁROZÁSA ÉS NÉHÁNY PARAMÉTERÉNEK BECSLÉSE POPULÁCIÓ-REKONSTRUKCIÓVAL

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ABSTRACT – Estimation of the past population size of roe deer (*Capreolus capreolus*) and some of its parameters with population reconstruction method in Hungary

The validity of size-estimation of the spring cohorts keep to be informed of the magnitude of roe deer (*Capreolus capreolus*) indigenous population. Using some population parameters (age distribution of buck antlers, non-hunting loss of bucks and does, rearing loss of fawns, fertility rate of does, average number of newborn fawns per does) the former population size can be rendered – as probable estimation – by the population reconstruction method (Csányi, 2000). Based on these feasible data the male cohort size and population estimate has been calculated between 1975-95. According to the results of the calculation can be concluded that population size presumably was higher than the reported one in the annual game management statistics (about 50 percent in the seventies). Furthermore this result assumes the high losses in the roe deer population (average of buck's non-hunting loss and doe's one: 30 %, average fawn's rearing loss: 60 %). Considering the provoking reasons of these high losses the harvesting rate could be between: 13-26 / at the examined period contrary to the reported: 16-37 % ones. Have been concluded that formerly there were certain reserves in the theoretical over-estimation of the indigenous roe population) and there may be at present too).

Keywords: *Capreolus capreolus*, population reconstruction, number of roe deer, cohort, non hunting loss

HOGYAN JUTNAK ÁT A VADAK EGY ÁTJÁRÓ NÉLKÜLI AUTÓPÁLYÁN?

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ABSTRACT – How can the wildlife get accross higway without passage...?

There are habitat-conservational and wildlife management aspects must be taken into account at the planning of highways. We must achieve the exclusion of animals from the highway and simultaneously secure their getting out and their negotiation. In case of disfunction or complete lack of appropriate habitat corridors, only the exclusion realizes. It endangeres the stability of nearby populations and habitats, and so the safety of the traffic, by the obligate increasing number of attemptped breakthroughs. This study focuses on two main issues. By studying the effects of the wildlife fencing, we seek answer to the following question: "Do we need to expect increased wildlife presence and attempts to break through alongside the wildlife-fencing, and if we do, what species come into question foremost?" The objects that secure the negotiation of animals, thus decrease the fragmentation of habitats, are missing mainly from the older highways. So the second issue of this study is to answer the next question: "Are the objects originally not designed to be wildlife passages, that intersect the track of the highways (cart-roads pipelines etc. over or underpasses) suitable for, or could these be transformed into wildlife passage, while keeping the original function?" We examined separately what species can be dangerous to the traffic, using these objects. We chose to study the segment from 29 to 43 km of the M3 highway. We studied five objects originally not designed to be wildlife-corridors, (two ditches, a stream, a cart-road underpass and a cart-road overpass) and also the wildlife-fencing, especially the segments next to forest areas. Our method was the collecting and documenting direct and indirect signs of wildlife (drop, footprint, track, hair, mastication marks). We also used a motion detector camera, and footprint-traps. The frequent observation of the fencing shows constant and obvious presence of wildlife, with countinuous attempts and succesful breakthroughs. We prove the presence of roe deer, wild boar, fox, badger, and pheasant with photos. In this study we prove with examples that the objects not originally designed to be wildlife-passages, can serve as wildlife-passages. We summarize in a table that which species was perceived on which passages. The next species occured demonstrably: red deer, roe deer, fox, dog, cat, badger, otter, stone marten. By discussing the problems of "exclusion", "diversion or gude", "negotiation" we touch on the question of the necessity of ensuring the "geting out". Our main conclusion is, that the habitat-conversion and the traffic-security on the highways can only be achieved together: we must solve the problem of negotiation-exclusion-getting out all in one.

Kulcsszavak: autópálya, fragmentáció, átjárók, vadvilág, vonalas létesítmény

Keywords: highway, fragmentation, passages, wildlife, linear infrastructure

DETERMINATION OF CONDITION DAIRY CATTLE FARMING IN BURDUR PROVINCE OF TURKEY

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ABSTRACT – Detemination of condition dairy cattle farming in Burder Province of Turkey

This research was carried out to determine the present situation and the possibility of improvement of dairy farms in Burdur city which has an important potential for milk production in Turkey. Burdur also accepted the driving force of the dairy sector in Turkey and most of the pilot projects start from Burdur. Cultural breed constitutes 98 % of bovines in Burdur city where the enterprise type is generally family animal husbandry.

Keywords: Burdur Dairy cattle, farm demography, production trait, management practices, socio-economic analysis

EGÉSZSÉGES ÉS LÁBVÉGBETEG JUHOK CSÜLÖKSZARUJÁNAK CA-, P-, ZN- ÉS CU-TARTALMA

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ABSTRACT - The Ca-, P-, Zn- and Cu-contents of the foot horn of healthy sheep and of those with foot disease

The Ca-content (1152 mg/kg) of the foot-horn of the healthy Merino group on the level of $P < 0,1$ % is greater than that of the sheep infected with foot rot (587 mg/kg). The horn of the ill sheep contained more P than of the healthy sheep. Consequently the Ca:P ratio (3.19; 2.01) of the horn wall and the horn bottom on the level of $P < 1$ % is larger than that of the group infected with foot rot (2.35; 0.65). From these results we can draw a conclusion that in the case of the sheep infected with foot-rot the Ca content of the horn is decreasing.

According to SZOVÁTAY (2002) the reason for this can be that blood supply in the foot is less since it is used less because of the pain, therefore less Ca can be built in the horn. This is why the Ca:P ratio is getting and the hardness decreases as well.

On $P < 1$ % level I found negative linear correlation between the amount of Zn and Cu ($r = -0.77$), while at the healthy Awassi group at a $P < 5$ % level it is ($r = -0.86$). These coincide with the statement of ELINDER and PISCATOR (1977, according to which Zn and Cu are antagonistic).

Keywords: foot horn, healthy, foot diseases, content

Section 3: Food and Environmental Sciences**AZ OLTOTT SÁRGADINNYE MENNYISÉGI ÉS MINŐSÉGI
VÁLTOZÁSAI AZ EGYES FAJTATÍPUSOKBAN****BALÁZS GÁBOR¹, KAPPEL NOÉMI¹, STEFANOVITS-BÁNYAI ÉVA²**¹Budapesti Corvinus Egyetem, Kertészettudományi Kar, Zöldség- és
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balazs.gabor@uni-corvinus.hu**ABSTRACT – Quantitative and Qualitative Changes in Grafted
Muskmelon Varieties**

Nowadays in connection with the healthy nutrition the importance of the consumption of vegetables and fruits is increasingly emphasized, as they are rich in vitamins and antioxidants. Among the other vegetables melons play a vital role in our nutrition. In melon production grafted transplants better and better will be used. Grafting has a lot of advantages, in watermelon well, in muskmelon less documented. Hence in our trial we investigated the effects of grafting in muskmelon production. In our experiment in year 2008, we used 2 muskmelon varieties (*Centro* and *London*) grafted with 5 different squash rootstock (*Beton*, *Kazako*, *No.3*, *RS 841 Improved*, *Strongtosa*), grewed in open filed condition with intensive technologie (soil covering, dripping irrigation, low tunnel covering). The grafted melons were planted on the 20th of April, with 160x120cm spacing (0,52 plant/ m²). The experiment was carried out in two repetitions, in small parcels, and in block design. We measured the quantity of the yield (kg/m²) and the quality of the fruits in the view of the internal features like antioxidant content.

The results showed in all grafting- combination higher total yield and we have concluded that grafting can also improve the antioxidant content of the fruits. Data show that *Kazako* rootstock resulted the highest antioxidant-content in *London* variety. By *Centro* variety we measured significant higher quantitative and qualitative values with *Beton* rootstock.

During the laboratory analysis we concluded that a rootstock has different effect on a variety. Considering the results we can say that it is very important to choose adecvate rootstock for a muskmelon variety.

Keywords: grafting, muskmelon, rootstock, yield, antioxidant-content

ÚJ KIHÍVÁSOK ÉS KITÖRÉSI PONTOK AZ ÁLLATI EREDETŰ ÉLELMISZEREK PIACÁN

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ABSTRACT – New challenges and break-out points in the food market of animal origin

The food sector is the largest manufacturing sector in the European Union and it is open to world markets and therefore challenged by them. In order to ensure that the Lisbon Strategy is fully realized the European Technology Platform Food for Life (ETP) seeks to ensure that competitiveness is enhanced through technological solutions that build on existing strengths, or seek to open up new fields which the industry see as providing good opportunities for exploitation. Concurrently, the ETP will address the growing health and social problems that will need to be tackled by a society that is ageing, and where a healthy diet can play a pivotal role in optimizing human health and ensuring the population has a reduced risk or a delay in onset of long-term, diet-related diseases. There are many opportunities in the Hungarian food industry to develop because we have appreciable lag from the European food market. In this study I wish to investigate the strengths, weaknesses, opportunities, threats of the Hungarian food market of animal origin.

Kulcsszavak: egészségtudatos étrend, minőségi termékek, élelmiszer-jelölések, fogyasztók, táplálkozási propaganda

A DÉL-ALFÖLDI RÉGIÓ KÚTJAINAK HASZNOSÍTÁSA ÉS HASZNOSÍTHATÓSÁGA A KITERMELT VÍZ ÖSSZETÉTELE ALAPJÁN

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ABSTRACT

The South Alföld's thermal wells are of Pannonian origin, and their common features are hydrogen carbonate character, high salinity and chlorid content as well as high additional (attendant) gas. In the region these attributes vary, one of them being dominant one time while the other one coming to front the other time.

The compound seriously affects the method of utilization, considering that usually we pass it to the place of utilization by the help of technical devices, and it greatly affects the condition of the equipments.

After utilization these materilas get back to the environment from the thermal water. In natural environment extra water itself can induce environmental changes, either in artificial or natural reservoirs.

The target of the examination is to learn what are those evironmental influences we have to face, depending on the methods of storage and the chemical contents of the thermal water.

Keywords: thermal wells, technical devices, utilization, natural reservoir, evironmental influences

THE MINERALS CONTENTS IN TOMATOES AFTER MINERAL FERTILIZATION

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ABSTRACT – The minerals contents in tomatoes after mineral fertilization

In this paper was analyzed the macroelements (Na, K, Ca, Mg) and microelements (Fe, Mn, Cu, Zn, Ni, Pb) accumulated in tomatoes cultivated in field, in Romanian west area, after NPK fertilization. The experience was done in a cambic cernosium soil, with low acidity reaction and the high natural fertility potential favorable vegetables cultivation. The study was performed on control soil samples (without fertilizers) and soil samples after differentiated NPK fertilization in variable doses: $N_{30}P_{30}K_{30}$, $N_{45}P_{45}K_{45}$, $N_{60}P_{60}K_{60}$, $N_{120}P_{60}K_{60}$. A field experiment was using tomatoes samples in different precocity steady: early (Export II) and middle tardy (Ace Royal). Na and K were determinate by atomic emission spectroscopy; Ca, Mg and microelements by atomic absorption spectroscopy. The mineral fertilization doses and the precocity steady of tomatoes influence the content of minerals in tomatoes fruit.

Keywords: tomatoes, precocity steady, mineral fertilization, minerals contents

In aceasta lucrare s-a urmarit analiza continutului de macroelemente (Na, K, Ca, Mg) si microelemente (Fe, Mn, Cu, Zn, Ni, Pb) acumulate, in urma fertilizarii minerale, in tomate cultivate in conditii de camp, in zona de vest a Romaniei. Tipul de sol pe care s-a amplasat experienta este un cernoziom cambic, sol cu reactie usor acida, cu un bun potential de fertilitate favorabil culturii legumicole. Cercetarile s-au efectuat pe un sol nefertilizat, precum si in conditii de fertilizare diferentiala cu NPK in urmatoarele doze: $N_{30}P_{30}K_{30}$, $N_{45}P_{45}K_{45}$, $N_{60}P_{60}K_{60}$, $N_{120}P_{60}K_{60}$. In analize s-au folosit tomate in diferite stadii de precocitate: timpuriu (Export II) si semitarziu (Ace Royal). Na și K s-au determinat prin spectroscopie atomica de emisie; Ca, Mg si microelementele prin spectroscopie de absorbtie atomica. Dozele de fertilizare si gradul de precocitate al soiurilor de tomate influenteaza continutul de minerale din fructe.

Cuvinte cheie: tomate, stadiu de coacere, fertilizare minerala, continut de minerale

STUDIES REGARDING THE INDIVIDUAL QUICK FREEZING TECHNIQUE IMPACT ON THE QUALITY OF SOME VEGETABLES AND FRUITS

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ABSTRACT – Studies Regarding the Individual Quick Freezing Technique Impact on the Quality of some Vegetables and Fruits

In this work were studied aspects of the transformations suffered by some fruit and vegetables after processing by freezing in dynamic conditions by IQF technique (Individual Quick Freezing) and in the storage time. For this purpose the investigated products were both subjected to sensory analysis (appearance, colour, taste, smell), and physical-chemical (moisture, ash, reducing sugar, total protein, dry matter, vitamin C, polyphenols content of total antioxidant capacity). The results show that the application of the modern techniques, non-destructive, the vegetables and fruits investigated has not been significant changes to the sensory and physical-chemical parameters, the minor differences are caused by the blanching, operation applied only vegetables studied. Regarding the behaviour of frozen products packed during the 12 months of storage at -18°C and relative air humidity of up to 60%, was concluded that they have maintained the initial sensory characteristics. Total antioxidant capacity have decreased by 20-35%, polyphenols content with 15-30% , and ascorbic acid with 17-20% for frozen fruit and 35-45% for frozen vegetables compared to baseline values.

Keywords: frozen vegetables and fruits, storage time, chemical composition, antioxidant properties, IQF technique

În prezenta lucrare au fost studiate aspecte legate de transformări suferite de unele legume și fructe în urma procesării acestora prin congelare în regim dinamic, prin tehnica IQF, precum și în timpul depozitării. În acest scop produsele au fost supuse atât analizelor senzoriale (aspect, culoare, gust, miros), și fizico-chimice (umiditate, cenușă, zahăr reducător, proteina totală, substanță uscată, vitamina C, conținut de polifenoli totali și capacitate antioxidantă). Rezultatele obținute relevă faptul că în urma aplicării acestei tehnici moderne, nedistructive, legumele și fructele investigate nu au înregistrat modificări semnificative ale parametrilor senzoriali și fizico-chimici analizați, diferențele minore sesizate datorându-se operației intermediare de blanșare aplicată exclusiv legumelor studiate. Referitor la comportarea produselor congelate ambalate, în timpul a 12 luni de depozitare la -18°C și umiditate relativă a aerului de maxim 60%, s-a ajuns la concluzia ca acestea si-au menținut caracteristicile senzoriale inițiale. Capacitatea antioxidantă totală s-a diminuat cu 20-35%, conținutul de polifenoli cu 15-30% iar conținutul de acid ascorbic cu 17-20% pentru fructele congelate și 35-45% pentru legumele congelate, față de valorile inițiale.

Keywords: legume și fructe congelate, timp de depozitare, compoziție chimică, proprietăți antioxidante, tehnica IQF

**A TEJ MINŐSÉGE, BELTARTALMA ÉS A TEJTERMELÉS
GAZDASÁGOSSÁGA
RELATIONSHIP BETWEEN MILK COMPOSITION, QUALITY AND
ECONOMICALLY MILK PRODUCTION**

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ABSTRACT - Relationship between milk composition, quality and economically milk production

The quality of the milk determines the economic efficiency of the milk production. The milk producers are interested in the continuous production of good quality milk.

Germs, somatic cells and antibiotic residuals are they important parameters. The number of germ is depended from milking hygiene and the functionality of cooling system.

The number of somatic cells vill influenced by a lot of environmental and biological factors.

In our article we deliver figures of several aspects (milking, cooling, human factor) affecting the raw milk quality.

We have investigated the development of milk composition and have given proposals on the processing directions of different milk fractions.

A BAROMFIÁGAZAT ÁLLATEGÉSZSÉGÜGYI HELYZETE, KÜLÖNÖS TEKINTETTEL A SZALMONELLÁRA

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ABSTRACT- The animal health situation of poultry section with significant regard to the stocks infected by salmonella

The basic aim of food law is the high level protection of public health. The microbiological and within it food contamination caused by salmonella continues to mean the main source of humane diseases transmitted by food. The common target of animal and public health is the protection against the infectious diseases spreading from animal to human being in which process the continuous and close following of the epidemiological situation in the food chain plays a great part.

Regarding the salmonella infected poultry stock in Hungary, The Poultry Product Council in close co-operation with the animal health authority has launched an action programme. The main object of the programme is to minimize, that is, to decrease the poultry stock infection below the level of 1 %. As it is well-known, the European Union ordered some severe arrangements in the last years to cease the salmonella infection in the member states. Its frames and programmes have been determined by some EU orders.

The first critical points of „poultry chain” in the primary production appear in animal keeping. That is why it is very significant to exempt the egg-laying stock from salmonella, that is to say that in case of successful realization of this exemption the salmonella infection of the final product will be of less degree. Vital importance must be attached toward the protection against the following infections: *S. Enteritidis*, *S. Infantis* and *S. Typhimurium* because these 3 pathogens appear the most oftenly in the animal stock while *S. Enteritidis* causes the overwhelming majority of human diseases.

The EU made new laws in order to decrease the salmonella infection of food which laws have resulted in significant changes in food microbiology. The end values previously regulated in sectoral guiding principles, also rendered into national law in Hungary by some legislative provisions have been replaced by a uniform order regulated and directly compliant criteria.

Keywords: Salmonella serotypical, Poultry, Contamination, Prevalence

**EFFECTS OF ROOT ZONE TEMPERATURE ON BLOSSOM-END
ROT OF SWEET PEPPER
(*CAPSICUM ANNUUM* L.) FRUITS**

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**ABSTRACT – Effects of root zone temperature on blossom-end rot of
sweet pepper (*Capsicum annuum* L.) fruits**

Blossom-end rot (BER) may reduce significantly sweet pepper production undergreenhouse in Temperate region during summer season. Temperature might play a key role to generate BER fruits. The objective of the present study was to examine the effects of root zone temperature on the incidence of BER in sweet pepper fruits grown in soil and soilless culture. Initially low incidence of BER fruits increased abruptly to the highest incidence (12.5%) of BER fruits in soil at the end of May.

Sweet pepper plants grown in rockwool slabs reached the maximum incidence of BER fruits at the beginning of June, with 36.3% of marketable yield. Compared soil with soilless culture, relationships between temperature of root zone media and the incidence of BER fruits, there were significant differences ($r^2=0.88$, 0.57 respectively). It can be concluded from the coefficient of linear regression function, that increasing temperature (range between 16-28 °C) of root zone media with 1°C, increased the incidence of BER fruits with 4% and 1.5% in soilless and soil grown sweet pepper respectively.

Keywords: blossom-end rot, *Capsicum annuum*, root zone temperature

CONSTRUCTED WETLANDS FOR ON-SITE WASTEWATER TREATMENT, EXPERIENCES IN FLANDERS

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ABSTRACT - Constructed Wetlands for on-site wastewater treatment, experiences in Flanders

Constructed wetlands can mimic the filtration processes of natural wetlands, effectively removing contaminants from wastewater. Successful applications for the treatment of municipal wastewater have led to the exploration of the technology for the treatment of other wastewater, including industrial, agricultural, acid mine drainage, storm water, landfill leachate, and urban runoff. During the last two decades, the number of constructed wetlands in Flanders (Belgium) increased exponentially. Design sizes vary between 1 and 2,000 Population Equivalents, with the majority of reed beds having a size smaller than 500 PE. Most reed beds are used as single treatment units, although they are sometimes also combined with other reed beds or even conventional systems. The main purpose is to treat domestic and dairy wastewater. This paper will summarize the state of the technology and illustrate removal mechanisms and performances of CW's.

Keywords: constructed wetlands, wastewater, Flanders, nutrient removal

AZ ŐSZI BÚZA LISZTEK SMS2 TEXTURE ANALYSERREL (KIEFFER) VÉGZETT VIZSGÁLATA

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ABSTRACT – Examination of winter wheat flours with SMS2 Texture Analyser (Kieffer)

Nowadays, many methods have been worked up in the interests of objective expression of winter wheat rheological quality. These define wide spectrum in view of their complexity and apparatus claim.

We have to know the new, untraditional quality parameters in Hungary, that satisfy costumers of the European Union in export market. The ambition of importers is shown by the fact that needs of certain suppliers and costumers for the extensographical parameters have increased in Hungary.

In present study we examined extensographical parameters of 10 Hungarian winter wheat which were produced in 2005-2007. Data show that GK Hattyú and GK Petur varieties have high extensigraphical resistance of extension and GK Csongrád and GK Piacos present high extensibility and subarea parameters. GK Garaboly shows the lowest parameters in 2006. GK Kapos presents low resistance of extension and subarea values and GK Hattyú the lowest extensibility.

In the standards there is no limit for extensographical parameters. The costumers dictate the limits and write their claims in the specifications. We can grouped the analysed flour according to requiments of member states of the European Union.

Keywords: winter wheat, rheological characteristics, alveograph, extensigraph

Kulcsszavak: őszi búza, SMS2 Texture Analyser, extenzográfós vizsgálat, Kieffer mérés

TREATMENT OF DAIRY FARM WASTEWATER WITH CONSTRUCTED WETLANDS

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ABSTRACT - Treatment of dairy farm wastewater with constructed wetlands

Constructed wetlands can provide an inexpensive and easily operated means of removing organic matter, suspended solids, nutrients and micro-organisms from agricultural wastewater. At dairy farms wastewater is produced from dairy wash water, runoff from soiled yard areas and in some cases silage effluent. Typically, such wastewater has a high biochemical oxygen demand (BOD), contains solids, and nitrogen-based compounds such as ammonia, and phosphorus. The wastewater characteristics show a great variability. This variability is not a function of animal numbers, type of milking system, or any other parameter. This paper summarizes the most important design criteria used for vertical subsurface flow constructed wetlands, based on experiences in Flanders.

Keywords: constructed wetlands, dairy wastewater, Flanders

ALTERNATIVE MEDIA FOR NUTRIENT REMOVAL IN VERTICAL SUBSURFACE FLOW CONSTRUCTED WETLANDS

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ABSTRACT - Alternative media for nutrient removal in vertical subsurface flow constructed wetlands

Discharge of wastewater is one of the major sources of nitrogen and phosphorus entering water bodies, causing undesired environmental problems such as eutrophication and algae bloom. In rural areas people have to rely upon on-site, low-cost small-scale wastewater treatment systems, for instance constructed wetlands. These systems have proved to remove nutrients and different removal mechanisms taking place have been identified. In order to achieve efficient cost effective treatment systems, natural materials, e.g. sands, gravel, lightweight expanded clay, lava rocks, peat, coco products etc., are generally been applied as filter substrates in constructed wetlands. In this research four different types were tested for their ability to remove nutrients: lightweight expanded clay, lava rocks, peat and coco products.

Keywords: wastewater, constructed wetland, filter substrate

TECHNOLOGICAL INNOVATION IN THE OFFER OF SAFETY AND HEALTHY FOOD

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ABSTRACT – Technological innovation in the offer of safety and healthy food

In food processing industry, additives and other ingredients, are used during the technological process of production-and scarcely, almost nil, in process of preparation and sale-slaughtering of cattle, primary processing, cooling, ready made, packing, transport or storage. Harmful additives need to be substituted by natural additives. To most consumers, there is a demand that food is safe to eat. A number of consumers look for healthy food. The creation of modern business philosophy has been focused on quality and consumer satisfaction. Consumers` wish to be able to use various types of goods of pleasant taste, look and aroma, regardless of the season and geographic origin, has led to an increased use of chemical substances. Pollution and degradation of environmental have very unfavorable effects upon the human, his health and his living surroundings. As a consumer, the human has become concerned for his health due to an increased use of chemical substances, present in additives for food production and in medicines. In order to reduce health risk, the human has attached particular attention to informing on the possibilities of replacing chemical substances by natural, herbal product. In the realization of this innovation, connections and cooperation are necessary. New technologies should be designed by scientific and technical knowledge and to accomplish the task to reduce the consumption of harmful additives. The production of food with natural additives is done according to the cooperation. The technological innovation, reduce the inputs and maximize outputs of subjects having different competences necessary for the creation of value. One of many motivations for creating of the new product is to get high quality products. In later years we have seen a tendency for some groups of customers paying more for food of certain origin, taste and design.

Open innovation is becoming a basement model for development and creating of a new product and collaboration. The effects of open innovation model` implementation upon human and nature are visible; reduction of harmful effect on health, safety, environment, strengthening of companies` social responsibility. Through social responsibility and the sustainable development of all participants of cooperative innovation development it is possible to fulfill consumer demands.

Key words: open innovation, consumer, medical herbs, healthy and safety food

Ključne reči : otvorena inovacija, potrošač, lekovito bilje,zdrava i bezbedna hrana

Section 4: Plant Sciences and Horticulture**FERTILIZING SYSTEM AND YIELD LEVEL IN MAIZE IN THE
CONDITIONS OF THE DIDACTIC STATION IN TIMISOARA,
ROMANIA**

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**ABSTRACT –Fertilizing system and yield level in maize in the conditions
of the didactic station in Timisoara, Romania**

Studies and research on which this paper is based aimed at improving the fertilising system in maize in the soil and climate conditions of the DS in Timisoara. While cultivating new maize hybrids with different yielding potential and using different fertiliser assortments, new agricultural technologies on the ground of changing economic and soil and climate conditions, we need to improve and optimise fertilising systems. Research highlighted the different impact of maize assortments and fertiliser doses on yield analysis of results from the point of view of linkage distance point out multiple fertilisation solutions to obtain comparable results.

Keywords: soil fertility, mineral fertilisers, fertilizer systems, maize crop, linkage distance

VITICULTURAL SYSTEMS IN WESTERN ROMANIA IN THE CONCEPT OF THE SUSTAINABLE DEVELOPMENT

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ABSTRACT – Viticultural Systems in Western Romania in the Concept of the Sustainable Development

The researches took place in the Western part of the country, in the wine-growing areas of: Receaș, Silagiu-Buziaș, Teremia, Miniș. They aimed at the sustainability of the viticultural systems as systems of production and ways of sustainable rural development. There are well organized holdings, with large areas, a great varietal assortment and adequate culture technologies. At the same time there are also small and medium sized holdings which have insufficient financial resources, and also possess plantations with different degree of biological degradation, with inadequate varietal assortments and a minimal culture technology. We consider that is necessary to maintain all the autochthon cultivars in the assortment, in order to create diversity and variability through which to enter, under the effect of some high-tech culture and wine making technologies into the global wine market.

Keywords: viticultural systems, sustainable development, vine assortment

AGARICUS BLAZEI TÖRZSEK SZELEKTÁLÁSA TERMESZTÉSI PARAMÉTEREIK ALAPJÁN

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ABSTRACT - *Agaricus blazei* cultivars selection based on cultivation parameters

The demand of natural and medicinal products has been increased for the past years. These products are often made from herbal and medicinal plants, and recently the mushroom products are much called. Nearby some well known species (like *Lentinula edodes* or *Ganoderma lucidum*) some not respected biomedicines are available in Hungary. *Agaricus blazei* (MURRILL) is a Basidiomycota fungus, with almond-like taste and not well-known cultivation technologies. This medicinal mushroom proved to be useful in cancer therapy and against some bacterial and viral diseases. In our experiment 8 *Agaricus blazei* cultivars were tested on fermented mushroom compost. The yields, average mushroom size, productivity and biological efficiency of strains were measured. Our data demonstrate that it is possible to get fruit bodies less than 2 months, and strain “837”, “2603” and “MaHe” are suggested for further experiments. These strains gave the highest yield and efficiency in the cultivation.

Kulcsszavak: csiperke, termesztés, mandula, biológiai hatékonyság

INFLUENCE OF GROWING SPACE ON 1000-KERNEL WEIGHT OF SOYBEAN UNDER IRRIGATED CONDITIONS

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ABSTRACT – Influence of growing space on 1000-Kernel weight of soybean under irrigated conditions

In two years research three row spaces and three soybean varieties were examined in irrigated conditions. Irrigation was doing with wide gripe device for artificial rain. Aim of this research was to establish rate of influence of growing space shape changing on 1000-kernel weight. Mass of 1000 grains was observed per floors. Experiments were arranged by the analysis of variance as two factorial split-plot experiments method (HADZIVUKOVIC, 1991). Factors of the examination were: (big plot) and different row spacing (sub plot). In both research years, statistically the lower 1000-kernel weight had variety Vojvodjanka. With increasing of row spaces average 1000-kernel weight increased too. Differences were statistically significant only between the smallest (25 cm) and the biggest (70 cm) row spaces. Mass of 1000 grains from lateral branches and separate floors is property of variety. Shape of growing space had influence on 1000-kernel weight from lateral branches and separate floors.

Keywords: 1000-kernel weight, growing space shape, irrigation

RESEARCH CONCERNING THE SEED SEPARATION AND SORTING BY VIBRATIONS

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ABSTRACT – Research concerning the seed separation and sorting by vibrations

The operation of separation of seeds from the layer on the sieves of seed cleaning and sorting machines takes place due to the phenomenon of material stratification in its components, which are differentiated after their density and also, due to the state of sifting of the seed layer on the separation surface, produced by the motion of sieves.

In order to verify the results, obtained in the theoretical study, experimental tests were performed, where there were determined the time and velocity of displacement of the material on the vibrating sieve surface, the degree of separation of components from the mixture, subjected to sifting process and the sieve productivity, all these as functions of the kinematical parameters of the motion of cleaning system, respectively of the rotative speed of the shaft of driving mechanism, the amplitude and frequency of oscillations.

All determinations were effected at different inclinations of oscillating sieves and different rotative speed of the driving shaft. In all variants of work, the tests were performed in more repetitions, the results presented in the experimental study being the average of these repetitions.

Keywords: flat sieves, sliding regimes, relative motion

EXPERIMENTAL RESEARCH CONCERNING THE SEED DISTRIBUTOR FROM THE SOWING MACHINES

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ABSTRACT – Experimental research concerning the seed distributor from the sowing machines

The sowing machines are destined for sowing weed out seed plants. The sowing precision is mostly influenced by the vacuum value created in the vacuum room of the seed distributor.

The seed distributor is a vertical disc type with holes. The seed distribution in row is pneumatically realized.

In this paper the influencing parameters of the seed distribution are analyzed, like: the vacuum value, the volume of the vacuum room, the number of holes of the distribution disc etc.

Concerning the made measurements there are proposed solutions for the optimal functioning of the seed distributors.

Keywords: flat sieves, sliding regimes, relative motion

MONITORING OF ENVIRONMENTAL IMPACT OF GENETICALLY MODIFIED PLANTS

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ABSTRACT - MONITORING OF ENVIRONMENTAL IMPACT OF GENETICALLY MODIFIED PLANTS

In this paper some of the most important problems related to the GM crops in the environment have been discussed on the following aspects such as: plant protection, ecological effects of HRCs, gene flow, biodiversity, stress, ecological risks of Bt crops, effects on the soil ecosystem, etc. There is a clear need to further assess the severity, magnitude and scope of risks associated with the massive field deployment of transgenic crops.

Keywords: biotechnology, GMCs, plant protection, biodiversity

ABSTRAKT - MONITORING UTICAJA GENETIČKI MODIFIKOVANIH BILJAKA NA ŽIVOTNU SREDINU

U ovom radu obrađeni su neki problemi vezani za GM biljke u spoljašnjoj sredini i to sa aspekta: zaštite biljaka, ekološkog efekta HRCs, gene flow, biodiverziteta, stresa, ekološkog rizika od Bt biljaka, efekti na zemljište itd. jasna je potreba za proučavanjem rizika na životnu sredinu usled naglog širenja transgenih useva.

Ključne reči: biotehnologija, GMCs, zaštita biljaka, biodiverzitet

THE IMPORTANCE OF HERBICIDE APPLICATIONS ON YIELD IN WINTER WHEAT

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ABSTRACT – The Importance of Herbicide Applications on Yield in Winter Wheat

Our research aimed at monitoring the impact of some herbicides on yield in winter wheat Romulus cultivar, in the soil and climate conditions of Romanian west area (Didactic Station Timisoara). In 2005-2007 period, we tested 9 herbicides: Aim Plus, Derby 175 SC, DMA 6, Icedin super, Lancet RV, Lintur 70 WG, Mustang, Oltisan extra and Sekator. The technology applied was specific to the chernozem soil, with the mention that the pre-emergent crop was soy. All the trial variants were fertilized with complex chemical fertilizers corresponding to a dose of N₁₀₀P₄₅K₄₅. The impact of the postemergent herbicides results in a diminution (the average 2005-2007) of the weeding degree, between 69.58 % (DMA 6-1 l/ha) and 89.49%(Icedin super-1 l/ha). The yields obtained in winter wheat are directly correlated with the weeding degree, i.e. higher in the variants in which weed control degree was maximal. The productivity had the values between: 31.03q/ha (non-treated) and 40.89 q/ha (Icedin super 1 l/ha).

Keywords: winter wheat, herbicides, weed control, efficiency, yield level

Cercetările noastre au urmărit studiul influenței unor erbicide asupra producției, la soiul de grâu de toamnă Romulus, în condițiile de sol și climă din zona de vest a României (Stațiunea Didactică Timișoara). În perioada 2005-2007, am testat 9 erbicide: Aim Plus, Derby 175 SC, DMA 6, Icedin super, Lancet RV, Lintur 70 WG, Mustang, Oltisan extra și Sekator. Tehnologia aplicată a fost specifică pentru tipul de sol (cernoziom), cu mențiunea că planta premergătoare a fost soia. Toate variantele experimentale au fost fertilizate cu îngrășăminte chimice complexe corespunzătoare unei doze de N₁₀₀P₄₅K₄₅. Influența erbicidelor postemergente s-a concretizat în diminuarea gradului de îmburuienare (media anilor 2005-2007), între 69.58 % (DMA 6 -1 l/ha) și 89.49% (Icedin super-1 l/ha). Producția obținută la grâul de toamnă a fost în corelație directă cu gradul de îmburuienare, fiind mai mare în variantele în care gradul de combatere a buruienilor a fost maxim. Productivitatea a avut valori cuprinse între 31.03 q/ha (neerbicidat) și 40.89 q/ha (Icedin super 1 l/ha).

IDEGEN GÉN BEVITELE BÚZÁBA

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ABSTRACT – Foreign gene introduction into wheat

Wheat is one of the most valuable domesticated plants being the main cereal for human feeding. The efforts for wheat breeding are often constrained by the availability of only a limited gene pool for exploitation. The modern biotechnological approach of direct gene transfer promotes to increase of breeding efficiency by expanding the diversity of the existing gene pool. Protoplast transformation methods and bombardment of genes adsorbed on microparticles have proved to be the most successful in obtaining fertile transgenic plants from some monocotyledonous species especially the agronomically important cereals. Microprojectile bombardment was applied as the method of transformation to introduce the foreign gene aldose reductase (*Alr*) being responsible for decreasing the effect of abiotic stress drought. Target cells of transformation were calli derived from immature embryos. The phases of transformation were controlled by integration and expression of marker gene *bar*.

Kulcsszavak: búza, rezisztencia, abiotikus stressz, génbevitel, részecskebelövés

Keywords: wheat, resistance, abiotic stress, gene introduction, particle bombardment

A NYUGATI VIRÁGTRIPSZ (*FRANKLINIELLA OCCIDENTALIS* PERGANDE) KÁRTÉTELE ELTÉRŐ FOGÉKONYSÁGÚ PAPRIKA FAJTÁKON

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ABSTRACT - The susceptibility of different pepper varieties to the western flower thrips (*Frankliniella occidentalis* PERGANDE)

Western flower thrips (*Frankliniella occidentalis* PERGANDE) has become the most significant pest of forced pepper after its introduction to Hungary. In Hungary the most popular sweet pepper type is the group of conical, white-fleshed cultivars, which suffer the most severe damage of thrips. The extent of fruit damage was studied in 7 different cultivars in two growing seasons. The samples were collected in two different greenhouses; in one of them insecticides were applied to control western flower thrips but in the other one no pesticide treatment was applied at all. Thrips found in flower samples were identified. The extent of the damage on the fruits and around the stem was assessed separately. Higher infestation of western flower thrips was observed in flower samples collected in the greenhouse where pepper was grown for longer and insecticide treatments were applied, and damage on the fruits was also greater. We found that *F. occidentalis* didn't cause major damage on the pepper, if the plants were regularly cut and the number of thrips was low (less than 1 adult thrips per flower). However, in a dense stock of plants this population can cause serious damage on the fruits. The fruits of 'Hó' and 'HRF' were sensitive to thrips damage, whereas 'Cecil', 'Kaméleon' and 'Táltos' varieties showed the highest resistance.

Keywords: Western flower thrips, sweet pepper, thrips resistance, thrips damage, thrips density

**TENDENCIES IN THE EVOLUTION OF THE CROPS AND THE
CULTIVATED AREAS WITH CEREALS AND OIL PLANTS IN THE
NEIGHBOURING AREAS OF JIMBOLIA**

**TENDINȚE ÎN EVOLUȚIA PRODUCȚIEI ȘI A SUPRAFEȚELOR
CULTIVATE CU CEREALE ȘI PLANTE OLEAGINOASE, ÎN
VECINĂTATEA LOCALITĂȚII JIMBOLIA**

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**ABSTRACT – Tendencies in the evolution of the crops and the cultivated
areas with cereals and oil plants in the Neighbouring areas of Jimbolia**

The remarks on the evolution of the cultivated areas and the crops obtained on local level were considered to be a good starting point in different complex studies. The data concerning the areas cultivated with cereals (wheat, barley, two-row barley, maize), respectively those cultivated with oil plants (sunflower, soy bean, rape) in Carpinis, Comlosu Mare and Lenauheim, which are in the neighbourhood of Jimbolia were analysed for the period 2003 – 2008. The data thus obtained were handed over to the Agricultural Office of the Timis County.

Keywords: Jimbolia, cereals, oil plant, crop, production

A KÖRNYEZETTUDATOS PALÁNTANEVELÉS TULAJDONSÁGAI ÉS OPTIMALIZÁLÁSA A TERMESZTÉSI GYAKORLAT SZÁMÁRA

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ABSTRACT – Features and practical improvements of environment supporter seedling production.

According to current regulations of Hungarian organic controller organizations, the organic farmer has to use organic seeds and produce organic seedlings for organic vegetable growing. These producers have two basic difficulties in growing: right mediums or substrates for transplants and correct plant protection. The aim of this research is to get favoring of knowledge of first difficulty for organic seedling production. The medias, as important factors of organic seedling rearing, are right soil mixes or agents, and the adequate supply of nutrients, because utilization of chemical fertilizers is forbidden. Accordingly an important target of research is finding suitable ecological soil-mix or agents for practice of organic seedling growing.

The experiment series was started in September of 2007 with a pre-experiment wich continued in May of 2008 and last prosperous experiment was stood up in September of 2008 at Soroksár Experimental Farm of Corvinus University of Budapest Dep. of Vegetable and Mushroom Growing. Authors prepared soil-mixes and these were compared with conventional medium. In the experiment transplants were grown on polystyrene trays with 96 cells (cells size is 5x5cm), and 1 tray was calculated to two parcels (1 parcel included 48 seedlings). The authors used 3 mixtures and three kinds of treatment as followed: 1 – ControlA (DOMOFLORE peat media with chemical fertilizer treatment); 2 – KM30 (mix of coco fibers and cow manure compost (30%) with no further treatment); 3 – TM30 (mix of white peat and cow manure compost (30%) with no further treatment); 4 – ControlB (DOMOFLORE peat media with chemical fertilizer and Hums FW treatment) 5 – KM30-H (mix of coco fibers and cow manure compost (30%) with Hums FW treatment); 6 – TM30-H (mix of white peat and cow manure compost (30%) with Hums FW treatment). Furthermore every each media was mixed with hydrated lime ($\text{Ca}(\text{OH})_2$) in 5% ratio. For experimental plant the lettuce (*Lactuca sativa* 'Capua') was chosen, because it can be good indicator that means lettuce is sensible to small changes of environment (substrate, nutrients, water, temperature, etc.). Authors fulfilled test of germination, test of utilization of sunlight (with SPAD chlorophyll meter), and executed measurements of seedling parameters (fresh and dry weights of shoots and roots, diameter of stem, height of seedling).

The following conclusions could determine from results: Significant differences of intensity and amount of germination weren't observable. In point of counted germination, parameters of seedlings, and measured SPAD, the results displayed similar or better quality than recorded plants gave from the control treatments.

Keywords: organic, seedling, transplant, humin acid, Fertilcare

AZ ÉVELŐ ROZS (*SECALE CEREAUM*) HASZNOSÍTÁSÁNAK LEHETŐSÉGEI MINT ALTERNATÍV ENERGIANÖVÉNY

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ABSTRACT – Utilization of Perennial rye (*Secale cereanum*) as an alternative energy crop

Genetic diversity in the genus *Secale* includes perennation, the ability of a plant to survive several years after flowering. The perennial wild rye species (*S. montanum* Guss. and *S. africanum* Stapf.) are used as forage grasses in the regions of their natural occurrence (REIMANN-PHILIPP 1995).

Perennial rye (*S. cereanum*) is a stable hybrid of the winter rye (*S. cereale* L.) and the perennial wild rye (*S. montanum* Guss.). Systematic breeding of perennial rye cultivars from the cross was initiated as early as 1906, and some forage rye cultivars derived from species hybrids expanded in eastern Europe and south-western Asia. In Hungary the crossing among the *Secale* species was made by Hódosné in the late 1950s and she studied the morphological, cytological and physiological properties of progenies. The most problem was the high degree of sterility in the progenies, so the first varieties were born after many ten years of breeding work. In 1998 there were registered 2 perennial rye varieties in Hungary, which were originated from these crossings. One of these varieties is 'Kriszta' was bred in the Research Institute of University of Debrecen.

Because of its low grain production and high green yield 'Kriszta' is primarily grown for green forage mainly on poor sandy soils. With our perennial rye variety one grain harvest could be combined with two green forages in successive years. We have been researching the possibilities of mixed culture with forage legumes for more years.

Dry matter production of perennial rye is higher with 20-50 % than annual rye under similar growing conditions. This production would be utilizable onto power generation by burning or fermenting to biogas.

Keywords: perennial rye, dry matter production, energy crop

Kulcsszavak: évelő rozs, szárazanyag-hozam, energianövény

PREVENTION OF NITRATE CONTAMINATION IN WHEAT PRODUCTION WITH RATIONAL USE OF NITROGEN FERTILIZERS

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ABSTRACT – Prevention of nitrate contamination in wheat production with rational use of nitrogen fertilizers

The contamination of soil and water by excessive nitrogen fertilization can be prevented by the optimal use of nitrogen fertilizers.

In this paper the positive effects of increasing quantities of nitrogen fertilizer on the yield and nitrogen content of grain are discussed. The aim was to find optimum doses of nitrogen that can give high yields with proper environmental care.

A four year stationery trial was performed during 2003 and 2004 at the experimant field of the Institute of Field and Vegetable Crops in Novi Sad. The yields of all the cultivars responded positively to the increasing nitrogen quantities up to the rate of 100 kg/ha N.

The nitrogen content of the grain grew with increasing doses of nitrogen fertilizer. The maximum N content was achieved by using 150 kg/ha N, but there was no significant difference relative to the rate of 100 kg/ha N.

The present study showed that by using the right quantities of nitrogen fertilizer we can optimize the fertilization in wheat production and also prevent soil contamination by nitrate.

Keywords: nitrogen fertilizers, wheat, nitrate, yield, contamination

ABSTRACT – Prevencija kontaminacije nitrata u proizvodnji pšenice racionalnom upotrebom azotnih đubriva

Nepovoljan uticaj prekomernog azotnog đubrenja, koji se odražava na povećan sadržaj nitrata u zemljištu i vodi, može se sprečiti njihovom racionalnom upotrebom.

U radu je ispitivan uticaj rastućih količina azotnih đubriva na prinos i sadržaj azota u zrnu pšenice, s ciljem utvrđivanja optimalnih doza azota, koje mogu obezbediti visoke prinose pšenice uz brigu o zaštiti životne sredine. Dvogodišnja ispitivanja su izvedena tokom 2003. i 2004. godine na oglednom polju Instituta za ratarstvo i povrtarstvo u Novom Sadu.

Utvrđen je pozitivan uticaj azotnih đubriva na prinos svih sorti, koji je u proseku rastao do nivoa upotrebe 100 kg/ha. Daljim povećanjem primenjene količine azota, nisu ustanovljene značajne razlike u prinosu.

Sadržaj azota u zrnu pšenice povećavao se sa rastućim količinama primenjenog azota. Najveće vrednosti su dobijene pri upotrebi 150 kg/ha N, međutim to povećanje nije bilo značajno u odnosu na nivo upotrebe 100 kg/ha N.

Istraživanja ukazuju na mogućnost racionalizacije đubrenja azotom u proizvodnji pšenice, uz istovremenu prevenciju povećanja koncentracije nitrata u zemljištu.

Ključne reči: azotna đubriva, pšenica, , nitrati, prinos, kontaminacija

Section 5: Rural Development**CHARACTERISTIC OF SOME AGRICULTURAL INDICES FOR SUDETY MTS AREA COMPARISON TO LOWER SILESIA REGION AND POLAND****AGATA LISZKA-PODKOWA, JÓZEF SOWIŃSKI**

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ABSTRACT – Characteristic of some Agricultural Indices for Sudety Mts Area Comparison to lower Silesia Region and Poland

Were compared some agricultural indices which characterise Sudety Mountains area to the values from the total area of Lower Silesia voivodship and Poland. For the Sudety Mts. region, the data from the communes was summed up, the structure was defined and the weighted average values were calculated. The values for the voivodship and for Poland were obtained from WUS and GUS (Voivodship Statistical Office and Main Statistical Office). More than 1/3 farms owners do not conduct agricultural activity. In the Sudety Mts. arable land consisted lower by 9.8 percentage than in average for whole country. Grassland and fallow land percentage in the land structure was higher respectively by 11.3 and 5.9% in study areas than in average for Poland.

Despite environment conditions favourable for the ruminants production, the number of animals 100 ha⁻¹ agricultural consisted 26% average indices for Poland. Higher differences were found in pig stock herds. Basic on chosen agricultural indices, in the analyze area agricultural production and perspective for their development was worst compare to Lower Silesia and Poland parameters. Support actions should be directed to the types of agricultural activity which are best for the environment conditions, ecological methods of production.

Keywords: Sudety Mts, agriculture indices, land structure, crop structure, animal production

Abstrakt

Porównano niektóre wskaźniki charakteryzujące rolnictwo w obszarze Sudetów do takich samych parametrów w województwie dolnośląskim i w Polsce. W publikacji wykorzystano dane z poziomu gmin Sudeckich, które następnie obliczono dla badanego obszaru i porównano do danych statystycznych pochodzących z województwa dolnośląskiego i Polski. Ponad 1/3 ogólnej rolników nie prowadzi działalności rolniczej. Pomimo, że są właścicielami użytków rolnych dochody pochodzą z innych źródeł niż rolnicze. Grunty orne stanowią o blisko 9,8% mniejszy udział w strukturze użytków rolnych niż średnio w Polsce. Wyższy natomiast był udział łąk i pastwisk o 11,3%. Wyższy również był udział gruntów wyłączonych z użytkowania rolniczego o 5,9%.

Obsada przeżuwaczy w Sudetach stanowiła 26% średniego wskaźnika dla Polski, pomimo korzystniejszych warunków siedliskowych. Jeszcze większe różnice stwierdzono w pogłowie trzody chlewnej. Przeanalizowane wskaźniki wykazały niższy poziom produkcji rolniczej i gorsze perspektywy rozwoju w porównaniu do średniej z województwa i Polski. Wprowadzony system dopłat nieuwzględniający w wystarczającym stopniu specyfiki obszaru nieznacznie poprawił sytuację rolnictwa w tym obszarze.

BIOMASSZA ENERGETIKAI CÉLÚ HASZNOSÍTÁSÁNAK JELLEMZŐI

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ABSTRACT – Utilization possibilities of biomass for energy purposes

Hungary is in a good position considering geographical and natural conditions. Renewable energy sources – continuing the tradition for centuries – play a significant role in the safe satisfaction of the country's energy supply. The utilization possibilities of various renewable energy sources – water energy, solar energy, wind energy, geothermal energy, biomass – depend on the quantity of sources, regularity and frequency of availability, storage possibilities, and the utilization's economic conditions. The increase of the expected renewable energy sources' percentage for utilization is needed with our intention concerning the EU-accession. The reduction of CO₂ equivalence, which has been undertaken by the Climate Change Conciliation, infers the major increase of renewable energy sources.

As the fossil energy source stocks had swiftly fallen, mitigation of atmosphere's pollution's damages require the greater taking of renewable and environmentally sound energy sources in the energy production and usage. Among renewable energy sources it is the biomass which can be produced and utilized almost unlimitedly.

Considering the correspondences about the European Union, in this article we will present which raw materials – woody and herbaceous energy crops and arable by-products – can be used from biomass. Biomass means those organic matters that have significant chemical energy content in a raw or processed forms as well, and in a processed form it can be turned to electricity, fuel or heat. I made an optimal estimate for the various raw materials' energy yields during processing.

Kulcsszavak: biomassza, megújuló energia, energetikai faültetvények, gazdaságosság, jövedelmezőség

RESEARCH OF TURISM IMPACT IN STRAJA – MOUNTAIN AREA**CERCETĂRI PRIVIND IMPACTUL TURISMULUI IN STRAJA-
ZONĂ DE MUNTE****BLAGA DIANA*, CSÖSZ IOAN*, NICOLETA MATEOC-SÎRB***

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ABSTRACT – Research of turism impact in Straja – mountain area

Increasing volume and complexity of the supply of tourist services have led the development of a genuine travel industry and tourism, which justifies treating the phenomenon of tourism as a distinct branch of the national economy growing.. Tourism is heavily involved in society and Romania practice various forms of tourism: cultural tourism, mountain, spa, scientific, business, religion. Tourism in Romania focuses on its rich history and natural landscapes including the Carpathian Mountains. The Straja area register with a high complexity, variety and attractive landscape in the structure and the potential tourist qualities of all the tourist resorts but in the futures the area must be exploit to his fully potential to remain competitive on the Romanian tourist market and not only.

Keywords: resort, turism, mountain area, the Valcan Mountains, ski

AZ AUTÓPÁLYA SZEREPE A DÉL-KELET MAGYARORSZÁGI TELEPÜLÉSEK ÉLETÉBEN

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ABSTRACT – The role of the motorway the noon east in the life of Hungary settlements

Some the motorway reached it eating it Hungarian-Serbian border and attains the Hungarian-Romanian border soon. Motorway construction rejoices at a wide social support, but those effects follow it, that in the period of the planning, they were waiting in the effect studies, for a castle? Arrived in time or it is one being late already?

Keywords: motorway, rural development, economic effect, regional development

ÖSSZEFOGLALÓ – Az autópálya szerepe a dél-kelet magyarországi települések életében

Néhány éve az autópálya elérte a magyar-szerb határt és hamarosan a magyar-román határt is eléri. Az autópálya építés széles társadalmi támogatottságnak örvend, de vajon követik-e azok a hatások, amelyeket a tervezés időszakában, a hatástanulmányokban vártak, várnak? Időben érkezett vagy már későn?

Kulcsszavak: autópálya, vidékfejlesztés, megtartóerő, gazdasági hatás, településfejlesztés

A HÓDMEZŐVÁSÁRHELY KÖRNYÉKI KISTELEPÜLÉSEK LAKOSSÁG MEGTARTÓ EREJÉNEK ESÉLYE

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ABSTRACT – Appeal Chance of Small Settlements’ Population in Neighborhood of Hódmezővásárhely

Let us like this settlement one, or let us bury it? (HORVATH D. 1985) – the question is brought up. Is it reality or outworn? What it is possible to see now in connection with its future? Possibly mostly it, how the farms sleep, it, that this a separate world, but worthy to recognize this settlement one.

Keywords: boondocks, structure of settlements, form of farming, rural development, appeal

ÖSSZEFOGLALÓ – A Hódmezővásárhely környéki kistelepülések lakosság megtartó erejének esélye

Ezt a településformát szeressük, vagy temessük? (HORVÁTH D. 1985) – vetődik fel a kérdés. Életrevaló vagy eljárt fölötté a világ? Mit lehet most látni jövőjével kapcsolatban? Talán leginkább azt, hogy alusznak a tanyák, azt, hogy ez egy külön világ, de érdemes megismerni ezt a településformát.

Kulcsszavak: tanya, településszerkezet, gazdálkodási forma, vidékfejlesztés, megtartóerő

INTEGRATING RURAL TOURISM ON THE ROMANIAN EUROPEAN AND GLOBAL MARKET

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ABSTRACT – Integrating rural tourism on the romanian european and global market

Rural settlements that offer unique products on the market are less numerous. Keeping a brand image of tourist service requires the best possible combination of the nature of supply, service quality and perceived price. Rural areas but offers a lot of profitable tourist items: pensions, camping and accommodation in peasant households can support a wide range of activities such as walks pedestre, cultural tourism, river tourism, fishing, hunting, horsemanship, winter sports, cycling etc.

Key words: rural settlements, infrastructure development, rural tourism and agroturism

Așezările rurale care să ofere produse unice pe piață sunt mai puțin numeroase. Păstrarea unei imagini de marcă a prestației turistice necesită existența unui raport optim între natura ofertei, calitatea serviciilor și prețul perceput. Spațiul rural oferă însă, o mulțime de elemente turistice profitabile: pensiunile, campingurile și cazarea în gospodăriile țărănești pot susține o gamă largă de activități precum plimbări pedestre, turism cultural, turism fluvial, pescuit, vânătoare, echitație, sporturi de iarnă, cicloturism etc.

Cuvinte cheie: așezările rurale, dezvoltarea infrastructurii, turism rural și agroturism

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ABSTRACT

Due to the drastic economic and political changes in Central and Eastern Europe in 1990, many elements of economy, society and politics have changed in Hungary, which have had a great impact on rural areas, rural people and the agricultural sector. Consequently, the regional and rural developments have become extremely important to find a solution to the enormous difficulties of the transition process. The development programme mainly focuses on social, infrastructure and labour aspects of rural areas; demographic processes, social structures, employment programmes, level of education, level of entrepreneurial skills, attitudes toward farming.

However, the development concepts should also cover the progression of agriculture entirely and combine different concepts and methods and put them into an integrated system to manage rural problems.

In fact, the importance of grassland management can be examined in different aspects regarding rural development. On the one hand, we can investigate landscape and grassland usage and conditions, on the other hand, the importance of grasslands in maintaining ecological balance and environmental protection in general. Besides, grazing animal production is profitable and may be a vehicle for rural economic development.

After Hungary had become a member state of the European Union, general provisions were laid down regarding grassland management in our country. Prior to the accession, the *National Agricultural and Environmental Programme (NAEP)* involved objectives for an extensive use of grasslands to encourage farmers to comply with the regulations by financial support. In 2004 NAEP was replaced by the *Agriculture and Rural Development Operational Programme (ARDOP)*, which ensured the realisation of the strategic objectives followed by the *New Hungary Rural Development Programme* in 2007.

In this paper I examine the economical and environmental importance of grassland management as well as the condition of grasslands and its potential for rural economic development.

Kulcsszavak: gyepgazdálkodás, gyepek szerepe, vidékfejlesztés, földhasználat, lehetőségek

ASPECTS REGARDING AGRICULTURE AND BIODIVERSITY IN THE EUROPEAN UNION

ASPECTE PRIVIND AGRICULTURA ȘI BIODIVERSITATEA ÎN UNIUNEA EUROPEANĂ

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ABSTRACT – Aspects Regarding Agriculture and Biodiversity in the European Union

Romania is characterized by a high level of biodiversity but changes in the current landscape show serious threats: the intensification of agricultural activities that affect mainly the most productive areas and abandonment of agricultural activities mainly in low productive areas.

Among the member states of EU - 27 Romania owns the biggest biogeographical diversity (5 biogeographical regions from the total of 11 in Europe) this being in majority in a favorable conservation. Of the 198 European habitat types, of which 65 are priority in Romania can be found 94 habitat types of which 23 are priority at EU level and whose conservation requires the designation of Special Areas of Conservation (SAC).

The total area of protected areas in Romania is of approx. 1,866,705 hectares, covering about 7.83% of the country. Here are included the Biosphere Reserve "Danube Delta" - 576,216 ha, 13 National Park - 318,116 ha, 13 Natural Parks - 772,128 ha, 981 nature reserves - 179,193 ha and 28 Special Protection Areas - 21,052 ha.

By managing a large part of the European Union's territory, agriculture preserves many specific genes, species and habitats. The EU set up measures in support of the agricultural biodiversity, to contribute reaching the 2010 target of halting the loss of biodiversity. The environmental aspect is a major component of the new orientations for the Common Agricultural Policy, which deals both with the integration of environmental considerations into CAP rules and with the development of agricultural practices preserving the environment and safeguarding the countryside.

Keywords: ecosystems, agri-environmental measures, good agricultural practices, sector objectives in agriculture

ABSTRACT - ASPECTE PRIVIND AGRICULTURA ȘI BIODIVERSITATEA ÎN UNIUNEA EUROPEANĂ

România este caracterizată de un nivel ridicat de biodiversitate, însă modificările actuale de peisaj pun în evidență amenințări serioase: intensificarea activităților agricole ce afectează cu precădere zonele mai productive și abandonarea activităților agricole ce se manifestă mai ales în zonele slab productive.

Dintre statele membre ale U.E. - 27, România deține cea mai mare diversitate biogeografică (5 regiuni biogeografice din cele 11 europene), aceasta aflându-se în majoritate într-o stare favorabilă de conservare. Dintre cele 198 tipuri de habitate europene, dintre care 65 sunt prioritare, în România se regăsesc 94 tipuri de habitate dintre care 23 sunt prioritare la nivel comunitar și a căror conservare impune desemnarea unor Aree Speciale de Conservare (SAC).

Suprafața totală a ariilor protejate din România este de cca. 1.866.705 ha acoperind aproximativ 7,83 % din suprafața țării. Sunt incluse aici Rezervația Biosferei „Delta Dunării” – 576.216 ha, 13 Parcuri Naționale – 318.116 ha, 13 Parcuri Naturale – 772.128 ha, 981 Rezervații Naturale – 179.193 ha și 28 Aree Speciale de Protecție Avifaunistică – 21.052 ha.

Administrând o mare parte al teritoriului Uniunii Europene, agricultura conservă multe gene specifice, specii și habitate. UE a elaborat măsuri în sprijinul biodiversității agricole, pentru a contribui (până în anul 2010) la atingerea țelului de stopare a pierderii biodiversității. Mediul reprezintă o componentă majoră a noii orientări PAC, care are de a face atât cu integrarea considerațiilor de mediu în regulile PAC, cât și cu dezvoltarea practicilor agricole care conservă mediul și spațiul rural.

Cuvinte cheie: ecosisteme, măsuri de agro-mediu, bune practici agricole, obiective sectoriale în agricultură

AZ EGÉSZSÉGTURIZMUS ÉS AZ ÉLETMINŐSÉG KAPCSOLATRENDSZERÉNEK VIZSGÁLATA

SŐRÉS ANETT

Debreceni Egyetem
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ABSTRACT

The view of society as a whole is that man lives a precious life if he is able to recognize and improve his own capabilities, and accordingly to this, he is able to unfold his own potentials. If man can pursue objectives and in order to achieve these he can mobilize his energy and it also gives him pleasure.

Tourism is actually the change of scenery which goes hand in hand with pleasant experience that has an effect on his quality of life, either he becomes affected as a participant of the trip, or as the member of his social environment. The career and leisure tourism and health tourism have several factors that have the most favorable effects on health surveillance which are activated during the meeting of human needs. In the course of my research I started from the hypothesis that residents on those settlements that have lure to health tourism can modify the territorial differences shown in the Hungarian society's quality of life and relative indices about receivers of services above the average.

My short study gives a look-out concerning theories and practices about the quality of life and measurements about advance and development. After the short overview about the evolution of research for quality of life I am going to review the relationships concerning some subdivisions that affect the quality of life. Besides, I am going to discuss in this short article the importance of the research about TRQL-index which is suitable for visualizing the coming guests and the changes of their territories' society.

In conclusion it can be stated that a functioning enterprise's index for quality of life (hereby the tourism enterprise's index for quality of life) can provide a good basis for working out a quality of life-index at a national level by which the national development plan's effect could be measured even by one compound index.

Kulcsszavak: életminőség, egészségturizmus, boldogság, TRQL-index, turizmus

HELYZETFELTÁRÁS A DERECSKE-LÉTAVÉRTESI TÖBBCÉLÚ KISTÉRSÉGI TÁRSULÁS TERÜLETÉN

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ABSTRACT

As a result of economical development and changes of living standard the Hungarian rural areas has got significant importance nowadays. Living and management in rural areas is much more difficult than ever was. There are serious economical and social problems next to the lack of place of work or ability of population keeping.

However, if we plan to develop any kind of level the most important step to measure the local resources. The suitable way of it is to make a local analysis about the available resources according to a systematic consideration.

In this paper I examine the economical, social background or resources of Derecske-Létavértes micro-region, because this is the first step of planning rural development strategy. In my study I deal with Derecske-Létavértes Sub-region. My aim is to survey economic background of this sub-region and get actual picture about this micro-region which will be able to continue in development strategy in the future.

On the one hand effects constitute coherent system; on the other hand we have to analyze those resources could be able to create an appropriate base for planning of rural development strategy.

Although it is a complex task, first step is essential to frame efficient developing must be done.

Kulcsszavak: erőforrások, kistérség, helyzetelemzés, tervezés, vidékfejlesztés

TURISZTIKAI BERUHÁZÁS MUNKAHELYTEREMTŐ SZEREPÉNEK VIZSGÁLATA EGY VIDÉKI KISTÉRSÉGI KÖZPONTBAN

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ABSTRACT

A city of the country Hajdú-Bihar in the North-Great Plain Region, Hajdúböszörmény is the centre of a rural statistics area, in accordance with population density criteria of EU. Generally we can tell about rural areas, that they fight against multisectorial problems in the fields of employment. It's essential in every case of sectorial investments, that how much the labour demand is, to help keeping the inhabitants in the area, and to increase ability potential of population keeping. In the city there was carried out an investment with more periodic to create the conditions for health tourism. I have analyzed multiplicative affects in the aspect of new workplaces. In this article I have analyzed 2 hypothesis. First it's right that the Bocskai's thermal bath will be able to permanently employ the new labour force in the year, in spite of the famous cities are about, which have thermal bath? Labour force in the new department had been employed still now permanently, and most of them are at work in atypical form. Due to the multiplicative effect of the developments of tourism 26 new work places had started up in the department of Bocskai's Thermal bath since 2004.

The second question is, that how many indirect labour demand had developed in connection with investment to health tourism? Answering is more difficult, but approximately 30 person have been employed in other sectors.

Summary we can say that in „the capital city of hajdúk” the condition of medical tourism has evolved in the summer season, and as a result of the multiplicative affects of the developments of tourism new workplaces have come into existence. The Bocskai's thermal bath has important role among the national spas, and it can develop its own group of guests despite the nearby cities of the region's bathing centres. In my opinion Hajdúböszörmény sets a good example to cities, which have excellent thermal waters, and are ready to show human dedication in the long run to realise developments.

Kulcsszavak: vidéki kistérség, munkahelyhiány, beruházás, gyógyturizmus, új munkahelyek

VILLAMOSENERGIA-ELLÁTÁS ALAKULÁSA EGY DÉL-BÉKÉSI TELEPÜLÉSEN 1990 ÉS 2006 KÖZÖTT

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ABSTRACT – Changes in Electricity Supply in a Settlement in Southern Békés between 1990 and 2006

In 1990 Mezőhegyes, among the settlements under examination, was 17th according to the use of electricity per one household consumer, the situation was worse only in Battonya. In 2004 there was a slight increase in electricity consumption, so Mezőhegyes, being the 14th in the rankings, preceded Gyula, Battonya, Békéscsaba and Orosháza. However, in both cases the electricity consumption per one household consumer was under the average of the stressed towns. It can be concluded from this fact that the living standard of the inhabitants in Mezőhegyes does not reach the average living standards of the inhabitants in County of Békés (according to the assumptions of the examination).

Keywords: infrastructure, electricity supply, yearly electricity consumption per one household consumer, rankings of the towns in County of Békés

Kulcsszavak: infrastruktúra, villamosenergia-ellátás, egy háztartási fogyasztóra jutó évi villamosenergia-felhasználás; békés megyei városok rangsora

Section 6: Poster**PRETABILITY OF THE SOIL FROM RECAS VITICULTURAL CENTER, TIMIS COUNTY FOR GRAPE CULTURE, FOR A BETTER DEVELOPMENT OF THE AREA****ÓKRÖS ADALBERT, RUSU IOAN, ANIȘOARA IENCIU**

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ABSTRACT - PRETABILITY OF THE SOIL FROM RECAS VITICULTURAL CENTER, TIMIS COUNTY FOR GRAPE CULTURE, FOR A BETTER DEVELOPMENT OF THE AREA

Bonitation of agricultural lands is a complex operation which implies minute observation of the conditions for growth and development of plants, and also determination of the degree of favorability (suitability) for certain crops, while using a system of techniques and bonitation indices.

Thus, bonitation determines how much better a certain plot of land is than another, taking into account its fertility, as it appears in the productions it yields.

The harvest quantity that is obtained per surface unit (in other words the productivity of agricultural plants) depends on the entire complex system of the environmental conditions (relief, climate, water conditions, soil), as well as on the influence of man, who can improve the natural factors or the characteristics of plants in order to take advantage of the natural conditions.

The object of bonitation is the land, which will be divided in such a way that each area should be as homogenous as possible from the point of view of the environment conditions and vegetation factors. These areas are named plot units (P.U.) or ecologically homogenous territories (E.H.T.). They are the elementary cells of the space of manifestation with specific characteristics, distinct from the neighboring areas.

Keywords: pretability, soil, viticultural center, fertility class, bonitation indices and coefficients

REZUMAT

Bonitarea terenurilor agricole reprezintă o operațiune complexă de cunoaștere aprofundată a condițiilor de creștere, dezvoltare și rodire a plantelor și de determinare a gradului de favorabilitate (pretabilitate) a acestora pentru anumite culturi (sau categorii de folosință), prin intermediul unui sistem de indici tehnici și note de bonitare.

Ca atare, bonitarea determină de câte ori un teren este mai bun decât altul, având în vedere fertilitatea lui, oglindită prin producțiile pe care le asigură.

Cantitatea de recoltă ce se obține la unitatea de suprafață, deci productivitatea plantelor agricole, depinde de întregul ansamblu al condițiilor de mediu (relief, climă, hidrologie, sol), precum și de influența omului care poate modifica în bine factorii naturali sau însușirile plantei în așa fel încât să valorifice cât mai bine condițiile naturale.

Obiectul bonității îl constituie pământul, terenul, care va fi astfel divizat încât fiecare suprafață de teritoriu luat în considerare să fie cât mai omogenă sub aspectul manifestării tuturor condițiilor de mediu și al factorilor de vegetație. Aceste porțiuni de teritoriu au fost denumite unități de teren (U.T.) sau teritorii ecologic omogene (T.E.O.) și ele reprezintă celulele elementare ale spațiului de manifestare cu însușiri specifice și distincte față de suprafețele vecine.

Cuvinte cheie: pretabilitate, sol, centru viticol, clasă de fertilitate, indicatori și coeficienți de bonitare

**MODERN TOPOGRAPHIC AND LAND SURVEY OPERATIONS
FOR THE INVENTORY OF THE LAND AREAS OF THE
U.S.A.M.V.B TIMISOARA**

**LUCRARI TOPO-CADASTRALE MODERNE PENTRU
INVENTARIEREA FONDULUI FUNCJAR AL U.S.M.V.B.
TIMISOARA**

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ABSTRACT – Modern topographic and land survey operations for the inventory of the land areas of the U.S.A.M.V.B Timisoara

The Leica TPC 805 Total Station was used for the survey operations performed within the area of the University of Agricultural Sciences Timisoara for detailed elevations surveys. A planimetric traverse was performed to make the support network denser at station points 1000 and 7000, from which a resection method was applied to close the traverse.

Keywords: topographic and land survey operations, compensation, resection, planimetric traverse, masuratori topo-cadastrale, compensare, intersectie inapoi, drumuire planimetrica

REZUMAT – Lucrari topo-cadastrale moderne pentru inventarierea fondului funciar al U.S.A.M.V.B Timisoara

Masuratorile topo-cadastrale au fost realizate cu Statia Totala Leica TPC 805 in perimetru Universitatii de Stiinte Agricole din Timisoara, avand ca si scop realizarea ridicarilor de detaliu. S-a realizat o drumuire planimetrică sprijinită la capete pentru indesirea retelei de sprijin pe punctul de statie 1000 respectiv punctul pe statie 7000 din care s-a realizat o intersectie inapoi (retorintersecție) pentru închiderea drumuirii.

TECHNOLOGICAL PARK IN RECAȘ, TIMIȘ COUNTY**ANIȘOARA IENCIU*, ÖKRÖS ADALBERT*, VALERIA CIOLAC***

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ABSTRACT - Evolution tendencies of the agricultural technological park in Recaș, Timis-County

It is safe to state that, regarding the agricultural equipment, the low level of machineries and the obsolescence and depreciation acquired in the course of time have as a consequence performing agricultural works outside the optimal period, with high production costs and poor quality of the works. All of these put together lead to poor quality yields, which reflects directly on the income obtained by the farmers in the area.

Although the level of agricultural machineries related to the arable area of the studied territory is lower than in the West of the EU and their quality is much inferior, the programs initiated by the Ministry of Agriculture made it possible to buy new ones, thus renewing the technological park and increasing at the same time the number of valid pieces of equipment.

In other words, improving the existing technological park and supplementing it with new equipment are the premises for sustainable agriculture with large possibilities of development for the area under study, through performing high-quality agricultural procedures on time, and implicitly obtaining larger, high-quality yields, which will help local producers to increase their income and at the same time to renew their technological park with new, performant equipment with low maintenance costs and high productivity.

Keywords: technological park, agricultural machinery, instrumentation, load per machinery, productivity

REZUMAT

În ceea ce privește dotarea cu mașini și utilaje agricole, putem afirma că numărul redus al acestora și uzura morală și tehnică la care au fost supuse de-a lungul anilor are drept consecință efectuarea lucrărilor agricole în afara epocii optime, cu costuri ridicate de producție și o calitate slabă în execuție. Toate acestea coroborate conduc la obținerea de producții mici, de slabă calitate, lucru care se reflectă în veniturile obținute de agricultorii din această zonă.

Cu toate că numărul de utilaje agricole raportat la suprafața agricolă a zonei studiate din zona studiată este mai mică decât în Vestul UE și calitatea acestora este net inferioară, prin programele inițiate de ministerul agriculturii acestea au putut fi reînnoite și totodată parcul tehnologic a crescut ca și număr de utilaje.

Altfel spus, îmbunătățirea parcului tehnologic existent și suplimentarea acestuia cu utilaje noi sunt premisele unei agriculturi durabile cu largi posibilități de dezvoltare pentru zona cercetată prin efectuarea lucrărilor agricole la timp cu o calitate ridicată a acestora și implicit de obținerea de producții ridicate și de calitate superioară ceea ce ajută producătorii locali să își mărească veniturile și totodată să își reînnoiască parcul tehnologic cu utilaje noi, performante cu un cost de întreținere redus și productivitate ridicată.

Cuvinte cheie: parc tehnologic, utilaje agricole, dotare, încărcătură per utilaj, productivitate

INVESTIGATION OF THE PROTEIN FRACTIONS IN GOAT MILK WITH RP-HPLC TO OPTIMIZE THE MILK PROCESSING

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ABSTRACT – Investigation of the protein fractions in goat milk with RP-HPLC to optimize the milk processing

The amount of protein in milk (which varies between different species of mammals) is critical to its commercial, technological and biological value. Caprine milk differs from cow milk in several physico-chemical characteristics, which explain major differences in the technological behaviour of the two milks. Goat milk also has different proportions of the four major caseins (α_{s1} , α_{s2} , β , κ) compared to cow counterparts, and there are great variations, especially between α_{s1} -casein and α_{s2} -casein contents between individuals and breeds of goats, because of the occurrence of genetic polymorphisms for all milk proteins, which influence greatly their cheese making properties.

The aim of our study was to adopt BORDIN's (2001) RP-HPLC method for analysis the casein fractions of denatured goat milk samples. The separation of main caseins (α_s , β , κ) was successful by ion-pair reversed phase HPLC with the help of casein standards originated from cow milk. Our results are well correlated with the data of references.

Keywords: goat milk, casein fractions, separation, HPLC

LACTATIONS OF HOLSTEIN FRIESIAN COWS WITH LONG LIFETIME

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ABSTRACT – Lactations of Holstein Friesian Cows with long life time

The mean number of lactations per a Holstein Friesian cow is 2.3 in Hungary today. In our analysis we selected those cattle found in the national database that performed at least 8 lactations between 1988 and 2006. From our findings we conclude that the mean lactation is 8.6. Though their lactation production was not outstanding, their dairy production increased gradually until the 6th lactation. Probably their performance is more economic than those ones' that have significant lactation productivity but perform only ca. 2 lactations.

Keywords: lactation, lifetime, cow, Holstein Friesian, milk

REMOTE SENSING APPLICATIONS FOR THE INVENTORY OF THE CATEGORIES OF LAND USE IN SOUTH-WESTERN ROMANIA

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ABSTRACT – Remote sensing Applications for the Inventory of the Categories of Land use in South-Western Romania

With preliminary processing aims at modifying the grey level of the pixels in order to obtain an adequate digital image for further processing. The characteristics of the processed image depend on the specific of the application and the destination. In order to improve the photo interpretation process — the accurate determination of the landmarks and cartographic details — a set of methods are applied to reveal the phenomena and objects of interest. The most frequent methods for improving image quality are: contrast improving, image filters, false coloured images, compound colour images and the analysis of the basic components.

Keywords: remote sensing, processing, spatial filter, classification

REZUMAT – APLICATII ALE TELEDETECTIEI PENTRU INVENTARIEREA CATEGORIILOR DE FOLOSINTA A TERENURILOR IN S-V ROMANIEI

Procesările preliminare au ca scop modificarea nivelului de gri al pixelilor în scopul obținerii unei imagini digitale ce poate fi folosită în prelucrările ce urmează. Caracteristicile pe care trebuie să le întrunească imaginea prelucrată depind de tipul aplicației și destinație. Pentru o mai bună fotointerpretare se determină cu precizie punctele de reper și se extrag detaliile cartografice cu ajutorul unor tehnici care au ca scop transformarea datelor inițiale în vederea scoaterii în evidență a obiectelor de interes. Cele mai frecvente tehnici de îmbunătățire a calității imaginilor sunt: îmbunătățirea contrastului, filtrajul imaginii, realizarea imaginilor fals color, realizarea imaginilor în culori compuse și analiza componentelor principale

Teledetectie, prelucrare, filtru spațial, clasificare

ZSÍRGOLYÓCSKÁK MÉRETELOSZTLÁSÁNAK VIZSGÁLATA TEHÉN-, ÉS KECSKETÉJBEN

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ABSTRACT

Production of goat milk comes to the front nowadays again, however slowly, but various goat milk products are being increased, which are more favourable according to physiological viewpoint than the products made from cow milk. One of these advantages is the smaller diameter of fat globules in goat milk than in cow milk, published in the literature.

The size distributions of goat and cow bulk milk samples were investigated in autumn and in spring seasons. We explored significant difference related average fat globules diameter between goat and cow milk. The average diameter of fat globules are 2.75 μm in goat milk, while 3.62 μm in cow milk calculated from all data. Our results confirm the statements in literature that fat globules in goat milk are smaller than in cow milk. We also found a little difference between in the average diameter of fat globules in samples from both species in autumn and spring but it was not significant in cow milk. Average diameter of fat globules was greater in spring goat milk, whereas in autumn cow milk.

The size distribution was not normal so we use medians in the evaluation. These were 2.51 μm in goat milk and 3.41 μm in cow milk samples calculated from all data. Considering the average diameters, the surface of fat globules in goat milk is 1.3 fold greater than in cow milk. This finding (considering the size distribution) stands close data related the summarized fat globule surface in the literature.

This result suggests further differences in the physiological value (digestibility), in lipase activity, processing of milk e.g. in the separation, in the fermentation or renneting of milk.

Keywords: fat globule, goat milk, cow milk

NUTRITIONAL VALUE OF COMPONENTS OF SMALL RUMINANT'S MILK

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ABSTRACT – Nutritional value of components of small ruminant's milk

The composition of ewe and goat milks varies over a wide range because of genetic differences between species. These genetic differences have considerable influences on the cheese making process and on human digestion of these milks.

This variability provides, therefore considerable potential to tailor – make ewe and goat milks according to the needs and preferences of consumers, and to provide an alternative to cow milk, where this is economically or medically advantageous.

A HASZNOSÍTHATÓ NAPENERGIA FŐ JELLEMZŐI 2008. ÉVBEN HÓDMEZŐVÁSÁRHELY TÉRSÉGÉBEN

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ABSTRACT-Main Properties of Usable Solar Energy in Hódmezővásárhely Region

One possible method to reduce the energy dependence is to increase the role of renewable energy sources being at our disposal.

Geothermal energy and solar energy are renewable energy sources which can be found in the largest quantity in Hungary be exploited economically.

The objective of my examinations is to acquire direct experiences about the active thermal heat utilisation, while comparing the results of the relevant literature and my own measurements primarily regarding the South Plain of Hungary and the neighbouring countries. The value of the radiance energy coming to the area of Hungary is slightly different according to the geographical position of the area. The average values are between 1250-1550 kWh/M2, with the higher values on the south-eastern part of the Great Plain of Hungary, in the Szeged-Debrecen region. The daily average values change between 3.28 kWh/m2 and 4.1 kWh/m2.

I carried out my examinations in Hódmezővásárhely between 1st January and 31st December 2008. The insolation measurements typical for the exploitable radiance energy values were done daily, every hour from 8.00 am to 4.00 pm in June, July, August and October. I registered the number of the sunny hours and their percentage compared to the days of the month as well as the insolation values expressed in lumen/M2 in a measurement register book. I defined the performance density values typical for the radiation intensity by calculating.

Based on the data in the literature and the examinations we can state that in the south-eastern part of Hungary and in the surrounding areas over our borders there are favourable opportunities for the utilisation of the solar energy primarily in the field of thermal use.

The potential solar energy enables a significantly more intensive utilisation primarily in those areas where the energy demand coincides with the summer maximum values of the radiance energy, such as fodder drying or solar cooling–air-conditioning.

Keywords: solar energy, solar insolation, solar thermal utilisation

A KERÉKPÁRUTAK FONTOSSÁGA HÓDMEZŐVÁSÁRHELYEN ÉS A KÖRNYEZŐ TANYAVILÁGBAN

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ABSTRACT – The importance of the cycle tracks in Hódmezővásárhely and the surrounding boondocks

The fast increase of the number of the motor vehicles not tax revenue means an increase merely, but considerable burdens. This measure comes close to the tolerance of the environment and the population rather continually. It is necessary to examine his forming, his development as an alternative. Solution like this the development of the public transport, him helping concerned for the spreading of the bicycle usage – primarily – inside a settlement border. The bicycle that last traffic device, from which yet the nature direct close enjoyable.

Keywords: cycle track, rural development, environmental protection, regional development

ÖSSZEFOGLALÓ – A kerékpárutak fontossága Hódmezővásárhelyen és a környező tanyavilágban

A gépjárművek számának gyors növekedése nem csupán adóbevétel növekedést jelent, hanem jelentős terheket is. Ezek mértéke egyre inkább megközelíti a környezet és a lakosság tűrőképességét. Alternatívaként meg kell vizsgálni a környezetbarát megoldások lehetőségének kialakítását, fejlesztését. Ilyen megoldás a tömegközlekedés fejlesztése, illetve a kerékpárhasználat elterjedésének segítése – elsősorban – településhatáron belül. A kerékpár az az utolsó közlekedési eszköz, amelyről még a természet közvetlen közlekedésről élvezhető.

Kulcsszavak: kerékpárút, vidékfejlesztés, környezetvédelem, településfejlesztés

TANYAI ÉLET, MINT LEHETSÉGES GAZDÁLKODÁSI FORMA A XXI. SZÁZADBAN EGY VÁSÁRHELYI PÉLDÁN KERESZTÜL

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ABSTRACT – Farm Life, as a Possible Form of Farming by a Vásárhely Example in the 21st Century

Are the farm settlement and a lifestyle compulsion or opportunities? People of 21st century how much can find their living space, wealth, vision far from the city's noise? Hódmezővásárhely boondocks show a special settlement construction, which has an effect on the economic contacts. I summarize his historical development shortly, I would like to illustrate the life of the family running a farm living there and his opportunities, his vision with an actual example then.

Keywords: boondocks, structure of settlements, form of farming, rural development

ÖSSZEFOGLALÓ – Tanyai élet, mint lehetséges gazdálkodási forma a XXI. században egy vásárhelyi példán keresztül

Kényszer vagy lehetőség a tanyai település- és életforma? A XXI. század embere mennyiben találja meg életterét, boldogulását, jövőképét a nagyváros zajától távol? A hódmezővásárhelyi tanyavilág speciális településszerkezetet mutat, amely hatással van a gazdasági kapcsolatokra is. Röviden összefoglalom történeti kialakulását, majd konkrét példán keresztül szeretném bemutatni az ott élő, gazdálkodó család életét és lehetőségeit, jövőképét.

Kulcsszavak: tanya, településszerkezet, gazdálkodási forma, vidékfejlesztés

THE POTENTIALS OF AGRICULTURAL LAND FOR THE CULTIVATION OF ENERGY CROPS, THE MUNICIPALITY OF IRIG

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ABSTRACT – The Potentials of Agricultural Land for the Cultivation of Energy Crops, the Municipality of Irig

In both the European Union and the developed countries of the world a good deal of attention has been paid to the renewable resources of energy. Numerous scientific and practical researches are directed towards the possibility of usage of plant residues – i.e. biomass, as a potential energy - generating product. By creating Biomass action plan, European Commission aroused considerable interest in biomass, causing some countries (The Netherlands, Germany, Great Britain) to create their own national Biomass action plans, while some other countries are in the process of doing the same. The Republic of Serbia has taken active participation on the subject of renewable energy resources, which is confirmed by the presence of the state delegation of The Republic of Serbia at the Founding conference of the International Renewable Energy Agency which took place in Bonn, Germany, on January 26 and 27, 2009. Bearing in mind that Vojvodina has got at its disposal enormous surface areas of fertile land ready for cultivation, the focus of this paper is on the introspection of the potentials of this region with respect to the production of renewable energy from biomass.

Keywords: renewable energy resources, biomass

ABSTRACT

U razvijenim zemljama sveta i Evropskoj uniji već godinama velika pažnja se poklanja obnovljivim izvorima energije. Brojna naučna i praktična istraživanja usmerena su upravo na mogućnosti upotrebe biljnih ostataka - biomase, kao potencijalnog energenta. Akcionim planom za biomasu, Evropska Komisija je pokrenula intenzivno interesovanje za temu biomase, pa su neke zemlje (npr Holandija, Nemačka, Velika Britanija) već napravile svoje nacionalne akcione planove za biomasu a ostale su na putu da to učine. Republika Srbija je uzela aktivno učešće u temi obnovljivih izvora energije, što potvrđuje i prisustvo državne delegacije Republike Srbije na osnivačkoj konferenciji Međunarodne agencije za obnovljivu energiju (IRENA - International Renewable Energy Agency) koja je održana u Bonu, Nemačka, 26. i 27. januara 2009. godine. Imajući u vidu da Vojvodina raspolaže velikom površinom plodnog, obradivog poljoprivrednog zemljišta, akcenat ovog rada je na sagledavanju potencijala ove regije za proizvodnju obnovljive energije iz biomase.

THE PROSPECTS OF RURAL DEVELOPMENT – THE MUNICIPALITY OF IRIG

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ABSTRACT – The Prospects of Rural Development – the Municipality of Irig

The concept of rural development changed and evolved in the decades after the Second World War: from the consolidation of land and development of infrastructure to national farmers' support programmes and the European Union policies in the domain of agriculture. During the 1970s the emphasis was on the development of villages, while in the 1980s the focus was directed to the programmes of environmental protection (by changing ecosystems and building recreational centres in rural areas). The 1990s were marked by the European Union structural funds for rural development. Furthermore, rural development and regional management came into focus during the 1990s and they have been there ever since. The purpose of this study is the account of the current condition of the rural development on the territory of Serbia and Voivodina. The research was conducted by surveying the people in the municipality of Irig. The purpose of the poll was to provide some insight into population's opinion on centres for rural development.

Keywords: Rural development, , Centre for Rural Development, Voivodina

ABSTRACT

Koncepcija ruralnog razvoja tokom decenija posle II svetskog rata se menjala i razvijala: od konsolidacije zemljišta i razvoja infrastrukture, preko nacionalnih programa za podršku farmerima, do kreiranja politike EU u oblasti poljoprivrede. Trend u 70im godinama je bio obnova sela, da bi se u 80 bavio programima zaštite prirode (promenom eko-sistema i izgradnjom rekreacionih oblasti u ruralnim sredinama). Devedesete godine označile su strukturni fondovi EU za ruralni razvoj, a poseban akcenat na ruralni razvoj i regionalni menadžment započeo je takođe devedesetih godina i aktuelan je do današnjih dana. Cilj ovog rada je prikaz aktuelnog stanja ruralnog razvoja na području Srbije i Vojvodine, a istraživanje je obuhvatilo ispitanike sa opštine Irig. Anketa je imala za cilj sticanje uvida u mišljenje stanovništva o centrima za ruralni razvoj.

APPLICATION OF BIOFERTILIZERS IN SOYBEAN PRODUCTION

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ABSTRACT – APPLICATION OF BIOFERTILIZERS IN SOYBEAN PRODUCTION

Usage of biological renewable resources in soybean production is possible by application of micro organisms which fixates atmospheric nitrogen. Those are symbiotic *Bradyrhizobium* and associative micro organisms which belongs to family *Azotobacter*, *Beijerinckia*, *Azospirillum*, *Klebsiella*. In three years lasting research of soybean breeding, seed bacterization with symbiotic nitrogen fixators *Bradyrhizobium japonicum* and mixed (symbiotic and associative) nitrogen fixators is applied. In liquid inoculums were high frequent varieties of next species *Azotobacter chroococcum*, *Azospirillum lipoferum*, *Beijerinckia Derx* i *Klebsiella planticola*. Besides bacterization, various quantum of straight nitrogen per ha is used (0, 40, 60, 80 kg N/ha). It is estimated influence of various kinds of nitrogen fixators, as bio fertilizers, at different levels of mineral nitrogen on the mass of 1.000 seeds and total quantum of protein in seed. In average, for three years period, it can be concluded that bacterization is influenced on increment of tested parameters with various intensity. During bacterization with mixed nitrogen fixators higher values for 1.000 seed mass by the usage of 40 kg N/ha are gotten, and content of protein was the highest through the usage of 60 kg N/ha. According results it could be concluded that in soy bean production besides symbiotic, associative nitrogen fixators as bio fertilizers can be used too. That is important by ecological aspect, according the importance of soy bean as first sowing in organic production.

Keywords: soy bean, nitrogen fixators, mineral nitrogen, mass of 1.000 seeds, protein

SAŽETAK - PRIMENA BIOFERTILIZATORA U PROIZVODNJI SOJE

Primena biološki obnovljivih resursa u proizvodnji soje je moguća primenom mikroorganizama koji fiksiraju atmosferski azot. To su simbiozni *Bradyrhizobium* i asocijativni mikroorganizmi koji pripadaju rodovima *Azotobacter*, *Beijerinckia*, *Azospirillum*, *Klebsiella*. U trogodišnjim istraživanjima gajenja soje primenja je bakterizacija semena sa simbioznim azotofiksatorima *Bradyrhizobium japonicum* i bakterizacija sa mešanim (simbioznim i asocijativnim) azotofiksatorima. U tečnom inokulumu nalazili su se visokoefektivni sojevi sledećih vrsta *Azotobacter chroococcum*, *Azospirillum lipoferum*, *Beijerinckia Derx* i *Klebsiella planticola*. Pored baktrizacije obavljena je aplikacija različitim količinama čistog azota po hektaru (0, 40, 60, 80 kgN/ha). Određivan je uticaj različitih vrsta azotofiksatora kao biofertilizatora pri različitim nivoima mineralnog azota na masu 1.000 zrna i količinu ukupnih proteina u zrnu. U proseku za trogodišnji period može se zaključiti da je bakterizacija uticala na povećanje ispitanih parametara različitog inteziteta. Pri bakterizaciji sa mešanim azotofiksatorima dobijene su veće vrednosti mase 1.000 zrna pri upotrebi 40 kgN/ha, a sadržaj proteina bio je najveći prilikom primene 60 kgN/ha. Na osnovu dobijenih rezultata može se zaključiti da se u proizvodnji soje pored simbioznih mogu primeniti i asocijativni azotofiksatori, kao biofertilizatori. Ovo je značajno sa ekološkog aspekta, s obzirom na značaj soje kao pred useva u organskoj proizvodnji.

Ključne reči: soja, azotofiksatori, mineralni azot, masa 1.000 zrna, proteini

ÉLELMISZERIPARI TÁRSAS VÁLLALKOZÁSOK VIZSGÁLATA A DÉL-ALFÖLD RÉGIÓBAN

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ABSTRACT – Examining Food Industry Enterprises in Hungary’s Southern Great Plain Region

Food industry plays an important role in the economy of Hungary’s Southern Great Plain Region. At the University of Szeged Faculty of Food Engineering a database was created which contains data about the food industry enterprises of the region: the form of the enterprise, the main activities, the annual income, the number of employees, the place of headquarter and the year of establishment. Many queries were created to acquire all the possible information from this database to find out as much as possible about the enterprises. Chuprov’s and Cramer’s coefficient were also counted to assess the strength of the relationship among the above mentioned data types.

All types of food industry activities can be found in the region. Most of the enterprises operate as limited liability companies; the headquarters can be found in 156 settlements. Most of them are concentrated close to the central region of Hungary or in well-developed towns, but there are many enterprises in small settlements too. Their income is mostly under 20 million HUF, but there are some enterprises with more than 4 billion HUF annual income as well. Most of the firms operate with a low number of staff, but there are also enterprises with more than thousand workers.

According to Chuprov’s and Cramer’s coefficient, the relations between the different data categories are weak. A relatively high relation was found between the number of staff and the annual income, or between the settlements and food industry activities.

Kulcsszavak: Dél-Alföld, élelmiszeripar, cégbázis, összefüggés-vizsgálat, asszociációs együttható

ADATBIZTONSÁGI FELMÉRÉS AZ SZTE MÉRNÖKI KARON

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ABSTRACT – Data security survey at the University of Szeged Faculty of Engineering

It is important to protect the digitally stored intellectual product at a University where education and research is the main activity. We have asked our colleagues at the Faculty of Engineering to take part in a survey about data protection.

Our findings: Only colleagues, who use computers regularly, sent back the questionnaire. The most used operating system is Windows XP Pro. The frequency of hardware and software failures indicate that more frequent maintenance is required. The data protection provided by the operating system or other software is more commonly used than hardware based protection. Most colleagues could give a correct estimate of the size of the programmes and documents or other data, so they know how much storage they need to store their files and to make backups. Two third of our colleagues think, that he or she has the knowledge to make backup copies and restores. On the other hand most of them do not know whether there is a backup programme installed on the computer. Optical and USB flash drives are used by half of the colleagues to store backup copies. Some use a separate hard disk or a separate partition for the backup. Almost half of them make copies themselves, but the other half thinks that the backup is made automatically by the programmes or they have no clue at all. Half of our colleagues think that restoring a complete system from a backup requires more time than installing and setting up all the software. This indicates that the knowledge about backup and restore is mostly theoretic and the computer users at our faculty have no real experience in backing up and restoring.

Kulcsszavak: SZTE Mérnöki Kar, szellemi termék, adatbiztonság, kérdőíves felmérés, biztonsági mentés

COMBATING CONFLICTS OF INTEREST

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ABSTRACT – Combating Conflicts of Interest

Conflicts of interest are more than headlines that blurt, "Politician caught in conflict of interest " or "professional denies conflict of interest allegations in the auto industry. " Have you ever wondered if you should be thankful that you haven't been the object of a business section newspaper story for conflicts of interest violations? Or, are you wondering about what to do to forestall such a story making you an interesting tidbit for one of the financial news services? Read on if you've wondered what exactly is a conflict of interest, why such conflicts are ethically significant, and what you can do to avoid being in one.

The problem comes when this private interest comes into conflict with the second element of recognizing the existence of a conflict of interest: that is your acting within or because or in conjunction with--an "official duty." Your official duty quite literally exists as the duty you have because you have an office, position, responsibility, authority, or are directed to act in an official capacity. The concept of obligation is paramount to this element.

Keywords: conflict, problem, ethical behavior, interest

THE POSITION OF RURAL TOURISM WITHIN THE ASSEMBLY OF THE TOURISTIC ACTIVITIES IN ROMANIA

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ABSTRACT – The Position of Rural Tourism Within the Assembly of the Touristic Activities in Romania

Offer "Rural Tourism", defines all the bids in rural areas that are not necessarily related to household (vacations in households that have lost the base stays in holiday homes, in rented houses in tourist hostels, motels, holiday villages, etc.) defining the location being in the countryside. We can distinguish different types of rural tourism: Cultural Tourism, Tourism Recreation, Tourism curative, Sports Tourism, Religious tourism.

Accommodation bases pears like a consequence of tourist supply and they are very sensible of the imperatives of these. At the present, in Romanian areas they are two types of tourist structures with function of tourist accommodation: rural guest-houses and agrotourist households.

Keywords: accommodation bases, rural guest-houses, agrotourist

Oferta turismului rural definește toate ofertele din mediul rural care nu sunt legate neapărat de gospodăria țărănească (vacanțe în gospodării care și-au pierdut funcția de bază, sejururi în case de vacanță, în case particulare închiriate, în pensiuni turistice, moteluri, microhoteluri, sate de vacanță etc.), definitorie fiind localizarea în spațiul rural. Putem distinge mai multe tipuri de turism rural: Turism cultural, Turism de agrement, Turism curativ, Turism sportive, Turism religios.

Bazele de cazare apar ca o rezultată strictă a cererii și sunt foarte sensibile la imperativele acesteia. În momentul de față, în România, în spațiul rural, există în principal două tipuri de structuri turistice de cazare: pensiuni turistice rurale și gospodării agroturistice.

Cuvinte cheie: bazele de cazare, pensiunile turistice, pensiunile agroturistice

THE WORK PRODUCTIVITY IN THE PRODUCTION OF AGRICULTURAL CROPS

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ABSTRACT – The work productivity in the production of agricultural crops

It has been studied the work productivity in the production of wheat, corn, sunflower and soybeans on the sowing area of the farm of 5.465 hectares. It has been viewed the structure of the sowing time, the human work expense per hectare, the machine work expense both per hectare and ton. The productivity in producing the basic agricultural crops has also been illustrated. According to a technological chart all working processes and calendar terms have completely been respected. There has been showed the productivity for the basic agricultural crops as well as the economy and profitability in the production of wheat. It is produced 0,795 t of wheat, 0,900 t of corn, 0,280 t of sunflower and 0,300 t of soybeans per an hour of all working time. The basic factors which affect the productivity are the following: the level of technical equipment, natural factors, applied agrotechnology, the organization of work, the qualification and motivation of employees. The given results can be used for improvement of business, agroeconomic analyses, planning, agromarketing needs and for the comparison of one`s own productivity with the presented results.

Keywords: productivity, economy, profitability of production, expenses per hectare, production per hour of working time, energy and fuel expenses per hectare.

LEADER-TERVEZÉS A HÓDMEZŐVÁSÁRHELYI KISTÉRSÉGBEN (2007-2013)

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ABSTRACT – LEADER planning in the Hódmezővásárhely micro-region (2007-2013)

The implementation of the new, 4th generation LEADER programme for the period 2007-2013 started on the 1st of September 2007 in Hungary. 105 local communities were formed throughout the country and 96 were authorised to prepare their local rural development strategy of the area covered by them. After the institutional process in the Hódmezővásárhely micro-region the local community – with 36 members (3 local governments, 9 civil organisations, 24 enterprises) – called „Vásárhelyi Vidék Jövőjéért” started the planning process on the 11th of March 2008. The planning process – with inclusion of stakeholders – ended on the 6th of July 2008. As the result of the planning process local rural development strategy of the micro-region came into existence, which consists of 5 development priorities, 22 measures and 28 solution proposals that concretize the strategy. The successful realisation of the strategy according to a preliminary calculation induces a development with a total cost of approximately 5.3 million euros in the micro-region.

Keywords: LEADER programme, Local Rural Development Strategy, planning, priorities, measures, Hódmezővásárhely micro-region

Kulcsszavak: LEADER-program, Helyi Vidékfejlesztési Stratégia, tervezés, források, prioritások, intézkedések, Hódmezővásárhelyi kistérség

ASPECTS REGARDING CONSUMER PROTECTION BETWEEN THE YEARS 2005 AND 2006. CASE STUDIES

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ABSTRACT – Aspects Regarding Consumer Protection Between the Years 2005 and 2006 Case Studies

If after the 1989 Revolution and until 2000 Consumer Protection did not constitute a worrying aspect for the authorities of Romania, starting with 1992, the year when ANPC was born, the activity for consumer protection was given a new face (makeover). In the following paper, we selected some aspects regarding this activity that today approaches the European parameters at which it needs to function.

Between January and December 2005 there were 5706 inspections in schools and 3495 in public kinder gardens with normal 4 hour schedule. 713 economic agents that were involved in the government program “Milk – Croissant” were inspected and here are the findings: -Non-compliance with the foreseen stipulations mentioned in the bidding documents regarding the expiration date and the quality of the bakery and dairy products; -Non-compliance with the hygienic and sanitary stipulations in production and distribution or storage in schools and kindergartens; -Non-compliance with the distribution and delivery schedule; -Non-compliance with the labelling, marking and wrapping standards. For the found misbehaviours the inspectors applied a number of 48 contravention fines in the total amount of 41400 RON and they stopped product distribution in the total amount of 10101 kg.

Keywords: consumer protection, economic agents, contravention fines, found misbehaviours, measures taken

ELEMENTS OF LABOR LEGISLATION**SÂMBOTIN L., GAVRILESCU V.**

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ABSTRACT - Elements of Labor Legislation

In Romania, employment report is carried out in terms of legislation, under collective labor contract, regulated by Law no. 130/1996, and the labor code, adopted in December 2003. Collective bargaining and labor is a dialogue between social-economic interests opposed to the arguments that face on the employment relationship, aiming at achieving the balance of forces at a time, dialogue is recorded in terms of a collective work. The collective labor agreement is concluded between the employer or employers' organization on one hand, and employees represented by unions or otherwise provided by law, on the other hand, to establish provisions on working conditions, salaries, and other rights and obligations arising from the employment (Law nr. 130/1996, art. 1). The effects of the conclusion of collective agreements is to promote fair labor relations, capable to ensure social protection of workers, prevent or limit collective labor conflicts or avoid triggering strikes.

Keywords: employer, agreements, organization, conflicts

EFFECT OF SULPHACHLOROPYRAZINE ON THE GLUTATHIONE AND THE ACTIVITY OF GSH-reductase and GSH-peroxidase IN BROILER'S BLOOD

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ABSTRACT – Effect of sulphachloropyrazine on the glutathione and the activity of GSH-reductase and GSH-peroxidase in broiler's blood

This report describes an investigation on the effects of therapeutic doses of coccidiocid sulphachloropyrazine on enzymatic and non-enzymatic antioxidative systems in hemolysed blood from broilers (glutathione-GSH, glutathione reductase-GSHR and glutathione peroxidase-GSHPx).

The in vivo investigation were carried out on heavy-line broilers (Arbor acres) of both sexes. One day old broilers were randomly distributed into two groups: Group I- a control group, Group II- a group of broilers inoculated with laboratory derived coccidia species at 21st day-of-age.

When symptoms of coccidiosis appeared (30th day-of-age), they were treated with therapeutic doses of sulphachloropyrazine (60 ppm).

It was concluded that sulphachloropyrazine therapy resulted in induction of GSH-peroxidase activity, as well as inhibition of GSH-reductase activity in blood hemolysates of infected-treated broilers comparison with the control group and the infected birds.

Keywords: sulphachloropyrazine, broilers, blood, glutathione

FARMERS' QUALIFICATION AND TRAINING NEED IN ESTONIA**MAIRE NURMET, ANNE PÕDER**

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ABSTRACT – Farmers' qualification and training need in Estonia

This article examines farmers' qualification and demand for training and retraining in Estonian small-scale rural enterprises according to types of farms by ownership and farmer's education. The study based on the outcome of a questionnaire-based survey. The sample of the respondents was based on the information of the Estonian Agricultural Registers and Information Board (ARIB), concerning the beneficiaries of single area payment, support to breeders of agricultural livestock and additional direct aid for the cultivation of agricultural crops. The results show that farmers, in order to maintain economic viability, need training in law, agricultural subsidisation measures, accounting and taxation, environmental protection requirements, growing of field crops and agricultural machinery. Larger businesses perceive need for training relatively higher than small entrepreneurs. The main development problem, encountered by self-employed persons, was marketing. Marketing and sales problems of such businesses could be solved by the development of cooperation for the marketing of produce of small-scale businesses.

Keywords: Rural enterprises, training, re-training

IMPORTANCE OF RURAL TOURISM IN THE WESTERN SIDE OF ROMANIA

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ABSTRACT – Importance of rural tourism the western side of Romania

West region is located on the border of Romania with Hungary and Serbia and Montenegro, is composed of four counties: Arad, Caras-Severin, Hunedoara and Timiș. The region has an advantageous geographical position being at the crossroads of major European roads, where Western culture and civilization to interfere with the East. It has many natural riches of soil and subsoil.

Keywords: tourist resources, thermal spa tourism, rural tourism and agroturism

Regiunea Vest este situată la granița României cu Ungaria și Serbia și Muntenegru, fiind alcătuită din patru județe: Arad, Caraș-Severin, Hunedoara și Timiș. Regiunea are o poziție geografică avantajoasă aflându-se la intersecția unor importante drumuri europene, unde cultura și civilizația vestului interferează cu cea a estului. Ea dispune de multe bogății naturale ale solului și subsolului.

Cuvinte cheie: resurse turistice, turism balnear, turism rural și agroturism

QUALITY AND EFFICIENCY IN TOURISM SERVICES

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ABSTRACT – Quality and Efficiency in Tourism Services

By their nature, tourist services would be creating conditions for restoring capacity physical body, while the party pleasant and informative leisure time, also, they must be designed so that the consumption their tourist would be achieve more information, knowledge habits and even us. Only thus it can be spoken of a content service tourist according with the modern age with the requirements of contemporary tourist. Specificity in the sphere of tourism and services resulting from the way in which achieve some of its defining trăsăturile such as dynamism, mobility, capacity to adapt to the each consumer-tourist.

Prin natura lor, serviciile turistice trebuie să creeze condiții pentru refacerea capacității fizice a organismului, simultan cu petrecerea plăcută și instructivă a timpului liber; de asemenea, ele trebuie concepute astfel încât în urma consumării lor, turistul trebuie să dobândească un plus de informații, cunoștințe și chiar deprinderi noi. Numai astfel se poate vorbi de un conținut al prestației turistice în concordanță cu cerințele epocii moderne, cu exigențele turistului contemporan. Specificitatea turismului în sfera serviciilor decurge și din modul în care se realizează unele din trăsăturile sale definitorii, cum ar fi: dinamismul, mobilitatea, capacitatea de adaptare la cerințele fiecărui consumator-turist.

Keywords: tourist services, tourism consumption, tourist activities

Cuvinte cheie: servicii turistice, consum turistic, activități turistice

**STUDIU PRIVIND SISTEMUL ASIGURĂRILOR DE PENSII
DESTINATE AGRICULTORILOR DIN ROMÂNIA**

**STUDY ON SYSTEM PENSION INSURANCE FOR ROMANIAN
FARMERS**

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ABSTRACT – Study on system pension insurance for romanian farmers

In Romania, reform pensions began in 2000 through promulgation of Law 19/2000 which entered into force in April 2001 and covers the public of the national pension system (PI). It also established the formula for calculating the pension of the public. Along with the public mandatory pension reform and also includes two private: private mandatory component (PII) and the private optional (PIII).

Keywords : insurance, pension scheme, management, pension fund

RESEARCH ON THE CHANGES IN POLYSACCHARIDES-STARCH IN STORED WHEAT AFTER INFESTATION BY RHIZOPERTA DOMINICA F.

CERCETĂRI PRIVIND MODIFICĂRILE POLIZAHARIDELOR – AMIDONUL ÎN GRÂUL INFESTAT DE RHIZOPERTA DOMINICA F.

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ABSTRACT – Research on the changes in polysaccharides-starch in stored wheat after infestation by rhizoperta dominica f.

The protection of stored agricultural products implies complex research on various aspects, many of which are little known or have not been solved yet. Relatively little has been published on the effects of insect infestation on the panification qualities of wheat. *Rhizoperta dominica* F. infests cereals and develops inside the grains thus producing the ‘hidden infestation’ of the cereals. The grains look healthy and undamaged, even if the embryo, the endosperm or both of them are partially eaten. Starch fills the largest part of the endosperm and constitutes the most important wheat grain supply substance. The amount of starch in the wheat grain decreases with the increase of total nitrogen content. The goal of the research was to monitor the changes in the starch in wheat grains infested by *Rhizoperta dominica* F. Results of bio-chemical analyses with spectrophotometry method shall be supplied to all interested farmers, to milling and bread-making enterprises. Quantitative changes the starch were monitored on a number of 5 sample variants infested with 25, 50, 75, and 100 insects of *Rhizoperta dominica*, respectively. According to the results we obtained, we can note that after a month of attack by *Rhizoperta dominica* F., the quantity of starch destroyed by these differs to some extent, in relation to the number of insects that infested and attacked the wheat sample. The starch percentage degraded by species *Rhizoperta dominica* F. increases proportionally with the period of attack and the number of insects that infest the wheat sample.

Keywords: wheat, infestation, *Rhizoperta dominica*, modifications, starch

REZUMAT

Protecția produselor agricole depozitate implică cercetări complexe care să abordeze diferite aspecte puțin cunoscute sau neelucidate. S-a publicat relativ puțin despre efectele infestării cu insecte asupra însușirilor de panificație ale grâului. *Rhizoperta dominica* F. infestează cerealele și se dezvoltă în interiorul boabelor constituind “infestarea ascunsă” a unei mase de cereale. Amidonul ocupă cea mai mare parte a endospermului și constituie cea mai importantă substanță de rezervă acumulată în bobul de grâu. Cantitatea de amidon din bobul de grâu scade, pe măsura creșterii conținutului în azot total. Scopul cercetărilor a fost urmărirea modificărilor care apar la nivelul amidonului din bobul de grâu infestat de *Rhizoperta dominica*, în raport cu numărul de insecte care au infestat proba. Modificările cantitative ale amidonului au fost urmărite pe un număr de 5 variante infestate cu 25, 50, 75 și 100 insecte de *Rhizoperta dominica*. Conform rezultatelor obținute se constată faptul că, după o lună de atac a indivizilor din specia *Rhizoperta dominica* F. cantitatea de amidon distrusă de aceștia diferă într-o oarecare proporție, în funcție de numărul exemplarelor care au infestat și atacat proba de grâu. Procentul de amidon degradat de specia *Rhizoperta dominica* F. crește direct proporțional cu perioada de atac și numărul de exemplare care infestează și atacă proba de grâu.

Cuvinte cheie: grâu, infestare, *Rhizoperta dominica*, modificări, amidon

**PENETROMÉTERES MEGFIGYELÉSEK NAPRAFORGÓBAN
KÜLÖNBÖZŐ AGROTECHNIKAI BEAVATKOZÁSOK
ELLENŐRZÉSE CÉLJÁBÓL**

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ABSTRACT - Observations with penetrometer in sunflower stands to check the effects of different agrotechnical activities

In an experiment of 2008 at Kisvárda the effects of three pairs agrotechnical methods were studied by the help of penetrometer. On the basis of the results have been got the earth up tillage methods increased the compactness of the soil - versus hoeing methods significantly at 8cm -9cm-10cm-11cm-12cm soil levels. The other agrotechnical steps as sowing at 5cm and 7,5cm soil levels, 35cm and 70cm plant distances didn't effected the compactness of the soil in the soil levels of 10-11-12-13-14-15-16 cm.

Keywords: sunflower, penetrometer, agrotechnical methods, soil compactness

Kulcsszavak: napraforgó, penetrométer, agrotechnikai módszerek, talajtömörtség

RURAL ECONOMY STRUCTURE AND LIFE QUALITY IN THE ROMANIAN RURAL AREAS

STRUCTURA ECONOMIEI RURALE ȘI CALITATEA VIETII ÎN SPAȚIUL RURAL ROMÂNESC

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ABSTRACT – Rural economy structure and life quality in the romanian rural areas

As a consequence of the fact that the economic development politics during the communist period considered the industry as the only branch that can support the development of an area, it has been decided the location of industries in all counties, notwithstanding the potential support with human and material potential.

In general industries developed during communism were located in predominantly agricultural counties with a dominance of the rural environment.

In the present in all regions of Romania there are counties with problems which occurred as a result of industrial restructuring combined with problems of rural underdevelopment, both aspects inducing the phenomena of unemployment and reduced living standards.

General issues of economic development existing in Romanian rural areas are similar to those European regions with low development, that applies structural policies and implements specific structural funds. In rural areas of Romania are not enough productive investment and not create enough jobs, which reduced revenues and the quality of life in rural communities.

In the present Romania has to face new challenges generated by the objective necessity of absorption of European funds allocated by the EU in the 2007-2013 period. Over 8 billion euro are intended for Romanian rural area development through the European Agricultural Fund for Rural Development. The European Union created this financial instrument to support the member states in implementation process of PAC (Common Agricultural Policy).

In Romania, in the National Plan of Rural Development have been formulated 4 domains (axes) which comprise the main activities financed through EAFRD.

These measures cover the following areas:

1. increasing competitiveness of the agricultural sector and forestry;
2. improving the environment and the rural areas;
3. life quality in rural areas and the diversification of rural economy;
4. LEADER

The funds are for eligible projects which reflect the real needs of the rural communities, having a direct effect on the development of romanian rural space, and indirectly improving life quality of inhabitants of rural areas.

Keywords: agriculture, tourism, income, business , services, infrastructure

BIOGÁZ ÉS BIOETANOL ELŐÁLLÍTÁSA TAKARMÁNYCIROKBÓL

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ABSTRACT - Biogas and Bioethanol Production from Forage Sorghum Biomass

Sorghum bicolor (L.) Moench are generally characterized by outstanding drought tolerance and their production for feeding purposes has had a several decades history in Hungary. Their bioenergy yield potential has also been tested for years, and their use as bioenergy source is increasing in Europe. The sweet sorghum type, silage sorghum hybrids that can be grown in Hungary in a reliable way were tested in our experiments as biomass sources of bioethanol and biogas production. The results demonstrated that the domestic silage sorghum assortment may provide valuable and sufficient biomass volume for the bioenergy industry.

Kulcsszavak: Bioethanol, Biogáz, Cukorcirok, Bioenergia, Biomassza

TERMÉSZET KÖZELI VÍZTISZTÍTÁS**SALLAI LÁSZLÓ, MOLNÁR TAMÁS**

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ABSTRACT - Wastewater treatment by reedbed system

There are several different ways to treat the wastewater. The present practice the canalisation among other long distance situated settlements to get subsidy for the local authorities, but the running of these is very expensive and not environment friendly. Dealing with the treatment of domestic waste water is our important interest, in the second place we have to fulfil the environmental standards in connection with the joining to the European Union. In our country there are many half ready made plans in the case of villages counting canalisation with one bigger settlement's wastewater treatment plant transporting the wastewater through 10-20 km. According to sustainability analysis this solutions produce enormous environmental deficit. In the case of small settlements is a manifest solution the environment friendly wastewater treatment technology, inside it the utilisation of the constructed wetland technology. They are more cost effective to install and simple and inexpensive to run compared with the conventional biological and mechanical purification plants. Compared with these widespread artificial technologies the advantages of a ecological wastewater purification plant are the following:

- low investment costs (the sewage network is necessary of course);
- low maintenance and running costs (there is no energy consumption in the purification);
- there is no utilisation of chemicals and no secondary sewage sludge;
- landscape fit, environmental installation.

Kulcsszavak: Kommunális szennyvíz, kistelepülések, szennyezőanyag eltávolítás, hidraulikai terhelés

CSEMEGEKUKORICA NÉHÁNY MORFOLÓGIAI TULAJDONSÁGÁNAK ALAKULÁSA GOMBAKOMPOSZT- TRÁGYÁZÁS HATÁSÁRA

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ABSTRACT – Changes in some morphological characteristics of sweetcorn in response to application of spent mushroom compost as fertilizer

In our experiment we studied the application of spent button mushroom compost as organic fertilizer (30 and 60 t/ha) in sweetcorn cultivation on sandy textured brown forest soil. As control, we applied artificial fertilizer doses corresponding to soil test, as well as creating zero control plots with no fertilizer application. We studied the changes in some characteristics typical of the vegetative growth of sweetcorn plants (rate of seed emergence, leaf number, height, number and height of tillers) as well as in parameters indicating the development of the generative parts (number of ears per plant, unhusked and husked ear weight). We also carried out calculations for the per-hectare yield. According to our results, spent mushroom compost can be successfully used in sweetcorn production as organic fertilizer. The application of the 60 t/ha dose seems appropriate on the soil type of the experiment which by itself produced results that were almost as favourable as the application of the fertilization regime. It can be supposed that with the adding of artificial fertilizers (e.g. nitrogen top dressing) to the basal fertilization with mushroom compost further increases can be achieved in the performance of plants. The zero control without fertilization was inferior to the other three treatments showing that originally there was an inadequate supply of nutrients in the soil.

Keywords: sweetcorn, spent mushroom compost, vegetative growth, yield

NITROGÉN FEJTRÁGYÁZÁS HATÁSA A FEJES KÁPOSZTA TERMÉSMENNYISÉGÉRE ÉS -MINŐSÉGÉRE

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ABSTRACT – Effect of nitrogen top dressing on white cabbage yield and quality

In our experiment, built on an experiment on the application of spent mushroom compost (30 and 60 t/ha) as organic fertilizer, we carried out investigations to see whether any yield increasing effect occurred on humus-rich sandy soil in the case of white cabbage plants showing signs of N deficiency in response to treating the crop with N fertilizer (50 kg/ha N) after the beginning of head formation, at approximately 6 cm head diameter. According to our results, the top dressing produced favourable results concerning fresh weigh, head weight, head diameter and head height. The most prominent change was detected in weight parameters (total weight increased by 17.5-18.5% and head weight by 13.8-19.8%). Changes in dry matter content and in net head percent (head weight/total weight) were not so obvious. The top dressing in itself (without starter fertilization) and all the mushroom compost+top dressing treatments were unable to produce superior results compared to those of the fertilized control treatment under the conditions of the experiment.

Keywords: cabbage, top dressing, nitrogen, yield, crop quality

EFFECT OF INTERCROPPING MAIZE WITH DIFFERENT LEGUMES SPECIES ON CARBOHYDRATES AND PROTEINS FORAGE BALANCE

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ABSTRACT – Effect of intercropping maize with different legumes species on carbohydrates and proteins forage balance

Począwszy od roku 2003 w Stacji Doświadczalnej w Pawłowicach, należącej do Uniwersytetu Przyrodniczego we Wrocławiu, przeprowadzono 4 serie doświadczeń dotyczących uprawy współrzędnej kukurydzy z roślinami strączkowymi z przeznaczeniem na kiszonkę: w latach 2003-2005 uprawa kukurydzy z tyczną formą fasoli wielokwiatowej oraz fasolą zwyczajną, w latach 2005-2007 uprawa kukurydzy z bobikiem, w latach 2006-2008 uprawa kukurydzy z łubinem żółtym i fasolą wielokwiatową (forma biczykowata), 2007-aktualnie uprawa kukurydzy z soją pastewną. Po zbiorze pobierano próby materiału roślinnego, który następnie analizowano pod względem zawartości białka i bezazotowych związków wyciągowych. W badaniach własnych zawartość białka ogółem w kukurydzy wahała się od 4,1 do 10,6% s.m.. Uprawa współrzędna zwiększała zawartości tego związku w paszy od 0,6 p.p. do 2,5 p.p.

Zawartość bezazotowych związków wyciągowych w paszy pochodzącej z uprawy współrzędnej wynosiła od 46,8 (kukurydza z łubinem żółtym) do 72,5% (kukurydza z bobikiem) a współczynnik zmienności, nie przekraczał 10%.

Keywords: maize, legumes, forage quality, protein, carbohydrates

EVOLUTION TENDENCIES OF THE AGRICULTURAL MECHANICAL PROPERTIES OF WINTER WHEAT VARIETIES

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ABSTRACT – Mechanical properties of winter wheat varieties

Wheat kernel hardness determines quality, flour yield, flour particle-size, water absorption and other quality characteristics of cereals. The hardness is determined by the degree of adhesion between various components of the starchy endosperm cells of the mature wheat grain, notably between starch granules and matrix (gluten) proteins but also between proteins and cell walls. Hard textured grains require more grinding energy than soft textured grains to reduce endosperm into flour, and during this milling process a larger number of starch granules become physically damaged. We have to know that the kernel hardness is soft or hard, because it determines the milling process, so we have to measure it. (BÉKÉSI, 2001) In our investigation we used two methods to measuring kernel hardness. The Perten Single Kernel Characterization System (SKCS) 4100 device and the Lloyd 1000 R Material Testing Machines were used. We determined the Hardness Index (Perten SKCS 4100), the mechanical properties – Young's modulus, breaking force, break work (Lloyd 1000 R). Our aim was to compare these methods.

Keywords: wheat, kernel hardness, Hardness Index, Young's modulus

USAGE OF THE GPS MEASUREMENT DETAILED REAL TIME (RTK) IN TRACING HIGHWAYS

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ABSTRACT – Usage of the GPS measurement detailed real time (RTK) in tracing highways

The RTK topographic surveys were accomplished by using 5 Leica GPS 1200 receivers – 1 reference station and rovers.

For every RTK session, after assembling the reference station on a type A landmark, a type B landmark was occupied by a rover receiver in order to compare the new obtained RTK coordinates of the landmark with the previous coordinates, determined STATICALLY. The difference between the coordinates were maximum of 2 cm per after maximum 10 seconds of occupancy.

Keywords: RTK survey, static measurement, reference station

REZUMAT

Ridicările topografice RTK s-au efectuat utilizând 5 receptoare Leica GPS 1200 – 1 stație de referință și 4 rovere. Pentru fiecare sesiune RTK, după montarea stației de referință pe o bornă de tip A, o bornă de tip B a fost ocupată cu rover receptorul, pentru a compara coordonatele RTK nou – obținute ale bornei cu coordonatele anterioare determinate STATIC. Diferențele de coordonate au fost maxim 2 cm pe xyz după maxim 10 secunde de ocupare.

**SOME ASPECTS CONCERNING THE DEVELOPMENT OF AN
INFORMATIC SYSTEM SPECIFIC TO REAL ESTATE CADASTRE
AND URBAN DATA BANK IN THE CITY OF DEVA CITY,
HUNEDOARA COUNTY**

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ABSTRACT – Some aspects concerning the development of an informatic system specific to real estate cadastre and urban data bank in the city of Deva city, Hunedoara county

In this paper we overview some aspects concerning the development of an informatic system specific to real estate cadastre and urban data bank in the city of Deva (Hunedoara County), regarding the real estate and urban network administration of a cadastre sector (sector 36 measuring 20,33 ha). Because cadastre is a methodically arranged public inventory of data concerning properties within an area, up-to-date cadastral data should be available for any time. If such data is in a digital form then it could be more valuable for a GIS application. So, local authorities want to establish their cadastral data infrastructure in initial stage of their GIS study. However, there are important issues in realizing it with respect to cadastral maps, data quality, institutional and legal perspective.

Keywords: real estate urban cadastre, road building, stereographic system

REZUMAT

In această lucrare ne-am propus să evidențiem câteva aspecte privind realizarea unui sistem informațional specific cadastrului imobiliar-edilitar și băncilor de date urbane în Municipiul Deva, județul Hunedoara, sistem privind gestiunea imobiliară și edilitară pentru un sector cadastral (sectorul 36 având o suprafață de 20.44 ha). Dat fiind faptul că cadastrul reprezintă un inventar de date publice cu privire la bunurile imobile dintr-un areal, aceste date ținute la zi trebuie să fie disponibile oricând. Dacă o astfel de dată este în formă digitală, aceasta trebuie să fie disponibilă pentru aplicațiile GIS. Deci, autoritățile locale doresc să realizeze propriile infrastructuri de date cadastrale într-o formă inițială a studiului GIS. Oricum, acest deziderat reprezintă un aspect important în realizarea hărților cadastrale, în contextul legilor în vigoare ale țării noastre.

NS SEED VARIETIES AND HYBRIDS PRODUCTION

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ABSTRACT – NS seed varieties and hybrids production

Agricultural products are the material base for the survival of humanity, providing conditions for economic, cultural and social development. Soybean and corn are presently grown in most countries, on large or small areas.

Over the last eight years, the production of NS soybean cultivars registered a trend of growth as well as significant variations. The production of NS corn hybrids registered a mild decrease. Increase in production volume is achieved not only by increasing crop acreage but also by increasing the yield performance per unit area. Productivity, and therefore the profitability of seeds production of soybean and corn depend on the genetic constitution of the cultivated cultivars and hybrids.

Keywords: soybean, maize, seed, production

IZVOD - Proizvodnja NS sorti i hibrida

Poljoprivredni proizvodi predstavljaju materijalnu bazu za opstanak čovečanstva, obezbeđuju

privredni, kulturni i društveni razvoj ljudske zajednice. Soja i kukuruz danas su prisutni u većini zemalja, na manjim ili većim površinama.

Poslednjih osam godina prisutan je trend rasta proizvodnje NS sorti soje sa znatnim oscilacijama kao i blagi pad proizvodnje NS hibrida kukuruza. Povećanje proizvodnje moguće je ostvariti ne samo povećanjem površina nego i povećanjem prinosa po jedinici površine. Produktivnost, a samim tim i rentabilnost u semenskoj proizvodnji soje i kukuruza zavisi od genetske konstitucije datih sorti i hibrida.

Ključne reči: soja, kukuruz, seme, proizvodnja

EFFECT OF NITROGEN NUTRITION ON THE TECHNOLOGICAL QUALITY OF WINTER TRITICALE

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ABSTRACT – Effect of nitrogen nutrition on the technological quality of winter triticale

Technological quality of two winter triticale cultivars (Favorit, Trijumf) depending of nitrogen nutrition was investigated. Nitrogen fertilizers are applied in four doses: $N_1 = 60 \text{ kg N ha}^{-1}$, $N_2 = 90 \text{ kg N ha}^{-1}$ and $N_3 = 120 \text{ kg N ha}^{-1}$. Analysis of sedimentation, gluten content, and rheological flour properties were done. High N fertilization significantly increased these quality traits in both cultivars. The highest sedimentation value and gluten content established with application of 120 kg N ha^{-1} . Triticale cultivars are reacted positively to nitrogen increasing, but rheological flour properties of triticale kept on the level of C₂ quality group. By the analysis of variance established high significant differences in mean values of sedimentation, wet gluten content and water absorption among the cultivars (A), years (B) and supplied nitrogen doses (C). All interactions (AB, AC, BC and ABC) were significant for wet gluten content, but for sedimentation only AB interaction, while of water absorption was only significant interaction BC.

Key words: triticale, nitrogen nutrition, technological quality, sedimentation, gluten

APSTRAKT

U ovom radu je ispitivan uticaj različitih doza azota na tehnološki kvalitet dve sorte ozimog tritikalea (Favorit i Trijumf). Primenjene su tri doze azota u prihranjivanju: $N_1 = 60 \text{ kg N ha}^{-1}$, $N_2 = 90 \text{ kg N ha}^{-1}$ i $N_3 = 120 \text{ kg N ha}^{-1}$. Urađene su analize sedimentacione vrednosti, sadržaja glutena i reološke osobine brašna i testa. Rezultati su pokazali značajno povećanje vrednosti ispitivanih osobina kvaliteta sa povećanjem doze azota. Najveće vrednosti sedimentacije i sadržaja glutena ostvarene su pri primeni 120 kg N ha^{-1} . Sorte tritikalea su pozitivno reagovala na povećanje doze azota, ali su se reološke osobine brašna zadržale na nivou C₂ kvalitetne grupe. Analizom varijanse su ustanovljene visoko značajne razlike u srednjim vrednostima za sedimentaciju, sadržaj glutena i apsorpciju vode između sorti (A), godina (B) i doza azota (C). Interakcije AB, AC, BC i ABC su bile visoko značajne za sadržaj glutena, a za sedimentacionu vrednost samo interakcija AB, dok je za apsorpciju vode bila visoko značajna interakcija BC.

Ključne reči: tritikale, ishrana azotom, tehnološki kvalitet, sedimentacija, gluten

A SZENTKIRÁLYI ÁSVÁNYVÍZ REKLÁMJAINAK HATÁSVIZSGÁLATA

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ABSTRACT - Analysis of the Advertisement Effect of the “Szentkirályi” Mineral Water

If I say: Hungarian world-famous mineral water, everybody think about the “Szentkirályi”. The producing factory asks two famous people, to ad their mineral water, they are: Zséda (singer) and Figo (footballer). I made a questionnaire to know the advertisement-effect of “Szentkirályi” mineral water. It was filled by 200 people with different age, sex, family-status, etc. People generally know this brand of mineral water; they have got their information from the TV, the newspaper and the posters. The most of them associated to Figo, the others said this mineral water is “naturally”, “clear”, “healthy”. For the most part of the costumers is not important if a famous man/woman ads some product. People usually listen to the advertisements; they often go and shop something, because of its ad.

Keywords: mineral water, advertisement-effect, questionnaire-survey

Kulcsszavak: ásványvíz, reklámhatás, kérdőíves felmérés

STEM HIGHT IN BROOMCORN DEPENDING ON PLANT SPACING

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ABSTRACT – Stem hight in Broomcorn Depending on Plant Spacing

Two broomcorn (*Sorghum bicolor* (L.) Moench) cultivars and 12 plant densities were examined in a field trial in the period 2003 - 2004. Height is a highly changeable trait, especially under a strong influence of external factors, primarily the size of plant spacing. This feature is important for manual harvest of broomcorn panicles as well as for panicle quality. We examined two row spacings (50 and 70 cm) and six spacings in the row (5, 9, 13, 17, 21 and 25 cm). Stem height was smallest in the largest spacings, 45.53 and 30.63 cm. Conversely, the smallest spacings produced largest heights 109.79 and 68.38 cm.

Keywords: broomcorn, stem height, row-to-row spacing, plant spacing in the row

A konferencia szervezőbizottságának tagjai:
The members of the organizing committee of the conference:

Dr. Bodnár Károly elnök/chairman
Dr. Horváth József titkár/secretary
Benk Ákos
Lantos Ferenc
Sallai László
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