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PROBLEMS, TRENDS AND PROSPECTS OF THE WORLD FOOD MARKET DEVELOPMENT

ПРОБЛЕМИ, ТЕНДЕНЦІЇ ТА ПЕРСПЕКТИВИ РОЗВИТКУ СВІТОВОГО ПРОДУКТОВОГО РИНКУ

Problem statement. According to new tasks in the field sustainable development for the period after 2015 year, one of the main goals of the system of United Nations is to end hunger at the global level up to 2030 year. The main mission of agriculture is providing food security, which is inextricably connected with the necessity to take into account permanently growing number of the world population at the expense of decline in mortality rate, increase in life expectancy and young population in regions with high birth rate. At the same time, as results of research of Food and Agriculture Organization of the United Nations (FAO) show, food market growth will also take place for the long run. Prior to 2050 Earth population will grow by 34% and will reach 9.1 billion people. Almost all growth of the population will accrue to the share of developing countries. Urbanization will grow at a rapid pace, about 70% of the world population as expected will be urban, in comparison with today's 49%. In order to provide growing, mostly urban and potentially better-off population with food, prior to 2050 it is important to increase food production output from initial level of 2005-2007 by 60%. Annual volume of net investment in agriculture of developing countries, which is necessary for ensuring such an increase in production, is 83 billion dollars of the USA. It means that the existent consumption funds should be added with at least the same volume of food products as there is now. Moreover, it is important to be done only to not reduce the current level of life, first of all consumption.

The world agricultural and food trade continues to be on the rise but differences in the organization and structure of trade depending on product and region are still significant. The main endogenous and exogenous factors contributing to agricultural production development and demand growth are the trade policy in the field of agriculture, agrarian policy of countries, asymmetry of national economies' development, price disparity in certain countries, disproportions of agrofood trade flows, increase in financial solvency in certain countries, growth in material need of food staff. Economic recession caused by the world financial crisis has led to a considerable amount of negative consequences in many sectors; agriculture demonstrated its firmness in the crisis and post-crisis periods. Changes in the economy as a whole, including growing global trade integration, influence the efficiency of agricultural sector. Higher general economic growth also increases consumer incomes and thus a demand for food products. A change in interest rates has an impact on capital contributions, land value and levels of storage, whereas inflation – on prices of resources, incomes and loan. Exchange rate fluctuations are important for international competitiveness and trade flows of food and agricultural products. These statements determined a choice of the research theme, its logic and structure.

Analysis of recent studies and publications. The issues of establishment of a global model of development, influence of economy's globalization on the structuring and transformation of market relations, determination of a place, prospects and lines for the country's adaptation to these processes are considered in the works of native scientists: V. Andriichuk, Ya. Bazyliuk, O. Bilorus, V. Budkin, V. Vlasov, V. Hubenko, A. Kredisov, D. Lukianenko, Yu. Makohon, V. Novytskyi, Yu. Pakhomov, Ye. Saveliev, O. Skydan, S. Sokolenko, A. Filipenko, M. Chumachenko, A. Chukhno, I. Shkola and others. Problems of food markets' development are studied by V. Andriichuk, V. Boiko, P. Haidutskyi, T. Zinchuk, P. Sabluk, L. Khudolii, O. Shpychak. **The purpose and task of the article** – determination of problems, trends and prospects of development of the world food market taking into account global trends. **The research object** – is the process of development of the world relations in agrofood sector commodity circulation.

Statement of basic material. The biggest fall in the world trading of goods (-22%) and services (-9%) over the last 20 years was in 2009, and the renewal of development rate of trade in products (14%) – in 2010 and services (22%) –

in 2004. Today the share of 10 leading traders in commodity trade is 51% to the total volume of the world trade in 2014, during this period the share of developing countries has increased up to 41%, and the volume of commodity trade of countries-members of the WTO is 18.0 trillion dollars of the USA. Now the world merchandise export is 19.00 billion dollars of the USA, this indicator in 1995 was 5.17 billion dollars of the USA and in 2005 – 10.51 billion dollars of the USA [9]. Leading exporters and importers are the USA, the EU and China.

A trend that is observed over a period of 20 years allows asserting a strong interrelation of the world gross domestic product (GDP) and world merchandise export, however, the growth of the latter is more changeable than the growth of GDP. So, in 2009 there was a decrease in the world merchandise export by 12.0%, and the world GDP by 2.0%; in 2010 – increase of the first indicator by 14.0%, and second by 4.0% accordingly; and 2014 was characterized by a balance of both indicators at the level of 2.5%.

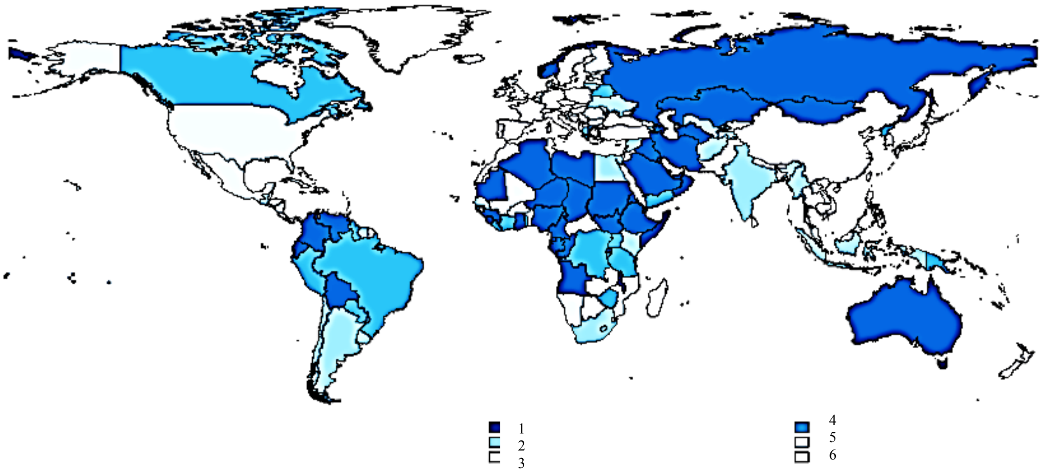
The agriculture importance as a branch of material production lies in the fact that in developed countries it provides 3% of the world output of gross product; in developing countries its share reaches 25% [2, 5]. Thus, in the world economy a dynamics of value added created by agriculture in the structure of the world gross product has a tendency to reduce, so in 1995 – 8.1%, in 2000 – 5.2%, in 2005 – 4.4%, in 2010 – 3.9%, in 2014 – 3.8%. In Ukraine, the share of agriculture in gross value added (GVA) in 1990 was 24.4%, in 2001 – 16.3%, in 2004 – 11.9%, in 2007 – 7.5%, in 2010 – 8.7% and in 2011 – 9.6%, in 2012 – 9.0%, in 2013 – 9.9%, in 2014 – 11.7%, in 2015 – 14.0%.

Every year the world spends for food consumption more than 9 trillion dollars, which on the average is more than 18% of all consumers spending over the year [7]. At the same time, according to the calculations of the FAO, one person in eight in the world is pinched with hunger, although in comparison with 1990 the number of these people has significantly decreased: from 1 billion people to 793 million in 2014.

A significant part of researchers has a common view that impossibility of solving the global food problem related to crisis state of the world economic relations that manifests itself in the form of asymmetry of socio-economic development, military conflicts, political instability, and food deficit deepens over the insufficient efficiency of reforms of agricultural sector of national economies and the scantiness of production resources.

The most of countries consider widening of participation in the global trade as a necessary element of their national strategy of foreign economic activity. However, trade activity's contributing to strengthening food security requires providing proper regulation of a process of increasing openness of economy for trading by means of trade and agrarian policy. Whereas the economy's openness for trade can provide an availability of large volumes of food products in countries-importers and be favour to the reduction of consumer prices, it is also accompanied by potential risks.

An increase of dependence on international markets can made countries more vulnerable in the face of short-term market shocks: both those which lead to decline in food reserves and raise in consumer prices, and those which arise over a sharp increase in import and further reduction of producer prices. Too fast process of increasing the economy's openness for trade can disrupt domestic



1. Very high increase (more than 25%)
2. Low change (-5% to 5%)
3. Very high decrease (more than 25%)
4. High increase (5% to 25%)
5. High decrease (5% to 25%)
6. No data

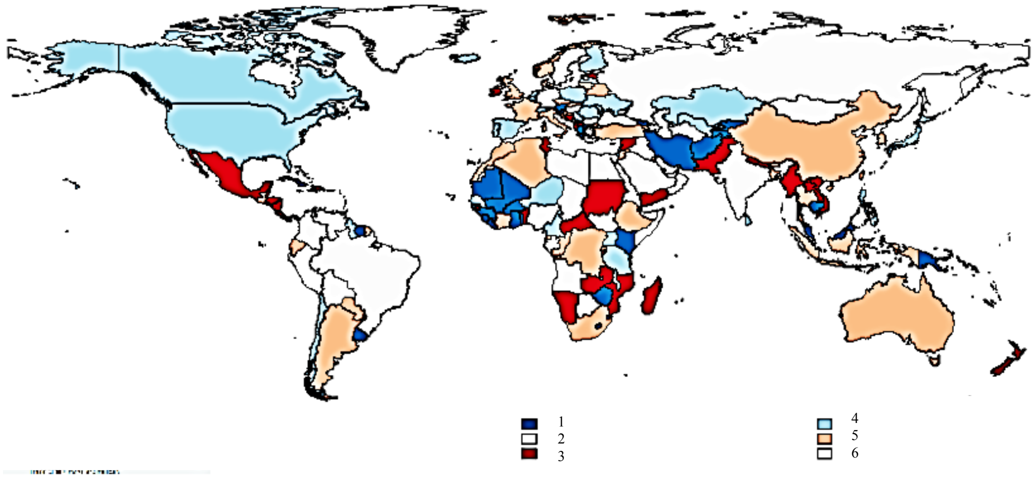
Fig. 1. Index of influence of export of agricultural products and natural resources on the country's economy in 2015 [10]

production in sectors where is felt a competition of import production, which presents a special problem at early stages of transformations in agriculture, where the agricultural sector still plays a key role in providing general economic growth of the country and employment of the majority of poor countryside representatives [4].

Although many countries strive to diversify their export, agriculture and natural resources are in the same way as before a large part of export basket of many developing countries. Researches study dependence of countries' economies on export of agricultural products by the index of dependence (Fig. 1).

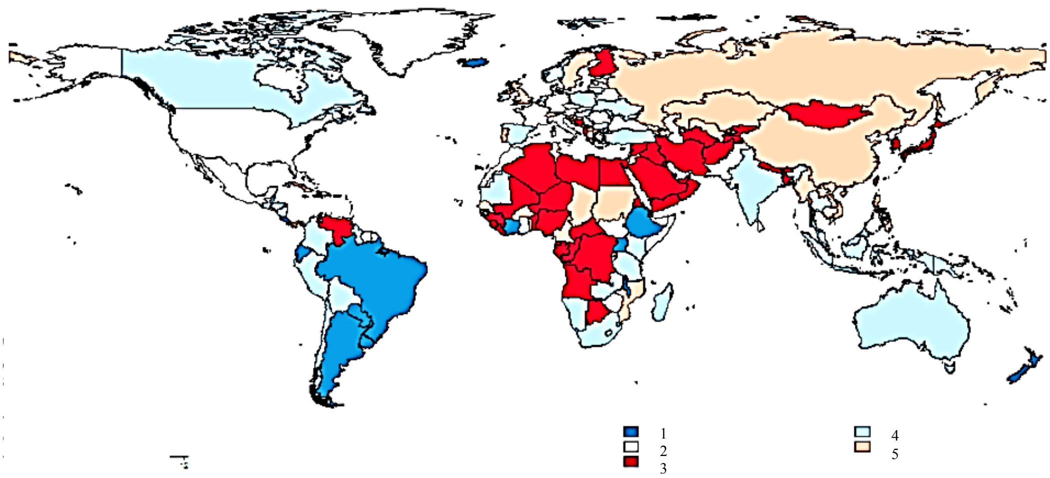
A dependence on raw materials is becoming more obvious for countries who export energy supplies in the Near East, raw material suppliers in Africa as well as for Latin American countries where agriculture constitutes a significant part in the total export volume as before [10]. Besides the agricultural products' dependence there is also calculated a dependence on natural resources. Commodity dependence is becoming more obvious for countries who export energy supplies in the Near East, raw material suppliers in Africa, Australia, and South America (Fig. 2).

Geography, demography and choice of trade and agrarian policy lead to deficit or proficit in



1. Very high increase (more than 25%)
2. Low change (-5% to 5%)
3. Very high decrease (more than 25%)
4. High increase (5% to 25%)
5. High decrease (5% to 25%)
6. No data

Fig. 2. Index of the country raw materials dependence on export, 2011-2014 [10]



1. Very high surplus (0,5 to 1)
2. Neutral (-01 to 0,1)
3. Very high deficit (-1 to -0 5)
4. High surplus (0 1 to 0 5)
5. High deficit (-0 5 to -01)

Fig. 3. Countries' food dependence index, 2015

trading of agricultural production (Fig. 3). As a whole, countries of Latin America, East Africa and South Asia are often food exporters, whereas much of the rest of Asia and Africa remain net importers of food.

The volumes of food production are increasing from year to year. According to the classification used by FAO, food includes the following commodity groups (in chapters of SITC – Standard International Trade Classification) [8]: 0 – food and live animals (live animals; meat and meat preparations; dairy products and birds' eggs; fish (not marine mammals); crustaceans, molluscs and aquatic invertebrates, and preparations thereof; cereals and cereal preparations; vegetables and fruit; sugars, sugar preparations and honey; coffee, tea, cocoa, spices, and manufactures thereof; feeding stuff for animals (not including unmilled cereals); miscellaneous edible products and preparations); 1 – beverages and tobacco; 4 – animal and vegetable oils, fats and waxes; partly chapter 22 – oil-seeds and oleaginous fruits.

A significant part in the world production is occupied by countries of Asia, Latin America and Oceania. The largest exporters and same time importers are countries of the EU, the USA and China. During 1990-2014 the volumes of agricultural production in the world have increased essentially – almost twice – from 1350661.2 billion Intl. dollars [6] in 1990 to 2320572.1 billion Intl. dollars in 2014 (Tab. 1). The leading food producers in the world are counties of Asia in 2000-2014, which annual share is on the average 46.1% of the level of food production in the world. During the last two decades this region's production has increased in 2.2 times. As a comparison, countries of North and South America have increased the production output in 1.7 times, and their share for the corresponding period on the average accounts for 24.0% of the world agricultural food production, countries of Africa – in 2.1 times with the share of 8.1%, countries of Oceania – in 1.5 times with the share of 1.5%. The lowest growth rate indicator belongs to the European region (0.9 times), on the average 19.9% of the volume of the world food production.

During the studied period the largest food producers remain countries of Asia, which have increased their share in the world production from 39.7% in 1990 to 51.2% in 2014. There was

Table 1

World food production in 1990-2014, billion Intl. dollars [6]

Group of countries/region	Year						Absolute variation	
	1990		2000		2014			
	bn Intl.$	%	bn Intl.$	%	bn Intl.$	%	bn Intl.$	%
World	1350661,2	100,0	1673786,7	100,0	2320572,1	100,0	969910,9	-
Africa	98647,4	7,3	134012,1	8,0	207838,4	9,0	109191	1,7
Asia	536395,4	39,7	791226,7	47,3	1187494,6	51,2	651099,2	11,5
North and South America	318966,3	23,6	410096,5	24,5	554710,6	23,9	235744,3	0,3
Europe	369890,2	27,4	303306,2	18,1	329970,2	14,2	-39920	-13,2
Countries of Oceania	27100,4	2,0	35725,3	2,1	41037	1,8	13936,6	-0,2

Note: food production output is given in the international dollars (I $), which are hypothetical unit of currency used for ensuring comparability of data of different countries of the world (2004-2006 bn Intl.$)

Table 2

World merchandise exports by major product group, 2014, bn USD and% [9]

Product group	Value, bn USD	Share in the world merchandise trade, %	Annual change, %								
	2014		1980-1985	1985-1990	1990-1995	1995-2000	2000-2005	2010-2014	2012	2013	2014
Agricultural products	1765	9,5	-2	9	7	-1	9	7	-1	5	2
Fuels and mining products	3789	20,5	-5	3	2	10	16	6	2	-3	-6
Fuels	3068	16,6	-5	0	1	12	17	7	5	-3	-7
Manufactures	12243	66,2	2	15	9	5	9	5	0	3	4
Iron and steel	472	2,6	-2	9	8	-2	17	3	-8	-7	5
Chemicals	2054	11,1	1	14	10	4	14	5	-2	2	3
Office and telecom equipment	1794	9,7	9	18	15	10	6	3	0	4	2
Automotive products	1395	7,5	5	14	8	5	10	6	1	3	4
Textiles	314	1,7	-1	15	8	0	6	6	4	7	3
Clothing	483	2,6	4	18	8	5	7	8	0	10	5
Agricultural products	1454	7,9	-	-	-	-	10	7	1	5	1
Non-agricultural goods	16850	91,1	-	-	-	-	10	5	0	2	1

increasing agricultural production by all regions of the world during the period of 2000-2014, the highest growth rates were peculiar to Africa – 3.319% and Asia – 2.574%, and the lowest to Europe – 1.035%. A corresponding indicator for America and Oceania amounted to 2.288% and 1.47% [3].

A structure of consumption and agricultural production plays an important role in the satisfaction of growing needs of countries with the food deficit and is significantly determined by the trade of food and agricultural production. Trade influences the four dimensions of the food security: food availability, access to food, utilization and stability. The world trade interrelation with these dimensions has a complex character and is caused by several deep factors, which explains a great difference in economic practice and agrarian and trade policy of different countries. Over the research period there are observed significant changes in production and consumption per capita. The biggest changes were in countries of Latin America, the Caribbean and Oceania.

A significant share of food in the world is cultivated at the local level. Where local production is not enough for meeting demand, trade plays an important role for bringing of a gap. The scale of food and agricultural trade is unprecedented today. In real terms, the value of international trade flows has increased in five times for 50 years in a row, which displays global tendencies in the overall volume of trade [5]. However, this increase was irregularly distributed by the world regions. Countries with high income level as a rule outrun developing countries, although some of them have natural comparative advantages concerning the quality of food and agricultural production.

Food export in the world amounts to 1765 billion dollars of the USA or 9.5% of the world merchandise export in 2014 [9] (Table 2). Food export in countries of North America amounts to 277 billion dollars of the USA or 11.1%, South and Central America – 212 billion dollars of the USA or 30.6%, Europe – 766 billion dollars of the USA or 10.6% of the world merchandise export.

At an average, in 2000-2014 in the world this index amounted to 8.2% of the world merchandise export. Herein the biggest share of food in the export commodity structure was peculiar for countries with a low income – 30.6% of merchandise export of the mentioned group of countries (Tab. 3). As a comparison, the share of food export of countries with a middle level of income amounted on an average to 9% of merchandise export of the mentioned group of countries, the share of food export of countries with a high level of income – 7.7% of merchandise export of the mentioned group of countries.

Among countries with low and middle income levels the biggest share of food export in merchandise export belonged to the countries of Latin America and the Caribbean. So, the share of food production amounted on an average to 18% of merchandise export of the specified group of countries. As a comparison, the share of food in the export commodity structure of counties of East Asia and Pacific Region at an average amounted to 6.2% of merchandise export of the mentioned group of countries, countries of Europe and Central Asia – 11.7% of merchandise export, countries of the Near East and North Africa – 2.25%, countries of South Asia – 12.9%, groups of countries south of Sahara – 13.7%, countries of the Eurozone – 8.8%. At the same time it should be noted that during the mentioned period in almost all countries with low and middle income levels was observed a growth in the share of food in merchandise export. So, the share of food in merchandise export of countries of Europe and Central Asia has increased by 4.6%, countries of Latin America and the Caribbean – by 2.5%, South Asia – by 0.8% in 2000-2014. Only countries of East Asia and Pacific Region as well as countries of the Near East and North Africa were an exception, where are recorded decreases in the share of food in merchandise export – 1.8% and 4.5% accordingly. The world food export has increased by 367 billion dollars – from 1119 billion dollars in 2010 to 1486 billion dollars in 2014 [9]. The world food export ramp-up was at the expense of countries of Europe and Asia. Food export of the former has increased by 137 billion dollars, the latter – by 95 billion dollars accordingly. As a comparison, the export volumes of countries of North America have increased by 57 billion dollars.

Table 3

Share of agricultural products in trade in total merchandise and in primary products by region, 2014, % [9]

Group of countries/region	Export	Import
Share in total merchandise		
World	9,5	9,5
North America	11,1	6,9
South and Central America	30,6	9,4
Europe	10,6	10,5
Commonwealth of Independent States (CIS)	9,2	12,0
Africa	11,5	15,6
Middle East	2,3	12,2
Asia	6,7	9,0
Share in primary products		
World	31,8	31,8
North America	40,0	30,3
South and Central America	43,3	29,3
Europe	48,7	36,7
Commonwealth of Independent States (CIS)	12,2	52,0
Africa	15,4	47,1
Middle East	3,4	52,5
Asia	37,3	24,7

The leading food exporters in the world in 2000-2014 are the countries of Europe, which annual index amounts to about 43% of the world export of appropriate production. The share of countries of Asia, in contrast, amounts on average to 21% of the world food export annually, countries of North America – 15%, countries of South and Central America – 13%, countries of Africa – 3.6%. However, it should be noted that regardless of the leading positions, countries of Europe, South and Central America, Africa acknowledged a decrease in their share in the world food export in 2010-2014 years. The share of countries of Europe has decreased by 1.5%, countries of South and Central America – by 0.2%, countries of Africa – by 0.3% in the world food export. A certain increase was observed in countries of Asia and North America, 1.6% and 0.2% accordingly. The largest exporters were countries of the EU (41% on average), the USA (11%), Brazil (4.4%), China (3.7%), Canada (3.7%), Argentina (2.6%), and Australia (2.4%). A country-exporter is not always a leader in production of agricultural food products as some countries-producers consume own production. Such countries are worth noticing when studying agricultural market as they can become potential importers or exporters depending on strategies and terms of development. So, internal regional export of food products of the EU countries amounts to 90%, even though they are irrefutable leaders among the largest exporters in the world.

The biggest reduce in the share in the world food export was peculiar to countries of the EU (5.2%), the USA (2.6%), Canada (0.8%), Argentina (0.2%) and Australia (by 0.7%), and growth – in Brazil (by 2.3%), China (by 1.2%), India (by 1.2%) and others. In 2016 reporting year a set of analytical publications of international organizations pay special attention and researches to the problems, current trends and forecasts concerning the agricultural development of Brazil [5]. This country is a top ten economies of the world and the second leading world supplier of food and agriculture commodities. Brazil aspires to be the main supplier of food, the world demand in which is increasing annually most of all due to the increase in demand in Asian countries. The world market of food sellers is characterized by a high level of concentration and can be considered as oligopoly market in 2014 [1].

The largest importers of foodstuffs are countries of the European Union, which average performance during 2010-2014 amounted to 41%, the USA – 9.3%, Japan – 8%, China – 3.3%, Russia – 2.4%, and Canada (2.3%). The same is true for countries of the EU, only 11% is importing out of countries, which are not members of the union, the rest of them has internal regional one.

Conclusions. The world food market continues to grow fast and is characterised by the ramp-up and increase in the level of concentration. It is expected that in the coming decades the volumes of food and agricultural trade will continue to grow in the world. As a consequence, there will also grow the trade influence on the level and nature of food security in all regions of the world. It is considered that negative tendencies and threats that influence on the structure and nomenclature of trade and are able to restrain further growth of the world production of food and agricultural raw materials today are: low growth rates and uncertainty of development prospects for the world economy, including agrarian sector; limitedness of arable land both in developed and developing countries, which related to the high level of urbanization and necessity of forestland preservation; ecologic complications associated with further drawing uncommitted land in turnover; limitedness of water resources; cutbacks to funding of agricultural production; aggravation of competition in merchandise markets; low adaptability of agrarian sector to the recession in demand and prices for food and agricultural production; currency fluctuations and wars; weather as well as natural and climatic changes as the most powerful factor that can influence on the dynamics of global food and agricultural markets.

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