



**AGRICULTURAL ACADEMY**  
**INSTITUTE OF AGRICULTURAL ECONOMICS**  
**Founded 1936**

**International Scientific Symposium**  
**"Agricultural economy in support of agriculture and  
development of rural areas"**

**November 7, 2023**

**Sofia, Bulgaria**





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**areas"**

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**European Rural Development Network**

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**Technical cover layout:**

- **Vanya Manolova**

**Venue:**

**Best Western Hotel Expo, Sofia, Bulgaria**



<b>Theme</b>
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International Scientific Symposium is organized by Institute of Agricultural Economics, Sofia in partnership with the European Scientific Network for Rural Development (ERDN). The conference is expected to get together scholars and researchers from different countries to share their studies and reflections for the agricultural development and capability and resilience of the industry to new challenges and goals. Nowadays, in the time after pandemic of COVID – 19, the war in Ukraine and the economic crisis, the agri-food supply chain faces challenges, which affect and resonate through all participants and chain stages raising the issue of food security, production stability, prices and safety net. The agricultural policies are committed to respond to those issue and to provide a smooth way of recovery and resilience so as all agri-food chain participants pass intact during this time.

<b>Aim</b>
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The aim is to reveal ideas concerning the new horizons of agricultural development in the context of environmental goals, food security, global food market and lessons from performance of agri-food chain in the of war in Ukraine. The traditional classic market-oriented agricultural economics, where the driving forces are set to marginal theory, comparative advantages and global food delivery system is encountered by notion for environmental protection, sustainability, safety net, well-beings of farmers, consumers, local communities. The agricultural economists are expected to facilitate policy-makers, agribusinesses and environmental activities to achieve an omnipresent balance, where all sides are satisfied and better off. International Scientific Symposium would contribute also further the knowledge on eco-governance and climate change adaptation and mitigation.

## Thematic scope

- ***Agriculture – markets, policies and food security***
  - ✓ Commodity markets;
  - ✓ Efficiency, productivity growth and competitiveness;
  - ✓ Agricultural investments;
- ***Agri-environmental challenges and the role of agriculture in achieving UN sustainable development goals***
  - ✓ Elements and changes in natural resources;
  - ✓ Contribution and adaptation of agriculture to climate change;
  - ✓ Green deal and impact on agriculture production;
  - ✓ Sociology of environmental movement.
- ***Rural areas development – the need for keeping their identity and viability***
  - ✓ Future of rurality
  - ✓ Innovations and farmers' intentions

## Keynote speakers

**Pawel Chmielinski**, *European Rural Development Network*

**Shengquan Che**, **Professor PhD** - *Shanghai Jiao Tong University, China*

**Norbert Potori**, **Professor PhD** - *Institute of Agricultural Economics, Hungary*

**Dragi Dimitrievski**, **Professor PhD** - *Cyril and Methodius University, Republic of North Macedonia*

**Hrabirin Bashev**, **Professor PhD** - *Institute of Agricultural Economics, Bulgaria*

**Anatolii Kucher**, **Professor PhD** - *National Scientific Center, Institute for Soil Science and Agrochemistry Research O.N.Sokolovski, Ukraine*

## International Scientific Committee

**Bashev Hrabrin, Professor PhD** – *Institute of Agricultural Economy, Sofia, Bulgaria;*

**Che Shengquan, Professor PhD** - *Shanghai Jiao Tong University, China;*

**Chmielinski Pawel** - *European Rural Development Network;*

**Dimitrievski Dragi, Professor PhD** – *Cyril and Methodius University in Skopje, Republic of North Macedonia;*

**Doychinova Julia, Professor PhD**– *University of National and Word Economy, Sofia, Bulgaria*

**Hamalczuk Mariusz, PhD** – *Warsaw University of Life Science, Poland*

**Ivanov Bozhidar, Associate Professor PhD** – *Institute of Agricultural Economy, Sofia, Bulgaria*

**Ivanova Boryana, Associate Professor PhD** – *Agricultural University, Plovdiv, Bulgaria;*

**Meyers William, Emeritus Professor PhD** - *Agricultural and Applied Economics at the University of Missouri, USA*

**Mitova Dilyana, Associate Professor PhD** – *Institute of Agricultural Economy, Sofia, Bulgaria*

**Popov Rumen, Professor PhD** – *Institute of Agricultural Economy, Sofia, Bulgaria*

**Potori Norbert, Professor PhD** – *Institute of Agricultural Economics, Hungary*

**Sarov Angel, Associate Professor PhD** – *Institute of Agricultural Economy, Sofia, Bulgaria*

**Stanimirova Mariya, Associate Professor PhD** – *University of Economy, Varna, Bulgaria*

**Wrzochalska Agnieszka, Professor PhD** – *Institute of Agricultural Economics and Food, Warsaw, Poland*

## Organizers Committee

**Bozhidar Ivanov**, Director of Institute of Agricultural Economics, Bulgaria

**Angel Sarov**, Institute of Agricultural Economics, Bulgaria

**Bozhura Fidanska**, Institute of Agricultural Economics, Bulgaria

## International Scientific Symposium

### "Agricultural economy in support of agriculture and the development of rural areas"

November 7, 2023

#### PRELIMINARY PROGRAM

09:00-09:30	<b>Registration of participants and welcome coffee</b>
09:30-10:00	<b>Official opening and welcome speeches</b> <ul style="list-style-type: none"><li>• <i>Representative of Ministry of Agriculture and Food, Bulgaria /awaiting confirmation/</i></li><li>• <i>Representative of Agricultural Academy /awaiting confirmation/</i></li><li>• <i>Pawel Chmielinski, European Rural Development Network</i></li><li>• <i>Bozhidar Ivanov, Institute of Agricultural Economics</i></li></ul>
10:00-12:00	<b>Plenary Session: Agriculture – markets, policies and food security</b> <b>Moderator: Professor Atanas Atanassov</b>
	<b>Keynote speakers:</b> <ul style="list-style-type: none"><li>• <i>Pawel Chmielinski, European Rural Development Network</i></li><li>• <i>Shengquan Che, Shanghai Jiao Tong University, China</i></li><li>• <i>Norbert Potori, Institute of Agricultural Economics, Hungary</i></li><li>• <i>Dragi Dimitrievski, Cyril and Methodius University, Republic of North Macedonia</i></li><li>• <i>Hrabrin Bashev, Institute of Agricultural Economics, Bulgaria</i></li><li>• <i>Anatolii Kucher, National Scientific Center, Institute for Soil Science and Agrochemistry Research O.N.Sokolovski, Ukraine</i></li></ul>
12:00-13:00	<b>Lunch</b>
13:00-15:00	<b>Plenary Session: Commodity market outlook /CAPA/</b> <b>Moderator: Associate Professor Bozhidar Ivanov</b>
	<b>Speakers:</b> <ul style="list-style-type: none"><li>• <i>Roel Jongeenil, University of Missouri, USA</i></li><li>• <i>Julian Binfield, LEI Wageningen University, Netherlands;</i></li><li>• <i>Doryana Milenkova, Rabobank, Netherlands</i></li><li>• <i>Daniela Dimitrova, CAPA</i></li></ul>
15:00-15:30	<b>Coffee break</b>

15:30- 18:00	<p><b>Thematic Session: Rural areas development – the need for keeping their identity and viability</b></p> <p><b>Moderator: Associate Professor Bozhin Bozhinov</b></p> <ul style="list-style-type: none"> <li>• Mariusz Hamulczuk, Professor PhD - Trade and price consequences of lifting of quotas and tariffs by EU on import of grain from Ukraine during a Russia-Ukrainian war</li> <li>• Nicola Galluzo, PhD – Technical efficiency analysis in Italian agritourism's and CAP effects;</li> <li>• Zenepe Dafku – Promoting community – based conservation to enhance biodiversity and achieve sustainable development goals in rural areas of Albania</li> <li>• Agnieszka Wrzochalska, Professor, PhD – Cooperation of agricultural universities with representatives of agricultural advisory centers in Poland</li> <li>• Marina Nacka, Associate Professor, PhD – Women empowerment in agriculture – use of economic experiments for evidence – based policymaking</li> <li>• Ivana Janeska Stamenkovska, Associate Professor, PhD - Rural women perspectives towards national agricultural policy</li> <li>• Dimitre Nikolov, Professor PhD – Analysis of the socio-economic parameters of farm applying soil restoration strategies in Bulgaria and Austria;</li> <li>• Svetlana Aleksandrova, Professor, PhD – Green deal in agriculture through the sights of researchers' studies</li> <li>• Petya Slavova, Associate Professor, PhD – How do Farmers take benefits through short food supply chains in a fragile institutional context in Bulgaria? Benefits 'through dependencies' instead of collaborative advantage</li> <li>• Dilyana Mitova, Associate Professor, PhD – Organic farming in Bulgaria – opportunity and challenge in the context of sustainable development goals</li> </ul>
18:00-18:20	<p><b>Thematic brief: Agri-environmental challenges and the role of agriculture in achieving UN sustainable development goals</b></p> <p><b>Moderator: Associate Professor Dilyana Mitova</b></p> <p><b>Speakers:</b></p> <ul style="list-style-type: none"> <li>• Tsvetana Harizanova – Metodieva, Associate Professor, PhD - Cluster analysis of districts in Bulgaria according to the development of the livestock sector</li> </ul>



	<ul style="list-style-type: none"> <li>• Krasimir Kostenarov, PhD – Development of a model to reduce production costs and costs as a result of the application of digital technical in the crop sector</li> <li>• Angel Sarov, Associate Professor, PhD – Farmer's attitudes on the economic merits of precise agricultural technologies</li> <li>• Rositza Mikova, PhD – Research the effect of subsidies on agricultural land rent payments after Bulgaria's admission to the EU</li> <li>• Desislava Toteva, PhD – Regional analysis of viticulture at statistical regions in Bulgaria</li> <li>• Mihaela Mihailova, PhD – Triple bottom line assessing the state of Bulgarian bioeconomy</li> <li>• Svetozar Ivanov, PhD Student – Analysis of the possibilities for improvement of the contracts related to the supply of agro-ecological services</li> <li>• Bozhura Fidanska, PhD Student – The role of contract solutions for farmers delivering of agri-environmental climate public goods – based on a survey result</li> <li>• Angel Sarov, Associate Professor, PhD – Attitudes of agricultural producers towards the collective provision of agro-ecological public goods</li> <li>• Rumen Popov, Professor PhD – The Development of Bulgarian Agriculture in the Framework of EU CAP</li> </ul>
<b>18:20-18:30</b>	<b>Conclusion remarks</b>
<b>19:00</b>	<b>Official dinner</b>

# **EU PARTNERSHIP FOR SUSTAINABLE FOOD SYSTEMS AND THE FRAMEWORK FOR NATIONAL BIOECONOMY AND FOOD SYSTEMS DEVELOPMENT. CASE OF POLAND**

Author: Pawel Chmielinski, PhD\*

\*European Rural Development Network

\*\*Institute of Rural and Agricultural Development of Polish Academy of Sciences

## **Abstract**

The EU partnership for sustainable food system across the member states is indispensable initiative, which not only foster the achieving the high and ambitious goals of EU but creates opportunities of research organizations, private business and None-governmental organization to work together on the common challenges.

**Key words:** bioeconomy, partnership, food system, innovation, Poland

# **THE EU CHAMPION IN FOOD PRICE INFLATION: THE CAUSES AND REASONS FOR THE SEVERE ESCALATION OF FOOD PRICES IN HUNGARY**

Author: Norbert Potori, Professor PhD\*

\*AKI Institute, Hungary

## **Abstract**

Over the past two years, the demand for food in Hungary has been characterized by exceptionally high food price inflation, and the adaptation of consumers to this challenging environment. While the surge in food prices was triggered by international factors, domestic peculiarities have also played a significant role in driving this record-high inflation. The presentation offers insights into these unique characteristics and highlights the international competitive disadvantages faced by the country in food production, processing, and trade.

**Key words:** food price inflation, production, processing, trade, Hungary

# **CHALLENGES OF THE MACEDONIAN AGRICULTURE TOWARDS A SUSTAINABLE FOOD SYSTEM**

Authors: Dragi Dimitrievski, Professor PhD\*, Ana Kotevska, Professor PhD\*

\*Ss. Cyril and Methodius University in Skopje, Faculty of Agricultural Sciences and Food, Institute of Agricultural Economics

## **Abstract**

The importance of the sustainability of the agri-food system has been emphasized by different events that test the functioning of the food supply system. Sustainability is also very important for ensuring the agri-food system's resilience to crises. Sustainability of the agricultural development means to balance among economic, social and environmental sustainability, *i.e.*, to provide benefits to economy, while having a neutral or positive impact on the natural and social environment. The recent global crises emphasized the importance of agriculture for the national economies. This paper focuses on the capacity of the Macedonian's agricultural sector to ensure the sustainability of the food system, taking into account its internal strengths and weaknesses vis-à-vis the external crises and challenges.

The internal factors that affect the agricultural sector development are of economic, social and environmental nature. Agriculture in Macedonia is one of the most important economic sectors. It participates in the gross value added (9%), employs a significant share of the total workforce (11.5%), and is very important for rural areas, which cover 87% of territory. Macedonian agricultural and food sector is not able to meet its own needs for agricultural and food products, thus the country is import-dependent and very vulnerable to the market volatility and crises.

Some of the socio-economic conditions arise from the previous period, prior 1990s, whereas some are result of developments in the last three decades. The market access was changing over the years, which affected the placement and the market connections, by changing the foreign trade regime and losing previously established markets. All these structural and market condition, combined with worsen living conditions in rural areas, caused a process of mass migrations, resulting with depopulation of rural areas and abandonment of the sector, especially by young people. In addition, due to its biological nature, it is very vulnerable to the climatic changes.

The external factors mostly relate to the Macedonian's aspiration to join the European Union (EU), but also other concepts aiming to protect the environment and the health of

people. The process of approximation to the EU affects the agricultural sector and its development, first through the process of harmonization of the national policies with the Common Agricultural Policy, but also with the forthcoming Green Deal of the EU and the Farm to Fork (F2F) Strategy. The country also needs to harmonize their policies and actions to meet the Sustainable Development Goals (SDGs) adopted by the United Nations in 2015.

This paper aims to discuss the ability of the country to meet the goals and objectives of the EU, Green Agenda, and SDGs, opposing the existing internal and external factors. It aims to provoke a wider critical thinking how the country, each stakeholder and each expert can contribute to facing these challenges. What are the actions needed to preserve and support the agro-food system; what are the collaborations needed to establish and nurture; and at last, but not least, what is the role of the agricultural economists in this process.

**Key words:** challenges, Macedonian food system, sustainability

# WHAT IS COMPETITIVENESS OF GOVERNING STRUCTURES OF BULGARIAN AGRICULTURE

Author: Hrabrin Bachev, Professor PhD\*

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## Abstract

Farm is an abstract category in Economic theory for describing agents managing farming activity, while the real governing structures in agriculture are farms of different juridical types. Farm's competitiveness is inadequately assessed through technical and accountancy efficiency, factors' productivity, profitability, market shares, etc. because critical governance aspects are ignored. This presentation suggests a holistic framework for assessing farm' competitiveness taking into account economic, financial and governance efficiency, and evaluates absolute and comparative competitiveness of governing structures of Bulgarian farming. The assessment system includes four pillars, four criteria, 17 particular and 5 integral indicators. First in-kind evaluation, based on survey data, found that competitiveness of Bulgarian farms is good. Competitiveness of cooperatives is highest, followed by corporations and associations, sole traders, and physical persons. Critical for competitive positions of farms are: low productivity, income, financial security, and adaptability to natural environment, where public support and farms' management strategies should be directed. Large shares of country's farms have low competitiveness, and if measures are not taken by improving management, restructuring, state support, etc., many farms will cease to exist in the near future. In some cases, other characteristics of governing structures like size, specialization, market orientation, and ecological location, are critical for determining competitiveness level.

**Keywords:** competitiveness, economic, financial, and governance pillars, governance structures, farming, Bulgaria

\*This study has been funded by the Bulgarian Science Fund, the project "The Mechanisms and the Modes of Agrarian Governance in Bulgaria", Contract № КП-06-H56/5 from 11.11.2021



# AGRI-ENVIRONMENTAL AND ECONOMIC ASSESSMENT OF THE IMPACT OF WAR ON SOIL: NEW CHALLENGES FOR SUSTAINABLE AGRICULTURE AND FOOD SECURITY

Authors: Anatolii Kucher, Professor, PhD\*, Lesia Kucher, Professor, PhD\*\*

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## Abstract

The purpose of this study is to identify and agroecologically and economically assess the impact of war on soils in the context of new challenges for sustainable agriculture and food security.

The ongoing Russo-Ukrainian war is affecting Ukrainian agriculture. As a result, food security in Ukraine, and to some extent, in the region (EU) and globally, is at some risk, especially in countries that rely heavily on agricultural imports from Ukraine. In the conditions of martial law, Ukraine's food security has significantly deteriorated and remains low, especially compared to the TOP-10 leading countries. About 70% of the land in Ukraine is used for agricultural production. The weak points of Ukraine's land resources from the point of view of food security include the low content of organic matter in the soil and land degradation, the importance of which increases significantly under conditions of armed aggression. Scientific support for the restoration of disturbed lands and soils and their sustainable management should be based on the results of the survey and the implementation of innovative technologies and measures for accelerated rehabilitation.

**Key words:** damages and losses, environmental security, food security, sustainable development.

# TRADE AND PRICE CONSEQUENCES OF LIFTING OF QUOTAS AND TARIFFS BY EU ON IMPORT OF GRAIN FROM UKRAINE DURING A RUSSIA-UKRAINIAN WAR

Author: Mariusz Hamulczuk, Professor PhD\*

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## Abstract

The Russian-Ukrainian conflict has led to the disruption of supply chains, thus posing a threat to global food security. Due to the blockade of Ukrainian seaports and the threat to global food security, the European Commission has decided to suspend all import duties and quotas on Ukrainian agricultural exports to the European Union (EU). The result of these measures is the growing role of EU countries in the share of grain exports from Ukraine and a more than 2.5-fold increase in grain exports to the EU in 2022 compared to previous years. In general, the consequence of the conflict and trade liberalization with Ukraine are visible trade creation and trade diversion effects. Exceptionally high imports of grains have been observed in the New Member States (NMS) located near Ukraine, which has led to the destabilization of grain markets there. As a result of farmers' protests, in May 2023, the EC banned imports of four agricultural products from Ukraine to Bulgaria, Hungary, Poland, Romania and Slovakia. One of the arguments raised by farmers and governments in these countries was the drop in prices and their impact on farm incomes. The analysis showed that the impact of this situation on the decline in grain prices in the NMS turned out to be relatively small, as prices in the NMS are very close to the average level in the EU.

**Key words:** trade liberalization, grain price, imports, farm incomes

# TECHNICAL EFFICIENCY ANALYSIS IN ITALIAN AGRITOURISMS AND CAP EFFECTS

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## Abstract

In Italy there has been a significant increase of agritourisms financed by the CAP subsidies allocated in the framework of the second pillar.

The core purpose of this study was to assess the technical efficiency in Italian farms specialized in agritourism and the pattern of technical inefficiency due to some excesses in input. In the first stage of the research the technical efficiency has been estimated by a non-parametric approach (DEA). In the further stage the excess of input has been estimated using the Multi-directional efficiency analysis or MEA. The investigated farms are a sample of farms part of the European Farm Accountancy Data Network (FADN), since 2014 to 2021.

Findings have pointed out as there are significant differences in terms of technical efficiency in different type of farming even in the average value has pointed out as Italian agritourism's are under the optimal level of technical efficiency. By the MEA it has been possible to observe as the input assets and labour have had the highest level of input excess. Drawing some conclusions, the analysis has emphasized an uneven distribution of technical efficiency among all Italia regions and among different type of farming.

**Keywords:** Data Envelopment Analysis, MEA, FADN, excess of input

# **PROMOTING COMMUNITY - BASED CONSERVATION TO ENHANCE BIODIVERSITY AND ACHIEVE SUSTAINABLE DEVELOPMENT GOALS IN RURAL AREAS OF ALBANIA**

Authors: Zenepe Dafku, Assistant lecturer\*; Etleva Dashi, PhD student\*\*

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## **Abstract**

Community-based conservation in rural areas is crucial as it not only safeguards biodiversity but also contributes to achieving sustainable development goals, fostering resilience and prosperity for local communities in Albania. This study shows the potential of promoting community-based conservation as a means of enhancing biodiversity and achieving sustainable development goals in rural areas of Albania. The objectives of the study include identifying the main factors that contribute to the success of community-based conservation initiatives in Albania, analyzing the challenges and opportunities for community-based conservation in rural areas, and proposing recommendations for policymakers and practitioners to enhance the effectiveness of community-based conservation in promoting biodiversity conservation and sustainable development. The research question focuses on the effectiveness of community-based conservation initiatives in promoting biodiversity conservation and sustainable development in Albanian rural areas. The conclusion is that community-based conservation has a lot of potential to help Albania's rural communities achieve their goals for sustainable development and biodiversity conservation, but it needs careful planning, robust community support, and adequate backing from policymakers and practitioners.

**Key words:** community-based conservation, biodiversity conservation, sustainable development, rural areas

# COOPERATION OF AGRICULTURAL UNIVERSITIES WITH REPRESENTATIVES OF AGRICULTURAL ADVISORY CENTERS IN POLAND

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## Abstract

The aim of the article is to analyze the functioning of the AKIS system based on the assessment of representatives of agricultural advisory units and agricultural universities. This is a fragment of the study conducted by IERiGŻ-PIB in 2022-2023. The analyzes conducted show that universities value the opportunity to share their knowledge and the possibilities of using this knowledge and experience in external projects, e.g. the EU, as well as in the development of domestic agribusiness, creating jobs requiring knowledge and innovative competences. Cooperation enables university employees to expand their scope of competences, expand their knowledge and knowledge of issues related to agricultural development, innovation in agriculture, intensification of activities in the area of R&D, as well as pro-innovation activities under the CAP. An important aspect is also the increased understanding of decision-makers and public opinion about the importance of food security and the role of supporting the development of an economy based on knowledge and the diffusion of innovation. In turn, employees of agricultural advisory units have the opportunity to expand their knowledge and become familiar with issues related to the development of agriculture, innovations in agriculture, as well as the opportunity to use knowledge and experience in the implementation of new models of development of conventional agriculture using scientific and research achievements in the field of agroecology, agricultural technology, biological progress, digitalization, ICT and other research results conducted in academic centers that can be used in the agri-food sector.

An optimistic phenomenon is that agricultural advisory workers contact representatives of agricultural academic centers and vice versa on an ongoing basis. Nevertheless, the conducted research has shown that the potential of agricultural advisory centers (including information and IT databases) should be better used to deepen cooperation. This particularly applies to cooperation in the implementation of specific innovative agricultural solutions. Advisory services expect greater scientific interest in agricultural practice, including consulting, and also expect cooperation to be institutionalized.

**Key words:** AKIS, agricultural universities, agricultural consulting, Poland



## **WOMEN EMPOWERMENT IN AGRICULTURE – USE OF ECONOMIC EXPERIMENTS FOR EVIDENCE - BASED POLICYMAKING**

Authors: Marina Nacka, Associate Professor, PhD\*, Andreas Drichoutis, PhD\*\*, Rodolfo  
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### **Abstract**

This paper presents the combined results of two comprehensive studies aimed at advancing women's empowerment in agriculture and promoting their increased participation and leadership in agriculture and rural areas in North Macedonia. It focuses on identifying key determinants of disempowerment for targeted support programs and recommending policy revisions for effective gender-responsive budgeting in agriculture and rural development. We employed a behavioral and experimental economics framework, utilizing the Abbreviated Women's Empowerment Index in Agriculture (A-WEAI) across five domains: Production, Resources, Income, Leadership, and Time Allocation. Additionally, we used an experimental economics method, the modified "Dictator game," to estimate the Women's Decision-Making Power. In the first study, we conducted a field survey among 464 agricultural households, measuring women's empowerment using the A-WEAI and quantifying the Women's Decision-Making Power within agricultural households with a non-hypothetical approach that provided precise insights into household dynamics. In addition, a Gender-Sensitive Policy Analysis was conducted on the existing policies and budgetary allocations, augmenting the A-WEAI with a money-metric measure from the modified Dictator game. In the follow-up study, we aimed to measure the level of women's empowerment in agriculture and elicited their risk and time preferences (RTPs). By correlating the empowerment index and RTPs, we aim to understand which domains of empowerment are expected to make a bigger change to household economic outcomes. Three groups of women (a total of 300) were recruited for the lab-in-the-field experiment: those who were not eligible for national gender-responsive support measures, those who were eligible but not approved for the support, and those who were eligible and approved for the support. Risk preferences are elicited by asking subjects to make choices between lottery choice tasks (incentivized real money

measures – 10 choices) that involve either a lower risk - lower yield or a higher risk - higher yield. In addition, we assessed the gender sensitivity of agricultural policies and programs, scrutinizing legal, strategic, and operational documents guiding developmental goals and financial support. By integrating methodologies and evaluating policy interventions, we offer a comprehensive framework for addressing women's disempowerment in agriculture. Our findings indicate that women who had higher index scores also tended to have higher RTPs scores. This suggests that interventions that focus on enhancing women's empowerment in agriculture, particularly in domains such as access to credit, decision-making power, and control over income, are likely to yield positive economic outcomes for households. Our study also found that women who were less prone to take risks or less future-oriented were less likely to engage in entrepreneurial activities, even when given the opportunity. More risk-taking is associated with the approved and rejected groups as compared to the control while the patience score is approximately the same between the three groups. Therefore, policies that aim to promote women's empowerment in agriculture must take into account the differences in RTPs among women and provide tailored support to those who may require additional assistance to overcome their risk aversion

**Key words:** women empowerment, economic experiments, gender-responsive agricultural policy.

# **RURAL WOMEN PERSPECTIVES TOWARDS NATIONAL AGRICULTURAL POLICY**

Authors: Ivana Janeska Stamenkovska, Associate Professor, PhD\*, Dragi Dimitrievski, Professor, PhD\*, Marina Nacka, Associate Professor, PhD, Riste Elenov, Professor, PhD\*

\*Ss. Cyril and Methodius University in Skopje, Faculty of Agricultural Sciences and Food-Skopje, Republic of North Macedonia

## **Abstract**

Although the importance of women's contribution to the agricultural sector is now widely recognized, the agriculture in North Macedonia is still a man-driven sector. Particularly, only 12% of the women own land and less than 10% of rural women participate in land decision-making. As a result, a lack of starting capital is often a substantial obstacle for women to start a business in rural areas. However, while national agricultural policies and programmes also include women, men continue to be the most frequent users of this support. Considering this, the aim of this study is to examine the rural women's perspectives toward current national policy measures as well as the extent to which this policy addresses their needs. The analysis is based on primary data obtained through structured interviews and standard descriptive statistical methods are applied. The survey was to assess the rural women's awareness of various policies, such as land policy, tax policy, investment-credit policy, policy for common market organization, with a particular emphasis on the specific national agricultural policy and programmes for rural development and financial support in agriculture. Though 86% of the women respondents pay taxes for their agricultural household, 83% have invested in their farm, and 37% rent agricultural land, the majority are unfamiliar with the tax policy (67%), investment-credit policy (67%), or land policy (59%). The vast majority of them (about 80%) are aware of both the rural development programme and the programme for financial support of agriculture. Despite the fact that rural women recognize and utilize the support provided by the specific agricultural policies, still 94% of the respondents do not engage in the process of policy design based on rural women needs. Only 6% of them participate indirectly through associations, cooperatives or membership in different groups inside the national institutions. The findings confirm that the lack of rural infrastructure, on one side, as well as lack of new economic opportunities for rural women, on the other, will lead to young rural women abandoning of the rural areas. Namely, the existence of the

agricultural businesses is highly dependent on financial support in agriculture, and as a result, most women farmers are familiar with this policy and consider that it is a gender-responsible policy that foster women entrepreneurship. Although those who are more involved in different groups of producers reveal a higher level of awareness, improved education for rural women will considerable contribute to their empowerment.

**Key words:** rural women, agricultural policy, women perspectives, North Macedonia

# ANALYSIS OF THE SOCIO-ECONOMIC PARAMETERS OF FARM APPLYING SOIL RESTORATION STRATEGIES IN BULGARIA AND AUSTRIA

Authors: Dimitre Nikolov, Professor PhD\*, Ivan Boevsky, Professor PhD\*, Martin Banov, Professor PhD\*\*, Ekatherina Tzvetanova, PhD\*, Krasimir Kostenarov, PhD\*

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## Abstract

This article presents the assessment of the degree of influence of socio-economic parameters of farms applying soil restoration strategies over the supply chain cooperation, public-private partnerships, and landscape alliances in Austria and Bulgaria. The aim of the assessment is to highlight new socio-economic opportunities which can be a target for the public policies. The study is based on the pilot farms analysis of the TUDI<sup>1</sup> project survey results. The analysis of the socio-economic parameters is made with, Analytical Hierarchical Process. The results are analyzed on both county and soil restoration strategy base.

The analysis shows that Fertilization strategies has impact on supply chain cooperation. The goal aims to involve all suppliers and the most important socio-economic opportunities are certainty of demand, access to finance, and uncertainty of income. In terms of fertilization and remediation strategies, the analysis shows that the most important socio-economic opportunities are related to certainty of demand and access to finance. On the other hand, the implementation of Remediation strategy requires higher consensus in the local society and more activities, which explains the stronger interaction of this criteria with the goals public-private partnership and landscape alliances. In this

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<sup>1</sup> The name "TUDI" comes from the abbreviation of the project name under which the research is financed: "Transforming Unsustainable management of soils in key agricultural systems in EU and China. Developing an integrated platform of alternatives to reverse soil degradation", Horizon 2020 Research and Innovation action under grant agreement No 101000224.



case, the most important socio-economic opportunities are certainty of demand, access to finance, political support, and training and equipment.

**Keywords:** Soil restoration strategies, socio-economic, farms

## **METHODOLOGICAL APPROACH FOR ASSESSING NEW INCENTIVES FOR SOIL HEALTH BUSINESS MODELS IN EU**

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### **Abstract**

Soil health business models can lead to the maintenance of sustainable and competitive agriculture. The agricultural policy in the EU pursues different incentives to encourage adoption of environmentally oriented practices. Investments in soil health can lead to significant benefits not only for the environment but for society as well. The aim of this paper is to present the methodological approach for assessing new incentives for soil health business models in the frame of the NOVASOIL project. The goal is to investigate the opportunities and gaps of new incentives for redirection of financial streams and policy support measures for provision of innovative soil health technologies. The methodology includes two phases. The first one comprises of targeting new incentives for soil health and then identifying the corresponding gaps and opportunities. The second one continues the analysis with assessing the selected incentives with the BOCR-ANP model. The processing of the data is based on Super Decision software tool.

**Key words:** Business models, soil health, agriculture, ANP

# GREEN DEAL IN AGRICULTURE THROUGH THE SIGHTS OF RESEARCHERS STUDIES

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## Abstract

The Green Deal in agriculture is an ambitious goal of making agriculture greener, more sustainable, more viable and contributing to limiting greenhouse gas emissions. In recent couple of years, there are various and a great deal of researches and analyses designated to investigate the broad aspects of this concept. The consequences of the Green Deal in agriculture are still unknown, but various publications discuss the expected effects of it on agricultural production food consumption, ecological benefits, social well-being, farm performance, etc. The aim of this paper is to synthesize as many as possible studies done and published by researchers and responsible organizations and available in well-known scientific databases as of Scopus, WoS, etc., and through a meta-analytical integration and AHP method to show summarization and give insight on the effects and judgments.

The study search is run primary on 3 key terms – “Green Deal”, “CAP 2027” and “Sustainable Goals”, where a bunch of more than 25 different papers and reports are reviewed, which allows to compile a huge number of qualitative conclusions and quantitative outcomes processed by adopted methods.

**Key words:** Green Deal, meta-analytical integration, AHP method

# **HOW DO FARMERS TAKE BENEFITS THROUGH SHORT FOOD SUPPLY CHAINS IN A FRAGILE INSTITUTIONAL CONTEXT IN BULGARIA? BENEFITS 'THROUGH DEPENDENCIES' INSTEAD OF COLLABORATIVE ADVANTAGE**

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## **Abstract**

**Aim:** It is well known that in Bulgaria short food supply chains developed by farmers are on the one hand hardly making their way through the legally created opportunities (e.g. through farmers' markets or direct on farm sales) and on the other hand are very widespread but function as part of the informal economy. Formal channels are not always profitable for farmers and make production very expensive for consumers, while informal channels are accessible only to a limited number of consumers and mainly through personal contact and are based on various socio-economic and political dependencies. These two features of the context in which short food chains operate in Bulgaria create barriers to the development of market opportunities and make it difficult for individual consumers to access quality farm food.

**Materials and methods:** This report, based on qualitative survey data from eight short supply chains of different food and beverage products in Bulgaria, aims to identify the barriers that farmers face in their attempt to market their products without intermediaries (short food supply chain), and to examine the business models that farmers use and the extent to which and how collaboration is embedded in them as a mechanism for generating direct and indirect benefits. The conceptual model of the study is based on Cao & Zhang's (2010) concept of benefit extraction/benefit foregone from collaboration and the concept of an unstable institutional context of Demeter (2018).

**Results and conclusion:** The main thesis that the paper try to defend is that the way short food supply chains operate in Bulgaria, whether they operate informally or according to legally available mechanisms, omits to derive 'benefits from cooperation', preferring to derive 'benefits from dependencies', and cooperation is conceived as mutual aid rather than as a sustainable element of the business model. This emerges as a major cultural difference of business models in the local context, which is characterized by insufficient or poorly functioning regulatory mechanisms to support short food supply chains and high levels of informality in the agro-food sector. Profiting from dependency, however, limits

both farmer-to-farmer cooperation and opportunities for free business development on farms.

**Key words:** short food supply chains, benefits, collaborative advantage, dependencies, Bulgaria

## **ORGANIC FARMING IN BULGARIA – OPPORTUNITY AND CHALLENGE IN THE CONTECST OF SUSTAINABLE DEVELOPMENT GOALS**

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### **Abstract**

This study aims to analyze and evaluate the development and role of Bulgarian organic farming sector (1,71% share of UAA for 2021) as environmental friendly production system in Bulgarian agriculture; the extent to which this sector meets society and consumer requirements while considering the effects of consumption of organic products on human health, environment and ecosystem; to determine priority measures to support the sector and improve its competitiveness. The object of the analysis, based on available statistical data, is the organic production in Bulgaria. On this basis and on the basis of the governmental agricultural policy are identified challenges and opportunities of this type of production in Bulgaria as well as recommendations and options for its future development.

**Key words:** Organic farming, national and CAP, sustainable functioning, agri-environmental challenge

# CLUSTER ANALYSIS OF DISTRICTS IN BULGARIA ACCORDING TO THE DEVELOPMENT OF THE LIVESTOCK SECTOR

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## Abstract

*The purpose of the research is to group the districts in Bulgaria according to the development of the livestock sector. A hierarchical cluster model was developed based on the indicators for the number of cattle and buffalo, sheep, pigs and poultry by district in Bulgaria. Data on the number of farm animals were taken from the Register of Farmers for the 2020/2021 business year. A dendrogram was constructed showing the distribution of districts by clusters. Average values of the studied indicators for each cluster were calculated. The largest number of cattle and buffalo are raised in the districts: Plovdiv (11,33% of the total number), Haskovo (8,33%) and Blagoevgrad (7,98%). Sheep are most numerous in the districts: Blagoevgrad (9,79% of the sheep population), Burgas (9,43%) and Plovdiv (8,87%). Pig farming is most prevalent in the districts: Dobrich (17,35% of the pig population), Stara Zagora (14,39%) and Ruse (12,92%). It is noted that in the Smolyan region there is not a single registered pig according to the Register of farmers for the 2020/2021 business year, in the Pernik region there is only 1 animal registered, and in the Sofia-grad region - only 4 animals. The largest number of poultry are grown in the districts: Veliko Tarnovo (22,33%), Razgrad (10,47%) and Targovishte (7,60%). The districts can be divided into 4 clusters according to the considered indicators. The first cluster includes 6 districts: Burgas, Haskovo, Kardzhali, Sliven, Blagoevgrad and Plovdiv. The second cluster includes 17 districts: Kyustendil, Pernik, Sofia-grad, Vidin, Smolyan, Montana, Lovech, Vratsa, Silistra, Gabrovo, Sofia, Yambol, Pazardzhik, Shumen, Razgrad, Targovishte and Pleven. It is noteworthy that the third cluster includes only one district - Veliko Tarnovo. The fourth cluster includes 4 districts: Stara Zagora, Dobrich, Varna and Ruse. The pairs of districts that share the most common characteristics with each other based on the studied indicators are: Kardzhali and Sliven (Kardzhali district is most similar to Sliven district according to the studied indicators); Blagoevgrad and Plovdiv; Kyustendil and Pernik; Sofia-grad and Vidin; Lovech and Vratsa; Silistra and Gabrovo; Pazardzhik and Shumen; Targovishte and Pleven; Stara Zagora and Dobrich; Varna and Ruse. In the first cluster, the average number of reared cattle and buffalo and sheep is the largest when compared to the average values of the other clusters (41,2 thousand cattle and buffalo and 78,6 thousand*



sheep). The largest number of poultry (6635,5 thousand) are raised in the Veliko Tarnovo district. The largest average number of pigs falls on the districts of the fourth cluster (76,1 thousand).

**Key words:** hierarchical cluster model; animal husbandry; districts

## **DEVELOPMENT OF A MODEL TO REDUCE PRODUCTION COSTS AND COST AS A RESULT OF THE APPLICATION OF DIGITAL TECHNOLOGIES IN THE CROP SECTOR**

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### **Abstract**

The successful development of any economic enterprise requires an appropriate business model. In agriculture, with the development of digital technologies in recent years, there has been a need to implement relevant business models. For the successful management of the agricultural enterprise, it is of great importance to choose the appropriate business model that will guarantee the successful implementation of digital solutions in the industry. To make the right decision, it is necessary to study and describe the possible digital business models. Multi-criteria analysis, through the AHP and V-AHP methods, can help make a reasoned choice from the proposed business models.

**Key words:** business model, digitalization

## **FARMER'S ATTITUDES ON THE ECONOMIC MERITS OF PRECISE AGRICULTURAL TECHNOLOGIES<sup>2</sup>**

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### **Abstract**

The aim of this study is to analyze the attitudes of farmers regarding the economic advantages of precision farming technologies. 36 farmers engaged in agricultural activity in the Sofia region, Kyustendil, Blagoevgrad, Plovdiv, Haskovo, Yambol, Dobrich, Shumen, Pleven, Montana and Vratsa were interviewed. The target group includes farm managers with different legal status. When considering the economic benefits of implementing precision agriculture, respondents were able to rank them by priority: increased yield, reduced costs, and reduced production costs. According to 40% of farmers, as a result of the implementation of precision agriculture, the yield increase is within 5%. The same number answered that they can expect an increase in yields between 5 and 20% and ten percent bet an increase in production up to 50%. Naturally, a large part of the respondents (about 65%) define a reduction in costs and a reduction in production costs by up to 5%.The belief that it is necessary to strengthen the collaboration between science - practice - businesses is confirmed.

**Key words:** Farmers, attitudes, economic merits, precise agriculture

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<sup>2</sup>The article was prepared under a project financed by the "Scientific Research" Fund, on the topic: Optimizing the parameters of precision agriculture to improve production efficiency and traceability of agricultural products. KP-06-H36/5, 13.12.2019.

# RESEARCH THE EFFECT OF SUBSIDIES ON AGRICULTURAL LAND RENT PAYMENTS AFTER BULGARIA'S ADMISSION TO THE EU

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## Abstract

The main objective of this study is to establish the interrelationship between SAPS subsidies paid, land rent payments and net income. The main research tasks are: to make a literature review of the problem; data collection for the studied indicators; to choose appropriate statistical methods and models to reveal the relationship between the three indicators; and to draw main conclusions. The data covers the period from 2007 to 2021, i.e. 15 years. Spearman's rank correlation analysis and multiple linear regressions were applied in the study. In the regression model, two indicators were used as independent variables: SAPS subsidies and net income. In the selected regression model, "time" is introduced as an additional factor that provides concrete practical advantages. The results obtained show a very strong relationship between rent payments and the independent additional variable "time", probably due to the observed continuous increase in the price of rent with each year compared to the previous one throughout the study period. Factors that influence the dynamics of rent payments are interest rates, economic growth, etc. The study found a statistically significant positive relationship between the amount of subsidies paid per area and the amount of rent payments in agriculture. Moreover, the relationship between the two is stronger than the relationship between rent and net income.

**Key words:** rent payments, net income, subsidies, agricultural land

# REGIONAL ANALYSIS OF VITICULTURE AT STATISTICAL REGIONS IN BULGARIA

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## Abstract

The purpose of the scientific development is an analysis that presents the capacity for grape production in the country by statistical regions, as well as the state of grape production in the country, the challenges in the sector and the opportunities for its development in the future.

The scientific development examines the natural and climatic conditions of the statistical regions in Bulgaria, as the basis for the development of viticulture. The regions of the country are presented on the base of NUTS and classification and statistical information from the Ministry of Agriculture, related to the production of grapes in the country.

The indicators of assessing the state of viticulture in Bulgaria, which will be used in the present study, are: level of average yields, level of harvested areas, level of production. The applied methods in the research are: analysis and synthesis, situational analysis and diagnostic analysis.

The study examines the areas, average yields and production of grapes in Bulgaria by statistical regions.

**Key words:** NUTS statistical regions, viticulture and Bulgaria

# **ANALISYS OF THE POSSIBILITIES FOR IMPROVEMENT OF THE CONTRACTS RELATED TO THE SUPPLY OF AGRO-ECOLOGICAL SERVICES**

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## **Abstract**

Within the project of "Provision of agro-ecological public goods in agriculture by improving contractual relations", launched in 2022 Institute of Agrarian Economics with SSA INº AI7, a survey was conducted in the form of a questionnaire. The main objective is related to the study of farmers' attitude and tendency to adopt and implement new contract solutions. In its essence, this predetermines the practices, methods and ways for improvement and development of the contracts under the provision of agro-ecological services. The respondents that took part in the survey are a total of 83 farms, located throughout the territory of the whole country. They were preselected on the basis of specified sample. As a result of the conducted research, the main conclusions are related to level of awareness, follow-up training, practice management, environmental results achieved, subsequent monitoring, collective arrangement and responsibility, labelling, types and extent of funding, management of staked results and guarantee of future sales.

**Keywords:** agro-ecological services, agro-ecological public goods, improvement and development of the contractual relations, environmental results achieved

# TRIPLE BOTTOM LINE ASSESSING THE STATE OF BULGARIAN BIOECONOMY

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## Abstract

The presence or absence of support measures in agricultural policy applied is another significant factor - while oilseeds and essential oils report significant production growth, traditional industries such as production of tobacco and textile fibers output manifest serious decline. It is important to take uneven production development into account when the new EU's CAP will be developed, and to find a way to support these decaying agricultural productions, given that the current policy focus is on greening.

For further analysis of the state of the regional development of bioeconomy production using industrial crops we have adapted the Triple bottom line approach (or otherwise noted as TBL or 3BL) that is a framework with three parts: social, environmental and financial. Some organizations adopt the TBL framework to assess their performance in a broader perspective to create greater business value, for the purpose of this research we will look at the bioeconomy through this framework. Business writer John Elkington claims to have coined the phrase in 1994.

Socio-economic TBL factors include influence of CAP, SDG goals and state agricultural policy, to support cultivation of industrial crops. In recent years, influence of the EU standards and regulations for natural environment and biodiversity protection on agricultural production increases. In conclusion – the restructuring of Bulgarian light industry after the country's accession to the EU has led to significant reduction of planted area and output (tobacco, fiber crops). National and under CAP support is an important stimulus for development of the sector, but it cannot replace the market forces and impulses.

**Key words:** bioeconomy, agriculture, triple bottom line

# THE ROLE OF CONTRACT SOLUTIONS FOR FARMERS DELIVERING OF AGRI-ENVIRONMENTAL CLIMATE PUBLIC GOODS – BASED ON A SERVEY RESULTS

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## Abstract

Lack of public funding and environmental deterioration are promoting the search for innovative mechanisms enabling to boost farmers' provision of agri-environmental climate public goods.

This work aims to contribute to the current debate by highlighting the role of innovative contractual solutions through a survey among public authorities. The review analyses the potential collective contracts as innovative solutions compared to action-based instruments, which are those currently most used. The design of innovative contracts and other mechanisms, e.g., auction and screening contracts, can reduce the policy failures. The paper emphasizes the trade-off between an accurate design of agri-environmental schemes and the related administrative burden, highlighting the need for a better understanding of the role of mechanisms design into the policy cycle.

**Key words:** innovative contract solutions, agri-environmental climate public goods, effectiveness

# ATTITUDES OF AGRICULTURAL PRODUCERS TOWARDS THE COLLECTIVE PROVISION OF AGRO-ECOLOGICAL PUBLIC GOODS<sup>3</sup>

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## Abstract

The provision of agri-environmental public goods through contractual relations between farmers and the state poses challenges to stakeholders. In a collective action agreement, farmers are members of a group that jointly applies for a subsidy to carry out certain environmental activities while cultivating the land. The contract prescribes environmentally friendly land application practices and levels of compensation to the farmer for additional efforts made to conserve water and improve the landscape and biodiversity. Current contractual solutions are inefficient due to a mismatch between government payments and farmers' costs

The purpose of the research is to respond to farmers' attitudes towards collective action in the sustainable provision of public goods in agroecology in Bulgarian agriculture. To achieve this goal, in-depth interviews were conducted with stakeholders. A wide range of practical questions, incentives, and attitudes are answered to understand the motivating factors among farmers for success and how the legal framework can be improved.

It is concluded that a comprehensive, systematic approach is needed to upgrade the institutional framework for providing agro-ecological public goods in Bulgaria.

**Key words:** agroecology, public goods, collective action, contract

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<sup>3</sup> This publication was developed in accordance with the implementation of the work program under the project "Cooperative models for doing business in Bulgaria and their potential for implementing innovative management solutions", financed by the "Scientific Research" Fund, "Fundamental Scientific Research-2022" competition. Contract No. KII-06-H65/1 -12.12.2022. We express our thanks to FNI.



# THE DEVELOPMENT OF BULGARIAN AGRICULTURE IN THE FRAMEWORK OF EU CAP

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## Abstract

The agriculture has significant place in Bulgarian economy – 4,6% in 2007 and 3,5 in 2020 of the GDP and 19,4% and 17,3 of the employment. At the same time there are serious changes of the correlation between the sub-sectors- crop growing and livestock breeding, as the output has changed in the 14 years' period from 55.7:44.3% to 72.6:27.4%%. Big changes have been observed also regarding the division in the sub-sectors – in the crop-growing the share of cereals and of industrial crops unlike the share of fruits and vegetables, while in the livestock-breeding there is a decrease of all sub-divisions. In relation to agricultural land could be noticed a strengthened use – at the beginning 3057.7 thousand acres have been used for arable land, for perennial crops – 195.4; for pastures – 1839.3 and others 27; at the end of period respectively 3477.5, 151.5, 1404.0 and others 14.3. The only crops with an increase are the essential crops, which show also a significant increase of production. The diminution of the livestock number results in diminution of production. The real price index of agricultural output (deflated to 2015) in total for the production for agriculture is 105.45; for the crop-growing it is 105.45 and for the livestock-breeding - 105.1. The agricultural output for the period is relatively unchanged and the intermediary consumption has a trend to equalizing. The GVA has a certain increase at the end of the period. The consumption of fixed capital increases, mainly due to the availability of European funds. The net GVA remains constant, while the incomes of other subsidies increase considerably as a result of the production support. The agricultural labour has diminished almost two times and the factor income has increased by 6.38 times and reached 179.0 thousand. The farms number shows a fast decrease – with 360,730 by 2020 compared to 2007, primarily farms with a size up to 1.9 hectares. The used agricultural area in farms over 10 hectares is increasing and now covers 96.14% of the total area.

Various research methods are used in the article, such as product grouping, comparative analysis of achieved results, relative share of an individual or group of products, producer prices and deflated prices, statistical groupings, factor analysis etc. The presented data and conclusions could serve to further solving of some of the most important problems of the integration of Bulgarian agricultural policy into the EU's CAP.

**Key words:** production volume; land use; agricultural labour; farm number



## AGRICULTURAL ACADEMY



The Agricultural Academy has been restored organization for research, for applied, servicing and auxiliary activities in the field of plant breeding, livestock breeding and food industry.

The Agricultural Academy has the main task to organize scientific activities in the field of plant breeding, animal husbandry and veterinary medicine. It includes 38 scientific institutes, 35 experimental and complex experimental stations, the Kabiuk Scientific Agricultural Complex, the National Agricultural Museum, the Center for Scientific and Technical Information (CNTI), two bases for development and implementation and two central laboratories.

A center for scientific, technical and economic information, a central agricultural library and an editorial and publishing council was established at the Academy. A permanent school for foreign languages is also organized.



**INSTITUTE OF AGRICULTURAL ECONOMICS**  
**Founded 1936**



**The Institute of Agricultural Economics (IAI) was established in 1935** as *Office for Agricultural and Economic Research* under the Ministry of National Economy, which in 1936 (SG, No. 16/23.01.1936) was renamed in Institute for Agricultural - Economic Studies with Director Prof. Yanaki Mollov. Its main goal is to comprehensively study and support agriculture in economic and social terms, with a view to improve living conditions in Bulgarian rural areas.

**During the first period (1935-1944)** of the establishment of the Institute, the scientific spheres of research were related to: Determining the directions of agricultural production development; Profitability of agricultural holdings; Agricultural zoning; Organization and restructuring of agricultural holdings; Prices and markets of agricultural products. Studies has been achieved on the living conditions of Bulgarian peasant, and on this basis the Ministry of Agriculture has developed a plan to improve the living standards of the rural population.

**Second period (1944-1970):** period of construction of cooperative farms with the aim of full cooperation. The ownership from private became cooperative and state; Central-plan management of the economy was established; Cooperative farms have been unified forming Agricultural-Industrial Complexes.

The Institute developed the first agricultural and economic zoning, which covered 5,700 settlements; 5 groups of agricultural and economic districts with 18 sub-districts (1957).

The Institute participated in the development of scientifically based concepts, programs and perspective plans for the development of agriculture.

**During the third period (1971-1988)** the Institute remained within the framework of the Agricultural Academy as Institute of Economics and Organization of Agriculture. The main directions of research activity have been: Integration of agro-industrial production; Theoretical and methodological problems of production cost, prices and price formation; New economic approach and mechanism for organization and management of the agricultural economy to increase the quality and efficiency of production; Economic-mathematical modeling and mechanized processing of information; Agricultural ergonomics.

**Fourth Period (1989–2000)** the name of the Institute was transformed into Institute of Agricultural Economics (IAE).

Research areas as: New field of study was created - "Market orientation of agricultural enterprises"; the elaborated projects were aimed at the market economy; Organizational and production restructuring in view of market requirements; Competitiveness of agricultural and food products on the domestic and international market; Labour economics, level and structure of incomes; Mathematical methods in scientific research; Land market, economic evaluation of agricultural land, methodology for determining land rent, land categorization; Sociological problems of labour and Bulgarian village, development of rural areas, rural tourism

**Fifth Period (2000–2023)** in its most recent period, the Institute of Agricultural Economics adjusts its scientific horizons on the basis of fundamental knowledge, but also in the perspective of the new challenges for Bulgarian agriculture and rural areas, namely in creating, managing and understanding knowledge in support of national and European policies for agricultural and rural development; development of innovative approaches and methods of analysis made available to the competent decision-making bodies; by using the database, the development of foresight scenarios on certain indicators for the development of the agriculture and rural sector; sharing know-how with EU countries, the scientific community and international partners in the implementation of various projects





## European Rural Development Network

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The ENRD was established in 2008 by the European Commission, Directorate-General for Agriculture and Rural Development (DG AGRI).

The ENRD is governed by formal structures, the European Rural Networks' Assembly and Steering Group, bringing together a range of rural development stakeholder groups providing strategic direction, guidance and coordination.

The European Network for Rural Development (ENRD) serves as a hub for exchange of information on how Rural Development policy, programmes, projects and other initiatives are working in practice and how they can be improved to achieve more.

The ENRD supports the effective implementation of EU Member States' Rural Development Programmes (RDPs) by generating and sharing knowledge, as well as through facilitating information exchange and cooperation across rural Europe. These activities are facilitated by two support units: the ENRD Contact Point and the European Evaluation Helpdesk for Rural Development.