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Prospects for the Development of Oilseed Rape Growing in Lithuania

Stasys Bernotas

Oilseed rape is the main oil-bearing plant of moderate climate zones. The area sown with oilseed rape is on a steady increase worldwide due to the rapidly growing demand for vegetable oil in food and other industries. Heavy and high quality oilseed rape yield can be produced only if the conditions for growing, development, wintering, nutrition, formation of yield structural elements that vary in relation to natural – climatic factors, soil peculiarities, agricultural practices used and growing technologies, are brought maximally close to optimal.

Development of oilseed rape production for 2003 – 2010 with a view to increasing competitiveness of rapeseed and its products on the domestic and international markets is predicted taking into account the findings of the experiments conducted according to the methodologies approved by the methodological committees of the Lithuanian Institute of Agriculture and the Lithuanian University of Agriculture for 1990 – 2002 and having assessed the current situation on domestic and foreign markets, as well as oilseed rape production strengths and weaknesses, problems and factors limiting development of rapeseed growing and on the basis of the main provisions of the "Agricultural and Rural Development Strategy" and "Rural Support Foundation". Rape areas in Lithuania supposedly will increase up to 210000 ha and average rape yield – up to 2,6 t ha⁻¹ until 2010.

Winter and spring oilseed rape, agroclimatic resources, vegetable oil.

Stasys BERNOTAS. Doctor of biomedical sciences (agronomy), director and senior scientific worker of Vezaiciai branch, Lithuanian Institute Agriculture. Address: Vezaiciai, LT-5845 Klaipeda distr., Lithuania, e-mail: filialas@vezaiciai.lzi.lt

Innovative Education in Agroecology: the Ecology of Food Systems in the Nordic Region

Charles Francis, Geir Lieblein, Lennart Salomonsson, Vida Rutkoviene, Nadarajah Sriskandarajah, Tor Arvid Breland, Michael Moulton, Juha Helenius

Agroecology is an emerging area of integrative study in the Nordic/Baltic Region and elsewhere in our agricultural universities. Specialized disciplines have difficulty dealing with complex issues, and the holistic approaches to production as well as the entire food system have appeal to contemporary students in agriculture. Innovative study programs in agroecology feature experiential learning through discovery and action in the field, an educational strategy that leads to high levels of student motivation and a capacity for lifelong learning. Group projects with clients in the rural landscape and communities complement lectures, discussions, readings, and consultation with experts, providing a real world learning scenario that emulates what students will face on the job after graduation. We conclude that these methods and a philosophy of just-in-time learning will be used in agroecology and other study areas in the future.

Experiential learning, ecological agriculture.

Charles FRANCIS. PhD, Professor of Agronomy and Horticulture, University of Nebraska, 225 Keim Hall, Lincoln, Nebraska, 68583-0915, U.S.A., fax +1-402-472-4104, e-mail: cfrancis2@unl.edu.

Juha HELENIUS. Associate Professor, Head of Department of Applied Biology, University of Helsinki, PO Box 27 (Viiikki, C), FIN-00014 University of Helsinki, Finland, tel: +358-(0)-9708 51, fax: +358-(0)-708 5463, e-mail: juha.helenius@helsinki.fi.

Vida RUTKOVIE NEN. Professor, Director of the Institute of Environment, Lithuanian University of Agriculture, Studentų 11, Akademija, LT-53067, Lithuania, tel/fax: +370 7 752 202, e-mail: ai@nora.lzuu.lt.

Lennart SALOMONSSON. Assoc. Profesor, Swedish Agricultural University, CUL, SLU, Box 7047, 750 07 Uppsala, Sweden, tel: 018 671441, fax: 018-67 35 71 e-mail: Lennart.Salomonsson@cul.slu.se.

Geir LIEBLEIN, dr, Agricultural University of Norway, Department of Horticulture and Crop Sciences, Box 5022, N-1432 Ås, Norway, tel: (+47) 6494 7813, fax: (+47) 6494 7802, e-mail: geir.lieblein@ipm.nlh.no.

Nadarajah S RISKANDARAJAH. Associate Professor, Department of Economics and Natural Resources, Royal Veterinary and Agricultural University, Denmark, Rolighedsvej 23, DK-1958 Frederiksberg C, tel: +45 3528 34 32, fax: +45 3528 3709, e-mail: sri@kvld.dk.

Tor Arvid BRELAND. Department of Horticulture and Crop Sciences, Agricultural University of Norway, PO Box 5022 N-1432 Aas, Norway, tel: +47 64 94 77 33, fax: +47 64 94 78 02, e-mail: tor.arvid.breland@ipf.nlh.no.

Michael MOULTON. Agricultural University of Norway, PO Box 5022, N-1432 Aas, Norway, tel: (+47) 6494 7813, fax: (+47) 6494 7802, e-mail: Mike.Moulton@adm.nlh.no.
The Rise of Employment in Depressed Regions as a Prime Objective of Country’s Regional Policy

Algis Šileika, Daiva Andriušaitienė

Main labour market characteristics of the depressed areas are: high level of unemployment, characterised by the large share of long-term unemployed persons without labour market skills; low level of employment, large share of unofficial labour market, big amount of employees in agriculture; poverty, influenced by the decreasing share of labour income and increasing income from transfers; ageing of society – decreasing of the youth share and increasing share of the old-age pensioners.

Unemployment is an essential feature of the depressed regions – a macro level problem, the economical subsequences of which are: unproduced goods, poverty, declining economic growth as well as psychosocial subsequences which become risk factor for the society: they increase emigration and induced growth of criminality. The unemployment index typifies situation in the counties and regions and it is relevant measure for the regional disparities evaluation. It is essential to develop an unconventional labour market instrument – Local Employment Initiatives when implementing the main objective of regional policy – raising an employment level in depressed regions.

Depressed areas, unemployment, employment, Local Employment Initiatives.

Daiva ANDRIUŠAITIENĖ. Doctoral student, Social Economic and Management department, Business management faculty, Vilnius Gediminas technical university, Referent of Institute of Labour and Social Research. Address: Rinktinės g. 48, LT-09318 Vilnius. Tel. (+370 5) 275 24 34, e-mail: daiva.andriusaitiene@dsti.lt.

Algis ŠILEIKA. Habilitated doctor of social sciences, professor, Social Economics and Management Department, Business Management faculty, Vilnius Gediminas technical university, Director of Institute of Labour and Social Research. Address: Rinktinės g. 48, LT-09318, Vilnius. Tel. (+370 5) 275 24 34, e-mail: algis.sileika@dsti.lt.

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SOCIAL SCIENCES

Social Partnership and Common Responsibility in the Development of Rural Areas

Vilma Atkočiūnienė, Svetlana Statkevičienė

Analysis of partnership concept, reasons of the application of local partnership groups model, functions of a partnership group, and identification of the role of social partnership and common responsibility in the development of rural areas have been based on the experience of the EU member states and Lithuania. The partnership is approached in the light of organization, management, collaboration, planning and rural development theories. Such analysis provides the possibility to form favourable conditions for establishment of partnership groups in Lithuanian rural areas, for strengthening the abilities of governmental institutions, farmers, rural business people and rural population to solve social-economical problems. It is important to prepare a guidebook for creation of partnership groups and development of their activity; to establish consulting and training system; to make decisions about legalization of partnership groups that are formed in regions and their activity in the fields of rural community activation and representation.

Social partnership, partnership group, rural community.

Vilma ATKOČIŪNINĖ. Doctor of social sciences, assoc. prof., Head of Department of Administration and Rural Development, Faculty of Economics and Management, Lithuanian University of Agriculture. Address: Universiteto 10, LT-53361 Akademija; Kauno r. tel: +370 7 752214. E-mail: vilmat@one.lt;

Svetlana STATKEVIČIENĖ. Doctor of social sciences, assoc. prof. Language department. Director of Rural Culture Institute, Lithuanian University of Agriculture. Address: Studentų g. 11 - 214, LT – 53361 Akademija, Kauno raj. Tel. (8 37) 75 22 14, e - mail: ka@nora.lzuu.lt

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SOCIAL SCIENCES

The Economic and Social Interaction Between Town and Country in the Regions of Lithuania

Jonas Ėapiškis, Neringa Michailovaitė

The existing level of region urbanization, the dimensional structure between town and country, the stage of urbanization determine the interaction between town and country. Three of ten Lithuanian regions are urbanized, four –
balanced and three - rural. It means that economic and social importance of country is uneven. The economic basis of rural regions is agrarian, less effective and does not have enough potential for development. It is the reason why GDP per inhabitant is less than in other regions, while the unemployment rate is the highest. The tendencies of existing urbanization are contrasting in the regions of Lithuania. The sequel urbanization is going on only in the regions of high level of urbanization. The substantial indicators of deurbanization (the migration from town to country and the rising dependence of economic base on agriculture) are observed in the rural and balanced regions. Different tendencies of urbanization are not increasing, but reducing the cohesion of regions. Introduction of the measures, improving the balance between urban and rural development, into the regional, policy of development is of vital importance.

Urban and rural interaction, urbanization, deurbanization, regional economical basis.

Jonas ČAPLIKAS. Dr. of social sciences (economics), assoc. prof., dean of Economics and management faculty, Lithuanian University of Agriculture. Address: Universiteto g. 10, LT-53361 Akademija, Kauno rajonas. Tel. (+370 37) 39 75 27. E-mail: caplikas@eko.lzua.lt

Neringa MicHAILOVAITĖ. Master of Social sciences (economics). Address: Universiteto g.10, LT-53361 Akademija, Kaunas distr. E-mail: neringam@nora.lzuu.lt

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SOCIAL SCIENCES

Development of Agricultural Information Systems in Latvia

Aleksandrs Gailums

There are manual information systems at the farms in Latvia. In the last years more computer – based information systems have appeared in the farms, more new information technologies have been used. Two agricultural information systems exist at the level of the district: information system of the consulting service and information system of the rural support service. Within the frames of PHARE project the Zemgale Development Agency together with its partner Latvian University of Agriculture plans to form the information net of Zemgale region. Consulting service and Rural support service exist at the State level. The Rural support service has developed Integrated administrative and control system (IACS). It is the information system that is necessary for administration and supervision of the EU direct agricultural payments.

Information, system, farm, region, state.

Aleksandrs GAILUMS. Doctor of economic sciences, associated professor. Head of Department of Computer systems. Latvian University of Agriculture, Faculty of Information Technologies. Address: Liela str. 2, LV-3001 Jelgava, Latvia. Tel. +371-30-26761, fax +371-30-23095. E-mail: ikalga@cs.llu.lv.

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SOCIAL SCIENCES

Problems of Digital Development in Rural Areas of Lithuania

Kęstutis Juškevičius, Gediminas Navickas, Arūnas Poviliūnas, Laimutis Telksnys

The paper examines the processes of digital development in rural areas of Lithuania. Digital development refers to the use of information and communication technologies (ICT) to improve productivity and competitiveness, to create economic and to social opportunities, and to enhance quality of life in rural communities (Laudeman, 2003). The main attention is paid to the challenges of seizing ICT opportunities by rural communities and integration of these opportunities into everyday activities. The actions, which are supported by public-private partnership to increase computer literacy level, however, are only a partial solution to this problem. It improves “having” but not necessarily “usage” of ICT possibilities. The pilot project on integration of ICT possibilities into community activities in small Lithuanian towns is described. The goal of the project is to create models demonstrating ICT possibilities for the rural communities, indicating ways of encouraging and facilitating the rural communities to use ICT, unclosing existing problems of ICT integration into rural community activities. The project is initiated by Open Society Fund – Lithuania and implemented in partnership with UNESCO Chair in Informatics for the Humanities at the Institute of Mathematics and Informatics, and Vilnius University Centre of Social Study.

The aspects of ICT infrastructure in rural areas of Lithuania are also analyzed. The public-private partnership initiative on creating of public internet access centers is evaluated. The alternative ways of technical infrastructure development in rural areas are considered. The recommendations for public policy on digital development in Lithuanian rural areas are presented.

Community informatics, technologies digital, information technologies, rural development.

Kestutis JušKEVIČIUS. Ph.D., majoring in informatics at the Institute of Mathematics and Informatics and Information Program Director in Open Society Fund –Lithuania. Address: Atviros Lietuvos fondas, Didžioji str. 4, LT-2001 Vilnius; fax: +370 5 268 55 12, e-mail: kesju@osf.lt.
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SOCIAL SCIENCES

New Challenges for Rural Areas and Agriculture of Poland in the 21st Century

Roman Kisiel, Renata Marks-Bielska, Renata Bialobrzewska

The functions of rural areas and agriculture changed with the passage of centuries. The traditional rural areas used to be multifunctional, but in a different way than it is at present. With specialization and technical changes in agriculture the productive and social functions of a farmer were subject to limitation. The landscape of Polish rural areas belongs to the least degraded one in Europe. The richness of natural resources, farm managing systems, the variety of folk culture and national traditions are important factors of a multidirectional development. This paper is an attempt to show the necessity for multifunctionality of rural areas and agriculture in view of the challenges faced by the farmer-entrepreneur in the 21st century.

Rural areas, agriculture, globalisation, integration, sustainable development.

Roman KISIEL. Professor, University of Warmia and Mazury in Olsztyn, Faculty of Economic Sciences, Department of Economy and Regional policy. Address: Plac Lodzki 1, 10-719 Olsztyn, Poland. E-mail: kisiel@moskit.uwm.edu.pl
Renata MARKS-BIELSKA. PhD, University of Warmia and Mazury in Olsztyn, Faculty of economic sciences, Department of Economy and Regional politics. Address: Plac Lodzki 1, 10-719 Olsztyn, Poland. E-mail: renatam@moskit.uwm.edu.pl
Renata BIALOBRZESKA. PhD, University of Warmia and Mazury in Olsztyn, Faculty of Economic Sciences, Department of Economy and Regional Politicy. Address: Plac Lodzki 1, 10-719 Olsztyn, Poland. E-mail: renatab@moskit.uwm.edu.pl

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SOCIAL SCIENCES

The Factors Influencing Direct Foreign Investments and Tendencies of Their Changes in Baltic States

Valdemaras Makutėnas, Danielius Skarbalius

The investments are one of the basic macroeconomic indicators. The growth of investments leads to the economical growth. Stimulation of the investments is one of the priority directions of the Lithuanian economy. Lithuania has become a leading location for foreign investors and a competitive centre for product sourcing in the region. The main factors are high – skilled employees, low cost alternative to production in the West, along with a stable and strong production springboard to the huge markets to the East. Added to this impressive economic growth, a stable currency, a great business environment and attractive incentives for investors in Lithuania’s free economic zones, all combine to make Lithuania the premier investment location in the Baltic region. The main lyders of investments countries are the USA, Sweden and Germany. The article analyzes the development of FDI (Foreign Direct Investments) and the climatic conditions for foreign investments, shows the conditions, which influence the different amount of the FDI in the Baltic States, and presents the positive and negative influence of the FDI on the economy of the country. Conclusions and proposals are formulated.

Direct Foreign Investments, Baltic States, Factors.

Valdemaras MAKUTĖNAS. Doctor of Social Sciences (Economics), assoc. prof. at the Economics Department, Faculty of Economics and Management, Lithuanian University of Agriculture. Address: University str. 10 LT – 53361 Akademija, Kauno raj. Tel. (8 37) 75 22 77, el. paštas valdasm@info.lzuu.lt.
Danielius SKARBALIUS. Doctor of Social Sciences (Economics), assoc. prof. at the Economics Department, Faculty of Economics and Management, Lithuanian University of Agriculture,. Address: University str.10 LT – 53361 Akademija, Kauno raj. Tel. (8 37) 75 22 77, el. paštas daniu@info.lzuu.lt.
Regional Peculiarities of Grain Growing Development: Economical Evaluation and Perspectives in Telšiai district

Daiva Makutienė

The article deals with the comparative advantage of Telšiai district in grain growing and also formulates the main tasks of grain sector development in the above-mentioned district. According to the research data the land – tenure of the above-mentioned district is not very productive and that is the main reason for rather low grain productivity in comparison to the land – tenure of Middle Lithuania and some other regions of fertile soil. The unstable political situation in Lithuania makes the subjects of agriculture decrease sown areas and change their species composition. The supply of harvest combines is rather poor especially in Mažeikiai district local administration where grain productivity could be very high. The main tasks of the sector development are the following: the intensive grain cultivation in Mažeikiai district local administration, the expansion of buckwheat area and the improvement of harvest – combain supply.

Regional specialization, productivity, buying up and processing, development of grain growing

Daiva MAKUTIENĖ, Dr. of social sciences (economics) acting assoc. professor Economics department, Economics and management faculty, the Lithuanian University of Agriculture. Address: Universiteto 10, LT– 53361 Akademija, Kauno rajonas. Tel. (8 37) 75 22 59. E-mail daivam@eko.lzuu.lt

The Role of Agritourism in Activation of Underdeveloped Rural Areas

Marek Marks, Emilia Marks, Iwona Polucha, Krzysztof Mlynarczyk, Agnieszka Jaszczak, Anna Siedlecka

The article presents the results of preliminary investigations carried out in the year 2000 among farmers providing tourist services in the region of Mazury, in north-eastern Poland. The survey completed by the farmers is part of a wider research on conditions for the rural tourism development in this region. Based on the assessment of existing agritourism enterprises, the authors report the following issues: the underlying motivation of farmers to enter agritourism business, possible economic profits and threats to agricultural production as well as the conditions, needed for successful development agritourism farms and rural tourists facilities. Agritourism may have major impact on rural economy and stimulate the development of rural areas. The results presented herein suggest that this type of tourism business generates additional or even alternative income for farmer families. It also encourages local populations to undertake other economic activities and make different investments in underdeveloped localities. For successful agritourism, the most essential factor is high standard accommodation and quality service at low prices. Another important aspect involves a wide selection of tourist attractions and opportunities for active relaxation.

Agritourism, rural areas, activation, multi-functional development.

Marek MARKS, professor (specificity: agronomy). University of Warmia and Mazury in Olsztyn, Faculty of Environmental Management and Agriculture, Department of Agricultural Systems. Address: Plac Lodzki 3, 10-727 Olsztyn, Poland. Tel (+48 89) 523 48 85, e-mail: marek.marks@uwm.edu.pl

Research of Human Resources Development in Rural Areas of Lithuania

Leonas Milčius

In pursuance of competitive agriculture development it is indispensable to pay substantive attention to the upholding of human resources in rural areas. The goal could be reached by setting a modern training and skill improvement system tailored for farmers and other rural inhabitants. This system, should stimulate the improvement of professional (vocational) skills of farmers and other villagers throughout their active life. It is a burning problem in the country, where general and special vocational education level of the rural workers is lower than that in urban areas. After land restitution process had started, many people having no agricultural background were engaged in farming. Under the guidance of the author, sociologic opinion poll was carried out in the years of 2001 and 2002. 1589 respondents produced their answers. It was established that agriculturalists lack the main knowledge and skills in the following fields: information technologies (computer literacy), business management
and use of the EU and other funds. Most of agriculturalists have not conceived yet the importance of specific fields of knowledge (cooperation, marketing, environmental protection). After assessment of the results of the questionnaire based opinion poll of farming population, standardizing acts on the issues of human resources development and other research works carried out by different authors, information is provided on educational and agriculturalists’ training institutions and their financing system. With regard to the conditions of our country, the organization of continuing vocational training of farmers and other villagers is expedient at different level of agricultural schools, at the centres of continuing vocational training of farmers. The highest qualification is obtained at the Lithuanian Agricultural Advisory Service and Scientific research institutes. Short courses organized in wintertime are the most preferred ones. It is worthwhile to encourage farmers and other villagers to follow even those programmes, which capacitate the creation of non-material (non-product) values improving general welfare. The analysis of state support system for continuing training of agriculturalists was made.

Human resources, long-term continuing training, training centres, training programmes, schools of agriculture, Lithuanian Agricultural Advisory Service.

Leonas MILCIUS. Doctor of sciences (technology), lecturer at the department of Administration and Rural Development, faculty of Economics and Management, Lithuanian University of Agriculture. Address: Universiteto 10, LT – 53361 Akademija, Kaunas district, phone/fax.: +370 7 75 22 14, e-mail LeonasM@zum.lt, leonasm@delfi.lt

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SOCIAL SCIENCES

Challenges of Euro-Integration in the Context of Political Culture of Lithuanian Province

Romualdas Povilaitis, Liudas Mažylis, Ingrida Unikaitė

In order to examine specifics of political culture of Lithuanian province and their influence on the motivation of voters, political information channels, instruments of political communication and political behavior - referendum on Lithuania’s accession to the European Union as well as on previous Presidential elections has been carried out in one of the rural territories of Kaunas region. Two sessions of focus groups (elites, and ordinary citizens) were held. Local and regional qualitative and qualitative research media content, as well as electoral results, have been analyzed, too. The research has shown that one motive is clearly dominating among ordinary citizens: problem of prices on agricultural production. Being disappointed by Lithuanian governmental policy, and due to lack of information on European matters, people express their uncertainty facing European integration. At the same time, elites seem to be better informed, express more motives in favor as well as against integration. Although prognoses of the EU accession referendum results were quite different according to different sources, factual results were, in general, in accordance with most of the prognoses. Political information channels during referendum campaign were varying not very much compared to Presidential election campaign: TV and radio were two most popular ones. According to the results of focus groups, the same instruments of political communication can lead to different results: for instance, TV clips during Presidential elections were supporting decision of essential part of electorate to vote in favor of support changes, when during referendum campaign TV clips in favor of the EU were interpreted by population as unconvincing ones. In general, formation of motives is a long lasting process, it can hardly be changed by short-term although massive referendum campaign.

Community, elites, electorate, Euro-integration, political culture.

Romualdas Povilaitis. Assoc.Prof. Dr. Head of Department of Culturology and Philosophy. Address: Studenitu 11-255, LZUU, Akademija, LT-4324, Lithuania. Fax: 837-75 22 71, e-mail: povilaitis@omni.lt
Liudas Mazylis. Assoc.Prof. Dr. Vice-Director of Institute of Political Sciences and Diplomacy of Vytautas Magnus University. Address: S. Daukanto 28, LT-3000 Kaunas. Fax: 837-203858, e-mail: liudas_mazylis@fc.vdu.lt
Ingrida Unikaitė. Master of Political Sciences. Assistant lecturer of Department of Political Science at the Institute of Political Sciences and Diplomacy, Vytautas Magnus University. Address: S.Daukanto st.28-200, LT-3000 Kaunas. Lithuania. Fax: 837-203858, e-mail: i.unikaite@pmdi.vdu.lt

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SOCIAL SCIENCES

Business Information Infrastructure in Rural Area

Daiva Rimkuvienė, Linas Stabingis

Sufficient and good quality internal and external information as far as possibility of rapid and not expensive communication are the main factors of successful development of business. Monographical and empirical research made
by authors of this paper shows that the level of business information infrastructure development in rural area of Lithuania and knowledge of rural inhabitants of information technologies possibilities are lower in comparison with those in cities.

Development of the separate components of Agricultural information systems is quite rapid. In process of its creation more attention is paid to the requirement of EU ACQUIS and information needs of authorities and less attention – to information needs of rural population.

This paper presents the results of empirical research of information needs of rural inhabitants for business development purposes, organization of rural population trainings to use IT and provides suggestions for development of business information infrastructure and information society in rural area.

Information and communication technologies, information society

Diversification of Farmer Activity: Problems and Possible Solution

Jurgita Rutkauskaitė

Diversification of economic activities in the countryside is conditioned by structural changes in agriculture, increasing attention to rural development, SAPARD support to farmers education and training, etc.

189 farmers farms in Alytaus, Lazdijų, Švenčionių, Vilniaus, Marijampolės and Tauragės districts were examined. 61 per cent of them diversified non-agricultural activities in their farm. One third of them diversified non-agricultural activities in their own farms, more than half of respondents – off the farm. The most popular were the activities related to agriculture: small scale processing and realization of agricultural production. Tourism was the most popular activity in localities of less-favourable to farming land.

The main causes impeding faster diversification of economic activities in farmers farms were insufficient capital, lack of credit, insufficient demand, unpredictable rates, lack of education.

Investment, farmers training and education, the increase of living standard of rural population were the main factors, determining the development of alternative activities in the countryside.

Agriculture, farmers activity, diversification.

Trends of Accounting Organization Improvement

Kostas Valužis, Milda Genienė, Stasė Palubinskienė

This article analyses theoretical and practical issues on improving the organization of accounting, which are closely related with the terminology of accounting, legal acts, types of accountability, and information needs for tax accountability and the information to management of enterprises. The research results indicate, that accounting objects in all enterprises are analogical. The balance sheet of all agricultural enterprises has the same rates. The article presents a brief overview of the formation and use of financial, tax and management accounting. The main trend of improving the organization of accounting is based on unification of the plan of accounts, as well as forms and principles of accountability in all spheres of activity inside the country and also on international level.

Organization of accounting, types of accounting - financial, tax, management, account list.
The Methodological Model of Micro- and Macro Evaluation of Labour Productivity as a Criterion of Agricultural Competitiveness

Vlada Vitunskienė

The suggested methodological model of labour productivity (as competitiveness indicator and factor) evaluation is based on the sustainable competitiveness concept. The paper of methodological approach consists of the following basic arguments:

1) the labour productivity must be measured either by gross output or gross value-added per unit of labour input measured by on full-time equivalent workers (“annual work units” – AWU) but not per worker person. This enables employment on agricultural holdings to be measured by full and part-time and combined employment. By conversion of the numbers of persons employed into full-time equivalent workers (‘annual work units’ – AWU), the data on working hours gives information on the actual volume of labour devoted to farming, the only valid measure of the labour contribution to agriculture, in view of the scale of part-time working;

2) the model distinguishes among valuation’s output or value-added at basic prices, at producer’s prices and at purchaser’s prices. The comparing of labour productivity measures based on gross output and / or gross value-added at basic prices and at market prices enables to identify the input of private initiative creating and strengthening the competitiveness and eliminates the influence of operating subsidies as government initiative.

Statistical and economical data of European Commission assessing the potential competitiveness of Lithuanian agricultural sector (as a whole) vis-à-vis other European Union countries by comparing labour productivity is examined in this paper. Lithuanian performance is significantly lower than the EU average. On either basis, Lithuania lags behind all the former candidate countries except Poland and Latvia (in 2002).

Sustainable competitiveness, labour productivity, value-added, subsidies.

Multifunctional Management of Waste from Animal Farms

Andrzej Eymontt

The main goal of the paper is the analysis of the existing technologies of the manure management and implementation of the new, ones, which decrease cost of manure management and take environmental protection into consideration. Additional problem is reduction of the glasshouse gases leaving animal buildings. We are trying to enrich manure storage systems by addition of dynamic composting in special cases completed with anaerobic fermentation technology. Anaerobic fermentation with dynamic composting is the most economic one and allows for good protection of the soil, surface and underground water. Total processing time takes about 21 days in the fermentation tank and 10 days in dynamic composting machine with additional production of biogas. Reduction of BOD₅, COD is almost 99% with ammonia and potassium utilized as fertilizers in the obtained compost. Reduction of the gases leaving animal buildings has been realized by biofilter, and reduction level is 100% for ammonia, 37% for hydrogen sulphide and 81% for carbon oxide. Both technologies are still developed in IBMER due to implementation of new equipment serving for farmers in the area of environmental protection. New methods and technologies of waste management and air protection are still developed in the European Countries. Very important problem is recycling of organic waste without pollution of water and soil, and management of residues from the field. Technologies of the co-digestion and co-composting allow farmers for fulfilling almost all environmental requirements and for proper management with additional profit from biogas and compost utilization that improve economy of farming. Implementation of the air filtering system in animal buildings leads to reducing atmosphere pollution by glass-house gases with parallelly decreasing energy requirements in animal farms. Both systems are complementary and may be implemented in the same time on the farms widening area of sustainable agriculture.
Farmers Decision Support Systems: Problems and Prospects

Algimantas Kurlavičius

The prospective integration of Lithuania into the EU and work under market conditions encourage looking for increasingly effective agricultural production management decisions. The universal farming systems used in agricultural enterprises and farmers’ farms provide agro business with the necessary data, however, their application to meet the specific needs of agriculture is limited. The presently introduced decision support systems give new possibilities to the farmer. The research data shows that it is the instrument for effective management of plant growing and livestock production with respect to environmental impact, which is useful for the farmer. In agricultural enterprises decision support systems are applied in the search for optimal decisions, comparison of the efficiency of possible decisions variants, selection of the actions applicable in concrete situations. They help to make rational decisions, save decision making time, increase reliability and reduces expenses. Further main trends of farmers’ decision support systems development are their intellectualization and integration into general agricultural enterprise information system.

A Perspective of Data Mining Use in Rural Areas

Reet Põldaru, Jüri Roots, Raivo Ruus

Data mining (DM) has emerged as visible research and development area. Application of DM in many fields of science and business is rapidly increasing. In this paper implementation of data mining methods in Estonian Agricultural University (Institute of Informatics) is considered and possibilities of application of data mining methods in rural areas are discussed. A detailed overview about decision tree induction method – CART (classification and regression tree) is presented. The CART regression tree method was implemented to analyze grain yield data of fifteen Estonian counties observed during the period of 1994…2001. DM methods (algorithms) and software packages may be used in data processing in rural areas. Studies on implementation of DM methods (algorithms) and software packages in agricultural research and business must be extended.

Computer Modelling in Forecasting Winter Wheat Growing Cost Price

Aleksandras Savilionis, Daiva Pyrantienė, Stasė Motuzienė
This article presents computer model for winter wheat growing cost price forecasting, wherein fertilizer norms, fungicide, stain, sowing time and seed amount have influence on winter wheat productivity and growing cost price. Results of recent experiments, carried out in Experimental station of LUA (1998-2001) are presented.

One of the ways to solve winter wheat productivity and growing cost forecasting problems is to use computer modelling. On the ground of these experimental results got II degree parabolic function and hyperbolic function. These functions are used in the made-up computer model. They shows links between winter crops growing technology parameters and harvest, and allows forecasting productivity and growing cost. Winter wheat productivity forecast computer model allows choosing optimal fertilizer norm, fungicide, sowing time and seed amount subject to forecasting productivity and growing cost of winter crop.

The computer model supports the idea that economical efficiency of grain trade increases fertilizer norms, early sowing and purposeful use of pesticides. In all senses great fertilizer norms significantly increase winter wheat harvest and herewith decrease 1 ton growing cost price.

Computer modelling, winter wheat, productivity, growing cost, forecasting.

Aleksandras SAVILIONIS. Doctor of technical sciences, associated professor, director of the Institute of Information Technologies, Lithuanian University of Agriculture. Address: Universiteto g. LT-53361 Akademija, Kauno raj. Tel. (8 37) 75 22 18, e-mail: savai@tech.lzuu.lt
Daiva PYRANTIENĖ. Doctoral student at Informatics department, Institute of Information Technologies, Lithuanian University of Agriculture. Address: Universiteto g. 10, LT-53361 Akademija, Kauno raj. Tel. (8 37) 75 23 94, e-mail: daivap@eko.lzuu.lt.
Stasė MOTUZIENĖ. Doctor of social sciences, associated professor, department of Informatics, the Institute of Information Technologies, Lithuanian University of Agriculture. Address: Universiteto g. LT-53361 Akademija, Kauno raj. Tel. (8 37) 75 23 94, e-mail: sm@eko.lzuu.lt.