

## **REVIEW**

**From**

**Prof. Dr. Veselka Duleva, MD**

**Head of the Food and Nutrition Department**

**National Center for Public Health and Analysis**

**REGARDING:** dissertation work of Dr. Rozalina Stefanova Braikova "Control of the trade of biologically produced agricultural products and food in North-Eastern Bulgaria" for the awarding of a scientific and educational degree "doctor" by field of higher education 7. Health care and sports; professional direction 7.1. Medicine by scientific specialty - "Hygiene (including occupational, communal, school, radiation, etc.)", Medical University - Varna

By order No. P-109-110/ 07.02.2023 of the Rector of the Medical University - Varna, I have been appointed to prepare a review under the procedure for acquiring the ONS "doctor" in the doctoral program "Hygiene (incl. labor, communal, school, radiation, etc.)", professional direction 7.1. Medicine, field of higher education 7. Health care and sports, with candidate Dr. Rosalina Stefanova Braikova.

Dr. Rosalina Stefanova Braikova graduated from the St. Petersburg State Medical Academy in 1986 with a Master's degree in Hygiene and Epidemiology. Since 2003, he has a medical specialty of Nutrition and Dietetics, MU Sofia, and since 2003 he has a qualification degree in Health Management, MU – Varna.

The professional path of Dr. Rosalina Stefanova Braikova prethe period 15.09.1986 - 12.03.2007 gradually includes positions such as resident, head of sector, head of department in HEI - Dobrich/RIOKOZ - Dobrich. During the period 12.03.2007 – 23.11.2009, she is an expert in the control of food and food establishments, manager at JSC Albena. From 23.11.2009 to 01.03.2011 is the Director of ROKOZ - Dobrich/RZI - Dobrich. From 01.03.2011 to 18.06.2018 Dr. Braikova is the Director of ODBH - Dobrich.

From 04/08/2019 and currently Dr. Braikova is assistant to the Health Ministry - Department of Hygiene and Epidemiology, University of Varna. He teaches academic subjects: hygiene and ecology in Bulgarian and English in medicine; hygiene and ecology in



Bulgarian in pharmacy; hygiene and ecology in Bulgarian and English in dentistry; MS hygiene and ecology; hygiene and ecology of AK; food safety and control in OKOZ.

Dr. Rozalina Stefanova Braikova is a doctoral student, full-time student from 31.01.2020.

Dr. Braikova is a member of the Bulgarian Medical Union, the Bulgarian Society of Nutrition and Dietetics, the Bulgarian Scientific Society of Public Health, the Bulgarian Association of Public Health and the European Society of Public Health.

Dr. Braikova speaks Russian, German and English.

The topic of the dissertation submitted for review "Control of the trade of biologically produced agricultural products and food in North-Eastern Bulgaria" is relevant and practically significant.

Organic farming in Bulgaria is one of the major challenges in the economic restructuring of the agricultural sector, aiming to create and develop a sustainable food production system, improve the use of natural resources and stabilize ecosystems. In Bulgaria, there are ecologically preserved areas, which, thanks to their natural, climatic and soil diversity, are a prerequisite for the development of organic agriculture. Today, modern man recognizes in organic foods, an alternative for a healthy eating pattern. The topic of organic foods is relevant because the ever-increasing demand for healthy and biologically clean, quality products that are produced through the application of good agricultural practices, protecting the environment and with concern for public health. In Bulgaria, not only the areas for growing crops using the biological method are increasing, but also the number of animals and the volumes, the ways of realizing the production, although at a slower pace, compared to world markets.

Consumer knowledge and behavior research, the awareness of traders and producers about organic foods and their choice are important, but it is of particular importance to analyze the existing practices of the official control by the competent authority, in the person of the BFSA, in the trade in organic foods, which guarantees the protection of the health and interests of consumers.

The dissertation "Control of trade of organically produced agricultural products and foods in North-Eastern Bulgaria" contains 251 pages, divided into separate parts: introduction (2 pages), literature review (38 pages), aim and tasks (1 page), materials and methods (7 pages), results (123 pages), discussion (21 pages), conclusions (2 pages), conclusions and



recommendations (2 pages) contributions (2 pages), publications on the topic (1 page), appendices (27 pages), sources used (18 pages).

The material is illustrated with 113 figures, 33 tables and 9 appendices. The literature reference contains 368 literary sources, of which 34 are in Cyrillic and 334 are in Latin.

There are 3 publications related to the dissertation work (1 in English), of which Dr. Braikova is the first author. 3 participations in scientific forums are presented.

The dissertation of Dr. Braikovais competently and comprehensively written. Demonstrates good knowledge and mastery of the methods and procedures related to the present study.

The structure of the work is in the format of a dissertation work.

*The literature review* is structured in 5 sections: Historical-theoretical overview of the concepts of organic food and organic agriculture/production; The development of organic agriculture - historical-geographic overview; Impact of organic food and organic farming on human health – positive and negative aspects; Contribution of organic foods to sustainable consumption; Data from organic food consumer surveys.

International literary sources predominate, national publications in the field are also presented, a review of the literary sources was also made in a retrospective aspect, with a sufficient number of publications from recent years also included. The literature review shows a good mastery of the problem and the material by Dr. Braikova, the issues in the field are presented comprehensively and competently and justifies the choice of the methods used in the dissertation's scientific developments.

The main goal of the dissertation is adequately defined - to investigate and analyze the activity of official control in the trade of biologically produced agricultural products and foods in the Dobrich and Varna regions, as well as to study the awareness of consumers, traders and producers regarding organic foods.

The formulated 6 tasks make it possible to achieve the set goal. The fulfillment of the tasks of the dissertation development allow: To analyze international and national normative documents and scientific literature on the issue; To analyze the results of the official control of the trade in biologically produced agricultural products and food in the Dobrich and Varna regions for the period 2014-2019; To analyze the socio-demographic profile and investigate the awareness and attitudes of consumers of biologically produced agricultural products and foods in the Dobrich region; Conduct a survey among merchants on issues related to biologically produced agricultural products and foods in the Dobrich region; To carry out a study of the awareness of the biological production of agricultural products among producers



in the Dobrich region; To formulate proposals aimed at increasing: The effectiveness of official control over trade in organically produced agricultural products and food; Awareness among the population regarding the distribution and importance of biologically produced agricultural products and foods; The level of knowledge regarding the regulatory requirements among producers and traders in the production and sale of organic food.

In order to achieve the objectives of the dissertation work, appropriate objects of the study, design, methods, analysis, processing and presentation of the data have been selected. A wide range of methods and studies were used, which enable adequate results and conclusions, ensure a scientific and scientific-applied level of compliance with the tasks set.

*The objects of the study* is a summary of information on inspections of organic products in the commercial network by the official control of trade in biologically produced agricultural products and food on the territory of the Regional Directorate for Food Safety (RDFS) Varna and RDFS Dobrich for the period 2014-2019. The procedures regulating the organization and implementation of official control of food in the commercial network on the use of terms and indications for biological production methods have been analyzed. Knowledge about biologically produced foods in the Dobrich region was studied. The awareness and attitudes among consumers of organic food in the Dobrich region were investigated.

*The study design* and the organization of the scientific research includes: Analysis of the results of the official control in the trade of biologically produced agricultural products and food in the Dobrich region and the Varna region for the period 2014-2019. The selection of producers of biologically produced agricultural products and foods from the Dobrich region was made by the Register of Organic Agriculture, published on the website of the Ministry of Agriculture. Survey among producers on issues related to biologically produced agricultural products and foods in the Dobrich region. The commercial establishments subject to inclusion in the study have been determined. To confirm the data for the sites, the Electronic Register of Food Retail Trade of the BFSA was also used: Survey among merchants on issues related to biologically produced agricultural products and food in the Dobrich region. Respondents were identified after personal contact by the principal investigator in commercial establishments selling organic food on a responder basis. All participants were previously provided with information about the scientific research with a set goal, a description of the procedure and an indication that by participating in the project they will contribute to the improvement of public health.



Inclusion and exclusion criteria were defined in the study.

The study is cross-sectional, starting in November 2020 and with realized stages as follows: Study of the awareness and attitudes of consumers (n=150) of biologically produced agricultural products and foods in the Dobrich region - from November 2020 to April 2021; Survey of awareness and attitudes among traders (n=50) and producers (n=20) towards organic food in the Dobrich region - from February 2021 to June 2021.

The research uses appropriate and informative methods: Documentary method (information from various sources - scientific articles, publications, reports, announcements, database registers, e-books, manuals, normative documents relevant to the topic of this dissertation). Sociological method (survey – adapted structured questionnaire developed and applied). Statistical methods (Descriptive analysis, Alternative analysis, Variational analysis, Statistical evaluation methods. All data from the analysis of official control and field studies are presented through tables and diagrams. MS Office Excel 2013 was used for graphical analysis.

The results of the conducted research and surveys are of an original nature, correspond to the set tasks, are presented and illustrated appropriately.

The dissertation covers all aspects and algorithms for evaluating the official control of the trade in biologically produced agricultural products and foods in the Dobrich region and the Varna region, as well as an analysis of the awareness of consumers, traders and producers regarding organic foods.

The results and discussions are presented thoroughly and in accordance with the tasks, which facilitates their systematization and perception.

A thorough analysis of international and national regulatory documents and scientific literature related to organic food production.

From the analysis of the data on the official control of the trade in organically produced agricultural products and food in the Dobrich region and the Varna region for the period 2014-2019, it was established that on the territory of the RDFS-Dobrich, the inspections of organic food in the commercial network were carried out at retail locations only. For the period 2014-2017, 25 objects were checked, with 25 inspections carried out in them. No violations were found in connection with the rules on the use of terms and designations for biological production methods, no prescriptions were issued and no acts were drawn up to establish administrative violations.



On the territory of RDFS - Varna, in terms of organic food, for the period 2014-2017, in addition to 89 retail establishments, two wholesale establishments were also checked. In the total of 92 inspections, no prescriptions were issued and no administrative violations were recorded.

The results of the application of a questionnaire for researching the awareness and attitudes of consumers of biologically produced agricultural products and foods in the Dobrich region are discussed in detail.

The results of the application of a questionnaire for the study of the awareness and attitudes of traders, as well as the level of their knowledge, regarding the regulatory requirements, in the trade in organic food in the Dobrich region, depending on the socio-demographic characteristics of the traders included in the scientific study, were analyzed. with organic foods.

The results of the application of a questionnaire to study the awareness and attitudes of producers, as well as the level of their knowledge, regarding the regulatory requirements, in the production and sale of organic food in the Dobrich region, are presented.

During the discussion, the results of inspections at retail and wholesale sites in the Dobrich region and the Varna region for 2014-2019 for two separate reporting periods were presented, due to significant changes in the rules governing the organic production control system. On the basis of the data, an analysis of the risk, classified as high and low, was made. A review of the frequency of checks carried out in the objects was made.

14 conclusions were formulated, logically following from the results and the discussion. Each of the conclusions logically follows from the obtained results and refers to: the regulatory requirements in Bulgaria and the EU for biologically produced foods; analysis of the trends and specific features of the activities of the competent authority, according to the criteria on the basis of which the frequency of inspections is determined; the procedures for official food control in the commercial network; consumer choice of organic food; The main sources of information on organic food; opportunities to submit verification alerts; knowledge of the characteristics of organic production; attitude towards organic food; biological logo recognition; the need for producers (85%) and traders (94%) of organic foods to conduct training on the regulatory requirements for trading in organic foods; controlling and ensuring the safety of organic food.

9 conclusions and 5 recommendations were made to the Ministry of Health, Ministry of Health, BFSA, Associations of organic producers.



*The contributions are formed in three aspects: of a theoretical - cognitive nature; of original character; of applied nature.*

*Contributions of a theoretical - cognitive nature include:* an in-depth review in development of normative documents and scientific publications of studies related to BP, with international and national scope; Identification of the attitudes, the level of awareness and the sources of information regarding organic foods within the framework of a survey conducted among consumers from the Dobrich region; Establishing the motives, stimulating factors and barriers facing consumers in their choice of organic foods; The characteristics of regular and occasional consumers of organic foods are derived; The reasons for the activity, production and trade in organic products, the sources of information, as well as the need for training in relation to organic foods were established within the framework of surveys among producers and traders of organic products and foods from the Dobrich region; The level of knowledge was investigated,

*Formulated original contributions are:* analysis of the results of the official control of the territory of the Dobrich and Varna regions in connection with the use of BH terms and designations for the period 2014-2019, as well as the normative documents regulating this activity; analysis and established regularities when outlining the biological profile of consumers from the Dobrich region in the context of attitudes, frequency, motives, stimulating factors and barriers related to the consumption of organic foods; reliable dependencies related to the sources of information, the ways of recognition and labeling of organic food by consumers, as well as the institutions related to the control of trade in organic products, have been studied and found; statistical dependencies between sources of information, knowledge, regarding the regulatory requirements for the trade in organic food and the ability to apply this knowledge by the distributors of organic food in commercial establishments in the territory of the Dobrich region; the influence of some demographic characteristics, such as the level of education and the presence of children in the family, in terms of sources of information about organic foods, recognition of organic foods, their labeling and frequency of purchase, has been proven; a number of hypotheses were tested and confirmed among male and female respondents (consumers and traders), related to: attitudes, sources of information, frequency of purchase, ways of labeling organic food, stimulating factors, reporting to the competent authorities in case of suspicion that a food marketed as "organic" is not,



*Applied contributions are defined:* Proposals and recommendations have been formulated to the competent institutions to improve the scope and effectiveness of official control in the trade in biological products; Proposals have been formulated to governmental, non-governmental bodies and organizations to increase awareness and education on the part of producers, traders and consumers of organic food, for fruitful cooperation between all participants in the market of organic products; By popularizing the data from our survey, we will contribute to enriching the profile of the organic consumer, increasing trust in organic production and improving communication with institutions related to organic production; The revealed regularities are a good basis for expanding the territorial and demographic potential of the study.

**In conclusion:** The topic of the dissertation is actual, scientifically based and dissertable. The main goal and tasks are formulated clearly and in accordance with the topic. The results are with original nature and of certain practical applicability. The presented material contains scientific information, results of own research and analysis, which are adequately interpreted. The mastery of the applied methods and the knowledge of the scientific literature by Dr. Rozalina Stefanova Braikova is evident. The contributions are of a theoretical-cognitive, original and applied nature and provide an opportunity for practical solutions to improve the effectiveness of official control in the trade in organic products and improve the awareness of consumers and producers of organic food.

Based on the above, I express a positive assessment of my dissertation "Control of trade in organically produced agricultural products and foods in North-Eastern Bulgaria" submitted for review. I firmly believe that the scientific jury can positively evaluate the development and support the awarding of a scientific and educational degree "doctor" in the field of higher education 7. Health care and sports, professional direction 7.1. Medicine by scientific specialty - "Hygiene (incl. labor, communal, school, radiation, etc.)", at Medical University - Varna by Dr. Rozalina Stefanova Braikova.

10.03.2023 Prof. Dr. Veselka Duleva, MD:.....