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УСТОЙЧИВОЕ РАЗВИТИЕ ЭКОНОМИКИ: МЕЖДУНАРОДНЫЕ И НАЦИОНАЛЬНЫЕ АСПЕКТЫ

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Устойчивое развитие экономики: международные и национальные аспекты [Электронный ресурс] : электронный сборник статей II международной научно-практической конференции, посвященной 50-летию Полоцкого государственного университета, Новополоцк, 7–8 июня 2018 г. / Полоцкий государственный университет. – Новополоцк, 2018. – 1 электрон. опт. диск (CD-ROM).

Впервые материалы конференции «Устойчивое развитие экономики: международные и национальные аспекты» были изданы в 2012 году (печатное издание).

Рассмотрены демографические и миграционные процессы в контексте устойчивого развития экономики; обозначены теоретические основы, практические аспекты управления человеческими ресурсами; выявлены и систематизированы драйверы инклюзивного экономического роста в Беларуси и за рубежом; раскрыты актуальные финансовые и экономические аспекты развития отраслей; приведены актуальные проблемы и тенденции развития логистики на современном этапе; отражены современные тенденции совершенствования финансово-кредитного механизма; освещены актуальные проблемы учета, анализа, аудита в контексте устойчивого развития национальных и зарубежных экономических систем; представлены новейшие научные исследования различных аспектов функционирования современных коммуникативных технологий.

Для научных работников, докторантов, аспирантов, действующих практиков и студентов учреждений высшего образования, изучающих экономические дисциплины.

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TENDENCIES IN FOOD INDUSTRY DEVELOPMENT

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The food industry has always been, is and will be one of the most important industries, as the products produced by the industrybelongs to the pyramid of basic needs of any person. Rapid growth of number of population in the world, general increase of the level of education, technological development, globalization and regionalization processes as well determine the latest trends in development of food industry.

Researchers, international organizations, and public administration institutions are increasingly focusing on the food industry conducting studies, developing strategic planning documents and legal regulations. since modern technologies offer a wide range of possibilities to create new food that would meet the needs of moderncustomer, food safety becomes a significant issue.

Food producers use the concepts "novel food" and "functional food" that are not always understandable by customers. Consumers assume that these are products enriched by various vitamins and minerals, and are modern. However, genetic engineering also leads to the creation of novel foods, for instance, genetically modified organisms, which are not generally supported by the European Union consumers [13].

One more piece of data is provided by a survey conducted in France, which states that the periods of cooking have been reduced from two hours and a half to one hour and forty minutes per day in four-person families. These factors confirm that consumer behaviour has changed, and the factors influencing the choice of food products by customers differ as well [9].

Aim of the article is to analyse tendencies of the food industry development, emphasizing the most important aspects of development

Tasks to achieve the goal:

– to explore theoretical and practical literature on the food industry development;

– to analyse the survey data;

– to make conclusions and develop proposals.

Scientific and practical information was used in the research (see: References). General research methods (monographic, logic and construction, graphical) as well as sociological method (survey) were used in the research.

According the Food and Drink Report 2017, the food industry development nowadays is very rapid. Moreover, it is considered as the leading European manufacturing sector in terms of turnover and employment.[2]Food industry is regarded as a key pillar of the EU economy with its turnover 1 trillion EUR, export amount 98 billion EUR, and trade surplus 25 billion EUR. It has to be noted that 9 in 10 food and drink companies are SMEs [2].

Industry is rapidly developing not only in terms of manufacturing volume (5.4% increase in the EU member states in the 3rdquarter of 2017, compared to the 3rdquarter of 2016) [6], the sector endures significant structural changes, enhanced by development of science and technology, and by changes in consumer behaviour.

In 2017, research and audit company RSM conducted a survey of 345 food companies. In the result, the factors illustrating consumer food trends having the most positive impact on sales over the last two years were identified. According the survey, the main factors influencing consumer behaviour in choosing foods are: health and wellness, convenience/ easy-to-prepare, freshness/ no preservatives, private label, ingredient transparency/ labelling, environmentally friendly, extended shelf life, organic and natural, locally sourced, non-allergen.[8] In fact, these factors illustrate tendencies in the food industry, which are explained by concepts of novel food, functional food, organic or ecological food, nutritional supplements. Use of these terms expands and they are oftenapplied as a marketing tool. Corresponding legislation has been adopted at the EU level both providing a conceptual explanation and regulating food production. According the EU and the Council's Regulation No. 2015/2283, "novel food"is any food that was not used for human consumption before the 15 May 1997 and which falls within at least one of the following categories:

- food with a new or intentionally modified molecular structure;
- food consisting of, isolated from or produced from microorganisms, fungi or algae;
- food consisting of, isolated from or produced from material of mineral origin;
- food consisting of, isolated from or produced from plants or their parts, except when the food has a history of safe food use within the Union and is consisting of, isolated from or produced from a plant or a variety of the same species obtained by:

– traditional propagating practices;

– non-traditional propagating practices, where those practices do not give rise to significant changes in the composition or structure of the food affecting its nutritional value, metabolism or level of undesirable substances;

- food consisting of, isolated from or produced from animals or their parts, except for animals obtained by traditional breeding practices
- food consisting of, isolated from or produced from cell culture or tissue culture derived from animals, plants, micro-organisms, fungi or algae;
- food resulting from a production process, which gives rise to significant changes in the composition or structure of a food, affecting its nutritional value, metabolism or level of undesirable substances;
- food consisting of engineered nanomaterials;
- vitamins, minerals and other substances [16].

Science and technology development have caused changes in food production creating new food ingredients and new production methods, such as nanotechnology. In addition, mass tourism and migration have increased interest in foods such as insects or tropical fruits, which until this time have not been part of the EU's traditional diet. This, in turn, has increased the need to assure consumers that the novel foods on the market are safe. In general, the new legislation seeks to facilitate the free movement of new food products within the EU single market, while maintaining a high level of food safety. It seeks to accelerate the authorization procedure used to assess the food safety before placing it in the market. It also aims to clarify the definition of a novel food.

According the above-mentioned Regulation, the EU constantly updates and supplements the list of products to which the novel food status is granted. There exists a certain procedure for

granting a novel food status to particular products, thoughthe authors will not address this issue in depth in this article.

As indicated in the above-mentioned survey, consumer choice is significantly influenced by health factor. Consequently, the concept of functional food could be used to describe it. Functional food concept is studied both by the researchers (Goldberg, 1994; Siro, Istvan, et al., 2008; Diplock, A.T., Aggett, P.J., Ashwell, M., Bornet, F., Fern, E.B., and Roberfroid, M.B.,1999), and the research institutions (International Life Science Institute; The National Academy of Sciences Food and Nutrition Board in the US; The Institute of Food Technologists; The American Dietetic Association). Their findings are used to develop regulatory documents. The key idea dominating in the functional food studies is – these are the food products that provide benefits.

Functional food is characterized by the following functions:

- nutritional function[19];
- sensorial or sensory function - its ability to stimulate the appetite, which, according to the resultant level of acceptance or rejection, depends on their organoleptic characteristics (colour, flavour, odour and texture)[9];
- the tertiary function of food that is involved in the modulation of the physiological systems of living organisms, such as the immune, endocrine, nervous, circulatory and digestive systems.

Over time, many terms have been used to identify functional kinds of food, such as designer food, nutraceuticals, genetically engineered food, farm food, vital food, phytofood/phytonutrients, food of high performance, smart food, therapeutic food, value-added food, genomic food, prebiotics/probiotics, superior food, nutritious hyper food, and real food [20].

It should be noted that in the European Commission documents [7] there are other reasons regarding the functional food mentioned echoing E. Sloan's ideas.

A questionnaire was developed within the framework of the study with the aim to identify to what extent the local food products are used by consumers in the Latgale region. As well, questions about novel food and functional food were included in the questionnaire. The survey was conducted in January and February 2017. In total, 504 valid questionnaires were obtained. According the CSB data, the number of permanent residents of Latgale region was 276 358 in 2016. Using the simple sampling method, the number of respondents required to claim that the data obtained with a probability of 95% is reliable and represents a general sample is 384. Since more respondents were surveyed (504), then it can be confirmed that reliability of the data obtained is 95%.

During the empirical research, interesting ideas were drawn demanding further in-depth research in order to confirm the current hypothesis proposed by the authors. Characteristics of the respondents. 65.7% of the respondents are women and 34.3% - men, 35.8% of the respondents are under age of 24, 16.3% of age 25-35, 20.1% - 36.45%, 19.1% - 46-60, 8.7% - over 61. 47.0% of the respondents are employees, 31.7% - students, pensioners (6.3%), employers (6.0%), housewives (5.8%), and unemployed persons (2.8%). 43.8% of the respondents have higher education, 29.4% - secondary education (that is explained by the fact that 31.7% of the respondents are students), 20.0% - vocational education, and 6.8% - primary education. Most of the respondents (64.1%) live in cities, 26.3% - in villages, and 9.6% - in farmsteads. It is essential that 67.5% of the

respondents have their own household farm, which is in favour of food products grown by themselves, that is, of products of certain/ known origin. 12.30% of the respondents are allergic to some food.

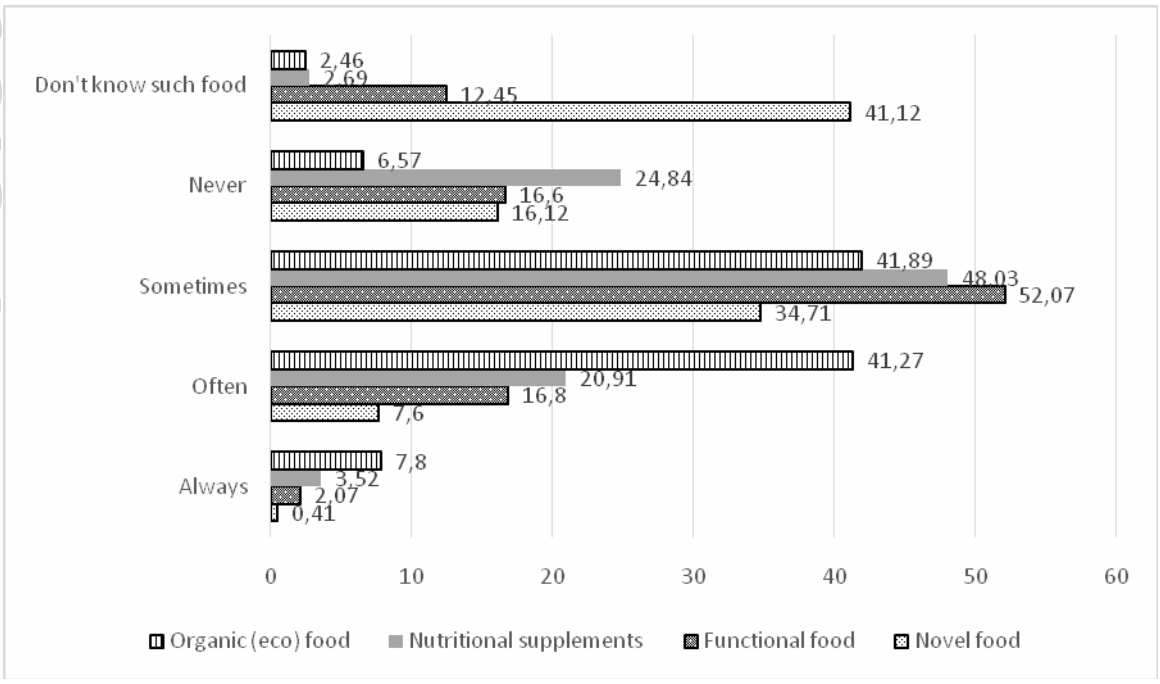

Figure. – Frequency of the purchases of novel food, nutritional supplements, functional food, and organic or ecological food by the respondents (by the authors, based on survey data)

Figure reflects respondents' responses regarding their purchasing habits and their level of knowledge. The respondents always or often buy organic (ecological) food. In contrast, another situation is regarding novel food, where 41.12% of the respondents claim they do not know such food. The same situation is regarding functional food, since only 18.87% of the respondents claim they always or frequently buy this type of food. According the authors, in-depth research is needed to identify the reasons, though it certainly can be said that it is necessary to raise awareness and knowledge on these issues in the society.

Analysing the EP and the Council's Regulation No. 2015/2283, it can be concluded that awareness of the "novel food" concept is expanding, and the term "functional food" is included in the concept of novel food. As functional food is one of directions of the novel food concept, and since the 1990s it already has a significant role in the food industry; researchers claim it is for a number of essential reasons [18]:

- The public cares more about their health and buys food with added nutritional value.
- Organisations responsible for food regulation are recognising the benefits of functional food to public health.
- The government is paying attention to this rung because it foresees the economic potential of these products as part of prevention strategies for public health.
- Other factors, which contribute to the boom of functional food, encompass technological breakthroughs, including biotechnology and scientific research, documenting the health bene-

fits of these kinds of food. It is a fact that consumers have begun to see these diets as essential for the prevention of chronic diseases such as cancer, cardiovascular disease, osteoporosis, and others. Thus, a phenomenon has presented itself called self-care, which is the main factor that motivates decisions to buy healthier food and this factor will rule the growth of the functional food industry.

The concepts of novel food and functional food are often associated with health and modernity. However, in the sense of consumers, one of the aspects of healthy food is local food (this can be concluded from the survey). Now, the role of local food is enhanced by desire of communities to develop their economic activity and identity, though, it is hold back by the lack of a normative basis, becauseeven the concept of “local food” is not defined. Therefore, the authors believe that the term “local food” needs to be read in conjunction with the concept of "novel food".

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ТЕНДЕНЦИИ РАЗВИТИЯ ПИЩЕВОЙ ПРОМЫШЛЕННОСТИ

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Пищевая промышленность является одной из самых быстрорастущих отраслей в мире, в которой задействовано наибольшее количество рабочей силы и создается наибольшая добавленная стоимость. Целью данной статьи является изучение тенденций развития пищевой промышленности с выделением наиболее важных аспектов ее развития. В результате исследования было обнаружено несколько важных факторов, влияющих на пищевую промышленность. При создании новых продуктов питания производители должны сосредоточиться на ряде факторов, которые важны для современных потребителей. К ним относятся: здоровье и полезность, удобство/легкость приготовления, свежесть/отсутствие консервантов, наличие торгового знака производителя, доступность информации об ингредиентах/маркировка, экологичность, расширенный срок хранения, органичность и натуральность, производство с использованием местных ингредиентов, гипоаллергенность. В целом следует сделать вывод, что ключевую роль в пищевой промышленности в будущем сыграет функциональная пища.