

## Risk insurance of agricultural organizations in Russia: trends, problems, directions of development

K A Naminova, K I Makaeva, E O Uchurova, E S Boldyreva and E S Godzhaeva

Kalmyk State University B.B.Gorodovikova, 11, Pushkina str., g.Elista, Republik Kalmykia, Russian Federation

E-mail: kermen.09@yandex.ru

**Abstract.** The historical heterogeneity of the Russian economic space has a significant impact on the evolution of the state structure, the structure and efficiency of the economy. Agriculture is carried out in conditions of risky farming, due to droughts, waterlogs, cold weather, which leads to poor harvest years, to high losses of livestock of farm animals. Thus, the weight of the frost, hail, in the South of Russia in 2018 caused great damage to the development of agriculture in the amount of 7.3 billion rubles, floods in Siberia, the Far East in 2019 caused damage costing more than 13 billion rubles. High risks rooted in the peculiarities of agricultural activities, crisis financial condition, debt burden of agricultural enterprises do not allow them to cope with losses on their own. However, the role of such enterprises and their products is the subject of national policy aimed at ensuring the country's food security. Despite notable achievements in the economic development, expansion of agriculture, the protection of the interests of the farmers remains low. The problems of crop loss, animal deaths, the issues of establishing insurance conditions with state support containing a combined list of insurance risks, without taking into account natural and climatic conditions, the imperfection of the procedure for providing state subsidies to the regions stays quite acute and relevant.

In modern conditions, a lot of research has been conducted to study the economic potential, the impact of natural and climatic factors on the functioning and development of regions, but research on the application of the mechanism of insurance protection of agricultural production in the context of state support as a stage in the development of relations between the government and insurance companies, which provides for an active role of insurance companies in solving state tasks to stabilize and improve the efficiency of agricultural production, has not yet been fully resolved [1,2,3,4].

The government, in order to minimize risks in agriculture and secure the stability of the financial condition, suggests using the insurance protection mechanism, but it has not gained acclaim among farmers. At the same time, the state has carried out significant work in the field of insurance protection of agricultural production.

During its development, the insurance system moved from the state to the private form and vice versa. But it was in 1993 that for the first time the Ministry of Finance of the Russian Federation developed the conditions for insuring agricultural crops with 50% compensation from the federal budget. Thus, it was 1993 that became the year when the insurance of risks of agricultural organizations began to be executed with state support.

Since 2016, the interests of agricultural enterprises in the insurance market have been represented by the National Union of Agricultural Insurers (NSA), which forms a single compensation fund, which is



Content from this work may be used under the terms of the [Creative Commons Attribution 3.0 licence](https://creativecommons.org/licenses/by/3.0/). Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

Published under licence by IOP Publishing Ltd

formed by transferring part of the insurance bonus received by insurers under agricultural insurance contracts [5].

Official data of the National Union of Agricultural Insurers shows the dynamics of the development of the market for risk insurance of agricultural organizations with state support. The analysis of the development of this market has been carried out since 2009[6], each period was evaluated by the development of the crop insurance system, in 2014 the system of insurance of agricultural animals was introduced.

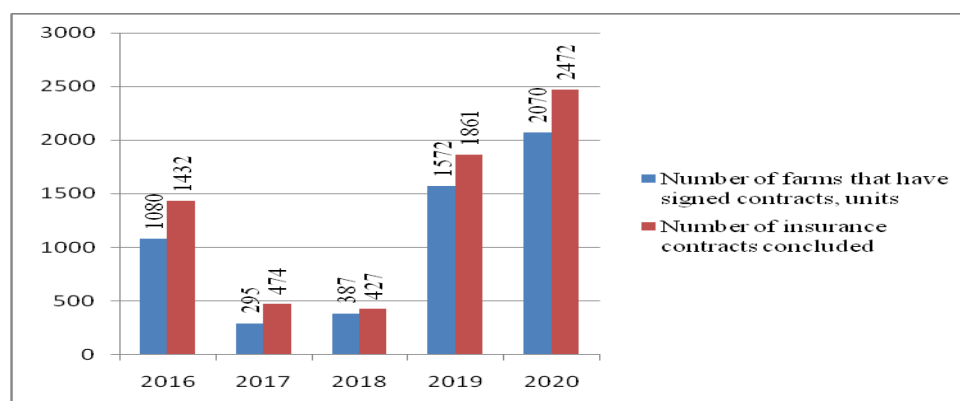
For example, table 1 shows data on insurance objects.

**Table 1.** Risk insurance coverage of agricultural organizations with state support in the Russian Federation [7].

Name	Years				
	2016	2017	2018	2019	2020
Acreage, thousand hectares	4050.7	1348.9	1158.1	4767	5591.6
Number of insured animals, thousand conditional heads	4305.4	4489.3	4793.9	6622.8	7853
Number of insured aquacultures, thousand conditional heads	0	0	0	0	2226.4

The data in table 1 shows that in 2017-2018, due to the introduction of the single subsidy mechanism, the unwillingness to restructure the regulatory framework, and distrust of insurance organizations, there was a decline in agricultural insurance for crops and perennial plantings, but in 2019-2020, the indicator increased and in 2020 showed the maximum amount of insured acreage for the entire period of analysis. Insurance of agricultural animals in the Russian Federation has been conducted since 2014, the need for insurance protection in terms of these objects is increasing, which is confirmed by the absolute values of insured agricultural animals. This is especially evident in the 2018-2020 period of the development of the insurance system under consideration: from 4793.9 thousand conditional heads in 2018 to 7853 thousand conditional heads in 2020. In 2020, aquaculture was also insured in the total amount of 2226.4 thousand conditional heads.

The introduction of a single subsidy, the unavailability of the regulatory framework, and distrust of insurance organizations also affected the reduction in the number of farms that concluded contracts for the insurance of agricultural crops and perennial plantings, especially during the transition from 2016 to 2017, from 1080 units to 295 units. (figure 1).



**Figure 1.** Number of contracts concluded for insurance of agricultural crops and planting of perennial plantings [7].

Furthermore, despite the two periods of 2017-2018, which stand out in terms of reducing the insured acreage in general, the number of farms that concluded contracts in this period increased slightly from

295 to 387, then the indicator increases more than 5 times in dynamics. If we compare the two indicators presented in figure 1, we can say that on average, each farm has finalized insurance contracts for more than one type of agricultural crops and perennial plantings.

The results of concluding insurance contracts with state support are presented in the following table. The insurance amount from 2019 started to increase in comparison to 2017-2018, which were a failure for the agricultural insurance market with state support and amounted to 124.98 billion rubles in 2019, in 2020 -173.06 billion rubles (table 2).

The insurance bonus paid under insurance contracts in 2016 amounted to 6,23 billion rub. or 76.35 % of the total insurance premium received by all insurance organizations in the analyzed year. In subsequent years, the ratios were as follows: in 2017 – 84.48 %, in 2018 -96.0 %, in 2019 -94.98 %, in 2020 -62.57 %.

**Table 2.** Dynamics of the sum insured and the insurance premium under insurance contracts with state support in the Russian Federation [7].

Name	Years				
	2016	2017	2018	2019	2020
Insurance amount, billion rubles	212.43	40.48	24.69	124.98	173.06
The amount of the accrued insurance premium, billion rubles	8.16	2.32	2	4.38	6.76
The amount of the insurance premium paid, billion rubles	6.23	1.96	1.92	4.16	4.23

Comparing the total amount of the insurance premium paid with the total insurance amount (table 1), it can be noted that the average tariff for agricultural insurance contracts with state support was: in 2016 – 2.94 %, in 2017-4.84 %, in 2018 – 7.78%, in 2019-3.33%, in 2020-2.,45 %.

Thus, in the development of the risk insurance system of agricultural organizations, two development trends can be distinguished: the first trend is connected to decreasing indicators (2017-2018), the second trend is aimed at increasing indicators, covering the periods 2019-2020.

The buildout of the second trend of development (2019-2020) of the insurance system is associated with changes in the insurance legislation, in the Federal Law-260 "On Agricultural Insurance" [5]:

a) in terms of insurance of agricultural crops and perennial plantings:

- By territory, farms with coverage of different regions are subject to insurance.
- Cancellation of the "death threshold"».
- Expanded the range of insurance products.
- Expanded the list of insurance events.
- It is now possible to insure individual risks.

b) insurance of farm animals:

- By territory, farms with coverage of different regions are subject to insurance.
- Added the risk of animal destruction.
- Now you can choose a reduced coverage.
- Expanded the list of insurance events.
- It is now possible to insure individual risks.

These innovations are related to the introduction of the risk insurance system of agricultural organizations to the world level, the amount of state support for the purchase of policies by farms in 2020 increased by almost 50% to 2.2 billion rubles from 1.5 billion rubles in 2019. However, the

increase in budget support is still not sufficient enough to cover 30% of crops-the threshold adopted in developed agricultural countries.

Currently, new rules for granting subsidies to farmers have been implemented, they are directed at promoting the achievement of the goals of regional programs for the development of the agro-industrial complex, per-hectare support and subsidies to the dairy industry. In 2021, the NSA is imposing the following programs focused on developing the insurance system in agriculture [7]:

1. Risk zoning of the territory of Russia. This program is a necessity associated with the formation of a single statistical database for a wide range of conditions. Conducting risk zoning will allow you to create and organize information about natural risks, their degrees of threat, specific to each region of the country. It is obvious that for each territory it is necessary to update the methodology of risk assessment, to study the probability of the frequency of their occurrence, in order to accurately know the cost of insurance. Currently, this problem is being handled by the Higher School of Economics Research Institute.

2. Development of the space monitoring system. Previously, when concluding insurance contracts, the work of experts was used, and their conclusions were not always objective, due to the "human factor" and the conflict of interests. In this regard, it is the results of space monitoring that will eliminate these errors. In his research, V. Ya. Tsvetkov notes "Space monitoring – global efficiency" [8]. The developed NSA program will allow you to plan measures to reduce the risk of crop yield losses. The NSA notes the following opportunities and advantages of space monitoring [7]:

- Analysis of the state of crops according to the NDVI index.
- Assessment of the impact of agrometeorological indicators on deviations in the development of crops.
- Ability to assess the criteria of natural hazards.
- The availability of a database for all indicators ensures the "transparency" of the underwriting and loss settlement process.
- The objectivity of the analysis of the state of insured crops.

3. Improving financial literacy. Financial literacy of farmers is one of the components of an effective Russian system of risk insurance of agricultural organizations. Often agricultural producers show a lack of knowledge in the field of insurance, they are hampered by insurance terminology, etc. Lack of knowledge for the farmer is, among other things, a barrier to the conclusion of an insurance contract. In this regard, the National Assembly plans to hold seminars, conferences, and practical events on a regular basis.

4. Development of additional insurance programs. The implementation of the program "Risk zoning of the territory of Russia" will allow the National Insurance Agency to expand the list of insurance programs, make them more flexible, taking into consideration the natural and climatic conditions of the territories, the distinct features and specialization of agricultural business.

5. Creation of a unified information system for agricultural insurance with state support. In modern conditions, there are several statistical databases, the values of which are different. The lack of a single statistical base in this area is the main problem of further development of the insurance system in the field of agricultural risks. In the context of digitalization of agriculture, the development of personal accounts of policyholders will also contribute to the promotion and expansion of insurance in this area. In our opinion, the NSA can initiate the development of personal accounts of policyholders with the involvement of authorized insurance organizations, which will act as a ready-made base for the promotion of insurance products, in turn, the policyholder can draw up an insurance contract, make adjustments related to the payment of the insurance contract, conduct correspondence and other.

Thus, the implementation of these programs is necessary to build an effective risk insurance system for agricultural organizations in the context of state support as a key mechanism that can ensure the

competitiveness of Russian agricultural products, identify the current problems of the underdevelopment of the state risk insurance system in the agricultural sector, as well as the direction of its development.

### References

- [1] Gossipukhov Yu A 2020 Agricultural insurance in the Russian Federation: current state and directions of development *Epomen* **41** 155-73
- [2] Vlasov V A and Zhavoronok Yu Yu 2019 Agriinsurance as one of the main effective directions of state support in the field of agricultural development *Agrarian and land law* **3(171)** 42-6
- [3] Nosov V V 2019 Insurance premium subsidies in crop farming: challenges and opportunities *Proc. of the 33rd International Business Information Management Association Conference, IBIMA 2019: Education Excellence and Innovation Management through Vision* 7594-600
- [4] Gleba O V and Chudakova K A 2020 Problems and prospects of development of insurance relations in the agricultural industry of Russia *Agrarian and land law* **3(183)** 32-5
- [5] Federal Law On State support in the field of agricultural insurance and on Amendments to the Federal Law "On the Development of Agriculture" (with amendments and additions) No 260-FZ dated 25 July 2011 Collection of Legislation of the Russian Federation of August 1, 2011 N 31, article 4700
- [6] Naminova K 2016 Risk insurance of agricultural organizations - state support *RISK: Resources, Information, Supply, Competition* **1** 148-51
- [7] Official website of the Union "United Association of Insurers of agroindustrial complex-National Union of Agricultural Insurers" // <http://www.naai.ru>
- [8] Tsvetkov V Ya 2015 Analysis of the application of space monitoring **3(15)** <https://cyberleninka.ru/article/n/analiz-primeneniya-kosmicheskogo-monitoringa>

Reproduced with permission of copyright owner. Further reproduction prohibited without permission.