

## **Risk management in distribution system of agro industrial complex**

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### **Introduction**

Ensuring effective sale of agricultural production is the priority direction of an agrarian policy and a strategic problem of financial stability of producers. The system of distribution and advance of foodstuff acts as the major element guaranteeing production of competitive food and directed on ensuring food security of Belarus. The choice of strategy of the organization of sale, its development and realization focus activity of subjects of managing on average and long-term prospect that predetermines need of development and deployment of the mechanism of risk management in internal and environment.

First, the system of merchandising of agrarian and industrial complex (AIC) constantly is under the influence of various micro and the macro processes connected with functioning of the Customs union, Common economic space formation, expansion of sales markets, and improvement of price, marketing and other mechanisms. Secondly, instability of external and internal conditions conducts to emergence of risks, threats and the dangers influencing efficiency of trade operations. Thirdly, there is an ambiguity and uncertainty of a choice of optimum methods of control over risks. It is connected with that there is no uniform approach to understanding of essence of this category caused by complexity and a multidimensionality of the phenomenon, its application for de assignment of different economic situations. In this regard, the importance gets the analysis of methodological and practical approaches of the risk management accepted for the solution of marketing tasks in the agrarian sphere of Belarus.

### **The main part**

Studying of references testifies that economists offer various approaches to risk essence justification, in each of which authors by results of the analysis of theoretic-methodological bases of this category and own approach developed in this regard to a

considered problem open its essence and practical mission. In our opinion, it is expedient to consider this category: statically – the phenomenon caused by adverse changes of internal and environment of the enterprise and (or) their combinations: dynamically – process of deployment of these phenomena in space and time.

Risk management represents purposeful search and the organization of work on decrease in its influence. Simultaneously it is an art of receiving and increase in the income (arrived) in an uncertain economic situation and includes a formulation of the purpose and tasks, collection of information about risks, measurement of their main characteristics, scales and ways of manifestation, development of alternatives of the risk decision, a choice and realization of most optimum of them (Figure 1).

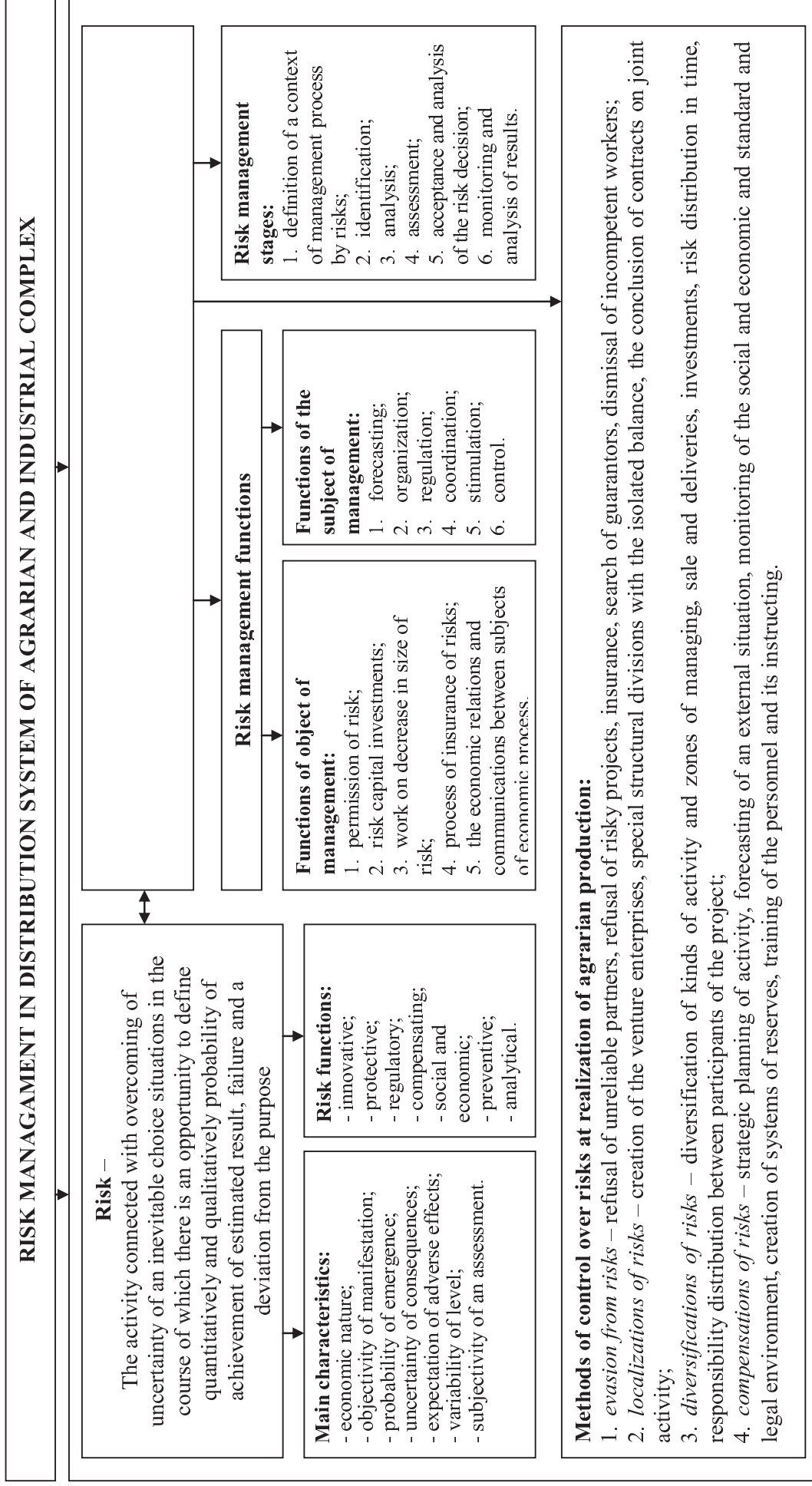
Researches show that risks in functioning of distribution system of agrarian and industrial complex are caused by external and internal conditions, features of the grocery markets, since agricultural production and finishing delivery of food to the end user. Thus the risks arising in agrarian sector, conduct to their emergence and strengthening at the enterprises of the food industry.

The main grocery markets for conditions of Belarus are the markets of grain, potatoes, sugar, vegetables, fruit and berries, vegetable oil, flax, meat and meat products, milk and milk products, eggs, fish and fish products. In a population food allowance, these products for 90% provide need for energy and for 85% – in the main feedstuffs. Set of risks in functioning of distribution system of each of groups includes as specific, caused by features of a product, and the general, characteristic for all or nearly all from them [5]. Basis of a sales market of agricultural raw materials and the food, except various types of production, a large number of producers makes. The modern distribution system of agricultural raw materials and the food of Belarus have multichannel character and a grocery orientation. In recent years, there were changes in structure of realization of production on merchandising channels that caused diversification of methods and ways of distribution.

*The market of grain* represents set of the exchange relations regulating economic communications and carrying out purchase and sale of grain and products of its processing. Producers of grain have commercial communications on supply of grain with customers on formation of the state funds of various levels, the procuring organizations, the wholesale resellers, the processing enterprises and can independently enter a foreign market. The most powerful sales channel of grain for the agricultural organizations is sale to the state. In 2005, grain was on sale only in three directions: for needs to the state (43.2 %), to employees of the agricultural organizations (6.9 %) and in the market (49.9 %). In recent years, the realization

structure significantly changed. At preservation of high specific weight of realization of grain on account of the state order (about 50 %) the role and a share of other channels of realization considerably increased: exchange trade, wholesale food markets, etc.

In 2012 in farms of all categories 9227 thousand tons of grain were collected, or nearly 587 thousand tons are more in comparison with 2011. It became result of harmonious work of the enterprises of public sector and allowed to provide completely animal husbandry with fodder grain (6.3 million tons), and also to implement the plan for the state order. Cases of non-compliance with technology, the careless relation from heads of the agricultural organizations were single.



**Figure 1.** Risk management mechanism in distribution system of AIC

**Note.** Drawing is made by authors on sources [1, 2, 3, 4].

However, according to the expected data of settlement balance of grain for 2012 its shortage made nearly 382 thousand tons. Due to the heavy long winter that has weakened crops of winter of grain and displaced terms of sowing of summer of grain is necessary to provide implementation of plans on collecting grain in 2013 at a rate of 10.4 million tons. Belarus has favorable soil climatic conditions for cultivation of potatoes and is one of leaders in its world production. The modern level of the branch development is characterized by prevalence in production of individual sector and country (farmer) farms gross gathering potatoes in which reach 90%. Security with this production exceeds requirements of domestic market (Table 1).

**Table 1.** Balance of the food of Belarus for 2010-2012, tons

Indicators	Year			2012 by 2011. %
	2010	2011	2012	
<b>Potatoes and products from potatoes</b>				
Demand - all	7961	7832	7219	92.2
including:				
domestic market	7822	7735	7022	90.8
export	139	97	197	203.1
The offer - all	7961	7832	6968.6	89.0
including:				
production	7831	7721	6911	89.5
import	130	111	57.6	51.9
<b>Sugar (white)</b>				
Demand - all	888.4	843.1	848.6	100.7
including:				
domestic market	396.8	449.9	397.4	88.3
export	491.6	393.2	451.2	114.7
The offer - all	816.1	985.7	862.8	87.5
including:				
production	816.0	985.5	862.6	87.5
import	0.1	0.2	0.2	-
<b>Vegetables</b>				
Demand - all	2552	2183	2074	95.0
including:				
domestic market	2476	2087	1951	93.5
export	76	96	123	128.1
The offer - all	2552	2183	1773	81.2
including:				
production	2335	1979	1581	80.0
import	217	204	192	94.1
<b>Fruits and berries</b>				
Demand - all	1128	654	1031	157.6
including:				
domestic market	1103	596	924	155.0
export	25	58	107	184.5
The offer - all	1128	654	1105	169.0

including: production	799	304	630	207.2
import	329	350	475	135.7
Vegetable oil				
Demand - all	284	268	378	141.0
including: domestic market	251	228	213	93.4
export	33	40	165	410.0
The offer - all	284	268	304	113.4
including: production	161	160	189	118.1
import	123	108	115	106.5
Meat and products from meat				
Demand - all	1059	1137	1681	147.8
including: domestic market	814	855	851	99.5
export	245	282	830	294.3
The offer - all	1059	1137	1250	109.9
including: production	971	1020	1093	107.2
import	88	117	157	134.2
Milk and dairy products				
Demand - all	6674	6538	6081	93.0
including: domestic market	3366	3233	2659	82.2
export	3308	3305	3422	103.5
The offer - all	6674	6538	6818	104.3
including: production	6625	6505	6767	104.0
import	49	33	51	154.5
Eggs and egg products				
Demand - all	3551	3770	3858	102.3
including: domestic market	3000	3155	3180	100.8
export	551	615	678	110.2
The offer - all	3551	3770	3871	102.6
including: production	3536	3752	3846	102.5
import	15	18	25	138.9
Fish and fish products				
Demand - all	163	151	181.4	120.1
including: domestic market	130	111	137	123.4
export	33	40	44.4	111.0
The offer - all	163	151	167.6	110.9
including: production	23	26	25.6	98.5
import	140	125	142	113.6

**Note.** Table compiled by authors based on source [6].

However, potatoes reduction in production is noted: for the first time over the last 10 years, gross collecting tubers made less than 7 million tons (6911 thousand tons in farms of all categories). Production consumption per capita in 2012 was below medical norm (162 kg against 170 kg).

Lack of appropriate system of domestic seed farming and system of storage of potatoes in the agricultural organizations leads to that only insignificant part of annually reaped crop is suitable for the food purposes. Its main part goes on industrial processing and forage to cattle.

Due to insufficient extent of development of domestic system of beet seed farming, the agricultural organizations get seeds at the European suppliers, which quality is not always the high. Practically terms of fertilizers application are everywhere broken – for introduction in their fall many agricultural enterprises have no necessary money, and carrying out such works in the spring possibly only in the top layer of earth. Due to the insufficient general capacity of beet sugar plants (2012 – more than 30 thousand tons) producers begin cleaning of not ripened root crops with insufficient sugar content, and terms of processing of beet are tightened (at necessary 110 days). As a result at gross gathering beet in 5 million tons of root crops in optimum terms only 3.5 million tons are processed.

Belarus lags behind in a sugar level of production many countries of Europe. So, in Poland on 1 hectare of crops receive 8-10 t of sugar, France – 12-14, Belarus – 6 t. World overproduction of sugar makes 3-4 million tons. Certain CIS countries develop the beet breeding. Ukraine has protected from the Belarusian sugar with high duties. In such operating conditions, it is necessary to work carefully with constant sales markets abroad. In 2013 restoration of export of vegetables in Belarus happens more slowly in comparison with potatoes export. As of 2012, internal needs of the country for vegetables, except imported garlic, are completely satisfied.

Realization of vegetables in domestic market is characterized by glut by fresh production of own production during the summer-autumn period and its import to a winter and spring season. The last is caused by damage and deterioration put on production storage in connection with violation of technology of storage. Besides, existence of excess stocks of raw materials conducts to growth of expenses respectively, increase of the realization price.

Risk of overproduction of vegetables which periodically arises in some regions of the country (in 2012 it captured Stolinsky, Mostovsky and other areas), it can be solved by their export to the partner countries of the Customs union – Russia and Kazakhstan and, therefore, to become a source of additional currency revenue.

One of the greatest threats for functioning of the domestic market of fruits and berries regarding delivery of fresh production a condition of fruit and berry plantings, especially in the agricultural organizations. By results of the carried-out inventory of gardens in them, 59% of fruit-trees are referred on quality to low and very low site class. Gardens on age structure passed the period of full fructification (87% of apple-trees and 67% of pears have age more than 20 years) in the majority of the organizations.

Delay of works on of fruit plantings updating, removal of old trees and bushes, a laying of new gardens will lead to reduction of volumes of gathering domestic fruit and berries, deterioration of a reaped crop, and also a supply and demand imbalance in domestic market, to interruptions in deliveries and production sale during the winter and spring period, to recession in processing of fruit and berry raw materials. As a result, the need for fresh fruit import will increase. That will negatively affect functioning of the grocery market; security of the population in products of this group at the expense of internal production will worsen.

Besides, for uninterrupted supply of the market by fresh fruits it is necessary to consider instability of crops by years. It is caused by a genetic favor of plantings to fructification and depends on weather-climatic conditions within a year. In this regard, development of system of a laying of fruits, first of all apples, on long storage is actual.

Researches show that the vegetable oil market in Belarus is formed at the expense of production of oil of the import seeds that have been grown up in the republic, import of oil in the natural form for processing or consumption, as a part of foodstuff, oil seeds for the purpose of their processing abroad and the subsequent import of oil. These directions do not exclude each other, and develop at the same time with various extent of influence on the result. Belarus cannot refuse completely import sunflower, soy, peanut and some other types of vegetable oil. Now our country has opportunities for the account of colza oil seeds considerably to satisfy internal needs for vegetable oil. Eighty percent of all vegetable oil consumed by the population of the country is sunflower oil (generally imported).

Tendencies of cultivation and processing of flax development in recent years show that the main reasons for unprofitability of this branch are insufficient security of production with the main and reverse resources, non-compliance with technological standards. Therefore, throughout a row of years productivity of flax did not exceed 7.8 c/hectare on a flax fiber and 3.4 c/hectare on seeds. The sales proceeds, at substantial increase of purchase prices on flax fiber and flax seeds, cover only costs of production.

In Belarus the market of meat and meat sufficiently balanced supply and demand. However, due to the periodic occurrence in the territory of the importing meat there is a risk



entering the Republic of contaminated products and defeat diseases of domestic animals. For example, in the Russian Federation currently recorded 37 active outbreaks of African swine fever (ASF) in 10 regions of the country. There is a possibility of animal and from a source that broke out in the country. So, in April 2013 in the agricultural enterprise "East" there was a mass mortality for diagnosed pigs with reproductive and respiratory syndrome.

Image of the Belarusian producers has a great impact on export growth of milk products abroad, among other things. Ban the import countries on import of our production and illumination of the similar conflicts in mass media cause a reputation loss to representatives of the Belarusian dairy branch. The reasons of the similar conflicts have most often political or legal character. In this connection, it is necessary to react quickly to possibility of their emergence in the long term.

Four milk-processing plants of Belarus have permission to sale a part of the production in the European market. However, expectation of overproduction of milk in Europe in 2013 can negatively affect volumes of export of the Belarusian dairy production and plans on expansion of geography of foreign trade.

At the end of 2012 restoration of the world prices on dairy began. Now production from New Zealand and EU poses smaller threat for the Belarusian positions on the main sales market. Nevertheless, during 2013, influence of the WTO will amplify and the competition will become aggravated. Due to the Russia's accession to the World Trade Organization turning of cheese branch in the country that is good possibility of increase of export for Belarusian cheese producers is expected.

Considerable problems of export of milk and dairy production are connected with lack of full-fledged system of laboratory control. The technical regulations "Milk and dairy production aren't entered Safety". Because of controversial questions, coordination at the level of EEK of technical regulations of the Customs union is tightened.

In Republic of Belarus, production of eggs is focused on export. The European market for the Belarusian producers so far is closed therefore as the main importers of this type of production the countries of the Customs union – Russia and Kazakhstan that overproduce eggs act. Besides Russia the accelerated rates develops egg poultry farming.

Production of eggs for the Belarusian poultry farms is generally unprofitable. That is connected, on the one hand, by price regulation and establishment of limit selling prices by the state, with another – increase of cost of raw materials and forages. Selling prices of egg chicken did not change from December 2011 to February 2013. For this period of the price of separate types of raw materials and forages grew several times. Therefore, in 2012 in relation

to 2011 the cost of grain grew by 1.8-2.2 times, soy meal – 1.9, sunflower meal – 2.8 times. For 2012 of a quotation of development and storage of compound feeds increased for 40%, the cost of fuel increased by 16%, credit resources reached 45-55% per annum. During the summer period the prices of exported eggs considerably fall that increases losses of the Belarusian producers.

In view of lack of an outlet to the sea Belarus is compelled to import sea fish. However, gradual growth in a share of consumption of fish and fish products of domestic pond fish from 7-11% to 16% is observed.

The board of the European economic commission lifted on April 25, 2013 limits on import to Belarus fishes, seafood and products of their processing. Corresponding changes are made to the Uniform inventory to which a ban or restrictions on import/export by member countries of the Customs union within the Euroasian economic community in trade with the third countries is applied.

Difficulties in increase of a saturation of the market by domestic fish is that insufficient number of outlets in Belarus have the special equipment that is reflection of disinterest of the organizations in work with this product.

The second problem – a ratio of the prices of a domestic carp, a silver carp and other fish, vietnamese a tilapia and a pangasius, and also sea hake and a pollock. Lack of measures for reduction of price disparity on domestic and imported fish only will strengthen risk of instability of the market both for the Belarusian producers, and for consumers concerning level of annual consumption of these products. Also for increase in consumption, it is necessary to expand with Belarusians of pond fish of domestic producers the range not only in fresh, but also in a smoked, dried or dried look.

### **Conclusions**

As a whole for distribution system of agricultural production of Belarus conservatism in a choice of channels of merchandising of agricultural raw materials is characteristic, production is realized according to the schemes, operating many decades. It is in many respects defined by specifics of agricultural production and has the certain risks influencing competitiveness of products and a financial position of subjects of managing. Thus, lack of the mechanism of risk management in distribution system of an agrarian complex conducts to emergence of new dangers and threats, and additional expenses on a covering of consequences of risk situations, stimulates growth of irrational expenses and reduces profitability of producers.

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