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ABSTRACT OF A DISSERTATION

"Control of trade in organically produced agricultural products and food in North-Eastern Bulgaria"

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The defense materials are available in the Scientific Department of MU-Varna and are published on the website of MU-Varna.

Note: In the abstract, the numbers of the figures and tables do not correspond to the numbers in the dissertation work.

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I. ABBREVIATIONS AND EXPLANATIONS USED IN THIS DISSERTATION

AEAV - Act for establishing an administrative violation

AW – animal welfare

BFSA – Bulgarian Food Safety Agency

CA – Competent authority

CAP – The Common Agricultural Policy

CESR - Committee on Ethics of Scientific Research

CP – controlling person

CPC – Consumer Protection Commission

DRBP – Directorate "Plant breeding and organic production"

EC – The European Commission

ECCOM – The European one plan for action for biological food and agriculture

EFSA – European Food Safety Authority

EU – The European Union (European Union)

FAO – Food and Agriculture Organization of the United Nations

FC – Food control

FiBL – Research Institute of Organic Agriculture (Research Institute for Organic Agriculture)

FL – Food Law

F2F – Farm that Fork (Farm to Fork)

GMOs – genetically modified organisms

(IBS) – IFOAM Basic Standards

IFOAM – The International Federation of Organic Agriculture Movements (The International federation on the movements for biologically agriculture)

IOAS - International Office for Organic Accreditation

ISO/IEC – International Organization for Standardization / International Electrotechnical Commission (International Organization for Standardization/International Electrotechnical Commission)

LAPI – Law on access to public information

LICOMAPEU – Law on the implementation of the common organization of the markets of agricultural products of the European Union

LMAFC – Law on the management of the agro -food chain

MAF – Ministry of Agriculture and Food

MAFF - Ministry of Agriculture, Food and Forestry

MEW – Ministry of Environment and Water

OA – organic agriculture

OC – Official control

OF – organic foods

OP – organic production

REC - Research Ethics Committee

RFSD - Regional Food Safety Directorates

SMANCP – Single multi-annual national control plan

SOP – Standard Operating Procedure

VMP – Veterinary medicinal preparations

II. INTRODUCTION

"The birthright of all living beings is health. This law is true of soil, plants, animals, and man: the health of these four is one connected chain. Any weakness or defect in health in any earlier link in the chain is carried over to the next link and the next until it reaches the last, namely man."

/ Sir Albert Howard, 1945/

A correct step in maintaining the health of these elements of the chain is the production of organic products and foods. Way back in time, our ancestors knew and used only the method of organic farming to feed their families. Without suspecting the modern meaning of the concept of "Biological production", the farmers of past centuries approached with care for the environment, preserving biodiversity and protecting natural resources.

The intensification of agriculture and animal husbandry in recent years, the continuous increase of the world population and the need to secure food sources, confront conventional production with many risks and challenges. We are witnessing the use of various inorganic and organic substances to increase yields, the destruction of weeds and animal pests of plants, genetic modification in the plant and animal population, the stimulation and treatment of animals with hormonal and antibiotic preparations, inclusion, due to technological feasibility in production of foods, of many supplements with different focus. The damage to nature, animal and human health, as a result of the traditionally applied methods of cultivation and extraction of products and food production, has been described in many scientific documents.

Historically speaking, starting with the founder of biodynamic agriculture Rudolph Schneider in 1924 and passing through all stages of organic farming, today modern man recognizes in organic foods, an alternative for a healthy eating model. More than 2.8 million producers of organic products and food are included in the control system, and this increase is annual worldwide. Bulgaria is no exception to the trend, not only the areas for growing crops using biological methods are increasing, but also the number of animals and the volumes and ways of realizing the production, although at a slower pace compared to world markets.

Undoubtedly, the topic of organic food is relevant, which stems from the ever-increasing demand for healthy and biologically pure quality products that are produced through the application of good agricultural practices that protect the environment and care for public health.

A strong interest in organic foods exists on the part of scientific researchers. They focus their qualitative and quantitative research mainly on studying organic foods through the lens of consumers. There are also examples of analyzes in the Bulgarian scientific circles, aimed at establishing the awareness and attitudes of consumers, producers and distributors of organic food, state and opportunities for production and market development.

Consumer demand for organic food is formed not only based on knowledge and ideas about this specific method of food production. To a large extent, people's orientation towards organic products also depends on trust in them. Trust is built on the one hand based on legally established characteristics of organically produced foods, and on the other , based on the actions of the competent authorities and information about their results.

Therefore, it is important for us to carry out a thorough research not only to what extent consumers are familiar with organic food, what motivates and deters them in their choice, but also to analyze the activity of the official control by the competent authority, in the person of the BFSA, in the trade with organic foods. The implementation of effective and comprehensive control related to the safety and quality of organically produced agricultural products and food guarantees the protection of the health and interests of consumers. In addition to this, the information we will receive about the level of knowledge of producers and traders, regarding the regulatory requirements, in the organic food trade is valuable to us.

III. PURPOSE AND OBJECTIVES

III.1. Purpose

The purpose of this dissertation is to investigate and analyze the activity of official control in the trade of biologically produced agricultural products and foods in the Dobrich region and the Varna region, as well as to study the awareness of consumers, traders and producers about organic foods.

III.2. Tasks

III.2.1. To analyze international and national normative documents and scientific literature on the problem.

III.2.2. To analyze the results of 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.

III.2.3. **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.

III.2.4. To carry out a survey among merchants on issues related to biologically produced agricultural products and foods in the Dobrich region.

III.2.5. To carry out a survey of awareness about the biological production of agricultural products among producers in the Dobrich region.

III.2.6. To formulate proposals aimed at increasing:

III.2.6.1. The effectiveness of official control over trade in organically produced agricultural products and food;

III.2.6.2. Awareness among the population regarding the distribution and importance of biologically produced agricultural products and foods;

III.2.6.3. The level of knowledge regarding the regulatory requirements among producers and traders in the production and sale of organic food.

IV. MATERIAL AND METHODS

IV.1. Material

IV.1.1. Object (contingent) of scientific research

To analyze the results of the official control in the trade in organically produced agricultural products and food, a summary of the inspections of organic products in the commercial network in the territory of the Republic of Bulgaria, in the territory of the Regional Directorate for Food Safety (RFSD) Varna and the RFSD 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 designations for the biological method of production are also the subject of analysis.

Knowledge about organically produced foods in the Dobrich region was studied in the field among twenty producers and fifty traders. The awareness and attitudes among consumers of organic food in the Dobrich region was studied among 150 adults.

IV.1.2. Study design and research organization

A. A found of the results of the official control of the trade in biologically produced agricultural products and food in the Dobrich region and the Varna region for the period 2014-2019.

The data on the official control of the trade in biologically produced agricultural products and food by the BFSA are not public. In this regard, on 28.07.2020 an application for access under the Law on Access to Public Information has been prepared and sent to the Executive Director of the BFSA for the provision of information regarding:

1. Number of inspections carried out by BFSA officials for the period 2014 - 2017 in wholesale and retail trade facilities and in municipal markets for the sale of agricultural products according to Art. 31, part 1 of Ordinance No. 1 of February 7, 2013 on the implementation of the rules of organic production of plants, animals and aquaculture , plant and animal products, products from aquaculture and food, their labeling and control over production and labeling;

2. Number of detected violations, number of acts issued and sanctions imposed by BFSA officials in connection with the information under Art. 32, part Three of Ordinance No. 1 of February 7, 2013, for the period 2014-2017;

3. Number of inspections carried out by the officials of RFSD - Dobrich and RFSD - Varna for the period 2014 - 2017 _ in the sites for wholesale and retail trade and in the municipal markets for the sale of agricultural products under Art. 31, part 1 of Ordinance No. 1 of February 7, 2013. for implementing the rules of organic production of plants, animals and aquaculture , plant and animal products, products from aquaculture and food, their labeling and control over production and labeling*;*

4. Number of detected violations, number of acts issued and sanctions imposed by the officials of RFSD - Dobrich and RFSD - Varna in connection with the information under Art. 32, part 3 of Ordinance No. 1 of February 7, 2013 for the period 2014-2017;

5. Number of inspections carried out by BFSA officials, for the period 2018-2019 in wholesale and retail outlets and in municipal markets for the sale of organic products according to Art. 38, part 1 of Ordinance No. Five of 3.09.2018 on the application of the rules of organic production, labeling and control, and on the issuance of a permit for control activity for compliance with the rules of organic production, as well as for subsequent official supervision of the controlling persons*;*

6. Number of detected violations, number of acts issued, number of criminal decrees issued, number of criminal decrees entered into force, sanctions imposed by the BFSA officials in connection with the information under Art. 39, part 3 of Regulation No. 5 of September 3, 2018, for the period 2018-2019;

7. Number of inspections carried out by the officials of RFSD - Dobrich and RFSD - Varna for the period 2018-2019 in wholesale and retail outlets and in municipal markets for the sale of organic products according to Art. 38, part 1 of Ordinance No. Five of 3.09.2018 on the implementation of the rules of organic production, labeling and control, and on the issuance of a control activity permit for compliance with the rules of organic production, as well as for subsequent official supervision of the controlling persons*;*

8. Number of detected violations, number of acts issued, number of criminal decrees issued, number of penal decrees entered into force, sanctions imposed by the officials of the RFSD - Dobrich and RFSD - Varna in connection with the information under Art. 39, part 3 of Regulation No. 5 of September 3, 2018, for the period 2018-2019;

9. Copy of the Procedures for the implementation of official control of biologically produced agricultural products and food in the commercial network, applicable respectively for the period 2014-2017 and 2018-2019;

By Decision No. RD 11-2006/28.08.2020 of the Executive Director of BFSA on 30.09.2020. full access to public information is provided, including the following:

Copies of reports on OP inspections carried out in the commercial network on the territory of the Republic of Bulgaria, RFSD Varna and RFSD Dobrich for the period 2014-2019;

- Copy of Standard Operating Procedure (SOP) KH-24, version 01- Procedure for official control of food in the commercial network on the use of terms and indications for biological method of production, Appendix No. 1 to Order No. RD 11-1780/03.08.2018 of the Executive Director of BFSA;
- Copy of SOP KH -24, version 02 - Procedure for official control of food in the commercial network on the use of terms and indications for biological method of production, Appendix No. 1 to Order No. RD 11-1885/12.09.2019. of the Executive Director of BFSA.

For the period 2014-2017 Procedure for implementation of biologically produced agricultural products and foods in the commercial network, issued by the Minister of Agriculture and Food since 2013, was used. (MAF, 2013).

B. Survey of producers, traders and consumers on OF

Survey among producers on issues related to biologically produced agricultural products and foods in the Dobrich region

The selection of the producers of biologically produced agricultural products and food from the Dobrich region was carried out by the Register of Organic Agriculture, published on the website of the Ministry of Agriculture: https://bioreg.mzh.government.bg/ . The same is maintained according to the provisions of Art. 28, paragraph 5 of Regulation (EC) No. 834/2007 and Art. 16a, para. 1, item 1 of the Law on the Implementation of the General Organization of the Markets of Agricultural Products of the European Union (GAAP).

In the period 06.20-07.20 contact was made by the main researcher (in person, by e-mail and telephone conversation) with the managers of the manufacturing companies, and information about the participant in the scientific research was provided. Through a prepared form, individuals are invited to participate voluntarily and completely free of charge in the scientific research, they are given detailed information about the purpose and procedure of the research.

The participation in the study of the producers of biologically produced agricultural products and foods from the Dobrich region was confirmed with written declarations of consent, which the dissertation student provided to the Committee on Ethics of Scientific Research (CESR) in MU-Varna

Survey among merchants on issues related to biologically produced agricultural products and foods in the Dobrich region

Based on his own review, the principal investigator determined the commercial establishments to be included in the study. To confirm the data for the sites, the Electronic Register for Food Retail Trade of the BFSA was also used:

https://www.bfsa.bg/bg/Object/site_register/view/6/%D0%9A%D0%BE%D0%BD%D1%82%D1%80%D0%BE%D0%BB%20 %D0%BD%D0%B0

In the period 06.20-09.20 contact was made by the dissertation student (in person, via e-mail and telephone conversation) with the managers of companies trading in biologically produced foods in various commercial establishments, such as: hypermarkets, supermarkets, specialized stores for trading in organic foods, diet food stores. To everyone a form is provided containing detailed information about the participant in the scientific research, revealing the main purpose and procedure for conducting it. At the same time, individuals are invited to participate voluntarily and completely free of charge in the study.

The requirement for inclusion in the scientific study has been fulfilled - signed declarations of consent from the managers/owners of the commercial establishments, place of conducting the survey. All declarations are reported to CESR in MU-Varna.

Study of the awareness and attitudes of consumers of biologically produced agricultural products and foods in the Dobrich region

In order to fulfill the task set in the research, it is suggested that persons participate completely voluntarily and without financial incentives. 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. The respondents were determined after personal contact by the principal researcher in the commercial establishments selling OF, on the basis of the respondents.

Criteria for the inclusion and exclusion of consumers, traders and producers of organic food from the district/city of Dobrich in the study have been defined and observed:

Inclusion criteria: signed informed consent; over 18 years of age; place of residence (address of the production/commercial base) in the district/city of Dobrich; OF consumption at least once a year.

Exclusion criteria: persons under 18; refusal to sign informed consent; place of residence (address of the production/commercial base) outside the district/city of Dobrich; non-use of OF.

The evaluation of the criteria for inclusion and exclusion of persons from the study was carried out by the principal researcher. The informed consent of the participants was taken personally by the dissertation student, immediately before the beginning of the study, as the informed consent forms were filled in by the respondents themselves. They are not established potential study risks. The scientific research has been implemented with own funds of the dissertation student. The same started after reporting and permission from CESR in MU-Varna: Protocol/Decision No. 96 of 24.09.20. The study is beginning in November 2020 and with realized stages as follows:

- Research on consumer awareness and attitudes (n=150) of biologically produced agricultural products and foods in the Dobrich region - from November 2020 until April 2021;
- Survey of awareness and attitudes among traders (n=50) and producers (n=20) to OF in Dobrich region - from February 2021 until June 2021

To preserve the ***confidentiality of the research data,*** the same is stored in electronic format on a password-protected computer with limited access for a period of 5 years, and also on paper carrier in a locked cabinet in an office of the Department of Hygiene and Epidemiology.

IV.2. Methods and tools

IV.2.1. Documentary method

In order to clarify the introductory concept of the study and to fulfill its purpose, a thorough analysis of various sources of information was carried out - scientific articles, publications, reports, announcements, registers with databases, e-books, manuals, normative documents relevant to the topic of the present dissertation. The publications are in Bulgarian and foreign authors (English and German), available in electronic sources and internet browsers, such as: Science Direct, PubMed, Scopus, Google Scholar and Research Gate. In addition, specialized databases from the official websites MDPI, IFOAM, FiBL, FAO, EFSA, EC, and BFSA were used. Targeted and thematically oriented have been researched in general 368 literary sources.

IV.2.2. Sociological method

The study among the three groups of respondents was carried out through a survey - an adapted, developed and applied structured questionnaire (Vitosha Research, 2009; MUTLU, 2007; Melovic et al., 2020) (Appendix 1, 2, 3).

To establish the level of awareness and attitudes among OF users, 24 questions were included in the survey. One and/or several possible answers can be given to the questions asked. Two of them require evaluation of the items included in them on a 3- and 5-point Likert scale. It is a question or statement to which the respondent must answer by marking his opinion on a scale, respectively: 1 - I do not agree, 2 - I have no opinion, 3 - I agree; 1-not important at all, 2-not important, 3-no opinion, 4-important, 5-very important.

The questions in the survey are grouped in the following way: Association of the concept of OF; Common sources of information on OF; OF purchase frequency; Reason for refusal to buy OF; Attitudes and incentives to purchase OF, intended for whom, place of purchase; Knowledge of OF labeling; Significance of OF in their purchase - assessment on a 5-point scale; The characteristics of OF - evaluation on a 3-point scale; Control activity; Demographic indicators of the respondents: gender, age, degree of completed education, marital status, description of the financial situation of the household, main occupation at the moment, persons in the household, number of children in the household under 18 years.

In order to establish the level of awareness and attitudes among OF traders and producers, 20 questions were included in the survey. One and/or several possible answers can be given to the questions asked. Only one commercial establishment, which previously gave a declaration of consent

in the survey, refused to participate in the survey. The survey, developed and administered to OF traders and producers, is structured with questions reflecting: Association of the concept of organic food; Reason for carrying out trade/production with OF; Common sources of information on OF; Training and knowledge of OF - requirements for origin, designation, control bodies; Assessment of customer awareness regarding organic foods; Vision for the demand for OF in the own commercial/production site; Factors influencing the use of organic foods; Object type, position; Demographic indicators of the respondents: gender, age, degree of completed education.

IV.2.3. Statistical method

IV.2.3.1. Descriptive analysis:

Descriptive statistics

Alternative analysis – descriptive analysis of qualitative variables, presented with absolute and relative shares (frequencies), distributed by ordinal, nominal and subjective assessment scales.

Cross-tabulations were used in the distribution of the studied statistical units by two or more categorical variables, with the expression of the indicators, as in the case of a one-dimensional distribution - with absolute and relative frequency. Tabulation is the basis for deriving and presenting a summary of the data, respectively analyzing the information.

Variation analysis - descriptive analysis of quantitative variables mean, median, moda, standard deviation (SD).

IV.2.3.2. Methods of statistical evaluation

The data in the study are categorical with more varieties or allowing ranking, which necessitates the use of non-parametric criteria for evaluating **hypotheses -** Pearson's $\chi 2$ (Chi -square) criterion. In addition, the empirical frequency is no more than < 5. The conclusions are established on the basis of the following limit values applied in practice for the guarantee probability (P) and the level of confidence (α): P=95%, which corresponds to α= 0.05 (Shishkov et al., 2014). Non-parametric tests performed were considered statistically significant at $p \leq 0.05$.

In the presented study, the previously collected data were coded to be analyzed and summarized using MS Office Excel 2013. Statistical processing was performed with the software product Jamovi, version 2.2.5 for Windows. X P .

IV.2.3.3. Tabular and graphic methods

All data from the analysis of official control and field studies are presented in simple and multidimensional tables, as well as pie-sector and bar charts. MS Office Excel 2013 was used for graphical analysis.

V. RESULTS

V.1. Analysis of international and national regulatory documents and scientific literature related to organic food production

The European scheme for organic production and its control became officially recognized with the adoption of Council Regulation (EC) No. 2092/91 of June 24, 1991, regarding the organic production of agricultural products and its labeling on agricultural products and foodstuffs. In him the

basic principles of OA and the rules for processing, the control system, the requirements for labeling of BP and imports from third countries of BH are laid out (EC, 1991). The scope of the regulation includes unprocessed agricultural plant products as well as animals and unprocessed animal products.

Initially, the Regulation only applied to unprocessed vegetables, fruits and cereals, as well as to consumer products containing mainly ingredients of plant origin, but later provisions were introduced regarding the organic production of animal products, as well as the ban on the use of GMOs (EC, 1999). Other regulations set out detailed rules for the application of regulations on imports from third countries and a logo to indicate organically produced products. Regulation (EEC) No. 2092/91 underwent more than 25 amendments and additions, making it difficult to implement.

In 2004 The European one plan for action for biological Food and Agriculture (ECCOM, 2004) urged for review on the legal one frame for BZ, with a purpose Yes everything provided simplifying and comprehensive consistency. Starts research project EEC 2092/91 (Biological) Revision funded by the EC to provide recommendations for revision and further development on EU Regulation 2092/91 . The opinion of the European Parliament on the new proposal was given in May 2007, and the text for a new regulation (EU, 2007) 834/2007 was agreed in June 2007. (Padel, Melby and Schmid, 2007). Council Regulation (EC) 834/2007 of June 28, 2007 on organic production and labeling of organic products and repeal of Regulation (EEC) No. 2092/91 entered into force in January 2009.

It aims at the production of high quality products and also the production of a wide variety of food and other agricultural products that meet consumer demand for goods produced by applying processes that do not harm the environment, human health, plant health or animal health and welfare (EU, 2007).

Organic production is a comprehensive agricultural and food production management system that combines best practices in terms of environmental protection, a high degree of biological diversity, conservation of natural resources, the application of high standards of animal welfare and a production method tailored to the preferences of some consumers for products produced using natural substances and processes. In this way, the organic production method fulfills a dual social role, on the one hand providing a specific market meeting the consumer demand for BP, and on the other hand delivering public goods contributing to the protection of the environment and animal welfare, as well as to rural development (EU, 2007).

The scope applies to the following products of agricultural origin when these products are placed on the market or are about to be placed on the market (EU, 2007): Live or unprocessed agricultural products; Processed agricultural products intended for food; Fodder; Planting and sowing material; yeast used for food or feed.

General goals and principles are formulated of organic production (EU, 2007) : Adequate development and management of biological processes based on ecological systems and using natural resources internal to these systems through methods that: They use living organisms and mechanical production methods; Practice land-based cultivation of crops and animal husbandry or aquaculture that conform to the principle of sustainable exploitation of fishery resources; Exclude the use of

GMOs and products produced from or through GMOs, with the exception of veterinary medicinal products; They are based on risk assessment, as well as the use of protective and preventive measures when appropriate;

Limiting the use of external resources. When external resources are needed or when the appropriate management practices and methods do not exist, they come down to: Resources from biological production; Natural or naturally occurring substances; Weak soluble mineral fertilizers.

Strict restriction of the use of chemically synthesized substances.

Where necessary, within the framework of this Regulation, the provisions for organic production must be adapted, taking into account health status, regional climatic differences and local conditions, stages of development and specific animal husbandry practices.

Any operator who produces or prepares products within the scope of Regulation (EC) No. 834/2007 regarding the organic production and labeling of OP and repealing Regulation (EEC) No. 2092/91 or placed on the market such products ensures that before the marketing of any products such as biological or in transition to organic production: Notifies the competent authorities about its activities authorities of the Member State in which it is carried out the activity; Underlays its enterprise of the control system established in the relevant member country (EU, 2007).

Member States create a control system and define one or more competent authorities to be responsible for control in accordance with the requirements of Regulation (EC) No. 834/2007. The supervisory and control authorities provide written evidence to each operator who is subject to their control and who meets the requirements of this regulation in the field of their activity. The written evidence allows the identification of the operator and the type or range of products, as well as the period of validity. The written certificate contains the following information (EU, 2007): Document number; Name and address of the operator and main activity (manufacturer, importer); Name, address and code number of the supervisory / control body; Group of products and date of control; Validity period;

Date, place and signature of the supervisory/controlling authority are in the regulation regulations included regarding organic production (EU, 2007): The use of GMOs is prohibited; the use of ionizing radiation is prohibited.

In crop production:

1. No mineral nitrogen fertilizers are applied;
2. The use of fertilizers and soil improvers is allowed only if they meet the requirements of the Regulation;
3. Biological seed and planting material is used.

In animal husbandry:

1. The animals are raised on farms with organic production.
2. Animals have constant access to open spaces.
3. The number of animals on the farm is limited in order to minimize the depletion of the pastures and their pollution from the excessive amount of manure.

4. The animals are fed with organically produced fodder, and the young mammals are fed with mother's milk.
5. The use of hormones and growth stimulants is not allowed.
6. The use of allopathic veterinary medicinal products (VMP) and antibiotics is permitted in extreme need and is strictly defined.

Aspects of labeling and use of terms **relating** to a biological method of production, namely (EU, 2007):

- Live or unprocessed agricultural products - can only be used when all ingredients of this product as well are manufactured in accordance with the requirements;
- Processed foods - the terms "organic" and "eco" can be used in the commercial description as long as they meet the requirements for organic production and at least 95 percent by weight of the ingredients from agricultural origin to be biological;
- foods that contain GMOs, consist of GMOs or are produced by GMOs can not to bear the terms "bio" and "eco".

According to Art. 23(1) of the Regulation, terms for the organic method of production, their derivatives or diminutives, such as "bio" and "eco", alone or in combination, may be used throughout the Community and in any Community language for labeling and advertising a product that meets the requirements specified in this regulation or adopted in accordance with it (EU, 2007). In Bulgarian, the term is ***„biological ".***

The use of the Community label for organic production is not mandatory for products that are imported from third countries. The Community mark is not used for products and foods produced in transition to organic production. Products that meet the requirements of the Regulation can also be labeled with national or private signs for organic production (EU, 2007).

Along with the implementation of well-documented legislation, the European Union's OA strategy includes a very important process, the certification process, which is the main route for farmers to approach this type of farming (Willer, Rohwedder and Wynen, 2009).

The first voluntary OP certification logo was provided in the late 1990s by the European Union (Figure 1) and depicts the EU flag with a wheat ear in the center. It represents a customized logo that each member state is required to use. Differentiations between member countries are made through their native language, in which the words "OA" are written (Bobe et al., 2014).

Figure 1. The "OA" logo is reserved for Bulgaria by the European Union

source *: http://ec.europa.eu/agriculture/organic/eu-policy/logo_bg_*

In order to harmonize the EU OF sector and increase consumer confidence in the certification of organic products, the EU introduced a new BH logo on 1 July 2010. This new logo became mandatory for use on all organic food products in the EU in 2012, after a two-year transition period (EC 834/2007, EC 889/2008 and EC 271/2010).

The technical requirements for reproduction of the organic logo for the EU are described in Commission Regulation (EU) No. 271/2010 of March 24, 2010 amending Regulation (EC) No. 889/2008 laying down detailed rules for the implementation of Regulation (EC) Council No. 834/2007 concerning the European Union Organic Label, Annex XI, which has been translated into all European Union languages (EC, 2010).

The reference color, according to the color Pantone pattern is Green Pantone No. 376 and Green (50% Cyan + 100% Yellow) if a four-color process is used.

Figure 2. EU organic logo

source *: http://ec.europa.eu/agriculture/organic/eu-policy/logo_bg_*

When affixing the sign of organic production, the following requirements are observed (EC, 2010): Height over 9 mm and width over 13.5 mm.; The ratio height/width is always 1:1.5; In exceptional cases, the minimum height it can be reduced to 6 mm for very small packages; It is placed in a prominent place and together with the rest of the information are clearly legible and indelible; The EU organic production sign may be associated with graphic or textual elements informing about the organic production method, provided that they do not modify or change the character of the EU organic production sign, nor the instructions for its application; National and private signs are not mandatory and their placement does not cancel the requirement to have "EU organic production mark" on the label as well as his mandatory requisites.

The code number of the supervisory or control body (controlling person) is indicated as follows (EC, 2010):

AB – CDE - 999

where:

- "AB" is the ISO code of the country in which they are carried out the checks;

- "CDE" is a three- letter designation defined by the Commission or each Member State (for example, "bio" or "öko" or "org" or "eko") and establishes a link with the method of organic production;
- "999" is the reference number consisting of a maximum of three digits and establishes the control or supervisory authority.

"Supervisory authority" means a public administrative organization in a Member State to which the competent authority has fully or partially delegated its competence for inspection and certification in the field of organic production in accordance with the provisions provided for in the regulation (EU, 2007).

"Control body" means an independent private third party that carries out inspection and certification in the field of organic production in accordance with the provisions provided for in the regulation (EU, 2007).

Certain are requirements regarding writing the places where are produced the raw materials used in the production of processed products food product. In one field of vision with the sign, in one of the following ways (EC, 2010): "Agriculture from the EU" when agricultural raw materials origin are grown in the EU; "Agriculture outside the EU", when agricultural raw materials origin are grown in third countries; "Agriculture from/outside the EU" when part of the plant raw materials are grown in the Community and part of them are grown in third countries.

The new one Regulation (EU) 2018/848 of May 30, 2018 on organic production and labeling of organic products was officially published on June 14, 2018. In connection with the COVID-19 pandemic, MEPs approve the postponement of the entry into force of Regulation (EU) 2018/848 of the European Parliament and of the Council of 30 May 2018 on organic production and labeling of organic products and repealing Regulation (EC) No. 834/2007 of the Council until 01.01.2022. This Regulation establishes the principles of organic production and defines the rules for organic production, the related certification and the use of designations relating to organic production in labeling and advertising, as well as the control rules in addition to those provided for in Regulation (EU) 2017/625 on official controls and other official activities carried out to ensure the application of food and feed law, animal health and welfare rules, plant health and plant protection products (EU, 2018).

There are three product categories covered by the new Regulation (EU, 2018): Live or unprocessed agricultural products, including seeds and other plant reproductive material; Processed agricultural products intended for food; Fodder.

The additional field of regulation includes products that are not clearly covered by the above categories, but may be eligible for BZ and certified accordingly, for example: sea salt and other types of salt intended for food and feed; cork; beeswax; mate, vine leaves; palm tree cores. Regulation (EU) 2018/848 presents objectives, general and specific principles of organic production. Organic production pursues the following general objectives (EU, 2018): Contribution to the protection of the environment and climate; Preservation of long-term soil fertility; Contribution to a high degree of biological diversity; Substantial contribution to a non-toxic environment; Contribution to high

standards of animal welfare, and in particular to meeting the specific behavioral needs of animals according to their species; Favoring short distribution chains and local production on the territory of the Union; Promoting the conservation of endangered rare and native breeds; Contribution to the development of the supply of plant genetic material adapted to the specific needs and goals of organic farming; Contribution to a high degree of biological diversity, in particular by using diverse plant genetic material, for example biological heterogeneous material and biological varieties suitable for organic production; Promotion of the development of activities for organic cultivation of plants in order to contribute to favorable economic prospects of the sector of organic production.

Along with expanding the range of certified BPs, the other changes expected with the implementation of the new organic regulations are (EU, 2018): A more targeted control system - stricter measures and strict inspections along the entire supply chain - carrying out on-site inspections at least once a year or once every two years, if no violations have been detected in the last three years; In order to guarantee compliance with the requirements for organic production and the confidence of consumers in this production method, it is necessary for operators to inform the competent authorities, control or supervisory authorities, of cases of suspected non-compliance with this regulation, which is justified or cannot be excluded, regarding products that they manufacture, process, import or receive from other operators; Withdrawal of the "organic" status of a product if it is found to be contaminated with unauthorized pesticides and fertilizers as a result of negligence or fraud. Decertification in case of traces of PRP, if there was a lack of preventive measures to avoid the risk of contamination (Schmidt, 2018); In case of suspicion of non-compliance, where such suspicion is due to the presence of unauthorized products and substances in BP or products produced in transition to organic production, and in order to avoid uncertainty for operators, competent authorities, control or supervisory authorities should carry out official investigation in accordance with Regulation (EU) 2017/625 to verify compliance with organic production requirements (EU, 2018); Strict import rules, such as a transition is being made from the current recognition of equivalence to the recognition of equivalence. This means that countries outside the EU must follow the same rules as those in the EU; The exception remains for imported products from third countries with which the European Union has signed a trade agreement that recognizes equivalence in terms of the regulatory and control system with the European Union. These include Canada, USA, Japan, Tunisia and New Zealand (Rodino, 2020); Clear and reliable labelling: the use of terms denoting BPs for the labeling of non-organic products within the Union should be prevented, regardless of the language used. The user is informed with the European logo on the origin of the agricultural raw materials, including the identity of the supervisory body; Maintaining the connection with the soil ecosystem; Facilitating certification procedures for small farmers by introducing a group certification system; Creation of a database in each country for organic or transition-to-organic plant reproductive material, for organically raised animals and for juvenile specimens from organic aquaculture in order to facilitate access to them; Providing an opportunity for producers to develop both traditional and organic agriculture, but with a clear separation of these activities; Establishing provisions concerning the exchange of certain relevant information between competent authorities, control authorities, supervisory authorities and

certain other authorities, and concerning the actions of these authorities, in addition to the provisions of Regulation (EU) 2017/625 (EU, 2018).

Changes are reflected in the document providing written evidence from the supervisory and control authorities to each operator who is subject to their control and who meets the requirements of this regulation in the field of their activity.

On March 25, 2021 The EC presents an action plan for the development of organic production (2021-2027). Its general goal is to stimulate the production and consumption of organic products and to reach by 2030. of a share of BZ in the amount of 25% of agricultural land, as well as a significant increase in biological aquaculture . The Action Plan is in line with the European Green Deal as well as the Farm to Fork strategy and the Biodiversity Strategy (EC, 2021).

In the period before Bulgaria's membership in the EU, the requirements and conditions for organic production were introduced with the adoption of two acts: Ordinance No. 22 of July 4, 2001. on the biological production of plants, plant products and foods of plant origin and its marking on them (Official Gazette No. 68 of August 3, 2001) and Ordinance No. 35 of August 30, 2001 on organic breeding of animals and organic production of animal products and foods of animal origin and its marking on them (State newspaper No. 80 of September 18, 2001).

After the accession of Bulgaria to the EU, the national legislation in the field of organic production is governed by the Law on the Implementation of the Common Organization of the Markets of Agricultural Products of the European Union (LICOMAPEU) (State newspaper No. 96 of November 28, 2006). According to the provisions of this Act, the Minister of Agriculture and food implements a quality policy, according to Council Regulation (EC) No. 834/2007 of June 28, 2007. on organic production and labeling of organic products, and ensures compliance with the legal framework for organic farming at EU level. Within the framework of the Ministry of Agriculture, the Directorate "Plant Breeding and Organic Production" (DPBOP) has been designated as the competent unit responsible for ensuring compliance with the requirements for organic production included in national and EU legislation. According to the LICOMAPEU, a competent authority (CA) and a controlling person (CP) are designated, which are responsible for the official control and certification of organic production. CP are local and foreign citizens who have received a permit from the Ministry of Agriculture and food, which includes a code number. CP must have concluded contracts with laboratories for performing analyses, in case of suspicion that unauthorized products for plant protection, VMP, etc. have been used in biological production (MEW, LICOMAPEU, 2006).

The Minister of Agriculture and Food determines by regulation the conditions and procedure for applying the rules for biological production of plants, animals and aquaculture , plant and animal products, products from aquaculture and food; their labeling and production and labeling control; the application of the rules for the import from third countries of organic plants, animals and aquaculture , plant and animal products, products from aquaculture and food; the official control over organically produced agricultural products and food in the commercial network; labeling and control of products and foods originating from public establishments nutrition; interaction with institutions that have competences in terms of supervision and control in organic production. The conditions for the use of

the national sign "Ladybird" in the labeling and/or advertising of agricultural products, food and their ingredients as an indication of a biological method of production and processing are defined (MAF, LICOMAPEU, 2006) (Figure 3).

Figure 3. Ladybug national sign

Source : Ordinance 1/2013

In 2013 with the adopted Ordinance No. 1 of 02/07/2013 on the application of the rules of organic production of plants, animals and aquaculture , plant and animal products, products from aquaculture and food, their labeling and control over production and labeling (pronounced, SG No. 16 of 19.02.2013, amended and addendum, No. 49 of 28.06.2016), are repealed: Ordinance No. 22 on the biological production of plants, plant products and foods of plant origin and its designation plant products and foods of plant origin and its designation on them and Ordinance No. 35 on organic breeding of animals and organic production of animal products and food of animal origin and its labeling on them.

Ordinance No. 1 of 2013 is repealed by Ordinance No. 5 of 03.09.2018 for applying the rules of organic production, labeling and control, and for issuing a permit for control activities for compliance with the rules of organic production, as well as for subsequent official supervision of the controlling persons (State newspaper, No. 75 of 11.09.2018), according to the requirements of Regulation (EC) No. 834/2007 of the Council and Regulation (EC) No. 889/2008 of the Commission. Motives for the adoption of the new regulation are changes in EU legislation from 2018, improvement of the control system over organic production. The changes include the creation of conditions for guaranteeing the quality of OP, the imposition of sanctions on CP in the event of violations by operators, an increase in the percentage of mandatory administrative checks of operators, the introduction of a minimum number of on-site physical checks of operators, the introduction of mandatory sampling before issuing a certificate for organic production, improving information systems. Since its promulgation, the regulation has undergone several amendments, the most important of which include the approval by order of the Minister of Agriculture, Food and Forestry of rules for the designation of official laboratories accredited according to the International Organization for Standardization /International Electrotechnical Commission (ISO/IEC) (International Organization for Standardization/International Electrotechnical Commission) 17025/2017 for carrying out laboratory analyzes of samples taken during official control of organic production; the provision of the national sign "Ladybird", which is the exclusive property of the Ministry of Internal

Affairs and Communications and is publicly available on the website of the Ministry of Internal Affairs and Communications in vector format, for use by KL; improvement of communication between the BFSA and other participants in the supervision system upon receipt of a signal of irregularities and/or violations of BP and/or products in transition to organic production (MAFF, Ordinance 5, 2018).

In August 2019 the government of Bulgaria adopts a National Action Plan for the development of organic production until 2027, including three strategic goals (MAFF, 2019):

1) *Improving the efficiency of organic production and expanding the national domestic market of BP*
2) *Maintaining an effective institutional-normative framework for the development of organic agriculture and an effective control and supervision system.*

3) *Stimulation of practice-oriented scientific research, education, training and consultancy in the field of biological production* .

We would like to point out as an interesting example of implemented activity under the first strategic objective, the Ordinance on the conditions and procedure for implementing schemes for the provision of fruit and vegetables, and milk and milk products in educational institutions - the "School fruit" scheme and the "School milk" scheme , in which, in addition to conventionally and biologically produced fresh fruits and vegetables, pasteurized milk and dairy products are provided, and the honey must be biologically produced (MAFF, PMS No. 251, 2016).

In 2020 the national legal framework in the field of the agri -food chain has been updated, which ensures the implementation of the changes in EU law. A reflection of this is the promulgated Law on the Management of the Agri-Food Chain (LMAFC) and the new Food Law (FL).

LMAFC outlines a general framework regulating the essence of the agro -food chain and the components included in it. It specifies for the first time all the competent authorities that implement the policy in this area and brings together all the activities of the agri -food chain. This will guarantee a high degree of protection of public health and the implementation of comprehensive control of all elements included in the agro -food chain (MAFF, LMAFC, 2020).

According to LMAFC, the Minister of Agriculture, Food and Forestry implements the state policy in relation to of organic production and labeling of organic products, and the BFSA carries out official control and other official activities on agricultural products or food within the meaning of the Food Law, including on biologically produced food and products, which is reflected in the LICOMAPEU. The law sets out rules for coordination and interaction of the bodies for official control of the agro -food chain with other bodies; for providing administrative assistance and cooperation in the field of the agro -food chain in contacts with the European Commission, with other member states and other institutions of the European Union in connection with official control and other official activities (MAFF, LMAFC, 2020).

The new Law introduces the requirement that when registering an object for the production, processing and/or distribution of food, the business operator declares that it will offer organically produced food. The rules for conducting food trade are regulated, incl. and biologically produced from a distance (MAFF, LF, 2020).

V. 2. Analysis of the data on official control of trade in organically produced agricultural products and food in Dobrich and Varna regions for the period 2014-2019.

The official control in the commercial network on the use of terms and signs for a biological method of production, processing and trade in plants, animals and aquaculture, plant and animal products, products from aquaculture and food is exercised by officials from the Bulgarian Food Safety Agency (BFSA), in accordance with the requirements of the Regulation (EC) No. 882/2004 of the European Parliament and the Council of 29.04.2004. When exercising this control, the officials from the BABH apply their powers under the Food Law, the Feed Law, the Law on Veterinary Medical Activity, LICOMAPEU and Ordinance No. 1 of 02/07/2013 on the implementation of the rules of organic production of plants, animals and aquaculture, plant, animal products, products from aquaculture and food, their labeling and control over production and labeling (MAFF, Ordinance No. 1, 2013). The Directorate "Food Control" methodically directs, coordinates and supervises the activities of the Food Safety Authority in implementing control of the labeling and presentation of organic foods in the commercial network, in accordance with its competences (Food Control Authority, Administrative Regulations of the Food Safety Authority, 2011).

Inspections regarding the official control of biologically produced agricultural products and food in the commercial network during the period of validity of Ordinance No. 1 of 07.02.2013 are carried out according to a procedure approved by the Minister of Agriculture and Food. The inspection (planned or sudden and/or on signal - on signals from citizens or to check ordered administrative measures), is carried out without warning with the possibility of covering all stages of the distribution and trade of biologically produced plants, animals and aquaculture , plant, animal products, products from aquaculture and food . When exercising the official control, the officials from the BFSA carry out (MAFF, 2013): inspections in wholesale and retail trade facilities and in municipal markets for the sale of agricultural products and food; documentary verification of written evidence within the meaning of art. 29, paragraph 1 of Regulation (EC) No. 834/2007, issued by the controlling entity with which the trader has a contract for control and certification *(Certificate issued by the controlling person);* checking the packaging and labels of the agricultural products and foods offered as organically produced in the relevant commercial establishment, for the correct use of the sign and indications for organic production, including in a foreign language, according to the requirements of Regulation (EC) No. 834/2007 and Ordinance No. 1 of February 7, 2013; inspection of no less than 60 percent of the conventional products offered in the relevant commercial establishment for illegal use of the sign and indications for organic production, including in a foreign language, according to the requirements of Regulation (EC) No. 834/2007 and Ordinance No. 1 of February 7, 2013.

When carrying out a control, officials from the BFSA: draw up a report on the results of the performed inspections, a copy of which is provided to the manager or his authorized representative immediately after the inspection; issue prescriptions and/or acts for the detected violations according to the provisions of Art. 65 of LICOMAPEU.

The results of OF inspections in the commercial network, based on information provided by the BFSA for the period 2014-2017, are reflected in the diagram as follows:

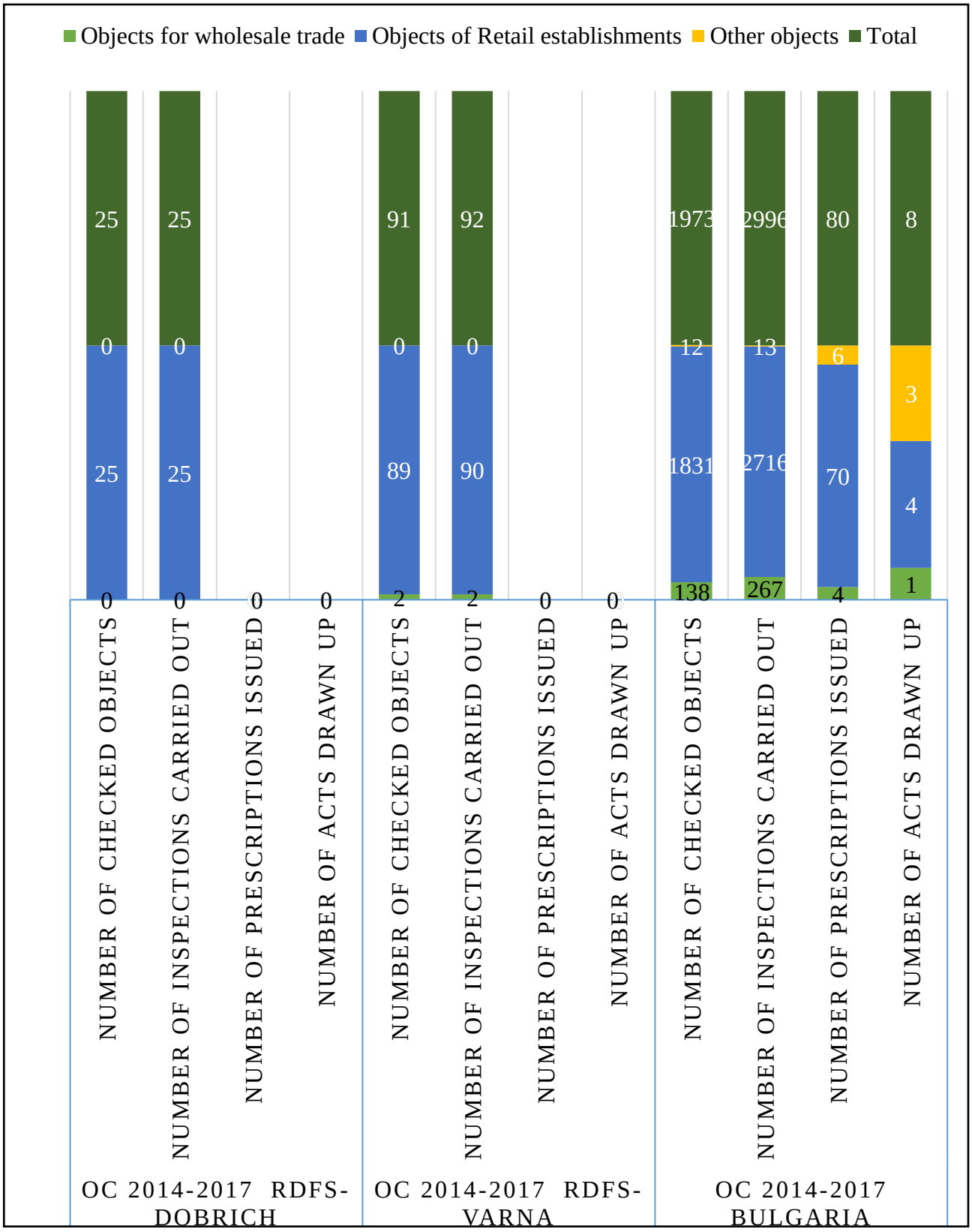

Figure 4. Official control (OC) of organic food in commercial establishments on the territory of RFSD - Dobrich, RFSD- Varna and RB (2014-2017)

As can be seen from the diagram, on the territory of RFSD-Dobrich, OF inspections in the commercial network were carried out only in retail establishments. For the period 2014-2017 25 objects were checked, with 25 inspections carried out in them. No violations were found in relation to the rules on the use of terms and signs for a biological method of production, no prescriptions have been issued and no acts have been drawn up to establish administrative violations.

On the territory of RFSD - Varna, in relation to OF, they are for the period 2014-2017. in addition to 89 retail establishments, two wholesale establishments were also inspected.

In the total of 92 inspections carried out, no prescriptions were issued and no acts were drawn up to establish administrative violations.

On the territory of the Republic of Bulgaria to comply with the rules on the use of terms and signs for organic production method: 138 wholesale sites (267 inspections), 1831 retail sites (2716 inspections) and 12 other sites (13 inspections) were inspected. A total of 80 prescriptions were issued for established violations (4 in wholesale establishments, 70 in retail establishments and 6 in other establishments). A total of 8 acts were drawn up to establish administrative violations (1 in a wholesale facility, 4 in retail facilities and 3 in other facilities).

Since 2018, after the entry into force of Ordinance No. 5 of 09/03/2018, the BABH carries out the official control of the use of terms and signs for biological production method in the commercial network, according to standard operating procedure (SOP) KH-24, approved by the executive director of BBAH with Order RD 11-1780/03.09.2018. The last one was updated in 2019 with Order RD 11-1885/12.09.2019.

In separate sections of the Procedure, the following are described in detail: purpose, scope, responsibilities and rights, legislation, planning of official inspections and carrying out inspections.

The results of OF inspections in the commercial network, based on information provided by the BFSA for the period 2018-2019, are reflected in the following diagram:

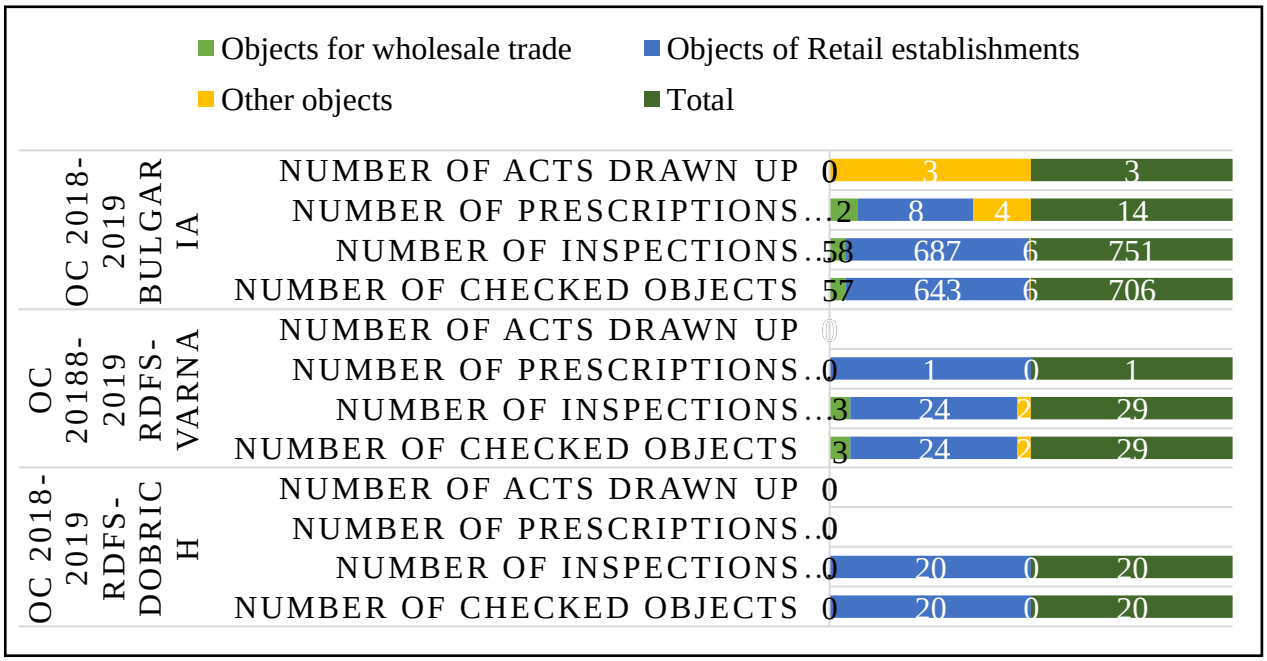

Figure 5. OK of organic food in commercial establishments on the territory of RFSD - Dobrich, RFSD - Varna and RB (2018-2019)

Analogous to the previous analyzed period, on the territory of RFSD-Dobrich, OF inspections in the commercial network were carried out only in retail establishments, and no violations were found in relation to the rules on the use of terms and signs for a biological method of production, no prescriptions have been issued and no acts have been drawn up to establish administrative violations.

On the territory of RFSD - Varna in relation to OF are for the period 2018-2019 in addition to retail establishments, wholesale establishments and other establishments were also inspected, and one prescription was issued at a retail establishment. There are no documents drawn up to establish administrative violations.

V. 3. 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.

Socio-demographic characteristics of the persons included in the scientific study

Establishing the socio-demographic profile of the study participants is essential to determine the biological user profile. The analyzes of the eight questions asked at the end of the survey also contribute to this. In addition to the distribution by gender and age (5 age intervals), the respondents gave answers in connection with the degree of completed education; marital status; a description that best reflects the household's financial situation; the respondent's current main occupation; number of persons in the household and number of children under 18. in the household.

It was found that out of 150 surveyed respondents, the distribution by gender was: 65.3 % (n= 98) women and 34.7% (n=52) men (Figure 6).

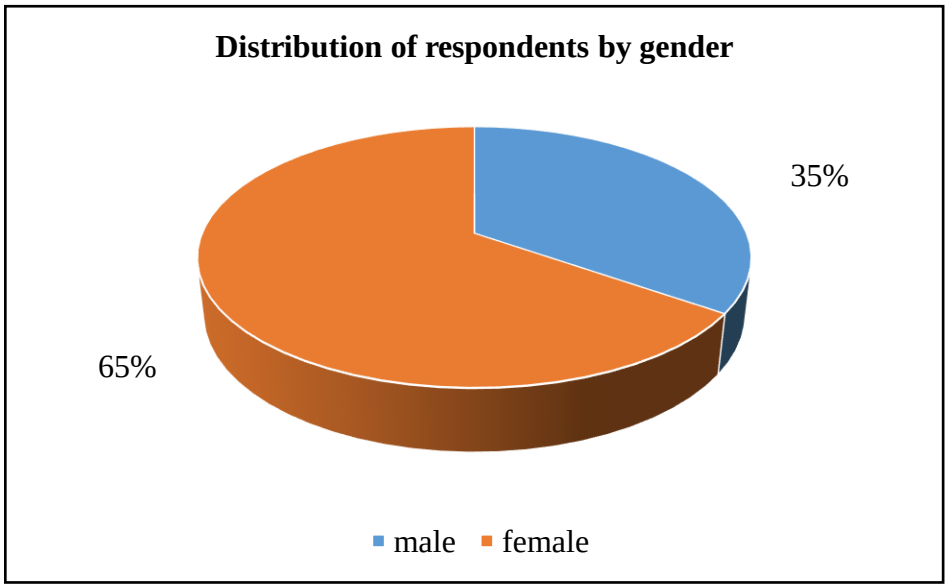

Figure 6. Relative share (%) of respondents, distributed by gender

When analyzing the age of the respondents, the following age range was used: 18-30, 31-40, 41-50, 51-60 and > 6 1 years. Their distribution is as follows (Figure 7): 18-30 - 20.7 % (n=31); 31-40 - 14.6 % (n=22); 41-50 – 20% (n = 30); 51-60 – 30.7% (n = 46); > 6 1 - 14% (n=21).

The average age of the respondents was 46.1 ± 14.7 years, with the oldest participant being a woman, 83 years old.

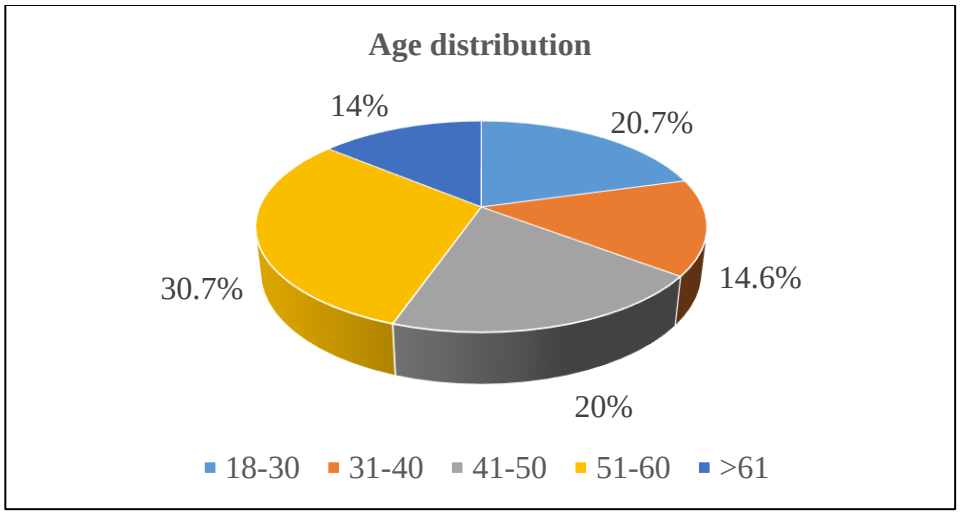

Figure 7. Relative share (%) of respondents, distributed by age

The levels of completed education that respondents must indicate in the surveys are: lower than elementary, elementary, primary, secondary, bachelor, master and doctor.

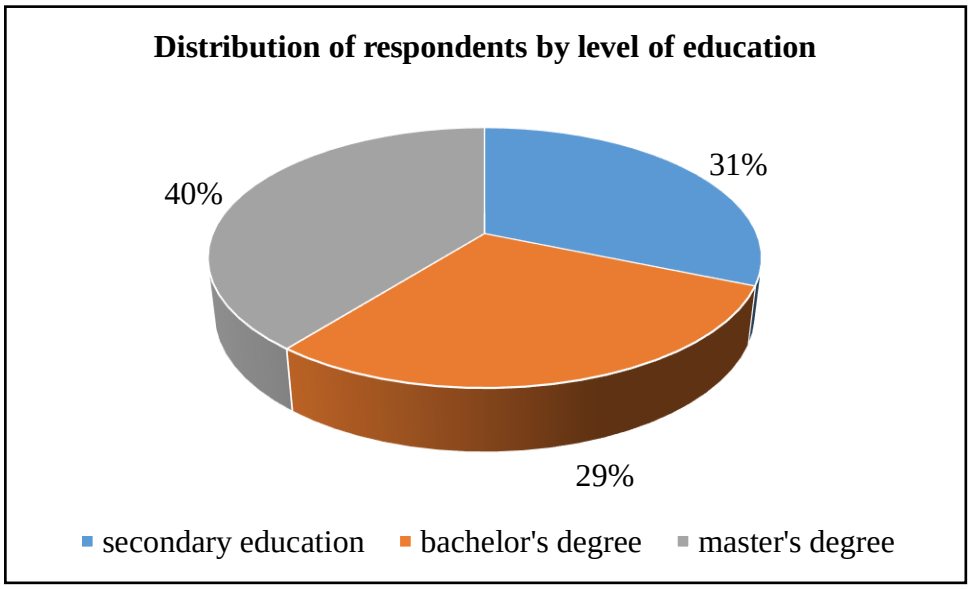

Figure 8. Relative share (%) of respondents, distributed by degree of completed education

When analyzing the data, the largest share of participants with a master's degree 39.3 % (n=59) was found, followed by those with secondary education 31.3% (n=47) and with a bachelor's degree 29.4% (n=44) (Figure 8).

The frequency range of respondents according to the defined categories for marital status is presented as follows: single 19.3 % (n=29); married or living with a partner 72% (n=108); divorced or separated 6% (n=9); widower/widow 2.7% (n=4) (Figure 9).

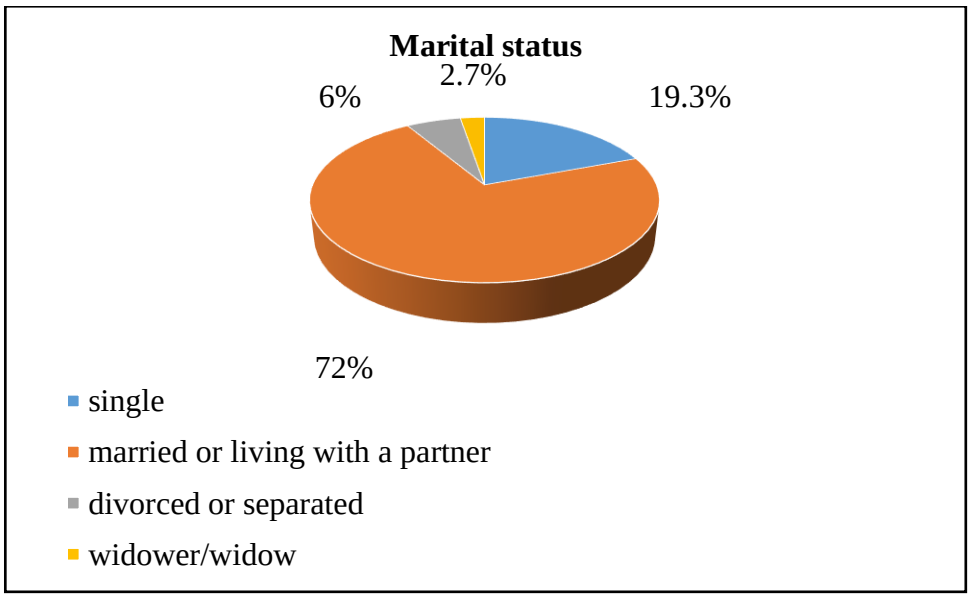

Figure 9. Relative share (%) of respondents, distributed by family status

In order to clarify the financial status of the respondents, the participants are asked to indicate the description that best reflects the financial situation of the household in which they live, namely: We don't even have enough money for food (1); We have enough money for food, but we still have difficulties (2); Money reaches us for food and clothing; we can save (3); We can afford to buy expensive things (4); We can afford to buy whatever we want (5).

Table 1. Frequency distribution of respondents according to the financial situation of the household

Respondents	Number n	Relative share %	Cumulative Frequency %
1. We don't even have enough money for food	1	0.7%	0.7%
2. We have enough money for food, but we still have difficulties	49	32.7%	33.3%
3. We have enough money for food and clothing; we can save	75	50.0%	83.3%
4. We can afford to buy expensive things	15	10.0%	93.3%
5. We can afford to buy whatever we want	10	6.7%	100.0 %

Half of the respondents refer to the financial status of their households, such as: "We have enough money for food and clothing; we can save" (50%); followed by those for whom "The money is enough for food, but they still have difficulties" (32.7%); the relative share of respondents who can afford to buy expensive things is 10%; Lower than that (6.7%) is the share of those who can afford

to buy whatever they want; Less than one percent (0.7%) are those participating in the survey who share that "They don't have enough money even for food".

A study of the main occupation at the time of conducting the survey, presents the following distribution of respondents (Table 2):

Table 2. Frequency distribution of respondents according to their employment

Respondents	Number n	Relative Share %	Cumulative Frequency %
Working in the private sector	68	45.3%	45.3%
Working in the public sector	47	31.3%	76.7%
Farmer or fisherman	1	0.7%	77.3%
Private entrepreneur or businessman	7	4.7%	82.0%
Unemployed	4	2.7%	84.7%
Retired	15	10.0%	94.7%
Learner (pupil or student)	8	5.3%	100.0 %

The majority of respondents are working in the private sector (45.3%), followed by those in the public sector (31.3%), pensioners (10%), students (5.3), private entrepreneurs or businessmen (4.7%), unemployed (2.7%) and farmers or fishermen (0.7%).

All variables forming the demographic and socio-demographic profile of the respondents from the Dobrich region, participating in the scientific study, are presented in a summarized form with their nominal and relative values in Table 3.

Table 3. Demographic and socio-economic profile of the respondents from the Dobrich region, participants in the study

no	**Variable**	**Number of respondents (n= 150)**	**Relative share (%)**
1.	**gender**		
	Men	52	34.7
	Women	98	65.3
2.	**Age**		
	18 - 30 years	31	20.7
	31-40 years	22	14.6
	41-50 years	30	20.0
	5 1-60 years	46	30.7
	61> years	21	14.0

3.	**With a beat on completed education**		
	Secondary education	47	31.3
	Bachelor	44	29.3
	Master's degree	59	39.3
4.	**Marital status**		
	Unmarried	29	19.3
	Married or Living with a partner	108	72.0
	divorced or divided	9	6.0
	In widow	4	2.7
5.	**Description of the financial situation on household**		
	We don't even have enough money for food	1	0.7
	We have enough money for food, but we still have difficulties	49	32.7
	We have enough money for food and clothing, we can save	75	50.0
	We can afford to buy expensive things	15	10.0
	We can afford to buy whatever we want	10	6.7
6.	**Professional employment**		
	Working in the private sector sector	68	45.3
	Worker in the state sector	47	31.3
	Agricultural, owner or fisherman	1	0.7
	Honorable entrepreneur or businessman	7	4.7
	Unemployed	4	2.7
	Retired	15	10
	Learner (pupil/student)	8	5.3

The information related to disclosure of the socio-demographic profile of the respondents is supplemented by the characteristics - number of members in the household and number of children in the household under 18 years. Household members of users in the research are distributed with the following relative proportions: 34% of respondents (n=51) reported three members; 31.3% (n=47) for two; 22% (n=33) for four; 6.7% (n=10) for one; 3.3% (n=5) are the 5th in the household; 2% (n= 3) indicate 6 and 0.7% (n=1) are from a 7-member household.

The participants in the scientific research regarding the number of children in the household under the age of 18 can be divided according to their answers into three groups: we have no children under the age of 18, we have one child under the age of 18. and we have two children under 18. In the variation analysis of the variable - number of children in the household, the following frequency distribution is obtained (Table 4):

Table 4. Frequency distribution of respondents according to the number of children in the household under 18 years of age

Respondents	Number n	Relative Share %	Cumulative Frequency %
No children under 18.	96	64.0%	64.0%
There is 1 child under 18.	37	24.7%	88.7%
There are 2 children under 18.	17	11.3%	100.0 %

Knowledge of the surveyed users regarding the characteristics of OF

Revealing the level of knowledge of the participants in the survey regarding the essence of OF has a determining importance for forming their profile, choosing BH for inclusion in their diet, frequency of purchase. We establish it by asking the question: **What do you associate the concept of organic food with? (**Respondents are asked to choose one or more of the answers included in the survey).

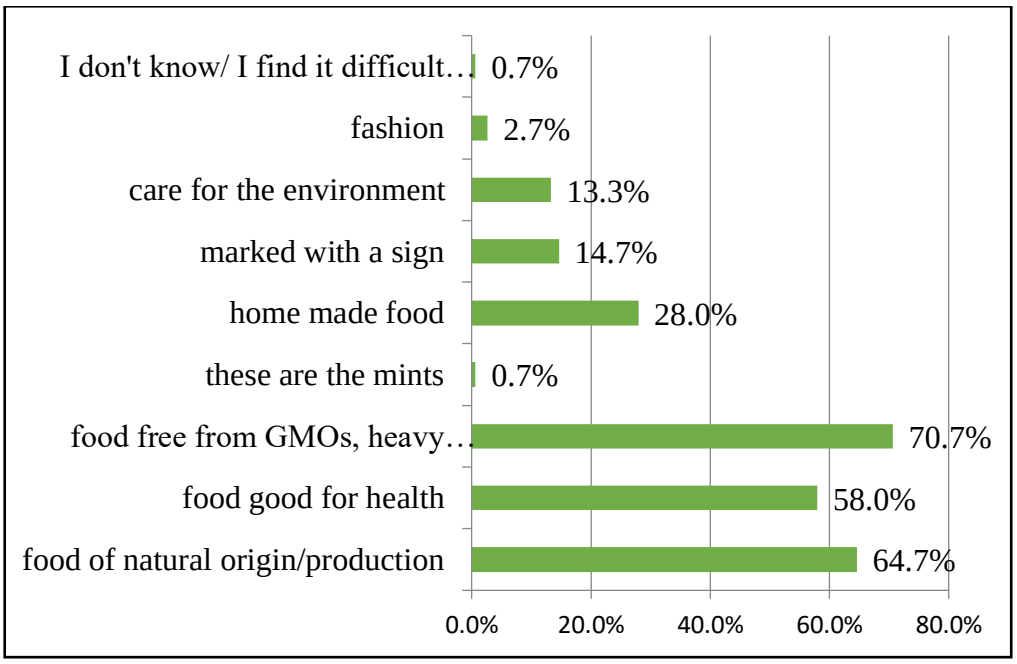

Figure 10. Relative share (%) of respondents regarding their knowledge of OF

The data reveal that the majority of respondents have a positive attitude towards OF and know their characteristics well. Almost two-thirds (76.7%, n=115) of the respondents perceive OF as free from GMOs, heavy metals, pesticides, chemical fertilizers and antibiotics, hormones, preservatives and dyes. Only 0.7% (n=1) of the study participants noted a negative attitude towards organic foods - "eat the mints". Participants are identified who find in OF "fashion" 2.7% (n=4) . One of the respondents - 0.7% does not have an answer or has difficulty in giving it.

Survey participants can select one or more reasons for their intention to purchase OF, which are presented in Figure 11:

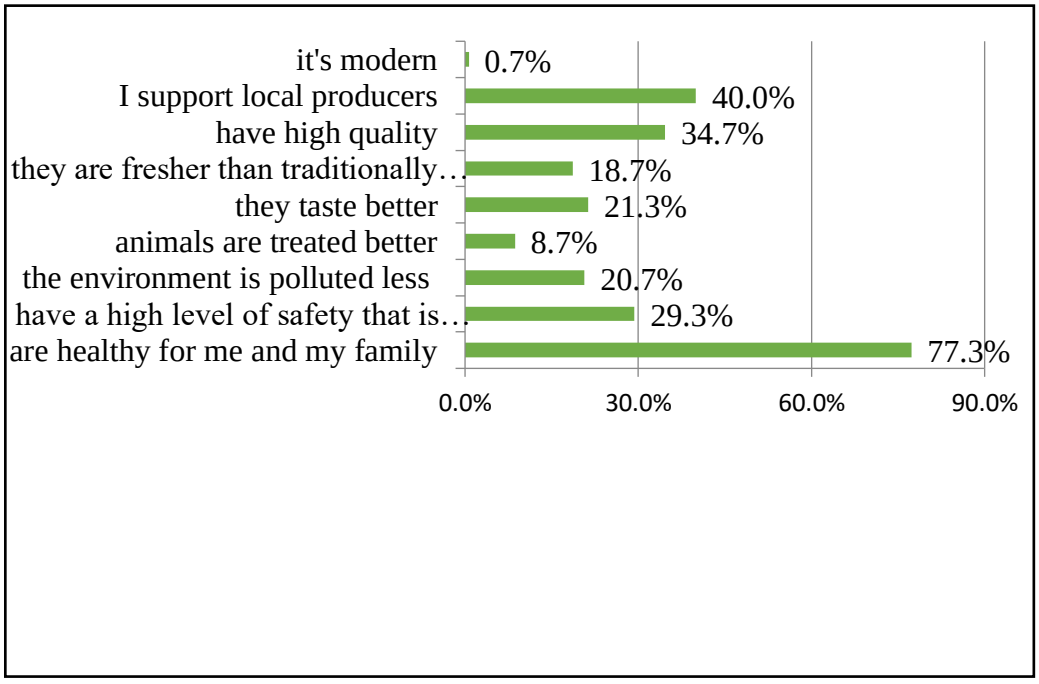

Figure 11. Relative share (%) of respondents regarding their reasons for purchasing OF

The respondents who choose OF due to health awareness have the largest relative share, 77.3% (n=116). 40% (n=60) of the respondents stated willingness to support local producers through OF . Over a third (34.7%, n=52) of the study participants found OF to be of high quality. With the support of 29.3% (n=44) is the belief to purchase OF, due to their high level of safety, which is guaranteed and controlled. One participant (0.7%) is motivated by the belief that it is fashionable.

The relationships between variables related to consumers' knowledge about OF on the one hand and different purchase motives on the other hand were investigated. The non-parametric cross-tabulation test was applied to establish the frequency distribution of the variables and Pearson 's χ^2 - test .

We find that 82.6% (n=95) buy OF because of the belief of their positive influence on personal and family health. The results of the χ^2- square analysis show that there is a statistically significant difference between those who perceive OF as food free from GMOs, heavy metals, pesticides, chemical fertilizers and antibiotics, hormones, preservatives and dyes and those who are motivated to buy OF for health reasons (are healthy for me and my family) (χ^2=7.82 and p=0.005).

A statistical dependent difference is established between the variables - association of OF as "foods free from GMOs, heavy metals, pesticides, chemical fertilizers and antibiotics, hormones, preservatives and dyes" and the reasons for buying: “have a high level of a safety that is guaranteed and controlled” (χ^2=9.49 and p=0.002) and "the environment becomes less polluted" (χ^2=4.07 and p =0.044) .

OF users are 87.8% of those who have an idea about the characteristics of OF and choose them, motivated by the most important reason for the respondents in their preference for them: the positive impact on health (χ^2=13.7 and p < 0.0 01).

The results of the statistical analysis of the frequency distributions of the remaining variables, providing information on the attitudes of consumers about OF, to the reasons determining their purchase behavior, are presented in a table as follows:

Table 5. Statistically dependent results of conducted χ^2- test of variables related to association and reasons for buying OF

Variables	I buy OF because I believe that they have a high level of safety, which is guaranteed and controls early		I buy OF because I believe they taste better		I buy OF because I believe they are fresher than traditionally grown foods		I buy OF because I believe they have high quality		I buy OF because I believe that I support the locals producers	
	χ^2	p	χ^2	p	χ^2	p	χ^2	p	χ^2	p

I associate the term I buy OF because I believe they have high quality with food of natural origin/production	NA	NA	NA	NA	**4.6**	**0.032 ***	**3.72**	**0.054**	NA	NA
I associate the term OF with food benefits for health	**3.96**	**0.046 ***	NA	NA	NA	NA	**4.12**	**0.042 ***	NA	NA
I associate the concept of OF with homemade food	NA	NA	**5.01**	**0.025 ***	3.77	0.052	NA	NA	**14.3**	**<0.001***
associate the concept of OF with foods marked with a sign	**14.6**	**<0.001 ***	NA	NA	NA	NA	NA	NA	NA	NA
I associate the concept of OF with care for the environment	**18.4**	**<0.001 ***	NA	NA	NA	NA	**4.21**	**0.040 ***	NA	NA

Pearson 's χ^2

p * significance level at $\alpha = 0.05$

The formation of consumers' attitudes and their behavior when choosing OF is largely determined by the information they have on the subject. To analyze this aspect, the survey included a question: From which sources do you usually get information about organic food?

(Respondents are asked to choose one or more of the answers included in the survey)

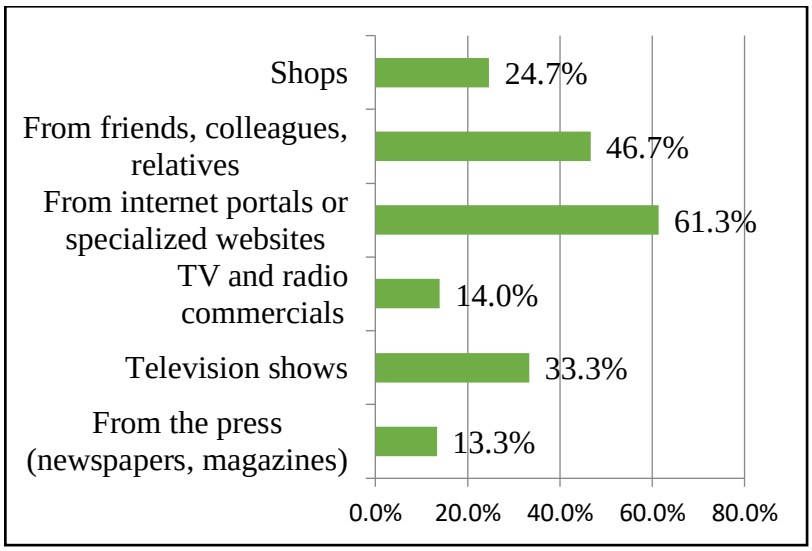

Figure 12. Relative share (%) of respondents using different information sources for OF

With the largest relative share are internet portals or specialized websites 61.3% (n=92), which can provide up-to-date and reliable information about OF. Under half (46.7%, n=70) of the respondents form their own attitudes for OF, referring to everything on information from friends , colleagues, relatives.

We examine how different sources of information affect respondents' knowledge of their perceptions of OP. The results of the crosstabulation of the dependent variables allows us to establish/reject the presence of statistical dependencies between them. The relative share of the respondents, 83.7% (n=77) of those using Internet portals and specialized sites, which connect OF with foods free from GMOs, heavy metals, pesticides, chemical fertilizers and antibiotics, hormones, preservatives and colorings is high (χ^2=6.57 and p=0.010). One of the characteristics of OF is their marking with a sign. Data analysis shows that 29.7% (n=11) of respondents who get information about OF from stores associate this type of food with a special label, compared to only 9.7% of respondents who use a source of information other than stores (χ^2= 8.90 and p =0.003). In parallel, it was found that 40.5% (n=15) of the respondents who received information about OF from stores were influenced to associate them with the qualities of home food, compared to 23.9% of those who received information through other channels (χ^2=3.83 and p=0.050).

Consumers arrive at the decision to purchase OF not only under the influence of their knowledge, but also based on the information they receive about them in various ways.

Table 6. Statistical dependent results of conducted χ^2 test of variables related to sources of information and reasons for buying OF

Variables	I buy OF because I believe they are healthy	I buy OF because I believe that they have a	I buy OF because I believe they	I buy OF because I believe that the	I buy OF because I believe that I support the

	for me and my family		high level of safety , which is guaranteed and controlled		are of high quality		environment is polluted less		locals manufacturers _	
	χ^2	p	χ^2	p	χ^2	p	χ^2	p	χ^2	p
I usually get information about OF from TV shows	3.73	0.054	4.12	0.042 *	NA	NA	NA	NA	NA	NA
I usually get information about OF from internet portals or specialized websites	7.53	0.006 *	8.71	0.003 *	4.63	0.031 *	NA	NA	NA	NA
usually get information about OF from friends, colleagues, relatives	NA	NA	NA	NA	NA	NA	NA	NA	2.79	0.095
I usually get information about OF from stores	NA	NA	6.54	0.011 *	4.24	0.039 *	4.15	0.042 *	NA	NA

Pearson 's χ^2

p * significance level at $\alpha = 0.05$

The results of the statistical treatment of the relationships between the categorical variables related to the sources of information and the reasons for choosing OF show that information in stores affects the distribution of respondents in their belief about the safety of OF. When consumers trust stores, 38.6% (n=17) buy OF with the belief that they "have a high level of safety that is guaranteed and controlled", compared to 61.4% (n=27) of those using other sources of information (χ^2= 6.54 and p=0.011). Internet portals and specialized sites have a credible influence on consumers when purchasing OF, related to a reason for their healthiness and the high level of safety that is guaranteed and controlled, respectively with data from the χ^2 test (χ^2= 7.53 and p =0.006) and (χ^2=8.71 and p =0.003) (Table 6.).

On the question, "How often do you buy organic food?", survey respondents are asked to select only one answer.

The criterion of frequency of purchase of OF allows us to conditionally qualify consumers as regular, occasional and non-buyers. We can refer to the regular ones who buy daily and once a week, and to the occasional ones, those who buy from one to three times a month, at least once a year and less often than once a year. The results of the study of the frequency of purchase of organic food by consumers in the Dobrich region is presented in Figure 13.

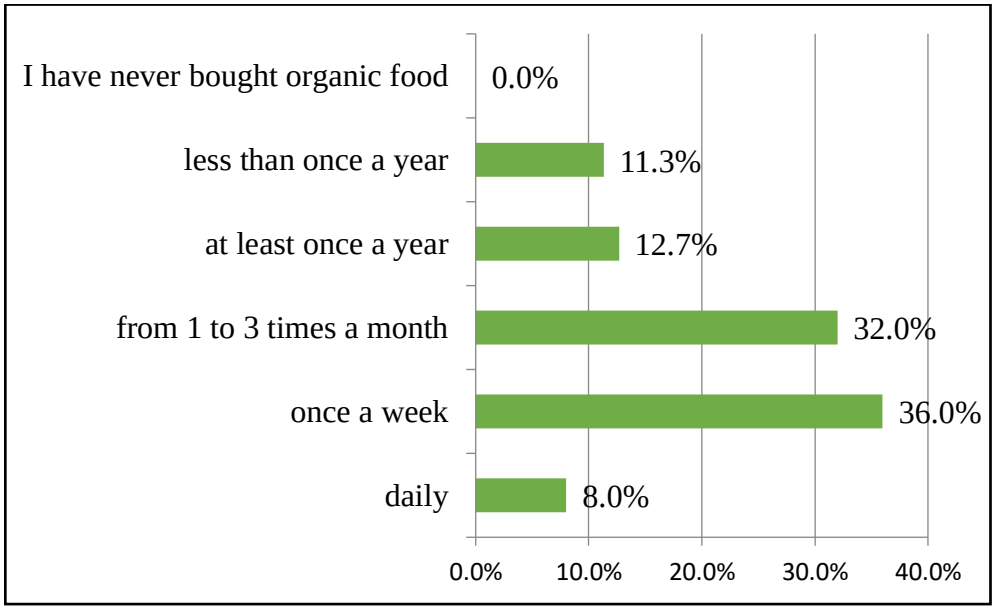

Figure 13. Relative share (%) of the respondents, according to the frequency of buying OF

As can be seen from the diagram, the largest relative share is those who buy organic food once a week - 36% (n=54) , which puts them in the group of regular buyers. Followed by users who choose OF from one to three times a month 32% (n=48) or these are occasional users. This category also includes those who buy OF at least once a year and less often than once a year with the respective shares: 12.7% (n=19) and 11.3% (n=17) . Regular users of OF, but with a small relative share, are those who buy daily or 8% (n=12). Of all the participants who responded to the survey, there are none who report that "I have never bought organic food". In general, casual OF users predominate among the respondents. We will analyze the socio-demographic characteristics of the group including *regular* (once a week – 36%) and *occasional* users with the largest relative share (32%). In the sample of regular users with a relative share of 36% of all users, women predominate 68.5% (n=37), in the age range 51-60 years, 29.62% (n=16), with a master's degree 50% (n=27), married or living with a partner 79.6% (n=43), who define their financial situation as "we have enough money for food; we can save" - 59.3% (n=32), working in the private sector 50% (n=27), in households consisting of three people 38.9% (n=21) and without children under 18 years 46.3% (n=25).

Apart from the frequency distributions, differences in the variables of the two groups of users are found in terms of the degree of completed education, which for occasional users has a tendency to predominate in the direction of participants with secondary education working in the public sector.

The frequency of buying OF is influenced by the sources of information forming the attitudes towards this type of food in consumers. We found that the relative share of daily OF buyers is 75 % among consumers who are informed by friends, colleagues and relatives , compared to 25 % of the

rest who are informed by other sources (χ^2=4.21 and p=0.040). The influence of friends, colleagues and relatives is for 23.5% of occasional buyers (less than once a year) compared to 76.5% of the other respondents (χ^2=4.12 and p=0.042).

For regular buyers of OF (with a relative share of 36%), a significant effect was identified from the side of the quality characteristics of OF (χ^2=9.65 and p=0.002), health consciousness (χ^2=6.43 and p =0.011) and weaker in terms of the support of local producers (χ^2=3.86 p=0.049) among daily buyers (with a relative share of 8%). The frequency of purchase among casual consumers (with a relative share of 32%) is influenced by the most important reason – the positive impact on health (χ^2=4.96 and p=0.026).

The study also examines the reason with the greatest weight for consumers to buy organic food. Respondents can choose only one of the proposed answers.

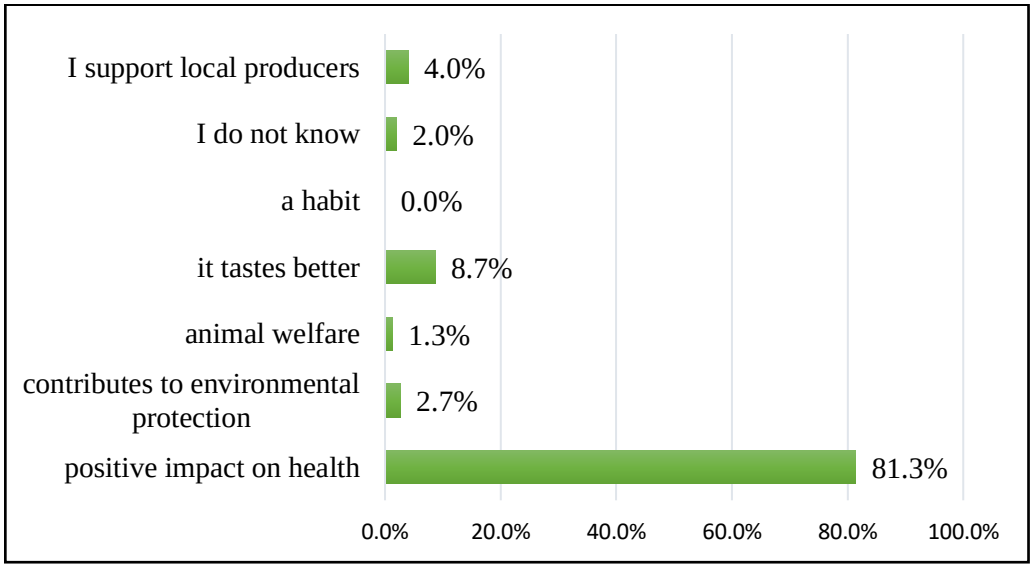

Figure 14. Relative share (%) of consumers according to the most important reason for buying OF

With the largest relative share, 81.3% (n=122) are the respondents for whom the "positive impact on health" is the most important motive. There are no respondents for whom buying OF is a "habit". Only a quarter 23.8% (n=29) of the consumers who chose the most important reason for buying OF (the positive impact on health) perceive them as homemade food, compared to about half of the respondents with another motive for consuming OF, in which 46.4% also perceive it as homemade. (χ^2=5.80 and p=0.016) .

The orientation of the modern consumer towards OF can be stimulated and limited by a number of factors. With the question "What would encourage you to buy organic food more often?", aims to identify the conditions that will motivate consumers to increase the purchase of OF. Research participants may indicate more than one of the included responses.

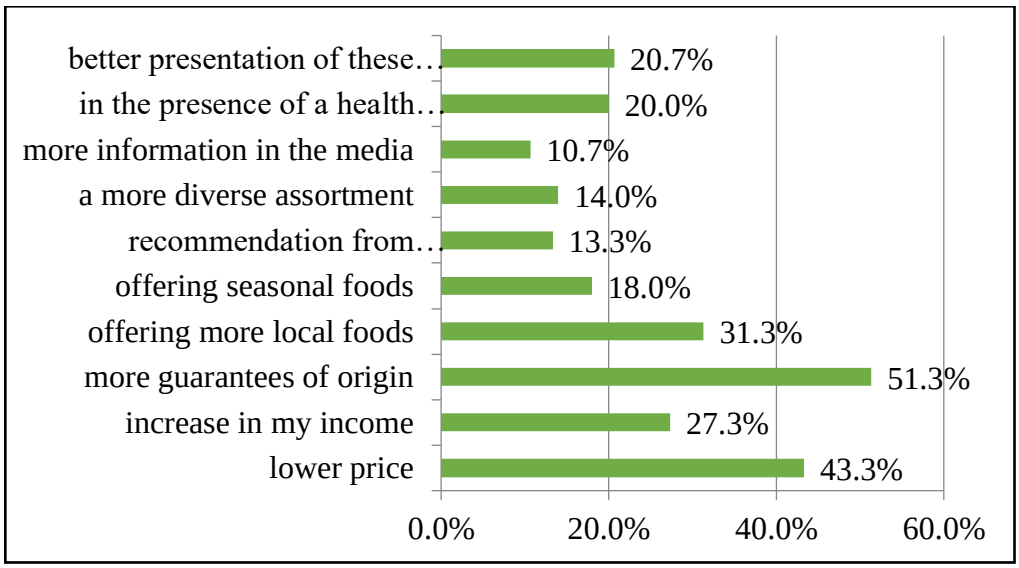

Figure 15. Relative share (%) of the respondents, depending on the stimulating factors for the purchase of OF

Almost half of the respondents share that the availability of more guarantees of origin - 51.3% (n=77) - will increase their choice of OF. The high prices of OF is a barrier to their purchase, therefore 43.3% (n=65) of the participants in the study find lowering prices as a potential solution to this deterrence. Support for the local economy, expressed in offering more local food, is another stimulating factor for consumers - 31.3% (n=47).

Statistical dependencies were demonstrated in the relations of the frequency distributions of the variables related to the stimulating factors: more guarantees of origin (χ^2=4.50 and p=0.034), offering more local foods (χ^2= 4.26 and p=0.039) and offering seasonal foods (χ^2= 6.07 and p=0.014) and consumers' perception of OF as food of natural origin/production.

conducted χ^2-test found a statistically significant difference between the categorical variables, reflecting respectively the respondents' perceptions of OF and their views on increasing the purchase in the presence of more guarantees of origin : χ^2= 9.07 and p=0.003, for the perception “marked with a sign”; χ^2=6.68 and p=0.01, for the perception "care for the environment".

A statistically significant difference was demonstrated in associating OF as foods beneficial to health and offering more local foods as a driver in OF purchases (χ^2=5.78 and p=0.016).

We test the awareness of OF users, due to information from various channels, with a view to analyzing their relationship with the conditions that change the demand for OF in a positive direction (Table 7).

Table 7. Statistically dependent results from conducted χ^2 test of variables related to consumer awareness and factors increasing OF purchase

Variables	Internet portals and specialized sites		Information from friends, colleagues and relatives		Information from stores	
	χ^2	**p**	**χ^2**	**p**	**χ^2**	**p**

The presence of more local foods would encourage me to buy OF more often	**4.98**	**0.026***	**4.58**	**0.032***	NA	NA
A more varied assortment would encourage me to buy OF more often	**6.12**	**0.013***	NA	NA	NA	NA
More information in the media would encourage me to buy OF more often	**5.17**	**0.023***	NA	NA	NA	NA
The recommendations of acquaintances would encourage me to buy OF more often	NA	NA	**5.05**	**0.025***	NA	NA
Better food presentation in stores would encourage me to buy OF more often	NA	NA	**6.97**	**0.008***	**19.1**	**<0.001***
More guarantees of origin would encourage me to buy OF more often	NA	NA	NA	NA	**9.27**	**0.002***
Offering seasonal foods would encourage me to buy OF more often	3.75	0.053	NA	NA	NA	NA

Pearson 's χ^2

p * significance level at $\alpha = 0.05$

We tested several hypotheses regarding the interactions of motivational factors and reasons for buying OF. When conducting the χ^2-test of 16 hypotheses, thirteen were supported and three were rejected. The greatest statistical dependence is found with the hypothesis "Offering seasonal foods would encourage more frequent buying of OF, as I believe they are fresher than traditionally grown foods" (χ^2=10.6 and p=0.001). The weakest statistical dependence was determined when testing the hypothesis "Offering more local foods would encourage more frequent buying of OF because I believe they have a high level of safety that is guaranteed and controlled" (χ^2=4.06 and p=0.044).

A question was added to the survey aimed at noting for whom OF are intended. Research participants may indicate more than one of the included responses.

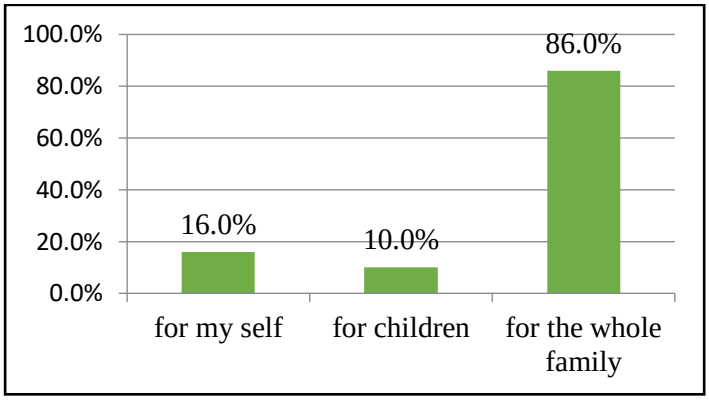

Figure 16. Relative share (%) of the respondents, depending on the purpose of the OF

With the largest relative share are the respondents who buy OF for the whole family - 86.00% (n=129). The relations of the addressees of OF with the motives of buying OF, the sources of information about them, as well as with the promoting factors were analyzed.

As a result of the cross- tabulation , it was found that 75% (n=18) of those buying OF for themselves chose the answer - "they are healthy for me and my family". Slightly more than half, 58% (n=14) of respondents associate this process with support for the local economy, and 45% (n=11) of those who buy for themselves are motivated by the high quality of OF. There is not a single participant in the study choosing OF for themselves because it is fashionable.

A statistically significant difference was found in the χ^2 test in relation to those buying OF for themselves, convinced that they support local productions (χ^2= 4 and p=0.045). When buying OF for children, the respondents to the greatest extent believe that they are healthy - 88% (n=13) . The second most important motive for the respondents is the high quality - 53.3% (n=8) and 46.7% (n=7) of those buying for children support local producers. One of the users finds OF to be fashionable 7% (n=1).

The healthy motive is the leading one when buying OF and for the whole family - 80% (n=103). The difference between the frequency distribution of the variables is small, but not statistically significant (χ^2=3.32 and p=0.069). Support for local producers is significantly less, 41.1% (n=53) and the high quality of OF, as a motive – 34% (n= 44).

The significant factor that would increase the frequency of buying OF "for yourself" is the lower prices - 63% (n=15). Support for the local economy is an incentive for half of the respondents - 50% (n=12), and 41.7% (n=10), declare that they would buy more for themselves if "my income increased". Only 17% (n=4) of self-buyers would encourage it if they had a health problem.

The χ^2-test conducted to establish statistically significant differences in the variables reflecting the motivating factors for purchasing OF and the respondents driven by the personal motive in choosing the foods included the following results: χ^2=4.27 and p=0.039, regarding the promotion of

buying with lower prices of OF; χ^2=7.93 and p=0.005, regarding trust in OF with providing more guarantees of origin; χ^2=4.63 and p=0.031, regarding offering more local foods.

Offering more local foods would increase the purchase of OF for children - 66.7% (n=10). The next most important motivating factor indicated by respondents is lower prices - 60% (n=9) and more guarantees for origin – 53.3% (n=8). Having a health problem would appear to be a factor in increasing frequency in only one of the children's buyers.

No statistically significant differences were found when comparing the frequency distributions of the OF purchasing variables for the children and the promoting factors.

The main encouraging factor for respondents buying OF for the whole family is the availability of more guarantees of origin - 55% (n=71). A statistically significant difference is demonstrated when performing the χ^2-test (χ^2= 5.06 and p=0.021) for these variables. Another factor that would increase buying OF for the whole family are lower prices - 41% (n=53) and the offer of more local foods - 32.6% (n=42). The relative share of the respondents buying OF for the whole family, in the presence of a health problem, is significantly larger - 20% (n= 26). At the same time, a statistically dependent difference was found between the respondents buying OF for children and their ability to recognize foods through information about their organic certification (χ^2=4.99 and p 0.025).

Organic foods nowadays are distributed through various outlets. The next question in the survey aims to analyze the channels of their sale. Respondents are asked to choose only one of the given answers to "Where do you most often buy organic food?"

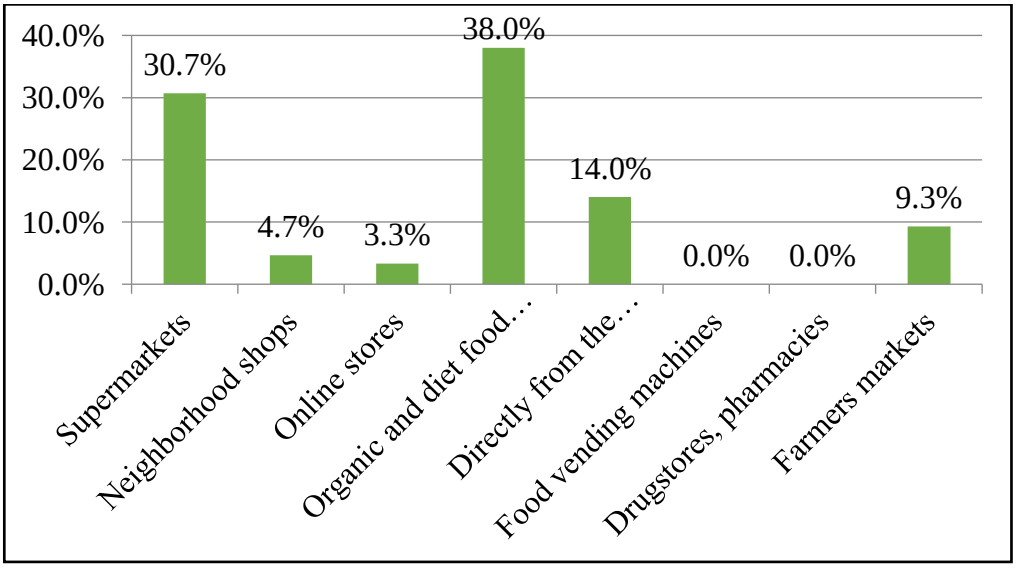

Figure 17. Relative share (%) of respondents according to the place of purchase of OF

Organic and dietetic food stores were indicated by the respondents as the most frequently chosen for the purchase of OF - 38% (n=57). The smallest is the relative share of neighborhood stores 4.7% (n=7) and online stores 3.3% (n=5). Vending machines, drugstores and pharmacies were not mentioned as a place to buy OF by the respondents.

The interaction of OF purchase locations with a number of other variables, such as attitudes, sources of information, frequency, motives, and promoting factors, has been consistently analyzed. A little more than half of the respondents, who most often buy food directly from the producer 52.4% (n=11), associate OF with home-produced food (χ^2=7.20 and p=0.007). Part of the participants in the study, 24.6% (n=11) , who choose organic and dietary food stores, associate OF with foods marked with a sign (χ^2=7.19 and p=0.007).

Various sources of information influence the choice of consumers to go to specialized retail outlets. One in four (24.6%, n=14) of those visiting organic and diet food stores use information from television programs to educate themselves on the subject (χ^2=3.18 and p=0.074), while 36.8% (n= 21) of the same consumers based on information obtained from stores (χ^2=7.33 and p=0.007).

A smaller statistically significant difference is determined for respondents who buy food more often in supermarkets and who form their attitudes from TV shows and friends, colleagues, relatives: χ^2=6.27 and p=0.012, for source - television shows; χ^2=7.27 and p=0.022, for source - friends, colleagues and relatives.

Conducted χ^2-test for casual consumers buying OF in supermarkets , proves a statistically significant difference (χ^2=5.13 and p=0.023).

The relationships between the motives for buying OF and the places most often visited by consumers for this were analyzed, and the obtained results are reflected in the table as follows (Table 8):

Table 8. Statistically dependent results of conducted χ^2 test of variables related to places and reasons for buying OF

Variables	Supermarket		Organic and diet food stores		Direct from the manufacturer - home delivery		Farmers markets	
	χ^2	**p**	**χ^2**	**χ^2**	**p**	**p**	**χ^2**	**p**
I buy OF because I believe they have a high level of safety that is guaranteed and controlled	NA	NA	3.81	0.051	NA	NA	NA	NA
I buy OF because I believe that the environment gets less polluted	NA	NA	**4.70**	**0.030 ***	NA	NA	NA	NA
I buy OF because I believe they taste better	**4.33**	**0.037 ***	NA	NA	NA	NA	NA	NA

I buy OF because I believe I am supporting local people manufacturers _	**11.5**	**< 0.001 ***	NA	NA	2.99	0.084	3.79	0.051
I buy OF because I believe they have a positive effect on health	**4.34**	**0.037 ***	NA	NA	NA	NA	NA	NA

Pearson 's χ^2

p * significance level at α=0.05

With the greatest statistical support are consumers who buy OF in supermarkets with the belief that they support local producers (χ^2=11.13 and p <0.001). OF consumers would be encouraged in their purchases at specialty stores (χ^2=4.57 and p=0.032) at lower food prices. In supermarkets, stimulating factors are more guarantees of origin (χ^2=3.95 and p=0.047). The presence of more information in the media would also have an influence on respondents choosing organic and dietetic food stores (χ^2=4.56 and p=0.033), and "increasing my income" is for those who prefer direct home delivery from producers (χ^2=3.90 and p=0.048).

How do consumers recognize organic foods? We get information about this, as respondents can indicate more than one answer.

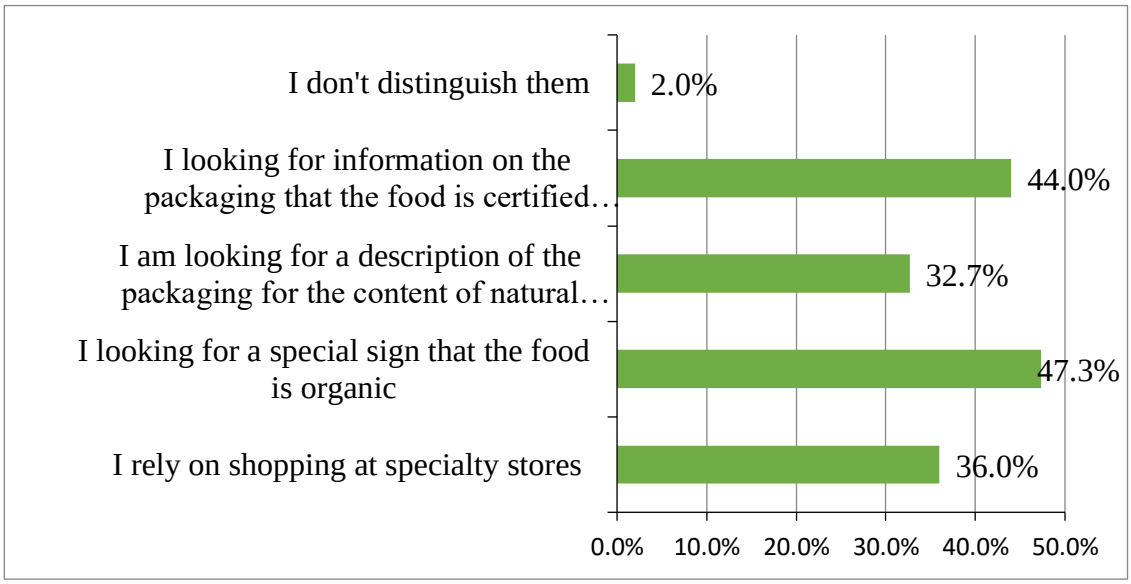

Figure 18. Relative share (%) of the respondents according to the ways of recognizing OF

The answer "I am looking for a special sign that the food is organic" was marked with the greatest support by the participants in the study - 47.3% (n=71). Close to it is the relative share of those who indicated "I am looking for information on the packaging that the food is certified as

organic" - 44% (n= 66). There are also those who trust that they shop in specialized stores - 36% (n= 54) . Only 2% (n=3) of the respondents could not distinguish OF.

Table 9. Statistically dependent results of conducted χ^2 test of variables related to ways of recognition and attitudes towards OF

Variables	I look for information on the packaging that the food is certified organic	
	χ^2	**p**
I associate OF as food with natural origin/ production	5.28	0.022 *
I associate OF as food free from GMOs, heavy metals, pesticides, chemical fertilizers and antibiotics, hormones , preservatives and dyes	6.20	0.013 *
I associate OF as foods marked with a sign	4.03	0.045 *

Pearson 's χ^2

p * significance level at $\alpha = 0.05$

Respondents who know the sign of organic certification associate OF as foods of natural origin (χ^2=5.28 and p=0.022), food free from GMOs, heavy metals, pesticides, chemical fertilizers and antibiotics, hormones, preservatives and colorings (χ^2=6.20 and p=0.013), and marked with a sign (χ^2=4.03 and p=0.045) .

Table 10. Statistically dependent results of conducted χ^2 test of variables related to ways of recognition and sources of information about OF

Variables	I rely on shopping at specialty stores		I look for information on the packaging that the food is certified organic	
	χ^2	**p**	**χ^2**	**P**
I get information about OF from TV shows	NA	NA	**4.38**	**0.036 ***
I receive information about OF from friends, colleagues, relatives	**3.91**	**0.048 ***	NA	NA
Shops	**5.02**	**0.025 ***	3.24	0.072

Pearson 's χ^2

p * significance level at $\alpha = 0.05$

Participants with trust in specialized stores would be positively influenced in buying OF, in the presence of a health problem (χ^2=6.08 and p=0.014). The same stimulating factor also plays a role in respondents who are informed about organic certification (χ^2=5.69 and p=0.017).

Almost one third (29.6%, n=16) of the respondents relying on the fact that they shop in specialized stores, are motivated in the purchase of OF by the care of the environment (χ^2=4.13 and p =0.042). Consumers who most often choose supermarkets to buy OF -19.6% (n=9) , recognize the foods, not by special signs (χ^2=7.78 and p=0.005), but trusting them as in specialized stores. Another part of consumers - 65.2% (n=30) recognize OF in supermarkets, looking for a special sign that the food is organic (χ^2=8.51 and p=0.004).

Regarding the study participants who buy OF mainly in organic and diet food stores, 61.4% (n=35) of them have no need for special food recognition (χ^2=25.8 and p< 0.001). Another part of them - 35.1% (n=20) recognized OF based on the special sign for their designation (χ^2=5.53 and p=0.019).

Do users know the sign with which OF is designated? We obtain information about this by analyzing the data collected when answering the relevant question. Respondents are asked to mark one correct answer.

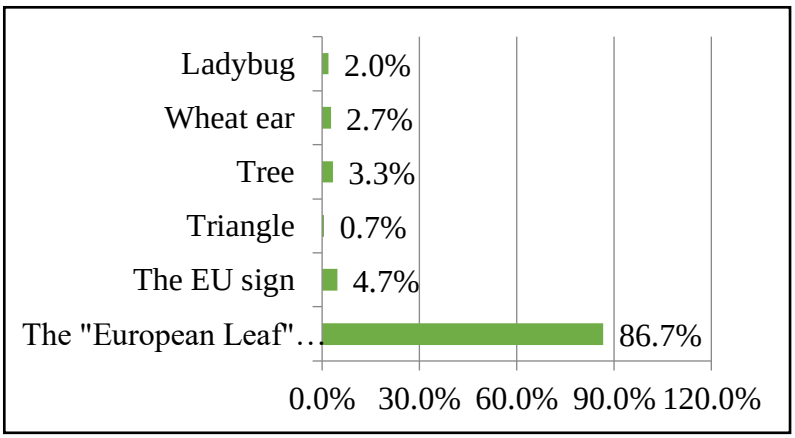

Figure 19. Relative share (%) of respondents according to the ways of describing the OF sign

The majority of respondents - 86.7% (n=130) correctly stated that this is the "European Leaf" sign, depicting the stars symbolizing the EU in the shape of a leaf on a green background.

Table 11. Statistically dependent results of a conducted χ^2 test of variables related to description of OF labeling and attitudes, motives, sources of information, promoting factors and places of purchase

Variables	The sign used to designate organic food is the "European Leaf" sign, depicting the stars symbolizing the EU in the shape of a leaf on a green background	
	χ^2	**p**

Associate the concept of OF with food that is good for health	3.07	0.080
Associate the term OF with home-produced food	**8.34**	**0.004 ***
I usually get information about OF from internet portals or specialized websites	**12.8**	**< 0.001 ***
I buy OF because I believe they have high quality	**3.94**	**0.047 ***
Lower prices would encourage me to buy OF more often	**7.54**	**0.006 ***
I mostly buy OF from organic and diet food stores	3.17	0.075

Pearson 's χ^2

p* significance level at $\alpha = 0.05$

Internet portals or specialized websites had the greatest influence on the respondents for their choice of the description "The sign "European leaf", depicting the stars symbolizing the EU, in the form of a leaf on a green background" (χ^2=12.8 and $p < 0.001$).

We investigate how survey participants determine that foods labeled as organic are, by being able to select more than one answer.

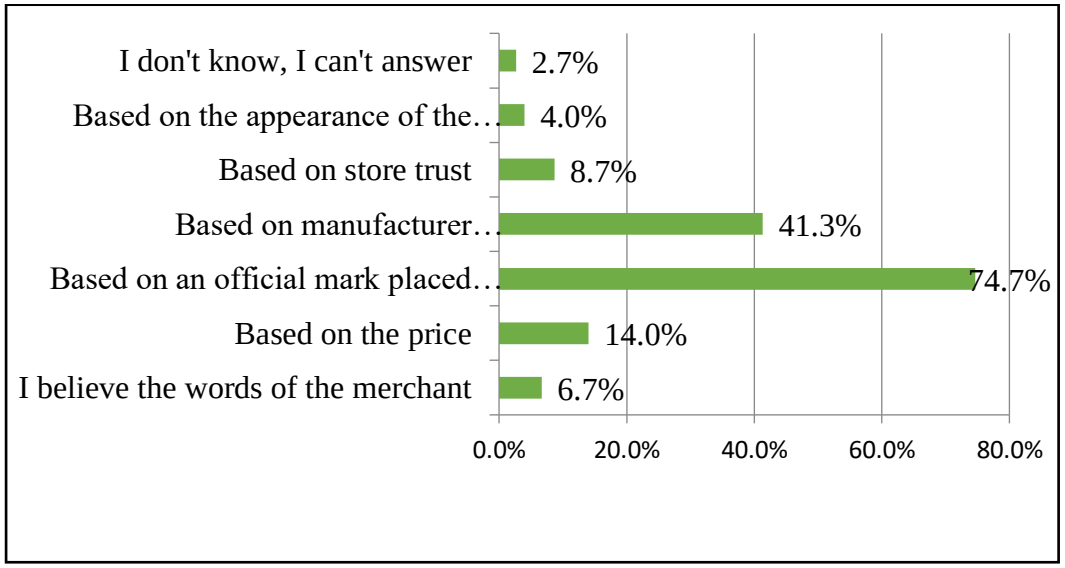

Figure 20. Relative share (%) of respondents according to the signs of orientation for organically labeled foods

Respondents who orient themselves on the basis of an official sign placed on the package have a predominant relative share - 74.7% (n=112). After them are those who are based on manufacturer information – 41.3% (n= 62). The respondents with the smallest relative share are those who, despite the designation of BH, cannot identify the symptom - 2.7% (n=4).

The relationships of the frequency distributions of the variables with the largest relative share (by price, based on an official sign placed on the package and based on information about the manufacturer) and those related to attitudes, reasons, sources of information, places of buying, ways of recognizing and promoting factors for OF. The largest statistically significant difference was found among the respondents who orient themselves towards organically labeled foods by the presence of an official sign placed on the package (χ^2=20.3 and p< 0.001). The influence is also statistically reliable among respondents who choose biologically labeled foods according to the special sign, associating them with foods free of GMOs, heavy metals, pesticides, chemical fertilizers and antibiotics, hormones, preservatives and colorings (χ^2=10 and p= 0.002) **.**

The extent to which the participants in the scientific study are aware of whom they can report to, in case of doubt that a food offered as "organic" is not, is revealed by the answers to the given question. Respondents may indicate more than one answer.

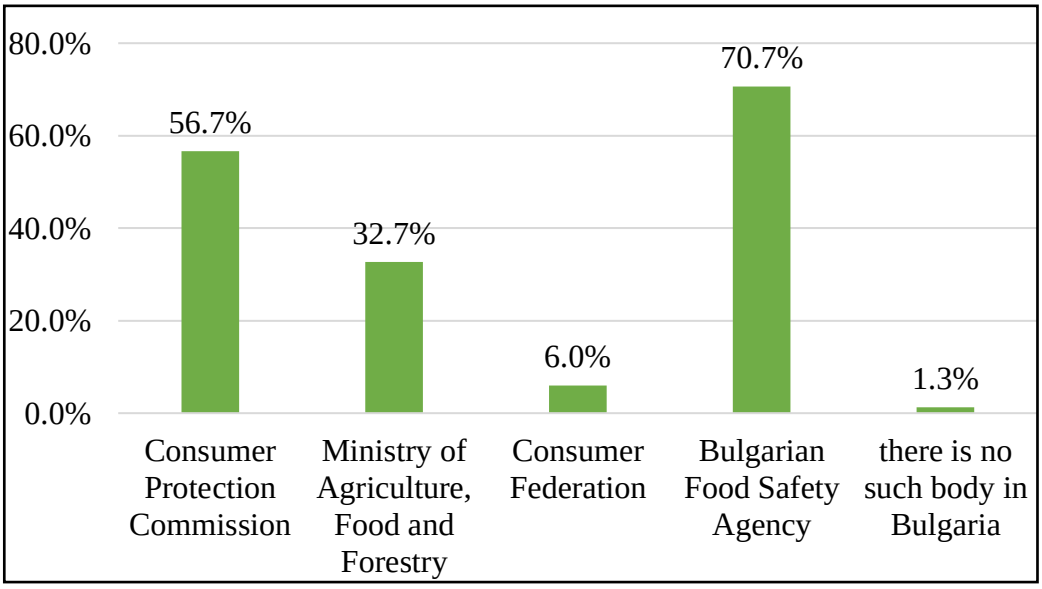

Figure 21. Relative share (%) of respondents according to the addressees for reporting suspicions that a food marketed as "organic" is not

The bodies to which users can report when they doubt the authenticity of OF are recognizable, and 70.7% (n=106) of the respondents would address this to the BFSA. The relative share of 1.3% (n=2) of respondents who do not know about the existence of a body to which they can submit a similar report is insignificant.

The study participants who associate OF as marked with a sign are well informed that when they have doubts about the authenticity of the food, they should report it to the BFSA (χ^2=7.64 and p = 0.006). Statistically reliable is also the result in the relationship between the frequency distribution of the variables reflecting the attitude that OF are foods that have a high level of safety that is guaranteed and controlled and their awareness that if a given food offered as "organic" is not (χ^2=7.40 and p=0.007), they should report to the BFSA **.** The relative share of participants in the study who state that they do not receive sufficient and reliable information about the results of the control activity

in the trade in organic food is large - 81% (n=121). Almost a third (32.4%, n=12) of the respondents, getting educated about OF directly in the stores, declare that they receive sufficient and reliable information about the control activity carried out in the organic food trade (χ^2=5.40 and p=0.020).

The share of consumers (65.5%, n=19) declaring that they receive sufficient and reliable information about the control activity carried out in the trade of organic food is twice as high (χ^2=4.77 and p=0.029) and recognizing them based on the special character. Respondents declaring that they receive enough information about the control activity carried out in the trade of organic food - 93.1% (n=27), orientate themselves on organically labeled foods as such, based on the official sign placed on the packaging (χ^2=6.46 and p=0.011). For part of the regular consumers (buying OF once a week) - 9.3% (n=5), transparency is also provided for the control activity carried out in the organic food trade (χ^2=5.49 and p=019).

The conducted crosstabulation confirmed the hypotheses of the existence of reliable differences between genders in: high quality of OF as the leading motive for buying them (χ^2=8.37 and p=0.004); information about OF from internet portals or specialized websites (χ^2=7.73 and p=0.005); frequency of purchase – once a year (χ^2=7.80 and p=0.005); recognition of OF through information on the packaging that the food is certified as such (χ^2=4.13 and p=0.042); promotion of buying when having a health problem (χ^2=7.54 and p=0.006); encouraging purchase through better presentation of these products in supermarkets and other food stores (χ^2=4.04 and p=0.044); designation of OF produced in the EU with the "European Leaf" sign (χ^2=4.21 and p=0.040); orientation for foods labeled as organic, based on an official sign placed on the package (χ^2=5.28 and p=0.022); reporting to the Ministry of Food and Agriculture in case of suspicion that a food offered as "organic" is not (χ^2=4.80 and p=0.029).

Statistically significant differences were found between the level of education and, respectively, the sources of information about OF (χ^2=8.30 and p=0.016), the recognition of OF by a special sign that the food is biological (χ^2=7.53 and p=0.023) and indicated price as a guide that foods labeled as organic are (χ^2=7.03 and p= 0.030).

Examining the frequency distributions as a result of crosstabulation, we find the following statistically significant differences in households with children under 18: the frequency of buying OF (once a week, for households with one child under 18) - χ^2=11.50 and p=0.003; submitting a report to the Consumer protection commission in case of doubt that a certain food offered as "organic" is not (with two children under 18) - χ^2=7.30 and p=0.026; encouraging buying by offering more local foods (with one child under 18) - χ^2=6.02 and p=0.049.

Respondents were given the opportunity to rate the importance of several statements related to the purchase of OF. Rating is on a 5-point Likert scale , ranging from 1 (not at all important) to 5 (very important).

Table 12. Evaluation of organic food claims in percentages (n=150)

Assertion	It's not important at all	It's not important	I have no opinion	It is essential that	It's very important	Mean	SD
When purchasing OF, the way in which organic foods are distinguished from traditionally grown foods in stores	4.0	3.3	10	42.7	40.0	4.11	0.994
When purchasing OF,the appearance and size of the package	11.3	11.3	20.0	42.7	14.7	3.38	1.2
When purchasing OF the design of the label	8.7	24.0	20.7	30.7	16.0	3.21	1.22
When purchasing OF, the information shown on the product packaging	1.3	0.0	3.3	18.7	76.7	4.69	0.665

The results show that it is very important (76.7%) for the research participants when purchasing OF, what information is shown on the packaging of the products. Important (42.7%) is the way in which OF is distinguished from traditionally grown foods in stores, the appearance and size of the packaging (42.7%). For the representatives of both sexes, the statement with the greatest support is the statement that when buying underwear, the information on the package is very important (53% for women and 23.3% for men).

The respondents' awareness of OF was analyzed by checking the degree of knowledge of the characteristics of these products, again applying the Likert scale . The statements are rated on 3 levels (I disagree, I have no opinion, I agree).

Table 13. Evaluation of organic food claims in percentages (n=150)

Assertion	I do not agree	I have no opinion	I agree	Mean	SD
OF are healthier than conventionally grown foods	1.3	12.7	86.0	2.85	0.397
OF are without genetically modified organisms (GMOs), pesticides , etc. supplements	2.7	8.0	89.3	2.87	0.412
OF taste better than conventionally grown foods	9.3	24.7	66.0	2.57	0.660
OF is not harmful to the environment	2.7	19.3	78.0	2.75	0.491
Organic production guarantees humane he related - us to the animals	3.3	31.3	65.3	2.62	0.555
By buying OF, you can support local producers	2.0	14.0	84.0	2.82	0.435

With the largest relative share is the statement - "OF are free of genetically modified organisms (GMOs), pesticides, chemical fertilizers, antibiotics, hormones and other additives" (89.3%). Again, the statement - "OF are free of genetically modified organisms (GMOs), pesticides, chemical fertilizers, antibiotics, hormones and other additives" has the greatest positive support

among the surveyed women (60%). They also appreciate the statement that OF are healthier compared to traditionally grown ones (56.7%). Among male respondents, in addition to agreeing on the health effect (29.3%), support for the regional economy (29.3%) and environmental protection (26%) are important.

V.4. 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 of organic food in the Dobrich region.

Socio-demographic characteristics of the persons included in the scientific study, trading with OF

In addition to the socio-demographic profile of OF consumers, that of the persons distributing food to consumers is also important. The analyzes of the three questions included at the end of the survey contribute to this: the distribution by gender, age (4 age intervals) and degree of completed education. It was found that out of 50 responding OF merchants, the distribution by gender was: 54 % (n=27) women and 46% (n=23) men.

The average age of the traders surveyed is 40.9 ± 11.1 years, and among women the youngest participant is 26 years old, and among men - 28 years old. The oldest participant in the study was a woman, 65 years old. Among men trading with OF, the maximum age is 62.

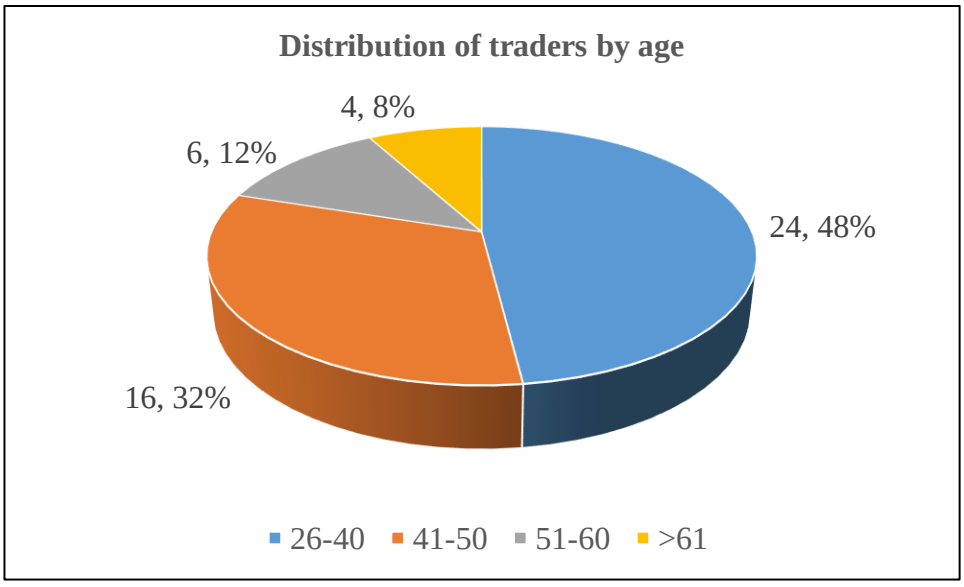

Figure 22. Relative share (%) of OF traders, distributed by age

When analyzing the data, the largest share of participants with secondary education 56% (n=28) was found, followed by those with a master's degree 28% (n= 4) and a bachelor's degree 16% (n=8). In the three age ranges studied, 26-40, 41-50. and 51-60 years. respondents with secondary education predominate , respectively 70.83% (n=17) , 43.75% (n=7) and 50% (n=3). The average age of respondents with secondary education is 37.2±10.6 years. The established average age for bachelors is 41.5±5.04 years. The participating masters have the largest average age of 48.5±11.5 years.

Knowledge of the surveyed merchants regarding the characteristics of OF

Revealing the level of knowledge of survey participants regarding the nature of OF is essential to form their profile, including information on compliance with regulatory requirements, in relation to the OF trade. We establish it by asking the question: What do you associate the concept of organic food with? Respondents are asked to select one or more of the answers included in the survey.

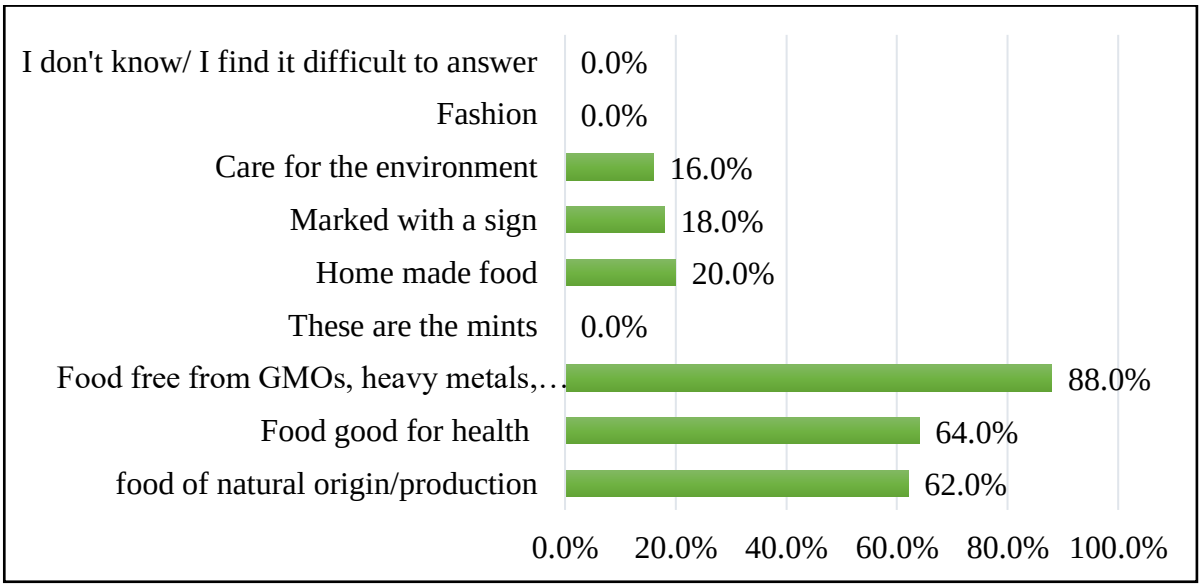

Figure 23. Relative share (%) of respondents regarding their knowledge of OF

The attitude of the respondents towards OF is positive. The results show that the participants are well aware of the characteristics of OF. The majority (88%, n=44) of the respondents perceive OF as free from GMOs, heavy metals, pesticides, chemical fertilizers and antibiotics, hormones, preservatives and dyes; 64% (n=32) associate them as foods beneficial for health; 62% (n=31), with foods of natural origin/production.

The formation of the attitudes of OF traders and their behavior when offering these foods in the sites is determined to a large extent by the information they have on the subject. To analyze this aspect, the survey included a question: From which sources do you usually get information about organic food?

Among the proposed answers, participants can indicate one or more answers.

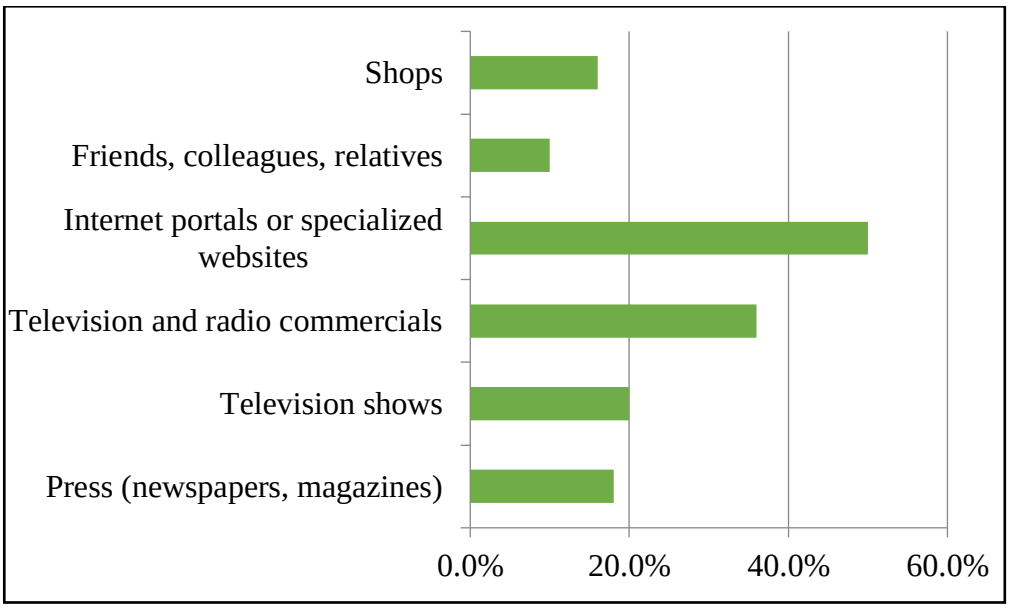

Figure 24. Relative share (%) of respondents using different information sources for OF

Half of the respondents (50%, n=25) are informed about OF from internet portals or specialized websites. Every third (36%, n=18) trader forms their own attitudes for OF, referring to everything on information from television and radio advertisements; TV shows accounted for 40% (n=10) of those surveyed about their education on the topic.

We examine how respondents' different sources of information affect their perceptions of OF, as well as their attitudes toward the reasons for trading with them. The results of the crosstabulation of the variables allows us to establish/reject the presence of statistical dependencies between them.

Table 14. Statistical dependent results of conducted χ^2 test of variables related to sources of information, perceptions of BH and reasons for trading OF

Variables	TV and radio commercials		from internet portals or specialized websites	
	χ^2	p	χ^2	p
I associate the term OF with food of natural origin/production	**8.63**	**0.003 ***	NA	NA
associate the concept of OF with food useful for health	**11.3**	**<0.001 ***	**5.56**	**0.018 ***
I trade OF because they are in good condition	**4.56**	**0.033 ***	NA	NA
I trade with OF because they are of high quality	NA	NA	**4.50**	**0.034 ***

Pearson 's χ^2

p* significance level at $\alpha = 0.05$

The various sources of information certainly contribute to increasing the knowledge of OF traders, but trainings are crucial in this regard. The majority of the respondents, 94% (n=47), indicated that it is necessary to conduct training in the field of regulatory requirements for the trade in OF. The survey includes a question that clarifies the subjective assessment of the respondents regarding their awareness of the regulatory framework for the trade in OF. Participants are asked to choose one of the answers. The respondents with the largest relative share are 44% (n= 22), who define themselves as "fully informed". Respondents who do not consider that there are different requirements for organic foods are close to this share - 40% (n=20). Among the participants in the survey, 16% (n=8) declared that they were not familiar with the legal requirements for the trade in OF.

The level of knowledge in the field of OF would help traders to advise consumers in their choice. Information about this self-assessment is reflected in the following chart:

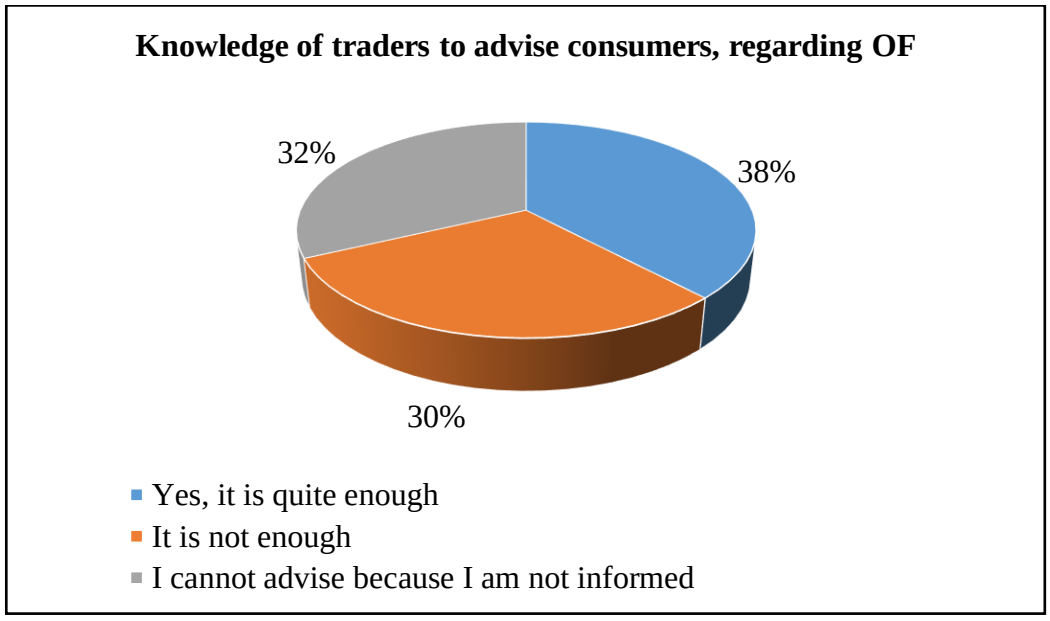

Figure 25. Relative share (%) of respondents for their assessment of their knowledge of consumer counseling on OF

Respondents who perceive OF as foods of natural origin 22.6% (n=7) define their level of knowledge as completely sufficient to advise consumers about OF (χ^2=8.44 and p=0.015). Another 35% (n=11) have a critical self-assessment of their knowledge, and 41.9% (n=13) define themselves as uninformed.

Among the respondents who get information from TV and radio advertisements, the largest relative share of persons who cannot consult because they are not informed is 72.2% (n=13) (χ^2=20.9 and p< 0.001). The established one is different result at the users internet portals or specialized websites – 52% (n=13) of the respondents consider that the level of knowledge allows them to advise consumers (χ^2=13.2 and p=0.001).

Knowledge of the surveyed merchants regarding the regulatory requirements for OF control

To the question, "Are you familiar with the requirements, how to control the origin of organic food?", respondents in the study choose one or more of the answers included in the survey.

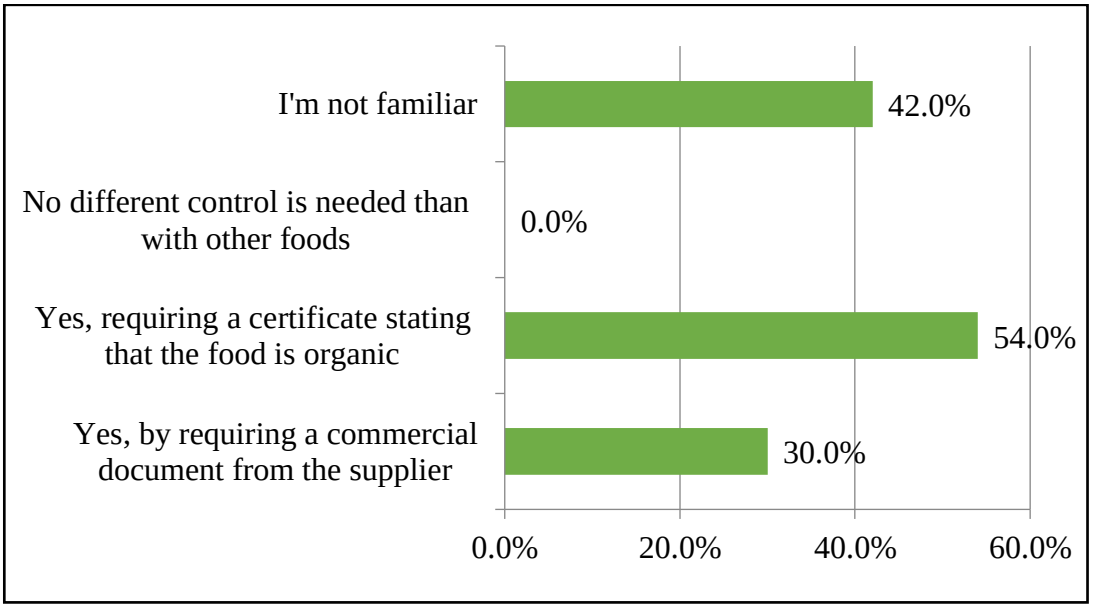

Figure 26. Relative share (%) of respondents familiar with the requirements, how to control the origin of OF

Almost 2/3 (63%, n=17) of the respondents, evaluating themselves as able to advise consumers, are familiar with the requirements for controlling the origin of OF (χ^2 =29.4 and $p < 0.001$). And over two-thirds (76%; n=17) of the respondents who cannot consult because they are not informed, are not familiar with the requirements for origin control (χ^2=36.3 and $p < 0.001$). The majority of traders (84%, n=21), who get information from internet portals or specialized websites about OF, control their origin by demanding a certificate stating that the food is organic (χ^2=18.1 and $p < 0.001$). At the same time, only 12% (n=3) of the respondents, who get information from internet portals or specialized websites about OF, are not familiar with the requirements for control of their origin (χ^2=18.5 and $p < 0.001$). Every second 54.8% (n=17) of those associating OF, with foods of natural origin/production, are familiar with the regulatory requirements regarding their origin (χ^2=5. 59 and p= 0.019).

Respondents with a health consciousness regarding OF 40.6% (n=13) control their origin by demanding a certificate stating that the food is organic (χ^2=6.4 and p= 0.011).

The awareness of the respondents regarding the indication on the label of organic foods, guaranteeing that they are organic, is revealed by means of the following diagram :

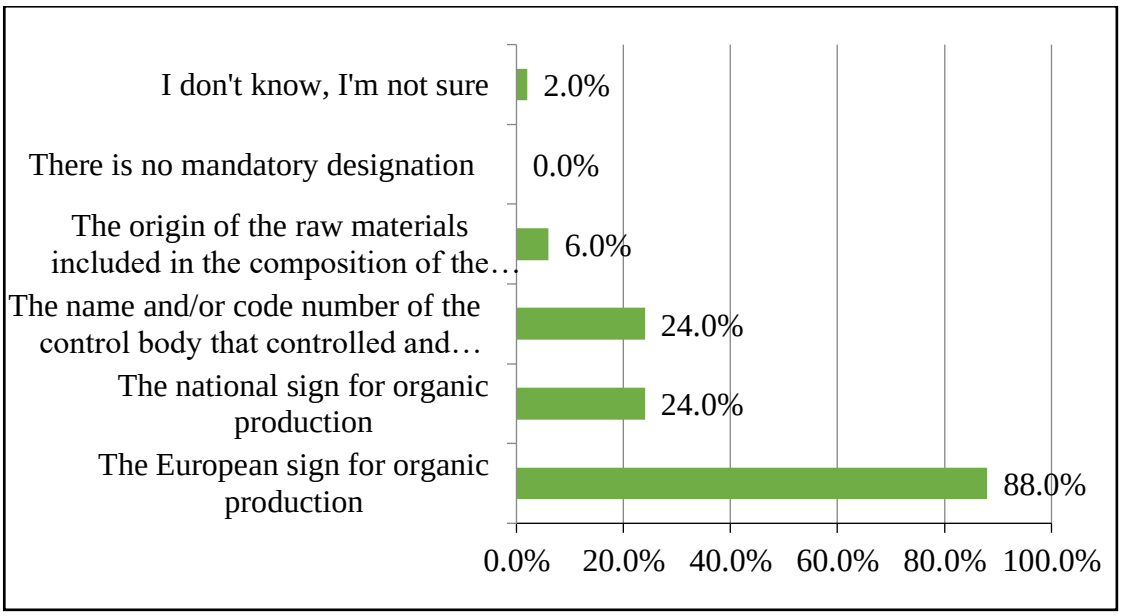

Figure 27. Relative share (%) of respondents familiar with the indication on the label of organic food guaranteeing that it is organic

The majority of respondents - 88% (n=44) - correctly stated that this is the "European leaf" sign. Just under a quarter (24%; n=12) of respondents choose the "National sign for organic production", again with 24% (n=12) support for the name and/or code number of the control body that controlled and certified the process of production, 2.0% (n=1) – are not sure of the sign of the sign. There are no respondents who chose the answer "No mandatory indication".

Over a third (37%; n=10) of those who chose the requirement to control the origin of OF (certificate stating that the food is organic), mark the indication on the label of OF "the name and/or code number of the control body, controlled and certified the production process" - χ^2=5.47 and p =0.019. To understand this designation, the study participants were helped by the information they received about organic foods from Internet portals or specialized websites - χ^2=3.95 and p=0.0 47.

The extent to which the participants in the scientific study are aware of who controls the OF trade is revealed by the answers to the given question.

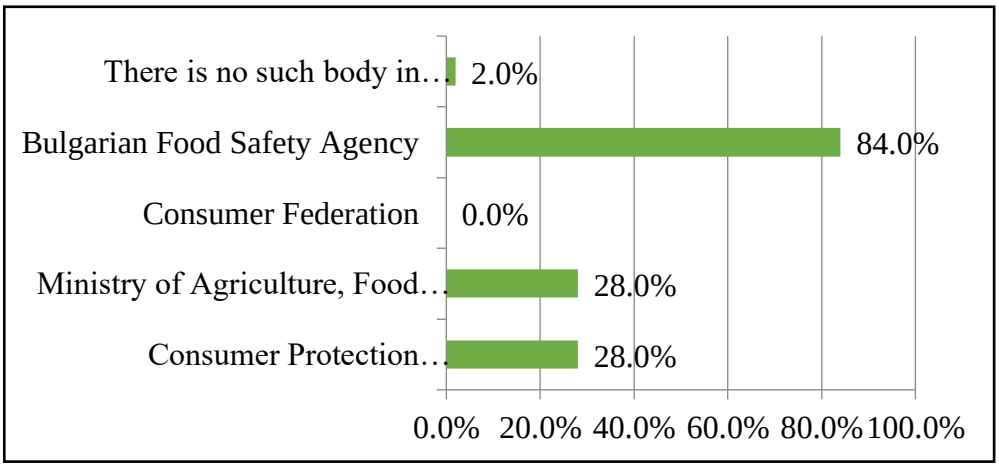

Figure 28. Relative share (%) of respondents who are familiar with the control body for the trade in OF

Correctly, 84% (n=42) of the respondents noted with their answer that the BFSA is the controlling institution in the Republic of Bulgaria in the OF trade.

OF traders demonstrate agreement with the following statements related to OF (can be more than one answer).

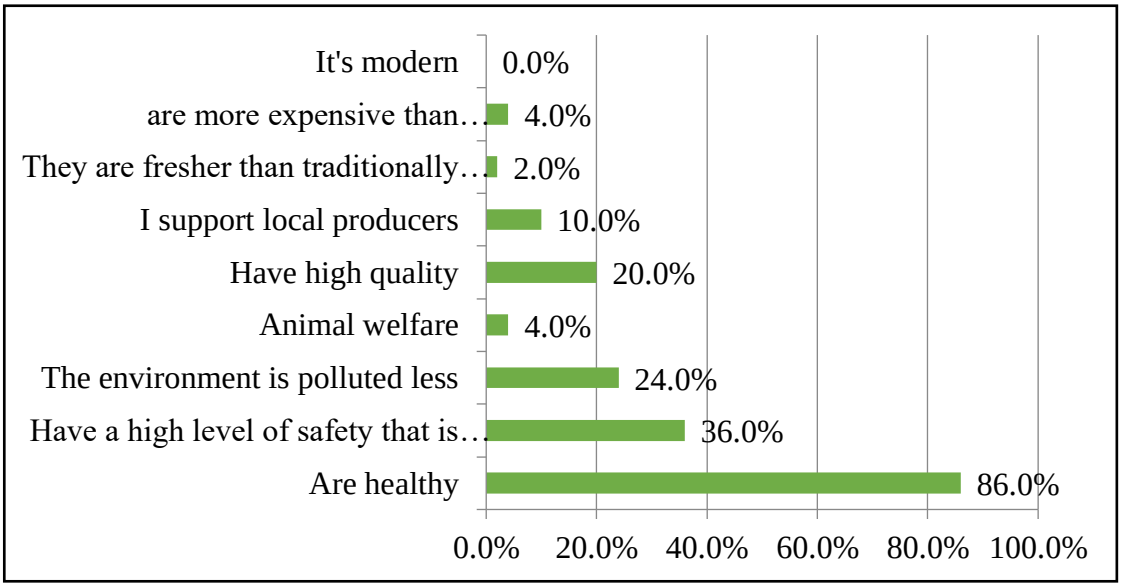

Figure 29. Relative share (%) of respondents, according to the reasons for trading with OF

The main reason given by the respondents for trading is that OF are healthy - 86% (n=43). "They have a high level of safety, which is guaranteed and controlled" is the second most important reason for trading with OF - 36% (n=18). No participant in the study was motivated to trade OF by modern motives.

Table 15. Statistically dependent results of conducted χ^2 test of variables related to trading motives and level of knowledge of consumer counseling, production control

Variables	I trade with OF because I believe they have a high level of safety that is guaranteed and controlled		I trade with OF because I believe that the environment gets less polluted	
	χ^2	**p**	**χ^2**	**p**
the level of my knowledge to consult clients on their questions about OF (**quite enough**, it is not enough, I cannot consult because I am not informed)	13.7	0.001 *	NA	NA

I control the origin by requiring a certificate stating that the food is organic	13.8	<0.001 *	NA	NA
I control the origin by requesting a commercial document from the supplier	13	<0.001 *	NA	NA
I am not familiar with the origin control requirements	15.3	<0.001 *	7.35	0.007 *

Pearson 's χ^2

p* significance level at $\alpha = 0.05$

More than half of the respondents - 61.1% (n=11) with the motive based on the trust in the institutions, stated that they have knowledge about consulting the consumers (χ^2=13.70 and p= 0.001). Individuals dealing in OF in their business are asked to select one of the statements that best describes their clients' awareness of OF. Almost half 48% (n=24) of the respondents are of the opinion that very few customers are informed about OF. One third (32%, n=16) see their customers as very well-informed users of OF, and 20% (n=10) define consumers as informed about the production and supply of OF, but not with their properties.

A statistically significant difference was found between the level of awareness of clients about OF and the source of information (internet portals or specialized websites), which is decisive for the respondents on issues related to OF - χ^2=13.60 and p=0.001. Moreover, among the respondents who prioritize internet portals or specialized websites, those who declare that "most of our customers are very well informed about organic foods" have the largest relative share - 56% (n=14) .

Based on their experience, 70% (n=35) of respondents expect the demand for OF to increase.

Retailers who associate OF with their health benefit (81.3%, n=26) (χ^2=4.40 and p=0.036) and perceive them as foods of natural origin (80.6%, n=25) (χ^2=5.36 and p=0.021), are optimistic about increasing the OP market.

The influence of factors on the use of organic foods has been studied. Respondents may choose more than one answer.

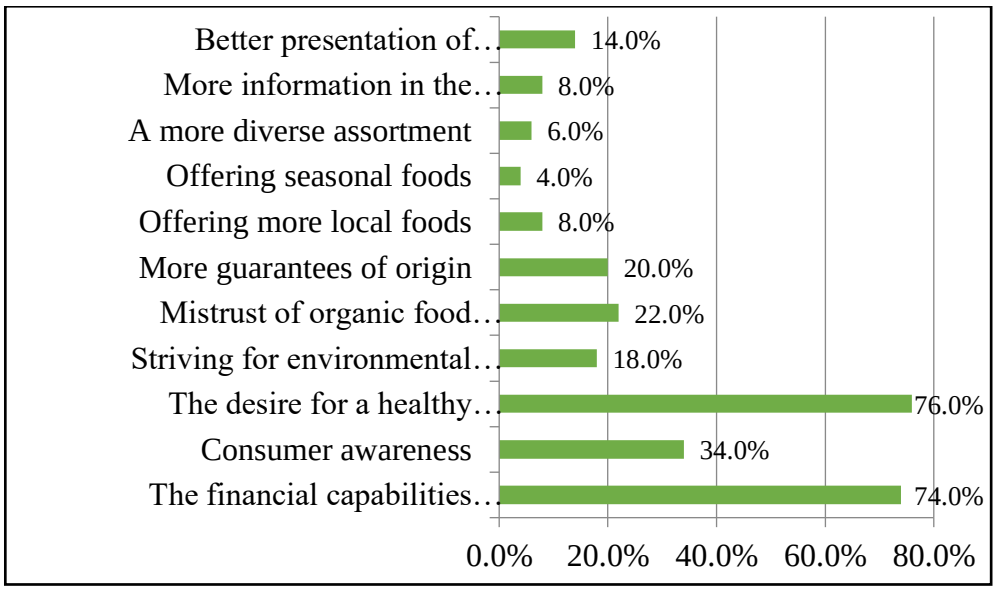

Figure 30. Relative share (%) of respondents indicating the factors influencing the use of OF

Almost the same is the relative share of the study participants who mark the desire for a healthy lifestyle 76% (n=38) and the financial capabilities of users 74% (n=37) as factors influencing the use of OF. Respondents inquiring about OF from specialized channels noted distrust of OF sold (χ^2=5.71 and p=0.017) and the presence of more guarantees of origin (χ^2=4.50 and p= 0.034) as factors that could change food use.

Predominant are the type of establishments, convenience store, supermarket, hypermarket, in which the surveyed participants in the study work - 66% (n=33). One fifth of them, 20% (n=10) carry out trade in OF in outlets for trading only food products, and 14% (n=7) in a specialized store for the sale of dietetic, diabetic, children's food, food supplements and organic food .

The relative share of respondents consuming OF is 90% (n=45).

The crosstabulation conducted confirmed the hypotheses of statistical significance between a number of variables depending on gender related to: attitude towards OF related to their health benefit (χ^2=6.40 and p=0.011); information about OF from television and radio advertisements (χ^2=4.84 and p=0.028) and internet portals or specialized websites (χ^2=3.95 and p=0.047); assessing their level of knowledge needed to advise customers on their questions about organic foods (χ^2=11.90 and p=0.003); influence of the desire for a healthy lifestyle on the use of organic foods (χ^2=5.47 and p=0.019).

V.5. 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 foods in the Dobrich region.

Socio-demographic characteristics of the persons included in the scientific study, producers of OF

The third group of participants in the scientific research is represented by OF manufacturers. Among the 20 OF producers who responded, men predominated with a relative share of 55%

(n=11). The producers are in the following age ranges, presented as relative shares: 41-50 years. (39%); 30-40 years (22%); 51-60 years. (22%); >61 years (17%). The average age of the women in the study was 49.6 ± 11.7 years, and of the men - 51 ± 11.3 years . When analyzing the data, the largest share of participants with secondary education 50% (n=10) was found, followed by those with a master's degree 40 % n=8) and with a bachelor's degree 10 % (n=2).

Knowledge of the surveyed producers regarding the characteristics of OF

Those who answered the question positively: **" What do you associate the concept of organic food with?"** are presented with their relative shares in the following diagram (Figure 31):

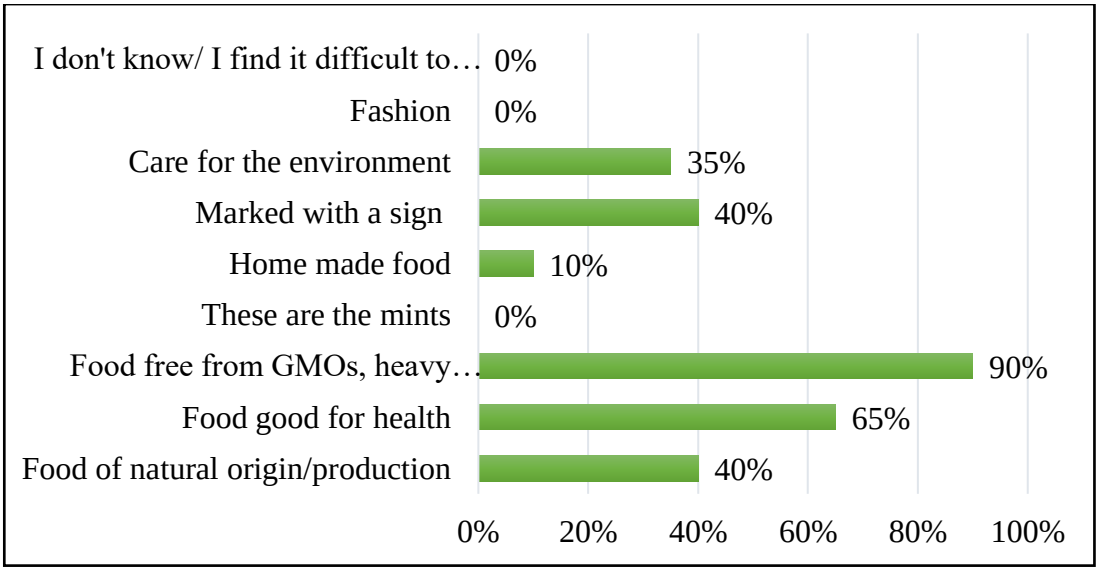

Figure 31. Relative share (%) of respondents regarding the association of the concept of OF

Respondents have a positive attitude towards OF and show a good knowledge of the signs of OF. The majority (90%; n=18) of them perceive OF as free from GMOs, heavy metals, pesticides, chemical fertilizers and antibiotics, hormones, preservatives and dyes. There are no participants who indicated the answers - "feed the mentee", "fashion" and "I don't know/ I find it difficult to answer".

The sources of information used by the research participants contribute to the formation of the attitudes of OF producers and their behavior in their contacts with customers looking for such foods. The analysis of this aspect is based on the answers given by the respondents for the usual channels from which they get information on the subject.

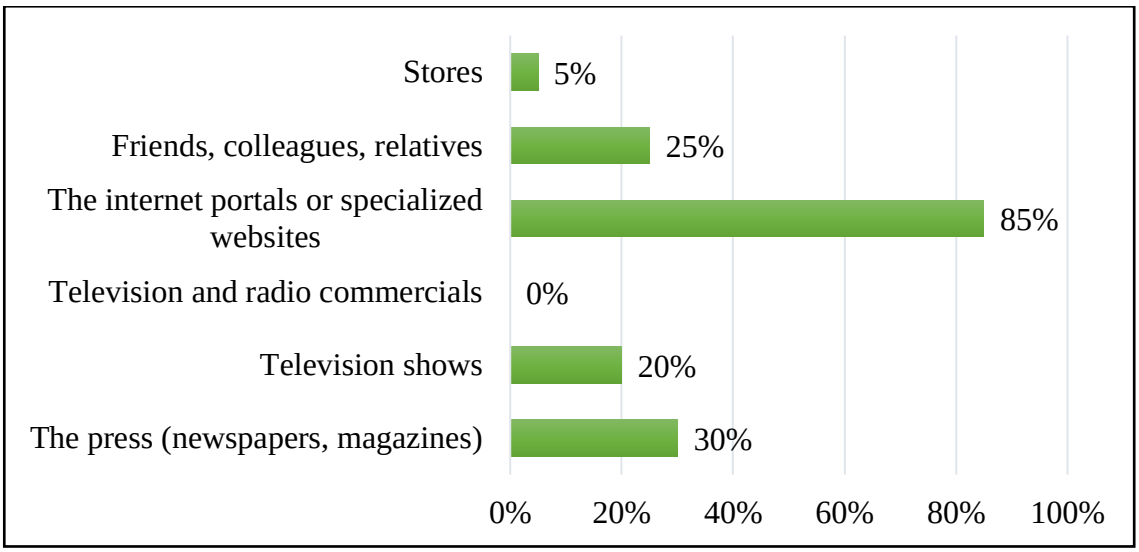

Figure 32. Relative share (%) of respondents using different information sources for OF

The predominant share of those who get information about OF usually from internet portals or specialized websites is 85% (n=17). Television and radio advertisements were not selected as responses. Using the various sources of information on OF, producers gain knowledge, but specialized training related to regulatory requirements in the production and trade of OF will definitely increase their qualifications. The majority of respondents, 85% (n=17), indicate that training in this direction is necessary. The subjective assessment of the respondents regarding their awareness of the regulatory framework for the production and trade of OF reveals that the respondents with the largest relative share are 85% (n=17), who define themselves as "fully informed".

Referring to acquired knowledge in the field of OF, respondents are asked to rate their ability to advise clients in their choice of OF. The survey participants are allocated, according to the positive answers given, as follows: 70% (n=14) have a level of knowledge that is quite sufficient; 30% (n=6) have an insufficient level of knowledge;

Knowledge of the surveyed producers regarding the regulatory requirements for OF control

The majority of respondents - 90% (n=18) guarantee the origin of OF by presenting a certificate stating that the food is organic. The marking on the OF label guaranteeing that they are organic is well known to the respondents. With the largest relative share are the respondents - 90% (n=18), who indicate that this is the name and/or code number of the control body that controlled and certified the production process; the "European Leaf" sign was mentioned by 85% (n=17) of the respondents; "The national sign for organic production" has a lower support of 40% (n=8). There are no respondents who chose the answers "the origin of the raw materials included in the composition of the food", " there is no mandatory indication" and "I don't know, I am not sure".

The survey included a question about the controlling institutions in the trade with OF. 65% (n=13) of the respondents noted with their answer that the Ministry of Agryculture is the controlling institution in the Republic of Bulgaria in the trade with OF. Another 60 % (n=12) declare that this process is controlled, respectively by the BFSA. One respondent - 5% of all - is not familiar with this

requirement and marks the answer "There is no such authority in Bulgaria". OF producers are motivated by various reasons in their activities. The main reason for production given by the respondents is that OF "They have a high level of safety, which is guaranteed and controlled" - 75% (n=15). The relative share of participants for whom health awareness and support for the environment are an important motive in their choice for the production of OF is the same - 70% (n=14). No participants in the study were motivated to produce OF by modern motives, animal protection and food externalities.

OF producers select one of the statements that best describes their customers' awareness of OF. Just over a third (35%, n=7) find their clients very well informed on OF issues. Another not a small part (40%, n=24) of the respondents define consumers as being informed about the production and supply of OF, but not about their properties, and 25% (n=5) are of the opinion that a very small part of customers are informed about OF.

Manufacturers' expectations for upcoming changes in demand for OF are positive - 65% (n=13) mark the answer that it will increase, while the rest are of the opinion that BP sales will remain at the same volumes.

Examining the influence of the factors on the use of organic food chosen by the respondents, we can summarize the following: The largest relative share is the respondents who mark the desire for a healthy lifestyle 95% (n=19) as a factor influencing the use of OF. Financial opportunities are supported by 65% (n=14), and the desire to protect the environment - 40% (n=8). The relative share of producers who believe that trust in OF will increase by increasing guarantees of origin and consumer awareness is the same, 30% (n= 6) (Figure 33).

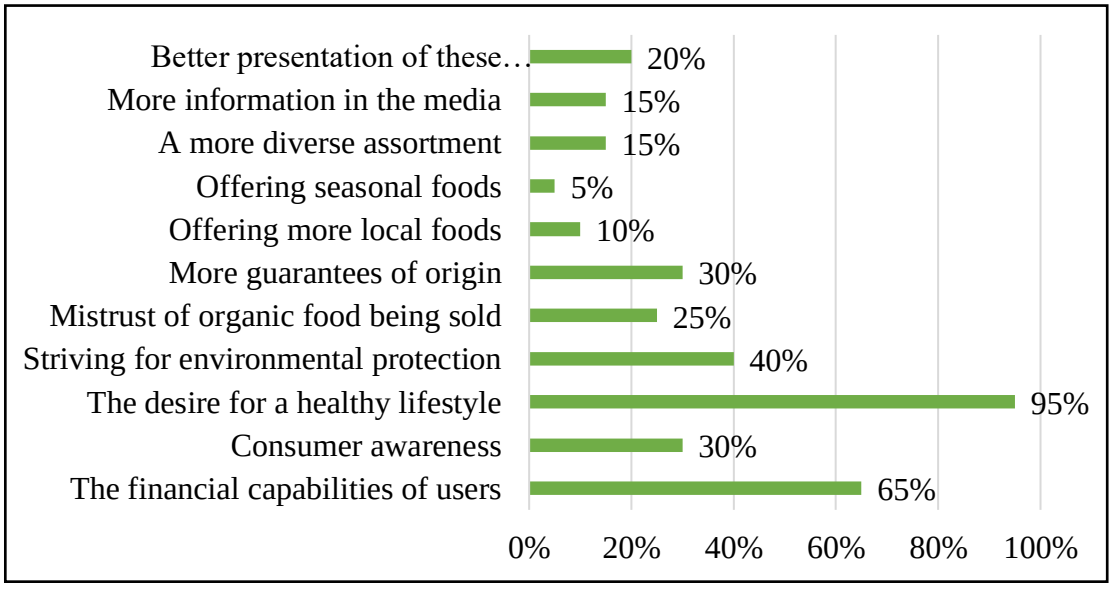

Figure 33. Relative share (%) of respondents indicating the factors influencing the use of OF

The producers of OF, participants in the study, are mainly from sites for the production of food of plant origin - 95% (n=19) and only one is of a mixed type, for the production of food of plant and animal origin.

The relative shares of workers in OF production sites by job title are as follows: owner/co-owner – 70% (n=14); manager/director – 15 % (n=3); worker – 15 % (n=3).

VI. DISCUSSION

The results of inspections in retail and wholesale establishments ***in Dobrich and Varna regions for 2014-2019*** are presented for two separate reporting periods, due to significant changes in the rules governing the organic production control system.

Period 2014-2017 year

The legal basis for carrying out labeling checks, according to the European legal framework, is Title I V, Art. 23 of Regulation (EC) No. 834/2007; Title I V, Art. 23, paragraph 1 of Regulation (EC) No. 834/2007, title III of Regulation (EC) No. 889/2008. The national regulation on the use of terms and designations for biological method of production in retail and wholesale establishments is according to Art. 25, para. 3 – 6 and Art. 25a, part 1 of LICOMAPEU and Ordinance No. 1/2013, Art. 1, part (1), item 7.

The control over biologically produced foods in the commercial network is carried out as part of the official control under Regulation (EC) No. 882/2004. The procedure by which the checks are carried out does not involve special planning based on a risk assessment. It does not describe exactly how the inspections are assigned, how the teams are determined, and also the frequency of inspections. There is no attached document specially developed for the purpose, in which the result of the inspection will be reflected. The BFSA registers do not contain information about the sites that also include the sale of OF, as the latter are not an independent group of food and are not declared by the operators when applying for the food trade activity when registering the sites. Thus, the incomplete determination of the objects for control of the terms and designations of OF is assumed, respectively for incomplete and insufficiently effective official control exercised in the objects of retail and wholesale trade on the problem, in general.

On this basis, it is not possible to assess to what extent the inspections, which were carried out on the territory of RFSD-Dobrich and RFSD-Varna in wholesale and retail trade facilities for compliance with BP labeling rules, are justified in terms of scope and frequency. Adequate protection of the interests of users is also not ensured due to the fact that the OF control system does not include those who trade through online platforms, which is a gap in the regulatory framework for the period under discussion.

Period 2018-2019 year

In 2018, in connection with the adopted new Ordinance No. 5, SOP FC-24 was introduced and approved by the executive director of the BFSA. The essential difference with the procedure that operated in the period 2013-2018 is that there is a new approach in planning inspections, which is based on risk analysis, including determining their frequency. These control activities are included in a separate section of the SMANCP in accordance with Articles 41, 42 and 43 of Regulation (EC) No. 882/2004. On the basis of the risk analysis carried out in RFSD, they are prepared Regional two years old control plans, which are sent to the Food Control Directorate by the end of the month January.

They are included in them all wholesale and retail outlets which trade in organic food, as well as municipal ones markets for the sale of agricultural products and foods with inspection frequency (BFSA, SOP, 2018).

RISK ANALYSIS

Site risk assessment	Activities with organic foods
High	Wholesalers who carry out import, export, free trade with EU member states or distribute on the territory of the country non-prepackaged organic food and products. Retailers who produce, prepare or process (slicing, packaging and labeling) on site OF which carry out trading with non-advance packed organic foods and products that store OF in a place other than the place of sale , import or assign any of these third party activities . Markets for the sale of agricultural products and foods.
Low	Wholesalers who trade only with advance packed OF. Retailers who trade only with advance packed OF.

FREQUENCY OF CHECKS

Site risk assessment	Frequency of inspections _
High	1 per year
Low	1 every two years

Source: SOP FC-24, approved by the executive director of the BFSA with Order RD 11-1780/03.09.2018

In addition to planned inspections, extraordinary inspections are also carried out, which are: at the request of citizens, groups of producers, other competent or control authorities; thematic, ordered by letters or orders from the Executive Director of the BFSA and checks on the implementation of ordered administrative measures, such as orders to stop the trade in organic food, orders to remove identified discrepancies in labeling, etc.

The methods and techniques of control, detailed in the Procedure, include (BFSA, SOP, 2018):

- Verification of the activities that the operator carries out with organic food for compliance with the requirements for inclusion in a control system or compliance with a national derogation for exclusion from the control system of retailers;
- Inspection of the presentation in the sales hall and the storage of organic food for compliance with national requirements;

- Inspection of labeling for compliance with specific organic food labeling requirements and consumer information requirements;
- Traceability of organic food - review of commercial documents and certificates provided by suppliers of organic food, for their compliance with the requirements of the legislation;
- Documenting the inspection;
- Inspections are documented with a finding protocol or a report, based on samples approved by the executive director of the BFSA. To facilitate the work of the inspectors, a checklist has been developed for the procedure, which includes all the elements of the inspection. The checklist is filled out in one copy and is intended for use only in the BFSA structure.
- Evaluation of discrepancies and measures for their elimination;

The discrepancies found during official control of food in the commercial network on the use on terms and designations for biological method on production everything graduate on essential and non-essential.

For **essential** everything accept the discrepancies, who touch the biological status of food: improper use of food terms and labels, which is not produced or imported according to the rules for biologically production; implementation by the operator of trade in biological products products without it being turned on in a control system; establishment with laboratory research, that the food contains substances (pesticides, leftovers from VMP etc.), which are not permitted for use in organic production; mixing of non-preliminary packed biological xpans with conventional foods at the storage them In these cases, the food or the activity of the operator is considered non-compliant of Regulation 834/2007 and LICOMAPEU (BFSA, SOP, 2018).

For **non-essentials** are accepted the inconsistencies that do not affect the biological status on the food: storing or offering in advance packed biological foods on indiscriminately or not marked place; detection of irregularities or omissions at the labeling of foods that have been produced according to the rules of organic production, for example wrong size or color of the organic production sign, wrong code number of the controlling one face, others discrepancies by Regulation (EC) No. 1169/2011, who no influence so the safety of the food (BABH, SOP, 2018).

At everyone case on establishment on discrepancy everything undertake measures and everything impose sanctions under XX and LICOMAPEU. They include for the essential non-conformities: suspension of the trade of the product, according to Art. 30, part, 1, item 11 of the 3X and drawing up an act for establishing an administrative violation (AEAV), according to Art. 65 of LICOMAPEU. The measures for non-essential non-conformities are: issuance of a prescription under Art. 30, part 1, item 4 of the LF and compilation of the AEAV under Art. 41 of LF. To be effective and proportional imposed sanction, she must to be directed to the operator, which is responsible for removal on the discrepancy. When determining the nature and amount of the sanction, data on previous ones discrepancies on the operator.

- In case of any non-conformity found, communication is carried out between the Food Control Directorate and the RFSD, which reports this to the competent authority in the Ministry of Food and Agriculture and, if necessary, the interested controlling person.

- The annual reports on the implementation of the SMANCP in accordance with Art. 44 of Regulation (EC) 882/2004, concerning official control of food in the commercial network is sent by the ODBH to the Central Agency of the BFSA, Directorate "Food Control" until January 20 of the following year. Until January 31, the "Food Control" Directorate prepares annual report on the control carried out by the BBAH in the commercial network of the use of terms and indications for the biological method of production to the Minister of Agriculture, Food and Forestry (BFSA, SOP, 2018).

In addition to the use of approved samples by the executive director of the BFSA, to reflect the results of the inspections, a special checklist is attached to the procedure, which reflects all the elements of the inspection, including indicating non-conformities. Developed in this way, the checklist significantly assists inspectors in their control activities and gives confidence in the correct application of the procedure.

With the new Food Act of 2020, the control of online food trade, including biologically produced food, becomes possible, which improves its efficiency, as well as creating conditions for increasing trust in the competent authorities and that of consumers in organic production. In addition, the beginning has been made for the collection of information at the level of the RFSD, upon registration of food distribution sites under Regulation (EC) No. 852/2004, for operators to declare the supply of organically produced food, in the sense of Regulation (EC) No. 834/ 2007. The change in the normative regulation will improve the planning of the official control over the use of terms and signs in the commercial network.

A growing consumer tendency to buy OF (Lee, 2016; McFadden and Huffman, 2017), poses many questions to scientific researchers: who are OF consumers, do they know the characteristics of OF, how, why and for whom they choose them, do they encounter disincentives . In our research, these tasks reveal the awareness not only of consumers on OF-related issues, but also of other participants in this cycle, such as manufacturers and sellers of OP.

The structured questionnaire to collect data on the study of motives and attitudes to purchase OF, applied in our study, is used in most quantitative research (Bravo et al., 2013) and academics rely on it, because of its difficult to access and often much more -expensive actual purchases of OF (Janssen, 2018). Furthermore , the study mode without an interviewer was accompanied generally by a lower social desirability bias than the study mode where the interviewer was present (de Leeuw, 2008).

More than half of the respondents in the study were women 65.3% (n=98). The age distribution of the respondents shows that those in the 51-60 age range predominate. – 30.7% (n= 46), followed by the group of younger respondents aged 18-30. – 20.7% (n=31). In addition, the women have a high level of education, 70% (n= 41) of the participants have a master's degree, which is the predominant degree for all respondents. They live in a family environment or are living with partners 66% (n=67), the number of members in the household is three 20% (n=30) and they have no children under 18. - 42.7% (n=64). The interviewed women defined the financial situation as “we have enough money for food and clothing; we can save" - 64% (n=48). Regardless of the fact that the

main share of respondents are working in the private sector, the women participants in the study have the largest relative share among all those employed in state structures - 25.3% (n= 38).

Referring to the responses regarding the frequency of buying OF, we find that there are no survey respondents who have never bought OF. Therefore, the socio-demographic characteristics of the respondents give us information about the general profile of OF users. Our study is in agreement with other past studies that women (Ureña et al., 2008; Zander and Hamm, 2010; Pearson et al., 2011; McFadden and Huffman, 2017), older people (Gracia et al., 2012; Van Loo et al., 2010) and people with higher education (Ivanova, Vassileva, Stefanov and Tipova, 2008; Paul and Rana, 2012) are more likely to show biological feeding behavior.

The profile of regular users with the largest relative share among respondents and with a frequency of purchase once a week is similar. A difference is found only in employment. Half of them (n=54) are working in the private sector. While for occasional users (with a frequency of purchase from one to 3 times a month), the established difference regarding the socio-demographic characteristics of the biological user is in the degree of educational qualification - 39.6% (n=19) of them have a secondary education .

Although half of consumers define their financial situation as “we have enough money for food and clothing; we can save", our study did not prove an influence on the frequency of buying OF. This has also been established by other researchers (Van Loo et al., 2010).

Analyzing the relationship between the respondents' ideas about the concept of OF and the motives for their purchase, we can state that the absence of GMOs, heavy metals, pesticides, chemical fertilizers and antibiotics, hormones, preservatives and dyes in OF is statistically dependent on the motive and the most important reason to buy, namely their positive impact on personal and family health. This is in agreement with statements found by other researchers (Hansen et al., 2018; Pham et al., 2019).

Our results are identical to the data of other studies, showing that consumers are motivated in their purchases more strongly by the health benefits of OF than by perceived environmental benefits. A reason for the possible dominance of health considerations over environmental impact may be that the former is perceived as more directly and personally affecting, while the latter may appear more distant to consumers (Ronga et al., 2019) . Not only that, consumers are also motivated by the belief that OF s have a high level of safety that is guaranteed and monitored. Similarly, *Michaelidou and Hassan* (2008) found that concern for food safety is another motivating factor for consumers to buy OF.

Logically, the statistically dependent difference between OF, free of GMOs, heavy metals, pesticides, chemical fertilizers and antibiotics, hormones, preservatives and dyes, and the protection of the environment, as the reason for their choice, is imposed. The preservation of biodiverse ecological systems is one of the main reasons for consuming OF (Hansen et al., 2018).

The naturalness of OF is the perception that she doesn't contains harmful substances like chemically leftovers, pesticides, fertilizers, artificial additives and preservatives (Padel & Foster, 2005). Consumers' assessment of OF as beneficial to health is statistically related to their belief that

they are of high quality and have a high level of safety that is guaranteed and controlled. We find that people place more importance on health (selfish motive) than other motives when making OF choices, as did *Mondelaers et al*. (2009) in their study.

More than half of the respondents who have knowledge of the OF marking with a sign are motivated in their purchases because they are convinced that they are safe and subject to control. The same motive is shared by the participants of the survey with concern for the environment. The concern for the environmentally friendly production is identified like motive for the consumption on OF in many studies , e.g. (Gracia & Magistris, 2008).

It is noteworthy that there are only a few respondents with a negative attitude towards OF (foods) and who consume them due to modern motives, as also established by *Goetzke and co-authors* (2014). The influence of individual sources of information, which determine the respondents' attitudes towards OF and their purchase behavior, is different. Food producers usually know whether their products meet organic standards or not, while consumers are unable to verify this (Müller and Gaus, 2015). That's why the level of trust of users in different sources of information is particularly important (Grebitus et al., 2015).

More than half of respondents using Internet portals and specialized sites, a result similar to reports from *Arabska* (2015), associate OF with foods free from GMOs, heavy metals, pesticides, chemical fertilizers and antibiotics, hormones, preservatives and dyes, which leads us to the thought that respondents are objective in their judgments and can trust the sources of information they use. They could raise consumer awareness of the health and environmental benefits of OF and accordingly the evaluation of such products can be increased (Torres-Ruiz et al., 2018). The same information sources have a positive influence on the formation of health awareness in consumers when purchasing OF, increasing their trust and the control system. *Roitner-Schobesberger and co-authors* (2008) as well reflect availability on knowledge on the users for OF and effect, which it her there is at OF search. A statistically significant difference is also found between those who get information about OF from the stores and those who know about the special marking. The stores also contribute to the choice of OF by consumers, due to their high quality and level of safety, which is guaranteed and controlled. It is interesting to note that those receiving information in stores are also motivated to buy OF for environmental reasons.

Although more than two-thirds of the respondents indicated that health is the most important reason for choosing OF, the relative share of regular users (with frequency of daily and weekly purchases) is significantly lower. Our results regarding the frequency of buying OF are close to those in a study by *Alexiev, Doncheva, Stoyanov, Stankov* (2018). The discrepancy between positive consumer attitudes and purchase behavior has been demonstrated by previous research in multiple countries (Joshi & Rahman, 2015; Shamsi et al., 2020), which makes it necessary to investigate the causes that give rise to it (Anisimova, 2019).

A small number of the tested hypotheses about the relationships between the frequency of buying OF and the reasons were supported. For regular users, this is the positive impact on personal and family health, the subjective assessment of the quality of OF and the support for local producers.

For regular users, previous research shows that taste (Midmore et al., 2011) and health (Anisimova et al., 2019) are the main motivations for purchasing organic products. The result we find regarding the choice of OF related to better taste qualities is similar to that of *Mitova* (2018), in a study among respondents from different cities in Bulgaria. Support for the local economy is marked with a positive sign by casual users as well (with a frequency of once every three months). A more reliable statistical difference was found not for health consciousness as a cause, but for the better taste of OF, a quality characteristic that did not affect the frequency of purchase (Nuttavuthisit and Thøgersen, 2017).

Barriers to users can be commented on in the context of factors that stimulate attitudes towards OF. With the largest relative share among the barriers are the high prices. This result is consistent with previous studies, e.g., *Paul and Rana* (2012). Even more reliable is the established statistical dependence between the associations "marked with a sign" and "care for the environment" with the stimulating factor related to increasing trust in OF - the presence of more guarantees of origin, a result also supported by *Sultan and co-authors* (2018), according to which customers make their purchase decision of these OF based on credentials, including trusted certification. No statistically significant differences were found between the incentive factors and the different frequency of purchase.

The largest relative share among those surveyed are those who buy OF for the whole family - 86% (n=129), results close to those found by *Mitova* (2018). For them, the main reason that would increase the frequency of purchase is the availability of more guarantees of origin, which is directly related to ensuring confidence in OF.

The buyers for themselves, OF consumers are motivated by the belief that they support local producers. The differences found in them are also statistically significant in relation to high prices, as a barrier and promoting factors (increased income, trust in OF and support for local productions). Several studies have shown that local food is associated with higher perceived food quality, e.g., *Carpio and Isengildina-Massa* (2009), as well as with perceived increased freshness of products (Roininen et al ., 2006). For respondents who prefer specialty stores to purchase, a greater influence on their awareness of OF is exerted by the stores themselves, which are a reliable source of information for consumers regarding OF labeling (Schrö der & McEachern**,** 2004). Supermarkets, as a more selective place to buy OF, have an advantage over casual consumers, compared to regular ones. The customers of specialized stores have a decidedly ecological orientation, with care for the environment. The hypothesis of support of the local economy by visiting farmers' markets and receiving OF directly from the producer was not proven.

Certainly, the high prices of OF in organic and diet food stores appear to be a barrier for consumers, and lowering BP prices would encourage consumers to buy organic foods (Grosglik, 2017). There is little difference in the relative shares of respondents who recognize OF by the EU organic production mark and certification information. Those who associate OF as natural foods marked with a sign and free from GMOs, heavy metals, pesticides, chemical fertilizers and antibiotics, hormones, preservatives and dyes know that BH is distinguished by organic certification. It is evidenced by either the presence of a sign from a third party performing OF certification or the

code number of the controlling person, which, in addition to control, we also associate with OF certification.

Trust in labels appears to be a particularly important factor, as consumers are usually unable to determine for themselves whether a product meets organic food production standards (Mkhize and Ellis, 2019). Part of the respondents, who get information about OF from the stores themselves, as well as from their friends, colleagues or relatives, completely trust the specialized stores and do not look for a special sign to recognize OF. This emphasizes the strong social communication of users and the trust that has been built between them and the specialized providers of OF.

Research participants trusting OF specialized stores would increase the purchase of food in the presence of a health problem, which appears to be a valid motive for other respondents to request relevant information on organic food certification. The latter gives guarantees to consumers to assess the healthiness of the food they consume and OF meets this consideration (Sultan et al., 2018).

We would explain the statistically significant difference in the buyers in specialized stores, without setting conditions for recognition of OF, with the high trust that consumers have in this type of objects, relying on the fact that they shop in them (Vitosha research, 2009). The study participants know the sign for OF. The relative share of respondents - 86.7% (n=130) - who correctly indicated that this is the "European leaf" sign, prevails. This mark assures users of compliance with specifications throughout the OF supply chain (Rodino, 2020) . The national sign "Ladybug" is barely recognizable. Compared to everyone information channels forming the attitudes of OF users, internet portals or specialized websites have the greatest effect on respondents' recognition of the organic logo. The information that the research participants receive from them is useful and reliable, thanks to which they make their informed choice.

It is important to know that the participants in the study with the largest relative share detect the distinguishing mark of foods that contain the term "organic". Almost two-thirds of the respondents, 74.7% (n=112), answered without a doubt that the terms "biological" or "bio" on the packaging are accompanied by an official sign. In a study by Mitova (2018), the relative share of respondents who check whether the organic product they buy is certified by a legal certification body is half. Statistically, we find for them that they perceive OF as food free from GMOs, heavy metals, pesticides, chemical fertilizers and antibiotics, hormones, preservatives and dyes, and marked with a sign. They are also motivated in their purchases due to the high level of controlled and guaranteed safety and health care.

OF users are aware of who are the controlling authorities in Bulgaria in case of doubts about the biological identity of foods labeled as such. BFSA has the most support among the respondents - 70.7%. Those who perceive OF by the most characteristic signs of organic production, such as food marked with a sign, and those who choose OF with the conviction that they are safe and controlled, know that the signals are sent to BFSA. The relative share of respondents, 81% (n=121) , who believe that consumers do not receive sufficient and reliable information about the results of the control activity in the OF trade, is very large. Providing unbiased and factual information is one way to increase consumers' trust and willingness to pay for OF (McFadden and Huffman, 2017). One third

of the respondents who inquire about OF directly in the stores declare that they receive sufficient and reliable information about the control activity carried out in the trade of organic food, in contrast to the others who give a negative answer. More than half of the respondents, positively informed about the control activity carried out in the organic food trade, have knowledge that OF is marked with a sign. A very small part of the regular buyers - once a week OF, also state that transparency is provided for the control activity in the trade of organic food.

Trust influences consumer behavior, according to previous research (Lazzarini et al., 2017; Mkhize and Ellis, 2019). We should note that consumers have more trust in information from government institutions, which thus promote people's well-being and health (Costa-Font, Gil & Traill, 2008). Our study confirmed several hypotheses for reliable gender-specific results. A gender difference was found in the promotion of purchasing when there is a health problem, which may be due to the fact that women are more concerned about food safety and health (Tsakiridou et al., 2008). The existence of significant gender differences in the purchase of organic food by consumers is also supported by past studies (Shin & Mattila, 2019).

In only one of the nine confirmed hypotheses, the relative share of men with a positive answer is greater than that of women (frequency of purchase – once a year). The lower frequency of purchase by men was also confirmed by *Tsakiridou and co-authors* (2008). The biggest difference in the relative shares between the two sexes is for the motive "I buy OF because I believe that have high quality", which suggests that women are guided in buying OF by subjective judgment. On the other hand, the difference is the smallest for the sign used to designate organic food produced in the EU - "European Leaf", the opinion of the representatives of both sexes converges.

Statistically significant differences are found regarding some variables depending on the educational qualification. More educated users are informed about OF from internet portals or specialized websites. In addition, respondents with a higher degree of education - masters, prefer specialized stores for OF. Higher education levels were found to be associated with increased intentions to purchase OF (Di Vita et al ., 2019). Regardless, international studies revealed that highly educated consumers have a positive attitude towards OF (Magnusson et al., 2001), and *Lea and Worsley* (2005) highlighted the minimal effect of education on actual purchases of organic products, which was also found in our study.

The presence of children under 18 years of age in the households affects the frequency of buying (once a week), which is mostly manifested in households with one child. The probability of an increase in the frequency of buying when there are small children in the household has also been established by other researchers (Hughner et al., 2007; Riefer & Hamm, 2011). Families with small children would be encouraged in their OF purchases, supporting local producers. They are informed that if the authenticity of the OF is in doubt, a report should be submitted for verification to the CPC.

The research team applied a Likert scale to assess consumer statements revealing what is important and to what extent when purchasing OF. The highest score (**Mean=4.69)** was given for the information contained on the BP packaging. For the representatives of both sexes in the study, it is

very important to make their informed choice, as is the way in which they can distinguish OF from conventionally grown foods (**Mean =4.11).**

By applying the 3-point Likert scale to assess the characteristics of OF, we find that respondents are familiar with organic production methods **(Mean =2.87).** The results indicate that the respondents have objective knowledge about OF (OF are free of GMOs, pesticides, chemical fertilizers, antibiotics, hormones and other additives).

According to *Pino et al*. (2012), consumer awareness of OF production processes tends to create a perception of their relative harmlessness. Some of the statements describing the characteristics of OF are supported by the results of a survey (EC, 2022) conducted in the 27 EU countries.

The majority of traders in the survey correctly associate the term OF with " food free from GMOs, heavy metals, pesticides, chemical fertilizers and antibiotics, hormones, preservatives and dyes". In contrast to the consumer group, there are no participants among the traders who indicated the answer - "fashion". It has not been established and surveyed, for which OF are associated with "food men". There are no respondents who do not know or have difficulty with the meaning of the term OF. The attitudes of OF traders and their behavior in the supply are formed to the greatest extent under the influence of Internet portals or specialized websites, a result found with a greater relative share in our study, compared to that of *Vitosha Research* (2009). The information that the respondents receive from this type of information channels helps in their perception of the health effect of OF and is the basis for motivation in the trade with OF, due to their high quality.

The majority of OF traders consider that their knowledge of the regulatory requirements for OF trading is insufficient. However, nearly half of the respondents who indicated that the training was necessary, considered themselves to be fully informed about the regulatory framework for the trade in OF. In addition, the majority - 89.5% (n=17) of fully informed traders consider that their level of knowledge is quite sufficient to advise consumers on their choice. The conducted crosstabulation also shows that 81.3% (n=13) of the respondents, for whom there are no different requirements for OF, state that they cannot consult due to lack of information.

The analysis of the results of the conducted χ^2-tests with proven statistically significant differences between the variables aimed at controlling the origin of OF, the level of knowledge on consumer counseling, sources of information and attitudes towards OF reveal the following dependencies: More than half of the respondents assessed as being able to advise consumers are aware of the requirements to control the origin of OF, requiring a certificate stating that the food is organic; Conversely, respondents who cannot consult because they are not informed are not familiar with the requirements for origin control; Traders who are informed by Internet portals or specialized websites about OF control their origin by requiring a certificate stating that the food is organic; The majority of traders who are not informed by Internet portals or specialized websites about OF, respectively are not familiar with the requirements for control of their origin; The relative share of persons who usually trust TV and radio advertisements for information about organic food, who are familiar with the requirements for controlling the origin of OF (commercial document and organic certificate), is small;

The relative share of respondents referring to television and radio advertisements who are not aware of how to control the origin of OF is high.

The revealed dependencies emphasize once again the importance of reliable sources of information and the need to expand their influence on OF traders.

The respondents are familiar with the requirements for marking OF, not only indicating the "European List" sign, although to a lesser extent they indicate the name and/or code number of the control body that controlled and certified the production process. Those who know how they are indicated on the OF label are also familiar with the requirements for controlling their origin. This knowledge is influenced by the information obtained from Internet portals or specialized websites. The majority of the participants in the scientific research are familiar with the institution that controls the trade in Bulgaria - BFSA, MAFF and CPC.

With the greatest support from the respondents is health consciousness as a motive for the trade in Bulgaria. More than half of the respondents who choose the motive for trading OF related to controlled and guaranteed food safety state that they have knowledge of consumer counseling. The same motive was stated by the persons who are familiar with the requirements for controlling the origin of OF (certificate and commercial document). It is interesting that the respondents with ecological awareness feel a deficit in their knowledge to advise the buyers of OF. It is noteworthy that the stimulating (desire for a healthy lifestyle) and limiting (financial capabilities of consumers) factor with the greatest support have almost the same relative shares in the responses of the survey participants.

The confirmed hypotheses of statistical significance between a number of variables depending on gender are in relation to the attitude towards OF related to their health benefit; with information about OF from television, radio advertisements, internet portals or specialized websites; by assessing the level of knowledge needed to advise clients on their OF issues; with controlling the trade with OF by the CPC; with the influence of the desire for a healthy lifestyle on the use of OF. In only one of the six confirmed hypotheses, the relative share of women with a positive answer is greater than that of men (I usually get information about organic food from Internet portals or specialized websites). This is a testimony that women trust sources that would provide them with quality information. The biggest difference is in the relative shares between the two sexes for control in the trade in organic food "CPC". The difference is the smallest for information channels - internet portals or specialized sites. Apart from the women surveyed, men also prefer credible sources of information.

A study of the awareness and attitudes, as well as the level of knowledge, regarding the regulatory requirements for the production and sale of OF of the producers was conducted only by applying descriptive statistics and crosstabulation . The reason for this is the small number of participants in the study – 20, which is also a limiting factor.

The demographic profile of the respondents shows that the responding producers are predominantly men, with the largest relative share in the age range - 41-50 years, mostly with secondary education.

The surveyed OF producers demonstrate a very good knowledge of OA methods, answering positively with the largest relative share - 90% (n=18) that they associate the concept of OF with foods free from GMOs, heavy metals, pesticides, chemical fertilizers and antibiotics, hormones, preservatives and dyes. In addition, they make an association with other characteristics of OF, such as being healthy, labeled and caring for the environment. The fact that among the respondents there are none who define OF as a fad, a dimwit or have difficulty in their judgment is also positive. Compared to the other two groups of participants in the scientific research, manufacturers mainly trust as a source of information the Internet portals or specialized sites, to a large extent the press, and also friends, colleagues and relatives, confirmed even further back in time by *Vitosha research* (2009). For them, TV commercials are not an information channel on the subject of OF.

Training is extremely important for producers, so support for its implementation is very high. The need for specialized training in the field of organic agriculture was shared by producers in a study conducted by Arabska (2015). In addition, the same relative share is found - 85% (n=17) of the respondents who feel fully informed about the regulatory framework for the production and trade of OF. The self-assessment of the level of acquired knowledge divides producers into two categories - nearly two-thirds consider themselves capable of fully consulting their customers, and the other has a critical attitude - knowledge in the field of OF is at an insufficient level. Again, a very good knowledge of the requirements for guaranteeing the origin of OF was demonstrated by the respondents. They correctly indicate the answers: commercial document and a certificate stating that the food is organic. The latter is supported by the majority of respondents.

Along with their knowledge of the documents proving the origin of OF, the research participants were also educated on the ways of indicating the BP on the labels. The answer with the largest relative share is correctly indicated - the name and/or code number of the control body that controlled and certified the production process, close to it is the sign "European leaf". Less than half of the respondents marked the national sign "Ladybug". It is important to note that there are no persons who are not sure of their answers and those for whom "No mandatory indication".

Regarding the controlling institutions in the OF trade, the survey participants with almost equal relative shares choose MAFF and BFSA, two are for CPC and one is not familiar (owners' representative), which reveals that most participants are correctly informed about the institution to which they could turn in matters related to the control of the production and distribution of biological products (Vitosha Research, 2009). OF manufacturers unite with almost equal degree around three main motives in their activity: the high guaranteed and controlled safety level of OF, health consciousness and support for the environment, similarly established by *Arabska* (2015). The financial incentive was noted as a motive for one fifth of the respondents. Animal welfare and modern incentives were not identified as attitudes.

One third of OF producers consider that their customers are very well informed on OF issues, while for the other 40%, consumers are not familiar with their properties, a result identical to a study by (Zakowska-Biemans, 2011). There are respondents (a quarter) who are critical of consumer awareness of BH (Goranova, Stefanov, Tananeeva 2011). The factor with the largest relative share

that will stimulate the use of OF, indicated by manufacturers, is the desire for a healthy lifestyle. The barrier that manufacturers identify as the biggest deterrent to OF use is price.

VII . IMPLICATIONS

1. The regulatory requirements in Bulgaria and the EU for biologically produced foods are constantly supplemented and amended. Bulgarian legislation in the scope of organic production has been developed and introduced in accordance with European regulations.
2. Statistically processed information from the annual reports of RFSD-Varna and RFSD-Dobrich, regarding the official control in the trade in organic food for the period 2014-2019, reflects the trends and specific features of the activities of the competent authority, according to the criteria on the basis of which the frequency is determined of inspections. When analyzing the information from the inspections of the territory controlled by RFSD-Varna and RFSD-Dobrich for the period 2014-2019, it was found that inspections of the labeling of biological products prevailed in relation to retail sales, and no significant deviations from the requirements of national and European legislation.
3. The procedure for official food control in the commercial network on the use of terms and indications for biological production method (SOP FC-24/2018) creates conditions for improving the planning, implementation and reporting of the results of official control in the field of OF trade, of its effectiveness and transparency. With the introduction of a mandatory declaration of the sale of OF when registering the food trade sites and requirements for online trade, conditions are created for a more precise definition of the control sites, to realize its comprehensiveness and effectiveness.
4. In contrast to men, female users are more likely to choose OF.
5. The main sources of information about OF used by the respondents (consumers, traders and manufacturers) are: internet portals, specialized sites, friends, relatives, colleagues and the shops themselves. Thanks to Internet portals and specialized sites, traders are familiar with the requirements for the control of the origin of OF and the institutions performing this control. Consumers show a high level of trust in OF specialist shops, not only in terms of the information they receive from them about food, but also in the food itself.
6. In case of doubt about the authenticity of OF, users know who to report to for verification. These are the ecologically motivated respondents who know the hallmarks of organic production and believe that OF are safe and controlled by the BFSA.
7. The users' responses regarding the association of the term OF show that they correctly read the meaning implied in it. For a large part of them, OF are foods with health benefits (58%), natural origin (64.7%) and free from GMOs, heavy metals, pesticides, chemical fertilizers and antibiotics, hormones, preservatives and dyes (70.7%). The latter association testifies to the study participants' familiarity with the hallmarks of organic production.

8. Selfish motives for buying OF, presented as a belief and the most important reason, are leading among respondents, with support of 77.3% and 81%, respectively. Individuals are persons with a negative attitude towards OF (foods of menthetes) and who consume them due to modern motives.
9. The factor that would most increase the purchase of OF, indicated by the respondents, is trust, by providing more guarantees of origin (51.3%). Barriers were identified for the research participants, the biggest of which was the high price of OF (43.3%).
10. The proportion of users who know the organic logo is very high (86.7%). The national voluntary sign "Ladybug" is almost unknown among the respondents .
11. Almost two-thirds of the respondents (74.7%) answered without a doubt that the terms "biological" or "bio" on the packaging are accompanied by an official sign. For the majority of traders (88%) and producers (90%) in the survey, the concept of OF is related to the characteristics of organically produced foods.
12. The majority of producers (85%) and traders (94%) with OF declare the need to conduct training on the regulatory requirements for the trade in organic food. Nevertheless, not a small part of the respondents defined themselves as fully informed and prepared to advise their clients about OF.
13. One of the main reasons for trading with OF, indicated by the respondents, is related to the controlled and guaranteed food safety (36%).
14. Unlike traders (54%), producers (90%) are better informed how to control the origin of OF (biological certificate) and are familiar with the requirements for labeling OF, as well as the "European Leaf" sign (88 % for traders and 85% for producers), they also indicate the name and/or code number of the control body that controlled and certified the production process (24% for traders and 90% for producers).

VIII . CONCLUSIONS AND RECOMMENDATIONS

VIII .1. CONCLUSIONS

1. The official control system for organic food trade has been developed, implemented and functions effectively, both at the national and regional levels, which is a direct reflection of the timely updating and harmonization of the regulatory framework in Bulgaria with EU legislation.
2. The main and special normative documents in the field of organic production clearly regulate the bodies included in the system for official control of trade in organic products in Bulgaria, the scope, the procedure and the reporting of the results of this control.
3. The public, including the biological user, are not sufficiently and reliably informed about the results of official control when using terms and designations for OF.
4. The profile of the organic consumer is influenced by the role of women, who are relevant to the increasing attitude towards organic foods worldwide, including in Bulgaria, which is due to the assumption of their health benefits. Women are not only concerned about their health

and the health of all family members, looking for special information on the subject, they apply it, using objective criteria in distinguishing OF from traditionally produced ones.

5. Further analysis covering other geographic regions and focusing on a younger population sample is needed to more fully understand the demographic and socioeconomic characteristics of the organic consumer.
6. All information means are important in providing more knowledge on the subject of OF, but the most significant is the influence of Internet portals and specialized sites on all participants in the production and market of OF. The revealed dependencies between the variables aimed at controlling the origin of OF, the level of consumer counseling knowledge, sources of information and attitudes towards OF, reveal the importance of credible sources of information and the need to expand their influence on OF consumers, traders and producers.
7. Education and informing consumers about the characteristics of biological products and the results of the control activity of the responsible institutions, could be significant for consumers in the perception process of these products and making purchasing decisions. At the same time, a favorable basis is created for increasing the trust of consumers towards the competent authorities.
8. The majority of the respondents (consumers, traders and producers of OF) who took part in the survey have a positive attitude towards OF, corresponding to the concept of organic production, an expression of positively oriented environmental behavior promoting sustainability. But the results show that the buying attitude among consumers related to objective signs only applies to about 1/5 of consumers. Despite the salient health consciousness as a motive and influencing factor for OF use, the relative proportion of regular OF buyers in the study was small (8% with a frequency of daily and 36% with a frequency of once a week). This calls for further research into both barriers and enablers and consumer preferences for specific organic foods.
9. Consumer demand for organic food would increase with more guarantees of origin, increased recognition of the organic logo and objective labeling features, access to more seasonal foods, support for the local economy, increased educational capacity of producers and distributors, on biological production.

VIII.2.RECOMMENDATIONS TO MAFF, MH, BFSA, ASSOCIATIONS OF BIO-PRODUCERS

1. For a more complete and accurate determination of the objects for control by the BFSA, it will help not only to declare the activity during the registration of the objects, but also to introduce a mandatory one-time submission of a declaration (on-line) by the food trade objects, with a focus to those where consumers usually buy OF (hyper - and supermarkets and specialized organic food stores).
2. The data from our study showing higher trust in OF can be provided to governmental and non-governmental organizations to use in developing policies and information campaigns to promote them and increase positive consumer attitudes towards them.

3. The competent authorities, together with representatives of organic production associations and Internet providers, attracting the scientific potential of our higher education institutions, can build online platforms that, in addition to current information on the activities of the institutions, conduct training events aimed at all groups on the OF market, as well as to provide access to scientific publications and regulatory documents on the subject.
4. Producers and distributors of OF to organize independent educational campaigns among their organic and potential consumers, including targeting children and their parents in children's and educational institutions, where organic fruits and vegetables are provided under the EU programs. Through them, the level of awareness of OP consumers would increase on the benefits of organic production at the individual and societal level, for the preservation of the environment and support for animal welfare.
5. The Departments of Promotion and Prevention of Diseases at RHI should include in their training plans topics related to the characteristics of organic foods and the impact of production processes on the protection of natural resources and the preservation of animal health.

IX. CONTRIBUTIONS OF THE PRESENT SCIENTIFIC WORK

IX.1. With a theoretical - cognitive character

1. An in-depth review was conducted in developing regulatory documents and scientific publications of OP-related studies with international and national scope.
2. The attitudes, the level of awareness and the sources of information regarding OF have been identified within the framework of a survey conducted among consumers from the Dobrich region.
3. The motives, stimulating factors and barriers facing consumers in their choice of OF have been established.
4. The characteristics of regular and occasional consumers of OF are derived.
5. The reasons for the activity, production and trade of biological products, the sources of information, as well as the need for trainings regarding OF were established within the framework of questionnaire surveys among producers and traders of biological products and food from the Dobrich region .
6. Researched on the level of knowledge regarding the regulatory requirements for the production and sale of OF among producers and distributors of OF in the Dobrich region.

IX.2. With an original character

1. The results of the official control of the territory of the Dobrich and Varna regions in relation to the use of OF terms and designations for the period 2014-2019, as well as the normative documents regulating this activity, were analyzed.

2. Analyzed and established regularities when outlining the biological profile of users from the Dobrich region in the context of attitudes, frequency, motives, stimulating factors and barriers related to OF consumption.

3. Dependencies related to the sources of information, the ways of recognition and designation of OF by consumers, as well as the institutions related to the control of trade in biological products, have been studied and found.
4. Statistical dependencies between the sources of information, the knowledge regarding the regulatory requirements for the trade in OF and the ability to apply this knowledge by the OF distributors in commercial establishments in the territory of Dobrich region were investigated and revealed.
5. The influence of certain demographic characteristics, such as level of education and the presence of children in the family, has been proven in relation to the sources of information about OF, recognition of OF, their designation and frequency of purchase.
6. 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 OF, stimulating factors, signaling to the competent authorities in case of suspicion that a given food offered as "organic" is not, assessing the level of knowledge needed to advise customers on their OF questions .

IX.3. With an applied nature

1. 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.
2. Proposals have been formulated to governmental and non-governmental bodies and organizations to increase awareness and education on the part of producers, traders and consumers of OF, for fruitful cooperation between all participants in the market of biological products.
3. 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.
4. The revealed regularities are a good basis for expanding the territorial and demographic potential of the study.

X . PUBLICATIONS AND PARTICIPATION ON THE TOPIC OF THE DISSERTATION

PUBLICATIONS:

1. R. Braykova, Regulatory requirements for organic food in Bulgaria and d the European Union - beginning, development and reform, Jornal of Biomedical&Clinical Research, Vol. 13, No. 1, Suppl. 1, 2020, 29
2. Braykova R., Toneva A., System of official control in trade of organic products in Bulgaria, International Electronic Scientific and Practical Journal "WayScience", 2021, 194-196.
3. Braykova R., Naydenova D., Toneva A., Consumer knowledge about organic foods and their control in Dobrich region, Collection of reports from the 14th Scientific Conference "Sustainable science for safe food" EFSA Contact Center Bulgaria (2021): 77-82 http://focalpointbg.com

PARTICIPATIONS:

1. Braykova R. Normative requirements for organic food in Bulgaria and the European Union - beginning, development and reform. Jubilee scientific conference with international participation "New approaches in public health and health policy", MU-Pleven, FOZ. 26.11-28.11.20
2. Braykova R., Naydenova D., Toneva A., Consumer knowledge about organic foods and their control in Dobrich region 14th Scientific Conference Sustainable Science for Safe Food of the Bulgarian Contact Center of EFSA at the Food Chain Risk Assessment Center, MZHH, 27.10.2021
3. R. Braykova, D. Naydenova, A. Toneva, I. Nikolova. Profile of consumers of organic food in Bulgaria. 10 years „Alumni Club and Friends" - Medical University - Varna, 01-02.04.2022