



IMPROVEMENT OF INSURANCE ACTIVITIES OF AGRICULTURAL ENTERPRISES

Yadgarov Akram

International School of Finance Technology and Science

| Article history: | Abstract: |
|---|---|
| <p>Received: 10th April 2024 Accepted: 8th May 2024</p> | <p><i>The agricultural sector of the economy is characterized by the seasonal nature of production activities and a large capital intensity. The material and technical resources used in economic activity have a low level of mobility, and the results of production and economic activity are highly dependent on natural and climatic conditions, the duration of the production cycle can last for several months. This determines the need for agricultural insurance. The rhinestone protection makes it possible to financially stabilize the income level of agricultural enterprises and can serve as an alternative to lending and subsidizing agriculture. In agricultural production, weak and small enterprises are most exposed to risks. The presence of state support for such enterprises, in our opinion, violates the principle of free competition and prevents the attraction of effective investors to the agricultural sector. We believe that the state in the agricultural sector of the economy should primarily support investment risk insurance, this will allow for a more rational use of public funds allocated to support agriculture, and attract investors' funds to the industry.</i></p> |
| <p>Keywords: <i>agricultural sector, agricultural insurance, income level of agricultural enterprises, support agriculture, funds to the industry.</i></p> | |

INTRODUCTION

Risk management and sustainability in agro-industrial production play an important role. These factors are the focus of studies that were reviewed in this special edition of the journal Agriculture. This Special Issue of Agriculture has been published with the aim of summarizing the international knowledge in the field of agricultural insurance, risk management in agriculture and rural sustainable development. Within the framework of this Special Issue, scientific research aimed at solving a set of problems to ensure the development of agriculture will be presented, namely: Conducting agricultural production in risky conditions, the use of risk reduction tools and the development of agricultural insurance; The development of scientific and practical potential in order to formulate proposals for the introduction of science-intensive technologies in agriculture; Popularization of fundamental and applied research in the field of agriculture, animal science, zoology, agronomy, plant growing and soil science; Formation of recommendations aimed at improving computer models, information technology, engineering and innovative or digital technologies in agriculture. In India, only 40 per cent of agricultural land in India is irrigated, while the remaining 60 per cent is subject to unpredictable weather patterns. Similarly, in Kenya, rain-fed agriculture accounts for about 80 percent of

total agricultural production. There is also evidence that rural women suffer more from climate-related events than men do, as 75 per cent of their income is dependent on agriculture. Agriculture insurance can help reduce the vulnerability of both women and men, households and enterprises that work in agriculture, by providing protection against crop losses due to natural disasters, such as drought, floods, hailstorms, pest attacks, disease outbreaks and other events that can damage crops or livestock. Agriculture insurance is a relevant mechanism to manage risks to help farmers to avoid financial losses and keep their businesses running. It aims to reduce the financial risk and uncertainty faced by farmers and help them manage their production and income more effectively. Insurance has become even more important as extreme weather events and climate change have increased the risks and uncertainties of farmers and agriculture-based enterprises. By reducing the financial risks associated with farming, agriculture insurance can help to promote stability and growth in the industry. In addition, agriculture insurance can improve access to credit for households and businesses, as lenders may be more willing to lend money to farmers who have coverage. This can help farmers to expand their operations and invest in new equipment or technology. Increasing awareness and understanding of insurance among



agriculture households and business and improving capacities of insurance providers – including insurers, aggregators and governments – needs continuous efforts. Working with local partners can increase knowledge and capacity on sustainable use and development of climate and agriculture insurance. Stimulating exchanges among relevant stakeholders can also help develop an inclusive insurance market and accelerate the offer of risk-management solutions for agricultural enterprises, households and individuals. Bundling or coupling agriculture insurance with other (non-)financial services offered by different stakeholders in the agriculture value chain, such as lenders, farm input providers and output buyers, can also promote adoption of insurance by making it more tangible for farmers.

LITERATURE REVIEW

The works of the following scholars, specializing in the ecological economics are devoted to studying the sustainable development methodology formation: J. Bartholomew, L. Brown, H. Daly, P. Davis, R. Constanza and others. Additionally, it is worth mentioning the research on the nature management carried out by the Russian scholars, such as T. Akimova, S. Bobylev, A. Golub, N. Pakhomova, I. Potravnoi, E. Ryumina and O. Shimova. G. Afanasiyev, A. Barinov, A. Gradov, V. Davydov, M. Yefimova, I. Larionov, Ye. Novoselov, V. Potemkin, V. Romanichev have investigated theoretical and practical issues of crisis management. N. Tom and J. Ruegg-Schturn have paid special attention to managing the changes, which are provoked by the crisis development. However, the contemporary crisis management studies do not take into account the sectoral peculiarities of the agricultural sphere and specific risks, characteristic of the integrated agricultural formations. In addition to it, there aren't many studies, devoted to the methods of lowering the integrated agricultural formations credit risk in terms of the global crisis management. In this regard, it is considered that it is essential to elaborate a complex of methodic recommendations on lowering the credit risk for the integrated agricultural formations. The economic security of an integrated agricultural formation if a financial- economic state, which provides the liabilities' repayment, fulfilling social functions, sufficient economic potential that ensures the functioning even despite the unfavourable market conditions. At the same time, when an agricultural formation functions in terms of the exceeding indicators, it will be assumed crisis and it will be logical to use the sustainable development strategy and special anti-crisis management methods to recover from the current

recession. In terms of the global crisis management it is necessary to elaborate the sustainable development strategy that will provide an agricultural formation's economic security in order to reduce the crisis factors. The "economic security" term is interconnected with "development" and "sustainability". Development is one of the economic security's components, while sustainability characterizes its durability and safety as well as the ability to withstand internal and external threats. Thus, sustainability and development are the essential characteristics of an integrated agricultural formation's work, as a united system. Both sustainability and development determines the economic security level of an integrated agricultural formation in their own way. Government policy can play an important role in agriculture insurance, as it helps to promote the availability and affordability of insurance products for farmers. By working effectively with the private sector – through public-private partnerships, providing subsidies, developing risk-sharing programmes and supportive regulatory frameworks – governments can support agricultural productivity while reducing the financial risks faced by farmers and agriculture-based enterprises. Agriculture began independently in different parts of the globe, which started as domestication has alternated towards commercialization. Damage in agricultural production can be crucial for the economy of a state especially in those countries where agricultural production, prevails in the gross national income. Agriculture is the major source of the Nepalese economy and source of livelihood of the two third population of the country (Chaudhary, 2018). Traditional way of agriculture, rain fed irrigation system, weather based cultivation system, lack of infrastructure and small land holdings are major hindrance of growth of agriculture sector. "Nepal is a natural disaster hotspot, with hazards increasing over the past three decades. The disaster damage their properties, interrupt their livelihood and causes severe loses. Disease outbreaks are a major obstacle for farmers engaged in animal husbandry and poultry farming. Agriculture pests have been a serious problem on crops such as paddy, wheat, maize etc (Anon., 2016). People are always looking for safety whether it is related to their assets or their lives. As a result of rapid economic and industrial development, several social and environmental changes have taken place today, so people today are more vulnerable to uncertainty, so they are in a hurry to have physical and economic security. Consumers are not usual to danger and prefer safety to unpredictable consumption. This doesn't mean that risk should be avoided at all costs,



but only that it should be considered when taking decisions. In agriculture, risks and uncertainties are normal, as there is a gap between making decisions and achieving returns. There are several factors which affect farm yields, many of which are beyond farmers' control (Shashikiran & Umesh, 2015). From the point of view of an agricultural producer, insurance represents a method of the transfer of risk from themselves to an insurance company, in exchange for a premium in a certain amount (World Bank, 2011). An entity which provides insurance is known as an insurer, insurance company, and insurance carrier or underwriter. A person or entity who buys insurance is known as an insured or as a policyholder.

MATERIALS AND METHODS

In order to achieve the desired impact, the Syngenta Foundation's AIS team works with multiple stakeholders. Our market development goes through the following phases:

1. Innovation: Focuses on developing and validating new products that meet smallholder needs. The product range includes a variety of crops and perils designed for different geographies. These products are fine-tuned to specific client risk profiles, distribution channels, and local conditions. The products must be profitable for the insurer and affordable to the farmer. The main activities in this phase include product design, testing, modification, and technology development.

2. Develop: As a next step, the market for agricultural insurance must be developed. This phase focuses on building the capacity of local supply-side and demand-side partners across the public and private sectors. To increase farmers' adoption of climate-risk insurance products, we run financial education and awareness campaigns to enhance their financial literacy. This phase also includes policy dialogue at the insurance regulatory level.

3. Scale: The aim of this phase is to scale up commercially viable and successful products and distribution channels with the aim of reaching as many smallholders as possible.

The Syngenta Foundation builds a bridge between the demand and supply sides of the agriculture insurance market and coordinates various organizations involved. The stakeholders include farmers, cooperatives, the public sector, input suppliers, insurance companies, banks, NGOs, and mobile network operators. The illustration below gives an overview of the different actors and their roles:

RESULTS

"Sustainable development" is based on a whole system of target indicators or targets, that allow characterizing

the geographical territory's formation degree, making a reasoned prediction of its future state (financial, ecological, public, political, etc.) and, using all this data, making a conclusion on whether this territory is sustainable in terms of the global crisis management. The sustainable development indicators are at the basis of an agricultural holding's economic security. One of the sustainable development complex characteristics, implemented by the UN, is the so-called "human potential development index", which reflects the GDP per capita, life expectancy, as well as various ecological indicators. The list of certain sustainable development indicators, elaborated by a group of international experts and recommended by the UN Commission on Sustainable Development, contains 50 main ecological, financial and demographic indicators, that evaluate the conformity of production and consumption levels, the level of financial welfare and economic development, state of the atmosphere, health and socio-demographic characteristics. Speaking about the integrated agricultural formations, the term "sustainable development" is of significant importance. It is determined not only by the fact that agricultural production plays an important role for the whole state, but by the society's striving at sustainable development in the agricultural sector particularly. The term "sustainable development", connected with the agricultural sector, was made up in Rome during one of the UN food and agriculture organization's sessions in 1996. Back then it said the following: "the main goal of the Agriculture's Sustainable Development Programme is increasing the level of the food produced and ensuring food security". Russian regulatory legal act "On the Agricultural development" and "Russian Agricultural Territories' Sustainable Development until 2020" say that the agriculture's sustainable development is connected with the dynamic development of the agrifood market only. Summing up the existing development theories and various points of view on the economic sustainability, it is worth noting that an agricultural holding's economic sustainability in terms of the global crisis management is the holding's ability to withstand internal and external factors and adapt to the changing production conditions preserving the initial balance. At the same time, the factors, which function in the agriculture, differ from the factors in other economic sectors in the content, level and influence. As a result of analyzing the agricultural holdings' economic, production and technological features, we have defined the peculiarities of ensuring an agricultural formation's sustainable development in terms of the global crisis management: edaphic-



climatic, biological, ecological, technological and organizing the farmland. Consequently, analyzing an agricultural holding's balanced indicators system is a source of information on the management system's needs, which allows to get the reliable and discrete information on implementing the sustainable

development strategy and defining the economic security field. We have highlighted an agricultural formation's 4 economic security fields in terms of the global crisis management (critical economic security, low economic security, normal economic security, high economic security).



1-fig. Improvement of insurance activities of agricultural enterprises

The loading for loss assessment will also be restricted, since the indemnity cover will not apply in case of covariate risks. Such a product can again be positioned as a total risk management solution. The premium worked out for such a product may still be higher than stand-alone multi-peril crop insurance or index-based insurance, and thus may have to be subsidized. • Value-added services to overcome dissonance: Risk transfer through insurance is just a part of a larger risk management process. High-risk activities such as agriculture are also exposed to speculative and operational risks that cannot be insured. Even for insurable risks, scope is considerable for risk reduction through loss prevention and minimization measures. The client value of insurance products can be

considerably enhanced if, apart from carrying the insured risks, insurers can offer value-added services for risk reduction. For example, localized weather forecasts, cropping patterns in other geographies, real-time price information, proper advice on fertilizers, and assessment of soil quality and its nutritional deficiencies are valuable inputs that can reduce risks and enhance the intrinsic value of the insurance product.

CONCLUSIONS

The farmers may even be willing to pay a slightly higher premium for an insurance product that carries such value-added services. More importantly, insurance coverage bundled with such useful services will help reduce customer dissonance and thereby ensure higher renewal rates. Risk reduction through such inputs will



also eventually reduce the claims costs for insurers and help make the product profitable. Like health, agriculture is a specialized insurance business that requires closer engagement with the client, much beyond the conventional underwriting of risk. Increased engagement with clients through value-added services can benefit farmers and insurers. • Mobile and satellite technology to improve efficiency: Mobile and satellite technology can be widely used in agriculture insurance to offer value-added services, reduce moral hazard, build a credible database of farmlevel behavior, and reduce transaction costs. Customized mobile applications can be provided to insured farmers, to transmit information and inputs to insurers on farmlevel data such as date of sowing or various stages of crop growth. Geo-tagging of insured farms can also be done to offer farm specific guidance. Such use of technology can reduce risks and enhance value for the farmers. As volumes pick up, the data collected can be used for policy, regulatory, and market interventions. The data can also be used for agricultural research and better behavioral analysis of farmers. • Fine tuning ex-post relief and ex-ante risk management: High-risk activities like agriculture need both ex-ante risk management in the form of risk control and transfer as well as ex-post support in relief and loss minimization. Sometimes, financing these activities can pose a challenge as each can have a crowding-out effect on the other. Exante measures need subsidies and ex-post measures relief funds. For better fiscal planning, governments should devise and adopt long-term strategies that adequately balance these approaches and ensure that the financial resources needed are set aside. In this context, various disaster risk financing instruments such as risk pools, contingency funds, disaster relief funds, can be considered. Agriculture insurance can reduce farmer and herder risk and increase average productivity and incomes. It can also increase access to credit. However, agriculture insurance is effective when combined with the adoption of risk management measures. De-risking agriculture and making it a viable activity requires comprehensive effort from multiple stakeholders, including the private sector. Governments and development agencies have to play a bigger role in partnering with private re/insurers, technology providers, input suppliers, and financial institutions. They need to do this in initiating sustainable risk sharing and transfer schemes and products that increase the financial resilience of farmers, as part of their broader agricultural risk management strategy.

REFERENCES

1. Zhichkina, L.; Nosov, V.; Zhichkin, K. Seasonal Population Dynamics and Harmfulness of Wheat Thrips in Agroecosystems of Grain Crops. *Agriculture* 2023, 13, 148. [CrossRef]
2. Zhichkin, K.A.; Nosov, V.V.; Zhichkina, L.N.; Krasil'nikova, E.A.; Kotar, O.K.; Shlenov, Y.V.; Korneva, G.V.; Terekhova, A.A.; Plyushchikov, V.G.; Avdotin, V.P.; et al. Agronomic and Economic Aspects of Biodiesel Production from Oilseeds: A Case Study in Russia, Middle Volga Region. *Agriculture* 2022, 12, 1734. [CrossRef]
3. Zhichkin, K.A.; Nosov, V.V.; Zhichkina, L.N.; Gubadullin, A.A. The Theory of Agriculture Multifunctionality on the Example of Private Households. *Agriculture* 2022, 12, 1870. [CrossRef]
4. Ahmed, N.; Hamid, Z.; Mahboob, F.; Rehman, K.U.; Ali, M.S.; Senkus, P.; Wysokińska-Senkus, A.; Siemiński, P.; Skrzypek, A. Causal Linkage among Agricultural Insurance, Air Pollution, and Agricultural Green Total Factor Productivity in United States: Pairwise Granger Causality Approach. *Agriculture* 2022, 12, 1320. [CrossRef]
5. Zhichkin, K.; Nosov, V.; Zhichkina, L.; Lakomiak, A.; Pakhomova, T.; Terekhova, A. Biological bases of crop insurance with state support. *IOP Conf. Ser. Earth Environ. Sci.* 2021, 677, 022026. [CrossRef]
6. Khan, N.; Ullah, R.; Ali, K.; Jones, D.A.; Khan, M.E.H. Invasive Milk Thistle (*Silybum marianum* (L.) Gaertn.) Causes Habitat Homogenization and Affects the Spatial Distribution of Vegetation in the Semi-Arid Regions of Northern Pakistan. *Agriculture* 2022, 12, 687. [CrossRef]
7. Lenwood, W.H., Jr.; Anderson, R.D. A Comparison of Sediment Metal Concentrations as Potential Stressors to Resident Benthic Communities in an Agricultural Waterbody. *Agriculture* 2022, 12, 1029. [CrossRef]
8. Li, N.; Xue, C. How Perceived Stress Affects Farmers' Continual Adoption of Farmland Quality Improvement Practices. *Agriculture* 2022, 12, 876. [CrossRef]