

**STATE REGULATION OF INSURANCE IN AGRICULTURE:
GLOBAL EXPERIENCE, ANALYSIS OF THE CURRENT SITUATION, PROSPECTS**

**АУЫЛ ШАРУАШЫЛЫҒЫНДАҒЫ САҚТАНДЫРУДЫ МЕМЛЕКЕТТІК РЕТТЕУ:
ӘЛЕМДІК ТӘЖІРІБЕ, АҒЫМДАҒЫ ЖАҒДАЙДЫ ТАЛДАУ, ПЕРСПЕКТИВАЛАР**

**ГОСУДАРСТВЕННОЕ РЕГУЛИРОВАНИЕ СТРАХОВАНИЯ В СЕЛЬСКОМ ХОЗЯЙСТВЕ:
МИРОВОЙ ОПЫТ, АНАЛИЗ ТЕКУЩЕЙ СИТУАЦИИ, ПЕРСПЕКТИВЫ**

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Annotation. The work focuses on the role of insurance to support sustainable agricultural production in economically developed countries, the importance of public-private partnerships in accordance with the potential of agro-industrial complex. *Purpose* – mechanism of state regulation of insurance of agricultural risks is considered using the example of the world experience, taking into account the situation in Kazakhstan. *Methods* – comparison and scientific generalization, review of literature sources on the topic. The study is divided into two stages: analysis of statistical sources on agricultural insurance at the international level from 2020 to 2023; study of domestic practice. *Results* – advantages and disadvantages of various approaches to insurance of agricultural activities with state participation have been identified. Recommendations for improving the insurance system of agricultural crops and animals in the republic are substantiated, including precise definition of responsibilities and conditions of participation for insurance firms, increasing the level of subsidizing premiums, ensuring the availability of information for farmers and cre-

ating a legislative framework. The work also notes the need to adapt international experience to Kazakhstan's national characteristics. *Conclusions* - state support for compensation of damage caused by natural disasters, the implementation of the proposed measures will significantly increase the efficiency of agricultural insurance in the country, ensure protection of the interests of farms, stable development of agricultural sector and minimize risks for agricultural producers. The legal mechanism of insurance in agro-industrial complex requires improvement. As a basis for regulation, it is necessary to establish constructive dialogue between stakeholders. To assess the condition of agricultural crops, the use of space monitoring data is of great importance. Agricultural insurance is a potential growth segment and factor in food security in Kazakhstan.

Аңдатпа. Жұмыста экономикалық дамыған елдердегі тұрақты Ауыл шаруашылығы өндірісін қолдау үшін сақтандырудың рөліне, агроөнеркәсіптік кешеннің әлеуетіне сәйкес мемлекеттік-жекешелік әріптестіктің маңыздылығына назар аударылған. *Мақсаты* - Қазақстандағы жағдайды ескере отырып, әлемдік тәжірибе мысалында аграрлық тәуекелдерді сақтандыруды мемлекеттік реттеу тетігі қаралған. *Әдістері* - салыстыру және ғылыми жалпылау, тақырып бойынша әдеби дереккөздерге шолу жасау. Зерттеу екі кезеңге бөлінеді: 2020 жылдан 2023 жылға дейін халықаралық деңгейде агроқұрылым бойынша статистикалық дереккөздерді талдау; отандық тәжірибені зерттеу. *Нәтижелері* – мемлекеттің қатысуымен ауыл шаруашылығы қызметін сақтандырудың әртүрлі тәсілдерінің артықшылықтары мен кемшіліктері анықталған. Республикада ауыл шаруашылығы дақылдары мен малдарды сақтандыру жүйесін жетілдіру бойынша ұсынымдар, оның ішінде сақтандыру фирмаларының міндеттері мен қатысу шарттарын нақты айқындау, сыйлықақыларды субсидиялау деңгейін ұлғайту, фермерлер үшін ақпараттың қолжетімділігін қамтамасыз ету және заңнамалық база құру негізделген. Сондай-ақ, жұмыста халықаралық тәжірибені қазақстандық ұлттық ерекшеліктерге бейімдеу қажеттілігі де атап өтілген. *Қорытындылар* - табиғи апаттардан келтірілген залалды өтеу кезінде мемлекеттік қолдау, ұсынылған шараларды іске асыру елдегі аграрлық сақтандырудың тиімділігін едәуір арттырады, фермерлік шаруашылықтардың мүдделерін қорғауды, аграрлық сектордың тұрақты дамуын қамтамасыз етеді және ауыл шаруашылығы өндірушілері үшін тәуекелдерді азайтады. АӨК сақтандырудың құқықтық тетігі жетілдіруді талап етеді. Ережені реттеудің негізі ретінде мүдделі тараптар арасында сындарлы диалог орнату қажет. Ауыл шаруашылығы дақылдарының жай-күйін бағалау үшін ғарыштық мониторинг деректерін пайдаланудың маңызы зор. Ауыл шаруашылығын сақтандыру-өсудің әлеуетті сегменті және Қазақстанның азық-түлік қауіпсіздігінің факторы болып табылады.

Аннотация. В работе акцентируется внимание на роли страхования для поддержки устойчивого сельскохозяйственного производства в экономически развитых странах, значимости государственно-частного партнерства соответственно потенциалу агропромышленного комплекса. *Цель* – рассмотрен механизм государственного регулирования страхования аграрных рисков на примере мирового опыта, с учетом ситуации в Казахстане. *Методы* – сравнения и научного обобщения, обзор литературных источников по теме. Исследование разделяется на два этапа: анализ статистических источников по агрострахованию на международном уровне с 2020 по 2023 гг.; изучение отечественной практики. *Результаты* – выявлены преимущества и недостатки различных подходов к страхованию сельскохозяйственной деятельности с участием государства. Обоснованы рекомендации по совершенствованию системы страхования сельскохозяйственных культур и животных в республике, включая точное определение обязанностей и условий участия для страховых фирм, увеличение уровня субсидирования премий, обеспечение доступности информации для фермеров и создание законодательной базы. В работе также отмечается необходимость адаптации международного опыта к казахстанским национальным особенностям. *Выводы* – государственная поддержка при возмещении ущерба, причиненного стихийными бедствиями, реализация предложенных мер значительно повысит эффективность аграрного страхования в стране, обеспечит защиту интересов фермерских хозяйств, стабильное развитие аграрного сектора и минимизирует риски для сельскохозяйственных производителей. Правовой механизм страхования в АПК требует совершенствования. В качестве основы регулирования положения необходимо установить конструктивный диалог между заинтересованными сторонами. Для оценки состояния сельхозкультур большое значение имеет использование данных космического мониторинга. Сельхозстрахование – потенциальный сегмент роста и фактор продовольственной безопасности Казахстана.

Key words: agro-industrial complex, agricultural producer, agricultural risks, insurance companies, insurance of crops and animals, government regulation, legislative framework.

Түйінді сөздер: агроөнеркәсіптік кешен, ауыл шаруашылығы тауарын өндіруші, ауыл шаруашылығы тәуекелдері, сақтандыру фирмалары, ауыл шаруашылығы дақылдары мен малдарды сақтандыру, мемлекеттік реттеу, заңнамалық база.

Ключевые слова: агропромышленный комплекс, сельхозтоваропроизводитель, сельскохозяйственные риски, страховые фирмы, страхование сельскохозяйственных культур и животных, государственное регулирование, законодательная база.

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Introduction

In recent years, the global agricultural landscape has witnessed significant transformations, marked by unprecedented challenges and opportunities. The escalation of natural disasters, economic uncertainties, and shifting climatic patterns have underscored the urgent need for robust risk management strategies within the agricultural sector. Amidst these dynamics, agricultural insurance has emerged as a pivotal instrument for safeguarding the livelihoods of farmers and ensuring the resilience of agricultural economies.

The Republic of Kazakhstan stands at a critical juncture in its agricultural development journey, grappling with the imperative to fortify its agricultural resilience amidst a backdrop of evolving climatic conditions and economic uncertainties. Recognizing the pivotal role of agricultural insurance in mitigating risks and enhancing the sustainability of the agricultural sector, Kazakhstan has embarked on a journey to bolster its agricultural insurance mechanisms.

The present study endeavors to delve into the intricacies of agricultural insurance in Kazakhstan, shedding light on its current state, challenges, and opportunities. The overarching goal of this research is to provide insights into the efficacy of existing agricultural insurance schemes and propose recommendations for their enhancement.

This study is guided by the following objectives:

- to assess the current landscape of agricultural insurance in Kazakhstan, examining the scope of coverage, participation rates, and effectiveness of existing schemes;
- to identify the challenges and barriers hindering the widespread adoption of agricultural insurance among farmers in Kazakhstan;
- to explore international best practices and experiences in agricultural insurance, drawing parallels and insights that could inform the enhancement of Kazakhstan's agricultural insurance framework;
- to propose actionable recommendations aimed at improving the accessibility, efficiency,

and effectiveness of agricultural insurance in Kazakhstan.

Working Hypotheses. In pursuit of these objectives, the study operates under the following working hypotheses:

* government subsidies play a pivotal role in incentivizing farmer participation in agricultural insurance schemes;

* communication and transparency are essential factors in fostering farmer trust and engagement in agricultural insurance programs;

* the adoption of dedicated legislation specific to agricultural insurance could catalyze the development of a robust and sustainable insurance framework in Kazakhstan.

Through a comprehensive exploration of these hypotheses and objectives, this study endeavors to contribute to the ongoing discourse on agricultural resilience and risk management in Kazakhstan. By elucidating the nuances of agricultural insurance and offering pragmatic recommendations, this research aims to pave the way for a more resilient and sustainable agricultural sector in Kazakhstan.

Literature Review

According to estimates by the Food and Agriculture Organization of the United Nations, the world is experiencing an increase in natural disasters. Their economic consequences are significant for agriculture, which accounts for 26 percent of the total losses. For countries with pronounced continental characteristics, such as Kazakhstan, agricultural insurance is particularly relevant (Agricultural insurance is a profitable business) [1]. The global coronavirus pandemic, followed by the global political-economic situation, has affected all economic sectors, including agriculture in Kazakhstan. It has been significantly influenced by three main factors: a decrease in the tenge exchange rate, fluctuations in demand, and disruptions in the global supply chain due to restrictions on movement between countries.

Sustainable agriculture is of paramount importance for the sustainable development

agenda until 2030. Agricultural production inherently involves risks due to unstable climatic conditions, crop losses from pests, price fluctuations of crops and/or inputs, limited access to inputs, and so forth. These risks and losses pose a perennial problem for 510 million smallholder farmers worldwide. Risk mitigation tools can play a crucial role in ensuring livelihood security and aiding vulnerable and poor households in overcoming shocks. However, risk-reduction tools, such as insurance, have not been widely adopted (Siddiqui Z.) [2].

Government support for agricultural insurance is a subject of interest in the literature. Studies have shown that subsidizing insurance premiums is an effective way to support small and medium-sized agricultural enterprises and ensure the economic stability of the industry (Turysbek A.K., Kantarbayeva Sh.M.) [3]. It has been identified that the effectiveness of government financing for insurance risks in agriculture has a significant impact on the development of the industry (Semenova N.N., Averin A.Yu.) [4]. However, the current model of agricultural insurance with government support in Russia has received criticism for its insufficient effectiveness in providing insurance protection and the lack of stimulation for investment activities among agricultural producers (Maslova V.V., Savkina G.M.) [5].

It has been suggested that improving the mechanism of agricultural insurance requires establishing equitable relationships among participants and creating a state-owned insurance company specializing in agricultural insurance (Nafi'ah B.A.) [6]. The use of insurance mechanisms in government support for agriculture has been studied in developed countries, and it has been found that public-private partnerships and specific disaster relief programs are effective in providing insurance coverage for farmers (Iskandarov A.M.) [7]. Furthermore, it has been argued that the state should primarily support insurance against investment risks in agriculture to attract efficient investors and ensure more rational use of public funds (Yekimov S., Kobernik S., Kuchareva O. et.al) [8].

Temesgen B. studied the impact of implementing weather index-based crop insurance (IBI) on food consumption and investments in agricultural resources using the Difference-in-Differences (DiD) estimator (Belissa Temesgen K.) [9]. The results indicate that the adoption of insurance led to an increase in food consumption and investments in high-risk, high-return agricultural resources.

Ma Qianting et al. identified the mechanism of climate change impact on the credit

risk of rural financial institutions using a multi-agent model. The results show that: (i) climate change has a negative influence on the credit risk of rural financial institutions; (ii) agricultural insurance demonstrates a threshold effect in the process of climate change, affecting the credit risk of rural financial institutions; (iii) high-level agricultural insurance can mitigate the adverse impact of climate change on the credit risk of rural financial institutions.

This indicates that agricultural insurance is an important policy for precautionary measures (Ma Qianting, Zhou Yueshu, Wang Jiayi) [10]. In his 2005 study, Wenner argued that agricultural insurance is once again becoming a subject of interest, particularly in light of the need to enhance the competitiveness of agriculture in increasingly integrated commodity markets (Wenner M.) [11]. This serves as a compelling rationale for providing government support to farmers both in terms of fairness and effectiveness.

By expanding access to assets and providing transfers in case of shocks, social protection programs can play a crucial role in agricultural insurance (Hill R.V., Torero M.) [12]. However, the challenge lies in overcoming obstacles and providing effective and sustainable agricultural insurance products. Key obstacles include the lack of quality information, inadequate regulatory frameworks, weak supervision, absence of actuarial expertise, lack of professional experience in product development and monitoring of agricultural insurance, a multitude of underprivileged and fragmented clients who may not desire or be able to afford actuarially justified premiums for multi-risk products, as well as governments' tendency to undermine market development through improper subsidy and disaster relief fund utilization.

A significant supply-side obstacle to providing agricultural insurance in developing countries is the lack of infrastructure support for agricultural insurance (Giller K.E., Hijbeek R., Andersson J.A. et al.) [13].

Materials and methods

The object of the study is the international experience of agrarian insurance. A review and analysis of various sources of information on international experience in the field of agrarian insurance were conducted to identify the peculiarities of insurance operations and government support. Data were collected from various sources, such as official documents of government structures, statistical reports, as well as publications in scientific and practical journals and internet resources. Key themes related to agrarian insurance, such as gov-

ernment support, subsidization of insurance premiums, types of insurance, examples of successful practices, and problems faced by different countries in implementing agrarian insurance systems, were identified during the analysis. The main terms and concepts used in the context of agrarian insurance were also identified.

Additionally, a comparative analysis of legislation and regulatory acts regulating agrarian insurance in different countries was conducted to identify common trends and features.

The synthesis of the information obtained was used to develop recommendations for the development of agrarian insurance in Kazakhstan.

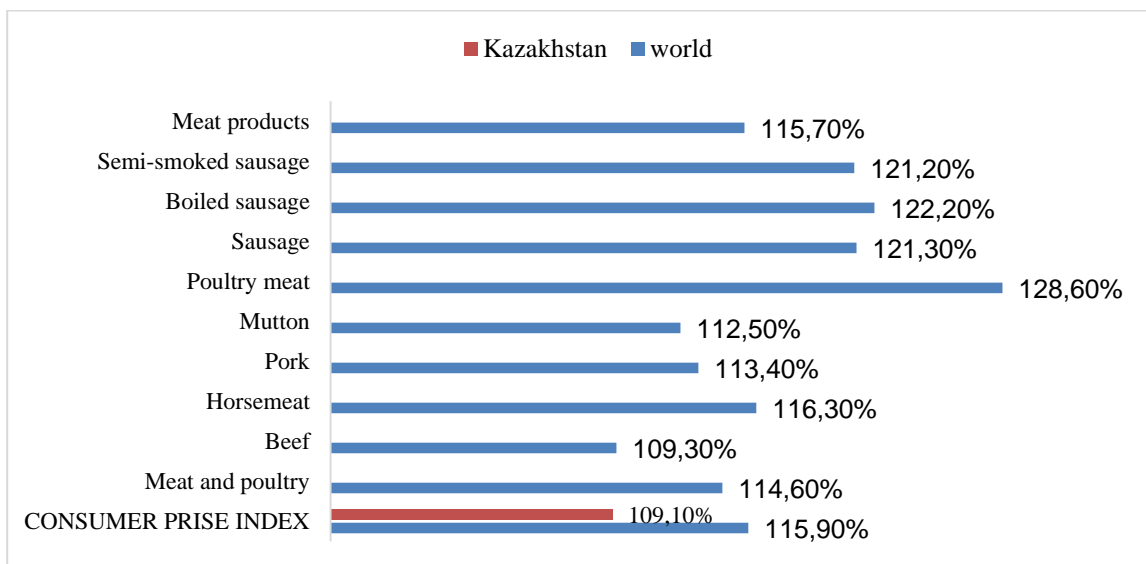
Results

International experience of state support for agricultural insurance is characteristic of most countries worldwide. According to data from the National Crop Insurance Union, we see that the level of insurance coverage in wheat-producing competitor countries ranges

from 15% to 90%, while in our country, it is less than 2%. This indicates the need for the development and improvement of the mechanism of agricultural risk insurance used in our country (Boranukov M.) [14].

International experience in agricultural insurance: In 2023, the resumption of economic growth, consumer spending, and demand from service sector enterprises contributed to a 14.2% increase in the index. Additionally, further disruptions and issues related to global food and energy supply chains are expected to exert upward pressure on agricultural product prices. It is anticipated that in 2024-2025, some of these factors will weaken, leading to a slight decrease in the index.

As an example, let's consider the Consumer Price Index (CPI) in the meat industry. Over the year, the CPI for meat products increased by 15.7%, for poultry it increased by 28.6%, and for semi-smoked and boiled sausages, the price rose by 21-22% (figure 1).



Note: compiled by the authors based on sources (Agricultural Price Index) [15]

Figure 1 – Consumer price index for meat and meat products in the world, 2024 (% of 2023)

Figure 1 presents the consumer price index (CPI) for meat and meat products worldwide in 2024 compared to 2023. During the year, the consumer price index for meat products increased by 15.7%, for poultry - by 28.6%, and prices for semi-smoked and boiled sausages increased by 21-22%. The data illustrates significant price increases for major meat products, which may be due to a variety of factors, such as disruptions in global food and energy supply chains and increased demand for consumer goods. Data analysis shows that in conditions of instability in world markets, supporting the agricultural sector

through insurance and subsidies becomes even more important for stabilizing prices and ensuring food security. During the period from 2020 to 2023, there was a rapid expansion and development of the range and volume of insurance products offered to producers. Much of this expansion is attributed to a wide range of government support, including premium subsidies, subsidies for delivery expenses, loss adjustment, and the provision of reinsurance services by the government. Table 1 below shows the top ten countries with the highest subsidies for both livestock insurance and crop insurance in 2023.

In the United States, this amounts to 64 percent of the total premium of the top ten countries (\$8.5 billion), followed by Japan at 8.3 percent (\$1.1 billion) and Canada at 8.2 percent (\$1.09 billion). Regarding premium subsidies, the United States still accounts for 59 percent, or \$3.8 billion. Spain follows with 8.9 percent, or \$581 million, and Japan with 8.5 percent of insurance subsidies, or \$546 million (table).

Most European countries, as well as the United States, China, and Turkey, utilize subsidies for insurance premiums under agricultural risk insurance contracts as the primary form of government support. At the same time, it should be noted that 90% of the collected insurance premium is allocated to crop insurance, as this sector is more susceptible to adverse weather factors and is considered the riskiest.

Table - Top 10 Providers of Subsidies for Livestock and Crop Agricultural Insurance in 2023 (in million dollars)

Countries	Premium	% to prem	Premium Subsidy	Premium Subsidy as % of total prem	% to total premium subsidy
USA	8,5	63,6	3,8	0,5	59,2
Spain	809,0	6,1	581	0,7	8,9
Japan	1,1	8,3	549	0,5	8,5
Canada	1,1	8,2	546	0,0	8,5
Italy	383,0	2,9	280	0,7	4,3
China	682,0	5,1	283	0,4	4,4
Russia	315,0	2,4	156	0,5	2,4
Iran	241,0	1,8	146	0,6	2,3
Mexico	142,0	1,1	62	0,4	0,9
South Korea	93,0	0,7	34	0,4	0,5
Total	13,4	100,0	6,5	0,5	100,0

Note: compiled by the authors based on sources (World Bank Group) [16]

Global agricultural insurance practice is based on laws and regulatory acts. Typically, laws address only basic approaches, while regulatory acts, depending on the needs of insurance participants, specify specific conditions and approve various insurance programs. A similar approach is used in the United States, Spain, and Turkey.

In the United States, the Federal Crop Insurance Corporation (FCIC) implements government-supported insurance programs. Such programs may be developed by insurers themselves in the future, and after their approval by the FCIC, they are also included in the system of government support. According to these insurance programs, government funds are allocated to compensate for the costs necessary to implement the program.

In the United States, over 10 major insurance programs are implemented in practice, including crop failure insurance, index-based insurance, and livestock insurance with various coverage options. In Spain, from 2020 to 2023, there were about 50 agricultural risk insurance programs with government support. To involve small-scale farming operations in agricultural insurance with government support in the United States, three mutual insurance companies operate. A similar experience is also utilized in Europe and Latin America.

According to global practice, small-scale farmers often prefer index-based insurance. This is an alternative to traditional types where the compensation amount depends on the impact of individual factors and is calculated based on a predetermined model. This type of insurance significantly simplifies the contract signing process and claims settlement but requires a large amount of preliminary work and data processing.

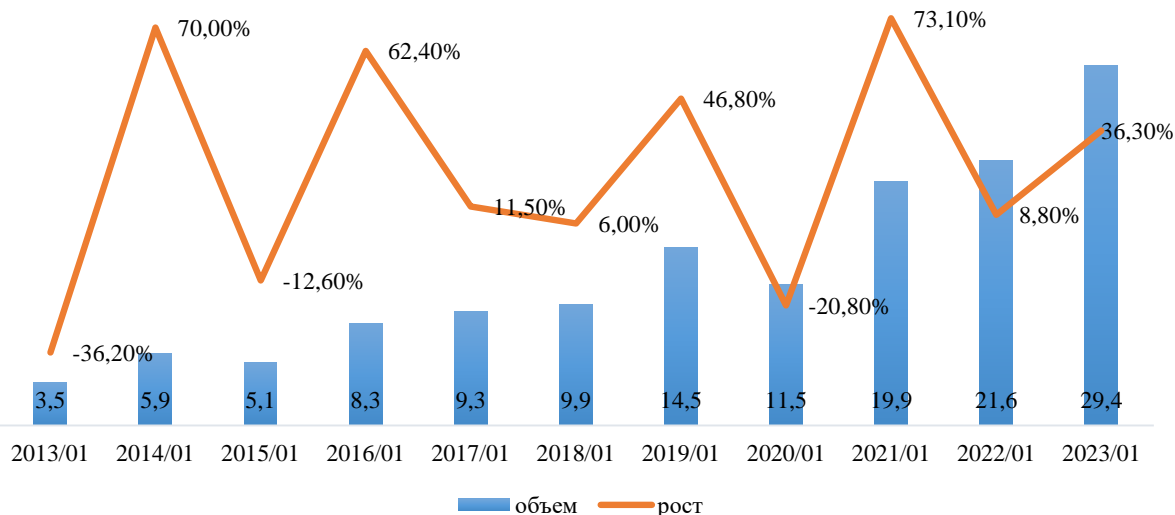
Approaches based on the analysis and adaptation of international experience can contribute to the improvement of agricultural risk insurance mechanisms in Kazakhstan. This could be the key to enhancing the resilience and competitiveness of the agricultural sector in the face of a volatile global economic environment.

Government support for agriculture in Kazakhstan includes subsidizing insurance premiums for agricultural producers to help them overcome the consequences of natural disasters and ensure economic stability in the agricultural sector. Kazakhstan adheres to a policy of sustainable agricultural development and encourages initiatives aimed at developing agricultural insurance. However, such programs face limitations such as limited budgetary resources, difficulties in determi-

ning the size of losses, and lengthy procedures for fund disbursement.

Funding for agriculture is increasing every year, and positive dynamics are observed in investments as well. In January 2023, the

volume of investments in fixed capital in agriculture, forestry, and fisheries reached 24.4 billion tenge, which is 36.3% higher in terms of value compared to January 2022 (actual growth in real volume - 33.7%, figure 2).



Note: compiled by the authors based on sources (Agricultural Price Index) [15]
 Figure 2 - Investments in fixed capital in agriculture, forestry and fisheries, 2013/01-2023/01 billion tenge

The voluntary agricultural insurance system in Kazakhstan started relatively recently, in 2020, but already demonstrates positive results. Today, such products as insurance against soil moisture deficit and excess, as well as insurance for agricultural animals, are available in the domestic insurance market. As part of the National Project for the Development of the Agro-Industrial Complex of the Republic of Kazakhstan for 2021-2025, one of the main tasks is to ensure domestic production of essential food products, including the production of apples (New agricultural insurance...) [17]. In 2022, a new direction was approved - insurance for apple orchards and apple crops for intensive and semi-intensive orchards.

Figure 2 illustrates the positive dynamics of investment in agriculture in Kazakhstan for the period from 2020 to 2023. The graph shows an increase in fixed investment in agriculture, forestry and fisheries, indicating growing interest and government support in the sector. A comparative analysis of data over the past four years shows significant growth, peaking in January 2023, when investment volume amounted to 24.4 billion tenge, an increase of 36.3% compared to January 2022. This growth is largely due to increased government subsidies and incentive programs aimed at supporting agricultural producers and increasing the sustainability of the agricultural sector.

The figure not only shows an increase in investment, but also highlights the importance of continued government support for agricultural development. This reflects Kazakhstan's desire for sustainable development of the agricultural sector and ensuring the country's food security. Improving the investment climate and attracting additional resources also contributes to increasing the competitiveness of agriculture at the international level.

Likewise, a similar insurance scheme is applied in livestock farming. For instance, a herd of 100 pedigree cattle is valued at 165 million tenge. By insuring this livestock, the insurance premium totals 2 541 000 tenge, with the farmer's contribution being only 508.200 tenge. The remaining sum is covered by government subsidies. In the event of an insured incident involving the 100 heads of cattle, the farmer could receive an insurance payout of up to 161.7 million tenge - nearly the entire value of the lost cattle due to death, illness, theft, or accidents.

All operations, starting from contract agreements to insurance disbursements, are streamlined and carried out through the online platform qoldau.kz. Domestic companies' risks are backed by reputable international firms, guaranteeing farmers payouts if an insured event occurs. The Agricultural Credit Corporation, a subsidiary of the "Baiterek" holding, serves as the operator for agricultural insurance (Agricultural insurance is a profitable

business) [1]. Each year sees an increase in the number of contracts concluded and insured assets, indicating a growing interest in this type of insurance among Kazakhstani agricultural producers. For instance, according to the report of Agrarian Credit Corporation JSC, while there were only 163 contracts concluded in 2021 and 262 in 2022, the number rose to 371 contracts in 2023.

Agriculture in developed countries is more stable compared to conditions in Kazakhstan. However, the level of state support for agricultural risk insurance in these countries is significantly higher. This example underscores the recognition by developed countries of the importance of the agro-industrial sector in the economy, as evidenced by the provision of necessary support to reduce risks faced by farmers.

To improve farmers' quality of life and increase agricultural productivity, which can be a key factor in the country's economic development, it is important for Kazakhstan to develop its agricultural insurance system and provide corresponding state support to assist farmers in coping with the risks associated with agriculture.

Suggestion 1. Precisely outline the duties and terms of participation in the subsidy program for insurance firms. It's essential to focus on standard insurance offerings, protocols, reporting methods, and the engagement of insurers in public outreach efforts.

Suggestion 2. Explore the option of raising the subsidy level for agricultural insurance premiums (up to 70% or 80%) to encourage farmers' engagement in the new subsidized agricultural insurance scheme. This could be seen as a short-term measure over the next 3-5 years, pending government approval. If this approach is accepted, it's essential to communicate to farmers that the increased subsidy on premium rates will be temporary, aiming to enhance their understanding of the agricultural insurance mechanism.

Suggestion 3. Ensure farmers stay updated on the program's advancement by providing updates on its effectiveness, notably through statistical insights on insurance disbursements, the quantity of farmers receiving compensation, geographical coverage, and the promptness of these disbursements. Disseminate this information via diverse mediums such as printed leaflets, radio broadcasts, TV announcements, and social media posts. It's advisable to share details about disbursements at the conclusion of each agricultural season and prior to the commencement of the new insurance season, preceding the planting period.

It is important to note that Kazakhstan lacks a dedicated law specifically regulating

subsidized agricultural insurance and its operational framework. The legal environment for the current subsidized crop insurance program is overseen by directives issued by the Ministry of Agriculture.

Suggestion 4. Explore the potential adoption of a dedicated legislation concerning state-supported agricultural insurance. This initiative could facilitate the establishment of a framework for a collaborative effort between the public and private sectors, guiding their operational dynamics and interactions specifically tailored to the requirements of the subsidized agricultural insurance initiative. Such legislation could introduce clear criteria for participating insurers, mandate more coherent reporting mechanisms regarding program progress, oversee the implementation process, and monitor subsidy allocation in the future. Ultimately, this could foster greater confidence among farmers in government-supported agricultural insurance products moving forward.

Suggestion 5. Set up a central data hub to gather and manage various kinds of information essential for agricultural insurance purposes and coordinate the collection of agricultural insurance data from different sources like Qoldau, the National Statistics Bureau, and the insurance market regulator. These data resources will enable thorough analysis of the entire agricultural insurance program and subsidized agricultural insurance, providing valuable insights for future program improvements and strategic planning.

In Kazakhstan, there are numerous challenges to overcome in order to increase the volumes of the subsidized agricultural insurance program (number of contracts, total premiums, total insured amount). It is also important to gain the trust of farmers in agricultural insurance and offer them new insurance solutions in addition to the existing soil moisture index insurance program. Currently, stakeholders from both the public and private sectors demonstrate a shared commitment to the continuous development of the agricultural insurance market in Kazakhstan in the coming years.

Agriculture in developed countries is more stable compared to conditions in Kazakhstan. However, the level of government support for agricultural risk insurance in these countries is significantly higher. This example highlights the awareness of developed countries of the importance of the agro-industrial sector in the economy, which is expressed in the provision of the necessary support to reduce the risks faced by agricultural producers.

The results of the study confirm that insurance is an effective mechanism for ensuring the sustainable development of agricultur-

al production. State support and the development of public-private partnerships in the field of agricultural insurance will increase the availability of risk insurance for farmers and agricultural producers.

Discussion

The findings of this study underscore the importance of insurance as a vital mechanism in supporting sustainable agricultural production, especially in the context of developing countries like Kazakhstan. By analyzing international experiences, it is evident that government subsidies and public-private partnerships play a crucial role in enhancing the effectiveness and accessibility of agricultural insurance.

One of the key insights is the significant disparity in the level of governmental support for agricultural insurance between developed and developing countries. In developed nations, substantial governmental backing ensures comprehensive coverage and high compensation for agricultural losses, thereby stabilizing the agricultural sector. This model could serve as a benchmark for Kazakhstan, where agricultural producers often lack sufficient insurance coverage due to limited awareness and inadequate state support.

The study reveals that commercial agricultural insurance tends to prioritize profitability over the protection of farmers. This highlights the necessity for state intervention to ensure that agricultural insurance schemes are accessible and provide adequate compensation. The introduction of dedicated legislation for state-supported agricultural insurance in Kazakhstan could establish a robust framework, ensuring transparency, accountability, and efficient use of public funds. Furthermore, the research identifies the critical need for enhancing farmers' awareness of available insurance options. Effective communication strategies and educational programs are essential to bridge this knowledge gap, thereby increasing participation in insurance schemes.

The study's recommendations, including the adoption of a centralized data hub and the establishment of specific legislation, aim to foster a more resilient agricultural insurance system. These measures can enhance the trust of farmers in insurance products and encourage broader participation, ultimately contributing to the sustainability and stability of Kazakhstan's agricultural sector.

Conclusion

1. The study examined international experience in insuring agricultural risks, and also revealed the features of insurance operations and state support for agricultural insurance in 2020-2023.

2. Commercial agricultural insurance is more focused on profit-making by insurance companies rather than protecting agricultural producers. Therefore, state support for agricultural insurance should ensure accessibility and wide coverage of agricultural insurance with high compensation for losses based on the effective use of public funds.

3. Income insurance promotes deeper cooperation between public authorities and private insurance companies, implementing the principle of insurability of catastrophic risks based on the offer of products with a high level of government support.

4. In Kazakhstan, there is a problem of lack of awareness of agricultural producers about the possibilities of agricultural insurance and the choice of the most suitable insurance program. This factor leads to insufficient coverage of agricultural risks and a decrease in the effectiveness of the state support program.

In conclusion, the integration of international best practices, coupled with tailored solutions addressing local challenges, can significantly improve the agricultural insurance landscape in Kazakhstan. Implementing these recommendations will not only protect farmers but also ensure the long-term viability of the agricultural industry in the region.

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