

Agricultural Insurance as a Tool of Marketing Risk Management in Agriculture



Nabi D. Avarskii, Aleksandr Iv. Bogachev, Anton V. Alpatov, Aslan A. Khashir,
Vadim R. Gumerov, Bella O. Khashir

Abstract: *The aim of the study is to assess the current state of agricultural insurance with state support as one of the components of the development mechanism of the agricultural sector and determine the vectors of its development. It is concluded that such insurance has not yet become a financial tool to minimize economic risks for most farmers. According to the results of the study, the main sources, causes and risk factors for reducing the stability of the agricultural insurance system were identified; the results of changes in the relevant legislation on agricultural insurance are evaluated; a set of measures has been formulated to transform the current agricultural risk insurance system aimed at developing and improving the efficiency of this sector of the insurance market of the Russian Federation.*

Keywords: *agricultural insurance, agriculture, risks, government support, conflict of interest, system stability.*

I. INTRODUCTION

In Russia, agriculture remains one of the few sectors of the economy that demonstrate growth and significant results of import substitution. However, it should be noted that agricultural production is characterized by a high level of exposure to various risks. As a result, the relevance of developing a risk management system in the agricultural sector is increasing in order to create stable conditions for the

functioning of production. World practice indicates that insurance is one of the most effective risk management tools.

The level of insurance risk in the agricultural sector is quite high due to the instability of agricultural production, its high dependence on natural and climatic conditions and the characteristics of the development and vital activity of plants and animals. As a result, insurance rates under agricultural risk insurance contracts are characterized by high values, which makes such insurance quite burdensome for agricultural producers, reducing its availability. The way out of this situation is the state support system for agricultural insurance, which is actively used in many countries.

II. LITERATURE REVIEW

The problem under study is at the junction of various scientific areas, covering various aspects of state support for agricultural risk insurance. For each of them there is significant theoretical and practical material reflecting the general and particular results of the approaches used by the authors.

A holistic view of modern problems of agricultural insurance and about their very essence and nature, formed the study of such Russian scientists as Abdrakhimov E.V., Voblyi K.G., Gladkov N.I., Konshin F.V., Motylev L.A., Nikitenkov L.K., Pototskiy V.M. et al. [1-6]. The problems of the functioning of the modern agricultural insurance system with state support, its prospects, as well as various measures to improve it, were investigated by Bondarenko L.N., Borkunov N.A., Vologdin L.N., Volovik Yu.S., Zhichkin K.A., Linin Yu.I., Mindrin A.S., Nikitina A.V., Nosov V.V., Parakhin Yu.N., Spletukhov V.A., Tsakaev A.Kh., Shibalkin A. E., Scherbakov V.V. et al. [7-20].

Serious studies have been carried out in foreign countries by Anton J., Barry P., Brady D., Gardner B., Glauber J., Goodwin B., Diaz-Caneja M., Koble K., Skiz D., Smith V., Hardaker D., Harrington S., Etlinger K. Richard L. Kohls, Joseph N. Uhl et al. [21-34].

In many respects, the development of insurance agribusiness is constrained by the insufficient elaboration of theoretical and methodological issues, and the poor substantiation of its priority areas [35]. Noting that the problems of the formation and development of the insurance market in the agricultural sector have been thoroughly theoretically and practically studied, it should be recognized that under the current conditions, many issues of organizing state support for agricultural insurance, related to the specifics of the development of insurance market institutions, need further study.

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* Correspondence Author

Aleksandr Iv. Bogachev*, Parakhin Oryol State Agrarian University, Oryol, Russia.

Nabi D. Avarskii, Federal State Budgetary Scientific Institution "Federal Research Center of Agrarian Economy and Social Development of Rural Areas - All-Russian Research Institute of Agricultural Economics" under Ministry of Science and Higher Education of Russian Federation, Moscow, Russia.

Anton V. Alpatov, Federal State Budgetary Scientific Institution "Federal Research Center of Agrarian Economy and Social Development of Rural Areas - All-Russian Research Institute of Agricultural Economics" under Ministry of Science and Higher Education of Russian Federation, Moscow, Russia.

Aslan A.Khashir, Federal State Budgetary Scientific Institution "Federal Research Center of Agrarian Economy and Social Development of Rural Areas - All-Russian Research Institute of Agricultural Economics" under Ministry of Science and Higher Education of Russian Federation, Moscow, Russia.

Vadim R. Gumerov, Federal State Budgetary Scientific Institution "Federal Research Center of Agrarian Economy and Social Development of Rural Areas - All-Russian Research Institute of Agricultural Economics" under Ministry of Science and Higher Education of Russian Federation, Moscow, Russia.

Bella O. Khashir, Kuban State Technological University, Krasnodar, Russia.

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In this regard, of interest is a comprehensive study of the functioning of the domestic system of subsidized agricultural insurance as one of the important strategic tasks of modernizing the agricultural economy.

III. PROPOSED METHODOLOGY

The object of the study is the agriculture of Russia, as well as the mechanism of state support for farmers in the insurance process. The subject of the study is a system of economic relations between agricultural enterprises, insurers and the state associated with the organization of insurance coverage for agricultural product.

The basis of the scientific research was a retrospective analysis of the development of the agricultural insurance market in Russia. The importance of the study is increasing due to the fact that acting as a tool to stabilize the income of agricultural producers, agricultural insurance contributes to solving the problem of food security, allowing, based on effective management of production risks, to increase food supplies and stabilize food prices.

The following research methods were used in the work: monographic, economic-statistical, computational-constructive, expert, system analysis, etc. The empirical base for the study was the data of the Ministry of Agriculture of the Russian Federation, the Federal Agency for State Support of the AIC, the Bank of Russia, the National Union of Agricultural Insurers, today insurance and Aggroinsurance portals, as well as materials published in scientific literature and periodicals.

The research algorithm provides the following procedure. At the first stage, the practice of developing agricultural insurance in Russia was studied in order to identify its positive and negative trends. The next stage assesses the current state of agricultural insurance with state support in order to identify the reasons for its low efficiency. Subsequently, on the basis of a comprehensive analysis of the identified causes and factors hindering the development of agricultural insurance, directions were identified for improving the domestic agricultural insurance system to increase the interest of farmers.

IV. RESULT ANALYSIS

The importance of agricultural insurance is quite difficult to overestimate. It provides reliable protection to agricultural producers, allows them to minimize damage caused by adverse natural and man-made events, save the business by compensating for losses, gain access to credit resources, and ensure stable development of production.

Nevertheless, in spite of all the significance, agricultural insurance does not have widespread application in the territory of the Russian Federation. At the end of 2016, the share of this insurance industry in the overall structure of the insurance market of the Russian Federation amounted to 0.83%, in 2017 - 0.31%, and in 2018 decreased to 0.25%.

In general, the domestic agricultural sector of the economy is provided with insurance coverage of only 10-15%. For insurance companies, the agricultural sector has a low priority. Most of them are not involved in special promotion of agricultural insurance, considering it as an additional service for existing customers. Today, only 27 companies out

of 190 insurers of the Russian Federation are engaged in agricultural insurance.

State support for agricultural insurance is widely used throughout the world. Its use is due to the need to maintain the profitability of agriculture, which in turn increases its investment attractiveness and prevents the outflow of resources from the industry in the long term, and also helps to weaken social, political and interethnic tension in society. In addition, agricultural insurance alone, without state support, is not able to provide adequate protection for agricultural producers [36]. The largest agricultural insurance markets in the world are the USA, China, India, Canada, Spain, Turkey, France and Italy [37]. The mechanism for the implementation of these programs is different, each country has its own system, where the role and functions of the state are determined by the tasks set, the degree of risk of agricultural production, the extent of state intervention in the economy, the effectiveness of state institutions, etc [17].

The agricultural insurance system for the future crop in Russia appeared in 1993 in connection with the enactment of the basic insurance law «On the organization of insurance business in the Russian Federation» (agricultural insurance - article 32.9 of the law). The first crop insurance contracts began to appear in 2002–2003. Agricultural insurance was envisaged as one of the strategic directions of state support in the law No. 264 of 29.12.2006 «On the development of agriculture». This type of insurance became widespread with the adoption of government decision No. 254 of 28.04.2007, providing for compensation to peasants for 50% of the cost of paying insurance premiums from federal and regional budgets.

A certain incentive to revise the mechanism of state support for agricultural risk insurance was the large-scale drought of 2010, as a result of which direct damage to farmers exceeded 40 billion rubles. In the second half of 2010, on the initiative of the Government and the President of the Russian Federation, the development of a specialized law on subsidized agricultural insurance began.

On 25.07.2011 federal law No. 260 «On state support in the field of agricultural insurance and on amendments to the federal law «On the development of agriculture»» was adopted, which came into force in 2012 (in terms of insurance of agricultural animals since 2013). According to it, the state subsidizes half the value of the agricultural risk insurance policy. Moreover, in order to receive a subsidy, the terms of the contract must meet the requirements of the law for a number of conditions: the size of the deductible, a set of risks, terms of payment, etc [38].

During 2014-2015 preparations were underway for the transition to centralization of the agricultural insurance system, the creation of which was provided for by federal law No. 424 of 12.22.2014. During these years, a number of amendments were made to Law No. 260-Ф3 in terms of expanding the list of risks and liability of insurers.

Since 2016, a single all-Russian association, the National union of agricultural insurers, has been operating on the agricultural insurance market with state support.

Insurance companies that have not joined the National union of agricultural insurers are not entitled to conclude agricultural insurance contracts with state support. Establishment of standard insurance rules, incl. in terms of loss settlement procedures, it has made the system more transparent.

During 2015-2016 The Bank of Russia has taken a series of actions to increase the financial stability of insurance market participants. As a result, a number of agricultural insurers lost their licenses due to their classification as insolvent insurance companies. The number of insurers in the market of subsidized crop insurance and perennial crops decreased by 2 times (43 and 21 insurers in 2015 and 2016), and by insurance of farm animals - by 1,7 times (22 and 13, respectively).

The best development of the agricultural risk insurance market in 2015 and 2016. demonstrated the largest agricultural regions of the chernozem zone, where insurance was considered as an important element of protection for farmers. In these regions, coverage rates are significantly higher than the national average [39].

In addition to the beginning of the functioning of the centralized agricultural insurance system, 2016 is indicative also for the reason that it was during this period that the basic principles of state support for agriculture were significantly

changed. 54 directions of state support for agriculture, which were previously financed separately, were consolidated in the framework of a single subsidy, including and state support for agricultural insurance. The introduction of a single subsidy, according to many experts and representatives of the insurance business, is called as the main reason for the crisis in the agricultural insurance sector. The regional authorities of the agro-industrial complex received the authority to independently distribute the funds allocated from the federal budget to state support. Practice 2017 and early 2018 showed that subsidies were directed mainly to the performance of production tasks. Agricultural insurance began to be ignored in the regions, and in some of them state support for agricultural risks insurance was refused altogether. In 2017, crop insurance contracts under subsidized conditions were concluded in 36 constituent entities of the Russian Federation, and livestock in 49 subjects (40 and 47 regions, respectively, in 2016) (Table 1). So, the regional agro-industrial complex of the Krasnodar Territory and the Belgorod Region in 2017 generally refused state support for crop insurance. The Republic of Bashkortostan showed a decrease of 93% in the number of concluded agreements, the Stavropol Territory and the Republic of Tatarstan - by 83%, Voronezh Region - by 80% [40].

Table 1. Parameters of the distribution of subsidized agricultural insurance in 2012-2018

Indicator	Years						
	2012	2013	2014	2015	2016	2017	2018
Insurance Coverage: - the area of insured crops, million hectares	12,9	11,7	12,9	8,3	4,1	1,3	1,2
- livestock of insured animals, thous, heads	-	1729	4303	4591	4305	4489	4794
Insurance coverage,%: - sown area	18,5	16,3	17,7	10,9	5,0	1,7	1,5
- agricultural animals	-	7,0	16,6	17,2	14,6	16,7	16,7
Number of subjects of the Russian Federation participating in insurance:							
- crops	60	60	62	56	40	36	26
- agricultural animals	-	38	57	51	47	49	42
Number of farms that have concluded insurance contracts:							
- crops	5145	4663	5827	2878	1080	295	367
- agricultural animals	-	371	526	349	310	243	328
Number of insurance contracts:							
- crops	7123	6741	6990	3619	1432	474	427
- agricultural animals	292	589	340	359	334	387	337
Insurers who have concluded insurance contracts with state support	36	42	44	43	21	14	12

* compiled according to the National union of agricultural insurers [41-45]

Negative trends in the development of the agricultural insurance market in Russia in 2017, along with the introduction of a consolidated subsidy, complicated the considerable delay in preparing the regulatory framework for agricultural insurance. As a result, the growth of the agricultural insurance market demonstrated a year earlier (+ 25% in 2016 compared to 2015) ceased. There has been a significant decrease in the level of insurance distribution among agricultural producers: in 2017, it covered only 1.7% (1,3 million hectares) of the sown area and less than 17% of agricultural animals (4489 thousand standard heads). For comparison, in 2016 these indicators had values at the level

of 5% (4,1 million hectares) and 14,6% (4305 thousand conventional heads). At the same time, there is a significant differentiation of insurance coverage with state support in the context of individual cultures and groups of animals. The increase in the share of the insured sown area in 2016-2017 marked only in cereals (+ 3,6%) and technical (+ 5,4%) crops, vegetables (+ 0,1%), and in the part of insured animals - only in poultry (+ 2,6%) and cattle (+ 5,7%) (table. 2).

For 2016-2017 the volume of insurance operations decreased significantly.

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The number of concluded insurance contracts for crops decreased by 3 times. The situation in agricultural insurance was the opposite - the indicator grew by 16% (+53 contracts). At the same time, the number of farms that concluded the contract, respectively, decreased by 3,7 and 1,3 times. The

reasons for the decline in demand for insurance were, first of all, the difficult financial situation of agricultural producers, the high cost of insurance, distrust of insurers and low awareness of farmers about the possibilities of insurance protection.

Table 2. Insurance coverage under concluded contracts with state support in the crop and livestock sub-sectors in 2016-2018

Group of agricultural crops	Share of insured sown area,%			The share of insured animals,%			Group of agricultural animals
	2016	2017	2018	2016	2017	2018	
Cereal	65,60	69,15	81,97	47,54	39,26	42,57	Pigs
Oilseeds	20,77	12,14	6,97				
Fodder	6,81	3,60	4,61				
Technical	3,49	8,80	5,03	41,17	43,74	41,30	Bird
Legumes	2,47	2,31	1,35				
Perennial	0,54	0,25	-	11	16,74	15,79	Cattle
Potatoes	0,16	0,20	0,04				
Vegetables	0,13	0,26	0,03				
TOTAL	5,00	1,7	1,5	14,6	16,7	16,7	TOTAL

* compiled according to the National union of agricultural insurers [46]

The total amount of insurance premiums received under agricultural insurance contracts decreased 2,5 times from 9,8 to 3,9 billion rubles. At the same time, the structure of the premium has changed: while in 2016 insurance with state support occupied 87% of the insurance premium, in 2017 only 61%. For the first time in recent years, the agricultural insurance market grew without state support (+ 246,4 million rubles by 2016), but its growth could not compensate for the loss of agricultural insurance with state support (-6,1 billion rubles by 2016), we can conclude that the observed decrease in the insurance premium in the agricultural insurance segment is largely due to a decrease in the size of budget subsidies to compensate for part of the costs of producers to pay insurance premiums, the amount of which for the indicated period decreased by 1,4 billion rubles. (-64%) (table. 3). The decrease was mainly due to a reduction in state support for crop insurance risks. As a result, the lack of subsidies has become one of the problems of the agricultural insurance system.

In addition to reducing the total amount of state support,

one more negative trend has been outlined - underfinancing of premiums. So, in 2016, 20 Russian regions did not receive insurance subsidies for a total amount of about 1,2 billion rubles [47]. Delays in the provision of subsidies to agricultural producers in agricultural insurance with state support could reach 4-6 months after the end of sowing. Due to a shortfall in 50% of the premium that the subsidy was supposed to cover, insurers also reduced payments by half.

According to federal legislation, state support for agricultural insurance provides for reimbursement of 50% of the insurance premium paid by agricultural producers under the concluded insurance contracts. However, an analysis of the share of subsidies in the total amount of insurance premiums paid (Table 3) indicates that the Government of the Russian Federation has not fulfilled its obligations. In 2016, this indicator as a whole for subsidized agricultural insurance amounted to 34,7% (35,7% for crop and crop insurance and 25,6% for agricultural insurance), in 2017 - 40% (40,3% and 39,7%), respectively.

Table 3. The main parameters of the subsidized agricultural insurance market in 2016-2018

Indicator	2016		2017		2018	
	Plant growing	Livestock	Plant growing	Livestock	Plant growing	Livestock
Premium received, million rubles	5600,7	625,4	1210,5	751,6	976,7	941,8
Subsidies transferred to the regions, million rubles	1999,3	160,1	487,4	298,1	481,2	435,3
Payments, million rubles	1094,0	180,4	863	26	259,7	394,3
Payout Level,%	19,53	28,84	71,29	3,46	26,59	41,87
Share of subsidies in premiums,%	35,70	25,59	40,27	39,66	49,27	46,23
Claimed losses, units	165	2	163	13	145	5
Settlement of losses, units	170	5	140	5	61	5
The number of denials of payment, units	30	0	23	5	76	2
Amount of losses for which payment is refused, million rubles	137	0	104	16	252	3

* compiled according to the National union of agricultural insurers [41, 42, 44]

As a result of such changes, 2017 became critical for agricultural insurance with state support. At the beginning of 2018, the stagnation of this segment of the insurance market continued. In the vast majority of agricultural crops (except

cereals and fodder) and agricultural animals (except for the livestock of pigs), the decline in insurance coverage continued. In general, at the end of the

year, only 1,5% of the cultivated area (1,2 million hectares) and 16,7% of the livestock were insured (about 4,8 million conventional heads). 63% of agrarian regions did not fulfill plans for agricultural insurance with state support [48].

By virtue of the current state of affairs, the topic of agricultural risk insurance is on the agenda at various levels of government, in ministries and departments. However, measures to restore the agricultural insurance system were taken only in the second half of the year. If livestock breeders were able to insure the livestock after the restoration of subsidies, spring crops could no longer be insured. As a result, the annual indicators characterizing the state of the market remained negative.

In 2018, agricultural insurance developed in 74 constituent entities of the Russian Federation, including insurance with state support - in 55 regions. In crop insurance under subsidized conditions, 427 contracts were concluded in 367 farms, in insurance of farm animals - 328 farmers concluded 337 contracts. Insurance with state support was carried out by 12 insurance companies. From 3,7 billion rubles. 52,3% of the premiums collected by agricultural insurers (almost 2 billion rubles) came from subsidized insurance. Of these, 976,7 million rubles. is crop insurance and 941,8 million rubles. - insurance of agricultural animals.

In 2018, 917 million rubles were actually allocated to stimulate the development of agricultural insurance. However, 84% of subsidies came in the second half of the year. As a result, the downward trend in the agricultural insurance market with state support stopped. Its volume increased compared to the same period in 2017 by 79% (for crop insurance - by 80%, for animal insurance - 78%) [49]. For the first time in the practice of agricultural insurance with state support as of December 31, all concluded insurance contracts with state support were funded - their payment level reached 98% [50].

As for the fulfillment by the insurance companies of their obligations, the situation here is not so clear. Over the 7-year period of the existence of the subsidized insurance system, the maximum amount of payments in crop production was recorded in 2012 (2,2 billion rubles), in livestock - in 2018 (394 million rubles).

Over the past 5 years, agricultural insurance has shown a steady upward trend in insurance payments under a single contract. In crop insurance, the maximum one-time insurance payment was recorded in 2017, when one of the enterprises of the Voronezh region received 206 million rubles for the loss of sunflower crop resulting from waterlogging of the soil. The most significant insurance payment in agricultural insurance (570 million rubles) was made in 2019 in the Primorsky Krai by company «Alfastrakhovanie» as a result of the death of 60 thousand pigs due to the outbreak of foot and mouth disease [51].

Agricultural insurance practice for 2012-2018 shows that the main risks leading to insurance payments in crop production are soil and atmospheric drought (22,2% and 21,7% of payments, respectively), hot wind (19,5%) and waterlogging of the soil (16,6%). Significant risks were also freezing (7,8%), frost (5,6%) and hailstorm (3,6%). In addition, strong winds, dust storms, the spread of harmful organisms, and natural fires led to the loss of insured crops during the indicated period. In insurance of farm animals,

almost the entire volume of payments (98,6%) is associated with the risk of contagious diseases. Isolated cases of death of the insured livestock due to power supply disruption as a result of natural phenomena, avalanches and natural fires were also noted [42].

It should be noted that insurance payments during 2012-2018 never (with the exception of insurance of farm animals in 2016) did not exceed the amount of subsidies transferred to insurers to pay part of the cost of policies. This casts doubt on the effectiveness and efficiency of the applied model of public-private partnership [52].

The observed low level of payments reduces the attractiveness of insurance by agricultural producers. The agrarians' perception of insurance was negatively affected by the fact that, against the background of the growth of the absolute size of the crop in Russia in recent years and the increase in yield per hectare (at least 35% over 5 years), cases of exceeding the established threshold for the decline in yield (30%, then 25%, from 2017 20%) became increasingly rare. As a result, funds in the form of contributions paid for the insurance contract were made regularly by the insured, while there were no insurance events, and, accordingly, no payments. Quite often, the reason for refusing to pay agricultural producers is the use by insurance companies of the economic, financial, legal, industrial incompetence of farmers when they fulfill the terms of the insurance contract. As a result, low loss ratio reduces interest in agricultural insurance.

At the same time, according to the National union of agricultural insurers for 2012-2018 insurance companies completed consideration of 7559 insurance cases under contracts with state support, the number of insurance payments amounted to 6762, or 89.5% of the total. Thus, the share of refusals in payment is only 10.5% of the considered insured events [51].

In addition, in recent years there has been a sharp decrease in the number of litigation cases on agricultural insurance. If in 2016 the courts considered 93 claims for the recovery of insurance compensation under agricultural insurance contracts, in 2017 - 18 claims, and in 2018 - only 4 claims. In just 7 years, the total number of cases examined by the courts amounted to 293, which is less than 1% of the concluded agricultural insurance contracts, or 4,1% of the total number of payments made over the years [53]. The reasons for this situation include tightening control over the solvency of insurers by the Bank of Russia, the transition to a unified system of agricultural insurance, the development of standard insurance rules, the accumulated practice of legal protection, the development of the institution of agricultural expertise, including using space monitoring data.

Thus, the current level of development of agricultural insurance still does not allow us to talk about using this tool as a systemic institution for the development of the agricultural industry with the range of opportunities that are widely involved in international practice.

The Russian system of subsidized agricultural insurance provides for the participation of three parties in the implementation of the insurance operation - the agricultural insurer, the agricultural insurer and the state.

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Moreover, their interests, for objective reasons, do not coincide, and sometimes contradict each other. So, for the agrarian, insurance is one of the methods of risk management, providing for the full or partial transfer of insured risk. The agricultural producer is focused on obtaining the maximum insurance coverage for the damage he received in order to compensate for the costs incurred. The domestic agricultural insurance model under state support is tied to a decrease in performance as a result of insurance events in comparison with average indicators of price, crop yields and productivity of agricultural animals, which does not stimulate insurance of the entire crop and the entire livestock. For the agricultural insurer, insurance acts as a type of commercial activity aimed at maximizing profit. Extremely stringent criteria for recognizing insured events, the absence of common methods of underwriting and settlement of losses make it possible for insurance companies to significantly affect the quality of insurance coverage, underestimating or completely refusing insurance payments. The state is aimed at the development of domestic agriculture. At the same time, it seeks to optimize the amount of subsidies for agricultural insurance allocated along with regular expenses to compensate farmers for the risks of emergency situations. As a result of such a conflict of interests between participants in the insurance market, there is a risk of reducing the stability of the agricultural insurance system [18].

The Kaoru Ishikawa diagram was adapted to identify the sources, causes and factors of this systemic risk [54]. This method is a graphical reflection of the results of root cause analysis and is one of the most effective methods of identifying cause-and-effect phenomena with the determination of their relative importance, this logical-graphical scheme is commonly called "fishbone" ("Fishbone"). For greater clarity, the results of the study are presented in figure 1.

The main sources of risk for reducing the stability of the agricultural risk insurance system are the agricultural insurant (agricultural enterprises, private entrepreneurs, individuals), the agricultural insurer (insurance and reinsurance companies) and the state (Bank of Russia, the Ministry of Agriculture, the Ministry of Finance and other state bodies and regional authorities).

Among the main reasons for the risk of a decrease in the stability of the agricultural insurance system caused by a conflict of interests due to the fault of the agricultural insurant are the financial situation of agricultural producers and a decrease in the demand of farmers for insurance. The

reasons arising from the fault of the agricultural insurer are low supply from insurance companies, poor competition in the agricultural insurance market and the underdevelopment of the reinsurance market. Among the reasons for the fault of the state, one can note its insufficient attention to the field of agricultural insurance and the low level of interaction with other participants in the insurance market.

A retrospective analysis and a comprehensive assessment of the current state of the subsidized agricultural insurance system made it possible to identify the main risk-generating factors within each of the reasons for the risk of a decrease in the stability of the agricultural insurance system. For greater clarity, the results of the study are presented in Figure 1. In more detail, the identification and analysis of individual risk factors for reducing the stability of the agricultural insurance system was presented by us in [55-57].

Significant changes in the domestic agricultural insurance system occurred at the end of 2018 due to the adoption of federal law No. 563 «On amending the federal law «On state support in the field of agricultural insurance and on amending the federal law «On the development of agriculture»» [58]. The specified regulatory act, which entered into force on March 1, 2019, introduced into insurance practice a number of innovations, among which the following can be distinguished:

- the threshold for crop loss and planting of perennial plantations was canceled, after which insurance compensation is carried out (previously it was set at 20% and 30%, respectively), i.e. payments will be made in case of any losses;
- a mandatory minimum unconditional deductible (part of the loss not covered by insurance) was introduced at the level of 10% of the sum insured (previously 0%);
- the maximum level of own retention for farmers (deductible) is increased to 50% (previously 30%);
- an agricultural insurance contract must be concluded for an insurance amount of at least 70% of the insurance value of the agricultural insurance object (previously 80%);
- a system of separate risk insurance is introduced in relation to the same object, when farmers have the opportunity to independently combine insured risks, concluding an insurance policy in case of risk of loss (loss) of crops, planting of perennial plantations, as well as agricultural animals as a result of exposure to all, several or one of 23 events listed in the law that are dangerous for agricultural production (previously, only all risks specified in the law were included in insurance coverage);

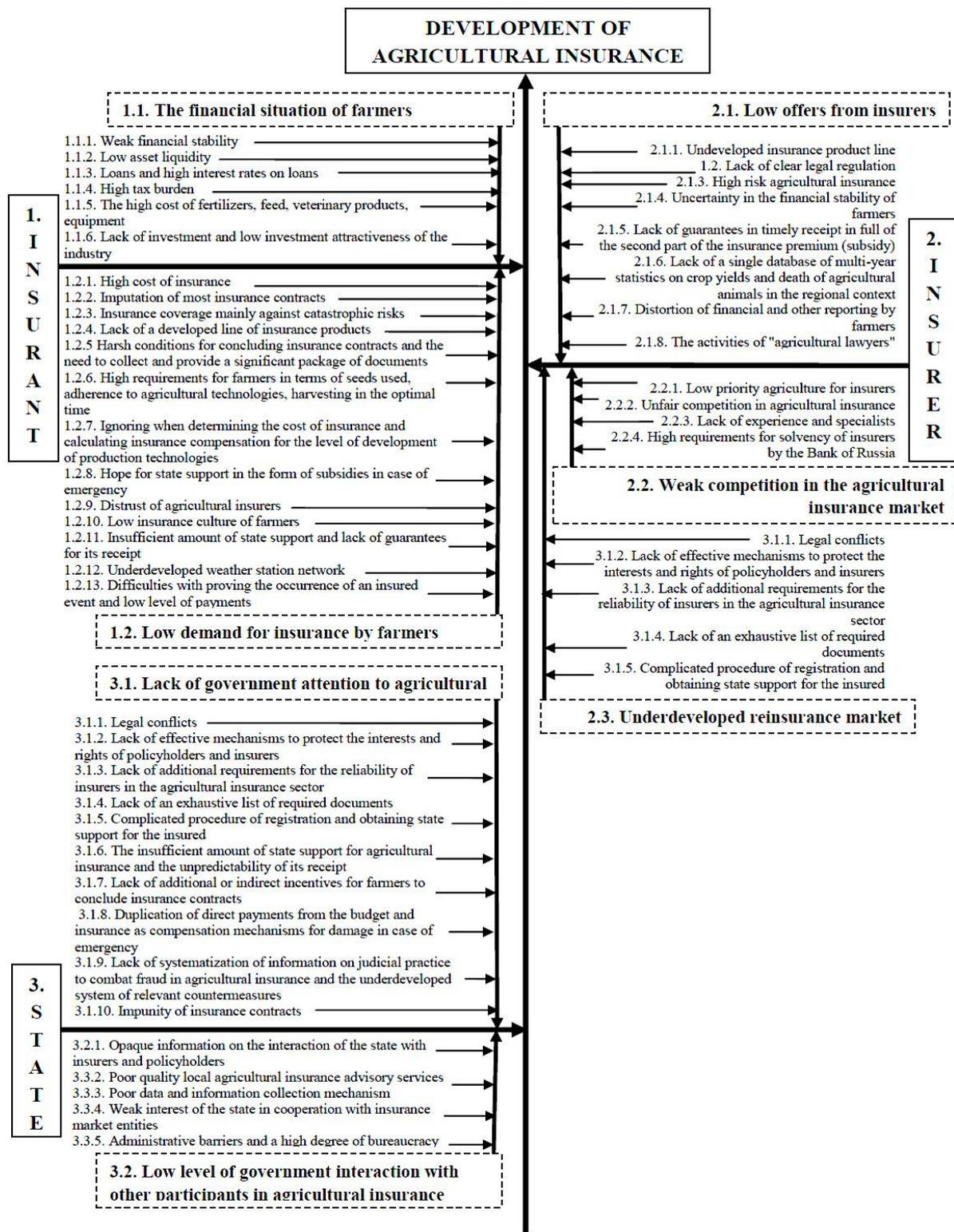


Fig. 1. Identification of the risk of stability of the agricultural insurance system on the basis of the K. Ishikawa diagram [54]

- the list of insurance events has been expanded (heavy rainfall, heavy and / or prolonged rain, early appearance or establishment of snow cover, freezing of the top soil layer were added);
 - the area of responsibility of insurers for insurance of farm animals has been expanded (the insurance company is obliged to cover damage to the death of the entire livestock of slaughtered animals in the exclusion zone, even if there is no

established fact of their infection);
 - introduced the ability to insure crops only within one subject of the Russian Federation and with various insurers (relevant for large farms with presence in different regions);

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- legislatively fixed the possibility of applying the monitoring results using aviation and space means to prove the occurrence of an insured event and conduct an examination under agricultural insurance contracts in order to calculate the amount of damage [59, 60].

To ensure compliance with the new conditions of the law on state support for agricultural insurance of the National union of agricultural insurers, new unified standard insurance rules were approved, agreed with the Ministry of Agriculture, the Ministry of Finance and the Bank of Russia, as well as a unified methodology for calculating the tariffs on crop insurance, perennial plantations and agricultural animals. It should be noted that in 2019 it is planned to increase the amount of subsidies provided from the federal budget. In particular, a separate limit of 1,5 billion rubles is envisaged as part of a consolidated subsidy to support agricultural insurance. (for comparison, in 2017 this amount corresponded to 0,94 billion rubles, and in 2018 – 0,93 billion rubles) [47]. According to expert estimates, the demand of agricultural enterprises in the Russian Federation for the allocation of budgetary funds as part of state support under agricultural insurance contracts in 2019 can reach 2 billion rubles [61]. This trend can be confirmed by the fact that several regions (Samara, Saratov, Amur regions, etc.) in the spring, as part of a conference call with the Russian Ministry of Agriculture, already reported a higher need for financial support for agricultural insurance exceeding the original plans [62].

In addition, as part of unrelated support in the field of crop production, which reimburses part of the costs of farmers for agricultural work, improving fertility and soil quality, another 1.4 billion rubles were allocated for 2019. According to the decision of the Government, these funds will be provided on a priority basis to the insured acreage, and if the agricultural producer does not have an insurance contract, the amount of hectare subsidy will be reduced by 15%.

At the same time, the introduction of this legislative norm, designed to encourage farmers to take care of protecting the crop or livestock, can have a negative effect for certain groups of agricultural producers in some regions. First of all, we are talking about areas classified as risky farming zones, characterized by a high frequency of adverse events (insured events), where insurers do not want to work because of the high probability of compensation for significant amounts of damage. As a result, peasants in these territories due to the low level of presence, and sometimes the absence of insurers without having concluded an insurance contract, may lose the funds of unrelated budget support that they use to purchase fuel and lubricants, chemical protection products, and mineral fertilizers. This will negatively affect local agricultural producers. Given that agriculture, as a rule, is not a high-margin type of activity, the cost of paying insurance premiums is often very burdensome for agricultural producers [17]. Even if the farmers begin to insure crops on a massive scale, this will entail additional and considerable expenses for them, which will ultimately affect their financial result [63]. Thus, increasing unrelated support to insured farmers may violate the principle of voluntary agricultural insurance, transferring it to the category of voluntary-compulsory, imputed.

In November 2018, the Government of the Russian

Federation approved resolution No. 1371, according to which farmers who are not involved in agricultural insurance with state support can rely on compensation for only half of the damage from emergencies from the federal budget [64]. The result of the said decree was the fact that the payments due to farmers from the federal budget in connection with the occurrence of damage from emergency situations in 2018 amounted to 5,5 billion rubles. due to lack of insurance (the total damage assessment from emergency situations in the agricultural sector amounted to approximately 10 billion rubles) [65].

The main tasks of introducing changes to federal legislation and increased attention to the development of subsidized agricultural insurance were improving its mechanism, expanding the range of insurance products available and attractive to farmers, raising interest in this risk management tool by insurants and insurers.

The first positive results indicating the restoration of the Russian agricultural insurance market and its return to the growth trajectory were obtained at the beginning of 2019. Thus, 58 regions voiced their readiness to provide state support for agricultural insurance following the meeting at the Ministry of Agriculture versus 32 in 2018 [66]. Subsidies for agricultural insurance have resumed in a number of regions where it was abandoned a year earlier. According to data for 5 months of the current year, compared with the same period in 2018, company «RSHB-Insurance» concluded 30% more animal insurance contracts and 4 times more crop insurance, in company «Rossgostrakh» there is an increase in requests for insurance by 1.5 times, and in company «VSK» - by 30-40% [47]. As of June 1, the insured area of spring sowing increased compared with the figure for the same date last year from 78 to 542 thousand hectares, or almost 7 times, and the insured population - from 1,65 to 1,95 million conventional heads (+ 18%) [67].

Positive changes are also observed in terms of cost indicators. In the first half of 2019, compared with January-June 2018, the average insurance rate for the concluded crop insurance contracts decreased from 3,91-4,45% to 2,79-3,12%, which allowed agricultural producers to expand the volume of insured objects. As a result, the average insurance amount per policy increased from 36 to 70 million rubles. (+ 94,4%), and the size of the insured area under one contract increased from 1,8 to 2,9 thousand hectares (+ 61,1%) [45].

The main driver of the market was a multiple increase in the crop insurance segment. The amount collected by insurers for 6 months of 2019 for crop insurance increased almost 7 times, reaching the level of 699 million rubles. (102 million rubles in the first half of 2018), the premium on insurance of agricultural animals increased by 36% - from 279 to 379 million rubles [67]. At the same time, 72% of insurance premiums accrued under agricultural insurance contracts with state support accounted for TOP-10 of the largest regional markets [68]. The leaders were the Voronezh (286,8 million rubles for insurance of crops and 81,1 million rubles for insurance of farm animals) and Samara (231,4 and 10.5 million rubles) regions, the Republic of Tatarstan (149,4

and 9,2 million rubles) and Mordovia (145,5 and 0,3 million rubles), Oryol Oblast (99,6 and 40,4 million rubles), Krasnodar kray (105,3 and 6,4 million rubles) and Belgorod region (17,6 and 48,7 million rubles).

It should also be noted a number of planned innovations aimed at the further development of agricultural insurance. So, in 2019, the National union of agricultural insurers began to develop and implement special regional agricultural insurance programs under state support, which will take into account the specifics and climatic conditions of the constituent entities of the Russian Federation, as well as the needs of specific territories and types of farms, including medium and small [69]. This will make it possible to build programs aimed at protecting against specific risks that are most often repeated in the regions.

Along with this, several new programs are being prepared for farmers: on insurance of regulatory costs, on insurance of risks of reseedling, a special program for greenhouses, as well as additional insurance programs that take into account the specifics of individual industries - viticulture, small farming [70].

With regard to regional agro-industrial complex agencies, a requirement is introduced to transfer insurance subsidies to agrarians within a period not exceeding 30 days from the moment they submit an application [61]. Previously, regions and farms could expect such subsidies for several months. It is also possible to provide state support for agricultural insurance contracts of the previous year, which did not manage to receive subsidies in the current year (relevant for insurance of winter crops during the autumn sowing season). Starting this year, a compulsory supplement to agricultural insurance contracts will be instructions for farmers describing the procedures for both the agricultural producer and the agricultural insurer in the event of an insured event. The development of a single standard form of these scripts is carried out by the Bank of Russia together with the Ministry of Agriculture, the Ministry of Finance and the National union of agricultural insurers. In early August, the Central Bank already agreed to the National union of agricultural insurers three standards for information materials - on insurance of crops, agricultural animals and aquaculture with state support [72].

Active work is underway to discuss the idea of creating a reinsurance pool to protect large risks in crop production or animal husbandry with the participation of the Russian national reinsurance company [73].

In the fall of 2019, a new procedure for providing state support in agriculture should be launched in Russia, which provides for its division into two parts - stimulating and compensating. Agricultural insurance, along with unrelated agricultural support, state support for increasing the productivity of dairy cattle breeding, livestock breeding and elite seed farming, traditional sub-sectors is among the compensating subsidies for which it is planned to allocate 34 billion rubles [74]. Moreover, not a single subject of the Russian Federation should receive more than 5% of the total amount of state support.

According to the new procedure, mutual links are established between the implementation of insurance plans and other types of state subsidies. In particular, farmers who have insured their risks will receive an increased level of unrelated

state support (an increasing coefficient of 1,2 has been established). The amount of funds allocated to some promising lines of business will depend on the intensity of insurance in the region. For example, the volume of subsidies for insured farms for pedigree livestock breeding or elite seed farming can be increased by 10% compared with those who did not insure such risks [71].

Since 2020, state support for agricultural insurance in the system of subsidizing the agricultural sector will receive a statutory allocated status. That is, no Russian Federation subjects can redirect budget funds for agricultural insurance to any other types of state support, if they are not used, they are returned to the budget. State support for agricultural insurance provided from the federal budget to the regions will be calculated separately, depending on what volumes of agricultural animals and crops are planned. to insure the region. The cost of insurance in the region in the previous reporting year will also be taken into account [75].

In addition, according to the draft Plan of agricultural activities for 2020, the ministry of agriculture plans to reduce the rates of subsidies in agricultural insurance with state support in a number of leading agricultural regions of the Russian Federation. Among such regions with the possibility of reducing rates by an average of 17% with respect to crop insurance were Voronezh, Oryol, Irkutsk regions, Krasnodar Krai, Rostov region, the Republic of Mordovia, and agricultural insurance - Belgorod, Bryansk, Voronezh and Lipetsk regions (decrease rates on average by 5%) [76].

As a result of the implementation of the specified set of measures to develop the agricultural insurance system in 2019, the Ministry of agriculture expects growth in the industry: an increase in the share of insured land to 2,6% of the total sown area (about 2 million hectares), and the share of insured cattle to 14,2% of the total livestock (about 4 million standard animals). By 2025, coverage indicators are planned to be increased to 11,3% (11.3 million hectares) and 26.1% (7,4 million conventional heads) [47, 59].

It should be noted that the agricultural insurance segment in the Russian Federation has been formed for quite some time. However, at the scale of the country and the agricultural sector, it should be significantly larger. To develop the domestic agricultural risk insurance system, it is necessary to implement a set of measures to stimulate the demand of farmers for insurance products, improve their financial situation, increase the supply of insurers and develop a line of insurance products, increase government attention to agricultural insurance and increase its interaction with other insurance participants process, the development of the reinsurance market in Russia and the promotion of competition in the agricultural market. Among these events, the following can be noted:

- expansion of the range of insurance programs and products offered to farmers;
- adaptation of insurance to the specifics of certain regions or areas of activity, taking into account their climatic and economic characteristics, as well as the level of applied agricultural technologies;
- simplification of the insurance procedure and a decrease in the number of documents provided during registration of facts of insured events;

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- increasing the availability of insurance for small enterprises and peasant farms, as well as newly formed farms with a short term of activity;
- development of real loss (income) insurance and index insurance;
- individualization of programs and conditions of agricultural insurance with state support (for example, taking into account the applied technologies of organic farming);
- development of remote customer service systems;
- development of partnership programs (agricultural lending, agricultural chemistry supply programs, supply chain financing, agricultural trader programs);
- the introduction of the ability to insure individual sections of fields, and not the entire array of arable land, as well as agricultural animals of one or several sex and age groups of the same type;
- reduction in the level of mandatory minimum unconditional deductible;
- study of the possibility of using agricultural insurance contracts with state support as collateral for lending to commercial banks, as well as loans secured by the insured crop using the specified instrument;
- making amendments to the procedure for subsidizing insurance contracts in order to exclude cases of delays in the provision of state support, as well as to increase the guarantee of its receipt by agricultural producers who submitted documents for insurance;
- an increase in the share of state subsidies of agricultural insurance contracts in priority areas of agricultural development, significant for ensuring food security;
- expansion of state subsidies for agricultural insurance with an increase in funding;
- the allocation of risk management measures in the agro-industrial complex as a separate subprogramme in the State program for the development of agriculture and the regulation of agricultural products, raw materials and food markets until 2020;
- development of a concept for the development of insurance protection for the agricultural sector for 2020-2030;
- development of recommendations for constituent entities of the Russian Federation regarding the choice of insurance options based on an analysis of the regional specifics of agricultural risks;
- increasing the presence of insurance organizations in the regions;
- increasing the transparency of risk assessment mechanisms, recognition of insured events and loss settlement;
- reduction in the timing of accrual of payments to farmers on recognized insured events;
- development of a risk redistribution system on the territory of the Russian Federation, incl. in the field of reinsurance using the capabilities of the Russian national reinsurance company;
- the formation of a statistical and methodological base for agricultural insurance, including based on the exchange of information between the Bank of Russia, the Ministry of agriculture of the Russian Federation and the National union of agricultural insurers;
- development of a system of agrometeorological observations and infrastructure of weather stations;
- increasing financial literacy and awareness of farmers about

the basics of risk management, including insurance coverage options;

- raising the level of qualifications and retraining of managerial personnel; more active cooperation of insurers with educational institutions, their participation in the educational process and the development of educational standards to solve the problem of staffing.

V. CONCLUSION

An integrated result synthesizing the results of the functioning of all components of the agricultural insurance system is the creation of an effective mechanism for effective insurance protection of the agricultural sector from risks.

As international experience and domestic practice shows, agricultural insurance is the main agricultural risk management tool that can minimize the majority of unforeseen financial losses and maintain the sustainability of the industry and individual agricultural producers. However, for a significant mass of Russian farmers, this tool is not attractive.

The results of the study indicate that at present, close attention is paid to the development of the agricultural insurance system at all levels of government, in ministries and departments. Changes in the relevant legislation and the measures taken by the Ministry of agriculture of the Russian Federation and the National union of agricultural insurers in cooperation with the agribusiness authorities of the Russian Federation to organize and stimulate the use of insurance instruments in agriculture played a positive role, helping to restore the agricultural insurance system after its strong subsidence in the last two years due to the transition to a single subsidy.

The increase in the cost of agricultural products leads to an increase in the capacity of individual risks for agricultural producers, which requires the application of adequate insurance protection measures. Agricultural insurance is in demand in those regions where it is considered as a financial infrastructure component of the agricultural development mechanism. At the same time, the scale of the spread of agricultural insurance both across the country and the sector remains insufficient. As a result, there is a need to develop a strategy for the development of the agricultural insurance system and its further improvement. The relevance of these measures is increasing against the background of the incidence of the negative effects of climate change and the spread of dangerous diseases of farm animals that have become more frequent in recent years. In 2018 alone, 27 constituent entities of the Russian Federation and 5,5 thousand agricultural holdings declared the death of crops on an area of 1,5 million hectares. The confirmed damage of these farms amounted to 7,3 billion rubles. The practical implementation of natural hazards and outbreaks of diseases can lead to significant losses in agriculture, putting farmers on the verge of losing financial stability. At the same time, the costs of the federal and regional budgets for the payment of compensation to agricultural producers on the risks of emergency situations, whose capabilities are already very limited, are also growing.

The historical maximum of such payments from the budget came in 2012 - 6 billion rubles, in 2017 – 3,6 billion rubles., in 2018 – 5,5 billion rubles.

In addition, in recent years, in the development of state agrarian policy in world and Russian practice, there has been a gradual transition from simple insurance support to the development of a single set of risk management measures, which include various insurance mechanisms and other measures.

Further modernization and increasing the effectiveness of agricultural insurance will help ensure the economic sustainability of domestic agriculture and increase its investment attractiveness, increase the efficiency of the use of budget funds at the industry and national levels, as well as solve the problem of food security.

REFERENCES

- E. Abdrahimova, A. Bakirov, "Improve agricultural insurance", AIC: economics, management, 7, 2001, pp. 40-43.
- K.G. Voblyy, The basics of saving insurance. Kiev: type. I.I. Chokolova, 1915, pp. 401.
- N.I. Gladkov, State property insurance of collective farms. 2nd ed., Revised. Moscow: Finance, 1973, pp. 112.
- F.V. Konshin, State insurance in the countryside. Moscow: Gosfinizdat, 1948.
- L.A. Motylev, L.K. Nikitenkov, State insurance in agriculture. Moscow: Finance, 1980, 143.
- V.M. Pototsky, Insurance device in the USSR. Moscow: Edition of the Main Board of the State Insurance of the USSR, 1927.
- L.N. Bondarenko, Insurance in the conditions of transformation of the agro-industrial complex of Russia. Volgograd: Change, 1999, pp. 286.
- N.A. Borkunov, A.S. Shibalkin, "Prospects for the development of agricultural insurance", AIC: economics, management, 3, 2012, pp. 49-52.
- T.A. Verezubova, K.A. Zhichkin, A.M. Mukhitbekova, "Crop risks insurance in Russia, Belarus and Kazakhstan", Finances, 10, 2018, pp. 55-60.
- L.H. Vologdin, "Current state of agricultural insurance in Russia", Agricultural insurance and lending, 2(9), 2005, pp. 9-13.
- Yu. Volovik, "State support - the basis for the development of agricultural insurance", Agricultural sector: economics, management, 1, 2010, pp. 42-47.
- Yu.I. Linin, A.A. Kemryugov, "On the state and prospects of crop insurance with state support", Economics of agricultural and processing enterprises, 10, 2010, pp. 61-63.
- A.S. Mindrin, A.V. Zverev, "The economic mechanism of crop insurance", Moscow: Agropress, 2001, pp. 156.
- A. Nikitina, "Agricultural insurance with state support: state and development trends", Economist, 12, 2014, pp. 76-80.
- V.V. Nosov, "Stages of development of subsidized agricultural insurance", Ostrovsky readings, 1, 2016, pp. 373-378.
- Yu.N. Parakhin, "State regulation of insurance in the agricultural sector", Voronezh: Bulletin of the Voronezh State Agrarian University, 1(28), 2011, pp. 103-109.
- Yu.A. Spletukhov, "Agricultural insurance in Russia and abroad: a comparative characteristic", Financial Journal, 1, 2018, pp. 87-99.
- A.H. Tsakaev, Z.A. Saidov, "The risk management mechanism for reducing the stability of the Russian agricultural insurance system", Bulletin of the Chechen State University, 4(32), 2018, pp. 9-18.
- A.E. Shibalkin, A.V. Kornienko, "The methodology for calculating tariffs in agricultural insurance", Agricultural sector: economics, management, 2, 2015, pp. 57-61.
- V. Scherbakov, "Obligatory form of crop insurance with state support: «for» and «against»", AIC: Economics, Management, 3, 2014, pp. 37-41.
- J. Antón, S. Kimura, R. Martini, Risk management in agriculture in Canada, OECD Food, Agriculture and Fisheries Working Papers, 40, 2011.
- J. Antón, S. Kimura, Risk management in agriculture in Spain, OECD Food, Agriculture and Fisheries Working Papers, 43, 2011.
- P.J. Barry, Risk management in agriculture. Iowa State University Press, Ames, 1984.
- J.L. Brady, The regulation of insurance; 1st ed. Malvern, PA: Insurance Institute of America, 1995.
- K.H. Coble, T.O. Knight, R.D. Pope, J.R. Williams, "An expected indemnity approach to the measurement of moral hazard in crop insurance", American Journal of Agricultural Economics, 2, 1997, pp. 234-257.
- M.B. Diaz-Caneja, C.G. Conte, F.J. Gallego-Pinilla, J. Strobilmair, R. Catenaro, C. Dittman, Risk management and agricultural schemes in Europe. Luxembourg: Office for Official Publications of the European Communities, 2009, pp. 30.
- K.H. Ettlenger, State insurance regulation, 1st ed. Malvern, PA: Insurance Institute of America, 1995.
- B.L. Gardner, "A crop insurance in U.S. farm policy". In D.L. Hueth and W.H. Furtan, eds. economics of agricultural crop insurance: Theory and evidence. Boston: Kluwer Academic, 1994, pp. 17-44.
- J.W. Glauber, "Crop insurance reconsidered", American Journal of Agricultural Economics, 4, 2004, pp. 1179-1195.
- B.K. Goodwin, V.H. Smith, The economics of crop insurance and disaster aid. Washington DC: The AEI Press, 1995, pp. 210.
- J.B. Hardaker, B.M.H. Ruud, J.R. Anderson, Coping with risk in agriculture. New York, NY: Cab International, 1997.
- S.E. Harrington, G.R. Niehaus, Risk management and insurance. Boston, MA: Irwin/McGraw-Hill, 1999.
- J.R. Skees, P. Hazell, M. Miranda, "New approaches to crop yield insurance in developing countries", International food policy research Institute: EPTD, 1999, pp. 123.
- R.L. Kohls, J.N. Uhl, Marketing of Agricultural Products, 8th edition by. Translated from English. Moscow: "Kolos", 2000, pp. 512.
- G.O. Nefetidi, Development of agricultural insurance in the conditions of market transformations: the dissertation ... candidate of economic sciences. Stavropol, 2004, pp. 159.
- B.K. Goodwin, "Problems with market insurance in agriculture", American Journal of Agricultural Economics, 83(3), 2001, pp. 643-649.
- O. Mahul, C.J. Stutle, Government support to agricultural insurance challenges and options for developing countries. Washington: The International Bank for Reconstruction and Development. The World Bank, 2010, pp. 250.
3. Federal law «On state support in the field of agricultural insurance and on amendments to the federal law «On the development of agriculture»» dated 25.07.2011 N 260-ФЗ. Available: <https://ppt.ru/docs/fz/260-fz-4037>
- L. Usoltseva, "The agricultural insurance industry will grow", Agricultural news, 8(115), 2016.
- Agricultural insurance in the coming year - expectations and plans. Available: <http://www.insur-info.ru/agro-insurance/interviews/1195>
- Agricultural insurance for Russia. The annual report of the National union of agricultural insurers for 2017. Moscow: National union of agricultural insurers, 2018.58 p.
- Agricultural insurance: new horizons. The annual report of the National union of agricultural insurers for 2018. Moscow: National union of agricultural insurers, 2019, pp. 54.
- Annual report of the National union of agricultural insurers for 2014-2015. Moscow: National union of agricultural insurers, 2016, pp. 52.
- Annual report of the National union of agricultural insurers for 2016. Moscow: National union of agricultural insurers, 2017, pp. 50.
- The cost of insurance of 1 ha of agricultural crops with state support in the first half of the year decreased by 22%. Available: <https://agroinsurance.com/en/rossiya-stoimost-strahovaniya-1-ga-selhoz-kultur-s-gospodderzhkoj-v-i-polugodii-snizilas-na-22/>
- The list of insured crops and farm animals according to prisoners in 2016, 2017, 2018. agreements. Available: <http://www.naai.ru/o-soyuzze/statisticheskie-svedeniya/>
- K. Palashina, "Agricultural insurance returns to its roots: restoring the state support model will change the sector", Kommersant: Insurance application, 99, 2019.
- The Ministry of agriculture recommends that the regions of the Russian Federation meet the deadline for the payment of subsidies in agricultural insurance in 30 days. Available: <https://agroinsurance.com/en/rossiya-minselhoz-rekomenduet-regiona-m-rf-ulozhitsya-s-vyplatoj-subsidij-v-agrostrahovanii-v-30-dnej/>
- In the area of special attention of the Ministry of agriculture of the Russian Federation, the Ministry of finance of the Russian Federation - the start of the contract campaign of spring sowing on new conditions [Electronic resource]. Available: <http://www.insur-info.ru/agro-insurance/press/144192/>
- A. Belova, "Farmer will assess the risks", Rossiyskaya gazeta: special issue – Insurance, No 92 (7850), 2019, pp. 5.
- In agricultural insurance, there is a tendency for a substantial increase in the amount of payments for unit losses. Available: :

Agricultural Insurance as a Tool of Marketing Risk Management in Agriculture

- <http://www.insur-info.ru/agro-insurance/press/145966/>
52. N.D. Avarsky, A.I. Bogachev, A.V. Alpatov, E.A. Novoselov, "Features of the development of the agricultural insurance market in the regions of the Central federal district of Russia", Economics of agricultural and processing enterprises, 9, 2017, pp. 38-47.
53. The number of litigation on agricultural insurance over the past two years has decreased by 20 times. Available: <http://www.insur-info.ru/agro-insurance/press/143337/>
54. K. Ishikawa, Japanese methods of quality management. Moscow: "Economics", 1988, pp. 199.
55. A.I. Bogachev, "Agricultural insurance is the basis of food security and sustainable production growth in livestock sub-sectors", Agrarian bulletin of the upper Volga, 4(21), 2017, pp. 144-151.
56. A.I. Bogachev, A.A. Polyakova, "The current state and development prospects of agricultural insurance with state support", Political mathematical network electronic scientific journal of the Kuban state agrarian university, 80, 2016, pp. 11.
57. A.I. Bogachev, "The Russian market of subsidized insurance: state, dynamics, prospects", Bulletin of the Voronezh state university. Series: Economics and management, 2, 2018, pp. 143-151.
58. Federal law «On Amending the federal law «On state support in the field of agricultural insurance and on amending the federal law «On the development of agriculture»» dated 27.12.2018 No. 563 (latest revision). Available: http://www.consultant.ru/document/cons_doc_LAW_314703/
59. The Ministry of agriculture expects agricultural insurance growth after amendments to the law on state support. Available: <https://agroinsurance.com/en/rossiya-minselhoz-ozhidaet-rosta-agrostrahovaniya-posle-vneseniya-izmenenij-v-zakon-o-gospodderzhke/>
60. The rules of state support in the field of agricultural insurance have been updated. Available: <https://agroinsurance.com/en/rossiya-obnovlenyi-pravila-gospodderzhki-i-v-sfere-selskohozyaystvennogo-strahovaniya/>
61. The volume of state support for agricultural producers will increase by a third. Available: <https://agroinsurance.com/en/rossiya-obem-gospodderzhki-selhozproizvoditeley-velichitsya-na-tret/>
62. All agricultural regions of the Russian Federation are ready to meet the targets for agricultural insurance in 2019. Available: <http://www.insur-info.ru/agro-insurance/press/d2458634/>
63. A. Mishin, Peasant «OSAGO». Siberian farmers may lose 15% of subsidies, Arguments and Facts on the Yenisei, 1-2, 2019, pp. 1.
64. Decree of the government of the Russian Federation of 14.11.2018 No. 1371 «On amending the rules for the provision of other inter-budget transfers from the federal budget to the budgets of the constituent entities of the Russian Federation for compensation to agricultural producers for damage caused as a result of natural emergencies». Available: http://www.consultant.ru/document/cons_doc_LAW_311645/
65. Budget payments to farmers in connection with emergency situations in 2018 were reduced by 5 billion rubles due to lack of insurance - the Ministry of agriculture of the Russian Federation. Available: <http://www.insur-info.ru/agro-insurance/press/145206/>
66. The country has changed the rules of agricultural insurance. Available: <https://agroinsurance.com/en/rossiya-v-strane-izmenilis-pravila-agrostrahovaniya/>
67. The area of agricultural crops insured on June 1 increased almost 7 times. Available: <http://www.insur-info.ru/agro-insurance/press/d2458649/>
68. TOP-10 regions of the Russian Federation in terms of agricultural insurance. Available: <http://www.insur-info.ru/agro-insurance/press/147653/>
69. Development of subsidized agricultural insurance programs for agricultural regions. Available: <https://agroinsurance.com/en/rossiya-razrabotka-programm-subsidiruemogo-agrostrahovaniya-dlya-selhozregionov/>
70. Agricultural producers will be able to insure up to 70% of the value of the crop under state subsidies in 2019. Available: <https://agroinsurance.com/en/rossiya-selhozproizvoditeli-smogut-strahovat-do-70-stoimosti-urozhaya-na-usloviyah-gossubsidij-v-2019g/>
71. Subsidies for agricultural insurance can grow up to 2,2 billion rubles. in 2020 after the issuance of a government decree in early autumn. Available: <http://www.insur-info.ru/agro-insurance/press/148137/>
72. The Central Bank agreed on the National union of agricultural insurers 3 standards for informing customers when concluding agricultural insurance contracts with state support. Available: <http://www.insur-info.ru/agro-insurance/press/d2458707/>
73. A reinsurance fund for the agro-industrial complex will be created in Russia. Available: <http://www.insur-info.ru/agro-insurance/press/143148/>
74. O. Sapozhkov, "To grow what is growing", Kommersant, No 127 (6607), 2019, pp. 2.
75. The Government of the Russian Federation plans from 2020 to abolish the «single subsidy» and give the state support for agricultural insurance a separate status. Available: <http://www.insur-info.ru/agro-insurance/press/?m=8&y=2019&image.x=1&image.y=14>
76. The Ministry of agriculture of the Russian Federation proposed to reduce subsidies in agricultural insurance with state support for 2020. Available: <http://www.insur-info.ru/agro-insurance/press/147288/>