INSTITUTE OF AGRICULTURAL ECONOMICS, BELGRADE, SERBIA

International Scientific Meeting

SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT IN TERMS OF THE REPUBLIC OF SERBIA STRATEGIC GOALS REALIZATION WITHIN THE DANUBE REGION - preservation of rural values -

Book of Abstracts



December, 6-8th 2012. Tara, hotel OMORIKA

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RURAL TOURISM AS A FACTOR OF RURAL ECONOMY DIVERSIFICATION IN THE REPUBLIC OF SERBIA

Radovan Pejanović, Gordana Radović¹

Abstract

The main hypothesis serving as the ground for this research is that in order to develop rural tourism, which is recognized as the main factor contributing to rural economy diversification, it is necessary to provide both strategic and financial support of the state. Taking into account that the role of the state in the Republic of Serbia vis-à-vis investing in rural tourism has been unsatisfactory so far, and that the assets were placed without a proper strategy, creating an integrated rural tourism product was proposed in this paper. For the purpose of this research, integrated rural tourism product is considered in a narrow sense, as a synergy of rural and event tourism, whose platforms are ethnographic and gastronomic events. It is necessary to direct the financial support of the state strategically towards in order to enable development of integrated rural tourism product. Further, by placing it properly on the local and international market, rural tourism development and rural economy diversification.

Key words: *rural tourism, rural economy, ethnographic and gastronomic events, integrated rural tourism product.*

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ANALYSIS OF SOUTH-MUNTENIA REGION, ROMANIA, WITHIN THE WIDER FRAMEWORK OF REGIONAL DEVELOPMENT¹

Ion Raluca Andreea², Dan Popescu Cristian³

Abstract

The paper presents the regional analysis of South-Muntenia Region, as a premise for underpinning the strategy of development for the above mentioned region. The research question is: What are the profile, infrastructure, population, and the main activities of the South – Muntenia Region? In pursuing this question, statistical data have been gathered and previos research has been analysed for describing the economic status of the region. It was possible to identify, within the region, both the more developed areas and the priority areas facing difficulties regarding environmental protection, unemployment, industrial restructuring, professional retraining, etc. Results show that there are regional disparities in this region, between the northern and southern counties. Thus, the northern counties, Arges, Dâmbovița and Prahova, are more developed and here are concentrated more industrial enterprises, representing such industries as chemical and petrochemical, machine building, food etc. The southern counties, Călărași, Giurgiu, Ialomita and Teleorman, are characterized by a predominantly agricultural activity.

Key words: regional development, regional policy, South-Muntenia

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SOME ENTREPRENEURS' SUCCESS STORIES FROM THE NORTH GREAT PLAIN REGION OF HUNGARY

Andrew F. Fieldsend¹, Gyula Vasvári²

Abstract

Agriculture is generally no longer the dominant sector in rural regions (at least in much of the European Union); indeed, in Hungarian villages, official data suggest that over 25% of jobs are in the manufacturing sector. However, the importance of non-agricultural rural entrepreneurship is often overlooked. This paper reports the results of interviews with representatives of five successful non-agricultural entrepreneurs in the North Great Plain region of Hungary. From these we conclude that continuing innovation is a key success factor, as are good management and related skills. Entrepreneurs have sought support from friends and family, and from the Chamber of Commerce and Industry, but business support from other sources has been limited. Constraints to entrepreneurship include an unstable legal background and complex taxation rules. If there are to be more 'success stories' similar to those described here, non-agricultural rural entrepreneurship must be given a much higher priority in the Hungarian policy agenda.

Key words: Entrepreneurship, innovation, business support, Hungary

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I SECTION

SUSTAINABLE DEVELOPMENT AS A MODERN DEVELOPMENTAL APPROACH IN PRESERVATION OF AGRICULTURE AND RURAL VALUES

EVOLUTION OF FOOD CHEMICAL STABILITY ACCORDING TO QUALITY GRADES

Adrian Stancu¹, Dragan Lukač²

Abstract

Products react different to internal and external factors during the production, shipping, preservation etc. This is due to their low or high level of chemical stability. In order to establish the evolution of food chemical stability in preservation process, a study was conducted on wine samples from the same vineyard and vintage, but which belong to two different quality grades. The wine samples were storaged at the same air temperature and relative air humidity and were tested in the same moments according to the specific period of validity. The chemical stability of physicochemical characteristics firstly was tested and then the stability of sensory characteristics. The results showed that the two wines have particular chemical stability for each characteristic.

Key words: *food, chemical stability, quality grades, physicochemical characteristics, sensory characteristics*

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THE EFFICIENCY OF TAXATION CONSIDERING THE IMPACT OF ENVIRONMENTAL TAXATION REGRESSIVITY

Adriana Florina Popa¹, Laura Brad²

Abstract

The environmental taxation is one of the most important economic areas as it brings about important revenues to the government. There is a problem though that in many countries, the environmental taxation is still regressive, that is the low income households have to pay a larger amount of money then the high income households. This article focuses on environmental taxation, especially in transport and energy's domains, pointing out the way that fiscal policy affects their regressivity or progressivity. It seems that in developed countries the environmental taxation is progressive, while in underdeveloped countries and emergency ones, the environmental taxation is regressive. Evidence is revealed by presenting Romania's characteristics in comparison with developed countries.

Key words: *fiscal policy, environmental taxation, progressive/regressive character, Romania, efficiency*

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THE BIOLOGIZATION OF FERTILIZER SYSTEMS IS THE WAY OF DEVELOPMENT OF SUSTAINABLE AGRICULTURE

Alexander Esaulko, Lyudmila Gorbatko¹

Abstract

This article gives the results of long-term researches in the long-term station included in the state register of the Russian Geographical network of experiences with fertilizers and other agrochemical means. On the basis of the received results the agronomical, economic and power assessment of efficiency of three of fertilizer systems is given:

- the recommended fertilizer system with a saturation of a crop rotation of NPK of 115 kg/hectares, including $N_{50}K_{58,75}K_{6,25}$ at NPK ratio = 1:1,18:0,13+5 t/hectares of manure.

- the biologized fertilizer system - focused on the maximum use of organic fertilizers with a saturation of a crop rotation of NPK-of 62,5 kg/hectares, also N 42,5 P20K0, at N:P:K ratio = 1:0,47:0+8,2 t/hectares of organic fertilizers, including 5 t/hectares of litter manure

- the rated fertilizer system is planned for obtaining the greatest possible productivity of crops.

We counted production efficiency of crops in a crop rotation depending on postaction of applied fertilizer system. We received conclusions on optimization of fertilizer systems.

Key words: *economic assessment of fertilizer systems, biologized fertilizer system, bioenergetic assessment of crop rotations.*

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TIMELINESS, QUALITY AND EFFICIENCY ARE THE PASSPORT TO SUCCESS OF SMALL AVIATION

Anatoly Kutsenko¹, Olga Shabaldas²

Abstract

The article presents the results of ground-based and aircraft spraying use at a struggle with pests, diseases and weeds in crops of winter wheat. It is established, that the use of the method aviation - aircraft SP-34 with certified equipment AMO-3 as a whole allows to achieve high efficiency of pesticides use along with reducing costs for their use. The aim of research was to study how ultralow-volume type of pesticides spraying influences the efficiency of protective measures against pests, diseases and weeds in crops of winter wheat through air method - plane - SP-34 with the use of certified equipment AMO-3.

Key words: *pesticides, aviation, ultralow-volume spraying, diseases, pests, weeds, thickness of the covering, efficiency.*

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PHYTOSANITARY MONITORING OF WINTER WHEAT ROOT ROT AS A FACTOR OF PLANT PROTECTION

Anna Shutko¹, Ludmila Tuturzhans²

Abstract

Found that in the three major agro-climatic zones of the Stavropol Territory complex root rot pathogens is represented mainly by fungi of the genera Fusarium and Bipolaris, and since 2009, and Gibellina cerealis Pass. The affecting root rot and harmfulness of the disease varies, depending on the varieties of winter wheat and soil and climatic conditions of cultivation.

Key words: winter wheat varieties, root rot, complex pathogens, harmfulness.

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LAND POTENTIAL

Branislav Gulan¹, Danilo Tomić²

Abstract

In this paper authors has researched utilization of land potentials in the world, Europe, Serbia and its ratio according to population. On the results of research authors remark that relation toward very important resources are not satisfied at the global and national level. Permanent grow worlds population from one side and limited land from other side must be very seriously warning for the creators of the national governments and wider union of states that responsibility relation in utilization of this resource.

Key words: land, population, non rational utilization

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POSSIBILITIES FOR DEVELOPMENT OF SUSTAINABLE LIVESTOCK PRODUCTION AT THE TERRITORY OF THE CRNA TRAVA MUNICIPALITY

Cvijan Mekić¹, Zorica Novaković²

Abstract

In the last decade great success was achieved in food production, which is result of the application of the scientific research results, and effort of the professional service. Development of biotechnology contributed to intensification of the animal husbandry, without considering the possible consequences. If adequate breeding technologies are not applied, livestock production can be very aggressive towards the environment, which imposed the need for precise definition of livestock production. Sustainable livestock production is defined as "production of livestock products that satisfies the need of human population in this moment, and which will satisfy the needs of future generations without degrading the environment and inducing environmental disturbances". Today everyone is interested in healthy food from different aspects: manufacturers and traders because of the higher price, consumers because of the health. Crna Trava municipality territory is area of unpolluted nature; therefore it is ideal area for organic healthy food production and organic livestock breeding (cattle and sheep breeding) development.

Key words: *Crna Trava, sustainable livestock production development, environment*

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ARABLE LAND IN ORDER TO INCREASE AGRICULTURAL EMPLOYMENT IN THE MUNICIPALITES OF THE SERBIAN DANUBE BASIN

Dana Bucalo, Svjetlana Janković Šoja¹

Abstract

Arable land, in the municipalities of the Danube basin in Serbia, with 77% of participation in the total of agricultural land, has a great influence on the agrarian development. The goal of this paper is to draw attention to the lack of exploitation of the land that is uncultivated or "resting" and to the possibilities of its exploitation as a factor of increase in employment in the agricultural sector by means of analysis of arable areas. Therefore the regressive analysis of the variables "arable land", "uncultivated or resting land" and "persons employed in the agricultural sector" in the municipalities of the Danube basin is observed in the paper in order to indicate the possibilities of a more complete exploitation of land with the purpose of employment.

Keywords: the municipalities of the Danube basin, the arable land, employment in agricultural, the linear regression model

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SCIENCE AND ECONOMY

Danica Micanovic, Veselinka Zecevic¹

Abstract

Knowledge, education and innovation drive economic development and lead cultural, social and economic prosperity of society as a whole. Legislation in the field of scientific and technological development, innovation and intellectual property activities in Serbia, is harmonized with European Union legislation, and provides the conditions for the creation, development and implementation of innovations and new technologies in the economy. This created the basis for the promotion and improvement of industrially applicable idea, raising the competitiveness of our products and to attract foreign investors. However, the connection of science and industry in Serbia has come to life and is quite flimsy. Small number of technology solutions, research results, the projects financed from the budget of the Republic of Serbia finds application in industry. The market valuation of creativity is a prerequisite for improving the level of technological development of the country, and it is therefore necessary systemic regulation of this area in Serbia

Key words: *knowledge, science, knowledge and technology transfer, industry*

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EMPLOYMENT IN AGRICULTURE AND LIFE IN RURAL AREAS? MIGRATION PREFERENCES OF AGRICULTURAL STUDENTS

Dejan Janković, Marina Novakov*

Abstract

This paper analyzes data from an empirical study that was conducted on a sample of 457 students of the Faculty of Agriculture in Novi Sad. The aim of this paper is to present demographic and migration problems in Serbia, main theoretical frameworks for understanding rural development and migration processes, respectively, complex relationships of various factors that may imply a decision regarding permanent or temporary migration of young people (students), and especially rural (student) population. The analysis is focused on the agricultural student population, their individual socio-economic characteristics, reasons for admission to study agriculture, expectation regarding employment, plans for permanent migration and others.

Keywords: young people in rural areas, migration, rural development

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COSTS OF COLLECTION OF THE CORNSTALK AS THE SOURCE OF ENERGY*

Dragan Milić, Nedeljko Tica**

Abstract

Biomass, as one of the sources of renewable energy, is an organic matter of vegetable or animal origin, which is used in the combustion process or in the converting process in the systems which produce other types of energy (electric, thermal). The research is oriented towards the establishment of costs of collection of the cornstalk as one of the criteria for evaluation of the economic aspects of production of energy from the cornstalk as biomass, and establishment of costs of collection of this type of renewable source of energy, which represents initial raw-material in the process of pellet production. The Autonomous Provence of Vojvodina, as characteristically agricultural area within the Republic of Serbia has great potentials for production of the energy from agricultural biomass.

Key words: *biomass, renewable sources of energy, the cornstalk, agriculture*

^{*} The research was preformed within the project: "Sustainable agriculture and rural development in the function of realization of strategic goals of the Republic of Serbia, within the Danube Region" financed by the Ministry of Science and Technological Development RS, III-46006.

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PROMOTION OF "GREEN MANUFACTURING" IN AGRIBUSINESS OF THE DANUBE REGION RURAL AREAS

Duško Jovanović¹, Slobodan Andžić²

Abstract

The education for environmental protection, in addition to timely and credible information, legislation and environmental eligible investments, rises as an important task, since it most directly affects the creation of environmental awareness and ecological behavior. The second pillar of the Danube Strategy - Protecting the environment in the Danube Region - focuses on the region's environment, closely monitoring the progress made in environment-related projects and activities. Cleaner production requires changes in behavior, responsible environmental management, development and implementation of appropriate policies and constant evaluation of different technology options.

Keywords: Cleaner production, Danube region, Agribusiness, Eco Marketing

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THE IMPACT OF ENVIRONMENTAL REPORTING INSIDE THE FINANCIAL AUDIT PRACTICES

Florin Dobre¹, Oana Georgiana Stanila²

Abstract

The scope of an audit of financial statements is to provide more pertinent information for decision making. This tendency develops in terms of a business environment continuously asking for more complex information. We have to acknowledge nevertheless, that some entities operate in domains where the environmental issues could lead to material impact on the financial statements. This happens not because the company is interested in protecting the environment, but because of the negative effects of not doing so. Therefore, the importance of an environmental matters analysis can not be denied, considering their impact on the financial statements and the audit mission. Our intention is to explore the involvement of audit profession in the environmental issues, as well as that of accounting professionals in this particular type of auditing, based on the assumption that there is a connection between the environmental reporting and the financial statements audit. We also plan to analyze the way the auditor reacts to specific environmental risks.

Keywords: *environment, financial statements, financial audit, accounting*

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ORGANIC FARMING IN BULGARIA: SOME RECENT EVIDENCE AND CONTRIBUTION

George Zheliazkov¹. Darina Zaimova²

Abstract

The vision recently promoted by the concept of sustainable economics has spurred some intensive debates and prominent research in various fields of social and economic life. It has become increasingly apparent that issues related to the growing world population and the increased demand for a quality food supply; sustain considerable challenges for policy-makers and public authorities, research community and society. This problem is two-fold since it calls for a renewed attention both towards practices of sustainable agriculture and enhancement of a knowledge-based economy. The present paper aims to shed light on organic farming in Bulgaria, following the recent tendencies in the legal framework and production conditions. Given its ability to effectively combine economic, social and ecological goals, organic production needs to be clearly recognized in terms of scope, performance and contribution to the sustainable consumption model.

Key words: organic production in Bulgaria, support policies, market regulation

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CONDITIONS AND POSSIBILITIES RECULTIVATION OF DEGRADED SOIL IN THE AREA MINING BASIN KOLUBARA $^{\rm 1}$

Gorica Cvijanović², Gordana Dozet³

Abstract

Soil is of particular importance in the concept of sustainable development. The pressurizing factors in loss of agricultural land in the Republic of Serbia and the expansion of urban and industrial areas, infrastructure and mining. The Corine Land Cover database analysis shows 2 to 351 ha yearly loss of agricultural land for the period 1990-2006. Development of coal mines is accompanied by numerous negative impacts on the environment, which requires the cultivation of degraded areas. The study was conducted on deposol soil type in RB Kolubara (Mining basin Kolubara) in order to determine the possibility of biological re-cultivation by different crop growing systems. It was found that the level of humus and nitrogen content in the soil, the abundance and activity of microbial populations can be increased by pure soybean production and inter-cropping with maize, sunflower and sorghum, using mineral fertilizer or manure. The calcification of the soil should also be implemented in order to diminish acid reaction, as well as regular monitoring of nickel levels, as its determined amount was greater than the maximum allowed

Keywords: re-cultivation, soil, fertilization, crops

¹The study is funded by the projects: "Multifunctional agriculture and rural development in the function of accession of Republic of Serbia into EU", no. III 46006, and "Improvement of sustainability and competitiveness in the organic crop and livestock production using new technologies and inputs", no. TR 31031 financed by the Ministry of Science and Environmental Protection of Republic of Serbia;

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USE OF ANDROCLINIUM REGENERALENTS FOR DEVELOPMENT OF GENETIC DIVERSITY OF TRITICALE

Inna Vysotskaya¹, Alla Krivenko²

Abstract

Success of adaptive crop growing is largely determined by an increase of field crops' species diversity based on a special biological method of fertility restoration of androclinium regeneralents of triticale for obtaining the source of selection material. Using this method provides creation of crop varieties which combine economic and valuable properties with adaptive ability. Cultivation of such crops will determine the management of natural and man-made factors in plant growing process in Central Ciscaucasia region.

Keywords: *adaptive crop growing, triticale, anther culture, androclinium regeneralents, fertility restoration, pollination.*

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THE ROLE OF SUSTAINABLE DEVELOPMENT AND ORGANIC FARMING IN PRESERVING AGRICULTURE AND RURAL VALUES

Jelena Birovljev¹, Biljana Štavljanin²

Abstract

As a key component of the development of Serbia, in addition to its economic importance, agriculture also has a remarkable social and ecological significance. The Sustainable Development Strategy of Serbia is based on three pillars - economy, ecology and society, which are appropriately related within an institutional framework. As an integral part of the concept of sustainable agriculture, organic farming can be represented as a significant opportunity for developing countries. In the final decades of the twentieth century, significant efforts were made to conserve and recover fairly degraded environment. Despite the current difficulties, organic farming is developing in line with market needs for high quality food produced using the latest technology with optimum use of natural resources, without the use of pesticides and with minimal waste generation. Organic production allows for greater economic gains, in terms of realized yields and investment, than conventional production. This article reviews the connection between sustainable development and organic farming, and the role of organic farming in the sustainable development strategy of Serbia.

Key words: organic farming, sustainable development, rural development, strategy

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PARTICIPATION OF WOMEN AND YOUTH IN SUSTAINABLE RURAL AND AGRICULTURAL DEVELOPMENT^{*}

Jovana Čikić, Marica Petrović¹

Abstract

Authors discuss the role of women and youth in sustainable rural and agricultural development. The idea of sustainable development of rural areas and agriculture is observed in a relation to the concept of neoendogenous rural development and multifunctional agriculture. At the same time, multidimensionality of the development is particularly emphasised as a crucial element in understanding the role of women and youth in the process. Basic idea is that the key element for the analysis of the women's and youth's role and participation in sustainable agricultural and rural development is the research of their power. Power derives from the resources which women and young people have, as individuals and as social groups.

Key words: *participation, rural women, rural youth, sustainable rural and agricultural development, power*

^{*}The paper is a result of the research within the project "Multifunctional agriculture and rural development in achieving the strategic goals of the Republic of Serbia within Danube region" (Ministry of Education and Science, project No. III 46006)

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CHALLENGES FOR SUSTAINABLE AGRICULTURAL DEVELOPMENT AND POLICY IN SERBIA¹

Koviljko Lovre,²Marinko Kresoja³

Abstract

Serbia has been going through a severe agricultural depression since early 1990s. It has now become clear that the transition process is far more complex and is likely to be much more protracted than was first expected. The agricultural policy of the socialist era resulted in considerable environmental problems, which are still present to varying degrees even after a considerable decrease in agricultural inputs during the past twenty years. On the other hand, Serbia still retains a significant proportion of Europe's biodiversity. The existing low input and low intensity agriculture practiced in this country can be perceived in certain respects as an opportunity for environmental sustainability in the agricultural sector. However, in view of future EU membership and accompanying policies, the question is to what extent the requirements of environmental protection and nature conservation will be taken into account in Serbian policy formation.

Key words: Agriculture, development, policy, Serbia, European Union

¹ This paper represents a part of the research on the project of the Ministry of Education and Science, Republic of Serbia, No. 46006, entitled: *Sustainable Agriculture and Rural Development in terms of the Republic of Serbia strategic goals implementation within Danube region*.

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LAND AND WATER MANAGEMENT AS ENVIRONMENTAL CHALLENGES IN AGRICULTURE

Maja Štrbac¹

Abstract

Climate change, land degradation and cyclical drought are challenges to sustainable development in many countries. Management of land and water resources have economic and social importance because it affects: economic growth, biodiversity, sustainable agriculture, food security, poverty alleviation in less developed regions, water availability, etc. Improving soil quality and improving water management requires a partnership and a joint initiative of the countries in the Danube region in order to preserve natural resources. The author analyzes the land, water resources and irrigation in the following countries: Germany, Austria, the Slovak Republic, the Czech Republic, Hungary, Slovenia, Romania and Bulgaria within the EU, and Croatia, Serbia, Bosnia and Herzegovina, Montenegro, the Republic of Moldova and Ukraine. Users and local communities should have ongoing cooperation in integrated land and water management (eg, identification areas and application of technology). Management of land and water are integrated in sustainable development, as response to global challenges.

Key words: environmental, management, land, water, agriculture

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LOWER DANUBE REGION AS A MODEL FOR APPLICATION OF THE CONCEPT OF SUSTAINABLE AGRICULTURAL DEVELOPMENT¹

Marijana Jovanović, Bojana Bekić²

Abstract

Sustainable development represents complex proces which permeates all aspects of human society. Application of the concept of sustainable agricultural development can lead to improvement of all natural resources due to reduction of chemical materials and fertilizers utilization, favoring of autochthonous plant and animal species and development of ecological production in rural areas. Region which is characterized by good natural preconditions for implementation of sustainable development concept is the region of the Lower Danube. Those precoditions are presented mainly by water potential of Danube River and protected natural area National Park "Derdap" with numerous endemic and relict species. Rational utilization of natural resources can enable sustainable development of this area in terms of production and services (agriculture, ecological food production, products with geographical indication, tourism, hospitality etc.). In this paper authors analyzed the state of main natural resources in the region of Lower Danube with the accent on biodiversity, land and water resources and their management. The authors gave directions for possible sustainable development of this area, with focus on rural areas and agricultural production.

Key words: Lower Danube region, sustainability, agriculture

¹ Paper is a part of research at the Project III 46006: "Sustainable agriculture and rural development in the function of achievement goals of Republic Serbia within Danube Region" and Project no. 179028 "Rural labor market and rural economy of Serbia - the diversification the income and reducing the rural poverty", which is financed by Ministry of Education, Science and Technological Development for period 2011-2014.

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SUSTAINABLE USE OF FOREST ECOSYSTEMS AND CLIMATIC CHANGES IN RURAL DEVELOPMENT*

Mihailo Ratknić, Ljubinko Rakonjac¹

Abstract

In the aim of the reduction of the disadvantages of the current global climate projections it is necessary to use the regional models and models of influnce in the forecasts in the aim of the quantification, accuracy and uncertainties. It is necessary to incorpate the results of these models in the activities which enable the timely adaptation to the climate change and their alleviation. Based on the models and scenarios it can be concluded that over a relatively short period the drastical change in the number and structure of the forest ecosystems in Serbia will occur. The previous concept of the multi-purpose planning system in each individual goal and methods for the achivement must be analyzed separately in regard to the climate change as one of the basic factors of risks. Adverse effects of the climate change in the forest ecosystems and environment in general, these are not the goals for future but the obligations of the present.

Key words: *cllimate models, acumulated temperature, biotope, climatic scenarios, forest managemant*

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METHODS FOR DETERMINATION OF BIOMASS ENERGY PELLETS QUALITY^{*}

*Miladin Brkic, Todor Janic*¹

Abstract

In this work are, on the base of existing standards and collected literature, described the methods for laboratory quality examination of biomass energy pellets after pressing and cooling of pressed material. On the base of existing methods, examinations on shape and dimensions, moisture content, bulk density, fine particle content, wipe away, ash content, calorific value of energy pellets were done. On the base of examination result, a range of data is gathered and physical characteristics of biomass energy pellets are estimated on the base of existing literature and standards. Comparing obtained results with existing standards and literary sources it can be said that the methods for examination of mentioned parameters are acceptable, because there were no greater deviation from regular. It is necessary to quickly reach a national standard for defining quality energy pellets and briquettes of biomass. National standards would regulate the methods for testing the quality of energy pellets and briquettes of biomass.

Key words: Biomass, pellet, energy, standards, methods

^{*}This paper is part of the research on project III 46006th.

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ANALYSIS OF PRODUCTION DYNAMICS FOR THE MOST IMPORTANT CROPS IN THE MUNICIPALITIES OF THE DANUBE REGION

Mirjana Krivokapić¹, Ana Anokić¹

Abstract

Twenty-six municipalities, which belong to the different regions of the Danube region and lie on Danube, have been observed in this paper. An analysis of the most important crops: wheat, corn, beans, potato, apple, plum and grapes has been preformed. As it is shown in this paper, analysis of the dynamic phenomena can be performed, not only by using relative numbers and trend method, but also by using the matrix of growth. Method of the matrix of growth was used to examine the process of production of major crops in the period from 2001 to 2010 and to forecast the total production for all the municipalities that lie on Danube for 2011 and 2012. The aim of this work is to apply the obtained results, based on the analysis of the matrix of growth, to improve the agricultural production of this part of Serbia, which is strategically important and naturally abundant.

Key words: *production, crops, municipalities, Danube region, the matrix growth*

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PERSPECTIVES OF FORESTRY DEVELOPMENT ACCORDING TO SUSTAINABLE DEVELOPMENT IN THE SERBIAN DANUBE REGION¹

Nada Mijajlović, Slavica Arsić²

Abstract

Serbian Danube region is located in the Danube area, with units marked as Upper, Middle and Lower Danube. This paper aimed to review the state of the forests in the Serbian Danube, emphasize the importance of certain forest ecosystems such as rainforests Iron Gates, forest of reserve in Upper Danube, forests of Fruska Gora and the need to protect and preserve the forest and improve the circuits on the principles of sustainable development. The paper considers the individual municipalities for each of the units of Danube region in Serbia, presented and commented upon data collected from statistical databases that were available at the state level as well as the available literature.

Keywords: *forestry, sustainable development, national park, a nature reserve, the Serbian Danube.*

¹ The work is a part of integrated and interdisciplinary research project No 46006: "Sustainable agriculture and rural development in the function of accomplishing strategic objectives of the Republic of Serbia in the Danube region", funded by the Ministry of Education, Science and Technological Development of the Republic of Serbia, in the period 2011-2014.

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TECHNOLOGICAL PROCESS OF EXTRUSION AND ITS EFFECTS OF NUTRITIVE VALUE OF FEED FOR ANIMALS

Nikola Puvača, Vladislav Stanaćev¹

Abstract

Throughout the world as well as in Serbia, different thermal processes are used for improving nutritional value of food and feed products intended for human and animal consumption. Food processing is an extremely important in developed and non-developed countries. Due to rapid global population growth, severe food shortages could be faced. To prevent this, food and feed production must be increased through application of new technologies in biotechnology, that is, bio-industry. Technological parameters of extrusion process, quality of feed after extrusion and major transformations in feed structure occurring during thermal treatment are presented. Development of animal production is, however, impeded due to difficulties caused by continuous rise of feed prices and occasional shortages of protein feeds. The aim of this paper is to present the effect of extrusion on the nutritive value of feed: soybean, rapeseed and corn.

Keywords: technology, extrusion, quality, nutrition, feedstuffs, animals

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SUSTAINABILITY OF DAIRY FARMING SYSTEMS IN CENTRAL SERBIA¹

Rade Popovic², Marija Knezevic³

Abstract

Two dairy production systems with biggest share in total milk production in Central Serbia are small farms with tie stall barn and small farms with grazing period. In the article are examined their main system characteristics, sustainability and integration in dairy supply chain. Three dimension of sustainability were explored by chosen indicators on farms sample in Kolubara district. Economic sustainability is low since average entrepreneur's profit is negative for both production systems, although small dairy farms with grazing period encountered less negative profit because advantages in feeding costs. Rate of dairy production systems viability is 25%. Social sustainability to get dairy subsidies. Demographic viability is low, especially for small farming system with grazing period, where it is 25%. Small farming systems are dispersed over all territory and don't make big pressure on ecology and natural resources.

Key words: dairy, family farms, system, sustainability, Serbia

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ANIMAL GENETIC RESOURCES IN THE FUNCTION OF SUSTAINABLE AGRICULTURAL PRODUCTION

Radica Djedović*, Gligorije Trifunović**

Abstract

The breeding of high productive breeds of farm animals in intensive conditions resulted in the fact that in the last fifty years over 65% of autochthonous breeds became endangered, while a considerable number of low productive, but more resistant breeds and strains disappeared. In a current concept of sustainable use of genetic resources the protection of these breeds has multiple importance, primarily genetic (preservation of natural variability), geographical, cultural-historical, economical and other. A key element of previous strategy of preserving was in-situ and exsitu conservation. By development of molecular and genomic selection the isolation and identification of desirable genes associated with specific phenotypic characteristics, as well as measuring of genetic distance which enables ranking of breeds and strains within one breed will be increasingly in use. Program of preserving and protection of animal genetic resources in Serbia commenced in the nineties of the last century and in that period the Law which conceives the making of the List of genetic resources of farm animals was passed along with the way of their preserving and keeping a corresponding Register of autochthonous breeds. This paper points to the importance and methods of preserving the existing animal genetic resources and gives a description and population trend of the most important autochthonous breeds in the Republic of Serbia.

Key words: animal genetic resources, conservation, sustainable agricultural production

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AGRICULTURE, SUSTAINABILITY, CLIMATE CHANGES AND THE CRISIS OF ENERGETIC RESOURCES IN THE ECONOMY OF THE 21ST CENTURY^{*}

Radojica Sarić¹, Radoja Janjetović²

Abstract

In today's world, the climate changes and the crisis of energetic resources belong to a group of the most current and most significant problems which jeopardize modern mankind and life on Earth. These two mutually intertwined problems on the global level represent a great threat to the world's economy of the 21st century from the aspect of further quantitative economic growth and sustainability of modern mankind. Their combined influence with multiple destructive consequences especially affects food production in the world and represents a limiting factor for agriculture on its way to sustainability. That is why observing agriculture within the economy of the 21st century becomes of strategic significance in the goal of creating security, i.e. sufficient food production and reduction of poverty in the world, and in the function of achieving sustainability.

Key words: *climate changes, crisis of energetic resources, economy, agriculture, sustainability, poverty*

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OPPORTUNITIES FOR DEVELOPMENT OF TOURISM WITHIN THE AREA OF FRUŠKA GORA^{*}

Sanja Đukić, Danica Glavaš-Trbić¹

Abstract

This paper analyzes the possibilities of tourism development in the area of Fruška gora. The area of Fruška gora is the lower mountain massif in Vojvodina with a total area of 13.430,01 hectares. At the heart of this area there is the National Park "Fruška gora", and in a broader scope, there are predominantly rural-type settlements and agricultural land used in an extensive and intensive way. The main economic activity of the area is agriculture, and to a lesser extent, tourism. The presence of the National Park in this area emphasizes the issue of sustainable development of Fruška gora, in that direction economic activities are subordinated to the principles of sustainable development. The authors conclude that sustainable tourism is an adequate and the most favorable model for performance of tourist activities in the area.

Keywords: Fruška gora, development, tourism, rural development.

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APPLICATION OF SUSTAINABLE DEVELOPMENT CONCEPT

Snežana Trmčić, Marko Trmčić¹

Abstract

Applying the concept of sustainable development implies harmonized economic and social growth, while respecting the principle of protection of natural resources of the environment. Standards of human life should be based on the capabilities of the environment without depleting the resources which need to remain of unchanged quality and efficiency for future generations to use. The concept of sustainable development and Agenda 21 are terms that have become a leading ones in the field of policies for maintaining a healthy environment after the United Nations Conference on Environment and Development held in Rio de Janeiro from 3 June to 14 June 1992. Agenda 21 represents a manual for action in different areas (soil protection, agriculture, forests, water, air, etc.). and lists the main social groups whose activities are of key importance for the sustainable development of the country. Purpose of this paper: We pointed out the importance and application of the concept of sustainable development, with particular emphasis on its application in the Republic of Serbia.

Key words: SD in Serbia, Agenda 21

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MACRO-REGIONAL STRATEGY FOR THE PURPOSE OF CONTEMPORARY CONCEPT OF SUSTAINABLE DEVELOPMENT*

Sonja Jovanović¹, Snežana Radukić²

Abstract

The concept of sustainable development is incorporated into all contemporary development policies and strategies. Therefore, there is a mutual complementarity between the goals of different strategies (Europe 2020, Danube Strategy, Strategy for the Baltic region) and sectoral policies (agricultural policy, environmental policy). The subject of research in this paper is analysis of key dimensions of the sustainable development concept as a basis for the creation of contemporary development strategies. The aim of this research is to highlight the importance of macro-regional approach (for example, macro-regional Strategy for Danube region) to solving important and common issues in many countries, with emphasis on the challenge of improving agriculture, as well as preserving and improving the natural environment.

Keywords: sustainable development, macro-regional strategy, Danube strategy, agriculture, European Union, Republic of Serbia.

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THE ROLE OF AGRICULTURAL EXTENSION IN AGRI-ENVIRONMENT POLICY IMPLEMENTATION¹

Stojan Kostić²

Abstract

The concept of multifunctional agriculture came as a result of large food surplus and growing pressure of agricultural production of the `80s towards the environment. Reformation of agriculture meant changes in the role of agricultural extension. As an important instrument of agricultural and rural development, extension was ought to solve complex problems ahead of the new concept by "producing" new knowledge. The new role came to the fore by formulation of agri-environmental policies and introduction of programs and measures necessary for achieving environmental goals. Examples of British agri-environmental programs (AEPs) showed that institutional framework, social and human capital, choice of advisory methods, etc. are necessary prerequisites for achieving environmental goals. Serbia has strengthened institutional framework necessary for implementation of AEP, but missed the opportunity to "tackle" some serious problems (lack of social capital in rural areas, negligence of the impact of extension on the processes of social learning, deliberation and negotiation).

Key words: *agricultural extension, agri-environmental program (AEP)*

¹ This paper is a result of a research within the project "Sustainable Agriculture and rural development in function of achievement of strategic goals of Republic of Serbia in the Danube region" (III 46006), financed by the Ministry of science, education and technological development of Republic of Serbia.

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INVESTMENTS AND COSTS OF IRRIGATION IN FUNCTION OF AGRICULTURAL SUSTAINABLE DEVELOPMENT^{*}

Svetlana Potkonjak, Tihomir Zoranović¹

Abstract

The objective of this paper is to analyze the necessary investments and costs of irrigation in regional and local systems as one of the prerequisites for the intensive development of agriculture. In the Danube area in Serbia, there are possibilities for the construction of several regional irrigation systems. The funds needed for building these systems equal between \notin 3000 and \notin 5000 per ha, depending on the chosen technical solution and the size of the system. Investments in local irrigation systems which belong to agricultural ownerships are considerably lower, provided that a water intake is provided, and that the costs range between $\notin 3.000$ and $\notin 4.500$ per ha. In this area, there is a significantly larger number of smaller ownerships whose wish it is to solve the problem of irrigation. Because of this, their organized inclusion in the regional irrigation systems (those already built as well as those planned) is a problem which needs to be solved. The costs of irrigation depend on the technology chosen and water consumption, and they range between €250 and \notin 400 per ha. The ways in which the construction of these systems is financed, as well as the methodology of the calculation of the price of 1 m^3 of water, also have an influence on the costs of irrigation. Because of the possibility of water shortages, a full cost recovery method is advised.

Key words: regional and local irrigation systems, investment, costs, financing

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RENEWABLE ENERGY AND GREEN ECONOMY AS A SUPPORT TO RURAL AREAS¹

Svetlana Roljević, Predrag Vuković²

Abstract

Green economic development is based on the definition of national resources and identifies the most appropriate sectors of the state economy on its path to achieve sustainable development. As a realistic and promising way to achieve green economic growth in rural areas this paper highlights the use of renewable energy and agricultural biomass. The potential for farming and manufacturing, as the major source of agricultural biomass for the period 2001-2010 is analyzed, covering the Metropolitan area of the Belgrade-Novi Sad, which for this survey includes 11 municipalities. It was found that the most realistic source of agricultural biomass according to the current seeding structure, lays in the production of cereals, industrial crops and fruit. Appropriate use of these resources could attract new investments in rural areas, labor employment, less dependency on the national energy networks and revenue diversification on farms.

Keywords: *Sustainable development, green economy, renewable energy, rural development*

¹ The paper represents part of a research project 46006: "Sustainable agriculture and rural development in order to realize the strategic goals of the Republic of Serbia as part of the Danube region" and 179028 "Rural labor markets and rural economy of Serbia - the diversification of income and reducing rural poverty" funded by the Ministry of Education and Science of the Republic of Serbia.

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INFLUENCE OF ANTHROPOGENIC FACTORS ON THE PARAMETERS OF THE COMMON BLACK EARTHES

Valery Tskhovrebov¹, Vera Faizova²

Abstract

The number of microorganisms can be used as an indicator to determine the direction of the process of soil formation. The needs to study these changes are related to the conservation and improvement of soil fertility.

Keywords: soil formation, black earth, raw land, arable land, the phase of vegetation, microorganisms, ammonifiers, cellulolytic microorganisms.

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CURRENT STATE AND PROSPECTS OF THE SERBIAN AGRICULTURE¹

*Vedran Tomić*², *Nikola Ljiljanić*²

Abstract

The current state and the prospects of the Serbian agriculture are defined by a large backlog of problems that have occurred over time and became more and more severe. In the race with the competition from day to day agriculture is losing momentum, strength and potential for growth. Ownership structure, the problems of competitiveness and the farm disorganization, unregulated agricultural markets, rural depopulation and the role of the state are aspects which show the current state of agriculture. The focus of the observation is the farm, as the most sensitive subject. Highlighted are a number of weaknesses that indicate that small and medium-sized farms do not have a mechanism for adjusting to the increasingly frequent price fluctuations and market trends. Mitigating the negative consequences and the gradual improvement of agriculture, primarily related to survival and development is possible primarily through the increased activity of the state in the form of greater access to affordable credits, initiating the establishment of farmer associations and creating various programs for returning young people to rural areas.

Key words: *ownership structure, the competitiveness of farms, agricultural commodity market, rural depopulation, the role of state, transition.*

¹ The paper is a result of the project "Sustainable agriculture and rural development in the function of realizing the strategic goals of the Republic of Serbia within the Danube region "(III-46006) and the project "Rural labor market and rural economy of Serbia - the diversification of income and poverty reduction "(OI-179028) funded by the Ministry of Education, Science and Technological development of the Republic of Serbia.

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THE IMPROVEMENT IN BIODIVERSITY AND SOIL FERTILITY THROUGH THE ADOPTION OF ORGANIC FARMING¹

*Vladimir Filipović*², *Vladan Ugrenović*²

Abstract

The globalization of agriculture, the adoption of 'superior' genes and monocultures in farm fields all around the world, the increasing demand for food, and climate changes on planet Earth are only some of the reasons and causes of rapid biodiversity loss and agricultural land degradation. Regrettably, profit is the reason why many developing countries and some developed countries are rapidly destroying their centuries-old biodiversity heritage and hundreds of hectares of fertile land. The recognition of organic farming as an important segment of sustainable agriculture, puts the conservation and improvement of agrobiodiversity at forefront. Furthermore, certain directives and activities of the European Union focus explicitly on biodiversity and agro-biodiversity. Thus, from the very beginning of the development of organic agricultural systems, biodiversity has been considered a key issue, equally important as soil fertility.

Key words: *biodiversity, fertility, soil, control, methods, organic farming.*

¹ The paper represents a part of the research results within the Project of Integral and Interdisciplinary Research No. 046006 "Sustainable Agriculture and Rural Development in the Function of the Accomplishment of Strategic Objectives of the Republic of Serbia in the Danube Region", funded by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

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PRODUCTION OF THE TRADITIONAL BUILDING MATERIAL AS AN ELEMENT OF RURAL DEVELOPMENT^{*}

Vladislav Zekić, Joanua Ranogajec¹

Abstract

Building material should provide rational energy consumption and necessary living conditions. Use of traditional materials and recycling of waste improves preservation of resources since the exploitation of mineral raw-material is directly reduced. In the foreseeable future, the rural sector will not be able to rely on development of high technologies, which means that it has to be developed within more affordable activities. Production of ceramic tiles and bricks implies production of approximately 5% of waste. Such substances can be smashed and used for preparation of mortar which has common ecological advantages. Besides, since the reed is traditionally used in Voivodina, it is necessary to support its exploitation as building material. Development of the observed activities should be supported through the establishment of funds and institutions for favorable crediting of new plants and development of the existing ones, through stimulation of use of alternative building materials and development of tax exemptions and other exemptions.

Key words: recycling, traditional building material, rural development.

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PROSPECTS AND CHALLENGES FOR THE DEVELOPMENT OF BEEF CATTLE BREEDING: CASE STUDY OF BULGARIA

Yuliana Ivanova Blagoeva-Yarkova^{*}, Roumen Ivanov Otuzbirov^{*}

Abstract

During the last years the role of the animal husbandry production for society has considerably changed. Beef cattle breeding in Europe face the challenge to work out a new conception for an efficient and sustainable animal raising and feeding in the area of beef production. The conception that economic, social and ecological results in animal husbandry production are inseparable and positively related has been winning recognition. During the last 20 years a process of massive reorganization has been done in Bulgarian agriculture which has led to changes in cattle breeding: a decrease in the number of farms and animals raised, and, respectively, of the production obtained. Emphasis must be put on to the trend towards increasing the producers' interest in beef cattle breeding. This determines the special attention the present study pays to the strong points and weaknesses of this sector in Bulgaria, as well as to the opportunities and challenges it faces.

Keywords: beef cattle breeding, Europe, prospects, Bulgaria

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DETERMINANTS OF SUSTAINABLE AGRICULTURE AND ORGANIC FOOD PRODUCTION IN SERBIA

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Abstract

This study presents the conditions and possibilities of sustainable agriculture and the organic food production in Serbia. The concept of organic agriculture was considered in the function of the organic food production. The principal characteristics of adjustment of cropping practices and procedures of establishing and realisation of the organic food production are pointed out. Furthermore, biological control in the realisation of the organic agricultural production is indicated. Fundamental procedures of biological control in organic agriculture are related to providing quality of soil, water resources and feed. Moreover, the alternative forms of crop protection products are indicated. Specificities of alternative programmes are studied with the aim to produce organic food. The necessity to adjust the education of producers and experts to perform the organic food production is also indicated.

Key words: *sustainable agriculture, organic production, organic food, agroecology, biological control, organic manure*

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II SECTION

STRATEGIC PLANNING AND INSTITUTIONAL-POLITICAL DIMENSION OF AGRARIAN AND RURAL DEVELOPMENT

CONSIDERATIONS REGARDING PROJECT RISK MANAGEMENT IN AGRICULTURE

Carmen Nadia Ciocoiu¹, Răzvan Cătălin Dobrea²

Abstract

Risk and uncertainty are inherent in agriculture in usual activities and, especially, in projects. As consequence, all the experts from agricultural field are increasingly seeking practices, tools and effective strategies to cope with these inherent risks. Given these needs, the research aims to identify the most appropriate definitions, methods and risk management methodologies that can be applied in agriculture. The paper presents the definition and sources of risk in projects and realizes a classification of the risks corresponding to each stage in the life cycle of a project. The most important elements and the specific aspects are described for each stage of the risk management – the identification, the evaluation, the response, the monitoring and control of the risks. Also are presented the phases and the implementation levels of a complex methodology for project risk management. As sources of information research is based on secondary data use, observation and interpretation.

Key words: *risk management, identification, evaluation, monitoring and control*

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THE HUNGARIAN EXPERIENCE OF FARM ADVISORY SERVICES

Erika Székely¹, András Molnár²

Abstract

Farmers have to face continuously with new challenges, which require appropriate knowledge gained one way or the other. The picture based on statistics and interviews show significant lagging of farmers training and knowledge. If appropriately configured and ran Farm Advisory Services (FAS) could play a central role in the knowledge transfer process. However, our finding indicate that overlapping roles and inadequate motivations undermine to serve the stated purposes. In the short run institutional reforms are needed to clarify the roles and responsibilities of the FAS stakeholders. Considering international tendencies, the long run goal should be a system with increased efficiency with flexibility and market driven focus.

Key words: knowledge, advisory/extension services, agricultural policy

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SOME ROMANIAN EXPERIENCE IN ACHIEVING THE BEST COMMON AGRICULTURAL POLICY RESULTS. HOW MUCH HAS THE AGRICULTURAL SECTOR HAS BENEFICIATE?

Jean Andrei¹, Dorel Dusmanescu²

Abstract

Adopting the Common Agricultural Policy (CAP) has represented a major challenge for Romanian agriculture and it has generated massive changes on nation agricultural sector. This paper makes a short and descriptive analysis regarding the CAP effects on Romanian agriculture during the accession period, in general context of valuing national agricultural potential. It is analyzed some of the effects on the inland agricultural system on the new CAP requirements.

Key words: agricultural, direct payments, market measures, CAP

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REFORM OF MODERN AGRICULTURAL EXTENSION SERVICE

Marija M. Nikolić, Jasmina Arsenijević¹

Abstract

The trends in transformation of modern agricultural extension services (AES) are analysed in the paper and pointed to different forms of this service in the world. The advantages and disadvantages of some development strategies of AES are underlined and presented the examples of best practice in reform of extension work in agriculture. The observed trends of increased private sector participation in extension and establishment of the so-called institutional pluralism is generally considered desirable, since it increases the quality of the services provided, but there are some limitations regarding total privatization of AES, which will also be discussed in this paper. Therefore, it is extremely important that the public sector continually participate in the establishment of an adequate quality control system of advisory work in agriculture.

Key words: *agricultural extension service, models of organization, reform, institutional pluralism.*

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INTEGRATION OF RETURNEES AFTER READMISSION IN TERMS OF SUSTAINABILITY OF RURAL AREAS IN SREM¹

Nada Kosanović², Snežana Janković³

Abstract

Based upon the Readmission Agreement, the Republic of Serbia initiates, integrates and coordinates the contracted activities in order to integrate efficiently returnees and members of other vulnerable social and migrant groups. Key words are readmission⁴ and reintegration⁵. The paper focused on returnees (citizens of the Republic of Serbia who do not fulfil or no longer fulfil conditions for obtaining temporary protection of Western European countries), as well as members of other vulnerable social and migrant groups. The paper proposed certain measures and activities for establishing an agricultural educational centre for returnees, helping them to integrate in the legal, social and economic system of the Republic of Serbia, which would contribute to revitalization of rural areas and local agriculture.

Key words: *educational centre, readmission, reintegration, returnees, agriculture*

¹The paper came as a result of the Project "Sustainable Agriculture and Rural Development in Terms of the Republic of Serbia Strategic Goals' Implementation within Danube region" (III-46006), funded by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

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⁴Readmission (coming from re-admission – the act of admitting someone again) is a procedure of returning and accepting people who do not fulfil or no longer fulfil conditions for entry or staying at the territory of another country.

⁵Reintegration of returnees, carried out by the state bodies and local self-governements of the Republic of Serbia, international organizations and NGOs, includes activities taken in order to enable returnees to access to all rights and to become a part of the society, preventing in this way secondary migration (re-departure to other countries).

SOME CHARACTERISTICS OF RURAL AREAS IN FUNCTION OF RURAL DEVELOPMENT

Sreten Jelić¹, Tatjana Jovanović²

Abstract

Paper suggests some characteristics of rural areas in function of rural development. Rural areas cover about 85% of Serbian teritory and in their lives 42% of total population. Paper subject is the definition of rural areas, balance of development and programs and measures of rural development. Accordingly in the papar are used the following methods: document analysis, comparative method, observation and statistics. Objective of this paper is to emphasize the govwing role of rural areas in the rural development. Results of the paper suggest on the division of the territory of the Republic of Serbia on the basis of statistical nomenclature of territorial units, the level of rural areas with the policies and programs of regional rural development.

Key words: *characteristics of rural areas, rural development, measures, programs, regional development*

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PRODUCTION AND EXPORT POTENTIAL OF SERBIAN AGRICULTURE IN PROCESS OF EURO-INTEGRATION¹

Stanislav Zekić, Miloš Tošin²

Abstract

Due to the importance it has in the economy and foreign trade of Serbia, agriculture will be one of the most important chapters during the upcoming pre-accession negotiations in the process of European integration. In this context, the problem is the low competitiveness of agriculture in Serbia, which in basic production performance lags significantly behind the EU countries. This is to a large extent caused by unfavorable resource structure and extensive character of Serbian agriculture. Inadequate production characteristics are reflected in the export performance of agriculture in Serbia. Despite the positive foreign trade balance, Serbia has a relatively low volume of agricultural exports in compare to the used labor and agricultural land.

Key words: Agriculture, Production performances, Agrarian policy, Serbia, European Union.

¹ This paper represents a part of the research on the project of the Ministry of Education and Science, Republic of Serbia, No. 46006, entitled: *Sustainable Agriculture and Rural Development in terms of the Republic of Serbia strategic goals implementation within Danube region.*

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EVOLUTION OF RURAL DEVELOPMENT POLICY IN BOSNIA AND HERZEGOVINA

Stevo Mirjanić, Gordana Rokvic¹

Abstract

The objective of this research was to analyze the evolution of the rural development policy in BiH. Due to the different levels of authority over the management of rural development, a comparative analysis of rural development policy was conducted at the national, and subnational levels. The results of the analysis confirm that B & H does not have a common policy for rural development. The process of harmonization of RD policy at all government levels is in progress. By comparing the structure of support for rural development at the entity level in Bosnia and the EU framework for supporting rural development, significant differences are noticed. Given the current prospects of development in BiH, simply copying the model of rural development as it exists at EU level, would not be sufficient or adequate measure to improve conditions in rural areas in BiH.

Key words: *evolution, rural development policy, agriculture budget, measures of support*

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IMPORTANCE OF COMMODITY DERIVATIVES FOR SERBIAN AGRICULTURAL ENTERPRISES RISK MANAGEMENT^{*}

Vladimir Zakić¹, Vlado Kovačević²

Abstract

The transition to market economy in the agricultural sector of Serbia reinforces the need for the development of market mechanisms that would allow agricultural producers production planning, marketing, and hedging. The object of this paper is to study and analyze the relevance of commodity derivates for the development of agricultural enterprises in Serbia. Establishment and development of commodity derivatives (futures and options) in Serbia will enable agricultural companies to secure the price of agricultural products prior to harvest / picking. This research is based on two most important methods: historical method in commodity exchange development analyzes and the comparative method which is applied in the analysis of experiences of countries in transition and developed commodity exchange systems. Commodity derivatives market leads to an increase in the overall production and trade volume, but also lower interest rate on loans to the agricultural sector.

Key words: *Commodity exchange, futures, options, commodity derivatives.*

^{*} This paper is a result of the research projects No. 179028 - "Rural labor market and rural economy of Serbia - Income diversification as a tool to overcome rural poverty" financed by the Ministry of Education and Science of the Republic of Serbia

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LOCAL STRATEGIC PLANNING AS A FACTOR OF REGIONAL DEVELOPMENT IN THE REPUBLIC OF SERBIA

Zoran Njegovan, Katarina Marković¹

Abstract

The paper deals with the role and importance of local strategic planning as one of the factors ensuring balanced regional development and macroeconomy stability. Following the latest international experiences in the area of regional development and planning in market oriented economies, the authors point out that the reform of local government represents one of preconditions that have to be fulfilled in order to ensure the efficient functioning of local strategic planning in the Republic of Serbia. The environment encouraging local development has been created by the adoption of relevant laws. Pursuant the above mentioned the paper deals with "good governance" concept as well as with model of local strategic planning in the Republic of Serbia. Strategic planning process, supported by the relevant laws should enable the citizens of Serbia to achieve a high standard of living.

Key words: *regional development, local development, strategic planning, administration, local government.*

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AGRARIAN DEVELOPMENT, ORGANIC FARMING AND PROBLEMS IN ENVIRONMENTAL PROTECTION¹

Zoran Simonović², Milan Mihajlović³

Abstract

The authors discuss the development of the agricultural, ecological agriculture and environmental problems. They point out that the development of agricultural environmental programs are an integral part of the EU accession process, which is defined within the IPT and as such is mandatory for all EU member states. In the times that followed contemporary agriculture in Serbia must comply fully with all regulations on the protection of the environment, as well as to harmonize all programs and bringing them into compliance with the National Environmental Protection Programmed. When viewed from the ecological point of view, the performance of agricultural production can have positive and negative impact on the maintenance and protection of land as environmental factors. In this paper, the authors describe the application of environment-friendly farming and give the main features of supply of organic agricultural products in Serbia. At the end, the authors point out that in Serbia there are no specifically defined policies for the conservation of ecosystems, to prevent the destruction of natural habitats and species loss prevention and reduction of the value of natural landscapes, which are related to agricultural production.

Key words: *agricultural development, organic agriculture, organic agriculture.*

¹ Paper is part of the research project III 46006 Sustainable agriculture and rural development in order to achieve the strategic objectives of the Republic of Serbia within the Danube region, financed by the Ministry of Education and Science of the Republic of Serbia.

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INTEREST CONNECTIONS AMONG AGRICULTURAL ENTERPRISES¹

Zorica Vasiljević², Bojan Savić³

Abstract

Trends of globalization, high dynamics of changes in the business environment, modified customer preferences, the effects of the economic and financial crisis initiate the need for a change in the existing business model of an enterprise. Namely, the burden of described circumstances makes individual enterprises to be very vulnerable. Instead of focusing their efforts towards achieving more efficient level of business, improving the quality of existing products and the development and introduction of new products, they are forced to struggle for a mere survival. The trend described above has not bypassed even the enterprises in the field of agriculture whose activity was by their nature expressed as risky, which emphasized the total exposure to adverse circumstances even more. Hence, the solution could be identified in mutual connecting of enterprises based on different grounds - connection by agreement or by the investment of capital. The main motives of interest connections among enterprises are contained in strengthening the potential to capitalize opportunities in an environment, to minimize adverse effects on the basis of numerous risks and improve the competitive position of an enterprise. The goal of this paper is to point out to the different forms of connections among the agricultural enterprises with a special emphasis on solutions that have been successfully implemented in developed countries. The significance of such an approach is recognized in providing the guidelines to domicile producers about the fact how they can improve their current position not only at domestic market, but to become competitive in the global market as well. It is conquering new markets and foreign currency income on the basis of the sales what represent a sure path to economic development and the improvement of business conditions in the Republic of Serbia.

Key words: interest connections, agricultural producers, competitive advantage, value creation, strategic allianc

¹ The paper is a result of the researching project No. III-46006 «Sustainable agriculture and rural development in the function of implementing the strategic goals of the Republic of Serbia within Danube region» and project No. III 46001 «Development and application of new technologies in production of competitive food value-added products for domestic and foreign markets – Let's make wealth from the wealth of Serbia" financed by The Ministry of Education and Science of the Republic of Serbia.

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LABOUR SUPPLY AND DEMAND MISMATCHES IN THE RURAL SERBIA - THE CURRENT STATE AND CONSEQUENCES

Žaklina Stojanović¹, Svetlana Popović²

Abstract

The paper analyses characteristics of the labour market in Serbia. The overall objective is to identify if the significant differences regarding the labour market current state and perspectives between rural and nonrural regions in Serbia exist. The analysis was conducted using descriptive statistics. Differences between rural and non-rural regions were tested by ANOVA in SPSS. We found no differences at 1% level of significance, both regarding labour supply and demand. Regarding labour supply, differences at 5% significance level are found in dependent ratio and share of lower/higher educated in the total district population. Differences regarding working contingent, and high school educated are identified at 10% significance level. Regarding the economic sector structure differences are found to be significant at 5% level. A higher investment in the non-rural than in the rural areas influences spatial dimension of the labour demand. Consequently, the non-rural areas are characterized with significantly less inhabitants per firm.

Key words: labour market, indicators, regions, rural, urban, disparities.

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III SECTION

AGRIBUSINESS OF RURAL AREAS, DIVERSIFICATION AND COMPARATIVE ADVANTAGES OF RURAL ECONOMY

AGRICULTURAL STRUCTURE IN THE SOUTH OF ROMANIA AND AGRICULTURE DEVELOPMENT OPPORTUNITIES¹

Adrian Turek Rahoveanu^{2,3}Magdalena Turek Rahoveanu,^{4,5}

Abstract

Economic zoning is an indispensable step in the establishment of sector development strategies and policies that respond to the particular needs and allowing preservation of individuality of each area. The configuration of these areas is not static in time and space, modifying it according to the needs and level of economic development at a time. To substantiate rural policies depending on the specific area, studies are needed to define the typology of rural communities, to highlight the socio-economic disparities. This research is aimed at selecting a limited number of diagnostic features, accomplishing conditions for stability in time, representation and accessibility of data. This approach is an important tool in diagnosing the countryside and a base for rural policy substantiation.

Keywords: *agrarian structures, agricultural economics, competitiveness, agricultural policies.*

¹The paper is a part of the research on the PNDII Project 1762/2008 "Improving management of production structures in developing South Muntenia Region in order to increase the competitiveness of farms", financed by the Ministry of Education and Research of Romania

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ROMANIAN TOURISM IN THE CONTEXT OF SERVICES GLOBALIZATION

Adrian Ungureanu¹, Lana Nastić²

Abstract

National and international tourism constitute the approach present a real chance at recovery sustainable economic growth, development of market economy in Romania, improve and balance of payments indicators. This paper makes a short and descriptive analysis regarding the globalization effects on Romanian tourism.

Key words: tourism, globalization, competitiveness.

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AGRICULTURE IN SERBIA

Andra-Valentina Tudorica¹, Velibor Potrebić²

Abstract

Only agriculture remains as the main economic activity in the rural areas, the primary source of income and improvement in the standard of living of the rural population. In that sense, reducing poverty, eliminating hunger, raising productivity, and protecting the environment in rural areas – all in a sustainable manner - represent a number of complex objectives which has to be efficiently governed toward development of a market oriented agriculture and is one of the most fundamental challenges the country is facing today.

Key words: *agriculture, fruit production, organic agriculture, regional development.*

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MODERN FEATURES OF AGRICULTURAL TRADE IN THE CONDITIONS OF MARKET INTEGRATION

Anna Ivolga¹, Vasily Erokhin²

Abstract

International trade with agricultural products is still rather far from full liberalization despite of the progress achieved in international trade by agricultural production after carrying out within the framework of the WTO of many negotiations rounds. Some new rules in the organizations of international trade and the new obligations which were taken up by the participant countries of WTO have opened the new questions to discuss and settle within the framework of the following negotiation rounds. The basic themes of such negotiations at the Russian introduction into WTO should become the questions of the state trade regulation, the further perfection of sanitary control rules, the further decrease of the custom duties and administrative character of tariff quotas establishment on imported agricultural production.

Key words: *agricultural products, sustainable development, agribusiness, subsidies.*

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THE SIGNIFICANCE OF CREATING A NETWORK DIAGRAM (CPM METHOD) IN THE PRODUCTION OF WHEAT¹

Biljana Grujić, Nataša Kljajić²

Abstract

This work primarily describes organisational and economic conditions in the production of wheat, emphasizing, at the same time, the necessity to procure with farm machinery. Also, the development of methods in network planning techniques (CPM and PERT method) is analyzed and the concept, factors and methodology of network planning, as well as the rules for drawing a network diagram are defined. If we include mathematical model into the network model, we get detailed information on terms for carrying out an operation and how long the production will last. The aim of the analysis is to explain the significance of creating a network diagram (CPM METHOD) for the production of wheat on 20 ha. Defining technology interdependence charts and lists of activities completes the process of creating a network diagram. Finally, the work contains tabular presentation of an analysis of costs of machinery services in the production of wheat. However, because of frequent price oscillations of oil derivatives, the costs of diesel fuel were singled out from the costs of machinery service.

Key words: wheat, technological chart, network diagram, CPM method.

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MACEDONIAN CONSUMERS AND FOOD SAFETY ISSUES

Blagica Sekovska¹, Predrag Jovićević²

Abstract

Consumers' attitudes to trust and risk are key issues in food safety research and attention needs to be focused on clearly defining a framework for analysing consumer behaviour in these terms. This paper aims to collate the current social sciences literature in the fields of food safety, trust and risk. The relationship between food safety and quality is addressed, and is discussed in the context of research on consumer risk perception. Quality and safety perception is linked to food choice and consumer demand. Consumers' preferences for food safety characteristics are investigated with a particular focus on the consumer subjective perception of food safety issues.

Keywords: Quality, trust, risk, food safety, consumer behaviour

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FUNDAMENTATION OF A FINANCIAL SCENARIO OF EUROPEAN FUNDS FOR AGRICULTURE AND RURAL DEVELOPMENT IN PRAHOVA COUNTY

Bogdan Lucov¹, Irina Elena Petrescu²

Abstract

This paper aims to analyze the economic situation from a county from Romania, named Prahova. Prahova is one of the 42 counties from Romania (including Bucharest), with high performances regarding industry and services, mostly tourism. Agriculture has an important share in the economy of the county and with all the European founds for agriculture and rural development from the actual and future period could help at the development of Romanian agriculture. The paper is being closed with an analysis of the European founds accession in the county and with a financial scenario for the remained founds in order to increase the economic efficiency of the county.

Key-words: rural development, tourism, agriculture, priorities.

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FOREIGN TRADE OF AGROINDUSTRIAL PRODUCTS SERBIA AND MONTENEGRO IN THE CEFTA AGREEMENT $^{\rm 1}$

Branislav Vlahović², Boris Kuzman³

Abstract

For food producers in Serbia, the process of trade liberalization is a tough competition. This implies the necessity of raising the technological level of production, productivity, efficiency and application of marketing concept. Increased competition in the domestic market should contribute to improving the quality and supply of goods. It is realistic to expect a decline in product prices, which in the future may be difficult to domestic producers, reducing their income. At the same time, this process provides an opportunity for consumers to have a wider choice of products by varied offer of cheaper goods. The subject of this paper is the foreign trade of agro-industrial products of the Republic of Serbia and the Republic of Montenegro within the framework of the CEFTA agreement signed in accordance with the agreement on free trade. CEFTA agreement contributes to the Western Balkan to become economically integrated area for goods and services. Meanwhile, it should be a destination for foreign investment. The aim of the research is considering possibilities of improving and expanding foreign trade of agro-industrial products of these countries. The analysis of foreign trade relations is necessary to detect the strengths and opportunities for improving trade relations between the two countries.

Key words: CEFTA, food, Serbia, trade, Montenegro, competition

¹ This paper is a part of research within the project "The impact of CEFTA foreign trade in agricultural products of the Republic of Serbia", of the macro project "right at the first chance," the Government of the Autonomous Province of Vojvodina in cooperation with the Faculty of Agriculture - University of Novi Sad. Funding for the project was provided by the Provincial Secretariat for Science and Technology.

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ECONOMIC CONDITIONS AND POSSIBILITIES OF HAZELNUT PRODUCTION IN SERBIA

Branka Kalanović Bulatović¹, Bojan D. Dimitrijević²

Abstract

Hazelnut is economically highly important, since the plant itself as well as its fruit are widely used in various domains of life. Products deriving therefrom are all the more frequent both in domestic and international trade. Therefore, the subject matter of this paper covers: hazelnut production conditions, economic profitability and production improvement possibility. The aim of this paper is to give the insight in hazelnut production conditions in Serbia, to consider expansion possibilities of plantings, production scope and placement on the market. *The following methods have been applied during the research: content,* SWOT and comparative analysis, mathematical and statistical methods. calculation and payback period method. Analyses of financial reports, break even point and performance indicators, have been made. Although conditions are advantageous, hazelnut tree production in Serbia is unsatisfactory, and needs for this fruit are met mainly through the import. This paper also presents hazelnut tree planting business, thus explaining positive effects the realization of such an undertaking may have on the income, business and estates. Such state of facts make possible to: expand plantings of this cultivar, decrease import, employ more people and acquire more income.

Key words: hazelnut, production, conditions, possibilities, Serbia.

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SPECIFIC INDICATOR FOR EFFICIENCY'S EVALUATION OF INVESTMENTS IN DIFFERENT AREAS

Claudiu Cicea¹

Abstract

Efficiency is one of the most important aspects of the economic life, in the current global economic crisis. Moreover, in the context of extremely limited financial resources, spending money in the economy should be made based on using a set of indicators to indicate which is the proper choice at a time. These indicators differ from one area of activity to another.

Keywords: indicator, efficiency, investments

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REFLECTING FOOD SECURITY REQUIREMENTS IN AGROALIMENTARY, FOOD AND NUTRITION POLICIES

*Corina Ene*¹, *Nikola Njegovan*²

Abstract

In every country, the public power has limited prerogatives - imposed even by the very meaning of free market in democratic states - towards social stability by mitigating the conflict between food producers and consumers. These interventions include monetary, fiscal, trade and social measures, as well as incentives for investments, in order to create a context for food security. Thus, further interventions of other entities national or international - are required, which, by the specific powers and resources, are able implement the principles and measures adapted to local programs to meet the goal of food security. Considering actual concerns deriving from both domestic and international preoccupation, this paper aims to underline key milestones of agroalimentary, food and nutrition policies which are oriented towards achieving food security at all levels.

Key words: *agriculture, food security, food system, food and nutrition policy.*

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INOVATIVE SYSTEMS OF WIND POWER TURBINES FOR IRRIGATION IN AGRICULTURE

Cristina Niţescu¹

Abstract

The present paper is a study which proposes a new integrate system of irrigation using clean renewable wind energy in the form of wind mills able to irrigate medium and large surfaces of agriculture lands using independent energy source produced by wind force and also able to deliver electric power to the National Energy System. In the present context, when Romanian agriculture is almost totally dependent on the meteorological conditions, this proposal represents an opportunity to rehabilitate the agriculture sector and the rural development and to improve significantly the agriculture production with direct benefic results on the entire national enonomy and the Gross Internal Product of Romania.

Key words: agriculture, irrigations, wind turbines, integrate systems.

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THE FAMILY HOLDINGS IN THE VAT SYSTEM

Djojo Arsenović¹, Srdjan Lalić²

Abstract

The main objective of this paper is to present the agricultural record of value added tax and to point out its most important characteristics. Furthermore, certain agricultural enterprises are exempted from the system of value added tax because their incomes are not large enough to be taxed. In order to provide more complex analysis of the problem, it is also perceived the type of taxable income and how big it is. In the end, legally speaking, in a situation of operating two or more companies where one of them is not the taxpayer, and the second is, it comes to some disagreement in the record of value added tax. Just because of this mismatch it is pointed to some disadvantages of accounting records and the legal coverage of this matter.

Keywords: value added tax, accounting, agricultural production, farms.

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ECONOMIC-FINANCIAL ANALYSIS OF GREENHOUSES' MODERNIZATION AND NURSERY BEDS' CONSTRUCTION IN CENTRAL DANUBE REGION¹

Drago Cvijanović², Anton Puškarić³

Abstract

Taking into consideration a significance of natural potentials, a significance of agriculture, as well as a strategic priority of economic effectiveness and sustainability for development of Central Danube Region zone (metropolitan area Belgrade- Novi Sad), in the paper was made an evaluation of economic sustainability on agricultural husbandry within the mentioned protected zone in the Republic of Serbia. In this paper were used data collected in the Central Danube Region zone, i.e. on the territory of metropolitan are Belgrade- Novi Sad, during 2011, and which were obtained by surveying agricultural husbandry, which developmental perspective lies in function of economic sustainability. The authors point out to a significance of existing greenhouse modernization in a husbandry, aiming to decrease the costs of thermal energy, which will primarily affect fully exploitation of production capacity, as well as obtaining higher price per a product unit, due to market performance in conditions of poor supply. Besides that, in the paper was pointed out to a significance of greenhouses' construction, in which will produce a plantlet of various vegetable species. Building the nursery bed will provide continuous supply of husbandry with plantlet of controlled quality vegetable, as well as obtaining the additional incomes according to the plantlet sale, which has not been used in production on husbandry.

Key words: greenhouses, nursery bed, vegetables, economic-financial analysis.

¹ The paper represents a part of the research on the project III - 46006 – *Sustainable agriculture and rural development in terms of the Republic of Serbia strategic goals' realization within the Danube region*, funded by the Ministry of Education and Science.

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ROMANIA'S AGRO-FOOD ECONOMY AT FIVE YEARS AFTER ACCESSION TO EU – CONVERGENCES AND DIVERGENCES

Filon Toderoiu¹

Abstract

The paper attempts to identify certain sets of macroeconomic variables determining non - performed generation of value added, which induced radical structural changes in the share of the main branches (agriculture, industry and constructions) in the essential resources of the economy (employment, fixed capital stock and net investment) and in its results (gross value added). The first set of variables is of correlative type, at macro-economic level (energy intensity of the economy; "real wages – productivity" correlation; intra-component ratios of the consumer price index). The second type of variables is of sectored type, at the agro-food economy level (disintegrative "double fracture"; upstream and downstream economic driving effects). The third set of performance reductive variables is of structural type, in the so-called "agro - food" chain (tri-dimensional structure of the agro-food chain – economic operators, employed persons and generated gross value added; average agro - food commercial openness).

Key words: global competitiveness, agro-food integration, backward linkages, forward linkages, degree of commercial openness, size structure of holdings.

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ASSESSMENT OF CLUSTERS' ECONOMIC VALUE AND THEIR INFLUENCE ON COMPANIES IN SERBIA

Gajo M. Vanka¹, Wim J. M. Heijman²

Abstract

This is the study of clusters and their influence on companies and environment in Serbia. The aim of this study was to analyze information regarding companies, clusters and process of cluster development in Serbia. Some of the most interesting features for Serbian companies were drawn out and presented in order to identify and analyze similar processes and externalities in future research of Serbian companies. In order to create comprehensive study, both quantitative and qualitative research methods have been applied. In total thirty nine companies have been surveyed in five Serbian clusters gaining valuable answers regarding companies who joined clusters and the expectations and aspirations of cooperation within cluster. Each research methodology was analyzed in-depth and valuable conclusions have been withdrawn. The study came across interesting conclusions. Serbian companies did not start cooperating because they were all aware of the benefits clusters are offering, but they grouped out of need to overcome some of the common legal and business problems. Majority of the companies within clusters are micro and small companies, without research and development. This study showed that even clusters in Serbia do not have R & D division, leading us to the conclusion that companies need to improve knowledge management in the companies, to support innovations and invest in new material and products development.

Key words: *clusters, competition, economic value, innovation, less developed countries, Serbia*

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THE SMES SECTOR IN ROMANIA: COMPARATIVE STUDY BY ECONOMIC SECTORS AND REGIONAL LEVEL

Georgiana-Raluca Lădaru¹, Silviu Beciu²

Abstract

This paper aims the approach of SMEs sector at regional level in Romania. It compare their role in the Romanian Regions of Development, as principal beneficiaries of programmes supported by The European Union which are aimed at stimulating and diversifying entrepreneurial sector, stimulating investments in the private sector contribution to reducing unemployment and leading to improved living standards at regional level.

Key wordS: SMEs, regional development, Romania, food industry.

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ANALYSIS OF REALIZED INVESTMENTS IN AGRICULTURE ON THE TERRITORY OF DANUBE BASIN IN THE REPUBLIC OF SERBIA¹

Jonel Subić², Marko Jeločnik³

Abstract

Investments represent basic material factor of economic – social development, from whose volume, structure and efficiency in great measure depends how will be and until which level will be solved major questions of sustainable development of agriculture in any country, region or local community. Considering potential perspectives for Serbia that come from the process of European Union (EU) enlargement, as well as that in sustainable development of agricultural husbandries investments will play key role, this paper is focused on analysis of realized investments in agriculture on the territory of Danube Basin in the Republic of Serbia. In that context, frontiers of research include: (1) analysis of realized investments in agriculture on the territory of Upper Danube Basin; (2) analysis of achieved agricultural investments in area of Metropolitan Belgrade - Novi Sad and (3) analysis of realized investments in agriculture in the Carpathians.

Key words: *investments, Upper Danube region, Metropolitan area Belgrade - Novi Sad, the Carpathians, Republic of Serbia*

¹ Paper is a part of research project III 46006 *Sustainable agriculture and rural development in the function of strategic goals achievement within Danube region*, financed by the Ministry of Education and Science of the Republic of Serbia, project period 2011-2014.

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PROFITABILITY AND GROSS MARGIN AT SWINE -COMPARATIVE ANALYSIS

Lidia Iurchevici¹, Rodica Chetroiu²

Abstract

In Romania must pay particular attention to growth and exploitation systems adaptation of pigs for meat to EU requirements. At the same time, it is necessary to protect and foster those characteristics of growing and exploitation pigs that have competitive advantages regarding the quality of the products obtained, and minimum environmental impact technologies. A particularly important goal is to promote and implement production systems that are environmentally friendly. It is important that technological solutions adopted in the growth and exploitation of pigs to meet all the requirements for environmental protection, in order to preserve the natural area of Romania. The main objective of this paper is to provide a technical and economic solution for pig breeding for meat in intensive system, in two variants: with acquisition of biological material and a variant with material produced by the own farm. Our researches reveal that the growing system of pigs in version with biological material produced on the own farm is more profitable, yielding considerable profit per animal.

Keywords: profitability, gross margin, swine, analysis, costs.

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COOPERATIVES – FACTORS IN ORGANIZING THE AGRICULTURAL ACTIVITIES

Mariana Eftimie¹

Abstract

Given the current conditions of uncertainty regarding the realization of profitable farms with reliable markets, resistant to competition with high power for attracting various types of funds, farmers worldwide must decide what strategy to adopt. One viable alternative is that farmers realize various forms of cooperative association.

Key words: cooperatives, farmers, cooperative members, Romanian agriculture

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COMPARATIVE ADVANTAGES OF SERBIA'S AGRARIAN EXPORT IN EX-YU AND OTHER NEIGHBORING MARKETS¹

Milan R. Milanović², Simo Stevanović³

Abstract

The agro-complex and potentials of agrarian export in Serbia have for long been considered to be the comparative advantages and development "chief supports" of the export-oriented economy. The soundness of such an attitude can only be checked by means of an appropriate comparative analysis, in the context of the market structure and the agrarian potentials of the narrower and broader environments. For that reason, the potential comparative advantages of Serbia's agrarian export are analyzed on two levels: (1) in the narrower environment of the ex-YU uniform market countries and (2) in a broader, however geographically close, environment of the neighboring, for the most part Danube-basin countries. Actually, comparisons are made with ten countries, half of which are the EU member countries and the other half of which are on their way to achieving that goal. Gaining an insight into the structural significance of the agro-food sector in foreign trade and the overall economy, the paper analyzes the fundamental features of and changes in the volume and structure of the total export and import, in particular the agrarian ones. On that basis, by a target comparative analysis of the series of data collected through years, and using the specific methods of carrying out the analysis (by calculating the coefficient and by ranking). comparative advantages are determined and the export potentials of the Serbian agrarian foreign trade are gained an insight into.

Key words: *agrarian export, comparative advantages, relative coverage, coefficients, ranking.*

¹ The paper represents part of research on the project of the Serbian Ministry of Science, 46006 "Sustainable Agriculture and Rural Development in Function of Achieving the Strategic Goals of the Republic of Serbia in the Danube Region".

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COMPARATIVE ANALYSIS AND IMPORTANCE OF SELECTED CROP INSURANCE SYSTEMS

Milenka Jezdimirovic,¹ Rajko Tepavac²

Abstract

The aim of this paper is to explore the advantages and disadvantages of the analysed crop insurance models together with the possibilities for their application in different conditions of agricultural production. In this paper, the authors point out to the importance of the general economic position of agriculture for growth and development of crop insurance as well as for insurance of other branches of agriculture. In addition to the aforementioned, the authors stress the impact of insurance not only on agricultural community but also on the entire value chain within the production of agro food products. Current global climate changes imply that insurance of agriculture is going to become one of the important factors of sustainable agricultural production i.e. the means to protect investments and continuity of production.

Key words: crop insurance, insurance models, subsidising insurance

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INSURANCE IN FUNCTION OF DEVELOPMENT OF AGRICULTURE

Mladenka Balaban¹, Slobodan Župljanin²

Abstract

Agriculture as a sector of the economy has a great importance for the overall social and economic development of a country. Agricultural sector has a very special position as the holder of Rural Development. Agriculture contributes a significant share of the national wealth in the creation of GDP and total employment population. Global warming leads to numerous natural disasters that have in the past made a lot of damage to agricultural holdings. In future it is even more unpredictable disasters that man, very often, it cannot influence, but it can protect their crops by the insurance policy. In many countries, efforts have been made to encourage the development of crop insurance through a variety of programs subsidized by the state.

Keywords: agriculture, crop insurance, subsidies, rural development

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MEASURING THE SME'S EFFICIENCY IN AGRIBUSINESS BY DEA TECHNIQUE

Radojka Maletic, Blazenka Popovic¹

Abstract

Modern economic growth is based on a harmonious combination of economic and technological advantages of large and small commercial units where the main criteria for commitment to one or the other based on economical efficiency. Improving the competitiveness of SMEs implies the active knowledge application, improving the knowledge productivity, as well as application of modern management techniques. In these circumstances, management has primary function especially when it comes to the management of an agricultural production, which has significant characteristics in comparison to the management of other productions that originate from position and importance of agroindustrial complex of Serbia's economy, but also from the specificity of agriculture itself. For the application of modern management methods and techniques, as a way of efficient management of a company and its activities, there is a need for adequate knowledge from various scientific fields. For this purpose the significant place belongs to some mathematical and statistical techniques, such as DEA analysis whose importance and application method is shown in this paper on a data of a dairy business in Serbia.

Key words: *Management, SME, agribusiness, DEA analysis, business efficiency.*

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EFFECT OF DROUGHT ON PRODUCTION AND MARKET RISK IN CROP PRODUCTION¹

Sanjin Ivanović², Saša Todorović³

Abstract

In the paper, the model of family farm that deals exclusively with crop production on the area of 15 ha is formed. Then it is assumed that in global drought conditions that occurred in 2012, certain risks (in this case, the change in yields and prices of field crops) will arise. The aim of this paper is to examine the change of the effects of family farm business operations (gross margin and profit for the whole farm, per working hour and per hectare) under drought conditions. The analysis has shown that under certain assumptions in drought conditions the rise in gross margin and profit can be achieved as well as that these indicators are more influenced by the change in market prices than by the change in yield of field crops.

Key words: *crop production, family farms, drought, risk, gross margin, profit.*

¹The paper is a result of the research conducted within the project of the Ministry of Education, Science and Technological Development of the Republic of Serbia No. 179028, entitled "Rural labor market and rural economy of Serbia - income diversification as a tool to overcome rural poverty".

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INVESTMENTS IN AGRICULTURAL MACHINERY FOR CULTIVATION AND SOWING OF HYDROMORPHIC SOILS

Savo Ivančević¹, Dragan Mitrović²

Abstract

Peculiarities of agricultural production, which refer to an impact of natural factors, existence of biological processes and organic production, as well as a productive and a social character provides basic characteristics of investments in agriculture generally. A base for investing in agricultural machinery is a size of property, a size of parcels, road and canal network on a property, physical characteristics of soil, sowing structure, remoteness of storing and processing capacities, labour education, etc. A system of hydromorphic soils tillage must consider a crop rotation and also a share of crop rotation – unstable crops or a group of related crops should not exceed a certain border line, determined by biological characteristics of grown plants and edaphic-climatic conditions. The tillage of hydromorphic soils obligatorily comprises a minimum of land reclamation processing, and an orientation to a form of regular cultivation, a conventional, conservation or direct sowing is a matter of choice, which mainly depends on capability for investments: for the conventional system is necessary 460 euro/ha, for the conservation system 385 euro/ha and for the direct sowing system 296 euro/ha for an arable area of 1000 ha.

Key words: investments, cultivation systems, hydromorphic soils.

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DEVELOPMENT OF TOURISM IN WESTERN SERBIA¹

Slavoljub Vujović², Zoran Jovanović³

Abstract

The essence of the work is to explore the possibilities of tourism development in western Serbia, in the future, based on entrepreneurial intentions and desires of students, as part of the population from which further depend on the social and economic mainstream. Given the importance: that mental creativity (science and art) exists since the foundation of the common people, the overall progress of mankind was created thanks to the great creative mind of former civilizations, and the fact that Western Serbia has exceptional natural and anthropogenic values suitable for evaluation in order to develop Tourism, research questions are formulated and approached the above-mentioned research. So, and autors have an indicator, not only economic, but social development the total number of students at one hundred thousand inhabitants (known to the developed world, compared to the underdeveloped, is incomparably more students) in a way encouraged this research. The methods: analysis, synthesis, correlation, deduction and induction. Primary field studies were based on questionnaires, interviews and in-depth interview. Ontological method-in particular the principle of sufficient reason and the results of the study provide support for the hypothesis (confirmed)-that tourism can and should be a leading economic activity in the future of Western Serbia.

Keywords: tourism development, tourism industry, research.

¹The work is part of the research project: "Development and application of new and traditional technologies in the production of competitive food products with added value for the domestic and world markets create wealth-wealth of Serbia" (Ministry of Education and Science of Serbia, no. 046 001).

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MUNICIPAL BONDS AS AN INSTRUMENT FOR FINANCING RURAL DEVELOPMENT

Snežana Krstić¹, Milan Mihajlović²

Abstract

The bonds which issue the local authorities represent a special category of securities. In some developed countries, like the USA, the municipal bonds have a long tradition of funding the local infrastructure electrification, road construction. construction. environment arrangement and similar. The purpose of the municipal bonds can be very wide, especially if they use for financing the rural development. This type of bonds gets its significance, while it provides to the local population a possibility for self-finance of own city or municipality. Our neighbors in the region, as well as many developed countries, develop more and more the market of debt securities. In Serbia, municipalities do not issue the municipal bonds, although there are no legal obstacles. In cases when a faith in financial institutions has been weaken, and insecurity on financial markets leads to interest rates increase, there opens favourable opportunity of our local communities' contraction of debts, by the municipal bonds issue after significantly lower rate of interest

Key words: *rural development, municipal bonds, local authorities, rate of interes, market.*

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RURAL AREAS OF THE DANUBE RIVER BASIN – THE FUTURE OF QUALITY TOURISM DEVELOPMENT IN SERBIA EXAMPLE OF FARMSTEADS

Snežana Štetić¹, Sara Stanić²

Abstract

Developing tourism, we must predominantly take into account its influence on resources and their sustainable development. The baselines for this research were global tourism development and possibilities of Serbia to find its place on the market through developing some niche products like tourism on the farmsteads in Vojvodina part of Danube basin. Changes in the development of tourism in the Danube region countries and wider surroundings of the Republic of Serbia put our country in very low profile position as we do not recognized very important tourist attractions. These changes have imposed the need to investigate the position of tourism in Serbia in the new conditions. Extremely valuable natural resources in Serbia with attractive relief, diverse flora and fauna, a favorable climate and hydrological conditions, rich cultural heritage and national tradition provide numerous development opportunities, particularly in tourism. Despite these facts, unfavorable migration trends continue, villages grow old and die, there are traffic isolation, poor infrastructure and other living conditions. The development of rural tourism, along with primary agricultural production, with an emphasis on preserving and improving the environment, is one of the solutions to reconcile the aforementioned contradictions applying economic, infrastructural, organizational and educational stimulating measures which will allow multiple positive effects.

Key words: *rural areas, Danube river basin, Tourism, farmsteads, quality.*

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COMPETITIVE FOOD PRODUCTION AS A STIMULUS TO ECONOMIC DEVELOPEMNT IN SERBIA

Svetlana Ignjatijević¹, Ivan Milojević²

Abstract

A subject of the research is an analysis of a position and a structure of total goods' export, especially of food products, aiming to perceive trends, to measure a level of comparative advantage and improve position on international market. The research has pointed out to limiting factors of food production development. We have established a positive comparative advantage (RCA and LFI indexes) of food industry and intra-industrial character of exchange measured by GL index. We had especially recognized export structure from a factor intensity point of view and we had established a presence of a negative comparative advantage and pronounced non-competitiveness of products Easy – to - imitate research – intensive goods and Difficult – to – imitate research – intensive goods. Conducted research of competitiveness and comparative advantage of food industry points out to a significant contribution to economic development, and especially to rural economy of Serbia.

Key words: competitiveness, trade structure, comparative advantage.

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RISK MANAGEMENT IN SOYBEAN PRODUCTION WITH WEATHER DERIVATIVES*

Todor Marković, Christoph Husemann¹

Abstract

It has been long known that weather conditions are the main factor of uncertainty in plant production. In the past, farmers have bought insurance for protection against fluctuations in crop yields caused by weather risks. Relatively new tools for risk management in plant production are weather derivatives. By using weather derivatives mostly the crops that are distinguished by the amount of vield or that have a significant participation in the sowing structure are being insured. In this paper the mutual interdependence of rainfall and vield of sovbean in some municipalities in Vojvodina is analysed by applying the regression and correlation analysis. By analyzing the production of sovbean it is evident that the amount of rainfall during the period from April to August has a relatively high impact on yield. This should be kept in mind while we explore the possibilities of application of these new financial tools in our agriculture. Therefore, it is necessary to quantify the effect of risk reduction that can be achieved by using weather derivatives on the example of selected farm in Srem. If the field of production is close to the meteorological station, and if a high correlation between weather indices and yield is assumed, then the effect of risk reduction is significant (up to 40 %).

Key words: *production-related basis risk, rainfall, risk management, soybean, yield, weather derivatives.*

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AGRO-SECTOR IN VOJVODINA: FROM THE TRANSITION TO THE GLOBAL ECONOMIC CRISIS¹

Veljko Vukoje², Aleksandra Figurek³

Abstract

The focus of this research is determining the success level of companies in the agro-sector (agriculture and food industry) and determining the main transition factors which indicated current financial conditions in this sector. The analysis covers companies in the agro-sector, on the territory of the Autonomous Province of Vojvodina, from 2001 to 2009, that is, the period which coincides with the most intense period of privatization in Serbia until the global economic crisis. Companies from agro-sector recorded negative financial results in six out of nine years of the period examined. Positive trends from the years of 2006 and 2007 were overturned in the last two years, mainly due to the negative impact of the global economic crisis. Recovery of this sector primarily requires considerable long-term funding provided from favourable resources, in combination with appropriate subsidies and other incentive measures.

Keywords: agro-sector, financial analysis, transition, economic crisis.

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ORGANIZATIONAL LEGAL ASPECTS OF CLUSTERS IN THE REPUBLIC OF SERBIA¹

Vesna Paraušić², Branko Mihailović³

Abstract

In theory and in practice, clusters, as specific form of economic entities association, differ significantly. Theoretically defined, a cluster is often hard to recognize in practice, especially in transitional and less developed countries. There are many dilemmas in scientific and professional public about the legal form of clusters. The most frequent perplexities are regarding clusters' legal aspects issues (is it necessary or obligatorily for cluster to be registered or not?), legal forms in which it can function, internal clusters organization (authorities, rights and obligations of members, etc.). This paper will be focused at a discussion of organizational-legal aspects of clusters in the Republic of Serbia. Base for this issue analysis and drawing conclusions will be a case study (analysis of organizational-legal form of a cluster in the field of Serbian food industry), the analysis of legal documents which regulate the issues of establishment and work of clusters in the Republic of Serbia, as well as the analysis of the governmental documents in the field of clusters motivation in domestic economy.

Key words: clusters, associations, organization, legal form

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WINE TOURISM AND SUSTAINABLE RURAL DEVELOPMENT IN THE DANUBE BASIN AREA IN SERBIA

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Abstract

Rural areas in the Danube basin area in Serbia facing serious economic and social difficulties, caused by the transition, the economic crisis and the processes of migration and depopulation, which are particularly evident in the area of the Lower Danube. Danube is known for its centuries-long tradition of producing grapes and quality wines, which is now concentrated in the family wineries. Wine tourism, based on the production of quality wines of protected geographical indications in conjunction with the production of traditional local food and craft products, cultural tourism and nature-based tourism can make a significant contribution to sustainable territorial development. The authors analyze the possibilities and constraints for the development of wine tourism in the wine regions of the Danube basin area, included in the official wine routes of the Tourist Organization of Serbia.

Key words: vineyards, wineries, quality wines, wine tourism, wine routes, sustainable rural development.

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