

## **Global Food Market and International Trade as Market Instrument of Food Resources Redistribution**

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**Annotation.** The important role of international trade in solving global food problem has been substantiated in the article. A number of challenges in the development of international food trade have been identified, the trends of its dynamics have been defined, the ways of its development related to the need for improving the conditions of trade and its structure, ensuring more favourable conditions of access to the world food market by improving the mechanism of regulation of import tariffs and quotas, export subsidies, internal support measures for producers of food products.

**Key words:** global agri-food system, global market, international trade, export of agricultural products, import of agricultural products.

**Introduction.** The most important component of the global agri-food system is global food trade infrastructure and institutes. Their functioning and interaction with other sectoral components of the world economy determine current role of the agricultural food system in the global economic progress, its effectiveness in addressing the problem of insufficient food supply in many countries of the world. Under current circumstances it's becoming more and more difficult for the present-day food systems to provide all people with sufficient in quantity, safe, diverse and nutrient-rich food products that ensure a healthy diet, particularly in view of the limitations imposed by the scarcity of resources and environmental degradation, as well as unsustainable models of production and consumption, food losses and food wastes, and unbalanced distribution; scarcity of food and low level of effective demand that are causing imbalance in the domestic food market by supply and demand; dependence of the domestic market on import of food, non-competitiveness of the national agro-industry; low competitiveness of products by quality and/or price when

having sufficient quantity of own-produced food products; underdevelopment of foreign economic relations, closed domestic food market; low efficiency of economic entities in agro-industry; turning export of food products into the end in itself of the agro-industry development; increase in the foreign debt repayment obligations while having unstable national currency rate. Therefore, the role of the world market and international food trade in solving global food problem cannot be overemphasized.

The problems of food supply for the population, uneven production, food consumption and trade in different countries of the world have been reflected in the works of foreign and domestic scientists: O. Berezin, L. Berezina, O. Bilorus, F. Braudel, V. Vlasov, O. Dobrosotskyi, R. Maltus, P. Sabluk, A. Sen and others. [1-8]. Existing mechanisms of formation and distribution of world food resources, international food trade and food aid provision do not create an effective system for provision of the countries across the world with the sufficient amount of food products. Therefore, it is important to substantiate the ways of solving food problem by improving mechanism for regulation of international food trade.

Theoretical and methodological and practical problems of global food market functioning constitute the subject matter of the present study.

The objectives of the study are to establish peculiarities of the global food market functioning and development of international trade as market instrument of food resources redistribution.

**Materials and methods.** Theoretical achievements of the world economic science, conceptual provisions of the world economy theory and international economic relations with regard to addressing global issues constitute methodological framework of the study. In order to achieve stated goal, the author used modern scientific research methods in this study: historical and logical approach; system-functional and factor analysis; system-structural analysis; statistical, comparative analysis, grouping. Information framework of

the study includes laws of Ukraine, regulations of international organizations, theoretical and methodological developments of domestic and foreign scientists, materials of the State Statistics Service of Ukraine, FAO, EU, official materials of other international organizations regarding assessment of the condition and prospects of solving global food problem.

**Findings.** The world market is an area of goods exchange between individual countries, as well as between international and transnational companies. By involving all countries of the planet in the international trade area, the world market becomes global. Being the most important structural element of the world economy, it performs a number of important functions, such as formation of supply and demand for various products, formation of market prices for such products, ensuring market transactions by concluding contracts, making real goods exchange transactions. International food trade accounts for the largest share in the world market functioning. Trade is one of the key elements in ensuring food security and nutrition, and trade policy should contribute to ensuring food security and nutrition as part of the fair international trading system based on the market principles. The volume of the world food trade is constantly growing (Fig. 1).

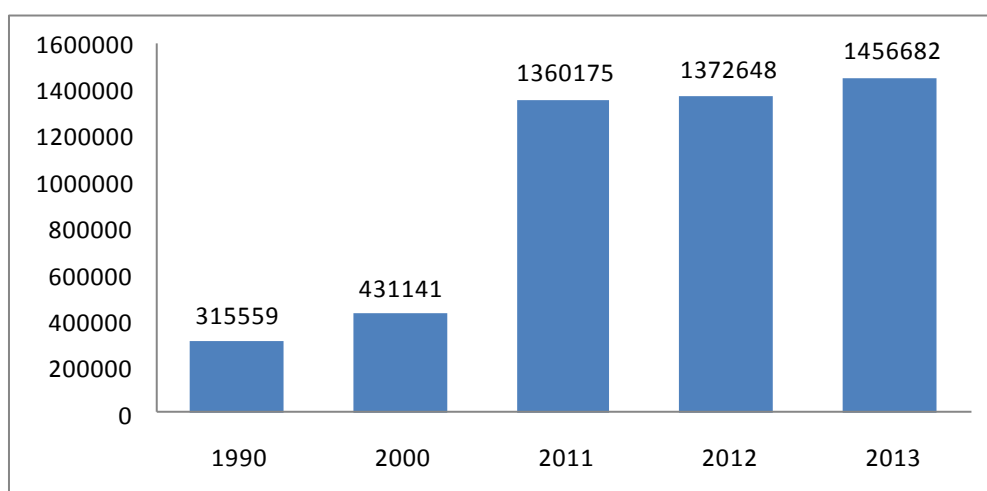


Fig. 1. Dynamics of the world food export volumes, millions USD [9]

From 1990 to 2013 the total volume of food products export grew from

USD 315,559 million to USD 1,456,682 million, which is 4.6 times growth. Its share in the general export of goods also grew, if in 2005 this share amounted to 6.7%, in 2013 it reached 8%.

Today, international trade has become a powerful tool of food resources redistribution between the countries. In 2013, agricultural products for the amount of USD 1,745 trillion were redistributed between the countries of the world by means of export; its structure by regions is presented in Table 1.

Table 1

Distribution of the general volume of export of agricultural products and food products by regions of the world in 2013 [9]

Regions of the world	Agricultural products		Food products	
	billion USD	%	billion USD	%
World	1745	100	1457	100
Europe	708	40.6	610	41.9
Asia	390	22.3	306	21.0
North America	266	15.3	213	14.6
South and Central America	217	12.4	198	13.6
CIS countries	69	4.0	*	*
Africa	62	3.5	51	3.5
Middle East	33	1.9	*	*

\* – data are not available

The share of food products in the total volume of agricultural products export is 83%; other products are intended for technical purposes (biofuel) and may be used as food for animals. The data presented in the table shows that the largest exporter of agricultural and food products is Europe, which provides 40% of the world export of products. Asia is ranked second, but its share is almost half that of Europe. CIS countries and Africa have a small share in the export of food resources (3.5-4%). Notwithstanding high potential of the agricultural sector of North America, its share in the export is only 15.3%.

It should be noted that during the last decade there have been some structural changes in the volume of export by groups of exporting countries. The share of European countries decreased from 46.8% in 2005 to 40.6% in 2013,

and there has been increase in the share of the exporting countries of Asia (from 18.3% to 22.3%) and South and Central America (from 10.6% to 12.4%).

Among 15 main exporters and importers of agricultural products the most significant are European Union, USA, and China. Only 9 countries have large volume of both export and import (Fig. 2).

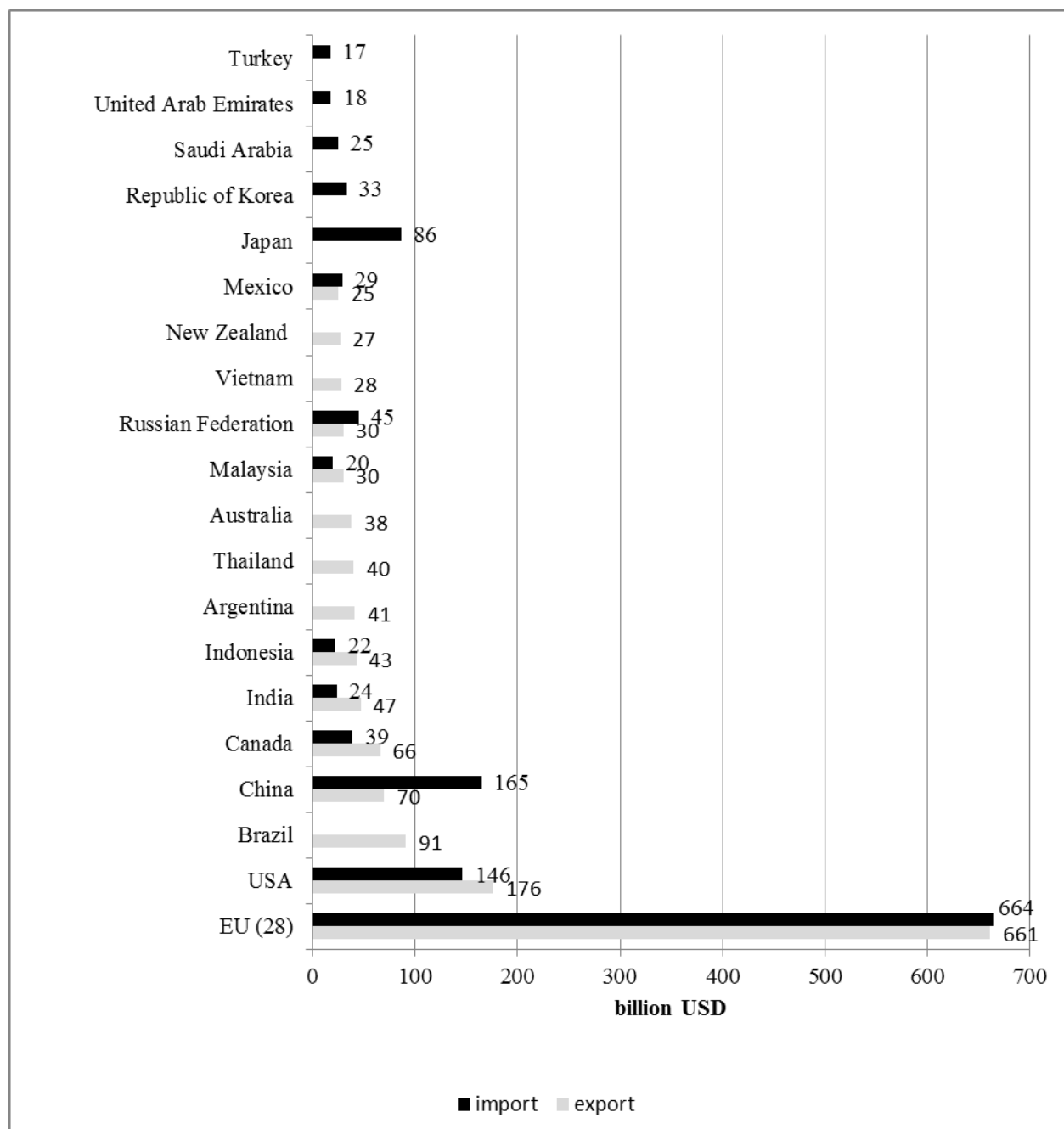


Fig. 2. Volumes of export and import of agricultural products of 15 leading exporters and importers in 2013, billion USD [9]

As can be seen from Fig. 2, special place in the structure of international

trade in agricultural products belongs to the European Union. Its volumes of export and import are almost identical, while the share of export of EU countries to other EU countries in 2013 was 76%. This indicates a high level of industrial cooperation and specialization of these countries, active development of intraregional external food trade facilitated by the common market and absence of tariff barriers. It also points to the effectiveness of EU policy regarding development of agro-industry.

It should be noted that the share of food export in the total volume of export of agricultural products wasn't equal for different groups of countries: in Europe it was 86%, in Asia – 78%, in North America – 80%, in South and Central America – 91%, in Africa – 82%. Thus, a significant part of agricultural products is directed to technical needs and it is growing.

The development of the world food market and international trade has caused dynamic growth of volumes of food products export and import. In general, for the period of 1990-2013 the volume of global food export has increased 4.6 times. The share of food export in the total export of goods of the countries varies. In the EU and USA it is 9%, in Canada – 10%. At the same time, in a number of countries which themselves suffer from the lack of food the share of food export is quite significant: in Ethiopia it is 77%, in Nicaragua, in Malawi – 76%, Uruguay – 66%. Such situation arises in case of undeveloped economy and monocultural agricultural development.

The most dynamically growing food export for the period studied was recorded in the following countries: United Arab Emirates 101.2 times, Canada – 23.9, Egypt – 18.2, India – 13.5, Ukraine – 12.7, Paraguay – 12.2, Indonesia – 11.2, Ethiopia – 11.2, Ghana – 10.7 Peru – 9.6 Uruguay – 8.9.

Export of food is a considerable contribution to addressing the global food problem, as it gives countries with a deficit of certain food products the opportunity to buy them on international markets. Export also helps to solve food problem at the national level, as it provides the country with currency

earnings, which can be spent on agricultural development, social sphere and import of scarce food products. This can be achieved when there is fair price parity both for different types of food products and other commodities, especially energy sources and means of production.

Import of food products is primarily related to solving food supply issues of individual countries. Its volumes depend not only on the need for various food products, but also on the level of world prices, economic capabilities of the country and its population, different tariff and non-tariff barriers for movement of commodity flows.

In 2013, the following countries had the largest share of food (more than 20%) in the total volume of import: Yemen (30%), Iran (27%), Senegal (24%), Syria, Bangladesh (21%), Egypt (20%), i.e. countries with a relatively low level of food security. Therefore, import of food for such countries is very important.

Dynamics of food import, which is presented in Table 2 of Annex B, shows that the highest import growth rates were recorded in the following countries: India – 21.6 times, China – 21.4, Chile – 19.9, Indonesia – 14.9, Colombia – 14.8, Guatemala – 13.7, Vietnam – 13.6, Venezuela – 13, Salvador – 12.8, Ecuador – 12.7, Bangladesh – 11.9, Argentina – 10.5, United Arab Emirates – 10.5, Ukraine – 8.9, South Africa – 8, Thailand – 7.7, Saudi Arabia – 7.3.

For the analysis of the impact of export and import of food on the change of the percentage of undernourished people in certain countries, a group of countries with available data on these indicators has been selected (Table 2).

Table 2

Dynamics of import, export of food and percentage of undernourished people in certain countries of the world for 1990-2013 [10, 11]

Countries	Dynamics of export, times	Dynamics of import, times	Dynamics of the percentage of undernourished people, %
Colombia	2.3	14.8	-47.3

Continuation of Table 2

Côte d'Ivoire	2.9	4.3	37.7
Ecuador	6.4	12.7	-42.2
Guatemala	5.7	13.7	-3.8
India	13.5	21.6	-36
Indonesia	11.2	14.9	-56.2
Kenya	5.04	9.1	-26.5
Pakistan	9.7	3.5	-13.5
Philippines	3.8	4.9	-56.3
Sri Lanka	4	4.3	-19.8
Vietnam	6.4	13.6	-71.7
Bangladesh		11.9	-50
Nigeria		4.9	-69.7
Senegal		4.5	-32
Ethiopia	6.4		-53.3
Honduras	3.6		-47.3
Malawi	2.4		-51.3
Uganda	5.5		11.1

The countries have been divided by this indicator using method of quadrants (quadratic matrix) when countries were divided into 4 groups:

I. low dynamics of export (import) – less than 5 times; low reduction of the percentage of undernourished people (up to -25%) or increase in this indicator;

II. high dynamics of export (import) more than 5 times; low reduction of the percentage of undernourished people (up to -25%) or increase in this indicator;

III. high dynamics of export (import) more than 5 times; significant decrease of the percentage of undernourished people (more than -25%);

IV. low dynamics of export (import) – less than 5 times; significant decrease of the percentage of undernourished people (more than -25%);

The highest correlation between positive dynamics of export (import) and reduction in the percentage of people suffering from hunger will demonstrate the countries of the III group; in the second group, the positive potential of foreign trade haven't affected poor undernourished people, so other social groups received it; in the IV group, the reduction in the number of people suffering



from hunger has been caused by other factors (agricultural development, food aid, etc.). Corresponding matrices for export and import are given in Figure 3.

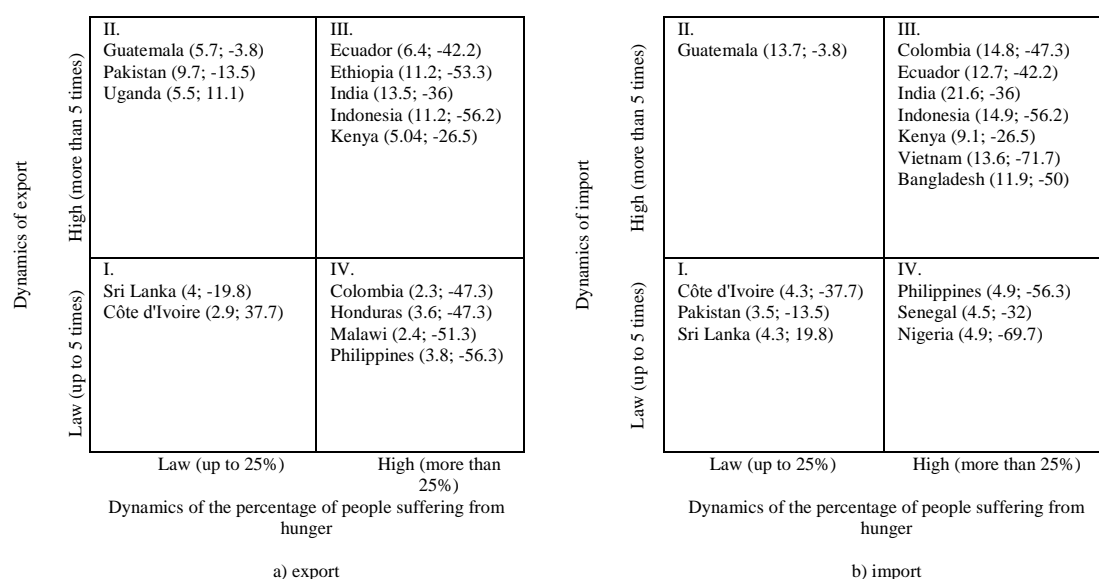


Fig. 3. Division of countries by dynamics of export (import) and the percentage of undernourished people \*

\* compiled by the author

The results of the analysis show that import has greater impact on solving food problem than export. High dynamics of food import contributed to the reduction of the number of people suffering from hunger in 7 countries, namely in Bangladesh, Colombia, Ecuador, India, Indonesia, Kenya, Vietnam, similar impact export had in 5 countries: Ecuador, Ethiopia, India, Indonesia, Kenya. The countries in which export potential has not affected the reduction of the number of people suffering from hunger include Guatemala, Pakistan, Uganda. Among countries in which the reduction of the number of people suffering from hunger was due to other factors were Colombia, Honduras, Malawi, Philippines, Senegal, Nigeria.

**Discussion and conclusions.** The analysis performed showed that trade in food resources is an important factor in solving food problem. However, its positive impact does not appear in every country. This points to the need to improve conditions of trade and its structure. In order to rationalize the structure

of the global food trade three groups of instruments are used:

- access to market (import tariffs and quotas that protect domestic producers from foreign competitors);
- export subsidies (government payments that cover some of the exporters' costs for promotion of goods on the market and special transport charges);
- internal support measures (direct aid to farmers related to the type of their products, prices and production volumes) [12].

Analysis of the reforms in the area of food trade shows their political sensitivity and complexity of their implementation. This includes application of such tools as taxation and subsidies. Low-income countries tend to impose relatively high taxes on farmers who produce export products considering them the most important source of budget replenishment, while developed countries tend to provide large subsidies to farmers. These differences often create political misunderstanding unfavourable for poor people both in domestic and international markets. [13]

Economic and social costs of today's trade, price and subsidy political measures in the global agri-food system are quite high, which are able to reduce prices on the world commodity markets by about 5% on average [14], restrain growth in the agricultural sector in developing countries. They take up a significant part of the state budget and prevent investments that help to achieve faster growth. Although over the last two decades such social and economic costs slightly decreased, they still play an important role, especially in developing countries, deepening income inequality. Correction of this kind of errors of the chosen political course and wrong investment policy would help to boost economic growth and reduce poverty.

Much attention recently is paid to the reduction of negative impact of the policy implemented by the developed countries with regard to the developing countries, including through attempts to open markets of the first to second and

cut subsidies in the developed countries, this way stimulating their own production and lowering world prices.

Since trade between developing countries themselves constitutes an increasing share of their total goods turnover, mutual facilitation of access to markets of each other could have positive results.

Regional agreements may address issues of regional collective actions which are not on the agenda of multilateral discussions on trade. They can reduce political tension and use advantages of economies of scale in the area of infrastructure. Enhancing regional integration and mutual opening of markets can be important in the areas where there are many small countries (for example, Sub-Saharan Africa). More than a third of global trade is carried out between the countries that take part in mutually beneficial regional agreements in one form or another. Such agreements are usually easier to make than agreements with multilateral obligations; they have fewer participants and usually extend beyond mere tariffs reduction, also envisaging the reduction of barriers at border crossing, measures for regulation and development of common standards. However, not all agreements result in the expansion of trade and investments, some, on the contrary, lead away from these processes. For example, countries that have high protectionist barriers on the border can actually reduce general trading activity of their partners, even if within given regional group trade volume increases.

African countries have entered into four regional agreements, Latin American into seven, which creates certain difficulties for trade [15].

In its recent review on these issues the World Bank concluded that agreements envisaging low external tariffs in the regime of the most favourable treatment for certain countries, and include some liberalization regarding certain types of goods and products from certain sectors, unburdensome tests for origin of goods, measures for facilitation of trade, regulatory rules in investment and intellectual property areas that meet development interests, and schedules for

timely performance, will help to boost national incomes. Practical implementation of the agreements turned out to be difficult for many countries, namely the movement of goods and workforce across the borders is governed by volumes of official documents which are poorly implemented in practice. There is a need for further efforts to harmonize policy, reduce non-tariff barriers, reduce formalities and corruption at the border, solve the problem of currency transfers and capitalize the results of economies of scale in the area of infrastructure.

### References

1. Berezin O.V. Vzaïmozv'iazok sotsialno-ekonomichnoi ta prodovolchoi bezpeky u formuvanni vidnosyn pidpriemstv APK / O.V. Berezin, L.M. Berezina // *Ekonomika APK*. – 2011. – №7. – S. 104-109.
2. Bilorus O.H. Hlobalizatsiia i bezpeka rozvytku / O.H. Bilorus, D.H. Lukianenko, M.O. Honcharenko, V.A. Zlenko [ta in.] – K.: KNEU, 2001. – 733 s.
3. Brodel Fernan. Materialnaya tsivilizatsiya. ekonomika i kapitalizm. KhV –XVIII vv. / Fernan Brodel; [per. s fr. L.E. Kubbelya; vstup. st. izd. Yu.N. Afanasyeva. – 2- e izd.] – M.: Ves mir. 2006.
4. Vlasov V. Deiaki tendentsii svitovoho vyrobnytstva prodovolchikh resursiv / V. Vlasov // *Ekonomika APK*. – 2006. – №4. – S. 142-147.
5. Dobrosotskyi V. Osnovnye napravleniya rehulyrovanyia prodovolstvennoho rynka/ V. Dobrosotskyi // *Экономист*. – 2000. – №3. – S. 78-81.
6. Maltus T.R. Doslidzhennia zakonu narodonaselennia / T.R. Maltus. – K.: Osnovy, 1998. – 535 s.
7. Sabluk P.T. Hlobalizatsiia i prodovolstvo / P.T. Sabluk, O.H. Bilorus, V.I. Vlasov. – K.: NNTs IAE, 2008. – 632 s.

8. Sen A. Poverty and Famines: An Essay on Entitlement and Deprivation. / Sen A. Clarendon Press, Oxford, 1981. – P. 100-130.

9. WTO Statistic Database. 2014. World Trade Organization.– [Electronic resource]. – Mode of access: [www.wto.org/statistics](http://www.wto.org/statistics)

10. Evrosoyuz skorrektiroval obshchuyu agrarnuyu politiku // Ekonomika selskogo khozyaystva Rossii. – 2009. – №1. – S. 86-87.

11. Food and Agriculture Organization of the United Nations. - [Electronic resource]. – Mode of access: <http://www.fao.org>

12. Magomedov A.N. Gosudarstvennoye subsidirovaniye kak faktor povysheniya konkurentosposobnosti selskogo khozyaystva v SShA / A.N. Magomedov // APK: ekonomika. upravleniye. – 2007. – №8. – S. 4.

13. Mirovoy prodovolstvennyy krizis: mneniya ekspertov // APK-Inform ot 21.01.2008 g. – [Elektronnyy resurs]. – Rezhim dostupa: <http://www.apk-inform.com/ru/exclusive/topic/55280#.VOGyLKjvtc0>

14. Kenni M. Protsess vnedreniya standartov komitetom Kodcx Alimentarius i ego rol v mezhdunarodnoy trgovle pishchevoy produktsiyey /M. Kenni // APK: ekonomika. upravleniye. –2008. – №12. – S. 17

15. Gordeyev A. Prioritetnyye napravleniya dolgosrochnoy agrarnoy politiki / A. Gordeyev // APK: ekonomika. upravleniye. – 2008. – №4. – S.25-