

## TO THE QUESTION OF METHODOLOGICAL BASES OF FUTURE HARVEST INSURANCE IN AGRICULTURE

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### ABSTRACT

The article considers the goals and objectives of state regulation of insurance in agricultural production, the theoretical aspects of insurance as a method of managing agricultural risks, the demand and supply for insurance services for future crops. Considerable attention is paid to the methodological principles of actuarial work of insurance organizations in the justification system of tariff systems and underwriting policies.

**KEY WORDS:** state regulation of insurance in agriculture, agricultural risks, insurance of future crops, underwriting.

### INTRODUCTION

The most important industry of the Republic of Uzbekistan is agriculture. In the "Strategy of Action on the Five Priority Directions of the Development of the Republic of Uzbekistan in 2017-2021," approved by Decree of the President of the Republic of Uzbekistan dated February 7, 2017 No. UP-4947, the main attention is paid to the modernization and intensive development of agriculture.

The most important tasks of the republic's agriculture are to strengthen the country's food security, increase the production of environmentally friendly products, and significantly increase the export potential of the industry.

In addition, the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 505 dated June 17, 2019 adopted the "Regulation on the insurance procedure for the future harvest of raw cotton and cereal crops", which provided for extremely important issues of insurance protection against agricultural risks [2].

The state insurance policy in the agricultural production of the Republic of Uzbekistan requires an adequate concept of insurance protection for the income of rural producers, depending on fluctuations in the gross harvest of crops, since in agricultural production, due to its high dependence on natural and climatic factors, the general methods of risk management are not always applicable. The government's attempts to legislate some conceptual principles for this protection and provide it with state subsidies have faced the problem of the lack of a methodology for insurance of future crops in a voluntary form and in a competitive market. The old methodology as a system of methods and principles that determine the scientific knowledge and study of compulsory insurance of this type in the monopoly market has outlived itself, the new one is just beginning to take shape.

Development of a new methodology, which includes theoretical studies of the goals and objectives of the state in the regulation of insurance processes, methods for creating new and evaluating existing insurance tariffs, principles for building rating systems, researching the insurance field, assigning future crop insurance to the industry classification system, determining the insurance object, insurance dangers and insured events, tariff policy, underwriting procedures, methods of formation and use of insurance reserves, receives the status of an important economic task and therefore relevant.

In addition, the relevance of the topic of this scientific article is determined by the need for insurance practice to compile and analyze the existing experience in providing insurance coverage to rural producers in a mandatory form, to identify and explain the causes of contradictions in this process, the patterns of supply and demand in this sector of the insurance market, restrictions and opportunities arising from the provisions of the Civil Code of the Republic of Uzbekistan, studies of foreign analogues of agricultural insurance and their possible adaptation to the economic conditions of the Republic of Uzbekistan.

### LITERATURE REVIEW

Methodological and organizational foundations of agricultural production risk insurance were laid in the XIX century. L. Grass. He is the founder of the principle of insurance for future crops, which subsequently with varying degrees of completeness was embodied in the insurance practice of our country, but also abroad.

However, in his works, as well as in the works of his contemporaries V. Targonsky, A. Brandt, F. Keppen, methodological methods for calculating tariff rates were mainly studied, since it was believed that they were the weakest link in the insurance process. The problems of the form of insurance, insurance interest and motivation, risk assessment, theoretical justification of the design of the insurance contract and its essential conditions were either of secondary importance or did not arise at all.

In Soviet times, the problem of crop failure insurance was solved in the fundamental works of V. Gokhman (1929), and much later (70-80s) - in the works of N. Gladkov, F. Gulyaev, V.E. Kolomina, L.A. Motyleva, V.I. Mikhailova, L.K. Nikitenkova. Each of these authors, in its own way, substantiated the need for a state monopoly on insurance operations and the need for an exclusively mandatory form of crop insurance. The issue of insurance of the risk of losses from entrepreneurial activities of agricultural producers was not raised at all. The development of agricultural insurance ideas was continued by V. Kulikov, P. Polovinkin, A. Pleshkov, M. Shermenev, who formed the theory of centralized state reservation of financial resources for compensation for damages arising, including in agricultural production. Only at the end of the 90s of the XX century did L. Bondarenko's monograph appear, in which many well-established and, nevertheless, contradictory methodological and methodological principles prevailed in insurance theory and practice were subjected to critical analysis. Insurance of the risk of losses from entrepreneurial activity has acquired the character of an intersectoral problem, the solution of which required additional research in the field of risk management, law, hydrometeorology, and agronomy. Journal publications L.K. Vologdina, V.N. Semenova, M.P. Kazakova, Yu.S. Volovik, A.N. Lebedeva, R. Chernia (problems of agricultural insurance in a market and its state regulation), as well as R. King, D.J. Liteam, J.V. Richardson, B.A. Carla Mack (on Farmer Insurance in Western Countries) ushered in a new stage in the study of this diversified problem.

Nevertheless, many of its aspects remain unresolved. If questions of conceptual approaches to organizing insurance for future crops as a whole have received theoretical justification, then such elements of the insurance process itself as underwriting, tariff policy and rating, differentiation of insurance premium rates for risky types of insurance, methodological methods for assessing the sufficiency of insurance rates, problems of organizational interaction participants in the insurance process for future crop insurance, the suitability of weather forecasts for insurance work and the specific features of the formation of the technical reserves of the insurer, remain only indicated. Their solution requires additional research in the field of insurance theory.

Research methodology, analysis and results.

Agricultural risks have a number of specific features, which include the catastrophic nature of its distribution over time, its connection with living organisms, and not always the unconditional connection of risk hazard and impending damage. In the risk management system, agricultural risk should be included in the category of production risks, which are accompanied by damage that causes disruptions in the normal production process and loss of income of agricultural producers.

The evolution of conceptual approaches to the organization of crop insurance in the XIX-XXI centuries. led to the formation of its new principles. They became: the use of a proportional insurance system, the use of insurance technologies in a competitive market environment, the voluntary form of insurance, the participation of state subsidies in the payment of insurance premiums, the obligatory reinsurance coverage in the national insurance reserve and the existence of a special departmental structure (Gosstraznadzor) that coordinates the work of individual insurance organizations. The full implementation of these principles is difficult due to their lack of methodological and methodological research.

The results of the study prove that this type of insurance protection refers to business risk insurance.

Insurance of entrepreneurial risk takes an intermediate place among the types of insurance of a particular property and liability, therefore, its object has the signs of a specific property and liability (property interests associated with all elements of ownership of a particular property). When insuring the risk of losses from entrepreneurial activities of rural producers (future crop insurance), the insurance object is a single set of property (crops) and property interests aimed at producing the future gross crop of crops.

An insured event when insuring a future crop should be adverse weather conditions, other hazards that cause a decrease in yield and a complete loss of crops.

The death of crops over the entire area of the insured crop should be considered as a separate insured event, for which it is necessary to calculate a separate insurance rate.

The insurance rate is the rate by which the insurer determines the price of the insurance product - the insurance premium. As an insurance product, it is necessary to consider a document (insurance policy or a separate contract), which sets forth the totality of mutual obligations of the insurer and the policyholder regarding the formation and use of the insurance fund of the insurer.

Based on the functional approach, insurance products can be divided into several groups: net insurance products (in which the risk function is implemented exclusively), accumulative insurance products (which combine the accumulative and risk functions) and quasi-analog insurance products, which include products distributed under compulsory insurance. When insuring a future crop, the insurer sells net risk insurance products.

The net tariff rate for future crop insurance may include two net rates - in the event of a decrease in yield and in the event of a complete loss of crop over the entire insured area. This division of the net rate can be used by the insurer in the development of the tariff policy and underwriting policy.

Under the tariff policy should be understood the activities of the insurance company aimed at pricing insurance products depending on risk factors and the ability of the insurer to provide their insurance coverage. The aim of the tariff policy should be to achieve, using pricing methods, the financial stability of the entire insurance organization and the profitability of certain types of insurance. Purposeful activities for the establishment, refinement, streamlining and differentiation of insurance rates should be indicated by the term "tariffing".

When insuring the future crop, it is necessary to develop a more detailed (differentiated) system of tariff rates, which would include taking into account risk factors in different weather conditions, as well as the features of agricultural production in farms of different groups of insurers.

Underwriting as a risk assessment procedure is currently only beginning to be mastered in the Russian insurance market and is successfully applied in those types of insurance, the principles of which are uniquely defined and have no conceptual contradictions.

When insuring a future crop, Russian insurers do not yet use underwriting as a risk assessment tool. This is due to the fact that insurance tariffs are being developed by the manager of insurance subsidies, the Ministry of Agriculture of the Russian Federation, tariff rates have no differentiation by type of damage, insurance rules are not focused on the offer of individual insurance levels. Therefore, insurers are limited only to the assessment of damages and the payment of insurance claims.

Underwriting procedures and the study of their capabilities when insuring the future crop allows us to find solutions related to the development and improvement of this type of insurance operations and the elimination of hidden contradictions in its concept.

In future crop insurance, carried out with the participation of state support, there are still no reliable actuarial methods for calculating insurance rates. This is due, in particular, to the fact that the issues related to the determination of the insurance object and insurance risk (damage caused by insurance risk) remain debatable. The lack of actuarial techniques in this type of insurance leads to conflicting attitudes in deciding who should be the prerogative of the setting of tariff rates - by government departments or local insurers. Prior to its decision, rates are set by the Ministry of Agriculture of the Republic of Uzbekistan, however, the question of their adequacy to ensure the insurance process remains open.

Crop insurance is characterized by a derivative type of catastrophic risk, which we call catastrophic risk with an increased frequency of fluctuation in loss ratio. Therefore, for this type of insurance, it is necessary to form a reserve for fluctuations in loss ratio. Its sources should be the amount of technical reserves that remain after the settlement of losses, and part of the investment income.

Future crop insurance as a type should be included in the second accounting group of types of insurance, which governs the method of forming an unearned premium reserve. Moreover, the specified reserve should be formed as the basic insurance premium until the insurance contract is fully expired.

When insuring the future crop, which is carried out as state voluntary insurance, it is necessary to change approaches to the methods of formation and use of the reserve of preventive measures. This reserve should not be directed to financing organizations that carry out repressive and preventive measures in the agricultural sector, but to financing specific work to reduce the risk of falling yields in specific insured farms. The amount of deductions to the RPM should be increased for the sole purpose: the more funds will be spent on preventive measures, the less will be the technical risk of the insurer, the less will be the load on the technical reserves of the insurance organization.

Traditional signs of the tariff policy in the conditions of the insurance market have ceased to show themselves as the main ones. A new definition is formulated, according to which the tariff policy should be understood as the activity of the insurer aimed at the formation of the market price of insurance products depending on risk factors and the ability of the insurer to protect the insured objects.

The demand for insurance products for crop insurance is characterized not only by the dynamics of the indicator of payment of accrued insurance payments and payment of them at the expense of insurers' own funds, but also by accrued insurance compensation, which shows the degree of interest of rural producers in repaying losses arising from decentralized insurance funds.

The demand for crop insurance is largely determined by the existence on the market of a free insurance substitute - compensation for part of the cost of dead crops from the state centralized reserves of the Ministry of Emergencies. A free product reduces the attractiveness of paid insurance services.

Insured events during future crop insurance should be adverse weather conditions and other dangers that cause a decrease in yield and complete loss of crops. The death of crops over the entire area of the insured crop should be considered as a separate insured event, for which it is necessary to calculate a separate insurance rate.

The material embodiment of the insurance service is an insurance product, which must be considered a document (insurance policy or a separate contract), fixing the set of mutual obligations of the insurer and the policyholder regarding the formation and use of the insurance fund of the insurer. The price of the insurance product (insurance premium) cannot be identified with the insurance rate. The insurance rate is the rate by which the insurance premium is determined (the price of the insurance product).

Underwriting is an intermediate procedure, during which the potential risk of the insured object is assessed and a decision is made to conclude an insurance contract. Prior to underwriting, an insurance product exists in the form of a "semi-finished product", it is not identified, has no price, because the risk does not have an adequate assessment.

The insurance field object is different from the insurance object. The main distinguishing feature is that the object of the insurance field always takes into account only specific types of property. The property interests of policyholders in assessing the size of the insurance field remain outside the surveillance area. Instead, the insurer examines information about the carriers of property interest - the insured themselves, who are potential consumers of the insurance product.

## **FINDINGS**

The study of the features of agricultural risk management by transferring them to insurance, the methodological and organizational foundations of insurance protection of entrepreneurial risk of agricultural producers showed the following.

In the risk management system, agricultural risk should be included in the category of production risks, which are accompanied by damage that causes disruptions in the normal production process and loss of income of agricultural producers.

The specific properties of agricultural risk are: its catastrophic nature of the distribution over time, communication with living organisms and not always an unconditional connection of risk hazard and impending damage. Agricultural risk is a complex risk, which may be accompanied by direct and indirect damage.

In the process of evolution of conceptual approaches to the organization of insurance protection against agricultural risks, there was a movement from mono-risk to multi-risk insurance. It was accompanied by changes in the understanding of the object and form of insurance, insured events and dangers.

At the end of the 20th - beginning of the 21st centuries, in connection with the demonopolization of the insurance market of the Republic of Uzbekistan, new conceptual principles were laid in the crop insurance organization system. They became: a competitive market environment, a voluntary form of insurance, participation of state subsidies in the payment of an insurance premium, mandatory reinsurance processes, the presence of a special departmental structure that coordinates individual insurers.

Despite the conditions for the use of market principles in crop insurance, this type of insurance still bears many signs of the previous methods of insurance coverage. This is largely explained by the fact that there is still no specification of the goals and objectives of state regulation of insurance in the agricultural sector.

An attempt to fill this gap made it possible to formulate goals and objectives as follows. The preliminary goals of state regulation should become the basis of the concept of insurance for future crops, since they contain guidelines for the level of compensation for lost profits of rural producers and the possibility of using an insurance policy as a guarantee document in the credit system. Intermediate goals are to form additional sources of capital investment in the development of agricultural infrastructure through a reserve of preventive measures, as well as mitigate the impact of weather conditions on the income level of crop enterprises. The ultimate goals of state regulation should be: stabilization of agricultural production, ensuring food security of the country, convergence of income levels of agricultural and industrial workers, as well as reducing the burden on the federal reserve of the Ministry of Emergencies due to the formation of decentralized insurance reserves.

In the current practice of insurance for future crops, the steady positive dynamics of accrued insurance premiums may indicate an increase in the supply of insurance products from insurance companies. The latter are interested in expanding insurance operations, since the more contracts they conclude, the more payments go into their accounts.

The demand for insurance products for insurance of future crops is characterized not only by the dynamics of the indicator of payment of accrued insurance payments at the expense of the insurers' own funds, but also by accrued insurance compensation, which shows the degree of interest of rural producers in repaying losses arising from decentralized insurance funds.

The most important methodological problem of future crop insurance is determining the place of this species in the industry classification system. Its decision is a key link that affects all other methodological and methodological foundations of the insurance process.

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