

## Leasing and Insurance Mechanism in Sustainable Agricultural Development

Baglan AIMURZINA

Kazakh University of Economics, Kazakhstan  
[aimurzina@mail.ru](mailto:aimurzina@mail.ru)

Mazken KAMENOVA

Kazakh University of Economics, Kazakhstan  
[mazken\\_kamenova@mail.ru](mailto:mazken_kamenova@mail.ru)

Ainura OMAROVA

Karaganda Economic University, Kazakhstan  
[ainuraphd@mail.ru](mailto:ainuraphd@mail.ru)

Roza SHOKHAN

L.N.Gumilyov Eurasian National University, Kazakhstan  
[Roza-shokan@mail.ru](mailto:Roza-shokan@mail.ru)

Ainur KARIPOVA

L.N.Gumilyov Eurasian National University, Kazakhstan  
[karipovaaainur@mail.ru](mailto:karipovaaainur@mail.ru)

Aizhan KHOICH

L.N.Gumilyov Eurasian National University, Kazakhstan  
[ayjika@yahoo.com](mailto:ayjika@yahoo.com)

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### Abstract:

Economic changes have predetermined public policy, in which its support should play a greater role compared to other sectors. Priority in the development of agricultural production will be indicators of production efficiency, competitiveness of domestic products. In this regard, one of the priorities of the development of the economy of the Republic of Kazakhstan is the accelerated development of the agro-industrial complex on the basis of increasing labour productivity in the agro-industrial sector and increasing exports of processed agricultural products by encouraging a leasing and insurance mechanism.

The article analyzes the dynamics of depreciation of fixed assets by type and renewal in agriculture, forestry and fisheries, shows the impact of the formation of mutual insurance on the production efficiency of agricultural producers. The proposals for further improvement of the leasing and insurance mechanisms, including according to the experience of developed countries, are given.

**Keywords:** agriculture; depreciation; agricultural production; agricultural producers; industrial potential; leasing; insurance.

**JEL Classification:** Q56; Q57; G22.

### Introduction

Kazakhstan's membership in the Eurasian Economic Union and the World Trade Organization creates opportunities and at the same time places high demands on competitiveness in both domestic and foreign markets. In this regard, the role of state economic regulation of the agro-industrial complex is extremely important and should

be aimed at increasing labor productivity in the agro-industrial complex and increasing exports of processed agricultural products by encouraging a leasing and insurance mechanism.

## 1. Research Background

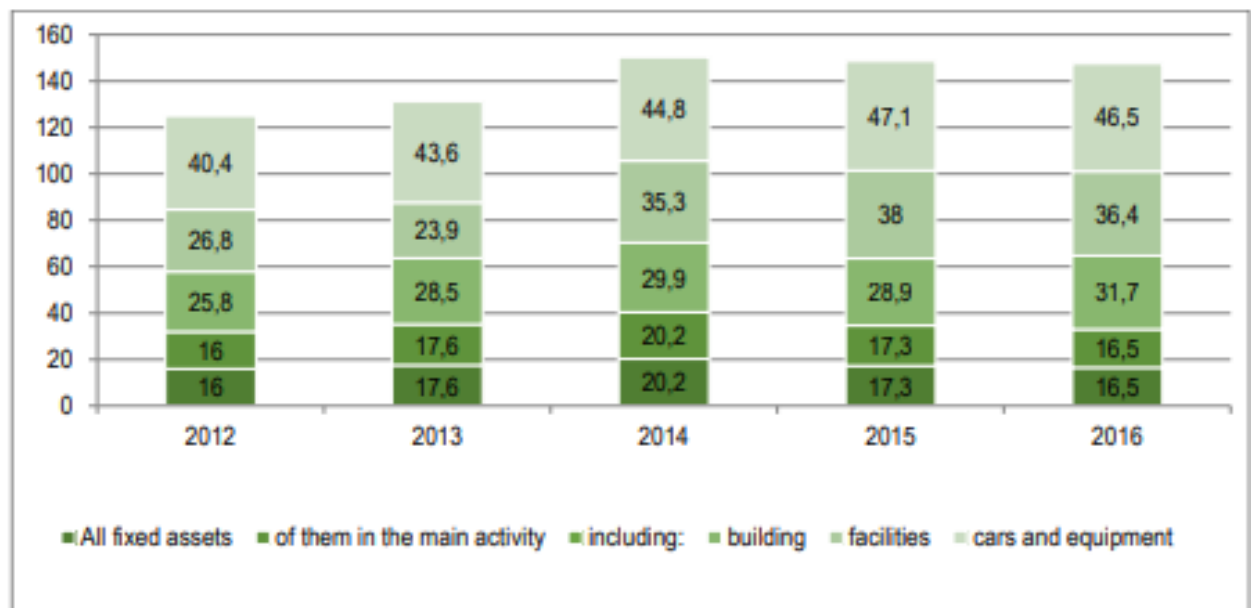
The mechanism of development of financial relations and their individual elements, including the leasing and insurance mechanisms, attracts the attention of many national researchers - G. Mayanlaeva (Mayanlaeva 2015), K. Zhuyrikov (Zhuyrikov 2010), I. Nazarchuk (Nazarchuk 2010), Z. Baymagambetova (Baymagambetova 2016) and others. These works they have important methodological and practical importance, since, in particular, they examine the theoretical foundations of the economic policy, show the results of its practical implementation, examine the experience of countries with developed market economies in the organization of financial owl relations.

As is known, the industrial potential of the regions of the republic is represented by machine-building enterprises, of which more than 50 enterprises produce reapers, seed drills, tillage implements (cultivators, stubble plows, harrows), as well as feed harvesting equipment, plant protection machines (sprayers, seed disinfectants) and other agricultural machines, equipment and spare parts, the remaining 70 are engaged in repair and restoration work, and also have the ability to manufacture, according to the orders of agricultural producers Spare parts for agricultural machinery.

## 2. Methodology

About 20 companies are manufacturers of final products. The capacities of many enterprises are 10-15% loaded. Depreciation of the main industrial and production assets is 43-80%, machinery and equipment - over 40% (Figure 1).

Figure 1. Ratios of depreciation of fixed assets by type in agriculture, forestry and fisheries

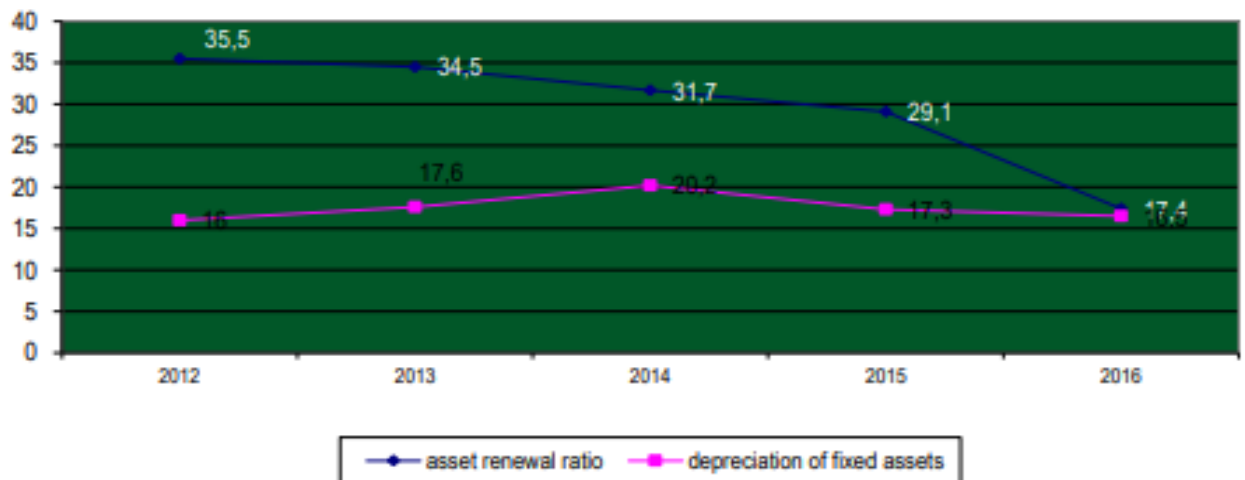


Source: compiled by authors according to data of Ministry of National Economy of the Republic of Kazakhstan

Technological processes and equipment are morally obsolete and lagged behind the advanced ones. The enterprises produce agricultural machines of outdated designs, there is no production of tractors and combines. In addition, enterprises lack modern marketing, sales, dealer and other services.

The situation shows that the rate of renewal of fixed assets decreased from 35.5% in 2012 to 17.4% in 2016 or almost doubled (Figure 2).

Figure 2. Ratios of renewal and depreciation of fixed assets in agriculture, forestry and fisheries



Source: compiled by authors according to data of Ministry of National Economy of the Republic of Kazakhstan

In this regard, there is a need for a special program consisting of targeted measures for the leasing business (in the field of law, taxation, incentives, management, etc.), which should have a multifaceted, complex nature, the interconnectedness of all tasks among themselves not only the common goal, but also a certain dependence, and interdependence.

In the course of its implementation, the necessary conditions for the development of leasing by solving the following problems:

- providing a regulatory framework;
- development of the institute of leasing;
- creation of an economic base;
- stimulation of foreign economic leasing activity;
- information and scientific and methodological support;
- improvement of the leasing activity regulation system.

Negative factors affecting the activities of equipment manufacturers can be adjusted through leasing services, allowing for more efficient operation of a particular manufacturer.

To solve the task of ensuring the regulatory framework, it is necessary to make changes and additions to the current legislation of the Republic of Kazakhstan, to develop new laws and regulations aimed at organizing and developing leasing activities. The existing standards that regulate the sphere of leasing activity consider the interests of the lessor and the organizational forms of realization of leasing relations, while the interests and positions of the lessees, for whom the leasing itself exists, are not reflected in them. By improving the current legislation, it is possible to increase the efficiency of leasing in enterprises as a factor in the development of production.

In order to avoid unnecessary procedures that require the lessor of new ways of transferring equipment returned to him by the primary lessee, the concept of "secondary leasing" in the legislation of the Republic of Kazakhstan needs to be clarified.

As a result, it is possible to predetermine the use of a flexible approach when purchasing equipment (seasonal, wholesale, other sellers discounts and the possibility of taking into account the production specifics of supply and demand for scarce equipment).

Due to the lack of conditions for the use of secondary leasing companies are suffering losses. When the lessee returns the equipment and there is no possibility of its re-transfer to leasing, they sell the leased asset to an affiliated company for the purpose of the subsequent purchase of equipment from it for a specific lessee. Consequently, the seller appears in this chain again, which allows for the transfer of equipment to secondary leasing, although this process increases the cost of the object of leasing.

In the organization and development of leasing activities, it is necessary to determine the priority areas carried out through leasing. They are:

- development of agricultural formations;
- increase the production of environmentally friendly products based on mastering new technologies;



- development of a network of processing industries.

Innovative activity:

- organization and development of high-tech industries.

Expansion and improvement of services to the population.

In the main areas, a mechanism should be developed for attracting, distributing, and returning the lessors' commodity and financial resources. At the same time, the use of the procedure and terms of crediting should take place on a competitive basis with the organization of project expertise.

To expand the possibility of using leasing, there is a need to develop marketing research in the field of logistics and services related to the study of the market, the emerging price level and aimed at identifying the basic patterns of demand for equipment and maintenance services. The purpose of acquiring equipment by users is to make a profit from its use, therefore the purchase of machinery and equipment is considered as an investment, as a rule, not at their own expense, but at the expense of attracted sources. In this connection, it is necessary to determine not really secured effective demand, but potential one that can be realized only with the active activity of suppliers of equipment, including in the investment segment of the financial market. Marketing research reveals the real need to provide potential consumers with not only sources of funds for the purchase of equipment and services, but also channels of cash flow to service the market for cars.

This is achieved through the implementation of the functions of marketing services that are part of the institutional support of leasing activities. As a result, business entities can receive information about the local market of machinery, equipment, services, information about the financial condition of their clients, and forecast sales of products in their area of activity.

The development of the institute of leasing involves the creation of insurance companies focused on servicing leasing entities for the stable functioning of this sphere by insuring the leased asset with the consent of the lessee. There is a need for the organization of structural formation in order to further develop leasing relations. The creation of a commission to coordinate the leasing activity will contribute to the formation of the nomenclature of leased assets and their total volumes, the determination of priority areas for the use of funds from the budget, etc.

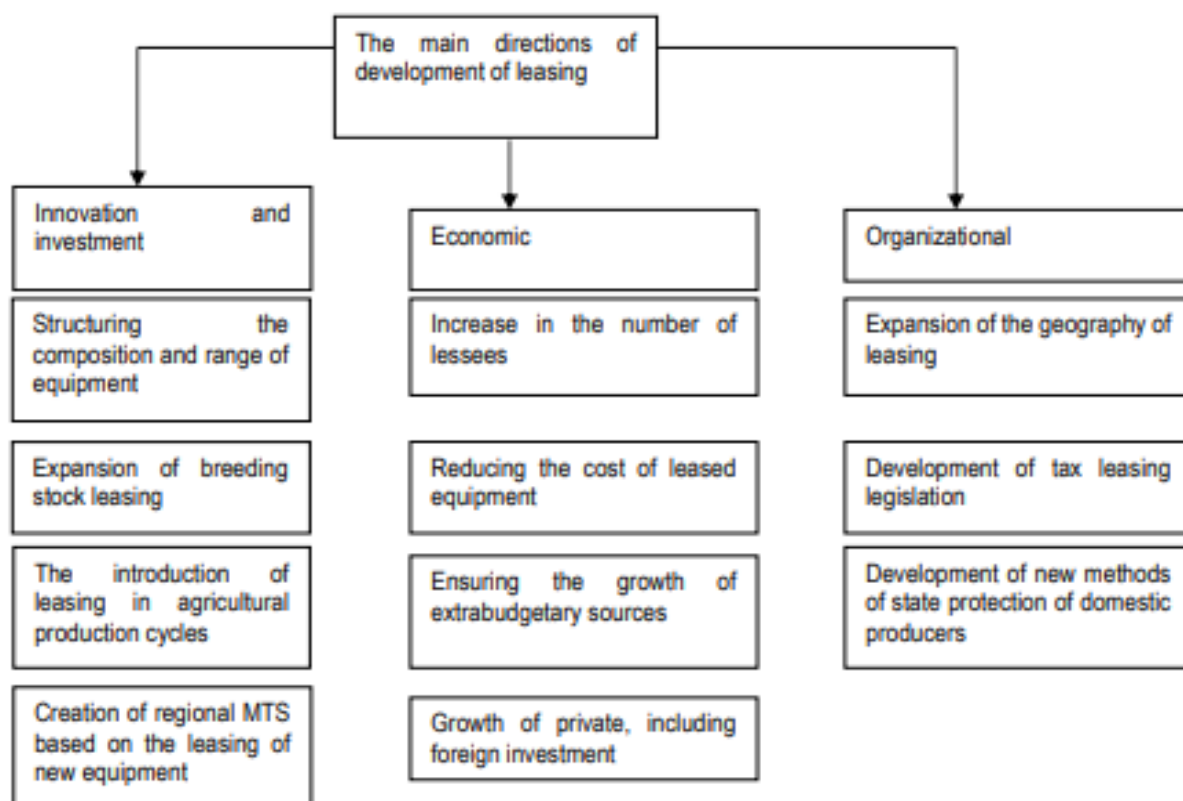
For the logistics and maintenance of agricultural producers, it is necessary to operate agro-service enterprises and machine-technological stations operating on a leasing basis. Protecting the interests of the agricultural sector urgently requires the participation in this process of banking institutions, industrial manufacturers, specialized leasing companies, dealer organizations directly operating in the leasing services market.

In addition, it is necessary to envisage the creation in each district of departments that provide services for concluding contracts for the rental of complex and expensive equipment, and it is expedient to convert interdistrict and regional logistics bases in accordance with their functions into joint-stock trading houses providing interaction between suppliers (manufacturers) and consumers. Under the conditions of this form of service, the founders-shareholders become economically interested in the efficient operation of agro-service supply and service units of the district and regional branches, wholesale firms.

The organization and improvement of the institutional support system for leasing activities requires solving the following tasks:

- ensuring the effective functioning of each entity in order to increase its competitiveness in market conditions;
- implementation of short-term and long-term financing;
- use the possibility of maximizing profits;
- the use of financial instruments for investment;
- formation of balanced investment portfolios;
- achieving risk minimization;
- attracting new participants in the leasing market;
- ensuring the inflow of foreign investment as a conductor of new technologies;
- improving the efficiency of use of financial instruments.

Figure 3. The development strategy of leasing in agriculture



Source: compiled by authors

For the development of leasing, it is necessary to use the principles of the market economy, which are used in developed countries to support agricultural producers by introducing quotas for the main types of agricultural products. Consequently, developing leasing in agricultural production, it is necessary to determine how much it should be produced and at what costs, what the yield will be, otherwise no form of state support will be effective, and leasing will not become an alternative and effective way of lending.

In general, the development strategy of leasing in the agro-industrial complex of Kazakhstan combines three areas - innovation and investment, economic and organizational, in accordance with Figure 3.

Thus, the activation of the investment process through leasing is the most acceptable form of lending in conditions of a shortage of working capital. The organization of production, assembly, maintenance, a service center for agricultural and other equipment could be promising.

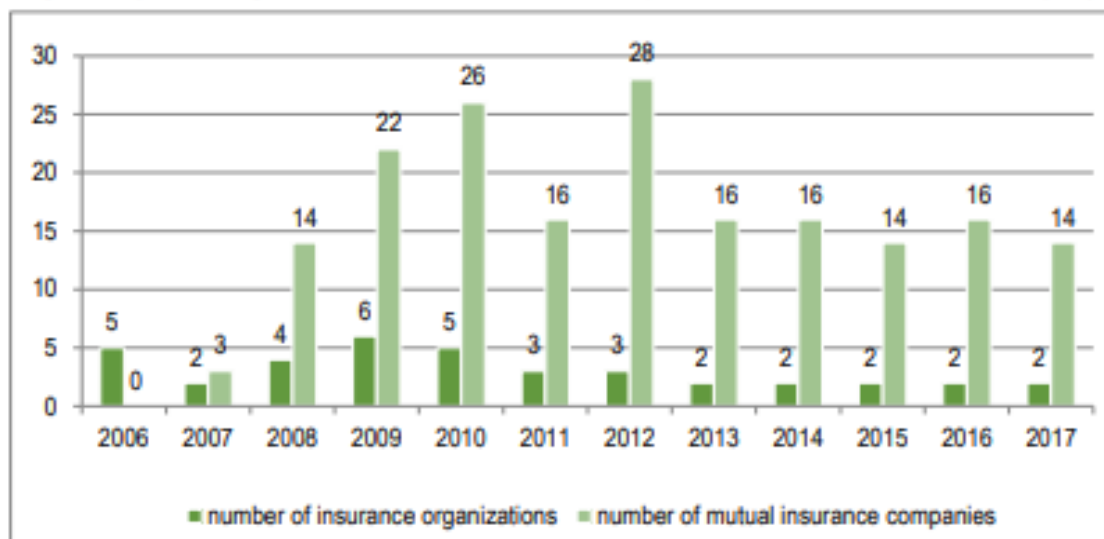
Agricultural production has a high degree of risk. Agricultural producers face many risks: fluctuations in prices, yields, partial or complete loss of resources, and changes in government policy, leading to significant fluctuations in income over the years. In addition, agricultural production is at risk of natural disasters and emergencies. Such natural hazards as drought, hail, flooding, can lead to serious industrial losses. In many developed countries, the state directly intervenes and regulates the situation on the domestic market for agricultural products, thus trying to reduce the problems associated with the risk in agricultural production. However, at present, in the context of growing globalization and the associated liberalization of markets, such risk management tools are losing their legitimacy. In this connection, in many, first of all, developed countries, the issue of developing and wider dissemination of risk reduction strategies based on market mechanisms and complying with WTO rules becomes relevant.

The current insurance system consists of compulsory and voluntary insurance. The legal basis for compulsory insurance is the Law of the Republic of Kazakhstan.

"On compulsory insurance in crop production", which obliges to insure cereals, oilseeds, sugar beets and cotton.



Figure 4. Dynamics of growth in the number of insurance companies and mutual insurance societies (MIS)



Source: compiled by authors according to data of Ministry of National Economy of the Republic of Kazakhstan

Currently, only two insurance companies are operating in this market, the number of mutual insurance societies is currently unknown, and 14 EIAs officially applied for compensation. A significant part of the crops are only formally insured by the OBC (Figure 4).

During the Law (2006–2015) (the Law was enacted on April 1, 2004), an average of 5.4 million hectares of crop area were insured per year, of which 558 thousand hectares were subject to adverse natural phenomena (10%). Despite the compulsory form of insurance, the law did not contribute to the popularization of insurance - the proportion of insured crops is decreasing annually and currently stands at just over 50%.

The irrelevance of the insurance rates established in 2004, as well as the standard cost standards established in 2009, led to the insurance becoming formal - agricultural producers paying an insurance premium of about 100 tenge per 1 hectare, when an insured event occurs, they receive an insurance payment in the amount of 3,500 tenge, while its minimum production costs today are about 15,000 tenge.

Thus, the current insurance system does not solve the main task of protecting the insurer's property interests related to compensation for its losses in the event of an insured event.

### 3. Application Functionality

Insurance is one of the tools whose use does not violate WTO rules and can potentially serve as an effective tool for stabilizing the incomes of agricultural producers and the rural population as a whole. At the same time, there are a number of important aspects that must be taken into account in order to successfully develop and operate both the insurance market and the agricultural sector.

Today, only privately-owned companies operate on the agricultural insurance market, which do not sufficiently take into account the peculiarities of agricultural production, which clearly confirms their current experience. Agricultural producers should have the right to choose insurers and proposed insurance conditions. Thus, there is now an urgent need for the creation of a State Insurance Company with 100% state participation in its capital, which mainly ensures the spread of crop insurance.

With the participation of the State Insurance Company in the field of agro-industrial production, it is possible to create an agricultural insurance pool, which would include other private insurance companies of the republic. If the agricultural producer works with one of the insurance companies of the agricultural insurance pool, it will be much easier for him to build his relationship with the insurer and there is no need to thoroughly study the insurance companies, since when joining this association they are appropriately selected. On the other hand, this approach is a real step to diversify risks and the initial stage in creating a country agricultural insurance system.

The experience of developed countries shows that in order for the system of agricultural insurance to be effective and serve the interests of all its participants, it is necessary:

a) Clearly establish, legally secure and not change the main rules of the game for a certain time. Consensus between insurers, policyholders and the state is considered the main prerequisite for the success of the agricultural insurance system in developed countries.

b) State support for insurance of agricultural risks, which is provided through subsidizing insurance premiums and by providing guarantees of state reinsurance, is a more effective form of income support for agricultural producers than direct government assistance in the event of catastrophic losses.

c) The participation of agricultural producers in the insurance should be voluntary. Providing state support for insurance of agricultural risks is not an argument in favor of compulsory insurance, but is the basis for the implementation of state control over this process.

d) International experience (not only Spain, but also the USA and Canada) proves that it is impossible to carry out the function of planning and general coordination of the system of agricultural insurance only by the forces of the Ministry of Agriculture. To do this, you must create an institution such as the Agency for Management of Agricultural Risks.

e) With regard to the organization of state reinsurance of agrarian risks, there is also an obvious need to create a mechanism (institution or fund) that could take on this function. One of the possible options could be the creation of a catastrophic loss fund under the Agency for the Management of Agrarian Risks (there is such experience, in particular, in Canada).

f) Private insurance companies in the country can hold the risks of agricultural production only on the basis of joint liability (co-insurance). Therefore, the prospect of development of the insurance services offer can only be associated with the pooling of insurers, which would offer standard insurance products and a loss assessment methodology. Arguments in favor of creating a single pool can be greater trust in insurance from agricultural producers, greater trust and interest in cooperation from reinsurers, and the possibility of government participation in such insurance as a co-insurer, as happens in the Spanish system.

g) The development of a full-fledged system of agricultural insurance is impossible without the development of associations of agricultural producers. A separate agricultural producer is practically deprived of the opportunity to influence the insurance conditions that insurance companies offer him; today, he can only choose from the small list of insurance products that are offered to him. Consequently, the very first and most important function that agricultural producers' associations should perform is to fully participate in the development and decision-making regarding new insurance products. It is also important that agricultural producers' associations disseminate information about insurance and insurance products to their members, provide the necessary advice and other assistance to policyholders. The development of associations of agricultural producers, in the first place, is their own business. However, the state, understanding this speaking as an expression of public interests, should in every way encourage and support this process through the improvement of relevant legislation, information and educational support.

A study of the history of the organization of insurance in Russia and abroad has shown that government support for agricultural insurance is incomparably more efficient than financial assistance provided in unfavorable years in the form of additional loans, subsidies, offsets, write-offs, delays and direct cash compensations. The effective organization of insurance business to a certain extent contributes to the sustainable development of agricultural business structures in many countries of the world.

In Kazakhstan at the present stage, the use of insurance in business practice is extremely difficult due to the lack of a developed insurance market. The current situation is aggravated by the lack of free financial means for agricultural enterprises to pay insurance premiums (Kosov 2017).

In our opinion, the Russian experience of mutual insurance is acceptable in our state. The mutual insurance society is a non-profit form of insurance organization. Mutual insurance societies are established by agricultural producers themselves with the support of state agricultural, insurance and financial bodies. The purpose of mutual insurance is the full insurance protection of property and personal interests of agricultural producers-members of society (Dadkov 2012).

Crop insurance is advisable to produce not immediately throughout the state, but gradually. Full insurance coverage of agricultural producers can occur in 5 years with one condition - state support (Aimurzina and Kamenova 2012).

In our republic, agricultural production is characterized by a high degree of riskiness (Kamenova 2012). In particular, the territory of Akmola region is in the zone of insufficient moisture. The amount of precipitation by years and their distribution during the vegetation period of plants is characterized by high instability. Recurrent severe droughts, wind erosion of the soil, dry winds significantly reduce the yield of agricultural crops (Aimurzina and Kamenova 2018).

The greatest threat to winter crops in the conditions of the Akmola region is represented by early autumn and late spring frosts, as well as frosty winters.



Akmola region is one of the main grain regions of the Republic of Kazakhstan. In our opinion, the formation of mutual insurance with state support in the territory of Akmola region would be a substantial financial support for economic entities of the agricultural sector. Thus, in the Akmola region 2500 grain farms have about 2,555 thousand hectares of sown area, the average yield for 5 years is 0.9 t / ha, the selling price of 1 ton is 1,370 tenge.

Based on the data, we will establish the estimated figures as of the fifth year of insurance, when all 2500 farms will be covered by insurance:

- crop cost -  $13070 \times 0,9 \times 2555000 = 30054,5$  mln. tenge;
- insurance amount -  $70\% \times 30054,5$  млн. тенге = 21038,2 млн. тенге;
- insurance payments -  $10\% \times 21038,2$  млн. тенге = 2103,82 млн. тенге;
- insurance reserves -  $80\% \times 2103,82$  млн. тенге = 1683,1 млн. тенге.

The growth of insurance volumes and the costs of its implementation will be presented in Table 1.

Table 1. The amount of payments for crop insurance for 5 years

Years	Number of farms	Insured crops, ha	Amount of payments, total in million tenge	Including from farms, in million tenge
1	500	159688	131,49	65,7
2	1000	319375	262,98	131,49
3	1500	638750	525,96	262,98
4	2000	1277500	1051,91	525,96
5	2500	2555000	2103,82	1051,91

Source: compiled by authors

Budget funding will be 1051,91 mln. tenge (50% insurance coverage), farms of the region – 1051,91 mln. tenge the insurance premium of each farm in this society will be  $(21038,2 \text{ млн. тенге}/2500)/2 = 420764$  thousand tenge and will be made by the farm in 4 stages:

1. 10% at the conclusion of the contract, each farm -42076,4 tenge
2. before 1 June - 15%, each farm- 63114,6 tenge
3. before 1 September - 50%, each farm- 210382 tenge
4. before 15 October - 25%, each farm- 105191 tenge.

It should be noted that at the initial stage it is necessary to transfer to the reserve fund up to 15%, and with full insurance coverage - 5% of the total amount of insurance reserves (Table 2).

Table 2. Insurance reserves for 5 years

Years	Amount of insurance reserves, in million tenge	Including:	
		To pay refunds	In reserve fund, 15%
1	105,2	89,42	15,78
2	210,4	178,84	31,56
3	420,8	357,68	63,12
4	841,6	714,76	126,24
5	1683,1	1598,94	84,16 (5%)+ 236,7 = 320,86

Source: compiled and calculated by authors

It is advisable that insurance reserves should not be used for the first years, but rather accumulated, and the damage should be compensated only within the limits of the received contributions. By the end of the fifth year, the amount of insurance reserves will be 1,683.1 million tenge. For individual farms in case of total loss of crops, the payments will be  $1,1389233$  tenge:  $2555000/2500 = 1022$  hectares per household;

payments:  $13070 \times 0,9 \times 1022 = 12021786 \times 70\% = 8415250,2$  tenge which is more than the paid payments 20 times.

### Conclusion

Mutual insurance should be of interest to rural producers and generally become a reliable tool for supporting and developing agriculture (Gizatov 2017).

You can consider such a direction of the insurance fund as the repayment of unsecured debt to commercial banks in case of non-repayment of loans due to adverse weather conditions. Compulsory insurance covers only material damage, that is, quantitative damage is compensated for as a result of natural disasters, death of livestock, etc. But many adverse events remain outside of insurance, in which there is no loss of material values, but these



negative phenomena have a serious impact on the performance of agricultural producers. For example, a prolonged cold spring contributes to lower yields, or a lack of pasture for transhumance, which can lead to a decrease in animal productivity, etc. In this case, there may be no death of livestock or yield loss, but there will necessarily be a decrease in product quality, leading to increased production costs, lower profits, and financial results of production. These losses, associated with a decrease in the quality of agricultural products, are not refundable to producers (Shulenbaeva 2013).

The introduction of new types of insurance will be a promising phenomenon for the further development of agricultural insurance in our country.

The formation of an agricultural production insurance system will be essential for the investment attractiveness of agriculture and accessibility to credit resources. Insurance is one of the financial leverage that can have a significant impact on the development of the agricultural sector of the Republic of Kazakhstan (Pogorelova 2012).

The creation of an effective insurance system for agricultural production will be a stabilizing factor in increasing production efficiency, reducing the risk of investment, and increasing access to financial resources.

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