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REVIEW ARTICLE

Environmental standardization and assessment of the economic effect of organic production export and fair trade

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The article systematically analyzes the preconditions, state and trends of global processes of standardization of organic products. It is determined that organic production tendencies and export diversification in economically developed countries are taking place in the direction of "Slow Food". In order to promote the world experience and ensure the competitive agrarian production in Ukraine, certain directions have been developed to ensure the sustainable export of agricultural products using innovations, conjuncture, standardization and product life cycle.

Keywords: Standardization; organic production; diversification; export; efficiency

Introduction

The realities of today's functioning of the economies of the world arethe subject to many challenges. The important factors in the development of the world economy at the end of the 20th-the beginning of the 21stcentury are globalization; the strengthening of integration and internationalization processes; transformation of technological systems and methods of production; the growth of imbalances in the global economy; aggravation of contradictions concerning natural resources; the increase in food prices; strengthening of the processes of the protection of national authenticity, including the sphere of economic development, etc. In many economically developed countries, information and communication factors, protection and advocacy of local and state interests have currently become crucial in most spheres of life. For example, "The Concept for the Development of the Digital Economy and Society of Ukraine for 2018-2020", which states that the digitalization of Ukraine should focus on international, European and regional cooperation in order to integrate Ukraine into the EU, on entering the European and world markets; be accompanied by an increase in the level of trust and security and integrated public administration (Ministry of Economic Development and Trade of Ukraine, 2017). On the other hand, given that agro-industrial production in Ukraine in recent years provides up to 40% of currency revenues, multifunctional agriculture must become the way of thinking of the relevant officials and the guide for agrarians and business. According to the report of the Cabinet of Ministers, in 2017, the export of agrarian products increased by 19.5%. The solutions that are only being developed in Ukraine taking into account foreign experience have already given positive effects in the planned agrarian policy of the USA, Japan, and the European Union. Agrarian production in such countries develops tolerantly and in harmony with the preservation of the natural environment, and the share of organic production is increasing every year. Therefore, the world practice of food production and exports takes into account the following innovative topics: organic production and best regional practices; the needs of the consumers in the economically developed countries; voluntary standardization of product quality and fair product provisions.

Brief literature review

The following scientists worked on the issues of market development and standardization of organic products in Ukraine: V. Artysh, N. Zinovchuk, H. Humeniuk, P. Skrypchuk, T. Chaika, H. Shevchuk (Artysh, 2009; Zinovchuk et al., 2011; Skrypchuk, Humeniuk & Shpak, 2015; Chaika, 2011), who analyzed the indicators of the estimation of the efficiency of organic production. The formation of the effective economic strategy of the state and the aspects of European economic integration were researched in the works of the Ukrainian scientists Y. Zhalilo and M. Hrebeniuk (Zhalilo et al., 2014; Hrebeniuk, 2012). The features of cross-border cooperation between Ukraine and the EU were explored by E. Kish, the possibilities of using the experience of new members of the European Union in Ukraine-by V. Kuibida, A. Tkachuk, T. Zabukovets-Kovachych, O. Betlii, I. Burakovskyi and others (Kish; Kuibida, Tkachuk & Zabukovets-Kovachych, 2010; Betlii, 2014; Burakovskyi, Movchan & Viter, 2004).

The study of the national food system and provisions of the innovative development of small enterprises were reflected in the works of S. Iliashenko, M. Koniordos, D. Bell, R. Gross, R. Mudrak, O. Polinkevych and others (Illiashenko, 2014; Koniordos, Matvienko-Biliaeva & Strapchuk, 2017; Bell, 1967;Gross, et al. 2000; Mudrak, 2014; Polinkevych, 2016).

The problems of agrarian marketing were studied by O. Salamin, B. Berman, J. R. Evans. The influence of various factors on the state of the agrarian market was analyzed in the works of J. Rhodes, O. Salamin (Evans & Berman, 2002; Rhodes, 2007; Salamin, 2015). The possibilities of adapting agricultural producers to the market expectations were examined in the works of J. Ferris (Ferris, 2005).

At the same time, as the research showed, there are currently no developments regarding the social, ecological and economic substantiation of standardization and specialization of the production of organic products in the direction of its diversification at different levels.

Purpose: The purpose of this research is to analyze the state and trends of global processes of standardization of organic products and diversification of its exports from Ukraine.

Results and discussion

Results In the current social and political conditions and in the context of globalization, it is expedient to determine the industries and aspects of production, in which domestic producers can obtain long-term benefits in a globalized world. The research methodology is based on the analysis of scientific and practical developments and statistics of production and export of organic food products in Ukraine and in the world. The main factors in the development of organic and environmental production are the standards that can now be generalized in the following way:

- international private or intergovernmental frame work standardssuc has the International basic standards of IFOAMortheFoodCode;
- the main operating Standards or Directivessuchas EU Directives (EEC) No 2092/91 or the American National Organic Program (USDA);
- private Standards of ecological production, suchas Demeter, Naturland, Bioland, Geae, Ekowin, etc.

Among the above-mentioned international framework standards, IFOAM Basis Standards deserve special attention. Their goal is to harmonize various certification programs through the creation of a universal framework for environmental standards throughout the world.

The basic operating standards regulate certain environmental markets, that is, they determine the basic minimum "environmental" requirements that must be met in relation to the products and the process of its production. In the world, there are ecological products markets with their individual certification requirements, that is, with their own standards.

The most important of them are:- European Union-Council Regulation (EU) No. 834/2007 from June 28, 2007 on organic production and labeling of organic products; Commission Regulation (EU) No. 889/2008 from September 5, 2008 concerning the rules for organic production, labeling and control for the implementation of Council Regulation (EU) No 834/2007 concerning organic production and labeling of organic products. These documents defined the general framework and principles of organic agriculture, requirements for the process of agricultural production, processing and manufacturing of food products, and labeling of organic products. They abolishd national regulation and created a single market for organic products; they started the system of control (inspection) of organic products, in particular, for their import into EU countries; they opened the market of organic products in the EU for import from third countries. Therefore, when developing own standards for organic production and organically grown (manufactured) plant and food products, it is advisable to follow the structure of the IFOAM Basic Standards and to choose the mandatory requirements and permissible substances in organic production from the Commission Regulation (EU) No. 889/2008 and recommended in the CAC/FAO/WHO and IFOAM standards, taking into account the specific object of standardization, local conditions and the planned quality of the finished products. In order to develop standards for organically grown (manufactured) products, it is necessary first to establish regulatory requirements for safety indicators that should be significantly more stringent than traditional products, or to set these requirements in the Technical Regulations and provide for mandatory certification of such products (The requirements of European organic legislation);

- the organic market of the USA-the National Organic Program, which came into force in November 2002 (USDA);
- Japanese environmental market-Japanese agricultural standards JAS;
- Switzerland, Israel, Argentina, Czech Republic, Bulgaria, Australia-environmental regulations equivalent to Council Regulation (EU) No. 834/2007 and Commission Regulation (EU) No. 889/2008 from September 5, 2008;
- Anglamark (private trade mark Coopin Denmark) also accounts for about half of organic food sales in this country;
- “BIOLan”, Ukraine. The logo is used to identify products manufactured in accordance with the Standards of organic agricultural production and labeling of agricultural products and food “BIOLan”. The standards are integrated into the part of the rules (BioLan Certification Body);
- trademark “Shchedryk” inthetownofRivne;
- standards of the organization “Green Initiatives of Rivne”, Ukraine. The organization systemically implements scientific and practical developments in the field of ecological and organic farming and production. The standards are intended to introduce local and regional traditions, brands, features of processing, etc. (Green Technologies);
- Russian Federation-the standard of the organization NP "AGROSOFIA" andothers.

Most ecological products markets, for example, the European Union or the United States, were formed as a result of establishment and direct influence of the Directives that define the necessary requirements for products, the methods of their production and allow products to be labeled as "ecological" ("organic", "biological", "biodynamic", "bio", "eco"). The International Directives on organic production, which are certified, currently do not exist, and a large number of standards make the focus on the environmental management of the enterprise, especially at the initial stage, rather complicated. Organic certification is usually determined by the standards established at the national or regional level. Many different

organic standards can work within the same country, and they may either not comply with the IFOAM standard or meet the standards included in the IFOAM Standards family. Individual countries (over 80) have local organic standards, and 17 countries are developing legislation (Huber & Schmid, 2017). Concluding on the international experience,it can be said that standards are not obligatory, but they determine the ways to achieve the mandatory requirements of technical regulations. Standardization as an element of technical regulation in a market economy provides a contribution to the economic growth that exceeds the relevant indicators from the introduction of patents and licenses. The experience of foreign companies shows that investments in standards give 20-40 units of profit per unit cost (Skrypchuk, 2017).

Against the background of economic, social and environmental problems of most countries of the world, organic agricultural production has been dynamically developing, hence the corresponding standardization is also developing. Organic agriculture is actively developing in the world, and according to the data of FiBL, in 2015, it was represented in more than 179 countries, with 2.4 million farms (7.2% growth compared to 2014). In 2002, the volume of the world market of ecological products was estimated as $ 25 billion a year. In 2015, it amounted to more than 75 billion euros, including the USA-35.8, Germany-8.1 and France-5.5 billion euros. It is prognosed that by 2020, it can reach a turnover of $ 200-250 billion a year. The largest areas of organic land are in Australia-22.7 million hectares, Argentina-3.1 and the USA-2.0 million hectares (Willer & Lernoud, 2017).

In 2015, 50.9 million hectares, which is 1.1% of world agricultural land, were certifiedworldwide as organic farming. The organic market included the United States of America (47% of the world organic market), Germany (11%) and France (7%) (Willer & Lernoud, 2017). The diversification of the standards in organic production is accompanied by the diversification of exports as a means of obtaining a larger share of the market and is an important policy objective for many countries. For these purposes, the diversification index is used; it is built on the basis of product coverage, market of achievements and historical activity, and can be used as the indicator of the technological and productive capacity of the country based on its participation in the world market. The study shows that the diversity of exports has generally increased in the past 20 years, but very unevenly in different countries (World Trade Organization, 2017). As in the traditional market for food production and sales in Europe, the consolidation is achieved through large companies' acquisition of the market share. For example, all leading grocery retailers in North America have developed the standards for private labels for organic products.

In developing countries, there is an increase in food exports in terms of diversification. The variety of exports from the developed countries has not significantly changed due to the maturity of their export structure. Such tendencies are complemented by the popularity of production and selling of socially responsible products (Fairtrade), the production of which adheres to mandatory and voluntary rules for the protection of environment, tracking the life cycle of products, using restorative materials, etc.

Comparing organic markets around the world with a single market, the United States is the leader: 43% of the world's organic retail sales are in this country (27.1 billion euros); the European Union and China follow the USA. For Fairtrade products, the European Union has taken leadership with more than 70% of the world market, followed by the United States (13%) and Switzerland (7%). At the regional level, North America remains the largest organic market (39.5 billion euros), followed by Europe (29.8 billion euros) and Asia (6.2 billion euros), (Figure 1). Europe has the largest certified Fairtrade market, with almost 80 percent of the world market, and North America-over 16 percent (Figure 2). However, there are problems with defining only Fairtrade certified and organic products due to the fact that many products are double-certified.

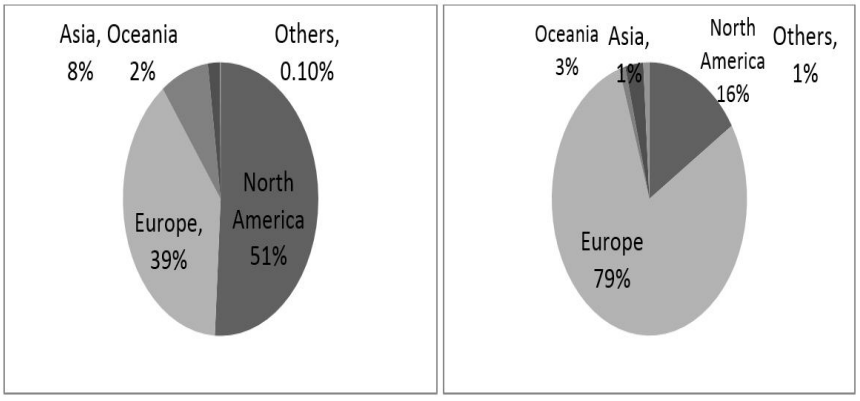

Figure 1. Distribution of the value of retail sales by region: a) Source: FiBL poll, (Willer & Lernoud, 2017); b) Source: Fait rade international 2016 (Willer & Lernoud, 2017).

Figures 2 and 3 show the growth of the organic market, which has more than quadrupled over 15 years since 1999, although, in some countries, during the financial crisis of 2008,the growth slowed down. Fairtrade certified products market has grown six times since 2004, according to the data from Fairtrade International annual reports. In 2015, the growth of the organic market was noted in all countries, and in some cases, the growth made a two-figure number. For example, in Spain, the market grew by 25%, which is the largest increase. In Ireland, the market grew by 23%, and in Sweden-by 20%. In some countries, the growth was more than 20 percent, such as Estonia (47%), the USA (33%) and Norway (25%). The country with the largest organic food market is the United States (35.8 billion euros), followed by Germany (8.6 billion euros), France (5.5 billion euros), and China (4.7 billion euros). The countries with the largest market for certified Fairtrade products were the United Kingdom (€ 2.1 billion), Germany (€ 978 million), and the United States (€ 917 million) (World Trade Organization, 2017).

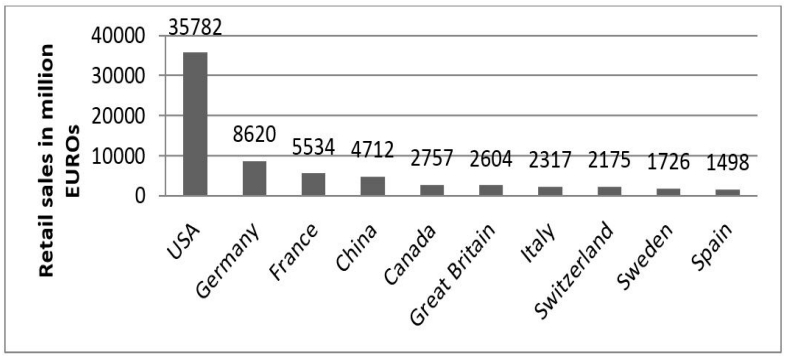

Figure 2. Top 10 countries with the biggest market of organic production in 2015. Source: (Willer & Lernoud, 2017).

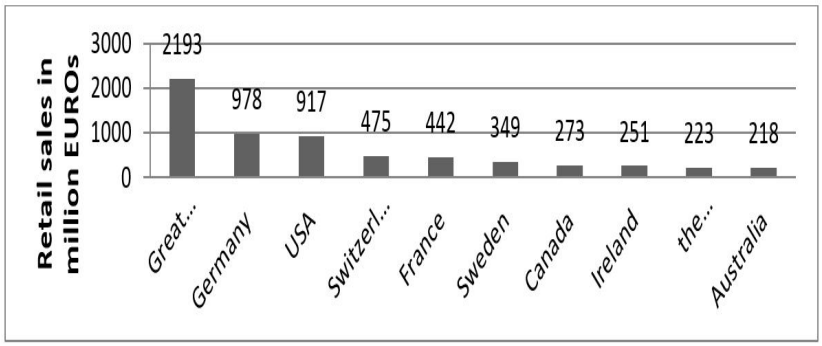

Figure 3. Top 10 countries witht hebiggest market of Fair trade food products in 2015. Source: Faitradeinternationalpoll 2016, (Willer & Lernoud, 2017).

Figures 4 and 5 show the consumption of organic products per capita in European countries: in 2015, Switzerland had the highest per capita consumption (262 euros), Denmark (191 euros) and Sweden (177 euros). Switzerland also had the highest per capita spending on certified Fairtrade products in 2015 (57.7 euros), Ireland (54.2 euros), Sweden (36.1 euros), and the UK (33.9 euros).

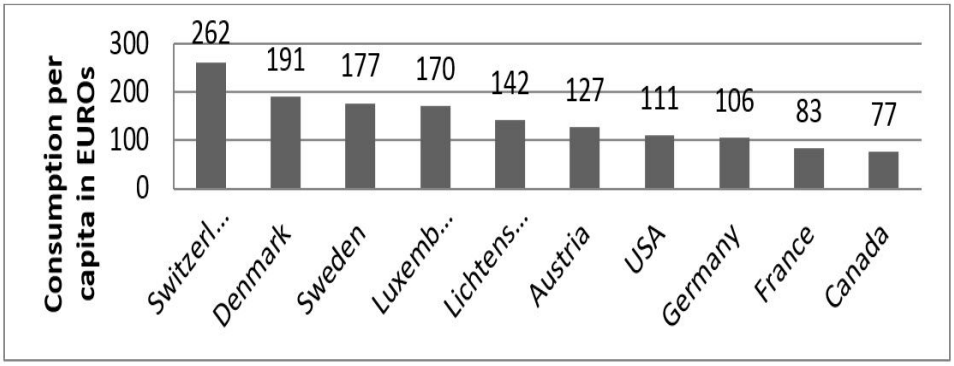

Figure 4. Countries with the highest per capita consumption of organic products in Euros in 2015. Source: FiBL-AMIpoll 2017, (Willer & Lernoud, 2017).

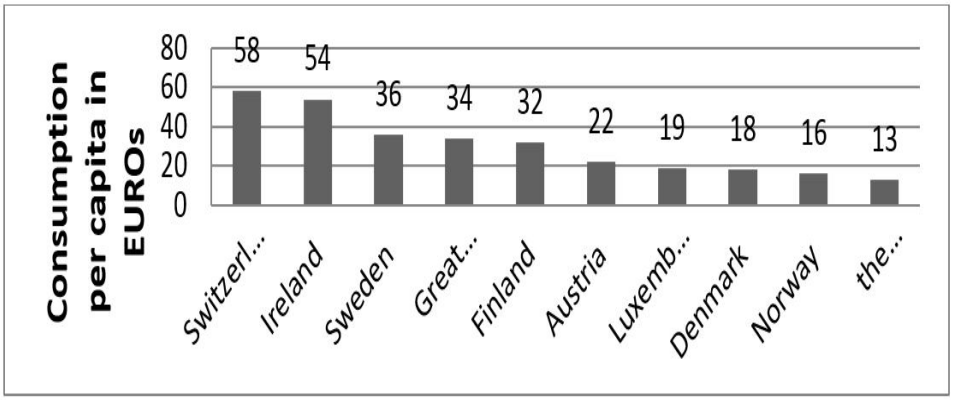

Figure 5. Countries with the highest per capita consumption of products certified as Faitrade, in Euros, in 2015. Source: Faitradeinternationalpoll 2016 (Willer & Lernoud, 2017).

Consequently, the aforementioned trends in environmental production and socially responsible businesses have formed the new direction “Slow Food”, which is based on the establishment of catering facilities that provide a healthier diet, as well as preserve the traditions of national and regional cuisine. Currently, this movement is present in more than 160 countries, has more than 1,000,000 supporters and 2,400 catering communities, and so on. The analysis of the mentioned tendencies confirms the results of the introduction of the model of European agriculture-multifunctionality in combination with sustainable development. In contrast to globalization in the production and consumption of food, and as counteraction to the production of food products using mass consumption technologies, such a model ensures proper and competitive agricultural production, preserves local landscapes and local supply networks. The practical solution for the development of “Slow Food” is the “Manifesto on Future Food Production” (Manifesto on Future Food Production).

Therefore, for Ukraine, it is very relevant to implement the following provisions in practice: the search for the ways and directions, and practical solutions aimed at ensuring social and environmental sustainability of agriculture; production of food products with a high share of value added (organic and niche products); the availability of quality products for the population, to place food safety and health protection above the corporate and commercial interests; preservation of biodiversity; taking into account WTO rules and the Codex Alimentarius; development of regional standards for products and services; localization of food sales; farmer marketing, etc.

Conclusion

In our opinion, the diversification of organic agricultural production in Ukrainian economy requires accessible and long-term loans in Ukrainian banks; the use of such an instrument as EPC-contractor (Engineering, procurement and construction)-a company that implements a project from A to Z and fully assumes the risks associated with project management before its commissioning, including standardization and marketing of regional and/or niche products; the organization of cooperatives and clusters; the attraction of Greenbonds that are aimed at financing or refinancing projects and mitigating environmental impacts and reducing greenhouse gas emissions; financing through state programs and grants of innovative projects; the use of the project "Agricultural Receipts"; attraction of export credit agencies (ECA), etc. However, the most effective way of preserving rural settlements and small and medium-sized farms is and will be to combine them into cooperatives, unions, and regional formations with the main purpose of "survival" and development. Such unions will require regional standards, marking, and logistics, and for successful implementation, will need to work in accordance with innovative technologies of world practice. For the future, it is necessary to justify the introduction of the following instruments: trust between businesseson the basis of business reputation, fulfillment of mutual obligations, level of personal relations, granting of financial privileges, high quality of services, reliability, image and brand, long term of cooperation, frequency of contacts and other specific social, ecological and economic tools.

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