

THE ABSTRACTS OF THE SCIENTIFIC PAPERS

of Assoc. Prof. Marina Nikolova, PhD

1. Monographs – independent and collective

1.1. Николова, М., (2013). Биологичното земеделие – състояние и потенциал за развитие. Библиотека „Образование и наука”, кн. 31, стр. 211. Академично издателство „Ценов” Свищов. ISBN 978-954-23-0813-3.
Nikolova, M., (2013). Organic Farming – Status and Potential for Development. Library "Education and Science", Issue 31, p. 211. Academic Publishing House "Tsenov" Svishtov. ISBN 978-954-23-0813-3.

The development of biological method in agricultural practice has been provoked as a result of a new awareness and attitude towards the issues of the environment and the health of future generations. The main purpose of the research is to study and assess the possibilities for the development of organic production, as well as the competitive advantages of organic farms in the conditions of a market economy. In this regard, several sub-goals have been formulated: analysing the dynamics and potential for the development of organic production on a national and regional scale; specifying the characteristics of organic farms in an economic aspect; bringing out the main trends in organic production in the Ruse region. In view of the above, the area of research is the state and potential for the development of organic agriculture. The subject of research are the organic farms that make the transition from conventional to organic production and those that are already certified for the production, processing and trade of organic products. The problems of evaluating the economic results of the activities of organic farms remain outside the scope of the study, due to the fact that at this stage most of the farms in the studied region are in a transition period and there are no comparable economic units.

In *the first chapter* "Organic farming – characteristics and features", the main theoretical statements regarding the nature of ecologically sound agriculture, its importance and relevance in the modern economy are presented. The essential characteristics of organic production and the current state of the sector are outlined. A comparative characterisation of biological and conventional agricultural systems is made.

In *the second chapter* "Development of organic production in Bulgaria", the new challenges to the components of the organic farming system are discussed, emphasising the different attitude to the soil as a living ecosystem, biological diversity in agroecosystems, preservation of water resources and the landscape. An in-depth analysis and assessment of organic production on a national scale for the period 2006-2011, such as the number of operators (producers, processors, traders) and areas in organic production, is carried out. Strategies for increasing the sustainability of organic farms, the marketing and market of organic produce, and financial support are substantiated. Two groups, internal and external factors influencing the development of organic farming in Bulgaria, have been identified.

In *the third chapter* "Potential for the development of organic production in the Ruse region", an empirical study is carried out to outline the state and potential of organic production in a regional scope. The advantages of the region for the development of organic agriculture, the trends, the structure of organic farms, the distribution of land ownership in the organic farms of the Ruse region, the age distribution of employees in the organic farms, the size of the organic areas, etc., are systematised. The evaluation of business development in organic farms (in transition and certified) is carried out through a survey. On the basis of the conducted survey with on-site visits, the main problems are revealed and recommendations for overcoming them and increasing the competitiveness of farms and their long-term sustainability are outlined. A significant part of the visited economic units

expects the changes in the CAP during the next programme period (2014-2020) and the increase in the amount of agro-ecological payments to have a positive impact on the development of organic agriculture in the studied area.

1.2. Николова, М., Ст. Симеонов, М. Линкова, П. Павлов (2012). *Оползотворяване на растителна биомаса чрез производство на топло- и електроенергия (оценка на потенциала и ефективността). Библиотека „Образование и наука”, кн. 12, стр. 153. АИ „Ценов” Свищов. ISBN 978-954-23-0741-9.*

Nikolova, M., St. Simeonov, M. Linkova, P. Pavlov (2012). *Utilisation of Plant Biomass through Production of Heat and Power (Potential and Efficiency Assessment). Library "Education and Science", Issue 12, p. 153. Academic Publishing House "Tsenov" Svishtov. ISBN 978-954-23-0741-9.*

(Authorship of M. Nikolova: chapter one – 1.1.3., 1.1.4. and 1.2. (1.2.1., 1.2.2.); chapter two; chapter three – 3.1., 3.1.1. (3.1.1.1., 3.1.1.2., 3.1.1.3.). The general concept, the introduction and the conclusion are the authorship of Assoc. Prof. M. Nikolova, PhD and Assoc. Prof. St. Simeonov, PhD.

A major share of the potential of renewable energy sources (RES) in Bulgaria falls on biomass. The amount of biomass that is created during the cultivation of agricultural crops and livestock, during the storage of waste, during the maintenance of green areas in the public sector or the processing of wastewater is significant. An important mechanism for the efficient utilisation of energy and energy from biomass is communal energy planning. At the level of municipalities, micro-regions and regions, it is necessary to develop and strategically consider a system for the utilisation of various energy sources, including the biomass.

The author's participation in *chapter one* (1.1.3., 1.1.4. and 1.2., 1.2.1., 1.2.2.) is related to the first objective of the study, namely – a study of the species composition of the plant resource in a wide area around the town of Svishtov in the context of the potential of waste biomass for use in ecological technology for electricity and heat production. To achieve the object, the theoretical aspects of the nature of biomass and its use for energy production, as well as the reasons for the increased interest in this resource, are examined. Emphasis is placed on the ecological aspects of using biomass as an energy source – the advantages and disadvantages.

Chapter two includes an assessment of the available and estimated potential of biomass in Svishtov municipality with determination of the theoretical and realistic biomass capacity of cereal crops in the region. On this basis, conclusions and recommendations are made.

The author's participation in *chapter three* is expressed in the analysed technologies for the production of electricity and thermal energy from waste biomass and summarised conclusions of the study.

On the basis of all this, it is clear that with the thus determined potential for the studied area, given the available resource and the necessary costs (technically and for connection to the NEC network), the construction of plants with a smaller capacity (3-5 MW) is economically efficient. Economically beneficial is to transport biomass to the site of the plant within a radius of 50 km. The most rational method of obtaining energy from agricultural biomass in the studied area is the combined production of energy (thermal and electric). In this case, the efficiency is higher and practically the heat losses are small.

2. Studies

2.1. Николова, М., М. Линкова (2009). *Барииери пред развитието на селския туризъм в България. Алманах научни изследвания, том 10, стр. 198-237, ISSN 1312-3815. АИ „Ценов” Свищов.*

Nikolova, M., M. Linkova (2009). *The Barriers Facing the Development of the Rural Tourism in Bulgaria. "Scientific research" Almanac, volume 10, p. 198-237, ISSN 1312-3815. Academic Publishing House "Tsenov" Svishtov.*

(Authorship of M. Nikolova: part two, introduction and part three – jointly by the two authors).

The study presents the results of a research project carried out under the guidance of the author with an emphasis on two main theses: Rural tourism is one of the tools for achieving the strategic goals of the government in relation to the development of rural areas for the period 2007-2013; Market and business niches for the development of rural tourism are being formed in the country. Rural tourism in Bulgaria has the potential to develop into a subsector of national importance. Examining the rural tourism as a cross-industry sector of the economy – agriculture, forestry and water management, tourism, transport, food industry, etc., allows the identification of market and entrepreneurial niches that will argue that rural tourism is a profitable business for Bulgaria, which can become a leading destination in the field of rural tourism among the countries of Eastern Europe.

The second part of the study examines the state of rural tourism in Bulgaria. The emphasis is placed on the origin and development of rural tourism, the characteristics and peculiarities of rural tourism, by outlining its components and its development mainly as an additional activity related to agriculture.

The assessment of the opportunities and trends for the development of rural tourism in Bulgaria (*the third part*) is based on traditional scientific research methods: general scientific methods – abstract, historical, logical, etc.; empirical-theoretical methods – observation, experiment, description; logical-theoretical – comparison, analysis, synthesis, induction, deduction; analogy; questionnaire survey. The respondents are divided into the following groups: guests of rural houses and family hotels 10%; functioning rural houses for which welcoming guests is the main activity 20%; rural houses for which welcoming guests is not the main activity 20%; guesthouses in coastal and mountain areas 5%; accommodation in suburban areas 5%; farmers, potential beneficiaries of subsidies for the development of rural tourism 20%; local authorities 10%; institutions 10%. It is necessary to conclude that rural tourism in Bulgaria is practiced in both its forms: agrarian tourism, providing additional income to rural farmers, which is not particularly profitable, with high risk and variability, and rural tourism as a collective form, which can generate substantial income.

The barriers to the development of rural tourism in Bulgaria have been systematised on the basis of statistical data and survey data. It must be concluded that at this stage Bulgaria does not offer a classic type of rural tourism. The specific features of the market sector of rural and agrarian tourism predetermine their consideration not as an alternative economic branch that provides full employment and guarantees basic income, but as a source for generating additional income. The practiced individual form of rural tourism does not provide the main part of the income of rural farmers and according to the EU definition, it is perceived as agrarian tourism. The collective form for offering rural tourism in tourist complexes with the main characteristics of settlements in Bulgaria: compactness, territorial isolation and location of arable and other types of resources around them, has the potential to generate significant income. The steps in determining the market and business niches for the development of rural and agrarian tourism, which would provide the farmers with a profitable diversification of products and an optimal combination of the available resources, have been systematised. The scientific contributions and practical results of the research are: critical analysis of the state and prospects for the development of rural tourism in Bulgaria; an empirical comparison of problem-solving approaches in countries with experience in rural tourism development; empirical assessment of market and entrepreneurial niches for the development of rural tourism; assessment of the readiness of agricultural holdings and the population in rural areas for the development of rural tourism.

2.2. *Николова, М., М. Линкова, Е. Лазарова (2010). Възможности за формиране на агротуристически продукт в България. Алманах научни изследвания, том 11, стр. 287-323, ISSN 1312-3815. АИ „Ценов“ Свищов.*

Nikolova, M., M. Linkova, E. Lazarova (2010). Possibilities for Formation of Agricultural Tourism Product in Bulgaria. "Scientific research" Almanac, volume 11, p. 287-323, ISSN 1312-3815. Academic Publishing House "Tsenov" Svishtov.

(Authorship of M. Nikolova: point one; the introduction, point three and the conclusion – jointly by the three authors).

The main purpose of the study is to assess the factors in the formation of an agritourism product in Bulgaria and outline the trends and forms for its implementation and development. In this regard, the following *tasks* are set:

- ✓ studying the state of the agritourism product in Bulgaria;
- ✓ examining institutional support for creating an agritourism product;
- ✓ identifying the problems in the formation of an agritourism product;
- ✓ studying the possibilities of applying the experience of established destinations for ecological and agrarian tourism;
- ✓ offering a complex agritourism product as a prerequisite for turning ecological and agrarian tourism into a successful business.

The area of research in the project are the main entities related to rural and agrarian tourism: rural houses and family hotels; rural house guests; accommodations in suburban areas; local authorities; institutions. The main scientific research thesis of the paper is: the formation of a standardised agrotourism product is a prerequisite for the transformation of ecological and agrarian tourism into a successful business for Bulgaria.

In Part One, the emphasis is on the identification of the problems in the construction of the agritourism product on a national scale, the participants in the formation and implementation of this product, advertising, the target groups, the tangible and intangible qualities of the tourism product.

The results of the study can be summarised in several aspects.

First, identifying problems in the formation of the agritourism product in Bulgaria. The components of the product are considered as a function of the needs of the urban type of person and the specific tourism resource of the individual region.

Second, a comparison of the approaches to the formation of the agritourism product in the individual destinations. Emphasis is placed on the elements of tourist communication as the main content part of the tourist realisation and the tangible and intangible qualities of the tourism product, the combination of which ensures the uniqueness and recognisability of the product.

Third, a study of the systems for certification and categorisation of the agritourism product, which on the one hand guarantee the quality of the offered agritourism product, on the other – ensure the protection and preservation of the agritourism resources, and on the third hand – strengthen the positions of agritourism on the Bulgarian tourism market.

Fourth, systematising the steps to build a complex and profitable agritourism product and build partnership relations among local government, non-governmental organisations, tourism companies and suppliers.

Utilising the rich potential of the Bulgarian rural areas requires the cooperation (formal or informal) of all interested parties – hoteliers, restaurateurs, people offering recreational activities, municipal and local authorities, NGOs, etc. in their joint efforts to provide and promote the product.

2.3. Николова, М. (2011). Биопроизводство и особености на пазара на биопродукти. Списание „Народностопански архив“, стр. 42-65, ISSN 0323-9004. АИ „Ценов“ Свищов.

Nikolova, M. (2011). Bioproduction and the Specifics of the Market of Bioproducts. Narodnostopanski Arhiv, Year LXIV, International edition - 2011, Academic publishing house "Tsenov" – Svishtov, p. 124-144.

The bioproduction is a strictly regulated process. A required condition for biologically produced products is that they meet the relevant requirements and standards for these products. The requirements for them are laid down in the main legislative acts, which are analysed in the paper for

the study period. European and national normative and strategic documents are reviewed. They are conditionally divided into 2 groups – regulating the legislation before 2007 and after the accession of Bulgaria to the EU. The possibilities for financial support of organic production and the requirements that must be met have been systematised and analysed. It has been concluded that the regulatory environment is clearly regulated and in line with European requirements, but there are a number of problems of an economic nature, despite the potential opportunities to increase the production volume in Bulgaria. The second part of the publication analyses the areas under organic farming, as well as the number of employed organic operators. The main reasons for the lack of interest in the first years of the development of organic production in our country and the important role of certification authorities are systematised. In the third part of the study, emphasis is placed on the market of organic products on a global and national scale. The market in Bulgaria is defined as a market with huge potential and opportunities for future development.

2.4. Николова, М., М. Линкова, Х. Ферхад. (2014). Проблеми и перспективи в устойчивото развитие на агробизнеса в България. Алманах научни изследвания, том 21, стр. 414-443, ISSN 1312-3815. АИ „Ценов” Свищов.
Nikolova, M., M. Linkova, H. Ferhad. (2014). Problems and Perspectives of the Agribusiness Sustainable Development in Bulgaria. “Scientific research” Almanac, volume 21, p. 414-443, ISSN 1312-3815. Academic Publishing House “Tsenov” Svishtov.

(Authorship of M. Nikolova: point 2.2. and 3.1. Associate Professor M. Nikolova, PhD and Associate Professor M. Linkova, PhD jointly developed – point 1, the introduction, and the conclusion).

In *point 2.2.* the problems of sustainable agriculture are considered. To monitor the general state and development of the agricultural sector after Bulgaria's accession to the EU, the following indicators are examined: gross value added (GVA) in agriculture, utilised agricultural area (UAA); arable land; natural land; structure of agricultural holdings in the agricultural sector, etc. The analysis of the indicators allows a summary of important findings:

First. The state and development of the agricultural sector in the years after Bulgaria's accession to the European Union has stabilised, but at a much lower level compared to its opportunities and potential for development. A challenge for the agricultural sector is an increase in the gross value added from production, not only export, as well as a regional balance in agriculture;

Second. After 2007, the utilised and arable agricultural lands have been constantly increasing, which shows that even in the conditions of economic crisis, agriculture is not a doomed sector, but is constantly developing. The downward trend in non-cultivated areas is a consequence of the use of CAP mechanisms and the increase in access to financing;

Third. The processes of consolidation of agricultural holdings are being intensified, and fewer farms are processing a larger amount of UAA. The farmed utilised agricultural area in one farm is increasing. The smaller decrease in the number of people employed in the agricultural sector after 2007 shows that supporting the sector has a positive impact on business motivation.

Fourth. The planned changes in the new RDP 2014-2020, which are aimed at greater efficiency and employment in rural areas, fully meet the expectations of involving new operators in the agricultural business, expanding cultivated areas and practicing more sustainable agriculture.

Point 3.1. considers organic production as a model for sustainable nature use in modern agriculture. Its dynamic development, especially for the last year of the study period (2006 – 2012) and an increase in motivation for its development as an innovative field for the agrarian sector is emphasised.

2.5. Николова, М., М. Линкова, И. Кръстева (2016). Възможности и проблеми на интегрираното производство в агросектора. Алманах научни изследвания, том 23, стр. 327-357, ISSN 1312-3815. АИ „Ценов” Свищов.

Nikolova, M., M. Linkova, I. Krasteva. (2016). Opportunities and Problems of Integrated Production in the Agricultural Sector. "Scientific research" Almanac, volume 23, p. 327-357, ISSN 1312-3815. Academic Publishing House "Tsenov" Svishtov.

(Authorship of M. Nikolova: point 2., point 4 (4.1., 4.2, 4.3.), point 5. Point 3 was jointly developed by Associate Professor M. Nikolova, PhD and Assistant I. Krasteva. The abstract, introduction and conclusion – jointly by Associate Professor M. Nikolova, PhD and Associate Professor M. Linkova, PhD.)

The integrated production of plants and plant products is one of the possible models for the sustainable development of agriculture, as a means of filling the emerging market and entrepreneurial niches on the Bulgarian market with quality and healthy products. It provides an opportunity to optimise agricultural systems towards alternative models of sustainable development and to provide farmers with a serious argument for investment projects related to the construction of sustainable productions. On the basis of the above, *the main objective* of the present study is the development opportunities and problems in practicing integrated production in the Republic of Bulgaria, as well as the prospects for sustainable development of the agricultural sector. The study is based on and defends the thesis that integrated production is an agricultural system for the production, processing and sale of food that optimises the use of resources and natural regulatory mechanisms, ensuring the viability and sustainability of agriculture in the long term.

The second point emphasises the need for sustainable development of agriculture in the conditions of modern economic development. *The fourth point* of the study examines the essence and possibilities for the integrated production of plants and plant products in our country, by analysing important regulatory documents. The main problems related to the launch and implementation of the integrated practice in agricultural holdings have been systematised. The challenges to the integrated production (IP) in Bulgaria are outlined in *the fifth point*, where it is emphasised that they are related to the expected results of the implementation of Integrated Pest Management and the observance of their general and specific principles in several more important areas:

- ✓ Production and sale of safe and quality plant products;
- ✓ Minimisation of the risk in the use of pesticides, by balancing the achievement of ecological and economic goals in the use of plant protection products (PPP);
- ✓ Limiting the use of chemical methods for plant protection and introducing alternative approaches;
- ✓ Preventing the emergence of pest resistance (weeds, enemies, diseases) to the pesticides used;
- ✓ Reducing the costs of the farmers for PPP;
- ✓ Increasing the motivation of producers to practice IP;
- ✓ Increase in the number of organic operators who switched to another sustainable production model, following the integrated production of plant products.

Based on the conducted research, general conclusions and recommendations are drawn.

3. Scientific articles

3.1. Николова, М., М. Линкова (2013). Възможности за повишаване качеството на професионалното обучение и мотивацията на студентите. Сп. „Диалог”, тематичен брой II – декември 2013, стр. 87-100, АИ „Ценов” Свищов. ISSN: 1311-9206.

Nikolova, M., M. Linkova (2013). Opportunities to Increase the Quality of Professional Training and the Motivation of Students. E-Journal "Dialog" thematic issue II – December 2013, p. 87-100, Academic Publishing House "Tsenov" Svishtov. ISSN: 1311-9206.

(Authorship of M. Nikolova: abstract, point 1; subsection 2.1.

The introduction and conclusion were jointly developed by the two authors)

The paper draws attention to the need to link specialised economic education with increasing the early motivation and activity of students in the educational process. *The first point* analyses the importance of alumni organisations and their development on a global scale, as well as the degree of their development in Bulgaria and specifically in D. A. Tsenov Academy of Economics. *Point 2.1.* focuses on the importance of the quality of training at the level of specialty/course, discipline. On the basis of the conducted research, it has been formed conclusions and recommendations, regarding increasing the motivation and satisfaction of students in the process of their education.

3.2. Николова, М. (2013). *Особености при управлението на растениевъдно биологично стопанство.* Сп. „Бизнес управление“, брой 4, стр. 5-26, АИ „Ценов“ Свищов. ISSN: 0861-6604.

Nikolova, M. (2013). *Specific Aspects of Managing an Organic Crop Farm.* *Business management* 4/2013, p. 5-23. Academic Publishing House "Tsenov" – Svishtov. ISSN: 0861-6604.

The subject of research is the management of the conditions of the environment in which the managerial process for introducing and practicing organic crop farming in contemporary agricultural farms is realised. The fundamental principles in the management of the components in the organic farming system, the basic and specific requirements for the implementation of management in organic crop farms and the peculiarities of the biological approach in management practice have been examined. It is necessary to state that the new vision and the new attitude in the managerial practices to the components of the environment is an opportunity for increasing the profitability and sustainability of organic crop farms. On the other hand, the sustainable management of these farms is a prerequisite for a balanced economic and social policy regarding not only the environment, but also regional competitive advantages and maintaining the vitality of rural areas.

3.3. Николова, М. (2015). *Върху необходимостта от остойностяване на екосистемните ползи.* Сп. „Бизнес управление“, брой 2, стр. 67-95, АИ „Ценов“ Свищов. ISSN: 0861-6604.

Nikolova, M. (2015). *The Need to Evaluate Ecosystem Benefits.* *Business management* 4/2013, p. 61-88. Academic Publishing House "Tsenov" – Svishtov. ISSN: 0861-6604.

The aim of this research paper is the preservation and restoration of eco-systems and services provided by eco-systems in Bulgaria. The subject of research refers to the need to manage natural capital and the evaluation of eco-system services. In this context, the focus of attention is on: the condition of eco-systems, various types of eco-systems, and their current allocation; identified types of eco-system services and potential threats of having these eco-systems destroyed and their sustainability reduced; arguments in favour of the need to evaluate the benefits provided by eco-systems; the priority framework for maintaining and restoring eco-systems and eco-system services in Bulgaria. On this basis, it is concluded that efficient management of these services is therefore an essential condition for preventing the loss of habitats and species. Unless we manage to preserve the existing biodiversity, the services provided by ecosystems will degrade, which will have a tremendous negative impact on human well-being. The sound management of natural capital and ecosystems services has the potential to raise social and economic sustainability at a local, regional, national, and European level.

3.4. Николова, М., М. Линкова (2020). *Състояние и проблеми при управлението и развитието на селското стопанство.* *Народностопански архив, (1), с. 15-28.* ISSN: 0323 – 9004.

Nikolova, M., Linkova, M. (2020) *State and Problems in the Management and Development of Agriculture.* *Economic Archive, (1), p. 13-26.* ISSN: 0323 – 9004.

The article presents in a synthesized form the results of the international scientific and practical conference held on the occasion of the 35th anniversary since the establishment of the Department of Agricultural Economics and the specialty of the same name. The main purpose of the paper is to identify, analyse and evaluate the current problems accompanying the development of agriculture, and to formulate specific proposals for their solution based on the expert capacity of the scientific community and the institutions administering agriculture in Bulgaria, the needs of agribusiness and the creativity of students and PhD students. The summarised conclusions regarding the possibilities to limit the identified problems are systematised and sent to the institutional bodies.

3.5. Nikolova, M., (2013). *Challenges to Organic Agriculture in Bulgaria. Ekonomskie teme, 51 (1), 191-208, Економски факултет НУИ. ISSN: 0353-8648, ISSN: 2217-3668 (online).*

The agricultural business and food industry worldwide have started to pay greater attention to the benefits of agroecological practices. The rapid growth of market demand for organic and ecologically certified products attracts the attention of an increasing number of business investors. There are a number of challenges in the development of organic agriculture in Bulgaria. The first part of the article argues for the appropriate conditions in our country, based on the territorial location and climate, the productive possibilities and the suitability for growing the various plant species, according to the credit score. The 14 agroecological regions have been systematised in accordance with the specified criteria. In the second part, the most important prerequisites for development and motivation for the development of the sector in our country are visually specified. Three-year data from the development of organic crop and animal husbandry are analysed, coming to the conclusion that the ambitious goal set for Bulgaria by the end of 2013 (3% of the production being "organic") is unlikely to be attained, bearing in mind that by the end of 2011, this indicator was below 1%. Even in a state of economic crisis, organic farming is one of the few sectors that is developing at a rapid pace and registering significant growth. Compared to 2009, the areas have more than doubled – from 12 322 ha to 25 648 ha in 2010, and the number of operators in the sector – by over 75%.

3.6. Nikolova, M., (2015). *Relationship between the Sustainable Models of Production in Agriculture and the Challenges to Their Development in Bulgaria. Journal of Economics and Development Studies, Vol. 3(4), p. 57-68. ISSN 2334-2382 print, ISSN: 2334-2390 on-line. DOI: 10.15640/jeds.v3n4a7. URL: <http://dx.doi.org/10.15640/jeds.v3n4a7>*

Contemporary farming offers new opportunities and poses new challenges to meeting the demand for safe and quality food. Technological innovations in the sector relate to increased environmental protection and applying environmentally friendly farming practices. At the same time, they contribute to improved management and higher profitability of innovative farms, in addition to meeting consumer demand for green products. Integrated farming is a practical model of food production in compliance with the principles of sustainable farming. This model illustrates the manner in which contemporary farming may observe all economic, environmental and social aspects of sustainable development. Applying that model in food production requires focusing on the rational exploitation of natural resources and observing high environmental standards. As a matter of fact, organic farming has already become an established model for the development of innovative farms and its development over the last years indicates significant dynamic trends in Bulgarian farming practices. This paper focuses on the need to develop sustainable farming by managing the components of the farming system through sustainable farming models. It also examines the relation among conventional, integrated, and organic farming and puts an emphasis on existing opportunities for developing organic and integrated farming in Bulgaria. The paper also reviews some of the challenges faced by two sustainable farming models, namely, organic and integrated farming.

The study gives grounds for the finding that integrated farming is a well – grounded model for encouraging the sustainable development of smaller farms (producing fruits and vegetables, for

example). Its development is a difficult and slow process, which requires specific knowledge, motivation and support from governmental institutions. Unlike integrated farming, the organic production sector is already well established and its development is an indisputable priority in the development of Bulgarian agriculture for the period 2014 – 2020.

3.7. Nikolova, M., M. Linkova, (2018). *Coordinating Participant Relations in the Organization and Functioning of Regional Farmer's Markets in Bulgaria. / Paradigms of knowledge, Praha, 4/2018, p. 68-81. ISSN: 2336-2642. Global Impact Factor – 0.884.*

(Authorship of M. Nikolova: point 1;
points 3 and 4, introduction and conclusion were jointly developed by the authors)

Farmer's markets occupy a special place in the classification of markets for agricultural products. This paper *aims* to investigate the feasible models of farmer's markets in terms of the degree of coordination among the stakeholders. The authors have set the following *objectives*: 1) to identify the legal and administrative limitations; 2) to assess agricultural producers' readiness to participate in farmer's markets; 3) to analyse the models of stakeholder coordination in the organisation of a farmer's market; 4) to approbate a function model of a regional farmer's market. In order to identify the administrative and legal limitations to the organisation of farmers' markets in Bulgaria, it is defined the role of the main participants in the process of their creation and effective functioning – the central government, the local governments, non-government organisations, farmers, consumers.

Different models of farmers' markets have been studied and a farmers' market has been piloted at a regional scale. The testing of a functional model of a regional farmers' market "Svishtov 2017" is the last stage of the research on the possible models for the organisation and functioning of the farmers' market in Bulgaria, in which we determined:

- 1) the model of organisation of the farmer's market;
- 2) the type of its Board of Directors;
- 3) the Market Manager;
- 4) the role of the educational institutions;
- 5) the market fees.

The empirical research corroborated the hypothesis on the grounds of approbation of a model for a regional farmer's market in the Municipality of Svishtov. On the grounds of the research, we may conclude that each region should determine the specific model of organisation of its local farmer's markets based on the level of cooperation between agricultural holdings, local authorities and communities. Our main conclusions can be summarised as follows:

First. The studied region has all the necessary external conditions for establishing and operation of farmer's markets as well as a positive attitude of the farmers to participate in their organisation and operation.

Second. The most efficient model for organisation and operation of a municipal farmer's market is the public sponsorship model with the participation of all stakeholders in its management.

Third. Educational institutions play an important role in the organisation of farmer's markets as mediators between producers and consumers by providing specialised support to the former and studying the attitudes of the latter.

3.8. Nikolova, M. (2019). *Problems and Opportunities for Realization of Bulgarian Organic Production. Trakia Journal of Sciences, Vol. 17, Suppl. 1, p. 259-267. Trakia University, ISSN 1313-3551 (online), ISSN: 1313-7069 (print). doi:10.15547/tjs.2019.s.01.042*

Organic farming is an important priority in agriculture development policy in the Republic of Bulgaria and one of the highlights of the common agricultural policy for the period 2014-2020. It is a fact that interest in organically produced food and drink is strengthened in global scale. The purpose of the study is related to the study of the market environment in Bulgaria for the realisation of organic

production. The results of the research are systematised in several directions. It is concluded that the increase in the number of those who offer organic products is an indicator of expanding the potential for development in this direction, despite the general negative trends in economic development as a whole, and consumers remain interested. It has been formulated recommendations to improve the measures of the supply chain of organic products in Bulgaria, by targeting a strong horizontal and vertical integration between the key figures in the sector. The effect of producer associations on a territorial/regional scope would be particularly pronounced.

3.9. Nikolova, M. (2020). *Opportunities and Challenges in the Sale of Agricultural Products from Small and Family Farms in Bulgaria. Trakia Journal of Sciences, Vol. 18, Suppl. 1, p. 549-559, 2020. Trakia University, ISSN: 1313-3551 (online) doi:10.15547/tjs.2020.s.01.088.*

Many consumers are looking for quality and healthy products through direct contact with producers in the region, in farmers' markets, but also in large food chains. The problem is that products from small and family farms can hardly reach the stands in food chains, where most of the products offered are still of foreign origin. The purpose of our study is related to the study of the possibilities for realisation of agricultural products from small and family farms in Bulgaria. The paper seeks answers to solve the problems of small agricultural farms related to the successful realisation of their seasonal production and the need for greater support for small farms and in the territory of each region is revealed. In this regard, the role of all stakeholders in the chain, incl. the need for active implementation of both state tools and the assistance of local authorities on a regional scale, is proven. It is substantiated the claim that the state national policy for increasing the competitiveness of small and family farms must constantly follow the focus on small farmers, who find it difficult to sell products in general, and even more so in emergency situations (COVID-19).

3.10. Nikolova, M., V. Velkovski (2020). *Some Aspects and Problems of Property of Agricultural Land in the Republic of Bulgaria. Международный рецензируемый журнал "Eurasian science journal" (Евразийский научный журнал), 4 (73)/2020, pp. 44-48. Издатель Евразийский Союз Ученых (ЕСУ), г. Москва, Русия. ISSN: 2411-6467.*

The possession, use and management of agricultural land is accompanied by some problems that affect the agricultural policy and its results to varying degrees. Despite the increase in the utilised agricultural area and the enlargement of the farms, the gross value added created by agriculture has decreased by almost 19% for the period 2000 – 2012. The share of the agricultural sector in the economy has shrunk by almost half – from 9.6% to below 5.0%, despite EU subsidies of 2007. The article draws attention to a particularly topical problem, namely the risk of deepening the polarisation of Bulgarian agriculture (a small number of large tenant farmers with profitable farming, and a large number of small farmers with loss-making and lower results) and the possibilities to minimise the consequences according to possible changes in the legislation. Good practices in other countries (the example of Denmark, etc.) are analysed. On this basis, conclusions and recommendations for correct and timely decisions regarding the considered problems and the use of ownership of agricultural land in the Republic of Bulgaria are formulated.

4. Articles in publications referenced or indexed in global databases *Scopus* and/or *Web of Science* (5)

4.1. Nikolova, M., M. Linkova (2011). *Risk Diversification in the Agricultural Sector in Bulgaria. Amfiteatru Economic Journal, Vol. XIII, No. 29, 305-320. Scopus p-ISSN: 1582-9146, e-ISSN: 2247-9104.*

Indici scientometrici 2021 - Clarivate Analytics: JFI = 2,304; JCI = 0.63; AIS = 0,231; Quartila = Q2; H index = 25; Scopus: CiteScore = 3.1; SNIP = 0,681; SJR = 0,370, Quartila = Q1; H index = 24.

(Authorship of M. Nikolova: point 2, the abstract, introduction and conclusion were jointly developed by the authors).

The main research thesis of the study is that the application of various forms of diversification is a prerequisite for reducing risk and ensuring sustainable development of the agricultural sector and rural areas. *Point 2* describes the possibilities for diversification of agricultural products and activities – diversification of products and diversification of activities. Various entrepreneurial solutions have been outlined as a strategy that offers opportunities for entrepreneurs, farmers to earn additional income and create additional employment, thereby reducing their dependence on the production of subsidized agricultural goods. The results of the conducted research are systematised into main conclusions and recommendations regarding the possibilities of adding value in agriculture by diversifying products and activities. The conclusions in the article are made on the basis of scientific publications, normative documents and studied regions of the Central Balkans and Western Rhodopes for the period May-September 2009. It has been used on-site survey of a representative sample including respondents involved in agricultural and non-agricultural activities in the agricultural regions and respondents from the local authorities and the State Fund Agriculture.

4.2. Nikolova, M., P. Pavlov (2021). *Interconnection and Interdependence of Key Economic Sectors - Agriculture and Tourism in the Conditions of a Pandemic Crisis. Scientific Papers Series “Management, Economic Engineering in Agriculture and Rural Development”, Volume 21, Issue 4/2021, pp. 387-396. University of Agronomic Sciences and Veterinary Medicine of Bucharest, Romania. Ceres Publishing House, Bucharest. PRINT ISSN 2284-7995, E-ISSN: 2285-3952.*

DOI: 10.13140/RG.2.2.17297.51040. Quartila = Q4;

https://managementjournal.usamv.ro/pdf/vol.21_4/volume_21_4_2021.pdf

Web of Science Core Collection (Emerging Sources Citation Index - THOMSON REUTERS)
<http://mj.clarivate.com/cgi-bin/jrnlst/jlresults.cgi?PC=MASTER&ISSN=2284-7995>

The policy for the development of rural areas in Bulgaria is aimed at achieving sustainable development of the economic sectors, as the rural area is a place for development not only for agricultural activities, but also it offers a good perspective for economic development on a regional scale, through adequate business support, job creation and tourism development. Therefore, the interconnection and interdependence between the two economic sectors is particularly important to find opportunities for the development of alternative tourism with the formation of unique tourism products and the application of environmentally friendly agricultural practices in order to achieve a higher living standard and economic benefits for local communities. The problem is that in a pandemic situation, a number of restrictions to a greater or lesser extent on each of the economic sectors are imposed. The aim of the research is related to the study of the interconnection and interdependence of key economic sectors – agriculture and tourism in crisis conditions. Emphasis in the research is placed in several directions: analysis of the connections and interdependence of the sectors through the opportunities for creation of unique tourism products and through the diversification of activities in rural areas. On this basis, findings and recommendations are formulated: the pandemic inevitably affects economic sectors, with greater constraints on the tourism business, where the preferences of potential tourists are focused on domestic alternative tourism. In the construction of unique and specific tourism products in rural areas, the relationship agriculture – tourism is strongly emphasised in terms of requirements for clean and healthy food, incl. organic food or the purchase of local products from the region. The diversification of activities in rural areas through the development of tourism provides an opportunity for the development of entrepreneurial initiatives. The strong connection and interdependence between the economic entities in the indicated key economic branches is fully manifested when the interests of all participants concerned in the development process of the specific territory/region are well combined.

4.3. Nikolova, M., R. Nenova (2022). *Classification of the NUTS 3 Regions in Bulgaria: Focus on Utilized Agricultural Area Categories. Journal of Mountain*

Agriculture on the Balkans, 2022, 25 (3), 281-319 ISSN: 1311-0489 (Print). Research Institute of Mountain Stockbreeding and Agriculture, Troyan.
<https://jmabonline.com/en/article/wOuEfB1qBc8B9U5gO6Mc>
Indexing: Web of Science (CABI), *Quartila* = Q4.

The purpose of the research in the article is to reveal the development opportunities for the different types of rural areas regions, by classifying the regions in Bulgaria (NUTS 3) on the basis of socio-economic criteria and employment indicators on the territory of the country by main categories related to agriculture. Data for the empirical study are derived from official statistical sources: National Statistical Institute (NSI) and Bulgarian Survey for Monitoring the Agricultural and Economic Situation (BANSIK). Hierarchical cluster analysis is applied for the classification, which is especially suitable for this type of research. Based on the analysis, six clusters were identified. By conducting a one-way analysis of variance (ANOVA) and Tukey's post hoc test, it was found that 11 of the total 22 variables included in the study were statistically significantly different in the determined clusters. Two of the clusters: fourth and second are characterised by a high level of the studied indicators. In the third cluster, the level of indicators is average, in the first – below average, and in the fifth and sixth – mostly low, i.e. the future challenges facing rural areas are diverse but can be grouped in a certain way. Based on the analysis of the results, the authors propose a new typology for the regions (NUTS-3) in Bulgaria, regarding the development of agriculture and the degree of utilisation of the agricultural area. The characteristics of the four types of regions substantiate the claim that the development of agriculture largely depends on the level of the utilised agricultural area. In the lagging regions where the utilised agricultural area is limited as a resource, alternatives, including diversifying and combining with other activities to increase the added value created by them, should be sought.

4.4. Nikolova, M., M. Linkova, P. Pavlov, E. Lazarova (2022). *Theoretical and Methodological Basis in the Management of Sustainable Development of Rural Territories in the Republic of Bulgaria. Agricultural Sciences*” - open access journal. Volume 14 Issue 34 2022, 37-48. ISSN 1313-6577 (print), ISSN 2367-5772 (online). DOI: 10.22620/agrisci.2022.34.005
<http://agrarnauki.au-plovdiv.bg/2022/issue-34/5-34/>,
Indexing: CAB International – CAB Abstracts, EBSCO Academic Search Ultimate, Web of Science – CABI, Google Scholar, AGRIS - *Quartila* = Q4.

The aim of the scientific article is to identify the theoretical and methodological foundations for the management of the sustainable development of rural areas in the Republic of Bulgaria. The following are reasoned: the theoretical foundations of sustainable development; the strategic framework for sustainable development; the problems in defining the rural territories; the development of alternative tourism as a good practice for the diversification of the functional use of the territory. The article argues that the management of sustainable development is based on the collaboration among the authorities, local communities and businesses for the diversification in the functional use of the territory and the optimal utilisation of available resources.

4.5. Petrova, M., M. Nikolova, P. Pavlov (2022). *An Innovative Organic Agriculture Model for Sustainable Development of Rural Areas in Bulgaria. IOP Conference Series: Earth and Environmental Science ISCES-2022, Volume 1126, pp 1-11. 2nd International Conference on Environmental Sustainability in Natural Resources Management 31/10/2022 - 01/11/2022 Riga, Latvia. IOP Publishing. Online ISSN: 1755-1315, Print ISSN: 1755-1307.*
doi:10.1088/1755-1315/1126/1/012034

The purpose of the research is to study the contribution of a sustainable organic agriculture model to achieve a multiplier effect for the rural area, as well as the linkage between organic agriculture and alternative tourism. In order to achieve the set goal, an analysis of the place and role of

the studied model for balanced development of the territories in the Bulgarian rural areas was carried out and the strength of the relationship organic farming – alternative tourism in the direction of increasing the sustainability of the territory was analysed. A survey on the benefits of diversification of economic activities through the development of biological farms was conducted, and the attitudes towards their inclusion in tourist routes were studied. On this basis, conclusions are drawn and recommendations for increasing the sustainability of the specific territory are formulated.

5. Scientific reports

5.1. Николова, М. (2011). *Влияние на икономическата криза върху аграрния сектор на България. Сборник научни доклади. Международна юбилейна научна конференция „Икономиката и управлението в XXI век – решения за стабилност и растеж“, 8-9 ноември 2011 г. Академично издателство „Ценов, том 4, стр. 236-243. ISBN: 978-954-23-0680-1.*

Nikolova, M. (2011). *Impact of the Economic Crisis on the Agricultural Sector of Bulgaria. Proceedings. International Jubilee Scientific Conference "Economics and Management in the 21st Century – Solutions for Sustainability and Growth", 8-9 November 2011. Academic Publishing House "Tsenov", Volume 4, p. 236-243. ISBN: 978-954-23-0680-1.*

The paper analyses the impact of the global economic crisis and its effects on the Bulgarian agricultural sector. For the period 2005 – 2010, important indicators: utilised agricultural area (UAA), arable land (AI), non-arable (natural) land, etc., are analysed. Current problems, characteristic of the study period, are systematised, emphasising that in the conditions of economic crisis, agriculture is not doomed and should be considered as a continuously developing sector. The problems are deep and serious, but by no means unsolvable. Investments and European funding are moving the sector forward, albeit slowly. And success is for those who manage to find their profitable niche and are open to the idea of association. It is this idea that is the basis of successful European models and should find development in our country as well.

5.2. Николова, М. (2014). *Възможности за участие на бизнеса в обучението и реализацията на аграрикономисти. Сборник научни доклади: Висшето образование и бизнесът в контекста на стратегия Европа 2020“. Издателство: Абагар, 2014, стр. 166-180. ISBN: 978-619-168-103-7.*

Nikolova, M. (2014). *Opportunities for Business Participation in the Training and Realization of Agricultural Economists. Proceedings: "Higher Education and Business in the Context of the Europe 2020 Strategy". Publisher: Abagar, 2014, p. 166-180. ISBN: 978-619-168-103-7.*

The interest and participation of business in the educational process of students is one of the prerequisites for their successful professional career. Partners relations among scientific circles, branch organisations from the agrarian sector and farmers are one of the important conditions for the successful realisation of agrarian economists. The paper discusses two main aspects: the need for synchronisation between the profile of graduate students and the dynamics of the labour market, and the relationship between the training of agricultural economists and the business for realisation in a practical environment. The events carried out and analysed prove that the process of training students, through conducting master classes, seminars and visits to a real working environment, enriches the students' perception of the reality of the environment and increases their chances of successful integration into the labour market. Carrying out more practical initiatives for students during their studies should become part of the management policy at the level of specialty, course, faculty.

5.3. Николова, М. (2016). *Тенденции и предизвикателства за развитие на екологичен туризъм в България. Сборник научни доклади: „Търговският и туристическият бизнес в условия на интелигентен, устойчив и приобщаващ растеж“, 21 октомври 2016 г. Академично издателство „Ценов“ - Свищов, том I, стр. 208-214. ISBN: 978-954-23-1150-8.*

Nikolova, M. (2016). *Trends and Challenges for the Development of Ecotourism in Bulgaria. Proceedings: "Trade and Tourism Business in Conditions of Smart, Sustainable and Inclusive Growth", 21 October 2016. Academic Publishing House "Tsenov" - Svishtov, Volume I, p. 208-214. ISBN: 978-954-23-1150-8.*

The basis of the paper is the analysis of the development of ecotourism in Bulgaria as an opportunity, both for the preservation and protection of resources, as well as for regional development and increasing the prosperity of local communities. As a result of the study of good practices for the development of ecotourism, as a stand-alone or in combination with other alternative types and/or mass tourism, a model for the sustainable development of ecotourism has been proposed, as an opportunity for implementation in a local or regional scope. The model is based on the global criteria for sustainable tourism. The inclusion and implementation of individual indicators could lead to the creation of unique ecotourism products in individual regions.

5.4. Николова, М. (2016). *Местните инициативни групи за развитие на селската икономика. Сборник научни доклади: „Икономическо благосъстояние чрез споделяне на знания“, 9-10 ноември 2016 г. Академично издателство „Ценов“ - Свищов, том I, стр. 371-377. ISBN: 978-954-23-1185-0.*

Nikolova, M. (2016). *The Local Action Groups for the Development of the Rural Economy. Proceedings: "Economic Prosperity through Knowledge Sharing", November 9-10, 2016. Academic Publishing House "Tsenov" - Svishtov, Volume I, p. 371-377. ISBN: 978-954-23-1185-0*

The paper discusses the impact of the development of the "Leader" approach for the period 2007 – 2013, identified problems from the early development of the idea and it presents its distinguishing features for the current period (2014 – 2020). The status, opportunities and challenges facing the local initiative groups, the evolution of "Leader" as a more flexible, advanced and responsible model are examined. The greater initiative of the local communities for the 2014 – 2020 programme period compared to the previous reference period and the role of the LAG for the growth of entrepreneurial initiatives for local territorial development with the aim of preserving and popularising the local identity are emphasised. The interaction among the local government, non-governmental organisations and business is increasingly pronounced and a number of good practices are increasingly being implemented.

5.5. Николова, М., М. Линкова (2017). *Проблеми и тенденции пред инвестициите в селското стопанство. Сборник научни доклади. Международна научно-практическа конференция, 7-8 април 2017 г.: „Съвременни предизвикателства пред финансовата наука в променяща се Европа“, АИ „Ценов“ - Свищов, стр. 558-563. ISBN: 978-954-23-1239-0.*

Nikolova, M., M. Linkova (2017). *Problems and Trends of Investments in Agriculture. Proceedings. International Scientific and Practical Conference, 7-8 April 2017: "Contemporary Challenges to Financial Science in a Changing Europe", Academic Publishing House "Tsenov" – Svishtov, p. 558-563. ISBN: 978-954-23-1239-0.*

Agriculture is a highly subsidised branch of the economy, which requires continuous analysis and measurement of the set goals and the achieved results. The completion of the first and the start of the next reference period of Bulgaria's membership in the EU provides an opportunity to evaluate the

impacts and adjust the applied policies and the targeting of a significant financial resource. Therefore, the authors place two main emphases: an analysis of the barriers and opportunities for investment activity in agribusiness in the context of the CAP and the trends and problems of investments in environmentally friendly agricultural productions. On this basis, the relevant conclusions and recommendations are summarised.

5.6. Николова, М. (2017). *Фермерските пазари в България – възможности и ограничения за създаване и развитие. Сборник научни доклади от кръгла маса: „Потенциал за развитие на фермерските пазари в България“, 6 октомври 2017 г. АИ „Ценов“ – Свищов, стр. 17-24. ISBN: 978-954-23-1251-2.*

Nikolova, M. (2017). *Farmers' Markets in Bulgaria – Opportunities and Limitations for Creation and Development. Proceedings. "Potential for the Development of Farmers' Markets in Bulgaria", October 6, 2017. Academic Publishing House "Tsenov" – Svishtov, p. 17-24. ISBN: 978-954-23-1251-2.*

The paper is the result of the implementation of a scientific research project, under the leadership of the author and it was launched for the first time as a department's initiative in the form of an exhibition "Farmer's Market – Svishtov" with the holding of a round-table and the publication of a collection of papers. The paper examines the nature of farmers' markets for the sale of produce from small farms, justifying two types with relevant characteristics. The second emphasis is on the limitations for the development and efficient functioning of the farmers' markets, as limitations of a different nature are systematised. It is concluded that a number of good practices are observed in the development of farmers' markets in Bulgaria, but at the same time there is a lack of sufficient coordination between all interested parties, with the aim of assisting farmers in the direct sale of their produce.

5.7. Николова, М. (2019). *Състояние на пазара на земеделски земи в Република България. Сборник научни доклади: „Състояние и проблеми при управлението и развитието на селското стопанство“. Международна научно-практическа конференция, 4 октомври 2019 г. Академично издателство „Ценов“ - Свищов, стр. 261-272. ISBN 978-954-23-1762-3.*

Nikolova, M. (2019). *The State of the Agricultural Land Market in the Republic of Bulgaria. Proceedings. "State and Problems in the Management and Development of Agriculture". International scientific and practical conference, October 4, 2019. Academic Publishing House "Tsenov" – Svishtov, p. 261-272. ISBN 978-954-23-1762-3.*

The paper analyses agricultural land prices by planning areas (NUTS-2), through presenting their dynamics over a nine-year period (2010-2018). The most important factors influencing the value of prices per unit area of agricultural land are systematised. The agricultural land market in Bulgaria is examined at two levels: primary and secondary. The primary market is defined by direct sales by owners or heirs, while the secondary is defined by large companies that trade in agricultural land and purchase it for future resale. The lack of investment interest from external investors is associated with fragmented land ownership, frequent changes in specific legislation, as well as the lack of a long-term strategy and vision for the development of the sector. This also explains the low prices of agricultural land in our country, which are among the lowest compared to other European countries.

5.8. Николова, М. (2020). *Градско земеделие – алтернатива или необходимост. Научно-практическа конференция „Икономиката на България - 30 години след началото на промените“. Сборник с научни доклади - Свищов, 22 ноември 2019 г., стр. 592-602. ISBN: 978-954-23-1815-6.*

Николова, М. (2020). *Urban Agriculture – an Alternative or a Necessity. Scientific and practical conference "The Economy of Bulgaria – 30 Years after the Beginning of the Changes". Proceedings – Svishtov, 22 November 2019, p. 592-602. ISBN: 978-954-23-1815-6.*

The paper is aimed at the essence and reasons for the emergence of urban agriculture, as a specific type of agriculture, at the different models for the development of agriculture in urban communities, which are developed and practiced in the European Union and Bulgaria. The answers are sought for its potential and expected impact in urban regions, for the challenges and limitations in the development of urban agriculture in the future, as a necessity or an alternative for people in the modern world. The models for revealing the potential of urban agriculture in urbanised areas are systematised in two main directions: use/exploitation of free roof spaces and suitable interior building spaces and use of areas in suburban and abandoned areas, through contractual conditions.

5.9. Николова, М. (2020). *Възможности и предизвикателства при развитие на поземлените отношения в България. Сборник научни доклади: „Статистически измерения на регионалните различия и неравенства между Северна и Южна България. Кръгла маса с международно участие Свищов, 16 октомври 2020 г. Академично издателство „Ценов“ – Свищов, стр. 263-272. ISBN: 978-954-23-1892-7.*

Nikolova, M. (2020). *Opportunities and Challenges in the Development of Land Relations in Bulgaria. Proceedings: "Statistical Dimensions of Regional Differences and Inequalities between North and South Bulgaria. Round table with international participation Svishtov, October 16, 2020. Academic Publishing House "Tsenov" – Svishtov, p. 263-272. ISBN: 978-954-23-1892-7.*

The paper presents the characteristics of land relations in Bulgaria. Data on the agricultural areas for the period 1998-2019 were analysed. The dynamics in land relations during the years of a free market economy are traced and the increase in concentration and consolidation of use is substantiated, regardless of the fragmented number of agricultural properties. The second focus of the paper is the price of land and rent. The average selling price of the agricultural asset "land" and the average rent price for agricultural land rented or leased are analysed. The mechanisms for effective management of land relations (land banking) and consolidation, the role of the state and the need to update the legal framework and financial support in accordance with the new conditions in the modern economy are indicated.

5.10. Nikolova, M. (2020). *Organic Agriculture – an Innovative Solution for Climate Change. International Scientific-Practical Conference on "PRIORITY DIRECTIONS OF INTERNATIONAL ECONOMIC RELATIONS IN THE XXI CENTURY", 22 May 2020 – Baki, Mütərcim, 2020, pp 182-186. Azerbaijan Tourism and Management University. ISBN: 978-9952-28-532-1.*

The paper examines the relationship between agriculture and climate change. Arithmetic average values of emissions from agriculture by sector (CO₂ equivalent) for a 27-year period (1990-2017) were analysed. During the same period, greenhouse gas emissions related to agriculture in Bulgaria decreased permanently with minor fluctuations. The second emphasis is on organic farming and its role in mitigating the consequences of climate change.

5.11. Николова, М. (2021). *Дигитални решения за реализация на земеделска продукция. Сборник с доклади: „Търговията – научно знание и бизнес*

реалност”. Кръгла маса с международно участие 08.10.2021 г. Академично издателство „Ценов“- Свищов, стр. 237-246. ISBN: 978-954-23-2005-0“.

Nikolova, M. (2021). *Digital Solutions for the Realization of Agricultural Production. Proceedings: "Trade - Scientific Knowledge and Business Reality". Round table with international participation, 08 October 2021. Academic Publishing House "Tsenov" – Svishov, p. 237-246. ISBN: 978-954-23-2005-0“.*

The first part of the paper examines the indisputable need for accelerated development of digital farming in an important and priority economic sector, such as agricultural sector. For the purpose of the report, it has been presented several good practices for successful digital solutions in the realisation of not only agricultural products, but also in the management of the irreplaceable asset for every farm/farmer, i.e. land as well as using modern farming software systems.

5.12. Николова, М. (2021). *Анализ на състоянието и тенденциите в развитието на биопроизводството в Северен централен район. Сборник с доклади: „Агробизнесът и селските райони – икономика, иновации и растеж“.* Юбилейна научно-практическа конференция (с присъствено и дистанционно участие) Варна 18.06.2021 г., стр. 255-264. ISBN: 978-954-21-1088-0, DOI: <https://doi.org/10.36997/ARA2021.255>.

Nikolova, M. (2021). *Analysis of the State and Trends in the Development of Organic Production in the North Central Area. Proceedings: "Agribusiness and Rural Areas - Economy, Innovation and Growth". Anniversary scientific-practical conference (with in-person and remote participation) Varna 18 June 2021. p. 255-264. ISBN: 978-954-21-1088-0, DOI: <https://doi.org/10.36997/ARA2021.255>.*

The paper focuses on the regional specifics of an innovative agricultural model and its potential to develop and strengthen socio-economic indicators in a specific region. The priority place of organic agriculture in European, national and local development policies is argued. The subject of the analysis is the characteristics of the organic production in the North Central Planning Region depending on the certified activities and the number of biological operators.

5.13. Николова, М. (2021). *Биологичното земеделие – иновативен бизнес модел и възможност за развитие на агробизнеса в регионален обхват. Сборник с доклади: „Иновативно развитие на аграрния бизнес и селските райони“.* Национална научна конференция с международно участие, 22 април 2021 г. София, Издателски комплекс - УНСС, стр. 38-44. ISBN: 978-619-232-477-3“.

Nikolova, M. (2021). *Organic Farming – an Innovative Business Model and an Opportunity for Regional Agribusiness Development. Proceedings: "Innovative Development of Agrarian Business and Rural Areas". National scientific conference with international participation, April 22, 2021, Sofia, Publishing complex – UNWE, p. 38-44. ISBN: 978-619-232-477-3.*

The focus of the paper is on the regional specifics of an innovative agricultural model and its potential to develop and strengthen socio-economic indicators in a specific region. The subject of the analysis is the state and development of organic production in the North-East Planning Region (NERP) depending on the certified activities and the number of organic operators.

5.14. Николова, М. (2021). *Състояние и развитие на българския аграрен сектор в условия на трансформираща се към устойчивост икономика. Сборник с доклади: „Устойчиво развитие и социално-икономическа кохезия през XXI век – тенденции и предизвикателства“.* Международна научно-практическа

конференция, 8-9.11.2021 г. АИ „Ценов“ – Свищов, том 2, стр. 523-531. ISBN: 978-954-23-2069-2 (print), ISBN: 978-954-23-2070-8 (online).

Nikolova, M. (2021). *State and Development of the Bulgarian Agricultural Sector in Conditions of an Economy Transforming towards Sustainability. Proceedings: "Sustainable Development and Socio-Economic Cohesion in the 21st Century - Trends and Challenges". International scientific-applied conference, 8-9.11.2021. Academic Publishing House "Tsenov" – Svishtov, Volume 2, p. 523-531. ISBN: 978-954-23-2069-2 (print), ISBN: 978-954-23-2070-8 (online).*

The main objective of the paper is to analyse the most important trends in the state and development of Bulgarian agriculture, after Bulgaria's accession to the EU – in the conditions of a financial and pandemic crisis. In order to monitor the general condition and development of the agrarian sector after Bulgaria's accession to the EU and the pandemic, it has been considered main economic indicators for the period 2007-2020: utilised agricultural area (UAA); arable land; natural (uncultivated) land; relative share of crops to arable land; Bulgarian State Standard BDS. The tendency to change the studied indicators is tracked with an analysis of changes in employment and use of the territory, both in the short-term and in the long-term aspect.

5.15. Николова, М. (2022). *Принос на биологичното производство към устойчивото развитие на регионалната биоикономика. Сборник с доклади: „Кръговата икономика в контекста на релацията индустрия 4.0 – общество 5.0“. Международна научно-практическа конференция, 20-21 октомври 2022 г., Свищов. Академично издателство „Ценов“, стр. 307-317. ISBN: (print) 978-954-23-2249-8, ISBN: (online) 978-954-23-2250-4.*

Nikolova, M. (2022). *Contribution of Organic Production to the Sustainable Development of the Regional Bioeconomy. Proceedings: "The Circular Economy in the Context of the Relationship Industry 4.0 - Society 5.0". International scientific and practical conference, October 20-21, 2022, Svishtov. Academic Publishing House "Tsenov" – Svishtov, p. 307-317. ISBN: (print) 978-954-23-2249-8, ISBN: (online) 978-954-23-2250-4.*

The aim of the paper is to outline the new challenges to the development of the regional bioeconomy in the agricultural sector and rural areas, as well as the contribution of organic agriculture to increase the sustainability of the regional and local bioeconomy. The challenges facing the agricultural production sector are related to new business models and technologies that contribute to achieving resource efficiency in regional ecosystems.

5.16. Николова, М. (2022). *Устойчив модел „биологично производство“ – възможност за иновативно развитие на агробизнеса в селските територии. Сборник с доклади: „Иновативно развитие на аграрния бизнес и селските райони“. Международна научна конференция, 29-30 септември 2022 г., София, УНСС, стр. 40-48. ISBN: 978-619-232-685-2. Сборникът е представен за индексване в Web of Science, CEEOL и др.*

Nikolova, M. (2022). *A Sustainable Organic Production Model - Opportunity for Innovative Development of Agricultural Business in Rural Areas. Proceedings: "Innovative Development of Agrarian Business and Rural Areas". International scientific conference, September 29-30, 2022, Sofia, UNWE, p. 40-48. ISBN: 978-619-232-685-2. Proceedings are submitted for indexing in Web of Science, CEEOL, etc.*

Sustainable agricultural models, as an innovative approach, are essential in the transition to a higher degree of sustainability of a healthy and environmentally friendly food system related to the production of high value-added products under the sustainable management of natural resources. The

aim of the research is to identify the contribution of organic agriculture to the sustainable management and development of rural areas in the Republic of Bulgaria. The strategic framework for the future development of organic agriculture and the contribution of a sustainable organic production model as a tool for innovative development of the territory are outlined. It is defended the opinion that the innovative development of agribusiness in rural areas, through the application of a sustainable organic production model, is based on the collaboration among the authorities, local communities and business for diversification in the functional use of the territory and optimal utilisation of the available resources.

6. Textbooks and educational materials

6.1. Николова, М., М. Линкова, В. Блажева, Р. Ненова, Цв. Кабакчиева, И. Кръстева, П. Петров (2021). Въведение в агробизнеса. Учебник, АИ „Ценов” – Свищов, ISBN 978-954-23-1963-4.

Nikolova, M., M. Linkova, V. Blazheva, R. Nenova, Tsv. Kabakchieva, I. Krasteva, P. Petrov (2021). Introduction to Agribusiness. Textbook, Academic Publishing House "Tsenov" - Svishtov, ISBN 978-954-23-1963-4.

The textbook "Introduction to agribusiness" aims to provide students with a set of basic economic knowledge and skills specific to Agricultural Business. As a result, students have the opportunity to make the necessary decisions for the sustainable functioning of enterprises of the agribusiness system. The author participated in the development of the following learning content: topic II (Specific environmental factors for agribusiness development), topic III (Ecology and sustainable development in agribusiness in part 3.1. Prerequisites and need for sustainable development of agribusiness and 3.2. Assessment of the level of ecological sustainability), topic VII (Farmers' markets - a successful agribusiness model in part 7.1. Administrative and legal restrictions for the creation and development of farmers' markets in Bulgaria) and topic XV (Production and management systems in favour of the climate and the environment).

6.2. Николова, М., М. Линкова, В. Блажева (2021). Икономика на аграрното предприятие. Учебник, АИ „Ценов” – Свищов, ISBN 978-954-23-1962-7.

Nikolova, M., M. Linkova, V. Blazheva (2021). Economics of the Agrarian Enterprise. Textbook, Academic Publishing House "Tsenov" - Svishtov, ISBN 978-954-23-1962-7.

The main purpose of the "Economics of the Agrarian Enterprise" textbook is the formation of basic skills and competencies for economic concepts, features, characteristics and categories in the agrarian enterprise. The content is logically interrelated, providing the necessary knowledge about the specifics of the agricultural economic sector. The content developed by Assoc. Prof. Nikolova, PhD includes – topics I, II, III, XI, respectively "Introduction to the discipline "Economics of the agrarian enterprise", "Land resources", "Forms of land ownership" and "Quality of agricultural production".

6.3. Николова, М., М. Линкова, В. Блажева, Р. Ненова (2018). Аграрен мениджмънт. Учебник, АИ „Ценов” Свищов, ISBN 978-954-23-1501-8.

Nikolova, M., M. Linkova, V. Blazheva, R. Nenova (2018). Agricultural Management. Textbook, Academic Publishing House "Tsenov" - Svishtov, ISBN 978-954-23-1501-8.

The textbook on "Agricultural Management" is among the specialising disciplines for the students of the specialty "Agricultural Economics". It allows students to gain knowledge of the organisational structure, management and functioning of agricultural enterprises and acquire the skills to apply modern methods and approaches to solving specific problems of practice. Assoc. Prof. Marina Nikolova, PhD participated in the development of the educational content with 3 topics – II,

VI and VII, respectively "Organisational foundations of agribusiness", "Good manufacturing practices in agribusiness" and "Organisation and management of organic production".

6.4. Николова, М., М. Линкова, Р. Ненова (2018). Малък и семеен агробизнес. Учебник, АИ „Ценов” Свищов, ISBN 978-954-23-1588-9.

Nikolova, M., M. Linkova, R. Nenova (2018). Small and Family Agribusiness. Textbook, Academic Publishing House "Tsenov" - Svishtov, ISBN 978-954-23-1588-9.

The textbook "Small and family agribusiness" provides specific knowledge on the problems of economics and management of small and family businesses in the agrarian sector. The main aim of the course is to give students an insight into a theoretical model of a small or family agribusiness, which model they can subsequently implement in practice. Assoc. Prof. Marina Nikolova, PhD participated in the development of 3 topics – I "Essence and characteristics of family business", II "Essence and characteristics of small business" and III "External environment of small and family agribusiness".

6.5. Николова, М., М. Линкова, Р. Ненова (2018). Развитие на селските райони. Учебник, АИ „Ценов” Свищов, ISBN 978-954-23-1617-6.

Nikolova, M., M. Linkova, R. Nenova (2018). Rural Development. Textbook, Academic Publishing House "Tsenov" - Svishtov, ISBN 978-954-23-1617-6.

The essence of the textbook is aimed at getting acquainted with the logical sequence of the Rural Development Programme (RDP), the concept of sustainable development of these areas, EU policy and their implementation in Bulgarian conditions. For this purpose, the state, problems and development opportunities of rural areas are analysed in the context of European integration. The trainees acquire knowledge about the problems of the rural economy and the possibilities for launching entrepreneurial initiatives under the individual measures of the RDP. Assoc. Prof. Marina Nikolova, PhD participated in the development of the content with six topics – II, IV, XI, XII, XIV, XV: "European Union policy for the development of rural areas"; "The concept of sustainable development and challenges to rural areas"; "Support for agro-ecology, climate and organic farming"; "Payments under Natura 2000, the water framework directive and areas with natural or other specific constraints"; "Tools for building cooperation in rural areas" and "Community-led local development under the Leader approach".

6.6. Николова, М., М. Линкова, Р. Ненова (2017). Аграрно предприемачество. Учебник, АИ „Ценов” Свищов, ISBN 978-954-23-1498-1.

Nikolova, M., M. Linkova, R. Nenova (2017). Agricultural Entrepreneurship. Textbook, Academic Publishing House "Tsenov" - Svishtov, ISBN 978-954-23-1498-1.

The main objective of the "Agrarian Entrepreneurship" training course is to form basic skills and competencies of potential entrepreneurs for the creation and management of an entrepreneurial agricultural holding. Assoc. Prof. Marina Nikolova, PhD participated in the development of the content with 4 topics – II, III, VI and VII item 1, item 2 and item 5, respectively "Environment for entrepreneurship in the agrarian sphere", "Generation of new ideas in agribusiness", "Alternative choice for starting the activity of an agricultural holding", "Management of the entrepreneurial process in agribusiness" (in the part – Management of production process, personnel, marketing and advertising in the agricultural company).

6.7. Николова, М. (2017). Аграрен туризъм. Учебник, АИ „Ценов” – Свищов, ISBN 978-954-23-1204-8.

Nikolova, M. (2017). Agricultural Tourism. Textbook, Academic Publishing House "Tsenov" – Svishtov, ISBN 978-954-23-1204-8.

The textbook includes knowledge about the nature and peculiarities of rural and agritourism, in accordance with the curriculum of the discipline of the same name. The possibilities for the development of alternative tourism, incl. rural and agrarian, are being considered, making a comparative analysis between them. Issues related to the creation of a complex agri-tourism product, marketing and advertising, the role of state structures and local authorities for the development of agricultural tourism are covered.

6.8. Николова, М., М. Линкова (2015). *Организация и управление на защитени природни ресурси. Учебник, АИ „Ценов” Свищов, ISBN 978-954-23-1054-9.*
Nikolova, M., M. Linkova (2015). *Organisation and Management of Protected Natural Resources. Textbook, Academic Publishing House "Tsenov" – Svishtov, ISBN 978-954-23-1054-9.*

The course on "Organisation and management of protected natural resources" provides basic knowledge about the need to protect, conserve and restore natural assets. In the seven topics (1, 3, 4, 8, 9, 10, 12) developed by Assoc. Prof. Marina Nikolova, the management systems of the natural environment, natural resources as objects of protection, ecosystem services, organisation and management of Natura 2000, the categories of protected areas, their protection and management and the organisation and participation of the public in environmental management are considered.

6.9. Николова, М., М. Линкова (2015). *Екологичен туризъм. Учебник, АИ „Ценов” Свищов, ISBN 978-954-23-1084-6.*
Nikolova, M., M. Linkova (2015). *Ecological Tourism. Textbook, Academic Publishing House "Tsenov" – Svishtov, ISBN 978-954-23-1084-6.*

Participation of the author, Assoc. Prof. Marina Nikolova, PhD – topics 1, 2, 3, 4, 6, 9, 12, 13.

Through the course "Ecological Tourism", students become acquainted with the most dynamically developing sector of the economy – tourism. The growing popularity of ecological tourism is a consequence of new trends in the modern world. It reflects a fundamental change in people's attitude towards nature. The students' attention is focused on the conditions and peculiarities of this rapidly developing segment of tourism and the specific characteristics of the ecotourism product. The peculiarities of marketing, advertising and ecological tourism in protected areas, as well as the organisation and management of a sustainable ecotourism business, are characterised.

6.10. Николова, М. (2013). *Екологично устойчиво развитие на агрофирмата. Учебник, Библиотека „Образование и наука”, бр.56. АИ „Ценов” Свищов, ISBN 978-954-23-0880-5.*
Nikolova, M. (2013). *Environmentally Sustainable Development of Agribusinesses. Textbook, Library "Education and Science", №. 56. Academic Publishing House "Tsenov" – Svishtov, ISBN 978-954-23-0880-5.*

The textbook reflects the possibilities for the introduction of ecological approaches and sustainable development of agro-firms. The need, conditions and motivation for ecological management of modern farms, as well as the introduction and practice of good agricultural practices in production units, have been examined. The possibilities for the development of the biological approach in the agricultural sector and the environmentally friendly utilisation of crop residues are substantiated. The main indicators for sustainable development of the modern agricultural enterprise are characterised.

6.11. Николова, М. (2012). *Основи на растениевъдството. Учебник, АИ „Ценов” Свищов, ISBN 978-954-23-0806-5.*

Nikolova, M. (2012). *Basics of Plant Production. Textbook, Academic Publishing House "Tsenov" Svishtov, ISBN 978-954-23-0806-5.*

The textbook examines important issues related to the use of the soil resource, composition and properties of the soil, agricultural production characteristics of the soil types in Bulgaria. The main agrotechnical methods for maintaining and increasing soil fertility – soil treatment, fertilization, crop rotation, irrigation and plant protection, are described. Cultivation technologies for the main groups of agricultural crops – field, vegetable, fruit and vineyard – are examined, as a condition for high economic results.

6.12. Николова, М. (2021). *Аграрна екология. Учебник за дистанционно обучение, АИ „Ценов“ Свищов.*

Nikolova, M. (2021). *Agroecology. Textbook for distance learning, Academic Publishing House "Tsenov" – Svishtov.*

The textbook reflects the latest achievements of agroecological science and practice. Important issues related to the development of agroecology – environment and its elements, the relationship between the environment and agriculture, are considered. Attention is paid to the sustainable use of natural resources and the modern ecological policy for the preservation and protection of the environment. A particularly important place is devoted to the main activities in sustainable agriculture, the specific practices in crop and animal production, as well as agro-ecological approaches in this type of agriculture. Attention is paid to the possibilities of restoration and improvement of damaged agricultural lands. The ecological and social benefits of applying the measures in sustainable land management are indicated. Some of the economic aspects of environmentally sound management of agroecosystems are considered. The basics of organic farming are described, as an opportunity for practical use of ecology in agricultural production.

6.13. Николова, М., М. Линкова, И. Кръстева, Цв. Кабакчиева (2021). *Дигитализация в агробизнеса. Учебник за дистанционно обучение, АИ „Ценов“ Свищов.*

Nikolova, M., M. Linkova, I. Krasteva, Tsv. Kabakchieva (2021). *Digitalisation in Agribusiness. Textbook for distance learning, Academic Publishing House "Tsenov" – Svishtov.*

Assoc. Prof. Marina Nikolova, PhD – topic III, IV, and point on topic VII.

In topic III "Digital technologies in agribusiness", digitalisation is considered as an innovative approach to increase the sustainability of farm business. Emphasis is placed on theoretical models and concepts for the development of digital agriculture, which integrates two particularly important and current concepts for practicing precision and intelligent agriculture, as well as their distinctive characteristics. Opportunities for implementation and use of digital services by farmers are identified. In topic IV "Digitalisation of agricultural holdings", the possibilities for modernisation and digitalisation of agricultural holdings are considered. It focuses on the incentives for digitalisation of agricultural holdings in the new CAP, the need for digital knowledge, skills and competencies for digital transformation and the importance of consulting services in the sector. Good practices for applications of digital solutions in a business environment have been identified. Topic VII "Digital strategies in agribusiness" characterises the digital infrastructure for communications and connectivity and the main areas of impact for improving Bulgaria's position in the EU according to these indicators. The development of digital networks and the use of software applications in the management of activity and decision-making in agribusiness is characterised.