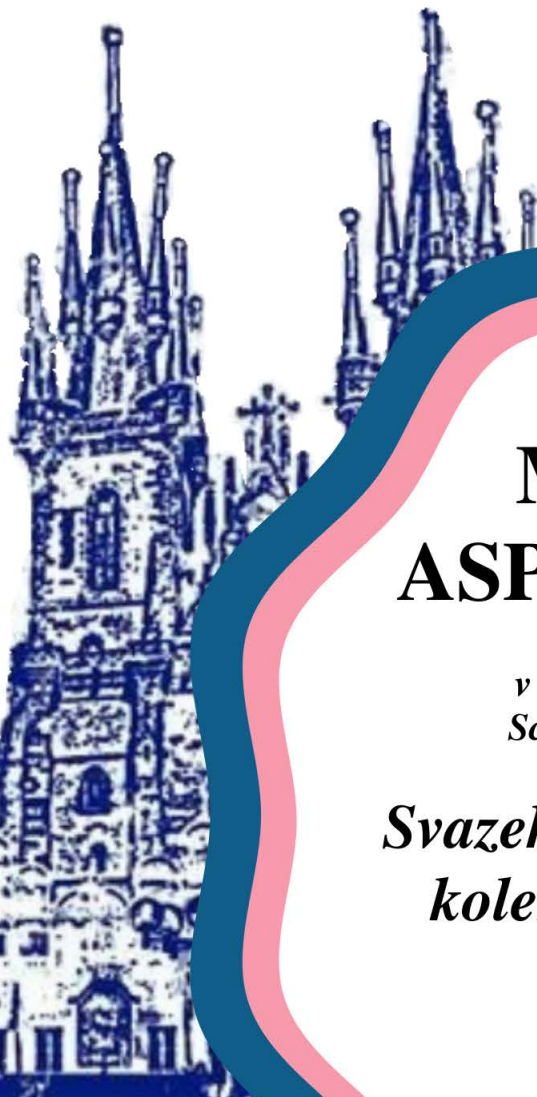




Наукoвi перспективи
Видавничa група



MODERNÍ ASPEKTY VĚDY

*v rámci publikační skupiny
Scientific Publishing Group*

*Svazek XXV. mezinárodní
kolektivní monografie*



Česká republika
2022



Mezinárodní Ekonomický Institut s.r.o. (Česká republika)
Středoevropský vzdělávací institut (Bratislava, Slovensko)
Národní institut pro ekonomický výzkum (Batumi, Gruzie)
Al-Farabi Kazakh National University (Kazachstán)
Institut filozofie a sociologie Ázerbájdžánu Národní akademie věd (Baku, Ázerbájdžán)
Batumi School of Navigation (Batumi, Gruzie)
Regionální akademie managementu (Kazachstán)
Veřejná vědecká organizace „Celokrajinské shromáždění lékařů ve veřejné správě“
(Kyjev, Ukrajina)
Nevládní organizace „Sdružení vědců Ukrajiny“ (Kyjev, Ukrajina)
Univerzita nových technologií (Kyjev, Ukrajina)

v rámci publikační skupiny Publishing Group „ Vědecká perspektiva “

MODERNÍ ASPEKTY VĚDY

Svazek XXV mezinárodní kolektivní monografie

Česká republika
2022

International Economic Institute s.r.o. (Czech Republic)
Central European Education Institute (Bratislava, Slovakia)
National Institute for Economic Research (Batumi, Georgia)
Al-Farabi Kazakh National University (Kazakhstan)
Institute of Philosophy and Sociology of Azerbaijan National Academy of Sciences
(Baku, Azerbaijan)
Batumi Navigation Teaching University (Batumi, Georgia)
Regional Academy of Management (Kazakhstan)
Public Scientific Organization "Ukrainian Assembly of Doctors of Sciences in Public
Administration" (Kyiv, Ukraine)
Public Organization "Association of Scientists of Ukraine" (Kyiv, Ukraine)
University of New Technologies (Kyiv, Ukraine)

within the Publishing Group "Scientific Perspectives"

MODERN ASPECTS OF SCIENCE

25- th volume of the international collective monograph

Czech Republic
2022

UDC 001.32: 1/3] (477) (02)
C91

Vydavatel:

Mezinárodní Ekonomický Institut s.r.o.
se sídlem V Lázních 688, Jesenice 252 42
IČO 03562671 Česká republika
Zveřejněno rozhodnutím akademické rady

Mezinárodní Ekonomický Institut s.r.o. (Zápis č. 21/2022 ze dne 8. listopad 2022)



Monografie jsou indexovány v mezinárodním vyhledávači Google Scholar

Recenzenti:

- Karel Nedbálek** - doktor práv, profesor v oboru právo (Zlín, Česká republika)
Markéta Pavlova - ředitel, Mezinárodní Ekonomický Institut (Praha, České republika)
Iryna Zhukova - kandidátka na vědu ve veřejné správě, docentka (Kyjev, Ukrajina)
Yevhen Romanenko - doktor věd ve veřejné správě, profesor, ctěný právník Ukrajiny (Kyjev, Ukrajina)
Oleksandr Datsiy - doktor ekonomie, profesor, čestný pracovník školství na Ukrajině (Kyjev, Ukrajina)
Jurij Kijkov - doktor informatiky, dr.h.c. v oblasti rozvoje vzdělávání (Teplice, Česká republika)
Vladimír Bačšín - docent ekonomie (Bratislava, Slovensko)
Peter Ošváth - docent práva (Bratislava, Slovensko)
Oleksandr Nepomnyashy - doktor věd ve veřejné správě, kandidát ekonomických věd, profesor, řádný člen Vysoké školy stavební Ukrajiny (Kyjev, Ukrajina)
Vladislav Fedorenko - doktor práv, profesor, DrHb - doktor habilitace práva (Polská akademie věd), čestný právník Ukrajiny (Kyjev, Ukrajina)
Dina Dashevská - geolog, geochemik Praha, Česká republika (Jeruzalém, Izrael)

Tým autorů

C91 Moderní aspekty vědy: XXV. Díl mezinárodní kolektivní monografie / Mezinárodní Ekonomický Institut s.r.o.. Česká republika: Mezinárodní Ekonomický Institut s.r.o., 2022. str. 553

Svazek XXV mezinárodní kolektivní monografie obsahuje publikace o: utváření a rozvoji teorie a historie veřejné správy; formování regionální správy a místní samosprávy; provádění ústavního a mezinárodního práva; finance, bankovníctví a pojišťovnictví; duševní rozvoj osobnosti; rysy lexikálních výrazových prostředků imperativní sémantiky atd.

Materiály jsou předkládány v autorském vydání. Autoři odpovídají za obsah a pravopis materiálů.



OBSAH

PŘEDMLUVA

10

ODDÍL 1. VEŘEJNÁ SPRÁVA, SAMOSPRÁVA A STÁTNI SPRÁVA

§1.1 ВЕРХОВНА РАДА ЛІКВІДУВАЛА ФОНД СОЦІАЛЬНОГО СТРАХУВАННЯ (Романенко Є.О., Національний авіаційний університет, Жукова І.В., Видавнича група «Наукові перспективи») 11

§1.2 DIRECTIONS FOR IMPROVING THE MANAGEMENT SYSTEM PERSONNEL IN THE SPHERE OF THE CIVIL SERVICE IN THE MODERN UKRAINE (Kuchmieiev O.O., Open International University of Human Development "Ukraine") 26

§1.3 СУТНІСНІ СКЛАДОВІ ПОЛІТИЧНОГО ЛІДЕРСТВА ЯК ЧИННИКА ЗАБЕЗПЕЧЕННЯ УСПІШНОСТІ ДЕРЖАВОТВОРЧИХ ПРОЦЕСІВ В УКРАЇНІ (ОСВІТНІЙ ПРОЦЕС) (Олькова-Михницька А.В., Київський національний університет імені Тараса Шевченка) 35

§1.4 БЕЗПЕКА ДЕРЖАВНОГО УПРАВЛІННЯ ЯК ФАКТОР СТАБІЛЬНОГО РОЗВИТКУ УКРАЇНИ (Столбовий В.М., Національна академія Служби безпеки України) 54

ODDÍL 2. EKONOMIKA A ŘÍZENÍ PODNIKU

§2.1 ФОРМУВАННЯ ІНСТИТУЦІЙНОГО МЕХАНІЗМУ ЗАЙНЯТОСТІ НАСЕЛЕННЯ В СУЧАСНИХ УМОВАХ РОЗВИТКУ АГРАРНОГО ПІДПРИЄМНИЦТВА: ТЕОРЕТИКО-МЕТОДИЧНИЙ АСПЕКТ (Алексеева О.В., Шпикуляк О.Г., Національний науковий центр «Інститут аграрної економіки», Мазур К.В., Вінницький національний аграрний університет, Ксенофонтова К.Ю., Національний науковий центр «Інститут аграрної економіки», Суховій А., Національний університет біоресурсів і природокористування України) 63





- §7.2 ЖАНРОВО-ТЕМАТИЧНІ ПРІОРИТЕТИ АНСАМБЛЕВОГО РЕПЕРТУАРУ БАНДУРИСТІВ УКРАЇНИ ТА ЗАРУБІЖЖЯ 354
(Кубік О.Є., Прикарпатський національний університет імені Василя Стефаника)

ODDÍL 8. TECHNICKÉ VĚDY

- §8.1 CONCEPTUAL BASIS OF THE FORMULATION OF GLUTEN-FREE PRODUCTS BASED ON THE USE OF DOMESTIC PLANT RAW MATERIALS (Gorach O., Kherson state agrarian and economic university) 373

- §8.2 PROBLEMS AND PROSPECTS OF OF LOGISTIC INFORMATION CORPORATE SYSTEMS ON EMERGING MARKETS IN CRISIS PHENOMENA (Krasnyuk M., Kyiv National Economic University named after Vadym Hetman, Goncharenko S., Kyiv National University of Technologies and Design, Tuhaienko V., Kyiv National University of Technologies and Design, Krasniuk S., Kyiv National University of Technologies and Design) 389

- §8.3 МЕТОДИКА КОМПЛЕКСНОГО УПРАВЛІННЯ РЕСУРСАМИ СИСТЕМ ЗВ'ЯЗКУ СПЕЦІАЛЬНОГО ПРИЗНАЧЕННЯ (Коваль М.В., Національний університет оборони України імені Івана Черняхівського, Веретнов А.О., Центральний науково-дослідний інститут озброєння та військової техніки Збройних Сил України, Шкнай О.В., Науково-дослідний відділ військової частини, Возняк Р.М., Національний університет оборони України імені Івана Черняхівського, Шишацький А.В., Центр досліджень трофейного та перспективного озброєння та військової техніки) 404

ODDÍL 9. ZEMĚĚLSKÉ VĚDY

- § 9.1 MODEL OF SOYBEAN VARIETY FOR FOREST-STEPPE CONDITIONS OF UKRAINE (Biliavska L.H., Poltava State Agrarian University, Prysiazhniuk O.I., Institute of Bioenergy Crops and Sugar Beet NAAS, Diyanova A.O., Poltava State Agrarian University) 426





10. Мандзюк, Л. (2007). Ансамблево-виконавська творчість бандуриста: мистецтвознавчий та психолого-педагогічний аспекти: дис. ... канд. мистецтвозн.: 17.00.03 – музичне мистецтво. Харків.

11. Мішалов, В. (2009). Культурно-мистецькі аспекти генези і розвитку виконавства на харківській бандурі: дис... канд. мистецтвозн.: 26.00.01 – теорія та історія культури. Харків, 2009.

12. Ніколенко, О. Оригінальна інструментальна бандурна творчість в аспекті жанрово-стильової еволюції: дис. ... канд. мистецтвозн.: 17.00.03 – музичне мистецтво. Львів, 2011. 243 с.

13. Хоткевич, Г. Бандура та її репертуар. Передмова, коментарі, загальна редакція В. Мішалова (2009). Харків: Фонд національно-культурних ініціатив імені Гната Хоткевича.

14. Федорняк, Н. (2020). Трансформація музичної фольклорної традиції у середовищі української діаспори Північної Америки: історико-виконавський аспект. канд. мистецтвозн.: 17. 00. 03 – музичне мистецтво. Львів.





ODDÍL 8. TECHNICKÉ VĚDY

§8.1 CONCEPTUAL BASIS OF THE FORMULATION OF GLUTEN-FREE PRODUCTS BASED ON THE USE OF DOMESTIC PLANT RAW MATERIALS (Gorach O., Kherson state agrarian and economic university)

Introduction. In recent years, the production of gluten-free products has gained great popularity in the world. According to the trends, the number of allergic diseases caused by the indigestibility of certain food compounds, in particular gluten, is increasing. An important factor in the health of the nation is the full nutrition of the population, in connection with which the problem of studying the mechanisms of health and ways of its preservation is extremely urgent. One of the directions of the implementation of the state policy in the field of healthy nutrition of the population of Ukraine is the development of highly efficient technologies in the processing industries of the agricultural industry, the search for new domestic sources of raw materials and the creation of new generations of food products enriched with vital trace elements.

The necessity and expediency of developing a technology and recipe for the production of gluten-free products is due to the growing trend in the number of allergic diseases caused by the indigestibility of certain food compounds, in particular gluten. In addition to people suffering from celiac disease and gluten-dependent diseases, gluten intolerance is often accompanied by other diseases. The reason for the threat of gluten consumption is related to the use of wheat with a high gluten content, which was bred in the 20th century. Cereals that contain the largest amount of gluten include: wheat, rye, barley and products containing them.

The preliminary studies conducted to study the chemical composition and biological value of grain crops, such as corn, rice





and others, which do not contain gluten, allowed us to conclude about the possibility of their use for the manufacture of gluten-free products of various functional purposes, since it is these crops in terms of biological value, content nutrients, vitamins and minerals may meet the requirements CODEX STAN 118-1979.

The conducted analysis of the production of functional gluten-free products allows us to conclude that today the main share of the market of gluten-free products in Ukraine is occupied by imported products, which indicates the relevance of the development and implementation of domestic technologies and recipes for the production of gluten-free products.

Recipes for the production of gluten-free products were researched and developed by leading domestic and foreign scientists, including Drobot V. I., Hryshchenko A. M., Dorohovich V. V., Babich O. V., Sabluk V. I., Prytul'ska N.V., Doman G., Perlmutter D., Aguilar N., Gallagher E., Rosell C. and others.

The production of gluten-free products will allow to expand the assortment of domestic manufacturers of bakery products and to replace expensive imported gluten-free products with our own, annually renewed plant raw materials based on the use and implementation of the latest innovative technologies. In connection with the above, the issue of developing technologies and recipes for the production of domestic gluten-free products of various functional purposes based on the use of domestic plant raw materials becomes particularly relevant.

Presenting main material. Full and balanced nutrition of the population of Ukraine is one of the most important factors determining the health of the nation. The health of the nation is an indicator of the civilization of the state, which reflects the level of its socio-economic development, the main criterion for the expediency and effectiveness of all spheres of human activity. Currently, in Ukraine, the trend towards the deterioration of the health of the population has reached a threatening level. This is due





to many factors, in particular, the deterioration of the ecological situation and the consumption of food products of dubious quality. In this regard, the problem of studying the mechanisms of health and ways of preserving it is extremely relevant. Understanding the essence of health from the standpoint of physical, psychological, social, and spiritual well-being will reveal worldview, cultural, medical-biological, and psychological-pedagogical aspects of its formation. The importance of these factors is confirmed by the priority direction of state policy [1].

One of the ways to implement the state policy in the field of healthy nutrition of the population of Ukraine is the development of highly effective technologies in the processing industries of the agricultural industry, the search for new domestic sources of raw materials and the creation of new generation food products enriched with essential micronutrients. According to the trends, the number of allergic diseases caused by the indigestibility of certain food compounds, in particular gluten, is increasing. In addition to people suffering from celiac disease and gluten-dependent diseases, gluten intolerance is often accompanied by other diseases such as Turner syndrome, type 1 diabetes, autoimmune diseases of the thyroid gland and liver, unspecified increase in the level of aminotransferases, deficiency of immunoglobulin A (IgA) and Down syndrome. Based on the above, it can be concluded that limiting the consumption of gluten-free products is a vital necessity for patients with celiac disease, allergy or non-allergic sensitivity to gluten. Such people are from 1 to 7% of the population all over the world and their number will increase in the future.

In connection with the above, the issue of production of functional gluten-free products with the use of domestic annually renewable raw materials is gaining particular relevance.

The cause of the threat of gluten consumption is due to the use of wheat with a high gluten content, selected in the 20th century. Cereals containing the largest amount of gluten include wheat, rye, barley and products containing them.



Gluten (gliadin) or gluten is a protein that is part of the grain, wheat. For example, rye contains secalin, barley contains hordein, without undergoing special processing, they contain these substances. It should be noted that today the threat is that most food products contain «hidden gluten», since it is not only found in flour, cereals and bakery products, but also in products where it is used to improve taste qualities, consistency, namely in the production of various sauces, sausages and confectionery, chocolate and even medicines. The main reasons for the development of gluten production are shown in fig. 1.

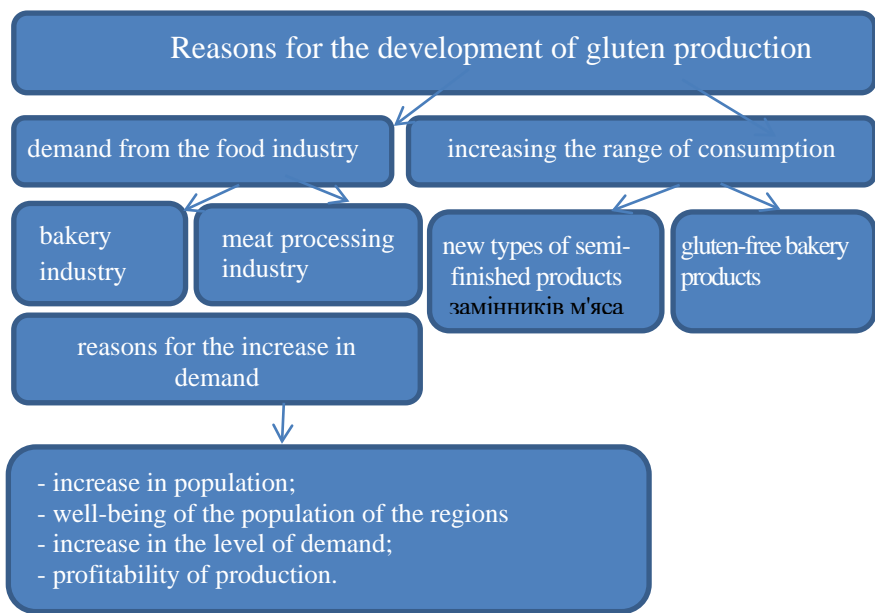


Fig. 1 Development factors of gluten production

Gluten serves as one of the criteria for evaluating the quality of flour in the baking industry and is most often used in this field. Flour improvers are widely used in the flour milling industry, and gluten is the most common of them [2, 3].



The world market for gluten-free bread in 2015 amounted to USD 1 billion and accounted for almost a third of all gluten-free products. The demand for gluten-free products is almost completely met by the developed countries of North America and Western Europe [4].

Statistics show that today 40% of gluten-free products are consumed by Europeans. The most widespread is the consumption of gluten-free products in North and South America and every year the production and consumption tends to increase. In fig. 2 shows the distribution of global consumer demand for gluten-free products [5].

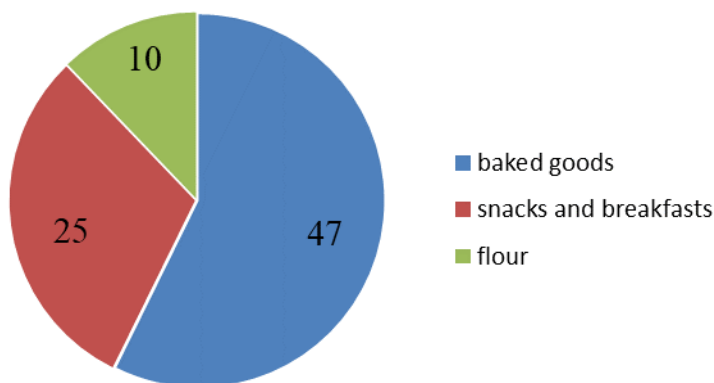


Fig. 2 Diagram of production of gluten-free products in the world, %

To date, the results of research carried out by the company Pro-Consulting, which conducted a study of the world market of gluten and wheat processing products, are known. The study examined the production and foreign trade of gluten between different countries. Research was also conducted on the production of such wheat processing products as starch, glucose and glucose-fructose syrups, lysine, citric acid. In addition, the prospect of production of gluten-free products in Ukraine was investigated [6, 7].



World experience in the production of gluten-free products shows that the industrial production of gluten-free products is carried out by companies such as Dr. Shar (Italy), Glutano (Germany), Finax (Sweden), Moilas, Valio (Finland), etc. They offer a fairly wide selection of products for the nutrition of people with celiac disease, namely: bread, pasta, cookies, pizza base, baking mixes, etc. Such products are patented, they are distinguished by the presence of the «gluten-free» label on the package.

To date, the number of manufacturers in Ukraine who are engaged in the production of gluten-free products has a tendency to increase. In the domestic market, you can find products labeled «Gluten-free». In addition, the «Crossed out ear» quality mark was developed for manufacturers and has been in effect since 2017, which indicates that the manufacturer complies with all European standards for the production of gluten-free products. In Ukraine, nine companies have a licensed European label. In fig. 3 shows the quality mark «Crossed out spike», which is applied to gluten-free products.



Fig. 3 Quality mark «Crossed out spike»

In addition, the «Ukrainian Celiac Association» operates in Ukraine, founded in 2007, which deals with the diagnosis of consumers with gluten intolerance and allows determining how gluten affects health and the need for additional examinations. «Ukrainian Celiac Union» is an official member of the Association of European Celiac Unions (AOECS) and the right holder of the



trademark «Crossed out spike», which guarantees the quality and safety of gluten-free products at the international level [8].

It should be noted that the CODEX STAN 118-1979 standard for gluten-free products has been developed and is in force in Ukraine, which contains unified indicators of the quality of such products and allows determining the gluten content. According to the current standard, products should not contain gluten or should not exceed the established norm of 20 mg/kg [9].

Today, according to domestic researchers, the number of patients with celiac disease and gluten deficiency in Ukraine is approaching 400,000; 47.5 thousand children have autism spectrum disorders, 19.69 thousand suffer from cerebral palsy, 2.5 thousand patients have been diagnosed with celiac disease. Table 1 presents the market of gluten-free products in Ukraine.

Table 1
Market of gluten-free products in Ukraine

Manufacturers	City	Product name
TM «Asparagus»	Kyiv	sorghum flour
LLC «Starch products of Ukraine»	Kyiv	Sago groats
TM «Healthy Tradition»	Kyiv	dry breakfast «Raw Granola»,
«Eye da Baker» LLC	Kyiv	nutritious sugar-free bars with different flavors
TM «Let's be healthy»	Lviv	gluten-free cookies «Cinnamon»
TM «Eat Well»	Kyiv	vanilla cookies
TM «Good Line»	Kyiv	dessert «Mango - Passion fruit»
«Panini» LLC	Dnipro	Cupcake Dessert
TM «Skyryanka»	Skvyra, Kyiv region.	corn spirals
«Agro-Yug-Service» LLC	Mykolaiv	buckwheat and corn groats, buckwheat and corn flakes, buckwheat and corn flour





Analyzing the data in the table. 1, it can be concluded that currently, in Ukraine, the sale and production of gluten-free products is only gaining momentum. The majority of manufacturers are located in the capital. Most of the products can be bought only through online ordering or found on the shelves of such stores as «Silpo», «Fozi», «Eko-lavka». Based on the conducted research, we can conclude that today the main share of the gluten-free food market in Ukraine is occupied by imported products, but the production of domestic gluten-free products is increasing, so in 2019 the first manufacturers of these products appeared.

Today, the basis of treatment for people suffering from intolerance is dietary nutrition aimed at the complete exclusion from the diet of all gluten-containing products containing wheat, rye, barley, oats, as well as hybrids of these grains (kamut and triticale). All existing gluten-free production technologies are associated with the replacement of traditional wheat and rye flour with corn, buckwheat, rice, amaranth, etc.

Scientists from many countries of the world paid great attention to the development and improvement of micronutrient-enriched bread and gluten-free flour products technologies, in particular leading Ukrainian scientists: V. I. Drobot, A. M. Hryshchenko, V. V. Dorohovich, O. V. Babich, Sabluk V.I., N.V. Prytulska [10-16]. Scientists: G. Doman, Institute for Human Potential Development (USA), D. Perlmutter and others describe the effect of a gluten-free diet on improving the condition of people and other [17-22].

The production of gluten-free products, based on the replacement of traditional gluten-containing flour with flour that does not contain it, will allow to expand the range of domestic manufacturers of bakery products and replace expensive imported gluten-free products with their own products every year. renewable plant raw materials based on the use and implementation of the latest technologies. In addition, the introduction of innovative





technologies into domestic production with the use of domestic plant raw materials of functional purpose will allow to increase the nutritional value, expand the range for manufacturers engaged in the production of bakery products for dietary and preventive nutrition, and ensure zero waste and ecological cleanliness of production. The introduction of technologies and recipes of gluten-free production will contribute to the expansion of the range of cafes, restaurants and other catering establishments in connection with the development of the tourist business.

In addition, the analysis of literary sources allows us to conclude that Ukrainian manufacturers are increasing the range of gluten-free products and that this range of products is currently being sold in supermarkets.

To date, there are technologies and technological equipment for the production of gluten-free products in the world. In Ukraine, the issue of high-quality equipment that will ensure proper cleaning of grain and its processing products from crops that may contain gluten is an urgent issue.

The technology of cleaning and manufacturing gluten-free flour is complex and consists in the fact that the gluten is first isolated, and then it must be replaced with another sticky structure. Domestic manufacturers of gluten-free products use the experience of making classic flour, which helps in the production of gluten-free products.

As a result of the analysis of literary sources on the topic of the work, it was established that the basis of the development of technology for the production of gluten-free bakery products is the replacement of traditional gluten-containing flour with gluten-free flour, namely corn and rice flour.

To date, there are well-known technologies for the development of recipes and technologies for gluten-free bakery products of various functional purposes based on corn and rice flour. The main reason for using corn flour is related to the fact that





it is traditional for the production of national flour products in the countries of Africa and South America, and rice flour for Japan and China.

In Bulgaria, a gluten-free recipe was developed for the preparation of bread, pancakes, muffins and biscuits based on the use of rice flour, corn starch, pectin and dry milk [23]. The National University of Food Technologies in Kyiv has developed a technology for gluten-free bread based on corn and potato starch with the addition of 30% rice and 15% buckwheat flour instead of starch [24].

Recipes for gluten-free cookies using sugar substitutes (isomalt and lactyl) were developed at the Kyiv National University of Trade and Economics [25]. In Belarus, at the Scientific and Production University of Food Technologies of Unitechprom BRU and Beltechnokhlib, mixtures of the gluten-free «Vita» series have been developed for the production of bakery and confectionery products. They include gluten-free types of cereals - corn, buckwheat, rice, soy protein isolate, as well as corn, potato and wheat starches, the protein content of which is reduced, skimmed milk powder, thickeners - guar gum and xanthan gum. When choosing the ingredients of the mixtures, both the absence of gluten and the minimum protein content were taken into account [26].

Today, most of the recipes and technologies for gluten-free flour products developed in the world belong to the largest companies in America and Europe: Dr. Schaer, Aproten, GLUTANO FARMO - Italy; GULLON - Spain; Bezglutenex, Balviten, Glutenex - Poland; Maddys - USA; Milupa, Hammermühle, camidaMed - Germany; Taranis - France; Beam, Bridge - Great Britain. All products have patents and «gluten-free» labeling on the packaging. But the main problem of manufacturers of gluten-free products is the high cost, which is 2-2.5 times higher than the cost of similar traditional products [27, 28].

To date, the St. Petersburg branch of the State Research and





Development Institute of the Baking Industry has approved regulatory documentation for gluten-free mixtures with rice and corn flour for the production of bakery products. The dosage of flour is 20-30% [29]. It was noted that when adding corn and buckwheat flour, the specific amount of bread decreases, and the porosity becomes denser and the plasticity of the crumb decreases [30]. The flavor profiles of bread made from rice baking mix are very close to wheat bread. Bread from a rice mixture for baking has a pronounced aftertaste of rice flour. The flavor profiles of corn and buckwheat bread are different from wheat bread. The marked aftertaste and smell of corn and buckwheat flour, the color is softer and the color of the crust is more intense [28].

Analyzing global technologies for the production of gluten-free bakery products, we can conclude that the most promising is the use of corn flour, since corn is a traditional grain crop for Ukraine. Various varieties of corn are grown in Ukraine and their number is constantly increasing. In fig. 1.4 shows the corn growing regions in Ukraine.

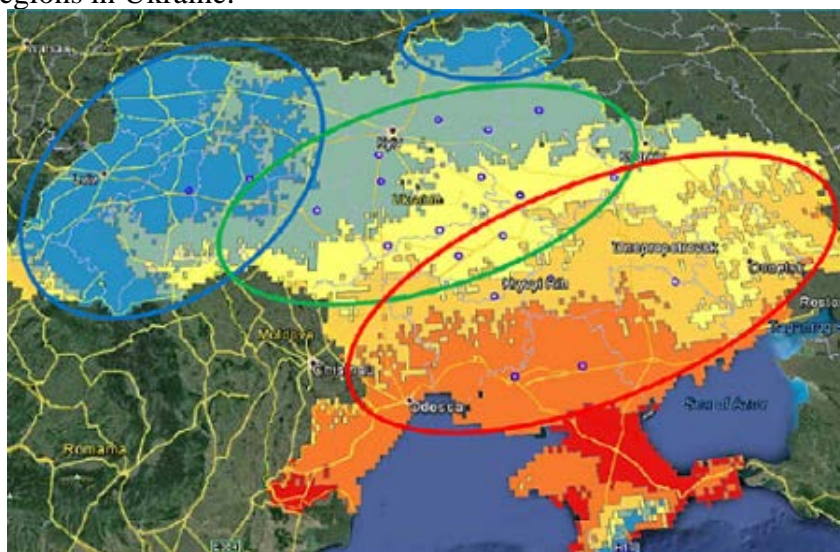


Fig. 4 Corn growing regions in Ukraine





In fig. 5 shows the diagram of corn cultivation and the relationship to the volumes of other grain crops in Ukraine in 2021.

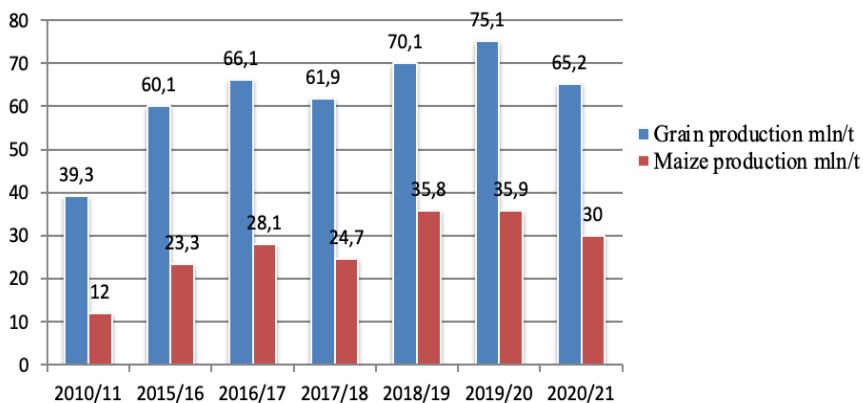


Fig. 5 Diagram of the cultivation of corn and other grain crops in Ukraine in 2021.

Analyzing the data shown in fig. 4 and 5, it can be concluded that today the volume of corn cultivation in Ukraine has a stable development due to the variety of varieties suitable for cultivation in Ukraine.

Conclusions. The conducted analysis indicates the need to provide celiac patients with high-quality and inexpensive domestically produced specialized products based on the development of the latest progressive technologies and recipes for gluten-free production using annually renewable plant raw materials. In addition, an urgent task in connection with the development of the tourist business is the introduction of innovative technologies into domestic production using domestic plant raw materials of functional purpose for cafes, restaurants and other public catering establishments.

The introduction of gluten-free production technologies into domestic production will allow the Ukrainian market to be filled with products based on the use of its own annually renewed raw





materials, provided that domestic technologies, processing and recipes for the production of useful products are followed. , high-quality gluten-free raw materials are being developed.

In connection with the above, the issue of the production of domestic high-quality and useful gluten-free products based on the development of technology and recipes for the production of gluten-free base for pizza and bakery products of various functional purposes is becoming particularly relevant.

References:

1. Горач О.О., Михалик К.В., Гусар А.О. Аналіз виробництва безглютенової продукції функціонального призначення на основі використання вітчизняної сировини / Таврійський науковий вісник, 2021. №6. С. 94-100. <http://dspace.ksau.kherson.ua/handle/123456789/7867>

2. Аналіз світового ринку глютену і продуктів переробки пшениці: веб-сайт. URL: <https://pro-consulting.ua/ua/issledovanie-rynka/analiz-mirovogo-rynka-glyutena-i-produktov-pererabotki-pshenicy-2019-god>

3. Безглютенові продукти – найдинамічніший сегмент ринку хлібопродуктів: веб-сайт. URL: <https://propozitsiya.com/ua/bezglyutenovi-produkty-naydynamicnishyy-segment-rynku-hliboproduktiv>

4. Горач О.О., Михалик К.В., Гусар А.О. Нові тенденції та особливості виробництва піци в сучасних умовах / Технічне забезпечення інноваційних технологій в агропромисловому комплексі: Матеріали III Міжнародної науково-практичної конференції. Мелітополь: ТДАТУ, 2021. С. 303-306.

URL: <http://www.tsatu.edu.ua/tstt/wp-content/uploads/sites/6/materialy-3-mnpk-tehniche-zabezpechennja-innovacijnyh-tehnologij-v-ahropromyslovomu-kompleksi-m.-melitopol-01-26.11.2021.pdf>





5. Горач О.О., Михалик К.В., Гусар А.О. Сучасний стан виробництва, якість та безпека хлібобулочних виробів / Сучасна наука: стан та перспективи розвитку. матеріали IV Всеукраїнської науково-практичної конференції молодих вчених з нагоди Дня працівника сільського господарства, 17 листопада 2021 р. м. Херсон. С. 315-319. <http://dspace.ksau.kherson.ua/handle/123456789/7315>

6. Бавыкина И.А., Звягин А.А., Мирошниченко Л.А., Гусев К.Ю., Жаркова И.М. Эффективность продуктов из амаранта в безглютеновом питании детей с непереносимостью глютена. Вопросы питания, 2017. № 2. Веб-сайт. URL: <https://cyberleninka.ru/article/n/effektivnost-produktov-iz-amaranta-bezglyutenovom-pitanii-detey-s-neperenosimostyu-glyutena>.

7. Дробот В.І., Грищенко А.М. Технологічні аспекти використання борошна круп'яних культур у технології безглютенового хліба. Обладнання та технології харчових виробництв, 2013. Вип. 30. С. 52-58.

8. <https://celiac.org.ua>

9. CODEX STAN 118-1979 , Rev.1-2008. Standard for Foods for Special Dietary Use for Persons Intolerant to Gluten (Пищевые продукты специального диетического назначения для людей, непереносящих глютен), 2009. С. 3.

10. Дробот В.І., Грищенко А.М. Технологічні аспекти використання борошна круп'яних культур у технології безглютенового хліба / Обладнання та технології харчових виробництв, 2013. Вип. 30. С. 52-58.

11. Дорохович В.В., Лазоренко Н.П. Безглютенові борошняні кондитерські вироби / Обладнання та технології харчових виробництв, 2013. Вип. 30. С. 341-347.

12. Бабіч О.В., Віхоть М.М. Проблематика забезпечення спеціальними продуктами харчування хворих на целиацію в Україні / Проблеми старіння і довголіття, 2016. Т. 25, № 2. С. 230-234.

13. Приходько Ю.С., Бережна Г.О. Обґрунтування складу рецептурної композиції з борошном сорго для виготовлення безглютенового хліба / Матеріали міжнародної науково-практичної конференції «Інноваційні технології у хлібопекарському виробництві». К.:НУХТ, 2018. С. 34-36.





14. Дробот В.І., Сорочинська Ю.С., Грищенко А.М. Перспектива збагачення хлібобулочних виробів казеїном / Наукові праці Національного університету харчових технологій. К.: НУХТ, 2019. Т. 25, № 5. С. 117-124.

16. Дробот В.І., Сорочинська Ю.С., Бондаренко Ю.В., Ренкас О.І. Використання шроту насіння гарбуза в технології безглютенового хліба / Харчова промисловість, 2019. № 26. С. 6-13.

17. About Glenn Doman. Founder of The Institutes. URL: <http://www.iahp.org/aboutus/about-glenn-doman>.

18. Perlmutter D. Grain Brain. New York: Little, brown and company, 2015. 336 p.

19. Okolo B.N., Amadi O.C., Moneke A.N., Nwagu T.N., Nnamch C.I. Influence of malted barley and exogenous enzymes on the glucose / Journal of institute of brewing, 2020. Volume 126, Issue 1. P. 46-52.

20. Muhammad Arslan, Allah Rakha, Zou Xiaobo, Muhammad Arsalan Mahmood, Complimenting gluten free bakery products with dietary fiber: Opportunities and constraints / Trends in Food Science & Technology, 2019. Volume 83, P. 194-202.

21. Sophie E. Stantiall, Luca Serventi Nutritional and sensory challenges of gluten-free bakery products: a review/ International journal of food sciences and nutrition, 2018. Volume 69, Issue 4. P. 427-436.

22. Різник А.О., Доценко В.Ф., Цирульнікова В.В., Тищенко О.М. Продукт переробки вівса як альтернативна сировина в технології аглютенівих хлібобулочних виробів / Вісник Львівського торговельно-економічного університету. Технічні науки, 2021. № 25, с. 90-97.

23. Bize M., Smith B.M., Aramouni F.M., Bean S.R. The Effects of Egg and Diacetyl Tartaric Acid Esters of Monoglycerides Addition on Storage Stability, Texture, and Sensory Properties of Gluten-Free Sorghum Bread / Journal of Food Science, 2017. vol. 82 (1). pp. 194-201.

24. Ayala-Soto F.E., Serna-Saldívar S.O., Welti-Chanes J. Effect of arabinoxylans and laccase on batter rheology and quality of yeast-leavened gluten-free breads / Journal of Cereal Science, 2017. pp. 10-17.





25. Sciarini L.S., Bustos M.C., Vignola M.B., Paesani C., Salinas C.N. A study on fibre addition to gluten free bread: its effects on bread quality and in vitro digestibility», J. Food Sci. Technol., 2017.vol. 54 (1). pp. 244-252.

26. Шаніна О.М., Гавриш Т.В., Галясний І.В., Дугіна К.В. Реологічні властивості безглютенового бездріжджового тіста / Молодий вчений, 2017. № 2(42), с. 225-229.

27. Гавриш Т.В., Шаніна О.М., Галясний І.В. Дослідження впливу полісахаридної та білкової добавки на гідратаційні властивості безглютенового бездріжджового тіста / Вісник Харківського національного технічного університету сільського господарства імені Петра Василенка, 2018. Вип. 194, с. 119-123.

28. Shanina O., Gavrish T., Haliasnyi I., Minchenko S. Research of polysaccharide and protein supplements influence on viscous properties of gluten-free dough / Technology audit and production reserves, 2017. Vol. 2, №. 3(34), pp. 30-35.



Vydavatel:

Mezinárodní Ekonomický Institut s.r.o.
se sídlem V Lázních 688, Jesenice 252 42
IČO 03562671 Česká republika

MODERNÍ ASPEKTY VĚDY

Svazek XXV mezinárodní kolektivní monografie

Podepsáno k tisku 10. listopad 2022
Formát 60x90/8. Ofsetový papír a tisk
Headset Times New Roman.
Mysl. tisk. oblouk. 8.2. Náklad 100 kopií.