

Significance of Agricultural Production in the Food Security of Ukraine

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The condition of food safety in Ukraine as a part of national security is analyzed from the position of agricultural production. The state of domestic production of the main agricultural products (crops and livestock) in the comparison with the major agrarian countries of EU and CIS is considered. The process of food safety implementation in order to ensure safe and quality products of rural industries is described. The analysis of export/import of agricultural production in Ukraine is conducted. It is noted that increasing of food quality and its compliance with international standards should ensure the production of standardized agricultural products and fill domestic market with prime quality goods.

Key Words: *food security, agricultural production, quality and safety of agricultural products, agrosphere.*

One of the key components of the national security of any state is food security. International agreements define food security as a state of the economy in which everyone and anyone is guaranteed access to food, drinking water and other products, the quality, the range and volume of which corresponds to the physical and so-

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cial development of the individual, provides health and reproduction of the population.

The food security issue has become increasingly relevant in recent decades in the world and in Ukraine – a country with a strong natural resource potential for agrarian production, which is able to provide food for a significant part of the population of Europe. For example, since 2005 there is a positive trend towards the growth of gross agricultural output (both crop production and livestock production) (Table 1). In 2016, compared to 2005, the gross agricultural output increased by almost 50%, even taking into account the fact that there is a very difficult political situation in the country and a part of the territory of Ukraine is temporarily occupied. At the same time, according to FAO, Ukraine's share in world-wide production of crop production is 0.4-6.0% depending on the type of products.

Table 1 Gross agricultural output in Ukraine (at constant prices in 2010) [1, 2]

Year	Gross output (all categories of households), million UAH	incl. production			
		plant growing		animal husbandry	
		million UAH	%	million UAH	%
1990	282 774,2	145 502,0	51,5	137 272,2	48,5
1995	183 890,3	106 329,6	57,8	77 560,7	42,2
2000	151 022,2	92 838,9	61,5	58 183,3	38,5
2005	179 605,8	114 479,9	63,7	65 125,9	36,3
2010	194 886,5	124 554,1	63,9	70 332,4	36,1
2015*	264 821,1	179 252,3	70,6	76 482,3	29,4
2016*	269 666,2	182 353,3	72,1	77 556,5	27,9

Note: * data without taking into account the temporarily occupied Crimea and part of the zone of carrying out of the antiterrorist operation

The analysis of the ratio of crop and livestock production to the gross Ukrainian agricultural output in the period 1990–2016 indicates that the industry has continuously increased production from 51.5% to 72.1%. At the same time, the share of

livestock production has decreased to 27.9%.

In Ukraine, the provision of food security is defined by the Law of Ukraine “On the Fundamentals of National Security of Ukraine”. However, there are a number of institutional controversies that complicate the implementation of an effective state food security policy. At the same time, the development and increase of capacities of certain branches of agriculture is restrained, complicated by the technical and technological modernization of the agro-industrial complex and its reorientation to the investment and innovation principles of development, etc.

Ukraine among the leading agricultural countries of the European Union (EU) in the production of agricultural products per one person takes the right place (Table 2), which also confirms the strong position of our state in the production and provision of food to the population. Thus, for the production of plant production for 1 person Ukraine is second only to several EU member states such as Denmark, France, Hungary, and significantly ahead of certain products of the Commonwealth of Independent States (CIS) – the Russian Federation and Kazakhstan.

Agricultural products traditionally occupy a significant part in Ukraine’s foreign trade, and this is perhaps the only branch of the economy of the country with a positive foreign trade balance. In 2016, the foreign trade turnover of agricultural products of Ukraine amounted to 19.2 USD billion (or 25.4%), an increase of 23.4% compared to 2010. Growth was due to exports. So, if in 2010-2012, agricultural imports decreased from 5.7 to 3.9 USD billion or 1.5 times, then exports increased from 9.8 to 15.3 USD billion, or 1.6 times [1, 2].

In 2016, the largest Ukrainian agricultural products were supplied to Asian countries, whose share in the regional structure of agricultural exports was almost 46%. The EU countries in 2016 accounted for 27.5% of the total export of agricultural products, to African countries – 15.7%, to the CIS countries – 7.7%, to the USA – 0.3%, to other countries of the world – 2.9%. The main countries to which

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Table 2 Production of main types of agricultural products, 2010
(kg/per 1 person) [1]

Country	Crop production					Livestock products	
	grain and leguminous crops	sugar beets	potato	vegetables and melon cultures	fruits, berries, grapes	meat	milk
Ukraine	856	300	408	193	47	45	245
The whole world	358	33	46	138	87	42	103
<i>Countries of the European Union</i>							
Austria	640	372	80	71	87	107	391
Bulgaria	945	—	34	68	53	30	172
UK	346	103	96	42	87	57	223
Greece	398	67	69	296	284	39	184
Denmark	1580	423	244	55	12	358	881
Spain	424	73	49	273	327	115	162
Italy	315	58	26	222	278	70	187
The Netherlands	109	317	411	275	40	151	699
Germany	544	290	124	41	27	100	361
Poland	716	256	229	136	72	93	321
Romania	782	39	153	180	101	47	236
Hungary	1236	82	44	115	113	87	170
Finland	558	101	122	45	3	73	436
France	1066	506	104	80	138	92	383
Sweden	465	209	86	33	5	58	309
<i>Commonwealth of Independent States</i>							
The Russian Federation	427	156	148	93	17	48	225
Belarus	732	394	819	245	83	102	693
Kazakhstan	752	9	158	227	14	58	332

Ukrainian products have been exported were India (10.2% of total exports of agricultural products from Ukraine), Egypt (8.6%), China (6.6%), Spain (5.4%), the Netherlands (4.6%), Iran (4.4%), Italy (4.1%), Turkey (3.9%), Poland (3.3%), Belarus (2.6%). Together Ukrainian agricultural products were exported to these

10 countries at 8290.5 USD million, representing 53.7% of the total exports of this type of products.

For each state, an important issue is the stable and guaranteed assurance of production of quality products in the required quantity and assortment. The deterioration of the health of people in Ukraine and the relatively short duration of their lives are directly due to contaminated environment and unsatisfactory level of environmental safety of food. However, the domestic agrarian policy is a priori aimed at fulfilling the economic tasks of the agro-industrial complex and does not actually contain an ecological component, although the currently widely used agricultural and processing technologies are causing pollution of soils, water sources and other natural resources and do not ensure the production of quality and environmentally safe products on a national scale.

The adopted resolution of the 63rd session of the UN General Assembly notes that integrated and sustainable agriculture and the development of rural areas are of great importance for the environmentally sound provision of more reliable food security and food quality. That is, along with the increase in the volume of agricultural production, the quality of food and food raw materials is acute.

Although the production of basic foodstuffs in Ukraine has remained at a satisfactory level for the last 25 years, the consumption of food by the population has a negative dynamics in most categories of products and does not meet the recommended norms of the Ministry of Health of Ukraine (Table 3). In particular, in 2016, the consumption of vital products by the population of Ukraine was: 62% – meat and meat products, 55% – milk and dairy products, 48% – fish and fishery products from the recommended norms. At the same time consumption of potatoes exceeded the norm on 12%.

Figure 1 shows the results of calculating the level of self-sufficiency of the main types of agricultural products (production for domestic use in the territory of

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Table 3 Consumption of basic food products by the population of Ukraine, kg/year per 1 person

Product	Year						
	1990	1995	2000	2005	2010	2015*	2016*
Bread products	141,0	128,4	124,9	123,5	111,3	103,2	101,0
Potato	131,0	123,8	135,4	135,6	128,9	137,5	139,8
Vegetables and melons food crops	102,5	96,7	101,7	120,2	143,5	160,8	163,7
Fruits, berries and grapes	47,4	33,4	29,3	37,1	48,0	50,9	49,7
Fish and fish products	17,5	3,6	8,4	14,4	14,5	8,6	9,6
Sugar	50,0	31,6	36,8	38,1	37,1	35,7	33,3
Oil	11,6	8,2	9,4	13,5	14,8	12,3	11,7
Meat and meat products	68,2	38,9	32,8	39,1	52,0	50,9	51,4
Milk and dairy products	373,2	243,6	199,1	225,6	206,4	209,9	209,5
Eggs, pcs.	272	171	166	238	290	280	267

Note: * data without taking into account the temporarily occupied Crimea and part of the zone of carrying out of the antiterrorist operation

Ukraine).

Taking into account the above-mentioned data, the issue of improving the food supply structure of the population and ensuring the quality and safety of food products, which requires appropriate scientific support and attention from the state authorities in the development and implementation of appropriate mechanisms for improving this situation, is acute in Ukraine.

By a decree of the President of Ukraine, the decision “On the state of the agro-industrial complex and measures to ensure food security of Ukraine” was adopted, according to which the main directions of state policy in this area are recognized:

- ensuring the proper quality and safety of food products sold in the domestic market, and its affordable availability for the population of Ukraine;

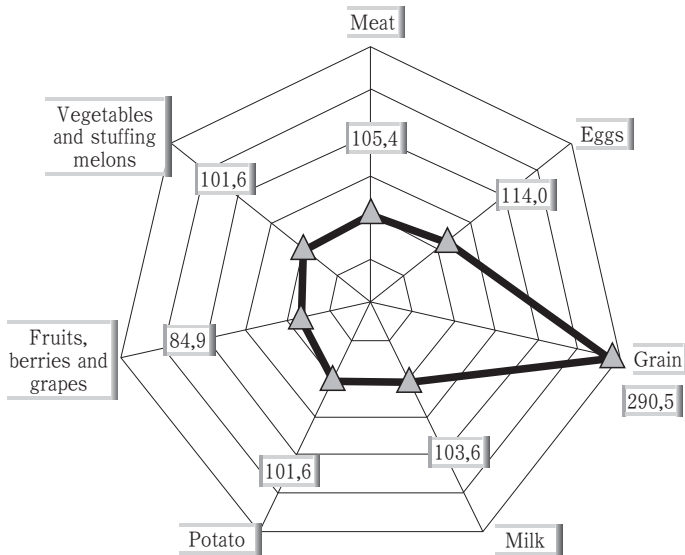


Fig. 1. The level of self-sufficiency of the main types of agricultural products in 2016, % [1]

- increasing the competitiveness of domestic products and its ability to enter the international market;
- stimulate the production of environmentally safe products in accordance with the needs of the population through the introduction of environmentally sound technologies;
- direction of environmental policy on productivity growth, competitiveness and technological level of agricultural production, etc.

Strategic goals and main tasks of the national security policy in the field of food security are defined in the National Security Strategy of Ukraine “Ukraine in a changing world” and approved by the Decree of the President of Ukraine as the development of the agrarian market, creation of conditions for the disclosure of the potential of the agrarian sector to meet the needs of the Ukrainian population,

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quality and safe food, asserting its role as an important exporter of agrarian products. This is also evidenced by the increased attention from the international community and a large number of current quality norms and standards. In EU countries, not only the general normative and legal acts act effectively, but also a number of specific requirements and norms aimed at ensuring the quality and safety of food products. The methodology of obtaining high-quality and safe agricultural products is also widely implemented, based on the principles of transition of control from the final product to the forecasting of possible negative influences and their avoidance at the stage of production. Such principles are enshrined in the Council of the EEC (No. 93/43) "On Hazard Analysis and Critical Control Points" and other international normative documents. In the EU, the question of the safety and quality of food products in the chain from the field to the table is regulated by about 160 European directives that need to be introduced into the legislation of Ukraine to create a similar system.

The development of international cooperation, Ukraine's accession to the World Trade Organization and its intentions regarding EU integration lead to the need and obligation to adapt the national system of technical regulation to international and European standards. The discrepancy of Ukrainian products with European standards is a significant threat to the domestic agro-food sector for the period of introduction of all necessary technical regulations and obtaining certificates of conformity. The process of harmonization of national standards with European and phased development of technical regulations, including on issues of safety and quality of food products in accordance with the requirements of the EU and the Customs Union is now actively developing.

The concept of food security in Ukraine should cover the satisfaction of physiological needs of the population in safe and high-quality food products in accordance with medical recommendations, environmental conditions and individual human

condition. There is no doubt that high requirements for product quality and strict adherence ensure the domination of products of developed countries on the world market, as well as its security, competitiveness, etc.

It should be noted that the production of high-quality and safe agricultural products and raw materials is impossible without taking into account the ecological state of the agrosphere and the use of modern, environmentally-friendly agrotechnologies. It is well known that the imperfection of technologies in the field of plant growing and livestock breeding, the violation of scientifically grounded approaches to agricultural production in general, pollution and inappropriate use of land, water and biological resources are factors in reducing the productivity of agrarian production, the quality of raw materials and products.

One of the main priorities for the quality and safety of food products is the control over the quality and safety of food raw materials and related materials, food products, especially for baby food. Creating an effective control system should primarily be based on the certification of the manufacturer, and only then on the quality control of the products it produces. This is the practice of developed countries. Soils on which raw materials are grown, raw materials itself, equipment, technological equipment, personnel, transportation, trade network and many other aspects of enterprise activity are subject to certification. Consequently, there is effective control over the entire chain “from production to implementation”.

Consequently, food safety and the provision of safe and high-quality agricultural products to the population and access to the world market can only be realized if international standards, norms and certification of production are implemented, international experience and practice of agriculture, modern environmentally friendly technologies are applied, incl. organic, environmentally-friendly use of agrosphere resources and strict control over the whole technological chain of agricultural production. All this in a complex will ensure the stable production of high-quality and

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safe food products and will reduce the risks of dangers for the life and health of the Ukrainian people.

Referenses

1. State Statistics Service of Ukraine. Retrieved from <http://ukrstat.gov.ua>
2. Ministry of Agrarian Policy and Food of Ukraine. Retrieved from <http://minagro.gov.ua>