



UNIVERSITY OF AGRONOMIC SCIENCES
AND VETERINARY MEDICINE OF BUCHAREST
FACULTY OF MANAGEMENT
AND RURAL DEVELOPMENT



International Conference
"Agriculture for Life, Life for Agriculture"

BOOK OF ABSTRACTS

SECTION 7

MANAGEMENT AND ECONOMICS
OF RURAL AREAS



2024
BUCHAREST

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Faculty of Management and Rural Development**

Address: 59 Marasti Blvd, District 1, Zip code 011464, Bucharest, Romania
Phone: + 40 213 1830 75, E-mail: managementjournal@usamv.ro, Webpage: www.managusamv.ro

CERES Publishing House

Address: 29 Oastei Street, District 1, Bucharest, Romania
Phone: + 40 21 317 90 23, E-mail: edituraceres@yahoo.com, Webpage: www.editura-ceres.ro

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BOOK OF ABSTRACTS - Section 7: Management and Economics of Rural Areas, 2024

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ISSN 2457-3256
ISSN-L 2457-3256

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**SUBSECTION
PRODUCTION ECONOMICS
AND AGROMARKETING**

PRODUCTION POTENTIAL OF SOME CORN GENOTYPES - RESOURCES FOR AGRICULTURAL PRACTICE AND BREEDING PROGRAMS

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Abstract

The study evaluated 80 corn genotypes based on grain production under comparative crop conditions. The research took place within the ARSD Lovrin, Romania. The culture of the 80 corn genotypes was carried out in non-irrigated conditions. The hybrids were numbered in the form C01 to C80 (C – corn; 01 to 80 – genotype number). The height of the corn plants (PH) varied between $PH = 2.05 - 2.71 \pm 0.02$ m. The height of corn ear insertion (EIH) varied between $EIH = 0.74 - 1.25 \pm 0.01$ m. The weight of one thousand grains (TGW) varied between $TGW = 230.10 - 345.20 \pm 2.95$ g. The hectoliter weight (HW) varied between $HW = 75.20 - 84.45 \pm 0.21$ kg. Grain production (Y) varied between $Y = 5,027.00 - 10,169.00 \pm 120.29$ kg ha⁻¹. Under the aspect of the variability of the studied parameters values, based on the coefficient of variation (CV), a high value of variation was recorded in the case of production ($CV=14.55874$), followed by the variability within the EIH parameter ($CV=11.14396$), the TGW parameter ($CV=9.05588$), PH ($CV=5.67716$) and HW ($CV=2.39561$). The multivariate analysis (PCA) led to the distribution diagram and principal component (PC1, PC2) explained the variance (PC1 = 44.857%; PC2 = 21.495%). The cluster analysis (CA) led to the obtaining of the dendrogram of the grouping of the maize genotypes in relation to the main parameters. The variation of production in relation to plants parameters (PH, EIH), and corn grains quality (TGW, HW) was described mathematically and in the form of graphic models, under statistical safety conditions.

Key words: breeding programs, corn genotypes, grain production, multivariate analysis, productivity elements

PRODUCTION AND PRODUCTIVITY ELEMENTS IN FIELD PEAS IN RELATION TO MINERAL FERTILIZATION

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Abstract

Legumes represent crops with multiple values at the farm level, from an economic and ecological point of view. The study evaluated the variation of biological yield, grain production and some productivity elements in field peas. The research took place in ARDS Lovrin, Romania. The experiment was organized under the conditions of a cambic chernoziom type soil, in a non-irrigated system. The 'Boxer' pea cultivar was cultivated. Fertilization was done with phosphorus, applied in autumn, in five concentrations (0, 40, 80, 120 and 160 kg ha⁻¹ a.s.; a.s. – active substance). On each phosphorus level, nitrogen was applied in spring in five doses (0, 25, 50, 75 and 100 kg ha⁻¹ a.s.). The combination of the two fertilizers resulted in 25 experimental variants, in four repetitions. Biological yield recorded values $BY=0.800 - 1.640 \pm 0.046$ kg m⁻². Pea grains production recorded values $PgP=0.091 - 0.604 \pm 0.031$ kg m⁻². Pea stalks varied between $PS=0.584 - 1.026 \pm 0.026$ kg m⁻². Secondary pea production varied between $PsP=0.659 - 1.127 \pm 0.027$ kg m⁻². Correlation of variable intensity was recorded between determined parameters. Based on PCA, PC1 explained 72.664% of variance, and PC2 explained 27.217% of variance.

Key words: biological production, field peas, grain production, mineral fertilizers, multivalent crop

FINANCIAL PROFITABILITY OF AGRICULTURE IN BULGARIA

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Abstract

Efficiency in agricultural business activity is directly related to the high financial results. The main approaches to business evaluation are related to the investment in production capital and the return on the investments made. The object of research in this article is the profitability of equity capital in the Agriculture sector in Bulgaria. Known in economic literature as Financial profitability, it is an important indicator for both owners and future investors, as it shows the profitability of capital invested in production. The main goal of this article is to make a comparative analysis and assessment of the direct factors that have an impact on the profitability of equity capital in agriculture. Based on the collected statistical information, the method of the financial profitability calculation was selected, through the influence of changes in the equity load factor and revenue profitability. The conclusion is related to finding a causal relationship between the components of financial profitability, which is the basis for specific recommendations and opportunities to increase its level.

Key words: profitability, equity capital, factor analysis, Bulgaria

**RESEARCH ON THE INFLUENCE
OF BIOSTIMULANTS ON PRODUCTIVITY
IN THE MILKWEED (*SYLIBUM MARIANUM* L.)**

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Abstract

The purpose of the paper is to study to what extent the production and productivity elements of the armory culture is influenced by biostimulators in the pedo-climatic conditions of the experimental field located in the town of Măciuca, Vâlcea county. The work is based on a trifactorial experience, where factor A is the genotype, with 5 gradations: from Prahova, from Secuieni, from Iasi, Dacia Plant and from Braşov; factor B is the applied biostimulator, with 4 grades: untreated, Cropmax, BioHumusSol and Bioenne; factor C is the sowing density, with 3 gradations: 15 pl/m², 10 pl/m², 25 pl/m². The three-factor interaction genotype x biostimulator x decime influenced calathidium diameter, production and MH. The Prahova population showed differences of 25 pl/m², when treated with BioHumusSol and Bioenne. The Sequoia cultivar was more productive at plots of 10 pl/m² and 25 pl/m² both untreated and treated with BioHumusSol and Bioenne. Desimea and the biostimulator influenced the Iaşi cultivar to a very small extent. Dacia Plant was the only one that reacted very significantly to the treatment with Cropmax, at the rate of 25 pl/m². The Braşov population recorded increases in production when treated with Bioenne, in both plots. These interactions technological requests for the cultivation of armors in experienced pedoclimatic conditions.

Key words: armory, genotype, calathidium, seeds, biostimulator

AGROPRODUCTIVE DIFFERENCES BETWEEN TWO LUVOSOL UNITS AT THE PREAJBA GORJ EXPERIMENTAL CENTER, ROMANIA

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Abstract

This paper presents the agroproductive differences between two luvisol units at the Preajba Experimental Center, Gorj, Romania, under the influence of surface erosion. Thus, two soil profiles were comparatively executed, one on the plateau on a slope of 2-5%, on a typical luvisol characterized by an A_{tel}, A_o, A_E, E_l, B_{t1}, B_C, C profile, and another in the lower third of the slope on a 10-15% where a stagnic eroded luvisol was identified. The latter had gradually removed its upper horizons due to slow surface geological erosion, exhibiting a shorter profile with the A_oE_l, E_l, B_{t1w}, B_{t2w} sequence. By washing the fertile topsoil year after year, the physical and chemical properties of the soil worsened. In this regard, the bonitation sheets were drawn up, the potential yields achieved under natural conditions were determined, and following the application of specific hydro-ameliorative measures and the execution of enhanced bonitation based on them, it was observed that the bonitation scores increased, the favourability classes decreased, and the yields increased directly proportional to the value of the enhanced bonitation score.

Key words: chemical properties, agroproductive, differences, potential yields, bonitation score

DEVELOPING A MODEL BASED ON A STATISTICAL ANALYSIS OF FOOD LOSS AND WASTE PATTERNS

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Abstract

Reducing food loss and waste on each level of agrifood chain is a responsible action, thus each stakeholder on the agrifood chain must create actions that are related to food waste prevention. In this matter, this paper presents an analysis of a statistical study run on a sample of respondents related to food loss and waste on a consumer level of agrifood chain. The study takes into account both quantity and quality parameters and serves as a provider of training data for a model which will be developed based on prediction. Another important aspect of the paper is related to the determination of food loss and waste economical behavioural patterns on the other levels of agrifood chain, which will consist in training data for the mentioned model for the other levels of the agrifood chain.

Key words: food loss and waste, statistical, model, agrifood chain

FINANCIAL PERFORMANCE IN THE CROP PRODUCTION SECTOR IN THE ERA OF DIGITAL TRANSFORMATION

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Abstract

This paper analyses the financial performance of crop production enterprises related to the costs associated with their innovation activity. We aim to determine influencing factors related to the digital transformation process, on the one hand, and on the other, explore the change in the economic performance of enterprises. For this purpose, we trace out enterprises' intangible assets and financial performance indicators. The study is based on a sample of enterprises, classified according to whether they disclose intangible assets in balance sheets. We use panel data collected on financial results, income, expenses, liabilities, and assets for five years. Both the Probit model and Fixed effects model are applied in an attempt to deepen the analysis. The results show that enterprises spend a negligibly small share of their revenue on innovation activities. Larger and more innovative crop farms with higher labour productivity have better financial performance. However, we found out that the higher value of return on assets does not affect enterprises' innovation decisions.

Key words: innovation activity, profitability, digitalization, Probit, agriculture

**AN ANALYSIS OF NATIONAL SANITARY VETERINARY
AND FOOD SAFETY AUTHORITY (ANSVSA)'S
ACTIVITIES DURING THE 2023 SUMMER SEASON
IN CONSTANTA COUNTY, ROMANIA**

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Abstract

This paper presents an analysis of the actions undertaken by the ANSVSA inspectors during the 2023 summer season in the areas of tourist interest within Constanta County. Based on the analyzed data concerning the Summer Season Command period and the periods and areas overcrowded with tourists, specifically from June 26, 2023, to September 3, 2023, several conclusions can be drawn: The research highlights the fact that food business operators still require support in order to meet food safety standards and to comply with the legislation in force. These issues have resulted in increased inspections in order to prevent food safety risks, including the prevention of food poisoning. A total of 2,245 units were inspected, leading to the enforcement of 471 penalties for offences, totaling 4,962,200 RON, and over 2 tons of non-compliant food were confiscated. These conclusions provide an overview of the evolution of the activities conducted by food business operators in the South-East Region of Romania, indicating both the challenges to and opportunities for their development and the continued implementation of good hygiene and food safety practices.

Key words: food quality, official inspections, South-East Region, Romania

**EVALUATION THROUGH NATURAL BONITATION
WORK OF THE SOILS IN THE ZONE OF CONFLUENCE
OF DOLJ AND MEHEDINTI COUNTIES, ROMANIA AND
THE ESTIMATION OF CROP PLANT PRODUCTIONS
SPECIFIC TO THE AREA**

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Abstract

The technical bonitation work was carried out based on soil mapping in the reference area, identifying the typical preluvosoil, the typical luvosoil and the gleic alluviosoil as the main soil units. The soils identified and evaluated in these natural conditions are characterized by morphological, physical, hydro physical and chemical properties, specific to the hilly area. Based on the physical-chemical properties, the evaluation of the main identified soils was carried out, in terms of their favorability for different plants grown in the area, by establishing bonitation marks and favorability classes. It was found that the highest bonitation marks (over 50 points) and the lowest favorability classes (III, IV and V) were obtained by the gleic alluviosoil, followed by the typical preluvosoil, and the lowest bonitation marks and the highest favored classes are recorded for the typical luvosoil. The estimation of the productions that can be obtained by the specific crops in this area, are according to the value of the bonitation marks obtained in natural conditions, with the 3 researched soil types.

Key words: soil mapping, soil bonitation, bonitation marks, favorability classes, yields

FROM FIELD TO CONSUMER: A COMPREHENSIVE ANALYSIS OF MEDICINAL AND AROMATIC PLANT PRODUCT PREFERENCES THROUGH GENERATIONS

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Abstract

The aim of the study was to investigate consumer behaviour and preferences regarding products containing medicinal and aromatic plant ingredients among age generations. Statistical program XLSTAT 2022.4.1 was used to evaluate 375 replies from a larger database for examination with using multiple correspondence analysis and non-parametric tests. The findings showed that the key factor in the process of buying medicinal and aromatic plant products for treating and preventing illnesses was the quality of the product. Research results pointed out that ingredients, scientifically confirmed benefits, labelling details, origin of raw materials, absence of synthetic components, and the scent of the product are also important determinants of purchase. Moreover, the research revealed that consumers from Generation Z do not use medicinal and aromatic plant products for cosmetics, personal care purposes, or the prevention and/or treatment of several illnesses, while Generation Y, along with Generation X and Baby Boomers, tend to use them. Generation Y uses these products for both cosmetics and treatment purposes for 1 - 9 years or more. Studying consumers of herbal and aromatic products across generational lines can provide distinct consumer patterns with a significant impact on the development of products and marketing strategies tailored to the specific requirements of each generation.

Key words: medicinal and aromatic plants, consumer, behaviour, generations, information

THE WINEMAKING SECTOR IN THE REPUBLIC OF MOLDOVA- ANALYSIS AND PERSPECTIVES

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Abstract

This paper analyses the winemaking sector in the Republic of Moldova using econometric models. The use of econometric models in agriculture involves the application of statistical methods and economic theory to analyze and model relationships in the agricultural sector. These models help researchers, policy makers and practitioners to understand the factors that influence agricultural outcomes and make informed decisions. The article presents the results of regression estimations in which the endogenous factor is the volume of overall production in agriculture, but also the volume of production in the wine sector. On the basis of official statistical data of the Republic of Moldova, the Cobb-Douglas production function was estimated, whereas exogenous factors are labor and capital used in agriculture, but also technical and scientific progress observed in agriculture. The function is used for both short-term and long-term forecasts.

Key words: agricultural sector, winemaking sector, econometric models, Cobb-Douglas production function, forecast scenarios

**THE ROLE OF INVESTMENTS
IN THE MODERNIZATION AND DEVELOPMENT
OF THE VITIVINICULTURAL SECTOR**

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Abstract

The paper presents the analysis of the investment flow in the vitivinicultural sector and the prospects for the development of the sector, and a SWOT analysis was developed to have a conjugate vision of the sector. The paper reflects the role and importance of investment in the modernization and development of the sector by increasing competitiveness, economic performance of enterprises, market growth and diversification. In Moldova, the vitivinicultural sector is at the heart of the harmoniously developed social and economic life, due to the favorable conditions, also wines can be considered as the visiting card of the Republic of Moldova. The methodology applied includes systemic analysis methods, quantitative and qualitative methods, economic and financial analyses specific to the production and marketing activity. The results of the research revealed the connection between investments in modernization-innovation and sustainable growth of the vitivinicultural sector through: improvement of technological processes, improvement of working and living conditions of the involved population, especially those in rural areas, effects of new technologies on the environment.

Key words: vitivinicultural sector, investment, sustainable development, modernization, innovation

THE SPECIFICS OF PUBLIC COMMUNICATION IN PROMOTING THE IMAGE OF AGRICULTURAL HOLDINGS

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Abstract

Considering the premises and theories of public communication, this paper aims, through a qualitative study, to capture, on the one hand, the main aspects of the image of agricultural companies with direct impact on their profitability and, on the other hand, to identify the mechanisms of public communication that have the greatest impact on image formation. The importance of agricultural companies is becoming more and more strongly perceived lately, the post-Covid 19 experience, the danger of uncontrolled increase in prices of basic foods, have made it easier for public opinion to understand the role of agricultural companies in ensuring food security. Certain governmental strategies to promote Romanian products, cooperation on the short producer-consumer chain, have led to putting on the public agenda, especially in recent years, the role and importance of agricultural companies within the Romanian society. In this context, the paper aimed to analyze the specific public communication strategies in promoting agricultural companies for increasing their credibility, enhance their competitiveness and conquest new markets. The qualitative research conducted through the method of the self-administered structured questionnaire analyses how agricultural companies, through their communication strategies, use recommendations and European funds in promotional campaigns to increase market image and build their own brand. The scientific premises, on which the research was based, were validated, the responses showing a significant correlation regarding information, access to funds, or the use of online promotional campaigns for building the image and brand.

Key words: public communication, image strategies, public opinion, target audience

**CHALLENGES OF THE CONSUMPTION BEHAVIOUR
TOWARDS THE ECO-FOOD PRODUCTS.
A STUDY ON THE SUSTAINABLE HUMAN NEEDS**

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Abstract

The human needs and the consumer behaviour are in a permanent transformation and having more sustainable and healthy food becomes a priority. The consumer behaviour follows the trends of the population needs. Eco-food consumption is increasing, as a result of agricultural, nutritional and food production policies. The producers in the eco-food branch should focus on quality that meets the consumers' demands. This study is focused on eco-food products analysis from the new consumption behaviour and sustainability point of view. The main purpose is to analyse the attributes perceived by consumers and their interest related to viability and sustainability of the eco-food, in association with expected benefits. The methods used for research are the market survey and focus group, alongside the incursion in the literature related to eco-food consumption behaviour. The research area is delimited on Iași County population, only for the eco-food products consumers. The results indicate a growing interest for the eco-food consumption, especially among middle-aged people, interested in better quality of life, personal and family health, and a sustainable new lifestyle.

Key words: *behavior, consumption, development, eco-food, needs.*

**ECONOMIC EFFICIENCY REGARDING
CASTOR BEAN (*Ricinus communis* L.) CULTIVATION
IN PEDOCLIMATIC CONDITIONS
IN THE CENTER OF MOLDOVA, ROMANIA**

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Abstract

*In Romania, castor bean (*Ricinus communis* L.) is not cultivated on large areas, offering beneficial perspectives to those who want to set up a business in the agricultural field. The expansion of surfaces with this species is limited by climatic conditions, and in particular by the fall of early autumn frosts, which can compromise the entire production of secondary crops. Climate change in recent years has led to the expansion of the castor cultivation area, which has obtained satisfactory production in the central area of Moldova if all technological links are respected. The research aimed to identify the genotype with the highest adaptability to the pedoclimatic conditions in the area of influence in order to establish the optimal sowing age and the distance between rows on the production and quality of seeds, implicitly in obtaining a net profit. The results obtained from 2018-2020 showed that the best option of cultivation and obtaining high net profit for the pedoclimatic conditions in the center of Moldova is the one for the variety Teleorman sown in second age and 70 cm distance between rows (12,046 lei·ha⁻¹ for a production of 1,607 Mg·ha⁻¹).*

***Key words:* seed production, sowing age, genotype, net profit.**

RAPESEED CROP MANAGEMENT CONTRIBUTION TO YIELD INCREASE THROUGH SOIL WORKS SYSTEM AND FERTILIZING TREATMENTS

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Abstract

The study analyzed how elements of crop management can contribute to increasing the yield of the winter rape crop. Field research took place in the area of Satu Mare locality, Arad County, Romania, in the period 2022-2023. The field experiments were organized in farm conditions, with accessible agricultural technologies. Two soil working systems (Sws) were considered: a classic system of soil preparation by disc tillage (SwsA), and a system of soil preparation by direct seeding (SwsB). Four treatments (T) of nitrogen and sulfur fertilization (T1, T3 and T4) were applied to the background of each system, compared to a classic fertilization (T2). In the case of soil tillage SwsA system, rape yield average was $Y_{(AvgSwsA)} = 3,537.50 \text{ kg ha}^{-1}$ (T4 treatment generated increase yield, $\Delta Y = 380.50 \text{ kg ha}^{-1}$). In the case of soil tillage SwsB system, rape yield average was $Y_{(AvgSwsB)} = 3,795.00 \text{ kg ha}^{-1}$ (T4 treatment generated positive growth, $\Delta Y = 1,007.00 \text{ kg ha}^{-1}$). At the experiment level, the average yield was $Y_{(AvgSwsA\&B)} = 3,666.25 \text{ kg ha}^{-1}$. A significant yield increase was recorded only in the case of the T4 treatment, with $\Delta Y_{(SwsB-T4)} = 1,135.75 \text{ kg ha}^{-1}$. Multiparameter analysis (PCA, CA) facilitated distribution diagrams and classification of variants, under conditions of statistical safety (Coph.corr = 0.936). PC1 explained 40.35% of variance and PC2 explained 29.297% of variance. Mathematical models described the variation of yield (Y) in relation to biometric parameters of the plants ($p < 0.001$, $R^2 = 0.873$ to $R^2 = 0.989$).

Key words: crop technology management, mathematical models, rapeseed, soil works system, technological treatments, yield increase

RESEARCH ON WEED CONTROL IN AN OAT CROP

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Abstract

Oats are more competitive with weeds than most other crops, especially when both the seed rate, due to its high twinning capacity, and the sowing season that will provide the oat crop with the vigor it needs to compete against weeds, through a good growth of roots and foliage, which will be reflected in their shading. With all these advantages, weed control is an essential and timely factor in obtaining a high production and quality of oats. The purpose of the present work was to determine the reserve of weed seeds in the soil, since their number and germinating ability make the soil the main source of weeding of agricultural crops, namely oats; the structure of soil weeding was also determined and the positive effect of applying the herbicide Granstar® Super (25% thifensulfuron-methyl + 25% tribenuron-methyl) against annual and perennial dicotyledonous weeds at a dose of 40 g/ha post-emergence was observed. The research was carried out on the Ovidiu variety, during the vegetation period of 2021 in Mircea Vodă commune, Brăila county. The degree of weeding in the oat variety Ovidiu decreased, as a result of the application of the Granstar® Super herbicide, varied from 147.2 weeds/m² to 6.1 weeds/m². The application of the Granstar® Super herbicide led to a very significant increase of 380 kg/ha production in the case of the Ovidiu oat variety..

Key words: weeds, control, herbicide, oat

RESEARCH ON THE EFFECTIVENESS OF SOME INSECTICIDES IN COMBATING PESTS IN AN OAT CROP

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Abstract

The behavior of oat varieties against harmful insects is an essential agronomic property. In the protection of plants in general and in oat culture, in the present case, insecticides will be applied only at the times when they are needed and in the optimal doses. In addition to respecting the technological links (quality ploughing, crop rotation, sowing in the optimal season), combating oat pests is a priority to minimize quantitative and qualitative production losses. In this work, the identified harmful species are presented: Sitobion avenae, Helicoverpa armigera, Haplodiplosis marginata, Haplothrips tritici, Agrotis segetum, Phorbia fumigata and mites, as well as the effectiveness of insecticide treatments based on cypermethrin 100 g/liter (Faster 10 CE), lambda-cyhalothrin 50 g/liter (Karate Zeon® 50 CS) and deltamethrin 100 g/liter (Decis® Expert 100 EC) against them. The research was carried out under conditions of natural infestation of the Ovidiu variety, during the vegetation period of 2021 in Mircea Vodă commune, Brăila county. Among these species, the greatest abundance was represented by the species Sitobion avenae. The effectiveness of the insecticide treatments applied to the oat crop was reflected in a very significant increase in production of 325 kg/ha in the case of the Karate Zeon® 50 CS product, a distinctly significant increase of 279 kg/ha in the case of the Decis® Expert 100 EC product and a insignificant increase, of 130 kg/ha, in the case of the product Fastac 10 CE.

Key words: oats, pests, insecticides, effectiveness

RESEARCH ON SOME ASPECTS OF POULTRY MEAT QUALITY DEPENDING ON STORAGE

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Abstract

The study of current research is of interest regarding the assessment of the quality of poultry meat depending on the storage conditions.

Research on the quality of poultry meat assortments demonstrated aspects of the quality of poultry meat assortments after 24 hours of refrigeration with a higher weight in the sample of poultry meat of the assortment purchased from the market - 3 isolated bacterial colonies, followed by the poultry meat of domestic origin-2 colonies and 1 bacterial colony determined in store-bought poultry meat depending on various storage conditions.

In the scientific research are analyzed the consumption of meat by different categories, the origin of poultry meat sold on markets from Moldova, the analysis of quality based on storage and proposed recommendations related the improving the quality of the poultry meat.

Key words: Poultry, Bacteriology, Bacterioscopy, Refrigeration, Freezing.

EGG QUALITY RESEARCH ON CONTAMINATION IN VARIOUS SEASONAL CONDITIONS

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Abstract

The scientific research reflected in this study aimed to identify the quality of chicken eggs regarding bacterial contamination in different seasonal conditions. The evaluation aspects of the conducted study demonstrated the general prevalence of microbial germs on the eggshell surface during the autumn season, followed by the spring season and finally a lower prevalence during the winter season. Salmonella species were not identified.

In the scientific research are analysed the egg production per region, revenue in the egg market of Moldova, sales channels of eggs and egg quality in different seasonal conditions. In the same time the research finishes with conclusions/recommendations related the egg quality assurance and bacterioscopic results.

Key words: Chicken eggs, Bacteriology, Bacterioscopy, Egg shell, Microflora.

CONSUMERS' PERCEPTION OF “GEZO” IN ROMANIA: A TRADITIONAL PRODUCT FROM KURDISTAN

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Abstract

The paper aimed to analyse Romanian consumers' perception towards a traditional product from Kurdistan. For this purpose a research was conducted among consumers of traditional products from Cluj-Napoca City. To achieve the purpose of the study a face to face survey was conducted. The research instrument was divided into 3 main parts: (i) expectation regarding the attributes of traditional product; (ii) perception of “Gezo” a traditional sweet product from Kurdistan; (iii) socio-demographic profile of the respondents. To determine if there are any differences between the perception and expectations regarding the traditional analysed product, a set of 13 items related to product attribute were evaluated on a scale from 1 to 5. The results indicated that the analysed product did not meet the Romanian consumers expectations especially in terms of taste (-1.1) and flavour (-0.22), but were positively appreciated the low content of fats (0.45) and sugars (+0.28). This study represents a first step in analysing the possibility of exporting traditional products outside of Kurdistan, and offers valuable information to adapt future development product strategies.

Key words: Romanian consumers, expectations, product attributes

**ASSESSMENT AND IMPROVEMENT
OF FOOD SUSTAINABILITY AND THE FACTORS
INFLUENCING CONSUMPTION PATTERNS**

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Abstract

This study focuses on the assessment and enhancement of food sustainability, exploring the multifaceted factors that shape consumption patterns. In a world marked by growing concerns about food security and environmental sustainability, understanding the dynamics of food consumption becomes paramount. Through a comprehensive analysis, this research delves into various dimensions of food sustainability, encompassing environmental impact, social equity, and economic viability. The methodology involved evaluating primary food sustainability indicators and concluded with a social survey analysis. Forecasts for the average daily food consumption per capita were interpreted. The study examined the Global Food Security Index (GFSI) in Europe, reflecting food access levels and the population's ability to secure adequate, safe, and nutritious food. The aim was to identify the most precise and statistically valid forecast method. Romania ranks 23rd in the GFSI overall score, which is improving. It stands 25th in accessibility, 21st in food availability, and also 21st in quality and security. While the overall score, accessibility, and availability show positive trends, quality and safety exhibit a decline. The critical analysis led to recommendations for a unified strategy to boost food sustainability.

Key words: assessment, enhancement, food sustainability, nutrition, consumption

NEW TRENDS IN THE GLOBAL AND EUROPEAN UNION RAW SILK TRADE IN THE PERIOD 2013-2022

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Abstract

The study aimed to analyze the trends in raw silk trade in the period 2013-2022 and by two sub-periods 2013-2017 and 2018-2022 at the global level and in the EU main producing and trading countries like China and India in Asia, and Italy, France, Romania, Germany and Spain in the EU. Fixed basis indices, absolute and relative differences among sub-periods, comparison, trend lines, regression equations and R square served as statistical tools to process the data from ITC and OEC World. The results pointed out the decline by 43.2% in world raw silk production which attained 91 thousand MT in 2022 vs 2013. The global raw silk export decreased from USD 3.12 Billion in 2013 to USD 1.91 Billion in 2022 (-38.8%), while the import went down by 38.8% from USD 2.41 Billion to USD 1.65 Billion (-31.54%). In consequence, trade balance remained positive at USD 0.26 Billion in 2022, but 2.5 times smaller than in 2013. In the EU, in 2022, raw silk export was USD 0.46 Billion (-46.5% lower vs 2013), while import value attained USD 0.62 Billion (-37.4% vs 2013), resulting a negative balance of - USD 0.16 Billion. China maintained its top position as a silk producer and exporter, with a positive trade balance, but negative in 2020-2022. The Asian competitors India, Uzbekistan and Vietnam increased production and their trade as well. The EU is a very important raw silk importer, so that its trade balance is negative (-USD 0.16 Billion in 2022). Italy is a remarkable top silk importer in the world, and France, Romania, Germany and Spain are also representatives. Silk textiles remain of high attraction for fashion industry, a reason to expect as production and commerce to flourish in the future, as in the EU is a new orientation to reduce the wastes caused by "fast fashion" based on synthetic fibers and to encourage the production of healthier and environment friendly clothes.

Key words: silk, export, import, trade balance, trends, world and EU

PROFITABILITY OF SUNFLOWER CULTURE ON A CAMBIC CHERNOZEM IN WESTERN ROMANIA

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Abstract

The aim of this study consists in the optimization of some technological links of major importance for the sunflower culture to develop some technological recommendations, which allow obtaining high and efficient productions. The research was carried out over a period of 3 years, on a cambic chernozem. The methods refer to the effect of some technological factors on sunflower production and some of its morphological components in the pedoclimatic conditions of the outskirts of Timișoara, Romania. The effects of some technological factors on production were studied and analysed, obtaining useful information to optimize the technology of some hybrids in soil and climate conditions like those in Timișoara. Results showed that the 59,524 g.g./ha variant (N₅₀P₅₀K₅₀, scarification+ploughing) produced the most – 2,612 kg/ha in 2022 and 3,417 kg/ha in 2020. Also, the N₅₀P₅₀K₅₀ variant at 24 cm per row ranked in the best 5 variants, recording productions of 2,507-3,145 kg/ha. The analysis of the economic efficiency of the production in different technological variants allows an adequate management of the costs to maximize the profit in accordance with market requirements. The researches related to this study fall under the concerns of obtaining useful information that will allow the achievement of superior, high-quality, and sustainable productions under the conditions of current climate changes.

Key words: economic efficiency, cambic chernozem, density, fertilization, sunflower culture

ECONOMIC EFFICIENCY OF SUNFLOWER PRODUCTION DEPENDING ON TECHNOLOGY

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Abstract

The purpose of this paper is to present an analysis of the economic efficiency of sunflower production in the pedoclimatic conditions specific to the outskirts of the city of Timișoara different technological options in the period 2020-2022. The experiment was trifactorial (of the 4 x 3 x 3 type), with 3 factors: D – density; F – fertility; T – technology. Ten plants were chosen from each plot and a series of measurements were made. Based on the values obtained, descriptive statistical indices related to the different technological factors were calculated, namely: arithmetic mean, error of the mean and coefficient of variation. The results showed that the profit had a variation between 849 RON/ha in the case of plants grown at a density of 49,261 g.g./ha on unfertilized agrofund prepared by scarification + ploughing and 1,990 RON/ha for plants grown at a density of 59,524 g.g./ha on the agricultural land fertilized with N50P50K0 and prepared by ploughing. In 55% of cases, the technological variants produced a profit of over 1,500 RON/ha. The research related presented in this paper concerns useful information that will allow superior, high-quality, and sustainable productions under the conditions of the current climate changes.

Key words: economic efficiency, production, technological factors, sunflower

**SUBSECTION
FARM AND COOPERATIVES
MANAGEMENT**

SOCIAL ASPECTS OF COOPERATIVE VALUES OF SOME TYPES OF COOPERATIVES IN BULGARIA

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Abstract

From their inception until now – the last 180 years – cooperatives are organizations that unite and balance the social and economic demands of society with the expectations of their members. Cooperative values and principles have been preserved for almost two centuries, which is proof of their sustainability and permanence. These values impress upon the societal values of freedom, equality and democracy. The aim of the present study is to study the social aspects of cooperative values in some types of cooperatives in Bulgaria. To achieve the goal, the following tasks are solved: (a) to examine the nature and character of cooperative values; and (b) to reveal the social aspects of these values by following their manifestation in individual Bulgarian cooperatives. To achieve the goal and solve the tasks, the methods of analysis and synthesis, induction and deduction, the structural-functional approach are applied. The main result of the study is that meeting the social needs of the member-cooperators in Bulgarian cooperatives occupies an important place, and for a significant part of the cooperators - a priority. From the analysis in this research, we can conclude that the social aspects of cooperative values in Bulgarian cooperatives makes them unique as a legal-organizational form, since these values are close to universal human values.

Key words: cooperatives, social responsibility, social enterprises, mutual aid, equality, Bulgaria

**ANALYSIS OF COOPERATIVES
IN THE AGRICULTURAL SECTOR
AND MANUFACTURING INDUSTRY-PRODUCTIVITY
AND GROWTH IN BULGARIA**

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Abstract

The article examines cooperatives from the Agricultural sector and the Manufacturing industry. The research focuses on the growth of cooperatives of different sizes and ages. The period of the research is 5 years. After an in-depth study of the empirical data of the studied sectors, an analysis of the rate of change in net sales revenue and their productivity is made. The productivity, growth and age of the cooperatives are expected to be positively related for the period under study. Cooperatives with longer working experience are predicted to realize a higher rate of change in net sales revenue compared to cooperatives that have been operating for a shorter period of time.

Key words: cooperatives, growth, productivity, agricultural sector, manufacturing industry, Bulgaria

THE “NĂDLAC FARMER” AGRICULTURAL COOPERATIVE – A MODEL OF GOOD PRACTICES FOR SMALL FARMERS, ROMANIA

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Abstract

In Romania, the numerous, dispersed family farms with small areas continued their activity in many cases considering a certain tradition as closed or partially open systems. After the accession of our country to the European Union in 2007, there has been a tendency to reduce small holdings through mergers, a phenomenon which is otherwise naturally manifested in all the states of the EU, but not to the extent that would be necessary for Romania. Following the analysis of agricultural holdings in Romania by size class in 2020, it was found that out of the 2,887.00 thousand of agricultural holdings, 2,606.98 are under 5 ha in size (54% are under 1 ha, and 36.30% are between 1 and 5 ha). The average size of farms increased in the period 2010-2020 from 3.45 ha to 4.42 ha. The chronic under capitalization of subsistence and semi-subsistence agricultural holdings also contributes to the modest performance of the Romanian agricultural and agri-food sector, compared to its natural potential and the population's expectations that agriculture and the food industry quickly adapt to the EU's common agricultural policy. Since these categories of farms mostly ensure self-consumption for the rural population in most Romanian villages, their association is required to achieve a level of economic development and efficiency. The purpose of this paper is to present a functional and performing agricultural cooperative from Nădlac, Arad County, Romania, that can be a model of good practices for the association of small farmers and Romanian agriculture.

Key words: cooperatives, small farms, model, development, efficiency

CHALLENGES AND ALTERNATIVES ON THE FORAGES RESOURCES PROVIDING UNDER CURRENT ENVIRONMENTAL AND CLIMATE CONDITIONS

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Abstract

Forages resources represent the vector between vegetal production and animal production, constituting, at the same time, the category of essential inputs for obtaining favourable technical-economic results in the animal breeding sector. The paper analysis the challenges and risks faced by these fodder resources in the context of environmental and climate changes, also presenting substitution alternatives, in case of deficit situations. As research methods used, descriptive and comparative analysis can be listed, along with correlations and analysis of statistical indicators, based on available official data. The analysis highlights the fact that, in the conditions of climate changes, ensuring the fodder for animal farms can present certain risks and, consequently, it is necessary to take managerial decisions to improve efficiency and reorientation in the structure of fodder crops, considering their nutritional qualities.

Key words: fodder, challenges, environment, climate

THE COOPERATIVE MODEL OF AGRIBUSINESS IN BULGARIA- ORIGINS AND CONTEMPORARY STATE

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Abstract

The contemporary Bulgarian cooperative business model emerged at the end of the 19th century in response to specific socio-economic conditions. It developed progressively with the realization of various businesses – agricultural, credit, or as provision of services to member-cooperators, etc. Throughout the years, the cooperative model underwent periods of significant growth, yet also of stagnation, which has justified the interest that both theory, and business practice have shown in it. Generally recognized is the contribution of a number of national and international researchers who in the past have analyzed the features of the cooperative model and defined it accordingly. From the analyzed literary and normative sources, we can deduce that the definitions and opinions on the cooperative nearly overlap. It is defined as a voluntary union of persons who mutually assist and cooperate with each other with equal responsibilities and rights. The member-cooperators delegate part of their functions to democratically elected leading representatives when they establish a cooperative enterprise. The main goal of the cooperative is to meet the needs of its members in its non-profit oriented activity. Considering the multi-aspect character of the studied topic, we outline the aim of this paper as making an analysis of the origin and development of the cooperative model and its applicability to the agricultural sector in Bulgaria. The chosen methodological approach is based on the statistical groupings of a big corpus of official data on cooperatives entered in the Bulgarian Commercial Register since 2005 to date. We have established certain indicators, reflecting the tendencies in the development of cooperatives by region of planning, economic sectors, annual revenue, etc. We used Microsoft Office and the licensed version of Statistics Grad Pack for Windows for data processing. Main inferences: In Bulgaria, the cooperative business model emerged first in villages to satisfy the needs of the local population. Later, these cooperatives appeared in larger towns.

Key words: cooperative, model, agribusiness, origin, state, development

GENOME EDITING TECHNIQUES: APPLICATIONS IN WHEAT BREEDING

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Abstract

Wheat provides the food and nutritional support necessary for human life; therefore the process of wheat breeding is very important to meet the growing demand for cultivars with better agronomic traits. Over time, breeders have tried various breeding techniques to improve desired traits, but these techniques have proven to be time-consuming and labor-intensive. To overcome these problems, scientists have developed new genome editing techniques to accelerate and facilitate crops improvement. The methodology used in this paper focused on processing, analyzing and providing updated information on genome-editing applications for wheat using data from the EU-SAGE platform. To date (January 20, 2024), 43 applications for the CRISPR/Cas technique, 3 for the BE technique and a single application for the TALEN technique have been registered on this platform. The USA is second, after China, in the application of genome editing techniques to wheat. All new wheat genotypes obtained through these applications do not contain foreign DNA, meeting the conditions for regulatory acceptance and ratification of several countries. These include important traits for both farmers and consumers, thereby contributing to increasing global efforts for sustainable agricultural development.

Key words: Base editing, CRISPR/Cas system, grain yield, quality, TALEN

FARM SIZE AND TECHNICAL EFFICIENCY OF THE AGRICULTURAL SECTOR IN THE EUROPEAN UNION (EU-27)

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Abstract

The majority of studies of agricultural productivity support the view that there is a relationship between productivity and farm size. How the size of a farm is related to its efficiency is a constant problem in agricultural economics research. It also has important implications for agricultural development policy. For developed countries, including the countries of the European Union, numerous studies show that, with the increase in the size of farms, their efficiency usually increases. Moreover, there is a constant decrease in the number of farms and the concentration of land and labor. For this reason, the problem of the influence of the economic size of a farm is included in the scope of the research related to the analysis of the relationship between the farm size and its efficiency. The purpose of the paper was to investigate the relative technical efficiency of the agricultural sector in the European Union (EU-27) using the Data Envelopment Analysis (DEA). It was found that with the increase in economic size, the technical efficiency of the researched farms improved. Attention was paid to the possibility of reducing labor inputs, mainly in farms of economic size classes ES1-ES4. No need to reduce the level of capital expenditure has been demonstrated. This emphasizes the growing importance of the substitution of labor with capital.

Key words: farm size, technical efficiency, Data Envelopment Analysis (DEA), Malmquist Index, EU Member States

PLOT QUALITY RATING AS A RESULT OF INNOVATION MANAGEMENT IN THE ARTIFICIAL INTELLIGENCE SOCIETY

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Abstract

The plot quality rating of seed research industry is of great importance for most trials and experiments, trying to bring data to validate or invalidate a trait, or to see how a trait is getting variability. Still today, the plot quality is a manual assessment, requires a lot of time, and the decision based need to be taken in a short time for creating space for actions. There is a switch of plot quality rating assessment, from conventional to modern, based on imaging. Many multinational companies who business in agriculture, mostly in breeding and research and development, are now, more and more attracted by the drone use as a proof of AI (artificial intelligence). The importance of a plot quality rating is high, from the pure reason it participates in the data validation, standardization, and governance as a science decision. In this area of research, imaging can be very useful and having strong benefits for the final customers. This need provided by AI comes with the imaging concept, based on drone flights and interpretation. The drone is most of the time a commercial one, but the sensor itself is multispectral, able to deliver different layers with interest for the farm. The farm decision or the research team, evaluate the plots by using a application developed by Sentera (USA), named Field Agent. This app represents today the most advanced plot evaluation, and the use of it is quite simple, most of the time deductible for the professional agronomist. As a POC (Proof of Concept), we have used the AI to bring more reliability into the data at farm level, specifically for corn seed production, where we were able to have a stand count (for female and male), tassel identification (target is to develop it for female rows, detasseled), and yield prediction together with disease and pathogens control under the PBD.

Key words: plot quality rating, drone, artificial intelligence

ECONOMIC EFFICIENCY OF MAIZE CROP IN SMALL FARMS IN THE SOUTH WEST OF OLT COUNTY, ROMANIA

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Abstract

A simple experiment was carried out at three neighboring micro-farms where the owners agreed to implement some proposed technologies in which the influence of differentially applied agricultural works and the influence of some inputs on corn production will be tested. The micro-farms are located in the South-West part of Olt county in the vicinity of Dolj county. Conventional works and minimum tillage were executed. For the conventional works, the farmers continued to use their knowledge of corn cultivation. For the proposed technologies, they received nitrogen 70 kg ha⁻¹, phosphorus 90 kg ha⁻¹ and NPK 8.15.15 + 3%CaO+ 9%S 200 kg ha⁻¹. In the short run, it has been observed that employing minimum tillage alongside soil fertility management technologies proves more beneficial in boosting maize yield under conditions of limited rainfall compared to conventional tillage methods.

Key words: maize, minimum tillage, fertility management, efficiency

CAPITALIZATION WITH AGRICULTURAL MACHINES VS. SERVICES FOR AGRICULTURE

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Abstract

The purpose of the research is to determine the specific capital costs of carrying out agricultural work with the farmers' own agricultural machines compared to the costs of agricultural services. A stratified sample based on economic size was used, consisting of 60 farms specialised in large crops from the NE and SE development regions of Romania. The novelty elements of this research consist in the fact that the analysis of the efficiency of the use of agricultural machinery uses a shadow cost—the opportunity cost—to determine the specific income of the use of agricultural machinery. The results show that small farms spend more than twice as much to carry out agricultural work with their own agricultural machinery. The average expenses per ha specific to the agricultural works carried out by farmers with their own agricultural machines recorded an average of 376.3 euro/ha for farms with a size smaller than 100 thousand SO and 186.5 euro/ha for farms with a size greater than 700 thousand SO. For a representativeness level of 69.3%, farms with a size smaller than approx. 578 thousand SO register losses if they carry out agricultural work with their own agricultural machines. This threshold can be appreciated on an area of approx. 854 ha cultivated with grain corn, common wheat, and rapeseed in equal proportions. Using the rationales and cost analysis models presented can help farmers make rational investments and strengthen informed demand in the agricultural services market.

Key words: capital cost, agricultural machinery, agrarian economy, services for agriculture, economic efficiency

SUSTAINABILITY OF THE WORKFORCE ON A FARM IN THE NORTHEAST REGION OF ROMANIA

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Abstract

Sustainability in the labour field on a farm in the Nord-East Region of Romania is a valuable subject having a significant impact on the performance and long-term development of the agricultural enterprise. The efficiency of using the available resources is known as productivity or effectiveness. The efficiency measurement can be attained through several methods, however two of them are most frequently utilised for performance evaluation. The first method, the physical productivity computed by measuring the natural performance of production indicators and is expressed in natural or conventional units; the second method, the performance is measured in terms of value, allowing to evaluate efficiency in terms of financial-monetary terms and is utilised in the modern management of enterprises. In this paper, the main objectives include identifying the optimization directions of workforce performance for S.C. Treter S.R.L., evaluation level and labour productivity evaluations, available resources analysis for improving labour productivity and review of economic consequences of the changes traced in the workforce productivity field.

Key words: human resources, sustainability, performance, efficiency.

SERIOUS GAME SEGAE AS MODERN TOOL FOR LEARNING TO MANAGE A CATTLE FARM

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Abstract

One of the main challenges facing agriculture is to produce food in the most environmentally friendly way possible. This approach is ensured by properly managed agroecological farms. At each stage of education, new methods of transmitting knowledge are sought that enable appropriate student involvement and, consequently, effective transfer of knowledge and skills. One of such methods is the use of educational games in teaching. The serious game SEGAE was created as part of the Erasmus+ project "Development of a serious game for digital learning of agroecology in Europe (SEGAE)". It is based on digital models of farm operation. The model describing the functioning of the farm consists of five modules: soil, plant, animal, economic and environmental. The student (player) makes decisions and then obtains information about the consequences of these actions. The effects can be assessed by analyzing many different indicators, presented in a transparent and user-friendly form.

Key words: serious game, modeling, education, farm management, dairy herd.

DETERMINING THE MARKET VALUE FOR AGRICULTURAL AND LIVESTOCK PROPERTIES

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Abstract

Determining the market value for agricultural and livestock buildings involves considering various factors related to the structures, their functionality, and the overall agricultural market. The current trends and demand in the agricultural sector can influence property values. If there is a high demand for certain types of agricultural activities, properties supporting those activities may have higher market values. The geographical location of the property plays a significant role in determining its market value. Properties in areas with high demand for agricultural activities or with easy access to markets and infrastructure may have higher values. The size and capacity of the buildings are crucial factors. Larger buildings with more significant capacities may have higher values, especially if they are well-maintained and in good condition. The impact of environmental factors, such as soil quality and climate conditions, on the property's productivity can influence its market value. The purpose of this work is to highlight the criteria that influence the market value for such a specialized property.

Key words: valuation, market value, agricultural and livestock properties.

**INTEGRATED RISK MANAGEMENT
IN A SMALL-DIMENSIONAL
LAVENDER PLANTATION IN SOUTHERN ROMANIA**

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Abstract

Studying an integrated management of the risks that young entrepreneurs face in trying to establish and maintain a lavender crop has become of real interest, as the competition has become fiercer. The present article focuses on some of the results obtained from our own research, carried out in Cornatelu commune, Dambovita county, in a family holding of 7,500 sqm, in the period 2017-2019. The total area was divided into three equal parts, 2,500 sqm each, the first being classically (control), the second intensively, and the third ecologically managed. During the three years, all the technological stages were followed, making correlations between the applied agrotechnics, the health status of the lavender crop, the yields obtained and the ways of its valorization for each of the tested variants. Results of the research refer both to the risks arising during the vegetation period, as well as to those from the time of harvesting, processing, packaging and delivery of the products for commercialization. The average of the testing period indicated that the classic system brings yield increases of 5-9%, the quality being also superior.

Key words: lavender, management risks, yields, Dambovita County, Romania

LAND USE FOR ANIMAL FEED IN ROMANIA IN THE PERIOD 2013-2022

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Abstract

The goal of the paper is to analyze the land use as cultivated area and grasslands for producing animal feed in Romania in the interval 2013-2022 utilizing the data from National Institute of Statistics (NIS) and Eurostat. The dynamics as graphical trend lines, regression equations and R square, fixed basis and structural indices were used to reflect the changes across the time. The results showed that the surface with green forages in arable land was 847,978 ha in 2022 representing 10.59% of the total cultivated area and also reflected a reduction by 1.26% versus 2013. The perennial forages covered 675,207 ha in 2022 (+3.7% vs. 2013). Alfalfa accounted for a larger surface with a share of 62.52% in 2022 (vs. 52.39% in 2013), while the clover area decreased its weight from 18.5% to 14.2%. In 2022, annual green forages covered 179,952 ha, by 13.35% less than in 2023. Maize for forage was cultivated on only 48,634 ha in 2022 (-13.36% vs. 2013) and root crops on only 3,033 ha, a surface smaller by 79.32% in 2022. The declined is justify by the negative influence of climate change which reduced forage production and also by the decreasing trend in livestock. Romania has also 5,172,800 ha grasslands, coming on the 3rd position in the EU after France and Germany. This area plays an important role in animal nutrition at a lower cost, in soil conservation, mitigating the effects of climate change, preserving biodiversity and the beauty of the landscapes.

Key words: land use, cultivated forage crops, grasslands, trends Romania

**SUBSECTION
AGRICULTURAL AND RURAL
POLICIES**

NATURAL POPULATION GROWTH IN BULGARIAN RURAL AREAS FOR THE PERIOD 2011-2021

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Abstract

This scientific article presents the geodemographic picture in the rural areas of Bulgaria for a period of 10 years. The research is based on the fact that the population located in the smaller administrative-territorial units (rural areas) is very significant for the functioning of the socio-economic processes in the country. The purpose of this study is to examine the natural growth of the population in the rural areas of Bulgaria for the period between the two national censuses (2011-2021), to analyze the geodemographic process, and to draw conclusions. The obtained results will present the real geodemographic picture in Bulgarian rural areas. The methodology includes: definition of rural areas in the EU and Bulgaria, application of the NUTS classification for grouping the above-mentioned territories, calculation of the natural population growth by years in the rural municipalities and on national level as a basis for comparison. The visualization of the natural population growth in rural areas is presented in tables and figures leading to analysis and conclusions.

Key words: *Geodemography, rural areas, natural increase, NUTS*

PREDICTIVE ANALYSIS IN RURAL ECONOMICS: TOOLS FOR PLANNING AND EVALUATING SUSTAINABLE INVESTMENTS

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Abstract

This article introduces a complex mathematical, economic model for analyzing rural economic development and guiding strategic decisions. Using specific data, it calculates global production, determines direct expense coefficients, and conducts a sensitivity analysis. Parameter adjustments are vital for aligning results with economic reality. The model provides insights for formulating economic policies, emphasizing the need for continuous adjustments amid economic changes. The article aims to analyze two branches of the rural economy through a detailed mathematical model, offering perspectives on economic interactions, optimal resource allocation, and facilitating strategic decision-making. Evaluating the model's results underscores the importance of parameter adjustments for conformity with economic reality, providing a useful framework for economic policies and strategies. In terms of originality, the article highlights the model's essential contribution to economic planning, resource optimization, and risk anticipation. It emphasizes the utility of transparently communicating economic policies for sustainable development. In conclusion, the importance of a complex mathematical and economic model for evaluating and making strategic decisions in rural economy branches. Continuous parameter adjustments are crucial, providing a valuable framework for economic planning and supporting sustainable development.

Key words: economic performance, sensitivity analysis, sustainable investments, production, rural economics

ANALYSIS OF THE DYNAMICS OF ORGANIC AGRICULTURE IN THE EUROPEAN UNION WITH AN EMPHASIS ON ROMANIA

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Abstract

The organic farming system emerged in the context of sustainable agricultural development, contributing to the promotion of an agricultural system that protects the environment. The specific practices of ecological agriculture contribute to the protection of biodiversity, to the maintenance of soil fertility, to the reduction of soil erosion, to the reduction of pollution of water resources, and to the reduction of greenhouse gas emissions. Also, in organic farming, energy consumption is reduced because this farming system is based on practices that require a lot of manual labour compared to conventional agriculture that consumes more energy. The European Commission demands, through the European Green Pact – Farm to Fork, that, by 2030, 25% of European agriculture should be organic. Based on these considerations, the authors of this paper carried out a study on the evolution of organic agriculture in Europe with an emphasis on Romania to analyse whether this objective proposed by the EU is achievable or not. The result of the analysis highlights that it is unlikely that this particularly ambitious goal will be achieved by 2030, noting that, in 2021, only 4.3% of the agricultural area cultivated in the ecological system.

Key words: organic agriculture, farms, România, evolution

STUDY REGARDING THE INTEREST OF ROMANIAN CONSUMERS FOR ORGANIC AGRICULTURE

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Abstract

Organic farming is developing as a sustainable alternative to intensive, conventional farming practice based on increasing yields, by maximizing the use of production factors to continuously increase agricultural production. Organic farming is, now, appreciated because it eliminates chemicals and produces health food with a positive impact on the environment. Sustainable development requires a healthy life due to responsible food production and consumption. These goals can be achieved in a food system where producers contribute through moral behaviours and where consumers are informed. All these aspects are gaining increasing importance at European and global level in the context of sustainable development. Considering these aspects, we carried out this research with reference to the interest of the inhabitants of the Western Romania for ecological products. The analysis of the data, obtained from the field application of a questionnaire and their interpretation, shows that, in Romania, although the area cultivated in the organic system is still small, there is an increased interest in the organic farming system both on the part of farmers and on the part of consumers.

Key words: consumers, interest, organic agriculture, questionnaire

**THE CONTRIBUTION OF AGRICULTURE
COMPARED WITH OTHER ECONOMIC SECTORS
TO THE FORMATION OF ROMANIA'S GROSS
DOMESTIC PRODUCT**

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Abstract

Agriculture was and remains the support of human existence, representing the backbone of the Romanian rural economy. The gross domestic product represents a macroeconomic indicator of results, being the consequence of the efficient use of resources. In this context, the authors analyze the place that agriculture holds in achieving the gross domestic product in Romania compared to the European Union, as well as its dynamics. In this sense, the share of resources in the formation of the gross domestic product in the period 2000-2022 is presented. The main research methods used for this work are: analysis, synthesis, comparison and mathematical analysis. From the analysis carried out, conclusive ideas emerge, and the article becomes even more suggestive, in that it is accompanied by tables synthesized by the authors and relevant graphics that highlight and support the assessments that the authors make in the content of this article. *At the end of the paper, the authors emphasize the fact that the GDP is the most complex indicator that reflects the transformations that the Romanian economy has gone through in recent years. From the point of view of the use of resources, it can be seen that the share of the agricultural sector has registered a downward evolution, which can be largely explained by the increase in the importance of industry and the service sector in the overall national economy.*

Key words: agriculture, GDP, Romania, evolution, economic sectors, EU

**TOWARDS SUSTAINABLE AGRICULTURE:
ASSESSING THE ECONOMIC IMPACT OF ORGANIC
FARMS IN MOLDOVA'S AGRICULTURAL SECTOR**

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Abstract

The Republic of Moldova has made significant strides in adopting organic farming practices, supported by government subsidies and strategic focus on market demand. This paper aims to analyze the economic performance of organic farms in Moldova and their impact on the sustainable development of the agricultural sector, using primary data collected from 63 organic farms benefiting from subsidies between 2020 and 2022. The agricultural sector in Moldova has experienced a gradual increase in cultivated land, with a noteworthy 9.5% dedicated to organic farming. Economically, farmers have seen substantial growth in income per hectare, credited to favorable climatic conditions and advanced technologies. Although organic farming contributes significantly, constituting approximately one-third of total income, conventional agriculture remains the primary contributor with two-thirds.

The impact of subsidies from the National Fund for Agricultural and Rural Development is evident in farm development, as calculated profits per one lei of subsidy have surged from 1.51 to 10.43 lei in 2022. This underscores the effectiveness of government support in fostering growth and development within Moldova's agricultural sector, emphasizing a positive trajectory for sustainable agricultural practices

Key words: *ecological agriculture, efficiency, economic performance, organic farming, subsidies*

EXTERNAL AND INTERNAL THREATS TO FOOD SECURITY

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Abstract

Food security is a paramount global concern, where the delicate balance of availability, affordability, and stability of food resources faces continuous threats from external and internal factors. The present paper provides an in-depth research work of these threats, examining their multifaceted impacts on agricultural systems and the global food supply. Through an extensive analysis of contemporary literature and empirical evidence, the present study navigates the complex web of challenges that threatens food security. Insights gathered from this research pave the way for potential strategies to mitigate the threats, promoting a more sustainable global food landscape. It emphasizes the urgency of a collective and interdisciplinary approach to preserve the future of food security in an evolving and challenging global environment.

Key words: food security, external threats, internal threats, agriculture, political instability

ASSESSMENT OF THE PHYSICAL AND SOCIO-ECONOMIC POTENTIAL OF THE GRASSLANDS IN BANAT, ROMANIA IN A HOLISTIC APPROACH

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Abstract

Grasslands, the main natural resources of rural areas, are open systems, which are functionally and structurally linked with other geomorphological, climatic and/or socio-economic components. The purpose of the research was the diagnostic analysis of the grasslands in Banat, based on several criteria from: (i) the physical environment; (ii) the sphere of biodiversity and (iii) the socio-economic environment. For the analysis - diagnosis, 8 indicators were established: relief; reduction of livestock; the variation in the number of inhabitants; the area of grasslands /inhabitant; accessibility; overlap with protected areas; high biodiversity; touristic potential. Each experimental site was rated with a score according to the characteristics, later the final "grade" was established, and the spatial analyzes were done in the GIS environment. The obtained results show that the grasslands located in the hilly and mountainous areas had the highest scores for the predetermined indicators. They are grasslands restricted by climatic conditions and infrastructure, but they have a High Natural Value, they are located in protected areas and are considered areas with great touristic potential.

Key words: grasslands, anthropogenic impact, socio-economic analysis, Banat, Romania

**CONSOLIDATING RURAL DEVELOPMENT:
AN INSIGHTFUL EXPLORATION OF THE INTEGRAL
ROLE OF RURAL DEVELOPMENT IN ACHIEVING
THE SUSTAINABLE DEVELOPMENT GOALS**

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Abstract

As a comprehensive mixed-methods research effort, this paper explores and extensively highlights the critical role that rural development holds in the broader context of achieving the Sustainable Development Goals. Conducting a cross-sectional analysis encompassing global and regional rural development policies, our investigation reveals that focused interventions have a profound and positive influence on critical SDG indicators. In particular, our findings illustrate substantial contributions to poverty reduction, improved access to education and health care, and notable increases in agricultural productivity. The qualitative dimension of our research draws on revealing information gathered during community engagement sessions, providing a deeper understanding of the nuanced ways in which local empowerment becomes a critical element in promoting sustainable outcomes. Further, spatial analyses contribute by providing insight into the geographical distribution of development gains, highlighting the imperative for context-specific and tailored strategies to effectively address diverse regional needs. By synthesizing these multifaceted findings, our study emphasizes the symbiotic relationship between rural development initiatives and the SDGs, thus emphasizing the critical need for a comprehensive, integrated, and locally informed approach to achieve sustainable and equitable global development.

Key words: rural development, sustainable development goals (SDGs), mixed-methods research, community engagement, geographic distribution

FINANCIAL INDEPENDENCE IN RURAL MUNICIPALITIES IN BULGARIA

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Abstract

Bulgaria is a unitary country and municipalities are the only subnational level of self-governance. It is important to have stability and independence in local finances to provide services of high quality. This research's main goal is to evaluate the level of financial independence in rural municipalities in Bulgaria by monitoring the main revenue flow to the municipal budget - through local taxes. There are a few methods used in the process of evaluation, like mathematical synthesis, comparative analysis, and deduction. The research is using the European NUTS classification, Bulgaria's Law on Regional Development, statistical information from the National Statistical Institute, and the Ministry of Finance. Results are going to show where is the weak point in the municipal local finances to gain more independence and how they can increase their revenue. This will allow them to distribute better their financial flows and invest in activities and services that are necessary for their municipality type.

Key words: *rural municipalities, local taxes, decentralization*

REPUBLIC OF MOLDOVA'S CROP SECTOR- DEVELOPMENT TRENDS AND ASSESSMENT OF COMPETITIVENESS AT THE INTERNATIONAL LEVEL

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Abstract

The agricultural sector of the Republic of Moldova is strongly relying on the crop production sector, which has been holding an average share of about 70% of the total agricultural output, being followed by livestock sector and services. Crop sector's importance is determined through its contribution to ensuring food security, provision of raw material for the food processing sector and also support to the livestock's sector development. Therefore, the paper aims to evaluate the current development trends of the sector, by emphasizing its achievements on the foreign markets through assessment of its competitiveness. The used methodology is based on the scientific research methods like comparative analysis, synthesis, sectoral SWOT analysis and calculation of several competitiveness indices like Revealed Comparative Advantage, Revealed Symmetric Comparative Advantage, Trade Specialization Index and Grubel-Lloyd Index. The results present a continuous development of the sector with the need for production diversification and a competitive advantage on external markets for mostly raw material products like oil seeds, edible fruits and nuts, cereals, etc.

Key words: agriculture, crop sector, competitiveness, Republic of Moldova

**ANALYTICAL FRAMEWORK OF THE
CONTRACTS IN BULGARIAN AGRICULTURE –
NEW INSTITUTIONAL ECONOMICS (NIE)**

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Abstract

This article analyzes the agricultural contract through the eyes of the NIE. The article has built its analytical framework on contracts in agriculture. This choice was dictated by the presence of more than 40 enumerated forms of the types of contracts, and the research realizes that such an enumeration is conditional and not exhaustive. The need to find specific forms of management of common resources - water, land; of general products - for example the "quality schemes" known by the CAP; the need for rapid deployment of specific technologies that are needed to derive synergistic benefits from ecology and agriculture; solving the food and farming problem. The agricultural contract is defined as a social category combining: (1) a system of interconnected institutions, uniting common rules and contractual clauses; (2) market and non-market, contractual and non-contractual processes; (3) a hierarchical structure combining heterogeneous, hybrid economic mechanisms of exchange. Relying on the theory of Governance structure (GS) and the theory of the hybrid contract, the study matches the classical understanding of contract law and the procedural nature of the neoclassical organization, with the modern understanding of the economy as a system of contractual and non-market relations. A unified analytical toolkit is proposed for the subordination of relationships between companies, administrative hierarchies, hierarchies including arbitrators, in property rights disputes; market and non-market contracts, the hybridity of the technological process and the essence of the organization as a type of procedure.

Key words: contract, institutions, legal forms, governance structure, agriculture

FINANCIAL DIAGNOSTICS OF BANKRUPTCY RISK IN AGRICULTURE: THE CASE OF BULGARIAN ENTERPRISES

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Abstract

The present study makes financial diagnostics of enterprises from the agricultural sector in Bulgaria in order to carry out a thorough analysis of the trends related to the development of economic processes and the possibility of early detection of financial difficulties. The studied enterprises from the agrarian sector are classified according to levels of financial sustainability, which reveal their ability to generate a positive financial result, to pay debts in a timely manner, to be financially independent, etc. To predict the risk of bankruptcy, well-established models in the world practice are used, including the Altman Z-score model, the Springate model and the Fulmer model. The comparison of the results of more than two models will give us a reliable picture of the state of financial stability of the enterprises. The presence of a high percentage of coincidence between the model forecasts is a reason to claim that the forecasts approximate the real state of financial stability. The results show that at least 1/3 of the surveyed enterprises in the period 2019-2021 are in a state of financial instability.

Key words: agricultural sector, risk of bankruptcy, Z-score models

CHALLENGES AND OPPORTUNITIES FOR ORGANIC FARMING POST 2023

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Abstract

Farm to Fork Strategy, which is the center of the green ambitions of the EU, presents indicators for organic farming development and sets ambitious targets. However, most EU Members lag behind, which is raising various questions about implementing the developed strategies and plans. The study aims to observe trends and changes in organic farming with a particular focus on Bulgaria and outline prospects post-2023. The analysis shows an increase in the share of organic UAA in almost all Member-States. In Bulgaria, there are variations, and the share is decreasing in 2021 compared to 2020. The EU emphasizes the importance of organic farming for the food system. Organic farms are eligible for support from several measures for 2023-2027 as a part of national strategic plans under the CAP. On the other hand, implementing the measures has to be efficient and well-targeted to achieve the EU's ambitions.

Key words: sustainability, Green Deal, CAP

INTERNATIONAL MIGRATION AND AGRICULTURAL SUSTAINABILITY IN THE ÇUKUROVA REGION: DETAILED ANALYSIS OF SOCIO-ECONOMIC STRUCTURE AND MIGRATION INTERACTIONS

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Abstract

This research aims to examine international migration movements and their effects on agricultural sustainability and the socio-economic structure in Turkey's Çukurova Region. The primary goal of the study is to provide strategic recommendations for the development of agricultural policies in the region by conducting a detailed analysis of the impacts of migration movements on agricultural sustainability. The first phase of the research was to investigate the general structure of international migration movements to the Çukurova Region and their socio-economic effects. In the second phase, data collected through surveys conducted with 14 family heads selected from the three most migration-receiving districts that represent the region in January and March 2024 was used. These surveys covered topics such as the migrants' countries of origin, family structures, capital transfers, sectors they work in, socio-economic statuses, and education levels. The collected data was evaluated using statistical and thematic analysis techniques, and these analyses provided a deep understanding of the dynamics of migration and their impacts on the agricultural sector. Findings reveal significant demographic shifts, with economic motivations driving migration decisions. The study points out the importance of understanding migrants' economic circumstances and cultural dynamics in shaping integration policies. Recommendations are proposed to facilitate economic integration and foster cultural harmony, contributing to a deeper understanding of migration's impact on agricultural sustainability.

Key words: Çukurova Region, international migration, agricultural sustainability, socio-economic analysis, survey study, impacts of migration

SOCIO-ECONOMIC AND OPERATIONAL DYNAMICS OF REAPER-THRESHER OWNERSHIP IN ADANA, TÜRKIYE

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Abstract

This research is aiming to illuminate the socio-economic and operational dynamics of reaper-thresher ownership in Adana and to provide valuable insights for future strategic planning in the sector. The primary data for this research were gathered through 16 face-to-face interviews with combine harvester operators in Adana. Constraints such as operators' hesitancy, time limitations, budget constraints, and their dispersed locations in various villages hindered the possibility of conducting a larger number of surveys. Moreover, considering the limitations mentioned, secondary data from sources such as the Turkish Statistical Institute (TUIK) and other relevant research reports were incorporated. Survey data collected between January and February 2024 underwent thorough analysis using techniques including cross-tabulation, statistical analysis, and regression analysis. The result of regression analysis indicates significant relationships between variables such as total area harvested, harvest price, and annual repair and maintenance expenses, and combine harvester profitability. These findings contribute to a nuanced understanding of the factors influencing harvesting revenues and their impacts on stakeholders. The explanation rate of these variables for the dependent variable (R square) is 99.3%. Since tolerance is greater than 0.10 and VIF is less than 10, there is no multicollinearity problem. The findings reveal a predominant demographic profile of combine harvester owners, consisting largely of young and middle-aged individuals with varying levels of education, often continuing family traditions in agriculture. The findings reveal significant information that will contribute to the development of agricultural mechanization strategies in the Adana region.

Key words: Reaper-Thresher Owners, Logistic regression, socio-economic logistics, Adana

EFFECTS OF LAND CONSOLIDATION ON AGRICULTURAL ENTERPRISES IN CİHANBEYLİ DISTRICT, TÜRKİYE: AN EVALUATION FROM THE PRODUCER PERSPECTIVE

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Abstract

This study examines the effects of land consolidation works carried out in Cihanbeyli district to provide solutions to important structural problems in Turkey's agricultural enterprise structure. The aim of the research is to evaluate in detail the socioeconomic effects of the consolidation process on farmers' land holdings and number of parcels and the legal dimensions of the process. The study was carried out using multi-layered data sources such as land registry and cadastral records, court cases and field observations, as well as surveys conducted with 26 farmers in villages such as Damlakuyu, Karatepe, Sağlık, Ülerziktepe and Taşpınar in Cihanbeyli district. The research was supported by various statistical tests such as regression analyzes and Wilcoxon Sign Test using the SPSS version 25 statistical package program. Analyzes revealed that there is a significant relationship between factors such as education level, agricultural experience and number of tractors and changes in farmers' land holdings and number of parcels after land consolidation. Findings highlight challenges and opportunities associated with land consolidation, including concerns about property rights, legal disputes, and infrastructure development. Despite some dissatisfaction among farmers, the research underscores the potential of consolidation in enhancing agricultural productivity and informing policy decisions for rural development strategies. The study provides valuable insights into the development of agricultural policies and rural development strategies and guide policy makers and practitioners for the effective management of consolidation processes. The research provides a scientific basis for future applications by illuminating the factors that will increase farmer satisfaction and the effectiveness of the consolidation process.

Key words: land consolidation, farmer's satisfaction, agricultural productivity, socio-economic impacts, statistical analysis, legal issues, regression analysis, Wilcoxon Sign Test

ANALYSIS OF SINGLE AREA PAYMENT SCHEME (SAPS) BENEFICIARIES. CASE STUDY IN TIMIȘ AND CARAȘ-SEVERIN COUNTIES, ROMANIA

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Abstract

This study investigates SAPS (Single Area Payment Scheme) beneficiaries in Timiș and Caraș Severin counties, Romania, categorizing them by legal entity type (individual, authorized natural person, legal entity, and enterprise), gender, age, and the respective monetary values attracted in each jurisdiction. Findings in Timiș reveal a numerical preponderance of individual beneficiaries, yet a cumulative analysis across legal entities underscores their quantitative superiority. Conversely, in Caraș Severin, the cumulative count of all legal entities does not exceed that of individual beneficiaries. Gender distribution in Timiș manifests as 70.5% male and 24.5% female, while in Caraș Severin, it is 71.1% male and 28.9% female, with statistically comparable proportions at a significance level of $\alpha=0.01$. Regarding age, beneficiaries uniformly exhibit a minimum age of 18 years, with noteworthy instances of advanced age, reaching 95 or 96 years. The rightward-skewed age distribution is explicable by a pronounced presence of elderly individuals within the cohort.

Key words: SAPS, FEGA, FEADR, subsidies, finance

**ASPECTS RELATED TO THE HONEY MARKET
AND THE ETHICS OF THE BEEKEEPING
ENVIRONMENT IN ROMANIA**

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Abstract

The paper presents the main trends of the Romanian honey market, in the period 2018-2022. In order to better highlight the evolution of this market, it was necessary to analyze specific indicators such as: total production of honey and the number of bee families both nationally and regionally; the price for honey at national level; consumption of honey per capita - average annual; quantitative exports and imports of honey from Romania. Complementary to the economic part, due to the fact that the honey bees are not only honey producers, but also vital natural pollinators, the paper also mentions and analyzes aspects related to the ethics of the beekeeping environment in Romania and EU, especially the use of neonicotinoids, in the context of global transformations.

Key words: bee families, honey production, ethics of the beekeeping environment, bioeconomy

**AGRICULTURAL AND RURAL DEVELOPMENT
IN THE CONTEXT OF A CIRCULAR ECONOMY
IN THE EUROPEAN UNION AND FRANCOPHONIE
STATES. CASE STUDY: ROMANIA**

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Abstract

The paper presents the current situation as regards the circular economy in agriculture in Romania, while also taking into consideration its global impact. We have here a system globally endorsed by the United Nations. It is also important for regional organisations such as the European Union or la Francophonie as the circular economy seems to have a high number of advantages in tackling climate change, creating a sustainable food chain, improving the organic character of the agriculture, etc. From that perspective Romania represents an interesting case study as it is both a European Union member state and a member of the Francophonie. It thus follows both sets of rules and recommendations in order to improve its status. The paper uses the bibliographic method and reviews the main documents that settle this aspect and presents the legal framework for circular economy. The put into practice of the circular economy in the Romanian agriculture would bring a series of advantages (environment, food safety, etc.) while also requiring systemic transformations.

Key words: circular economy, European Union, Francophonie, Romania, agricultural sector

TRADITIONAL SAXON HOME GARDENS AS HOT-SPOTS FOR PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE CONSERVATION - CASE STUDY IN ROMANIA

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Abstract

One of the future challenges in ensuring food security is accessing a broader diversity of plant genetic resources for food and agriculture (PGRFA). Today, heterogeneous agricultural lands are considered hotspots for biodiversity, and they also exist in the hilly mountain areas of Romania's Carpathians. The scope of this article is to describe Saxon traditional home-gardens related to the land use of households and cultivated crop species in Moșna commune, Sibiu County, Romania. The survey was conducted with the support of authorities and local stakeholders. The results of this study revealed that the maintenance of crop species structure and land use in traditional households has been ongoing for more than two centuries. Today, these home gardens cover 26% of the total area of a household and are cultivated mainly with vegetables. Generally, a household should have a surface area ranging between 5,000 and 1,500 m². The first local council decision in Romania in 2019 supporting the recognition of 20 landraces, the Saxon church garden, and 15 traditional home gardens as heritage values was officially adopted. Among the oldest and most popular landraces cultivated in home gardens, we identified Moșna cabbage, garlic, celery, dill, and Saxon raspberry. The results of our study also support the idea that these traditional households are functional agro-ecosystems with a positive impact on food security for the future and generally on biodiversity conservation.

Key words: agricultural land use, intangible culture heritage, landraces, on farm conservation, traditional knowledge, Saxon origin home-gardens

ASSESSMENT OF THE POTENTIAL OF THE HUMAN FACTOR FOR SUSTAINABLE DEVELOPMENT OF THE RURAL TERRITORIES IN REPUBLIC OF BULGARIA

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Abstract

The primary trends defining the paths toward sustainable development in rural areas of Bulgaria underscore the significant influence of human resources., and the priorities are oriented towards stimulation of the vocational training and science based skills, obtained through appropriate education and specialized training, and leading to success in the development and management of the local economy. The tendency, related to the problem is highlighted as the shortage of adequately educated and skilled entrepreneurs capable of harnessing technological advantages in agricultural production and implementing innovative technologies. The goal of our study is related to investigation and summarization of basic tendencies in this aspect, within Bulgarian agricultural enterprises, the emphasis lies on the crucial connection between theoretical knowledge and hands-on experience, particularly highlighting the importance of educating and training agricultural producers. The education and practical application of scientific knowledge by those engaged in agriculture are vital components for achieving success and ensuring the sustainability of economic endeavours at the local level. By promoting education and training for individuals involved in agricultural activities in the agrarian sector, the agriculture guarantees its sustainable and efficient development, which without doubt reflects on the increase of the sustainability of the rural territories, as a whole. The results of the study formulate guidelines, conclusions and recommendations related to recognition of the need of ensuring the proper education and training of agricultural producers, especially in the realm of environmentally friendly practices and innovative technologies. In conclusion, the synthesized research findings provide insight into the tendencies in basic strategic documents supporting knowledge, as well as data for the educational status in the Bulgarian agrarian sector regarding the potential and significance of the human factor. Future guidelines for the study in the sphere of human resources are outlined in the modern agriculture and the Bulgarian rural territories.

Key words: human factor, education, training, agricultural producers, rural territories

**THE ECONOMIC CENTERS IN BULGARIA -
AN OPPORTUNITY TO DISCOVER
ADDITIONAL POTENTIAL IN THE REGIONAL
DEVELOPMENT OF RURAL TERRITORIES**

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Abstract

In Bulgaria, according to the Institute for Market Economics, 16 economic centers have been defined, which form a large part of the national economy. The paper focuses on the economic centers located in the territory of the North Central Planning Region and the North Western Planning Region, emphasizing their role in revealing the potential for development of the rural areas within their scope. In this context, the specific features of their development have been analyzed and the possibilities for future development have been assessed in order to achieve the goals of sustainable development of the territory, to increase the living standards of the population, and to reduce the risk of poverty in rural areas. The study utilized statistical methods for analyzing dynamic trends, hypothesis testing, regression, and correlation analysis. It was found that the indicators for the municipalities within the economic centers are more favorable compared to those outside of them. The results of the analysis demonstrate that the presence of economic centers in the region has a statistically significant impact on indicators such as population, age dependency ratio, population density, average annual salary of employees under labor and service contracts, and unemployment rate.

Key words: economic centers, rural territories, potential, regional development, sustainability

FUNDING OPPORTUNITIES FOR SMART VILLAGE PROJECTS THROUGH THE LEADER INTERVENTION

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Abstract

Rural communities face problems related to depopulation, lack of jobs, weak digital infrastructure, decline of basic public services. LEADER is an initiative to support rural communities, which takes shape in a Local Development Strategy with a role in using local resources in a way that meets the needs identified in the territory. The support of projects for smart villages must be encouraged through local development strategies that pursue various fields: reducing the depopulation of villages, providing quality services, developing local services, promoting digitization. The paper proposes the role that the LEADER intervention belonging to the Strategic Plan, which is one of the instruments of the European Union, can contribute to supporting these rural development projects, which can represent local initiatives and which can benefit from funding sources that will contribute to the identification of strategies and future solutions to promote smart villages. The information used in the work was collected, processed and interpreted starting from data belonging to the Bureau for the Financing of Rural Investments, along with insights from the Ministry of Agriculture and Rural Development, converge in a rich tapestry of thought at the paper's conclusion. Here, they weave forward-thinking strategies for the cultivation of smart villages, which are envisioned as vibrant oases capable of elevating the quality of life for rural dwellers. These innovative settlements promise to champion the cause of sustainable rural development, casting a verdant future where community and sustainability flourish side by side.

Key words: LEADER, local development strategy, rural development, smart village, rural communities

**PERSONS EMPLOYED IN NON-AGRICULTURAL
ACTIVITIES IN RURAL AREAS OF THE SOUTH
CENTRAL REGION IN THE REPUBLIC
OF BULGARIA FOR THE PERIOD 2010-2020
(IN THE CONTEXT OF A LOCATION INDEX - LI)**

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Abstract

In the scientific development, an attempt is made to present a part of the persons employed in non-agricultural activities in the rural municipalities of the South-Central Region (SCR) in Bulgaria for a certain period of time. The purpose of the research is to track the population employment in part of the non-agricultural activities by sectors for the period of ten years, as well as to study and analyze the employment of the population in rural municipalities by region. Development methodology includes: definition of rural areas (RA) in the EU and Bulgaria, application of the NUTS classification for grouping the above-mentioned territories by areas. A location index (LI) is applied for the study of persons employed in some of the non-agricultural activities in the Rural Areas of the SCR, according to the Classification of economic activities (CEA) - 2008. An empirical, statistical and comparative approaches have been applied in the research, analysis, drawing generalizations and conclusions. The visualization of the process is presented in tables and figures, in which the dynamics of the numerical values of LI for the period 2010-2020 is indicated.

Key words: rural areas, location index, employed persons and NUTS

**ASPECTS REGARDING SUSTAINABILITY
AND FOOD SECURITY IN ROMANIA
IN THE CONTEXT OF EUROPEAN POLICIES**

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Abstract

The aim of this research is to examine the present condition of food security within the framework of preparations for future adoption of reforms under the new Common Agricultural Policy, as well as the development of the National Strategy for the Development of Agriculture and Rural Area (SNDASR) for the period 2012-2027. It evaluates key indicators related to food security and culminates in an examination of a social survey conducted in the North-eastern Region of Romania. This study has specific objectives: to assess the level of food security within Romania and compare it with global and/or European standards using FAO-provided indicators, and to evaluate the extent of food security assurance specifically within the North-eastern Region of Romania. In recent years, there has been a growing focus on food security, particularly concerning food safety. It's important to clarify the distinction between food security and food safety, as they are often conflated. While food security encompasses indicators related to food access for the population, food safety is more concerned with the quality, sanitation, and safety of food products.

Key words: food sustainability, consumption, agricultural, food policies, security

ORGANIC VS. CONVENTIONAL: A COMPARATIVE REVIEW OF HEALTH-RELATED WELFARE ISSUES AND THEIR ECONOMIC IMPACT ON POULTRY PRODUCTION

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Abstract

This review delves into the health-related welfare challenges faced by organic and conventional poultry production, highlighting the impact on bird well-being. It identifies key issues such as disease prevention, behavioural wellness, and environmental quality in both systems, with organic practices facing hurdles like antibiotic-free disease management and conventional systems dealing with antimicrobial resistance and intensive farming pressures. Additionally, the paper explores the economic aspects of these systems, analysing cost structures, market dynamics, and profitability concerns that ultimately affect both producer and consumer choices. This economic perspective is crucial as it interlinks with welfare issues to shape the overall sustainability of poultry farming. The review further advocates for an integrated approach to improve poultry welfare, emphasizing the role of technological innovations like Precision Livestock Farming, policy reforms focusing on animal welfare and sustainability, and the importance of collaboration among stakeholders including producers, policymakers, and consumers. Conclusively, addressing the welfare challenges in poultry production demands a multifaceted strategy that leverages technological advancements, supports policy changes, and fosters stakeholder engagement to enhance animal well-being, meet production goals, and satisfy consumer expectations for ethically produced poultry products.

Key words: poultry welfare, organic production, conventional farming, technological innovations, stakeholder engagement

**AQUACULTURE IN TRANSITION:
PREDICTIVE INSIGHTS INTO ROMANIAN
AQUACULTURE PRODUCTION**

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Abstract

The significance of aquaculture in contributing to global food security is well-established, especially as traditional fishery yields plateau. Recognizing the essential role of hatcheries and nurseries in sustainable development, this paper examines Romanian aquaculture, predicting production trends until 2034. Employing time-series analysis via Microsoft Excel, it forecasts production at various life cycle stages, from eggs to juveniles, excluding mature aquaculture outputs. The study highlights expected outputs alongside their associated confidence intervals, pinpointing potential fluctuations. The forecasted trends in Romanian aquaculture highlight the potential for growth in the sector, reflecting an industry poised to meet future demands. However, the variability encapsulated within the confidence intervals suggests that stakeholders should remain adaptable to changes. Strategic planning should therefore incorporate these forecasts while also considering environmental, economic, and technological developments that could influence production. The findings underscore the need for ongoing research and adaptive management to maintain and enhance the contribution of aquaculture to food security and economic development in Romania and beyond.

Key words: aquaculture forecasting, fish production, hatcheries and nurseries, food security

**ANALYSIS OF THE AGRICULTURAL LABOUR
FORCE IN TERMS OF THE AREA CULTIVATED
WITH THE MAIN CROPS IN ROMANIA,
DURING THE PERIOD 2018-2022**

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Abstract

At a time when expert analysts states that one of the main reasons why Romanian agriculture has been going through a major crisis for more than a decade is the labor crisis in agriculture, the content of this article will determine the evolution of the areas cultivated with the main crops and of the agricultural labor force during the period 2018-2022 at the level of the whole country, of the 8 development regions, as well as at the level of the 7 counties composing the South-Muntenia development region, also indicating the total area under main crops per person employed in agriculture during the reference period. In the year 2022, the area cultivated with the main crops in Romania slightly exceeded 8 million hectares. In the same year, out of 7.8 million people with an income-generating occupation, only about 11% of these people had an occupation in agriculture, thus a person employed in agriculture had a little over 9 ha of the total cultivated area with the main cultures. To create this article, statistical data will be analyzed taken from the official page of the National Institute of Statistics of Romania, from the TEMPO Online database, using both descriptive and inferential statistics.

Key words: agriculture, labor force, agriculture, cultivated area, evolution

**ANALYSIS OF THE EFFICIENCY OF THE
IMPLEMENTATION OF FINANCING PROGRAMS
FROM THE EUROPEAN SOCIAL FUND ON EDUCATION
IN THE RURAL ENVIRONMENT IN ROMANIA**

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Abstract

The objective of this article is to achieve a centralization of educational units and the number of students since 1990 in Romania, focusing on the analysis of data related to the number of students enrolled in different forms of education versus the number of graduates. The importance of this article is given both by the historical context of this period, being characterized by the fall of the communist regime and the start of the reform processes in all fields, including education, following that from 2007, with Romania's accession to the European Union, the education system should benefit the implementation of funding programs from the European Social Fund (ESF), placing more emphasis on education in rural areas in Romania. It was also aimed at analyzing the results recorded in reducing educational gaps between rural and urban environments, as well as the impact on the socio-economic development of rural communities. In conclusion, recommendations will be proposed to optimize the efficiency of the implementation of ESF financing programs, for the purpose of rural education and supporting sustainable rural development.

Key words: education, graduates, financing, rural, Romania

**SUBSECTION
AGRIBUSINESS
AND AGRICULTURAL
EXTENSION**

VARIANCES BETWEEN CONTRACT AND NON- CONTRACT FARMS IN THE USE OF SUSTAINABLE FARMING PRACTICES: CASE STUDY

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Abstract

The present paper aimed to investigate the main characteristics of contract farming versus non-contract farming from Dornelor Basin, Suceava county. The research was based on a large-scale survey conducted in the study area, the data being collected from 52 farms who raise dairy cows. The results reveal that contract farmers are, generally, younger, have a slightly higher education level, with more years of agricultural experience and have larger farms, both in terms of size and number of animals, but they express a lower degree of willingness to uptake sustainable practices in comparison with non-contract farmers. Still, it looks like contract farming could represent a viable support instrument to farmers for converting to more sustainable practices. One possible way of achieving this is by creating a connection between contracting and the adoption of ecological farming methods and by supporting farmers with inputs and training in sustainable agricultural practices.

Key words: contract farming, sustainable agricultural practices, livestock farming

**COMPARATIVE ANALYSIS OF INCOME
AND EXPENDITURE TRENDS IN AGRICULTURAL
HOUSEHOLDS IN ROMANIA**

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Abstract

The study focused on the comparative analysis of income and expenditure trends in agricultural households in Romania. By using a comparative analytical framework, an investigation was conducted into how the evolution of income and expenses influences the economic condition of agricultural households. The primary aim of this research was to recognize fluctuations and patterns in the incomes of agricultural households, while examining how these factors influence farmers' purchasing choices. Through comparative analysis, we gained deeper insights into the expenditure structure in agricultural households across the development regions in Romania. Specialized articles from the main scientific databases were used for documentation. The research was conducted using official statistical data provided by the National Institute of Statistics for the period 2018-2022. The study's results highlighted that understanding the evolution of incomes and expenses in households, with a focus on the agricultural category, can enable the development of appropriate economic and social policies to support the overall well-being and economic development of Romania. Thus, it can be appreciated that the conducted research can provide valuable information in the analysis of sustainable development in the agricultural sector, for the improvement of farmers' quality of life and rural communities.

Key words: agricultural households, income, expenditure, Romania

COMPETITIVENESS OF MOLDOVAN AGRI-FOOD EXPORTS AT THE REGIONAL LEVEL IN THE CONTEXT OF CURRENT CRISES

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Abstract

In the context of current crises, the competitiveness of Moldova's agri-food exports emerges as a primary topic of interest, given that they account for over 50% of the nation's total exports. This study investigates the competitiveness of Moldova's agri-food exports compared to three EU candidate countries - Georgia, Moldova, and Ukraine - and two EU member states - Poland and Romania. Using the Balassa Index, it analyzes the comparative advantages of these nations in the agri-food sector, with particular attention to the sub-categories of food products and vegetables. The results indicate a high competitiveness of Moldova in the exports of food products and vegetables, while the category of animal products shows comparative disadvantages. The study contributes to the literature by highlighting the dynamics of comparative advantages and recommends focusing on the development of the agri-food processing industry to improve the external trade structure. The research emphasizes the need for a strategic approach in adapting and integrating national agricultural and food systems into global value chains to maximize economic benefits in a changing regional and global landscape.

Key words: export competitiveness, Balassa Index, comparative advantages, economic impacts of regional crises

FARM DEBT AND INVESTMENT. EMPIRICAL EVIDENCE FROM BULGARIAN AGRICULTURE

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Abstract

This article explores the relationship between farmers' investment activity and debt structure in order to bring out the factors mediating the outcome. Overleveraging is one of the most serious problems faced by the Bulgarian farmers due to the high levels of competition in the EU. This research is based on a stratified random sample of 5% (2,985 observations) on farms in the agricultural sector encompassing the sub-sectors crop production, livestock production and auxiliary activities, with a research horizon of five years. A fixed-effect panel threshold regression analysis is used. The obtained results show that where the debt level is high, this has a negative impact on the investment activity of the farms in the agriculture sector.

Key words: *investment, debt, panel threshold regression*

PROBLEM-SOLVING GROUNDS IN SMALL-SCALE FARMING IN WESTERN ROMANIAN AGRICULTURE

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Abstract

The paper introduces the analysis results over a selected number of small-scale farms in the Western Romanian agriculture, more precisely in the counties of Arad and Timis. The purpose of the investigation is linked to the assessment of need for advisory services input in solving the problems of the farmers, particularly for the ones operating in small farms. Analysing the returned answers in connection with the fields of interest or needed expertise, accounting for the forms of mutual or directional help, compiling any forms of advice inputs, including the specialised structures other than public in absence of a function Farm Advisory Service allow the development of a structured image in terms of current problems, the way of solving and the interactions among the farmers inside or outside their communities. The quantified findings can serve as base for a public policy recommendation in the field of farm advisory as part of the Agriculture Knowledge and Innovation System.

Key words: *problem-solving, extension, advisory services*

**ANALYSIS AND ASSESSMENT OF THE USE OF
PESTICIDES AND FERTILIZERS IN THE RURAL
TERRITORIES OF REPUBLIC OF BULGARIA**

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Abstract

Modern agriculture poses new challenges related to the increase of the need of sustainable development of the agrarian sector, and rural territories, respectively. Improper use of excessive quantities of pesticides and fertilizers in agriculture results in multitude of dangers and a number of risks for human health and for the environment. The goal of this development is to perform an analysis and assessment of the current state of use of pesticides and fertilizers in Bulgaria, as part of the agro-ecological indicators affecting the sphere of the climate and the environment. As a result from the research carried out we found that the levels of pesticide use in Bulgaria are below the average, but the last years are marked by a tendency for gradual increase of the areas of the used quantities of nitrogen fertilizers, manure and organic fertilizer, and a deficit in the Phosphorous balance in soil was noted. We need lowering of the degree of ecological risks related to use of pesticides and fertilizers in Bulgaria. This way the results will be multiplied for achieving higher level of economic, social and ecological sustainability in the development of individual rural territories.

Key words: pesticides, fertilizers, sustainable agricultural practices, indicators, rural regions.

INFLUENCE OF LEADER ON THE SUSTAINABLE DEVELOPMENT OF RURAL REGIONS OF BULGARIA

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Abstract

The present study is oriented towards Leader approach and its contribution to the sustainable development of rural territories in Bulgaria. The upgraded model for decentralized and integrated development of rural regions has been implemented in Bulgaria since 2014. The goal of the study is to trace and analyze the actual contribution and the effect from the work of the local initiative groups and the implementation of the approach on a local and national level, and identify the problems and derive the solutions for optimization of the processes, aiming at achieving greater sustainability in the territorial development of rural regions. The main hypothesis is that the approach is universal and sustainable instrument for development of rural regions, but its full potential has not been completely deployed under the conditions in Bulgaria, yet. To this end, the implementation of the strategies for development of pre-selected local action groups is analysed, depending on certain criteria. Empirical data have been summarized and the opportunities for increase of the efficiency of the acquired European funds on territorial scale have been substantiated.

Key words: Leader approach, CLLD, development, rural regions, sustainability

**INITIATING A BUSINESS FOR ESTABLISHING
A MODERN QUINCE CULTIVATION
IN SOUTHWESTERN ROMANIA – A PROFITABLE
SOLUTION FOR THE FUTURE**

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Abstract

The quince is a fruit tree species that occupies 2% of the total orchard area in Romania. It can be utilized considering that quince is a fruit species used for ornamental purposes, for protective hedges, as a pollen-rich plant, for obtaining rootstock seedlings, in medicine, and the food industry. Following the identification of eco-pedological factors influencing the growth and development of quinces and the implementation of the stages underlying quince cultivation technology, it has been demonstrated that, in the pedoclimatic conditions of South Western Romania, establishing and exploiting a quince orchard is a highly profitable and interesting business with low investment and high returns. This fruit species yields abundantly, produces a large quantity of fruits, the production costs are low and can be recovered in a short time, the inter-row spaces can be used for intermediate crops, and the attractive selling price and the scarcity of quinces on the market provide the entrepreneur with an attractive income, making the business economically efficient.

Key words: quince culture, business, profitability, Oltenia region, Romania

MARKET TRENDS IN THE EU BEVERAGE INDUSTRY

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Abstract

The aim of this paper is to analyse the significant changes within the European beverage industry between 2011 and 2020. This period was characterized by a complex interplay of economic, technological, and socio-cultural factors that influenced the sector. During this decade, there were notable shifts in employment structures, market trends, production innovations, and responses to both global and regional economic challenges. Different national strategies led to workforce expansion in Malta and reductions in Poland and Denmark. Technological advancements, changing consumer preferences, and increased awareness of sustainability prompted strategic adaptations, production restructuring, and the creation of new market segments. Significant changes in the top 10 countries by the number of active companies include growth in Spain, France, Italy, and the Czech Republic. The financial performance across countries such as Germany, Italy, and Romania highlight a dynamic and evolving market landscape. This analysis underscores the resilience and adaptability of the European beverage industry in the face of varying national responses and market conditions.

Key words: beverages, market trends, economic challenges, consumer preferences

**SUBSECTION
AGRITOURISM
AND RURAL TOURISM**

TOURISM SECTOR IN BULGARIA - POST-PANDEMIC RECOVERY OR DECLINE

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Abstract

The past few years have been marked by significant economic, political, and health-related changes, including the COVID-19 pandemic, which has adversely affected Bulgaria's tourism sector, highlighting its crucial role in its economic development. Ensuring health and safety measures has become a top priority, forcing hotels, restaurants, and tourist attractions to adapt to provide a safe environment for visitors. However, these measures have exposed the sector to serious economic challenges and have undermined its sustainability. This paper aims to present the current economic development of the Bulgarian tourism sector and answer the question, "Has the sector recovered from the disastrous economic and social consequences of the COVID-19 pandemic?". To achieve this goal information from the World Tourism Organization and official data from regional statistics in Bulgaria were analyzed. The results indicate that the pandemic resulted in a significant drop in the gross domestic product generated by tourism and a rising level of unemployment in the sector. However, there has been a recovery sign in the last two years.

Key words: Bulgaria, COVID-19, economic challenges, tourism

**EVALUATION OF INSTITUTIONAL CHANGE
IN TOUR AGENTS BRANCH - NEW INSTITUTIONAL
ECONOMICS ANALYTICAL FRAMEWORK**

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Abstract

The study aims to adapt an analytical framework for the analysis of the institutional environment and institutional change. The activity of the tour agents (TA), part of the tourism sector of Bulgaria in the period 2005 - 2021, was a subject of the study. The institutional impact is integrated with the transaction cost economics, monitoring the dynamics of rules and distribution of economic effects. Relative institutional analysis retrospectively follows the rules. Legal realism explains the institutions and measures used to resolve concomitant crises (Covid-19), turning them into synthetic values. Discrete structural analysis fragments processes and thus makes coordination clear. The adaptation of the actors is analysed by transaction cost (TC) measurement. The results show that the institutional changes are many and are designed in favour of the great actors. TC are increasing, and TA problems are systemic and are not a consequence of concomitant crises.

Key words: *concomitant crisis, financial incentives, institutional change, tour agents, transaction cost*

**STUDY REGARDING THE ANALYSIS OF TOURIST
RESOURCES AND ACTIVITIES FROM A BOARDING
HOUSE IN THE MUNICIPALITY OF CICANEȘTI - ARGESȘ,
ROMANIA, IN THE PERIOD 2018-2022**

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Abstract

In the study carried out in the researched area, an inventory of the main natural tourist resources was followed in the first phase, as they are also an important factor in attracting tourists to the boarding house. Following the study, it was demonstrated that the area and implicitly the boarding house has a rich and valuable natural tourist potential, but which has not yet been capitalized at the highest level. After this, a study was carried out aimed at the inventory and analysis of human tourism resources, noting that the studied area represents the land of the inherited monasteries, Poienari and Negru Voda fortresses, as well as numerous churches, monuments, memorial houses and architectural sites and monuments traditional. Also, in order to be able to create a unique and personalized offer within the boarding house, we insisted more on anthropic tourist resources specific to the commune of Cicănești, through which it can be clearly differentiated from other tourist offers at the national level. In the last part, a complex and well-documented study was carried out in terms of the calculation and analysis of the main indicators with the help of which the tourist activity in the area and from the boarding house is characterized, based on which the conclusion was reached that in the analyzed boarding house a management of quality and very flexible, which easily adapted to the new conditions imposed by the pandemic, in the period 2018-2022.

Key words: agritourism, boarding house, management, rural tourism, tourist resources

LOCALIZATION OF TOURIST BUSINESS IN THE RURAL TERRITORY OF BULGARIA

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Abstract

The purpose of this publication is to offer an analysis of the possibilities for diversification of the local economy by exploring the attitudes of stakeholders towards the localization of alternative tourism within the territorial scope.

The study is based on the following methods and information sources: analysis and summary of literature, graphical and schematic representation of characteristics and trends, comparative analysis, questionnaire survey. Main results - The regional specificities in the individual territories of Bulgaria have been established. Possibilities for stimulating types of tourism specific to individual regions, have been identified. The potential of individual territories for diversifying economic activities have been revealed. In conclusion, it can be said that the development of various initiatives related to alternative tourism is essential for the local economy. Also in view of the general development of other sectors and diverse activities in the municipalities, in order to offer a quality service, respectively to achieve positive effects on local economic development, it is necessary to take into account all aspects of the interrelationships of the various forms of alternative tourism with a number of socio-economic activities at the local level.

Key words: rural areas, alternative tourism, economic diversification, localization

STUDY ON TOURISM ACTIVITY IN THE WESTERN DEVELOPMENT REGION OF ROMANIA

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Abstract

In this article the authors present the tourist activity in the Western Development Region, analyzing the evolution of the following indicators: tourist accommodation facilities, accommodation capacity in operation, the number of incoming tourists and the total number of overnight stays in tourist accommodation facilities. The information needed for this study were provided by the local authorities, the National Institute of Statistics and other bibliographic sources. The analysis, centralization and processing of the obtained data allowed the elaboration of the most important conclusions regarding the evolution of the main tourist indicators found in the studied area. Tourists arriving in the Western Development Region are attracted by the natural tourist potential, which is represented by rich natural resources and the existence of unique natural elements, recognised and protected through the numerous protected natural areas, including the Retezat National Park, the most important in Europe, but also by the existing anthropic potential. On the territory of the region, there are 14 tourist resorts, 6 of which are of national interest and 8 of which are of local interest. The authors of the work made a diagnosis regarding the evolution of the tourist accommodation structures, the capacity of the tourist accommodation structures, existing and in operation, but also other very important aspects for the tourist activity in the analyzed area. The tourist accommodation structures in the Western Region had an upward trend in the analyzed period, the same evolution can be observed in terms of the existing accommodation capacity. Instead, the accommodation capacity in operation had an oscillating evolution from one year to the next, with the most accommodation places being found in 2015, and the fewest in 2020. The total number of tourists arriving in the region recorded an upward trend until 2019, and in the pandemic, arrivals drastically decreased, but then, from 2021 they began to register slight increases. Therefore, the development of tourism in the Western Development Region is accessible also thanks to the accommodation possibilities for tourists who want to spend their leisure time in this region.

Key words: Western Development Region, tourist accommodation, tourist facilities, tourists, accommodation capacity, Romania

**STUDY ON THE DEVELOPMENT
AND EVOLUTION OF THE SUSTAINABLE
AGRITOURISM ACTIVITY AT A BOARDING HOUSE
IN CRASNA MUNICIPALITY - GORJ, ROMANIA**

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Abstract

The paper presents the way in which a tourist reception structure can practice sustainable tourism based on the conservation and protection of all natural and anthropic resources. The case study was carried out at a Boarding house in the commune of Crasna-Gorj, where authentic agrotourism is practiced, because a series of specialties served at the table to tourists are prepared with products obtained from their own household, in which traditional agriculture is practiced, based on obtaining high quality products, with as few chemical substances as possible. At the same time, the main natural and anthropogenic factors favorable to the practice of tourism were presented, and an analysis of tourist traffic and the quality of management at the boarding house under study was carried out. In the analysis of the tourist potential and activity, more emphasis was placed on the objectives and leisure and gastronomy activities specific to the place, through which the Boarding house can create an offer of great originality and attractiveness for tourists.

Key words: agritourism, boarding house, gastronomy, management, sustainable tourism

ROMANIAN RURAL TOURISM IN GUESTHOUSES - EVOLUTION PERSPECTIVES

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Abstract

In Romania, domestic tourism is increasingly incorporating rural tourism. The number of travelers using the specific services provided by agritourism and tourism guesthouses increased during the pandemic. In this context, in this paper it was analyzed the evolution of this categories of guesthouses, at the national level in the period 2018-2023, with the following statistical indicators: tourist destinations, types of tourists, degree of occupancy, accommodation capacity, tourist arrivals, occupancy rate, and number of overnight stays. The study reveals a preference of tourists for guesthouses and the efficient use of natural, cultural and human zonal resources. The creation of tourism products that capitalize on the zonal development potential is one of the options with a great development potential. Tourism and agritourism guesthouses have adapted more easily to the requirements of the health crisis by promoting a personalized tourist offer closer to the needs of tourists. The creation of diversified tourism products that capitalize on the regional specificity is one of the options with a great potential for future development.

Key words: rural tourism, agritourism guesthouses, tourism guesthouses, Romania

**PRELIMINARIES ON THE AGRITOURISM TOURIST'S
TYPOLOGY IN ROMANIA. CASE STUDY *SATUL
BANULUI GUESTHOUSE*, PRAHOVA COUNTY**

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Abstract

Touristic and agritouristic guesthouses in Romania own authentic resources that represent elements of maximum attraction, and Satul Banului Guesthouse is representative for promoting the authentic vernacular Romanian, Muntenia style in the touristic offer. The study aims to identify the rough guide criteria by which tourists select guesthouses and how much it is appreciated, according to multiple socio-demographic categories, the local national authenticity through services and other opportunities. The data were collected through an original questionnaire which includes 33 subjects, customers of Satul Banului Guesthouse, with the following demographic structure: 51.5% men and 48.5% women, ages between 31-50 years are predominant, and 66.7% of the respondents have university degrees. The results indicated that: the proximity to the home is not a significant indicator; tourists between 31-50 years choose a good quality/price offer; especially male tourists choose a guesthouse appreciating Romanian authenticity (56.67%); participation in outdoor activities is strongly segregated, and cultural tours is especially important for women.

Key words: Romanian rural tourism, tourist typology, case study Satul Banului Guesthouse, vernacular, authenticity

RESEARCH ON THE IMPACT OF THE HOSTILITIES IN UKRAINE ON TOURISM IN THE DANUBE DELTA

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Abstract

The purpose of the paper was to study the tourism in the Danube Delta and to evaluate the impact of the hostilities in Ukraine on tourist flows and other aspects. The study was carried out between February 15 and March 15 2024, by applying a questionnaire with 6 questions, on site and during the Romanian Tourism Fair (February 15-18). The questions in the questionnaire addressed how the tourism structures in the Danube Delta have been affected by the hostilities in the neighborhood and whether they were helped by the central and local public authorities. Representatives of 178 accommodation units, totaling 3,080 accommodation places, as well as representatives of some public institutions and NGOs answered the questionnaire. It was tried to find out exact data from all areas of the Danube Delta, so the authors went to the representative localities from a tourist point of view: C.A. Rosetti, Letea, Periprava, Chilia Veche, Crisan, Mila 23, Jurilovca, Maliuc, Murighiol, Sfântu Gheorghe and Sulina. The conclusions pointed out a deep decline in the number of tourists in the Danube Delta in the year 2023, by 42% compared to 2022.

Key words: *tourist flow, accommodation, the Danube Delta, hostilities in the neighborhood, Romania*

THE IMPACT OF THE COVID 19 PANDEMIC ON RURAL TOURISM IN EUROPE

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Abstract

This paper aims to analyze the evolution of rural tourism in Europe and the tourist specifics of countries with popular destinations, focusing on the impact of COVID-19 from 2019 to 2022 and its influence on tourism trends. Using data and documents from the pandemic period, we will identify trends in Europe and evaluate the sector's ability to recover to pre-pandemic levels. The analysis and conclusions are inevitably shaped by the COVID-19 pandemic period, with its effects compared against specified parameters. The statistical analysis, utilizing specific indices, shows that the pandemic had a negative impact on tourism activities, resulting in significant declines and underscoring the sector's vulnerability during crises.

Key words: rural tourism, COVID-19 pandemic, tourist flow, number of overnight stays, Europe

**SUBSECTION
ENVIRONMENTAL
ECONOMICS AND
BIOECONOMY**

A QUANTITATIVE APPROACH TO INFLUENCING DRIVERS FOR SUSTAINABLE AGRICULTURE DEVELOPMENT

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Abstract

The need to address the complex exchanges between natural resource efficiency and economic growth has become increasingly discussed in worldwide strategies and position papers. Resource depletion, environmental challenges and climate change are just a few topics related to fast industrialization and economic expansion. Understanding the importance of resource efficiency becomes essential. The agricultural sector exerts the most significant influence on the Romanian economy. The question is how information regarding crops, climatic factors, or solutions used in plant treatment are managed. Integrating these data into quantitative models can provide insights into trends, correlations, or even predictions, and the results obtained serve as inputs for decision-makers (whether at microeconomic or macroeconomic level). Historical data and time series analysis represent useful directions for examination, considering the strong dynamics of Romanian agriculture and the interaction of the analyzed factors. The results can be used as a decision support tool that can recommend suitable crop management strategies for transition to sustainable agriculture.

Key words: *sustainable agriculture, econometric methods, multicriteria indicators, strategic thinking*

**SOCIO-ECONOMIC CHALLENGES
IN THE TRANSITION TO A LOW-CARBON ECONOMY
AT REGIONAL LEVEL IN BULGARIA**

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Abstract

A number of dynamic events have taken place in recent years, leading to an uncertain global and national situation. One of these is the signing of the European Green Deal, which attempts to make Europe a climate-neutral continent. This, in turn, has further worsened the situation of some European countries, including Bulgaria. The presence of three active coal mining complexes in the country largely exposes it to serious challenges in the transition stages and hinders the finding of appropriate methods and instruments to reduce carbon dioxide emissions. The aim of the study is to explore the main socio-economic challenges in the transition to a low-carbon economy at a regional level and to present some of the author's views on limiting the negative impacts on regional development. The analysis of the available data shows that the sustainable dimensions of the three coal mining regions is highly threatened.

Key words: Bulgaria, low-carbon economy, regional level, socio-economic challenges, transition

GREEN DEAL AND SOLAR ENERGY- PROSPECTS FOR BULGARIAN RURAL AREAS

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Abstract

Renewable energy is essential for the European Union. The targets presented by the Green Pact are closely related to the development of renewable energy, and it has a vital role in achieving climate neutrality in the EU. Solar energy's importance has increased in the past years. It can help achieve the goals presented in the EU and contribute to the sustainable development of rural areas with unrealized potential. The aim of the study is to outline the dynamics and tendencies in solar energy development in the EU and Bulgarian energy mix and highlight perspectives in the context of rural areas. The results show challenges related to green transition in Bulgaria. Renewable energy, especially solar and wind, has increased in its role in the last few years. However, it should be noted that the country's development began from a lower starting point. Bulgaria is dependent on fossil fuels, and more than 80% of electricity is produced from coal, which is one of the substantial sources of pollution. However, some positive tendencies and possibilities exist for boosting rural economies and employment creation.

Key words: regional sustainable development, energy mix, renewables

**THE APPLICABILITY OF FARMS IN ROMANIA
REGARDING THE ECO-SCHEME “PD-04
ENVIRONMENTALLY BENEFICIAL PRACTICES
APPLICABLE IN ARABLE LAND”**

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Abstract

“European Green Architecture” refers to the implementation of sustainable agriculture, because it provides sufficient food and ecosystem services, both for present and future generations. The conditions included in the PD-04 eco-scheme “Environmentally beneficial practices applicable to arable land” refer to the introduction of agricultural practices with a positive impact on the environment in the activity of farms and are addressed to farms with sizes over 10.01 ha. In 2023, the number of farms throughout the country was of 46,608, for a total area of 5,789,746.35 ha, and of these 2,934 were declared uncultivated areas, representing 26,829.82 ha. According to the general agrotechnical rules, for field crops, crop rotation aims at an optimal crop structure, as follows: 25% cereal straw, 25% maize, 25% grain legumes (soybean, peas, beans, etc.) and sunflower, 25% fodder crops (alfalfa, clover, peas, etc.), necessary to increase soil fertilization. The paper presents the crop preferences of Romanian farmers in 2023, regarding the implementation of the PD-04 eco-scheme “Environmentally beneficial practices applicable to arable land”.

Key words: *eco-scheme, Romanian farms, crops, beneficial agricultural practices*

GLOBAL TRENDS ON RESEARCH TOWARDS THE VALUATION PROCESS OF AN AGRICULTURE LAND

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Abstract

Increased use of data analytics and machine learning algorithms to process large datasets, enabling better prediction of land values based on various factors such as soil quality, climate, and historical performance. The primary objective of this paper is to underscore the significance of addressing the topic concerning the evaluation process, regarding a agriculture land. Concurrently, it seeks to accentuate the interconnectedness across various domains of study, encompassing strategic management, agronomy, ecology, agricultural practices, and agricultural policies. Integration of advanced technologies such as satellite imagery, remote sensing, and Geographic Information System (GIS) tools for more accurate and efficient land valuation. Growing emphasis on incorporating sustainability factors into land valuation, considering the impact of agricultural practices on the environment and the overall sustainability of farming operations. Research focusing on how climate change and related factors (e.g., changing weather patterns) can affect the valuation of agricultural land and the development of methodologies to incorporate these considerations into the valuation process. The results demonstrate the fact that this theme is increasingly addressed by researchers.

Key words: valuation, global trends, agriculture land

COMPARATIVE ANALYSIS OF GOVERNANCE MODELS IN MOUNTAIN AREAS. INSIGHTS FOR ASSURING SUSTAINABILITY AND RESILIENCE

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Abstract

The main aim of the article is to explore essential aspects of mountain governance, with a particular emphasis on the principles of Good Governance. This includes emphasizing soft skills, knowledge, innovative solutions, and the allocation of necessary resources. The core concept centres on adopting a community-focused governance model, which establishes a structure for proactive stakeholder engagement and sustainable conflict resolution. The primary audience includes practitioners, communities, businesses, and others, providing them with potential strategies to enhance their involvement in the decision-making process. The paper aims to offer pertinent insights into effective practices within European mountain governance. Commencing with detailed contextual backgrounds, objectives, and developmental trajectories, these practices undergo comprehensive analysis, considering the essential elements outlined earlier. The goal is to extract distinct experiences and glean valuable lessons, evaluating both the potential and constraints for their applicability in varied geographical contexts.

Key words: *community participation, replicability, participatory approach, competences*

**SUBSECTION
DIGITAL ECONOMY
AND INNOVATION
IN MODERN AGRICULTURE
AND FOOD CHAIN**

TESTING THE POTENTIAL OF INNOVATIVE TREATMENTS OF WHITE GRAPE MUST WITH VEGETAL PROTEINS – SENSORY IMPACT ON WINE

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Abstract

In white wine production, for some grape varieties, it is beneficial to technologically reduce the concentration of the polyphenols to make the final wine less bitter and astringent. Normally, the removal of excessive polyphenols is addressed by fining the wine with polyvinylpolypyrrolidone (PVPP), a synthetic polymer, or animal proteins, which bind the tannins. However, the nowadays trend is to replace the products of animal or synthetic origin with vegetal or inorganic ones. In this paper innovative technologies based on treatments with pea protein, alone and in combinations with other vegetal or inorganic products, were tested. Also, as another innovation, the treatments were performed directly on the must, to remove some of the polyphenols before they can be oxidized. Six variants of Tamâioasa romaneasca, treated with pea proteins and combinations of agents, were compared with a non-treated variant and with the classical treatment with PVPP. The resulting wines were evaluated by professional tasters based on a complex sensory evaluation sheet and sensory profiles were determined for all variants. Multivariate statistics analysis was also applied to determine the most promising alternative treatments acceptable for the wine consumers.

Key words: innovative wine fining, pea protein, wine consumers, wine sensory profile

RESOURCE REQUIREMENTS OF BULGARIAN CATTLE FARMING AND OPORTUNITIES FOR ADAPTATION OF DIGITAL SYSTEMS

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Abstract

Bulgarian cattle farming plays a key role for the advancement of local agriculture. Bovine milk is an important product for local consumers, with dairy products forming a large part of the local diet. Cattle farming has not stray from the tendency of transformation that Bulgarian agriculture has undergone, resulting in lowering production capacity at the end of the 20th century and continuing development under the CAP of EU after 2007 (the accession of Bulgaria to the EU). Resource management has been an issue for local producers, that face fierce competition on the Common market for most of the processed products. Improving production efficiency through the adaptation of digital resource management can create opportunities for the development of the sector and improving its competitiveness. The purpose of this study is to analyse the resource requirements of Bulgarian animal husbandry farming and disclose some opportunities for application of digital solutions for resource management. The methods used are analysis and synthesis, statistical analysis based on data from centralised databases. The main result from the study is focused on the growth of cattle farming in Bulgaria during the studied period and thus the feeding material requirement, while at the same time the prices of these materials have risen significantly. The conclusion is focused on this significant market change, which leads to the necessity of better resource management for Bulgarian cattle farms and the introduction of digital systems to support it.

Key words: fodder stock, digital management, supply chain management

INNOVATIVE STRATEGIES FOR FOOD WASTE REDUCTION AND THE USE OF MOBILE APPLICATIONS IN THE AGRI-FOOD SECTOR

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Abstract

The FLW phenomenon represents a challenge for all actors in the agri-food chain today, as one-third of the food produced globally is wasted at some point along its journey, with significant economic, social, and environmental consequences. Addressing this issue by finding solutions to minimize food loss and waste represents a priority for both researchers and socioeconomic experts. Based on the gap identified in the literature, the research aims to analyse the impact of using a mobile app in Romania that connects companies that have surplus food or food that is nearing the end of its warranty period with people who need that food and pay low prices for it. Statistical analysis of the data provided by this application reveals that the benefits of using it are multiple, for all actors involved, from redistributing food to segments of the population in need, to reducing the amount of food thrown away and educating and raising awareness of its users.

Keywords: *FLW phenomenon, agri-food stakeholders, mobile applications, digitalisation, innovation*

CONCURRENCY AND DISTRIBUTION IN ECONOMIC MARKETS: MODEL DESCRIPTION

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Abstract

Economic markets can be modeled using a system-based approach. In an economic system, agents have complex behavioural patterns, two of the most important being concurrency and cooperation. In this paper, we present a model of an economic system that integrates the dual characteristic of economic system. On one hand, the concurrent characteristic is modeled using Petri nets and focuses on determining the agent behavioural patterns in the system related to the resources distribution and market share. On the other hand, the cooperation characteristic is related to the determination of an agent that can influence the market behaviour, using a model based on Leader Election. In this matter, the concurrency between agents is integrated with market coordination, useful in contexts as quality standard establishment or collective issues. The context of the model related to distribution can be further developed, especially related to agrifood chains in economic markets, by establishing a classification of the agents of the economic market, useful for a vertical integration of the market.

Key words: economic market, concurrency, cooperation, model

DEVELOPING A DIGITALTWIN MODEL FOR CORN, WHEAT AND RAPESEED YIELDS COMPUTATION

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Abstract

Digital Twin is an emerging agritech technology that involves creating virtual representations of physical systems, which can be used for various purposes, such as optimizing crop management, predicting yield, and managing resources efficiently. The research is focusing to build a accurate digital twin model for crop growth, considering factors like evaporation (ET), growing degrees days (GDD), crop type, soil data, and agricultural practices. The model handles data streams related with geolocation, IOT historical sensor data and weather forecasts streams to simulate the crop risk and yield. Frequent updates based on real-time data enhance accuracy. Aside essential water management crop flow, the model is processing historical data related with nutrients like nitrogen (N), phosphorus (P), and potassium (K) elements are vital for plant growth and health, and their optimal balance can significantly impact corn yield. The research is extended on five locations in both Romania and Luxembourg handling wheat, corn and rapeseed crop simulation.

Key words: digital twin, climate conditions, yield computation

**DIGITAL INNOVATIONS IN CATTLE-BREEDING -
OPPORTUNITIES AND CHALLENGES
FOR SUSTAINABLE DEVELOPMENT
OF THE RURAL AREAS IN BULGARIA**

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Abstract

The article explores the transformative effect of the digital innovations in the agrarian sector (in particular ruminant breeding) by tracking both the opportunities, and the challenges, which they represent for the sustainable development of the modern agriculture. Integration of digital technologies in cattle-breeding becomes more and more common, offering potential solutions for increasing of the efficiency, productivity and ecological sustainability. The change towards digitalization brings different challenges, varying from problems related to accessibility to concerns, related to data security and ethical consequences. Based on the existing literature and empirical evidence, this research provides complete analysis of the current conjuncture of the digital innovations in livestock industry, assesses the potential benefits from them and explores the barriers preventing their broad acceptance. The conclusions contribute to nuanced understanding of the role, which the digital technologies play in shaping the future of the sustainable agriculture and the rural areas in Bulgaria. The implemented retrospective analysis shows that the problematic agricultural holdings can be encompassed by digitalization only if serious financial investments are made.

Key words: digitalization, cattle breeding, sustainable development, innovations, rural area

**SUBSECTION
MISCELLANEOUS**

FOOD SAFETY PERCEPTIONS INFLUENCED BY ONLINE TRADE IN FOODSTUFFS

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Abstract

With the constantly growing world population the need for securing sufficient and safe food resources has also raised greatly. Examining the new pattern in consumers` behavior influenced by the Covid-19 pandemic with a shift towards online trade in foodstuffs, , the present study aimed to investigate the consumers` perceptions on various aspects of food safety based on their experience in internet shopping. Based on an anonymous questionnaire among 470 Bulgarians the survey found that the main problems the respondents encountered through online food shopping were related to quality discrepancy (18.9%), damaged package (18.5%) and unknown origin of the product (12.3%). As important indicators of the safety of the product bought the respondents pointed out labels with expiry date (19.1%), intact package (13.2%) and temperature at delivery (13.2%). In conclusion, online purchase food products were considered safe for the consumers` health as stated by half of the respondents whose perceptions on food safety were significantly dependent ($p < 0.05$) on their experience in e-trade during and after the Covid-19 epidemic.

Key words: food safety, Covid-19, e-trade, consumers

**STATISTICAL ANALYSIS OF ECONOMIC
INDICATORS IN NITROGEN FIXATION
OF BIRD'S FOOT TREFOIL CULTIVARS
AND ITS INFLUENCE ON THE ECOLOGICAL EFFECT**

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Abstract

The amount of fixed nitrogen per decare was studied in the experimental field of Research Institute of Mountain Stockbreeding and Agriculture-Troyan of bird'sfoottrefoil cultivars, such as Targovishte 1, Alvena, Lotanova and Frilo (Italy), Polom (Slovakia), Bonnie (France), Bull (Canada). The Lotanova and Polom varieties have increased nitrogen-fixing capacity and level of tuber formation, as well as fixed nitrogen per decare (17.40 and 17.17 N fix, kg/da), which is a prerequisite for increasing soil fertility and the ecological effect. These two varieties could be recommended as suitable for implementation in production from an economic and ecological point of view. The correlation analysis proved a high positive correlation dependence of gross revenue with yield ($r=0.9999$), production costs ($r=0.9982$), and the amount of fixed nitrogen ($r=0.9998$). Plant nitrogen storage through symbiotic nitrogen fixation of bird'sfoottrefoil, as a suitable meadow legume species for mountain conditions, determines its ecological effect.

Key words: *bird's foottrefoil, nitrogen fixation, ecological effect*

ECONOMIC EVALUATION OF FERTILIZING WITH ORGANIC FERTILIZERS IN THE PRODUCTION OF BIRD'S FOOT TREFOIL FODDER

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Abstract

*The impact of organic fertilizers, such as Blago 5 at doses of 300 and 600 ml/da and Fertileader Axis at doses of 500 and 1,000 ml/da were tested on a bird's foot trefoil grassland (*Lotus corniculatus* L.) in the experimental field of the Research Institute of Mountain Stockbreeding and Agriculture of Troyan (RIMSA) from 2020 to 2023. To analyze the main economic indicators based on dry matter yield, graphical and tabular methods, comparative methods were used; method of analysis and synthesis; descriptive statistical analysis and correlation analysis. The high productivity of the grassland treated with the Blago 5 at doses of 600 ml/da determined the lowest cost price and the highest profitability rate of this organic fertilizer. A strong correlation dependence of yield with gross revenue and gross profit ($r=1.000$) was established, and the high correlation coefficient between gross profit and profitability (0.994) proves the good interdependence between these two indicators. The established results show that Blago 5 applied at a dose of 600 ml/da is a suitable for practical use for the production of bird's foot trefoil forage.*

Key words: *bird's foot trefoil, fertilizing, economic indicators, correlation dependences*

**ONLINE LEARNING TECHNOLOGIES
AND SUSTAINABLE RURAL DEVELOPMENT:
AN EUROPEAN PERSPECTIVE**

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Abstract

An important factor for local communities is education. Education has a long-term influence on the community development. Education has significant differences between urban and rural regions. The purpose of this study is to analyse how the extent education can reduce these differences and particularly, the online education contribution to the development of rural communities. Also, the economic and social factors relevant for rural development were studied. This study utilized a qualitative analysis of statistical publications, academic literature, and official data from the European Commission and Eurostat. The results showed that online learning technologies provide several benefits for rural development, such as: easy access to knowledge, build new skills, exchange information with peers with similar interests, raising individual awareness of the modern topics like smart agriculture. Additional to the key factors there are challenges posed to the development of the rural communities, from which the digital divide, limited broadband coverage and the ageing of rural population that makes the online education less effective in rural communities. Through this study, it is given a contribution on how to improve the understanding of the role of online learning technologies in a sustainable rural development and to provide insights to various stakeholders, including national and regional authorities, entrepreneurs, educators and researchers.

Key words: e-learning, online learning technologies, rural development, smart agriculture, sustainability

IMPORTANCE OF SOFT-SKILLS FOR MANAGING VETERINARY PRACTICES

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Abstract

In the past years the relatively new field of veterinary management faced incredible challenges. In order to maintain the fluent workflow and guide the veterinary practitioners through economic and health crises the profession itself demanded a new skill-set to be implemented focused on the so-called soft skills. The present study focused on a survey among owners, managers and employees at veterinary clinics and hospitals in order to establish the level at which they have implemented some non-technical skills in their work. We investigated the amount of time during the workhours which the respondents used for non-clinical tasks as communication with animal owners, suppliers, governmental officers, colleagues, financial management and time management. The conclusions drawn could be used for improvement of the curriculum for veterinary professionals, addressing their needs for acquiring and updating their non-clinical skills and competences in managing their businesses.

Key words: management, veterinary practice, soft-skills, communication

**INSIGHTS OF ROMANIAN WINE PRODUCERS'
BUSINESS AND THEIR INVOLVEMENT
IN WINE TOURISM**

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Abstract

The aim of this research paper is to explore the business framework of the Romanian wine making sector. In the analysis were considered factors that have an influence on the performance of the legal entities such as the professionals working in the sector, winery profile, the dimension of the vineyards holding etc. The research was conducted using the survey method divided in three sections, first was to point out the profile of the winery's employees, while the second part reveals data regarding the winery and organization. Finally, the third part is focused on the wine tourism activities that are performed within the wine cellar. The results of this study were analysed with the cross-tabulation method for nominal variables that showed the dependence between winery type and dimension of the vineyards holdings. Moreover, the wineries perspective has been investigated in regard to the main reasons that encourage them to expand the wine making business to wine tourism. Finally, in the last part of the analysis the reasons that restrain the producers from expanding their wine making business to wine tourism were revealed.

Key words: wine tourism, wine tourism turnover, wine producers' business, wine tourism activities

ADAPTATION OF THE FARMERS' SKILLS TO THE REQUIREMENTS OF THE FUTURE AGRICULTURE

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Abstract

This research explores the evolving skill requirements in the agricultural sector, driven by changing business environments and technological advancements in the labour market. As agriculture undergoes significant transformation with the integration of technologies like drones, soil sensors, and data analytics, the role of farmers is shifting towards that of data-driven, business-savvy professionals. To assess modern agriculture's skill needs, the study employed a multi-faceted approach. Firstly, we utilized the European Skills/Competences, Qualifications and Occupations (ESCO) classification to identify agriculture-related skills. Secondly, we analysed job advertisements from Romanian profile websites to compare the skills mentioned in job postings with the ESCO taxonomy. Lastly, we administered questionnaires to agronomy students and practicing farmers to gauge their perspectives on necessary skills. The study revealed a comprehensive skill set relevant to agriculture, with a strong emphasis on information skills, effective communication, and management abilities. These findings highlight the multifaceted nature of contemporary agriculture careers, which require technical expertise, sales acumen, analytical skills, and adaptability to navigate the evolving landscape.

Key words: agriculture skills, technological transformation, contemporary farming, skill gap analysis

WASTE MANAGEMENT IN BROILER INDUSTRY, BULGARIA

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Abstract

Under the current global policies for sustainable development, agriculture and animal husbandry are among the sectors which need to shift their production concepts towards more efficient, eco-friendly and smart technologies. Poultry farming is currently the most rapidly growing agricultural industry. This sector aims at stable economic growth combined with environmental safety which is an opportunity to introduce a transition of the business from the traditional linear model to circular economy. The present study focuses on the aspects of poultry waste management which sees waste as a resource for utilization. We discuss the main principles of circular economy in the view of a real-life example from one of the intensive poultry-breeding industries in Bulgaria which had implemented practices for waste-to-energy solutions.

Key words: poultry, waste, circular economy

**INFLUENCE OF FORMAL AND NON-FORMAL
EDUCATIONAL ACTIVITIES ON THE ACADEMIC
INTEGRATION OF FIRST-YEAR STUDENTS OF "ION
IONESCU DE LA BRAD" UNIVERSITY OF LIFE
SCIENCES (IULS) IAȘI, ROMANIA, FOR REDUCING
EARLY DROPOUT**

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Abstract

University dropout has become a worrying reality for the education system in general, but also for Romania in particular, which ranks first in Europe. Thus, the worrying phenomenon of early university leaving is a phenomenon that has complex causes and therefore requires a variety of ways to combat it. These include the development of a supportive extra-curricular environment and individualized teaching practices focused on student-centered learning to support their potential. The aim of the research undertaken in this paper is to demonstrate the contribution of learning support activities in a formal and non-formal environment to the progress of first year of "Iasi University of Life Sciences" (IULS) students in the Faculties of Agriculture and Horticulture in reducing dropout. The qualitative research methodology was carried out through a review of the literature on university dropout, predominantly early. The case study, as a quantitative research method, is composed of a questionnaire containing 13 questions applied to first year students at IULS Iasi. The resulting data were processed and analyzed by statistical methods, and after interpreting the results we formed an overview of the problem of the causes of early university dropout of first year students and thus could apply personalized support measures. As a result of the steps taken in this respect, adaptability to the university environment increased and early university leaving was reduced, which provided us with a working model. This work has an innovative character in terms of the educational support measures provided to first year students at IULS Iasi, which constitute a model of good practice for increasing the adaptability of first year students to the university environment and for reducing early dropout.

Key words: students, remedial activities, dropout, university integration, IULS Iasi, Romania

VALUE CHAINS IN AGRICULTURE: INTERNATIONAL, EUROPEAN AND ROMANIAN PERSPECTIVES

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Abstract

This article explores the complexities and opportunities of agricultural value chains, exploring them from international, European, and Romanian perspectives. Highlighting the importance of efficient value chain management, the exploration examines how global and regional policies impact agricultural production and distribution. The international section addresses market dynamics and the role of multinational corporations in shaping value chains. The European lens focuses on the Common Agricultural Policy (CAP) and its implications for member states. The Romanian context highlights local challenges and strategies for integrating into broader value chains. By analyzing case studies and current trends, the current study aims to provide insights for enhancing economic efficiency, sustainability, and competitiveness in the agricultural sectors.

Key words: agriculture, value chains, global markets, European Union, Romania, agribusiness, supply chain management, sustainability, digitalization

ANALYSIS OF THE CAUSES OF CAMEROON'S PERMANENT DEPENDENCE ON RICE IMPORTS

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Abstract

This study, which aims to analyze the causes of Cameroon's permanent dependence on rice imports, is inspired by the observation that the expense linked to rice imports has a very negative influence on the Cameroonian trade balance; however, the country produces rice which is mainly exported to certain neighboring countries. To carry out this study, the objectives were set to analyze the marketing channels of Cameroonian rice, and to identify the factors that favors rice consumption. The target populations are traders and consumers of rice in Cameroon. The regions covered are those of the Far North, North, and Center, which produce most of the rice in Cameroon. To collect data in the field, questionnaires and interview guides were developed. As for the traders, an interview guide was used to collect information, after carrying out a categorization. For this purpose, local wholesalers of paddy rice, foreign wholesalers of paddy rice, foreign wholesalers of processed rice, retailers of markets close to production areas, local wholesalers of processed rice, wholesale retailers, supermarkets, and shops were identified.

Key words: rice, marketing circuit, consumption, import, export, Cameroon

EMBRACING THE CIRCULAR ECONOMY: A PARADIGM SHIFT FOR SUSTAINABLE PROSPERITY

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Abstract

The proposed paper is a review of the scientific literature regarding the circular economy, which has to be a viable alternative to the linear "take-make-dispose" approach and assure sustainability. The paper is logical structured and has a critical vision and approach of the circular economy versus liner economy, comparatively emphasizing the benefits and restrains. Illustrative schemas present the two economic models, and the objectives of the circular one. The principles, beneficial aspects, key policies and initiatives of the circular economy are presented and commented highlighting the EU's commitment and the development of the metrics for circularity measurement. Regarding the circularity in agriculture, it is emphasized the efficiency in resource use, recycling, and waste reduction, closed nutrient loops, biodiversity conservation, climate change mitigation, food production and consumption, and the creation of economic value. Circular agriculture practices such as agroforestry, crop rotation, composting organic farming, and regenerative agriculture are also presented. Circularity in agriculture should cease to be seen merely as a concept, it should be considered a necessity for building a sustainable and resilient economy of the future.

Key words: circular economy versus linear model, objectives, good practices in circular agriculture

FROM FARM TO FORK: THE ROLE OF FOOD MARKETS IN ENSURING FOOD SECURITY THROUGH EFFECTIVE POLICY

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Abstract

The global population's ongoing need for consistent access to healthy, sustainable, and safe food presents a considerable challenge. Addressing this challenge has been a focal point for the European Commission, with a series of proposed approaches supported by policies and laws spanning the entire food production and consumption spectrum. Aligned with the objectives of the European Green Deal and Common Agricultural Policy (CAP) reform, relevant research studies and actions are designed to contribute to key goals: (1) ensuring access to healthier and affordable food, (2) improving agricultural and food systems, (3) mitigating biodiversity loss, (4) achieving climate neutrality, and (5) supporting farmers. Despite these overarching goals, the journey toward sustainable food systems remains uncertain due to a lack of knowledge and tools to bolster policies in this domain. Our research underscores the pivotal role of science in governing food systems, facilitating collaboration among key stakeholders to establish co-benefits for both rural and urban environments. Food science emerges as a crucial instrument for realizing the objectives of the European Green Deal and CAP reform, offering potential avenues for analyzing synergies between urban and rural areas, emphasizing rural development, fostering innovation in urban agriculture, and facilitating multi-actor collaboration. In response to identified gaps and opportunities, our focus has centered on the analysis of 42 farmers' markets in Bucharest. Utilizing a questionnaire-based interview method with agricultural producers, we delved into aspects such as the geographical distribution of farmers in these markets, the allocation of areas, market and facility preferences, and challenges encountered throughout the entire farm-to-consumer process.

Key words: farm, food, security, sustainable



ISSN 2457-3256
ISSN-L 2457-3256