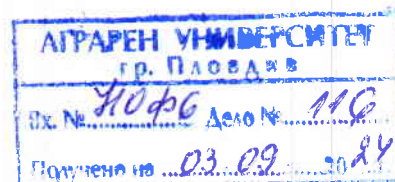


REVIEW



On a dissertation for obtaining the educational and scientific degree "doctor" in the field of higher education 3. Social, economic and legal sciences; professional field 3.8. Economics; the scientific specialty of Economics and Management.

Author of the dissertation: NATALIYA YORDANOVA SHUKADAROVA

PhD student (part-time) at the Department of Economics at the Agricultural University, Plovdiv

Dissertation topic: SUSTAINABILITY OF BULGARIAN CEREAL PRODUCTION IN THE CONTEXT OF THE EUROPEAN GREEN DEAL

Reviewer: Prof. Dr. Ivan Penov, Agrarian University - Plovdiv; Department of "Economics"; field of higher education 3. Social, economic and legal sciences; professional field 3.8. Economics; scientific speciality Economics and Management (by branches) appointed as a member of the scientific jury by order No. RD-16-854/ 28.06.2024. of the AU Rector.

1. Brief introduction of the candidate

Nataliya Yordanova Shukadarova was born on 03.12.1980. In 2004, she received a bachelor's degree and in 2007, a master's degree in Modern Greek Philology from Sofia University "St. Kliment Ohridski".

In 2011, she graduated from the Higher School "Agricultural College". Plovdiv, professional bachelor in "Technologies in Horticulture and Winemaking", and in 2014 received a master's degree "European Expert in Agriculture and Rural Areas" from Agrarian University - Plovdiv. From 2021 to 2024, she is a part-time doctoral student at the Economics Department of the Agrarian University-Plovdiv.

She started her career 2004 as a part-time Greek language teacher at the Academy of the Ministry of the Interior. From 2011 to the present, she is the Executive Director of the National Association of Grain Producers.

2. Relevance of the problem

There is no doubt that the dissertation topic is particularly relevant, considering the protests of agricultural producers in Europe and Bulgaria. The challenge is not whether or not to proceed towards ecological production but how to make that transition.

Greening is not just a process of reducing the use of chemical fertilisers and herbicides but a complete change of production technology and consumer behaviour. From this point of view, the challenges in implementing farming systems that contribute to the protection of the environment are primarily related to the behaviour of agricultural producers and consumers.

3. Purpose, tasks, hypotheses and research methods.

Objective: to determine the sustainability level of Bulgarian grain producers under the European Green Deal and to identify measures to mitigate the conflict between ecological requirements and the economic efficiency of production.

Tasks: (1) To determine the sustainability of Bulgarian agriculture; (2) Positioning of the grain sector considering the farms' support under the Strategic plan. Provide an model of an average grain-producing farm; (3) Surveying the attitudes of Bulgarian grain producers.

Research Methods: Several research methods were used. Literature review - to study the state of the problem. Analysis of the legislation - to examine the legal framework. Conducting a survey- to study the producers' behaviour.

Sample size. 128 agricultural producers - members of (NAG). The survey was conducted in July - August 2023 and includes: South Central Region - 27 farms; South East Region – 24 farms; North East Region – 33 farms; North Central Region – 17 farms; North West Region – 27 farms. The survey contains

38 questions, 10 open-ended and 28 multiple-choice, grouped into two categories: (1) on-farm parameters, 24 questions; (2) about farmers' attitudes towards environmental policies- 14 questions.

4. Transparency and presentation of the obtained results.

The dissertation consists of 221 pages, of which: introduction - 4 pages; Chapter one (theoretical part) – 62 pages; Chapter two (methodical part) – 9 pages; Chapter three (analytical part) - 101 pages; Chapter four (constructive part) – 13 pages; Conclusion – 5 pages; Literature - 24 pages. 140 literary sources were used.

The dissertation is well-structured and includes all the necessary elements.

5. Discussion of the results and used literature.

The dissertation includes an introduction, four chapters, conclusions and recommendations. The introduction presents the importance of the problem and the challenges grain producers face under the Green Deal.

The first chapter is theoretical. It explains the categories of sustainable rural development. The importance of grain production for food security is discussed. The development and objectives of the Common Agricultural Policy, Farm-to-Fork and Biodiversity Strategies are reviewed. It also outlines the challenges facing the implementation of the European Green Deal. The relationship between agricultural sustainability and food security in the context of the United Nations 2030 Agenda for Sustainable Development is revealed.

The second chapter is methodological. It presents the purpose, tasks and methodology of the research.

The third chapter is empirical. The factors contributing to the sustainability level of agricultural production, income per annual work unit, state support for research and development, and areas with organic farming are presented. Second, instruments supporting farmers per hectare are presented: (1) for climate and protection for the environment; (2) on animal welfare; (3) coupled

support schemes for protein crops etc. Third, an analysis was made of the attitudes of Bulgarian grain producers regarding European green policies and the adoption of ecological practices. The analysis includes the profile of surveyed farms, the farms' readiness to apply the new CAP's environmental requirements, and the realism of the objectives of the Green Deal through the prism of the Bulgarian grain producers.

The fourth chapter is constructive. It presents a Model of Sustainable Grain Farming and provides recommendations for improving the institutional environment of grain production. In the end, conclusions and recommendations from the research are summarised.

6. Contributions of the dissertation work.

Scientific contributions

- A model of sustainable agricultural system is derived in which farmers are placed at the centre, and their role in achieving sustainable agriculture is highlighted.
- A model for 2023 of sustainable grain-producing farms is derived. The model balances the economic, social and ecological dimensions of sustainability.

Applied contributions

- Environmental and climate policies in agriculture have been analysed at (1) a global level - the UN Program until 2030; (2) the European level – the Green Deal and the CAP; and (3) the national level – the Strategic Plan for the Development of Agriculture and Rural Areas.
- The parameters of the mandatory conditions and support interventions in the SPDARA (Strategic Plan for the Development of Agriculture and Rural Areas) for 2023-2027 have been analysed.
- Recommendations are made for improving the institutional environment, which leads to improving the sustainability of the "Grain Production" sector.

7. Critical Notes and Questions.

Critical notes

Structure: (1) In the theoretical part, it is better to start with the history of the CAP and then move on to the requirements of the Green Deal. This will show better why there is a shift from policies that support production to policies supporting environmental protection. (2) Calculations of what a grain producer can get under the new conditions should be presented after analysing the questionnaires. (3) The methodological chapter is short compared to the other chapters. In this case, including the methodology in the first chapter would be better. (4) Literature is good to divide into research material, such as legislation, and scientific literature, such as research articles.

- **Graphs:** (1) Some data are better presented by column diagrams instead of pie charts. In the pie chart, the different colours are hard to distinguish. (2) In some of the graphics, the names of the observations are written in Latin letters (for example, Fig. 1.1.9, the name of the countries)). It is good that all texts are in Cyrillic. (3) Fig. 1.1.11: Value of production from the "Cereals" subsector for the period 2000 - 2020, million BGN - The trend line is redundant

- **Citations:** In some places, the author and the year are given at the end of the paragraph. The citations seem to refer only to the last sentences but not to the entire section. For example, almost all literature sources on the Green Deal impact assessment. It is good to start the paragraph with the author and year to avoid a misunderstanding (for example, "According to FAO (2020)....").

Questions for the PhD student

- To what extent is the inability of farmers to comply with the Green Deal requirements due to restrictive requirements, and to what extent is there a lack of technology to meet these requirements?

- To what extent can the requirements for minimum soil cover be fulfilled under Bulgarian soil and climate conditions?

- To what extent are the "insufficient" unproductive areas (groves, bushes) a consequence of the bipolar structure of Bulgarian agriculture?

- Why are the areas under organic farming decreasing in Bulgaria and increasing in Europe?
- Should the state give priority to local organic producers in public procurement? (p. 100) Why the market for organic products is weak?
- To what extent do 73 interventions in the strategic plan consider the complexity of the challenges facing the Green Deal? Does this number of interventions help or hinder the transition to biological agriculture?

Recommendations for the future work of the doctoral student

- It would be good to include the concepts of public goods and externalities in the theoretical chapter. From this point of view, the need to support the production of public goods with public funds can be better justified.
- Also, some of the effects of interventions can be examined using the partial market equilibrium analysis. For example, the impact of reducing the excise tax on fuels used for agricultural production. Economics is a science that tries to explain the rational economic agent behaviour. Agricultural policy is a science of how the profit-maximising producer responds to various policy instruments. The economic policy is a system of tools (interventions) that will stimulate the profit-maximising producer to do what society has defined as a goal (in this case, switching from "chemical" to "biological" agriculture).

8. Published articles and citations.

Two articles published in the journal Agrarian Sciences are presented. Also, the student participated in two scientific conferences organised by the Agrarian University-Plovdiv (30.11.2021) and by the Institute of Agrarian Economics on 25 - (26.10.2022)

The presented abstract objectively reflects the structure and content of the dissertation.

CONCLUSION:

Based on the various research methods learned and applied by the doctoral student, the correctly performed experiments, the generalisations and conclusions made, I consider that the presented dissertation meets the requirements of the Law on the Development of the Academic Staff and the


The regulations of the Agricultural University and the rules for its application give me a reason to evaluate it **POSITIVE**.

Therefore, I would like to propose to the esteemed Scientific Jury also to vote positively and award

NATALIA YORDANOVA SHUKADAROVA

the educational and scientific degree "doctor" in the scientific speciality
3.8. Economics; scientific speciality Economics and Management (by
branches)

Date: 27.08.2024
Plovdiv


REVIEWER: Prof. Dr. Ivan Penov