

## INSURANCE AS AN EFFECTIVE MECHANISM TO MINIMIZE RISKS AT THE ENTERPRISE

Julia J. Golubyatnikova<sup>1\*</sup>, Vasily G. Zakshevskii<sup>2</sup>, Victor M. Zakharov<sup>3</sup>, Marina V. Vladyka<sup>4</sup>, Vladimir M. Gerashenko<sup>5</sup>

<sup>1,3,4,5</sup>Belgorod State University 85 Pobedy St. Belgorod 308015 Russia, <sup>2</sup>Scientific Research Institute of Economics and Organization of the Agro-Industrial Complex of the Central Black Earth Region of the Russian Federation 26a Serafimovich St. Voronezh 394042 Russia.  
Email: \*julia.golubjatnikova@yandex.ru

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### Abstract

**Purpose:** The article analyzes the state of domestic insurance in agricultural enterprises, which is a complex type of property insurance, subspecies of which are insurance of crops, animals, commodity aquaculture, real estate and income of agricultural producers.

**Methodology:** Generally accepted methods and techniques of economic research were used in the study process: monographic (in the process of studying risk management theoretical foundations), statistical and economic (when studying trends of AIC enterprise development and functioning), design-constructive (when justifying and calculating indicators of enterprise functioning), abstract and logical (when generalizing conceptual and methodological approaches in identifying, analyzing and assessing risks), comparative analysis (synthesis of native and foreign risk management experience), various risk assessment methodologies.

**Result:** The economic risk passport is understood as a set of information about the risk area, risk criteria, as well as for instructions on the application of the necessary methods to manage or minimize the risk. The article presented a liquidity loss risk passport with one of the measures to minimize it - self-insurance.

**Applications:** This research can be used for universities, teachers, and students.

**Novelty/Originality:** In this research, the model of Insurance as an Effective Mechanism to Minimize Risks at the Enterprise is presented in a comprehensive and complete manner.

**Keywords:** Risk, Risk Minimization Methods, Insurance, Insurance Mechanism, Risk Passport, Liquidity Loss Risk.

### INTRODUCTION

Achieving the efficiency of agricultural enterprise management in modern conditions is impossible without the use of special methods of analysis and risk management. In Russia, the number and variety of risk factors that weaken the conditions of stable operation of enterprises in the agricultural sector are increasing in its market period of socio-economic development; so the risk management function is becoming increasingly important.

In a real business situation, under the conditions of various risk factors, various methods of reducing the final risk level may be used that affect some aspects of the activities of enterprises. The most common, widely used and effective methods of preventing and reducing risk are methods of evasion, transfer, localization, dissipation (distribution) and compensation ([Stupakov, Tokarenko, 2007](#); [Balabanov, 1996](#); [Shakhov, 1996](#)). Each method contains a variety of business risk management tools.

In this article, we consider, in more detail, one of the risk minimization methods - insurance, the essence of which is to transfer risk (responsibility for the results of negative consequences) for a certain reward to someone else, that is, to distribute damage between the parties to the insurance.

### METHODS

Generally accepted methods and techniques of economic research were used in the study process: monographic (in the process of studying risk management theoretical foundations), statistical and economic (when studying trends of AIC enterprise development and functioning), design-constructive (when justifying and calculating indicators of enterprise functioning), abstract and logical (when generalizing conceptual and methodological approaches in identifying, analyzing and assessing risks), comparative analysis (synthesis of native and foreign risk management experience), various risk assessment methodologies.

### RESULTS AND ITS DISCUSSION

Insurance is an agreement according to which the insurer (for example, some kind of insurance company) for a certain conditional remuneration (insurance premium) undertakes to pay damages or part thereof (insurance amount) to the insured (for example, the facility owner) that occurred as a result of the hazards and/or accidents stipulated in the insurance contract (insured event) to which the insured or the insured party is subject to ([Yakovleva and Shevchenko, 2003](#)).

There are three branches of insurance: personal, property and liability insurance ([Merbeck, et al. 2004](#)). In the risk insurance system in Russia, property, and liability insurance have become prevalent.

In agriculture, insurance is a complex type of property insurance, subspecies of which are insurance of crops, animals, commodity aquaculture, real estate and income of agricultural producers.

Agricultural insurance performs a number of important functions that make up its categorical essence. First, it acts as a process of initial risk allocation (risk function). As part of the risk function, there is a redistribution of the monetary form of value among insurance participants in connection with the consequences of random insurance events ([Musshoff and Hirschauer, 2010](#)). The precautionary function is aimed at financing measures to reduce the insured risk at the expense of part of the funds of the insurance fund.

In addition to the risk and preventive functions that are traditionally indicated in the literature, we can distinguish the investment function of agricultural insurance. In developed countries, insurance is widely used to attract private funds in the real economy ([Star, 2006](#)). At the same time, from the point of view of long-term investments, insurance has a number of positive aspects in comparison with other sources of investment. First, insurance premiums refer to the so-called "long funds". After the terms of the insurance contract, such funds are not subject to return to the insured and thus are completely transferred to the insurance company. Secondly, long-term insurance makes it possible to invest the accumulated funds for a long period in the slowly paying off projects. Third, insurance companies not only have opportunities but also create incentives to invest in the real economy ([Tepman, 2009](#)).

At its core, insurance is the creation of money funds intended to protect the property interests of the population, private and economic life from unexpected misadventures, which are accidental in nature, accompanied by damages.

The main organizational insurance funds: state (social insurance funds); self-insurance funds; funds of insurance companies.

Agricultural insurance with state support can only be carried out by insurance organizations that are part of the Single All-Russian Association of Insurers (hereinafter - the NSA) ([Federal Law No. 260-FZ](#)).

Currently, insurance in domestic agriculture is carried out in accordance with the Federal Law No. 260-FZ dated July 25, 2011 "On State Support in the Field of Agricultural Insurance and on Amendments to the Federal Law "On the Development of Agriculture".

In accordance with the Law, the following risks are subject to agricultural insurance with state support:

1. Loss (death) of the crop (crops, leguminous, oilseeds, industrial, forage, melons and gourds, potatoes, vegetables, vineyards, fruit, berries, nut plantations, hop plantations, tea), loss (death) of perennial plantings (vineyards, fruit, berry, nut plantations, hop plantations, tea) as a result of the following events:
  - The impact of natural phenomena hazardous for the production of agricultural products (atmospheric, soil drought, dry winds, frost, freezing, damping out, hail, dust storm, ice crust, fresh, flood, flooding, high water, landslide, over-wetting, strong wind, hurricane wind, earthquake, avalanche, mudflow, natural fire);
  - Penetration and (or) distribution of pests, if such events are epiphytotic in nature
  - Breach of electricity, heat, water supply as a result of natural disasters in the insurance of crops grown in greenhouses or on reclaimed land.
2. Loss (death) of farm animals (cattle (buffalo, oxen, cows, yaks); small cattle (goats, sheep); pigs; horses, equines, mules, donkeys; camels; deer (morals, spotted deer, reindeer); rabbits, fur-bearing animals, bird of egg breeds and bird of meat breeds (geese, turkeys, chickens, quails, ducks, guinea fowl), broilers, family of bees) as a result of:
  - Infectious animal diseases included in the list approved by the Ministry of Agriculture of Russia, mass poisonings;
  - Natural disasters (lightning, earthquake, dust storm, hurricane wind, heavy snowstorm, snowstorm, flood, landslide, avalanche, mudflow, landslide);
  - Breach of electricity, heat, water supply as a result of natural disasters, if the conditions of keeping farm animals stipulated mandatory use of electric, thermal energy, water;
  - Fire.
3. Loss (death) of the following types of commercial aquaculture facilities (fish; invertebrates; algae) as a result of:
  - Infectious diseases of commercial aquaculture facilities (commercial fish farming) included in the list approved by the Ministry of Agriculture of Russia, mass poisonings;
  - Impact of natural phenomena (storm, hurricane wind, flood, typhoon, tsunami, ice drift, anomalous decrease in water level and (or) anomalous (sharp) changes in water temperature used in the implementation of commercial aquaculture (commercial fish farming) water bodies and (or) their parts);

- Breach of electricity, heat, water supply as a result of natural disasters, if the conditions of maintenance of commercial aquaculture facilities (commercial fish farming) stipulate mandatory use of electrical, thermal energy, water supply;
- Fire.

Since January 1, 2016, a unified system of state support for agricultural insurance has been created in the Russian Federation, supported by a common guarantee system for protecting the rights of insured farmers in case of insurer's bankruptcy. Insurance is carried out on the basis of uniform standard rules and methods. Under conditions of state support, an agricultural enterprise can insure property interests associated with the loss of at least 20% of the crop due to natural phenomena, the loss of perennial plantations (orchards, berry fields, plantations, etc.), as well as the loss of livestock of agricultural animals ([Federal Law No. 424-FZ](#)).

Since 2017, state support for agricultural insurance is carried out within the framework of the "single subsidy" mechanism, which allows regional AIC bodies to independently determine whether to subsidize the insurance of agricultural production risks or set farmers to solve this problem exclusively at their own expense ([Federal Law No. 260-FZ](#)).

According to the NSA President Kornei Bizhdov, "The results of 2017 clearly indicate that the refusal to allocate target funds for agricultural insurance was erroneous, as now there is virtually no regional responsibility mechanism for the farmers in the absence of insurance protection in case of losses from natural emergencies, there are no incentives for regional AIC bodies to encourage agricultural insurance" ([Kudryavtsev, 2010](#)).

Considering the processes occurring in the domestic agricultural insurance, it should be noted its constant transformation. But an entrepreneur has to make a decision every second in his business; therefore we suggest applying a self-insurance fund for sustainable development.

Self-insurance funds are created at enterprises and households on a voluntary basis. Self-insurance is based on the reservation by the entrepreneur of a part of financial resources that allows him overcoming the negative consequences of those financial transactions for which these risks are not associated with the actions of contracts.

The main forms of self-insurance:

The formation of the reserve fund is carried out in accordance with the requirements of the legislation and the charter of the enterprise. Not less than 5% of the amount of profit received by an enterprise in the reporting period is directed to this fund.

Formation of target reserve funds, for example, a price risk insurance fund (for a period of temporary deterioration in the market conditions), a fund for the settlement of uncollectible receivables for credit operations, etc. The list of such funds, their sources, and amounts of contributions to them are determined by the charter and other internal standards of the enterprise.

Formation of reserve amounts of financial resources in the system of budgets brought by different centers of responsibility. Such reserves are usually provided in all types of capital budgets and in a number of flexible current budgets.

Formation of a system of insurance stocks of material and financial resources for individual elements of the current assets of an enterprise: monetary assets, raw materials, materials, finished products. The size of insurance stocks is established in the process of rationing current assets.

The unallocated balance of profits received in the reporting period can be considered as a reserve of financial resources allocated to eliminate the negative effects of certain risk types ([Stupakov, Tokarenko, 2007](#)).

An example of applying the formation of reserve amounts of financial resources can be seen in the liquidity loss risk passport (Figure 1).

The liquidity loss risk is the inability of an enterprise to settle its short-term liabilities.

In the context of economic activity, the management of an agrarian enterprise has a key role in solving problems of managing the economic risk, since it approves the programs of measures to reduce risk, makes decisions about the start of their implementation in critical situations. To optimize these measures, the manager will be helped by the introduction of the risk management system software using the information technologies, where the key role is assigned to such a meaningful element as a risk passport.

In his works, A. A. Kudryavtsev gives a similarly comprehensive view of the totality of risks, which he calls the risk profile, and his documentary expression - the risk passport ([Kudryavtsev, 2010](#)).

In our view, the economic risk passport (hereinafter - the ERP) is understood as a set of information about the risk area, risk criteria, as well as for instructions on the application of the necessary methods to manage or minimize the risk ([Golubyatnikova, 2019](#)).

## ECONOMIC RISK PASSPORT (ERP) No. 35

ER type: financial ER subspecies: liquidity loss risk	ER duration: from 01/01/17 to 31/12/17 <small>indicate the ER term (with the exception of permanent ER)</small>	
<b>Subdivision in the activity of which the economic risks can be identified</b>		
Subdivision name	Activity code	
Accounting service	03	
<b>Functional operations of enterprises in which the ER is used</b>		
Transaction name	CODE	
financial management	01	
<b>Economic risk feature</b>		
Identification of risk by liquidity coefficients: Current liquidity coefficient, critical assessment coefficient, absolute liquidity coefficient		
There are no restrictions in liquidity upon the occurrence of debt obligations	Normal liquidity	State of liquidity imbalance
Risk free area	Risk tolerance area	Critical risk area
<b>Description of economic risk</b>		
Liquidity risk is the inability of an enterprise to pay its short-term liabilities. Direct risk assessment begins with the assessment of funds by assets and liabilities, then their comparison for the last year of operation of the studied enterprise or at the reporting date. In the analysis of financial solvency, several liquidity coefficients are used, which are instruments for assessing the liquidity loss risk of an enterprise, calculated on the basis of the enterprise's statements to determine the nominal ability of an enterprise to repay its current debt from the existing current assets.		
The assessment methodology of the liquidity loss risk includes the following blocks: Preparation of baseline data for balance sheet items; Evaluation of assets and liabilities using liquidity coefficients; Determination of liquidity dynamics		
<b>Risk management methods</b>		
Creation of reserve systems	405	
Attraction of external resources	407	
<b>Contact information:</b>		
Responsible structural units of the enterprise for monitoring the ER performance - financial service		

**Figure 1:** Economic risk passport - liquidity loss risk

One of the methods to manage the liquidity loss risk is the creation of reservation systems representing the process of reserving funds for unexpected expenses. This method of reducing the negative consequences of the occurrence of risk events consists of the fact that the entrepreneur creates separate funds for indemnification of losses at the expense of a part of his own current assets.

In essence, the reservation of funds represents a decentralized form of creating reserve (insurance) funds directly in the economic entity. Therefore, the reservation of funds to cover losses is often referred to as self-insurance in the literature.

Depending on the purpose, reserve funds can be created in kind or in cash.

For example, such agricultural enterprises as Agrotech-Garant LLC Shcherbakovskoe, Lutsenkovo LLC, Znamya Truda Collective Farm, Sovetskaya Rossiya Collective Farm, Kalitva SEC, Mikhailovskoye LLC create primarily natural reserve funds: seed, fodder, etc. for preventing and compensating for possible losses caused by unfavorable climatic and natural conditions.

Reserve funds are created for the case of occurrence of unforeseen expenses associated with changes in tariffs and prices, payment of various risks, etc.; need to cover accounts payable; cover the liquidation costs of the business entity, etc.

In agriculture, centralized seed and feed insurance funds are required in the event of force majeure risks (for example, severe droughts).

It is advisable to create seed funds through the production of seeds in seed farms.

Reserve funds of feed could be created as intraeconomic. But a certain role could be played by centralized funds of concentrated feed at affordable prices during the years of force majeure events (droughts, freezing, etc.) of large livestock complexes (pig-breeding, fattening cattle, poultry farms), as well as feed mills.

In modern conditions, it is extremely difficult to create the necessary financial reserve funds. This is due to many factors: the breakdown of the financial system, the insolvency of rural entrepreneurs, etc.

## CONCLUSION

Insurance is used as an effective method to minimize risks and is one of the decisive conditions for strengthening the reliability and sustainability of the production and economic activities of enterprises, which makes them more attractive from the point of view of investment.

Using self-insurance as a risk reduction technique, it should be borne in mind that insurance reserves in all their forms allow quickly recovering the financial losses incurred by the entrepreneur only for certain types of risk.

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