

problems of assessment and current status. *Institute for Strategic Studies*. [ONLINE]. Available at: <http://www.niss.gov.ua/content/articles/files/energoeffekt-5cecc.pdf> [Accessed 21 June 2020].

12. Directive 2012 / 27EU of the European Parliament and of the Council of 25 October 2012 On energy efficiency, 2012. [ONLINE]. Available at: http://sae.gov.ua/sites/default/files/UKR_Directive_27_2012_2.doc [Accessed 21 June 2020].

13. Bodrov, V. H., Olijnyk, N. I. & Baldych, N. I. 2016. Financial and credit mechanisms for energy efficiency of residential sector in Ukraine. *Kyiv: Scientific thought*.

THE AGRI-FOOD MARKET CONJUNCTURE UNDER THE ECONOMIC GLOBALIZATION CONDITIONAL: ECONOMIC, MARKETING, ENVIRONMENTAL COMPONENTS

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The agri-food market has many relationships with the external environment, including related industries, competitors and consumers from almost all over the world, suppliers of fixed and current assets, financial institutions. This economy's sector also affects and changes the environment. With growing population, the demand for agri-food products is growing. Therefore, the leading market players are trying to increase agricultural production to meet existing demand, while ensuring high economic efficiency.

Development of the world market and the economies of most countries have been characterized by the presence of significant structural changes that manifest themselves in various spheres of the economy. In general, modern transformation processes are caused by the growing role of globalization, which covers various directions of development and interaction of subjects and objects of socio-economic and environmental relations. Under the

conditions of the economy globalization, new tendencies of social and economic development are being formed. Growth of population, changing structure and culture of consumption are an impetus for both quantitative and qualitative indicators. There arises a need for a comprehensive assessment of the level of the countries socio-economic development in order to identify the factors and components of an effective globalization development. Leading global institutions use different approaches and indicators to carry out such an assessment, however, they do not cover the entire spectrum of the development factors. Therefore, the issue of conducting researches to substantiate the optimal methodology for assessing the socio-economic development of the countries of the world is relevant [8].

The agricultural market continues to operate under an economic crisis conditional. Agricultural and food products are in demand despite the decline in economic activity, inflation, unemployment, structural changes. However, the agri-food market is extremely sensitive to any fluctuations, as this sector of the economy interacts with many other components of the national economy.

Now the world economy is in economic crisis. This crisis differs from others in that this situation is due to an unpredictable factor covid-19, which exacerbated existing socio-economic problems and created new ones. Under such conditions, the situation in the agricultural and agri-food market changes quite quickly and becomes unpredictable and unbalanced. Based on these conditionals, the research of supply and demand in the agricultural market under conditions of economic instability and crisis is extremely relevant and timely.

The problems of agri-food market development under economy's globalization and agri-food market components have been considered by many authors, for example, Meyer J., Glazer R., Cicia G., Colantuoni F., Teresa D.G., Pascucci S., Huan Dong, Benjamin Campbell, Adam N. Rabinowitz [1–3, 6, 8].

The agri-food market development can be viewed from different angles. However, in our opinion, today, economic, marketing, environmental components are the main components in the formation of the agri-food market (Fig. 1).

The leading role of the environmental factor can be traced in the research of such scientists as Huan Dong, Benjamin Campbell, Adam N. Rabinowitz. They consider that nowadays, consumers have become increasingly aware of their local food system as a result of concerning about health and nutrition, food safety and sustainability, and local economic development. This transitional shift from global to direct-to-consumer farm operations has increased the demand for locally produced foods. As an alternative, community supported agriculture (CSA), a direct and sustainable food

channel, has gained tremendous popularity in the US [2].

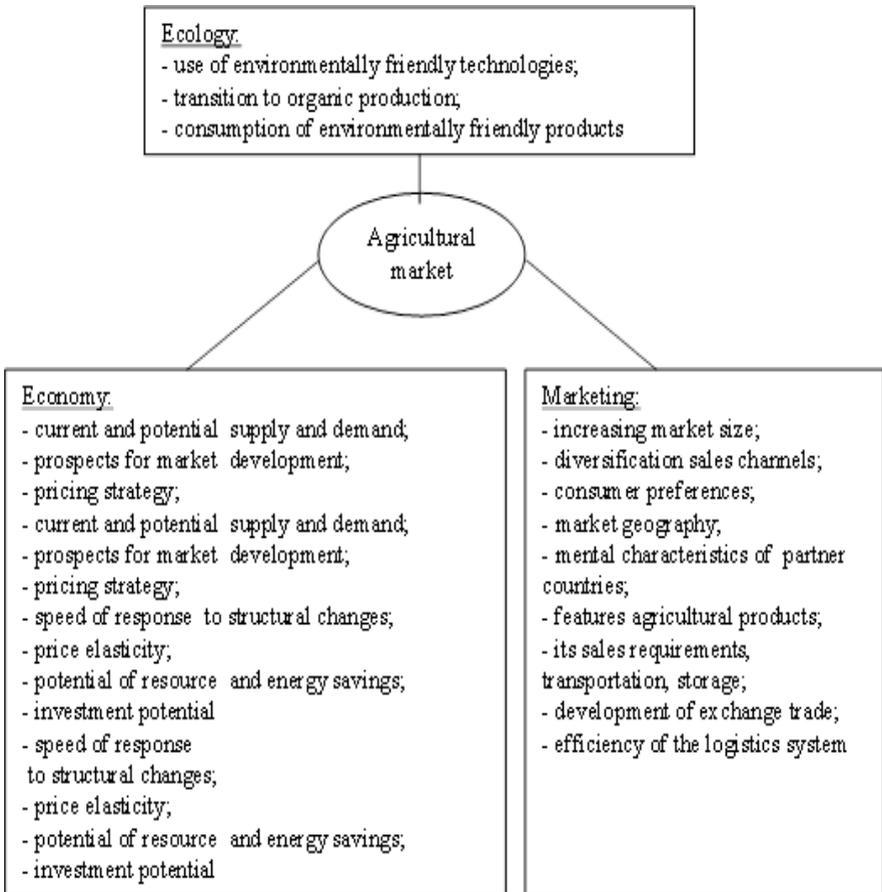


Fig. 1. Ecology, economy and marketing components of agricultural market

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Regarding marketing, according to the Marketing Science Institute (1999), one of the pressing priorities in marketing is to identify marketing activities for building relationships and to quantify the effectiveness of customer loyalty initiatives [4].

To analyze the agri-food market in terms of marketing, it is necessary to consider not a calendar but a marketing year.

A marketing year is a period of one year (or sometimes less), designated for reporting and (or) analysis of production, marketing and disposition of a commodity. (Disposition of an agricultural crop might include such uses as food, animal feed, industry, seed, and export, as well as changes in stocks) Because of year-to-year fluctuations in production, much marketing and disposition of some commodities may reflect production that occurred during a previous calendar year. For this reason, analysis is often facilitated if the marketing year for a crop commences at about the time of harvest. However, world markets or other factors may also influence choice of beginning date for the marketing year for some commodities in some countries. Especially in the case of certain perishable fresh fruits and vegetables, the marketing year may be less than a full year in length, because economic activity of interest for reporting and analysis may be concluded within just a few months [5, 7, 9] (tabl. 1).

Table 1

Crop marketing years in various nations

Cultures	Characteristic
Wheat	The marketing year commences April 1 for Japan, June 1 for the United States, July 1 for the European Union and New Zealand, August 1 for Canada and October 1 for Australia
Coarse grains	The marketing year commences April 1 for Japan, July 1 for the European Union and New Zealand, August 1 for Canada and October 1 for Australia. The US marketing year commences June 1 for barley and oats and September 1 for corn (maize) for grain and sorghum for grain.
Oilseed	The marketing year commences April 1 for Japan, July 1 for the European Union and New Zealand, August 1 for Canada and October 1 for Australia. The US marketing year begins June 1 for canola (rapeseed), and September 1 for soybeans and sunflower seed.
Rice	The marketing year commences April 1 for Japan and Australia, August 1 for the United States, September 1 for the European Union, October 1 for Mexico, November 1 for Korea and January 1 for other countries.

It has been seen that marketing year is different in terms of countries and cultures.

Commodity marketing years in the United States differs from other countries: January 1: cattle, sheep, lambs, wool, mohair, milk, turkeys, honey, cauliflower, celery, lettuce, onions, strawberries, sweet corn, tomatoes: May

1 hay; June 1: barley, oats, wheat; July 1: canola, flax seed, apples (fresh); August 1: cotton, peanuts, rice; September 1: corn for grain, sorghum for grain, soybeans, sweet potatoes, hops; December 1: broilers, eggs, hogs. For some of the above commodities, the marketing year in some US states differs from that for the US as whole [9] For several other commodities, notably some perishable fruits and vegetables and some tobacco categories, the marketing year for the US and (or) for various US states is less than a 12-month period [5, 7, 9].

Thus, the situation in the agri-food market can be analyzed according to the data for the marketing year (tabl. 2).

Table 2

The world market of main agricultural cultural, 2011/12-2020/21 marketing years, mln. tonn

Marketing years	Production	Supply	Utilization	Trade	Ending stocks	World stock-to-use ratio
World cereal market						
2011/12	2357.6	2922.1	2321.0	322.5	597.0	25.6
2012/13	2317.9	2915.0	2332.2	318.2	594.0	24.3
2013/14	2557.5	3151.5	2449.1	363.7	673.6	26.9
2014/15	2607.9	3281.5	2507.8	377.0	770.7	30.2
2015/16	2583.2	3353.9	2550.5	393.0	797.8	30.5
2016/17	2661.8	3459.6	2613.5	406.6	844.0	31.9
2017/18	2696.9	3540.9	2649.5	422.7	884.7	33.0
2018/19	2648.7	3533.4	2677.8	410.4	871.9	32.4
2019/20	2710.9	3582.8	2689.4	423.7	882.7	32.5
2020/21	2780.5	3663.3	2732.4	433.0	926.8	32.9
2020/21 to 2011/12, %	117.9	125.4	117.7	134.3	155.2	x
World wheat market						
2011/12	699.0	902.1	693.2	149.2	203.9	29.9
2012/13	658.6	862.5	682.4	143.6	185.8	26.8
2013/14	715.3	901.1	692.2	159.4	200.4	28.3
2014/15	735.2	935.6	708.2	156.6	228.7	31.9
2015/16	737.2	965.9	717.0	167.5	243.2	33.0
2016/17	764.9	1008.0	737.3	176.9	267.0	36.1
2017/18	761.6	1028.5	739.1	177.4	288.1	38.4
2018/19	732.1	1020.2	751.1	168.2	271.9	35.9
2019/20	762.2	1034.1	757.5	175.1	276.2	36.6
2020/21	758.3	1034.5	754.3	177.5	280.3	36.3
2020/21 to 2011/12, %	108.5	114.7	108.8	119.0	137.5	x
World coarse grain market						
2011/12	1178.6	1410.9	1165.7	132.6	246.6	20.9
2012/13	1174.4	1421.0	1180.7	134.4	246.2	19.3
2013/14	1351.6	1597.8	1276.6	158.8	301.7	23.0
2014/15	1382.6	1684.3	1312.8	175.3	368.3	27.4
2015/16	1357.4	1725.7	1343.2	184.1	382.7	27.7
2016/17	1400.4	1783.1	1382.1	181.3	404.1	28.6
2017/18	1436.0	1840.0	1413.1	196.8	420.3	29.5
2018/19	1410.3	1830.6	1426.8	198.1	415.4	29.1
2019/20	1448.1	1863.5	1429.8	203.7	423.1	28.8
2020/21	1513.5	1936.6	1468.0	207.9	464.6	30.5
2020/21 to 2011/12, %	128.4	137.3	125.9	156.7	188.4	x
World rice market						

2011/12	480,0	609,0	462,0	40,6	146,6	31,2
2012/13	484,9	631,5	469,1	40,2	162,1	33,7
2013/14	490,6	652,6	480,2	45,5	171,6	35,2
2014/15	490,1	661,6	486,8	45,1	173,6	35,4
2015/16	488,6	662,2	490,3	41,4	172,0	34,8
2016/17	496,5	668,5	494,1	48,4	173,0	34,8
2017/18	499,4	672,3	497,3	48,5	176,3	35,3
2018/19	506,3	682,5	499,9	44,1	184,6	36,8
2019/20	500,6	685,2	502,0	44,9	183,4	36,0
2020/21	508,7	692,1	510,0	47,6	182,0	35,3
2020/21 to 2011/12, %	106,0	113,6	110,4	117,3	124,2	x

Source: summarized by authors by [10]

The cereal market is growing significantly due to the increasing demand for this product due to the population increasing in the world. The volume of cereal production in the 2020/2021 marketing year, according to forecast data, will be 2780.5 million tons, which is 422.9 million tons, or 17.9 % more than in 2011/12. Due to last year's balances, the supply of this type of agricultural products in 2020/2021 will amount to 3663.3 million tons, which is 741.2 million tons, or 25.4 %, more than in 2011/2012. World wheat market, coarse grain market and World rice market have been also increases.

Regarding international trade, then during the study period each year there is a positive balance. Inventories of products are significantly increasing, which in 2020/2021 amounted to 32.9 %, while in 2011/12 this figure was 25.6 %. The main exporters of cereals, including wheat, are Argentina, Australia, Canada, the EU, Kazakhstan, Russia, Ukraine and the United States. The agricultural policy of these countries and their supply and consumption of agricultural products determines the state of the world market.

Consequently, the agricultural market is the basis of the agri-food market and has all the hallmarks of a classic market, complemented by the sectoral characteristics of the agricultural sector. Conjuncture is one of the main features of market relations, which characterizes the market situation, formed on the basis of the ratio of supply and demand. The state of the market situation can be used to draw conclusions about the stages of the life cycle of goods, market participants, industries, price equilibrium.

The agricultural sector is a leading sphere that provides economic security and development of other socio-economic systems' components. The situation in the agricultural market is formed under the influence of general and specific factors. For modeling the future balance of supply and demand, structural changes in the economy, competitors, marketing strategies, positions of major market players, public policy, including protectionism, quotas, certification, standardization, exchange rates, and organizational and economic aspects, should be taken into account.

General trends characterizing the world situation in the agricultural market

indicate a significant increase in the supply of agricultural products with a corresponding increase in consumption. International trade in agricultural products is reviving, despite the crisis and the general economic downturn, new players are entering the world agricultural market. Marketing, economic and ecology components have become the most important for agricultural market development.

References:

1. Cicia, G., Colantuoni, F., Teresa, D., & Pascucci, S. (2011). Community supported agriculture in the urban fringe: empirical evidence for project feasibility in the metropolitan area of Naples (Italy). *International Journal on Food System Dynamics*, 2(3), 326–339.
2. Dong, H., Campbell, B., Rabinowitz, A. (2019). Factors impacting producer marketing through community supported agriculture. *PLoS ONE*, 14(7)
3. Glazer, R. (1991). Marketing in an information-intensive environment: strategic implications of knowledge as an asset. *Journal of Marketing*, 55(4), 1–19.
4. Marketing Science Institute (1999). Research: The 1998-2000. Research Priorities. [ONLINE]. Available at: <http://www.msi.org/msi/res01.htm>. [Accessed 19 June 2020]
5. Marketing year. [ONLINE]. Available at: https://en.wikipedia.org/wiki/Marketing_year#:~:text=A%20marketing%20year%20is%20a,well%20as%20changes%20in%20stocks.) [Accessed 19 June 2020]
6. Meyer, J. (2012). Community supported agriculture: a strategic analysis of the market and a competency-based strategic plan. A plan B Research Paper Submitted to Michigan State University, *Department of Agriculture, Food and Resource Economics*.
7. OECD-FAO Agricultural Outlook 2007–2016. [ONLINE]. Available at: <http://www.oecd.org/tad/agricultural-trade/38893266.pdf> [Accessed 22 June 2020]
8. Samoilyk, Iu., Bilan, Yu., Nitsenko, V. (2017) Conceptual modeling of agri-food market development under economy's globalization. *Naukovyi Visnyk Polissia*, 3(11), 1, 54–61.
9. United States Department of Agriculture. 2009. Agricultural prices 2008 summary. [ONLINE]. Available at: <http://usda.mannlib.cornell.edu/usda/current/AgriPricSu/AgriPricSu-08-05-2009.pdf> [Accessed 28 June 2020]
10. World Food Situation. [ONLINE]. Available at: <http://www.fao.org>. [Accessed 24 June 2020]