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Government's Role in Agricultural Insurance Development

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Abstract

Agricultural production always faces many risks and challenges such as natural disasters and epidemics. Agricultural insurance was born as an effective financial tool in minimizing and overcoming risks for farming households. In Vietnam, agricultural insurance has been deployed with many expectations. However, during the implementation process, there are still many difficulties and challenges. In an agricultural, developing country where the

quality of life and awareness of farmers is not high, the government's role in supporting and promoting the development of agricultural insurance is indispensable. The article outlines the process of applying agricultural insurance in Vietnam and the role of the Government in the development of the country's insurance. On that basis, the article offers some comments and discussions to expand and develop agricultural insurance in the coming time.

Keywords: Agricultural Insurance, Agricultural Production, Government, Vietnam

1. Introduction

Agriculture is still an important economic sector in Vietnam, directly and most strongly influencing the stability and development of the country, where the majority of the population lives in rural areas and works in the agricultural sector. With its significant contribution to GDP, agriculture continues to play a central role in Vietnam's economy. Vietnam is located in the most vulnerable region in the world to extreme weather phenomena such as storms, rains and floods, droughts, earthquakes, tsunamis, landslides and mudslides, and is subject to biological diseases such as pests and disease outbreaks on crops, livestock and aquatic products. This has had a significant impact on agricultural production.

According to the World Bank (2009), Vietnam ranks 6th in the list of countries with heavy losses due to natural disasters and serious epidemics affecting crops, causing great damage to the economy up to 1.5% of GDP, more than 70% of the population is at risk due to climate change... The United Nations Development Organization assesses Vietnam as one of the top 5 most vulnerable countries in the world and directly injured by climate change climate change process. Climate change has had major negative impacts on crop output and productivity as well as affecting livestock and aquaculture.

Facing the challenges of agriculture, Vietnam has applied many measures for natural disaster risk management and natural disaster risk financing to provide tools, measures and techniques to support farmers in reducing the risk of natural disasters. Minimize damages in the event of natural disasters or epidemics. Agricultural insurance has become one of the effective tools that not only Vietnam but also ASEAN member countries or many countries around the world apply to transfer some of the unmanageable risks that farmers face to other countries domestic and international capital and insurance markets. In a developing agricultural country, where the quality of life and awareness of farmers is not high, the government's role in supporting and promoting the development of agricultural insurance is indispensable.

2. Theoretical basis

Agricultural insurance is a special line of insurance applied to agricultural activities, which aims to protect farmers (and other agricultural value chain actors) against the risks they face as part of their business, while also contributing towards enhancing their productivity (FAO, 2021) ^[6]. Agricultural insurance is understood to be not limited to crop insurance but also applies to livestock, livestock, forestry, aquaculture and other related activities. Two main types of agricultural insurance products can be identified, demonstrating significant differences in the risk assessment process, product design characteristics and loss adjustment process: i) indemnity-based products conventional and ii) index-based products (FAO, 2021) ^[6]. Indemnity-based insurance products determine claim payments based on actual damages and losses that occur. As for index-based agricultural insurance products, payouts are based on the value of an "index", not on losses measured in the field. This index is a variable

that is strongly correlated with loss and cannot be influenced by the insured.

Agricultural insurance is considered a special business by many researchers/organizations. Difficulties in achieving adequate diversification because of the nature of the risk, asymmetries of information in underwriting, the geographical dispersion of agricultural production and the complexity of the biological processes of production, which requires skilled and expert underwriting, justify it being considered a special business line (WB, 2009). Because the agricultural sector faces many risks. The complexity and scale make the problem of risk diversification very difficult, and there are even many potential systematic risks leading to mass compensation claims. The lack of information about customers due to geographical dispersion, complexity in the agricultural value chain, lack of database on weather, temperature, precipitation... makes agricultural insurance even more difficult special and complex.

Based on the complexity of agricultural insurance, (Hazell *et al.*, 1986) ^[10] believes that developing the agricultural insurance market needs to combine the three factors of supply, demand and government management to ensure development. Of the insurance market. In particular, not only does the Government need to manage the insurance market well and establish a strong regulation to encourage cooperation between the public and private insurance sectors to create more insurance products (Manhul and Stutley, 2010; Roth and McCord, 2008) ^[11, 12].

The government has many policy measures to apply to promote the use of agricultural insurance (ASEAN, 2022) ^[3]. These include measures: i) Developing an agricultural insurance law; ii) Invest in data enhancement; iii) Invest in rural literacy and financial programs; iv) Financial subsidies for agricultural producers; v) Develop national standards for agricultural insurance product design and pricing for all insurance companies to apply; vi) Promote state catastrophe reinsurance protection; vii) Compulsory agricultural insurance for farmers accessing formal credit... Insurance premium subsidies are the most widely implemented form of support in developing countries. In a study of agricultural insurance provision in more than 65 countries, Mahul and Stutley (2010) ^[11] report that nearly two-thirds (63%) of governments provide premium subsidies.

3. Role of the Government

3.1 Agricultural insurance in Vietnam

It is an agricultural country with the majority of the population living in rural areas. Agricultural insurance has been receiving attention and development in Vietnam. Agricultural insurance in Vietnam was launched early (1982) when Bao Viet deployed rice insurance in the two districts of Nam Ninh and Vu Ban, Nam Dinh province with the entire rice growing area in the two districts. From 1993 - 1998, Bao Viet continued to re-deploy rice insurance in 12 provinces nationwide, but the results were not successful.

After that, in addition to Bao Viet, Groupama Vietnam General Insurance Company Limited also implemented agricultural insurance and failed. The reason is explained by people's low demand for insurance, which does not ensure the principle of the many compensating for the few, high compensation rates, and prolonged losses. The agricultural insurance program is almost "stagnant". Faced with such a situation, recognizing the importance of agricultural insurance in contributing to stabilizing and promoting

agricultural production, on March 1, 2011, the Government issued Decision No. 315/QĐ -TTg on pilot implementation of agricultural insurance for the period 2011-2013 in 20 provinces and cities. Insured objects include 9 types of products: rice, buffalo, beef, pig, chicken, duck, sa fish, black tiger shrimp, white leg shrimp; with insured risks and insurance compensation including 7 types of natural disasters and 18 types of epidemics of the above subjects.

Table 1: Results of the agricultural insurance program in the period 2011-2013

Targets	Unit	Rice insurance (Rice)	Livestock insurance (Buffalo, dairy cows, pigs, poultry)	Aquatic insurance (Pangasius, black tiger shrimp, white leg shrimp)	Total
Number of participating households	Households	236,397	60,133	7,487	30,017
Fee revenue	Billions dong	91.919	83.906	218.175	390.000
Indemnify	Billions dong	19	13.3	669.5	701.8

Source: Report of the Ministry of Finance on the results of the agricultural insurance pilot period 2011-2013

The State supports 100% of insurance fees for poor farmers and individuals engaged in agricultural production; 80% of insurance premiums for farmer households and near-poor individuals; 60% of insurance premiums for farming households and individuals who are not poor or near poor and 20% of insurance premiums for agricultural production organizations. Bao Viet Insurance Joint Stock Corporation, Bao Minh Insurance Joint Stock Corporation, Vietnam National Reinsurance Joint Stock Corporation were selected as enterprises to pilot agricultural insurance with the goal of not for profit (Government, 2011) ^[7].

The agricultural insurance pilot program for the 2011-2013 period was completed, state insurance premium support ended, and the program was later suspended due to many difficulties. Through evaluations from stakeholders, the program restarted in 2019, the 2019-2021 pilot phase has state support but at a lower level. However, due to the impact of the Covid19 pandemic, the program was seriously affected. Bao Viet is the only unit implementing insurance programs including: rice insurance implemented in Nghe an and Thai Binh provinces and livestock insurance in Ha Giang province.

Table 2: Agricultural insurance program for the period 2019-2021

Targets	Unit	Rice insurance		Livestock insurance
Number of participating households	Households	Nghe An (2020)	Thai Binh (2021)	Ha Giang (2020)
Insured value	Billions dong	39.1	30.2	71.9

Source: Compiled from Anh B.T.V *et al.*, 2023

Rice farmers are covered under the AYII program and livestock farmers are covered under a dangerous accident and disease insurance policy. Following the massive investments made by all stakeholders in phase 1 (2011-2013), agricultural insurance adoption and penetration over

the 2019–2021 period has been disappointing with sales AYII rice sales and minimum livestock policy as well as zero rice sales (ASEAN, 2022)^[3]. However, it does not stop there, on May 9, 2022, the Government decided to continue implementing the support policy for the next period for the period 2022-2025.

3.2 Role of the Government

The Government decides to institutionalize the agricultural insurance model and establish the management roles of relevant parties. Vietnam implements an agricultural insurance program following the public-private partnership (PPP) insurance approach. Three public sector agencies play important roles in supporting the pilot: the Ministry of Finance, the Ministry of Agriculture and Rural Development and the Provincial People's Committee. Therefore, regulating the role of these agencies is indispensable in contributing to the establishment of the agricultural insurance market.

Table 3: Roles of agencies in implementing Agricultural Insurance in Vietnam

Organ	Responsibility
Ministry of Finance	Approve/change agricultural insurance products Provide guidance on financial mechanisms and support policies for insurance businesses Providing funding is the responsibility of the central budget and guiding the Provincial People's Committee to implement agricultural insurance support policies Supervise the implementation of agricultural insurance Evaluate and annually report to the Prime Minister on the implementation of agricultural insurance
Ministry of Agriculture and Rural Development	Issue documents on procedures for declaring natural disasters and procedures for confirming natural disasters and epidemics Promulgating processes, regulations, and technical standards in agricultural production Coordinate with the Ministry of Finance to regulate agricultural insurance documents, procedures and processes
Provincial People's Committees	Organize the implementation of agricultural insurance, arrange funding (from the central budget and local budget) Direct authorities to control risks, prevent and combat fraud in agricultural insurance Coordinate with the Ministry of Finance to regulate agricultural insurance documents, procedures and processes Quarterly assessment reports and proposed corrective measures to the Ministry of Finance and the Ministry of Agriculture and Rural Development

Source: Author compiled from Decree No. 58/2018/ND-CP

The Ministry of Finance plays a key role in designing crop, livestock and aquaculture insurance products, insurance premiums as well as establishing systems, procedures and conditions for premium subsidies dangerous. The Ministry of Agriculture and Rural Development takes the lead role in selecting pilot areas, field activities and technical processes and standards in agricultural production. The Provincial People's Committee organizes implementation, monitoring and reporting.

The government, through its agencies, establishes overall policy for agricultural insurance, creating a favorable legal and regulatory environment by promulgating legal

regulations. The legal documents set out a stable and transparent framework to facilitate the implementation of agricultural insurance on a voluntary basis without limitations on the type of insured person, insured object, risk or Geographic scope: Decision 315/QĐ -TTg dated March 1, 2011 of the Prime Minister on pilot implementation of agricultural insurance in the period 2011 - 2013; Circular 47/2011/TT-BNNPTNT dated June 29, 2011 of the Ministry of Agriculture and Rural Development guiding the implementation of agricultural insurance in cultivation, livestock and aquaculture activities; Decree No. 58/2018/ND-CP dated April 18, 2018 of the Government on agricultural insurance; Decision No. 22/2019/QĐ - TTg dated June 26, 2019; Circular No. 09/2020/TT-BNNPTNT dated July 24, 2020 guiding the confirmation of natural disasters and epidemics in implementing agricultural insurance support policies; Decision No. 13/2022/QĐ - TTg dated May 9, 2022 on implementing agricultural insurance support policies and other legal documents. Documents are always revised, supplemented and completed with new situations to create an environment, framework and development orientation.

Government agricultural insurance premium support programs are introduced. For a developing country where people's income is still low, insurance premium support has made agricultural insurance policies more accessible to farmers. In Vietnam, support capital comes from the central and local budgets. During the 2011-2013 agricultural insurance pilot period, the government supported 100% of insurance fees for poor farmers and individuals engaged in agricultural production; Support 80% of insurance fees for farming households and near-poor individuals engaged in agricultural production; 60% of insurance premiums for farming households and individuals who are not poor or near poor in agricultural production; 20% of insurance premium for agricultural production organizations. The insurance premium support budget is about 304 billion VND, equivalent to 77% of total insurance premiums (AgroInsurance International, 2021)^[1] for the agricultural insurance pilot period from 2011–2013. In the period 2019-2021, 2022-2025, 90% of insurance premiums will be supported for farmers, poor and near-poor individuals; Individuals engaged in agricultural production who are not poor or near-poor households receive 20% of the insurance premium; Agricultural production organizations are supported with 20% of agricultural insurance premiums.

The government invests in research and product development, establishing various types of insurance. Traditional insurance products are researched and developed based on actual losses such as identified risk insurance, all-risk insurance, and income loss insurance. Accordingly, the insurance company will compensate based on actual losses incurred as agreed in the insurance contract. In addition, the development of new innovative retail insurance products for crops, livestock and aquaculture for farmers is also being researched and implemented by the Government. In particular, investing in new technologies to ensure high accuracy, cost savings, and efficiency in risk management is also focused on by the Vietnamese Government, such as developing regional productivity index insurance (AYII), weather index insurance (WII), remote sensing index insurance.

Vietnam is currently the only country in the Asean bloc to successfully deploy AYII for more than 300,000 small

farmers under the National Agricultural Insurance Pilot Program for the period 2011–2013. With the launch under the national agricultural insurance pilot program for the period 2019–2021, Vietnam becomes the second country in the world, after India, to apply technological innovation to AYII rice products by switched to using the satellite-based remote sensing AYII envelope. This is the result of cooperation between the Ministry of Agriculture and Rural Development within the framework of the joint venture of the International Rice Research Institute of the Philippines, the German International Development Agency, SARMAP (a Swiss remote sensing specialist company), the Swiss Agency for Development and Cooperation and SwissRe. This new technology provides timely and accurate estimates of average rice yields in defined areas at harvest and where yield shortfalls occur, thereby triggering payments.

The government participates in agricultural reinsurance programs to reduce costs for farmers and provide disaster insurance. Through reinsurance programs farmers can enjoy the advantage of globally distributed risk. In Vietnam, through the combination of national reinsurance joint stock company VinaRe and leading international reinsurance company SwissRe.

4. Discuss and suggest solutions

According to Vietnam's PPP approach, two insurance companies Bao Viet and Bao Minh play a secondary role in design and risk taking. International experience shows that insurers (often in collaboration with their leading reinsurers) are best placed to design and evaluate agricultural insurance products (based on fair actuarial principles) and prepare insurance contracts (wording) for subsequent approval by insurance regulators (ASEAN, 2022). Therefore, insurance companies' creativity in product design, promotion, assessment and risk acceptance will make agricultural insurance products more competitive and attractive.

Agricultural insurance has been deployed in Vietnam not long ago and in pilot form. That is why the legal framework related to agricultural insurance is still incomplete, lacking monitoring mechanisms, risk management, and product management mechanisms, especially for parametric products. Therefore, it is necessary to continue to improve the agricultural insurance legal system and form an Agricultural Insurance Law to create a solid foundation for the agricultural insurance market in the future (Anh B.T.V *et al.*, 2023).

For a developing country like Vietnam and the ability of farmers to contribute is still low, agricultural insurance premium subsidies are a solution to help farmers easily access insurance products and increase penetration rates. However, if the subsidy policy is not appropriate, it will cause farmers to rely on subsidies or create moral risks in agricultural production. It is essential that subsidies be delivered through a smart policy approach that supports clearly defined social goals and does not seriously undermine the program's potential to achieve sustainability sustainable in the long term (FAO, 2021) ^[6]. Therefore, the classification of subsidies for each subject is appropriate, but there needs to be specific assessments of the ability to contribute, production scale or farmer household income to ensure fairness and practicality. The government also needs to have a roadmap to provide fee support according to the industry's strategic development goals.

Vietnam has been testing high-quality products, especially index-based insurance products such as WII and AYII. Infrastructure systems and databases related to cycles, agricultural techniques, and past loss data are sorely lacking. Current limitations in implementing AYII, WII focus on the lack of good data on seasonal rainfall, yields, crop damage and other factors affecting crop productivity. This leads to insurance companies lacking risk management databases, and farmers may have to pay higher insurance premiums. Therefore, the Government needs to invest in collecting, monitoring, managing, storing and sharing data (AgroInsurance International, 2021) ^[1]. Accordingly, the Government and other stakeholders can play a key role in collecting, analyzing and disseminating and sharing such information to all interested parties.

Currently, farmers' understanding of agricultural insurance is very limited. Even many farmers do not have any understanding of agricultural insurance. Therefore, to increase the insurance penetration rate, the Government needs to increase the provision of information as well as raise awareness and understanding for farmers about agricultural insurance, the superiority of agricultural insurance as well as the importance of agricultural insurance. Propaganda must be the task of all levels of departments, especially the Vietnam Farmers' Association, which is the agency closest to farmers.

5. Conclusion

Agricultural insurance is proven to be an effective solution in minimizing and financing risks in agricultural production. However, depending on the conditions of each country, there are different strategies for developing agricultural insurance. With the difficulties encountered during the implementation of agricultural insurance pilot programs in Vietnam, the role of the Government in supporting and helping farmers access agricultural insurance and insurance becomes clearer market development direction.

6. References

1. AgroInsurance International. Disaster Risk Finance Solutions for the Agriculture Sector: Recommendations for ASEAN and ASEAN Member States (AMS), 2021.
2. Anh BTV, Thuy TT, Tinh TV. Developing agricultural insurance in Vietnam. *Journal of Corporate Finance*, July, 2023.
3. ASEAN. Asean Guideline on Agricultural Insurance Implementation: Lessons and Experience from the ASEAN, 2022.
4. Dao HTT, Tai LV. Agricultural Insurance Market Development the Role of Vietnam Government. *International Journal of Economics, Commerce and Management*. 2014; 2(9).
5. FAO. Agricultural Insurance in Asia and the Pacific Region, Report to Food and Agriculture Organization of the United Nations, Bangkok: RAP Publication, 2011.
6. FAO. Protecting livelihoods - Linking agricultural insurance and social protection Rome, 2021.
7. Government. Decision 315/QD-TTg dated March 1, 2011 of the Prime Minister on pilot implementation of agricultural insurance for the period 2011 – 2013, 2011.
8. Government. Decision No. 13/2022/QD-TTg dated May 9, 2022 on implementing agricultural insurance support policy.

9. Government. Decree No. 58/2018/ND-CP dated April 18, 2018 of the Government on agricultural insurance, 2018.
10. Hazell P, Pomareda C, Valdes A. Crop insurance for agricultural development: Issues and experience. Published for the International Food Research Institute, The John Hopkins University Press, Baltimore and London, 1986.
11. Mahul O, Stutley CJ. 'Government Support to Agricultural Insurance: Challenges and Options for Developing Countries', Report to The International Bank for Reconstruction and Development/The World Bank, Washington DC, 2010.
12. Roth J, McCord MJ. Global Practices and Prospects, Microinsurance. Microfinance Center, 2008.
13. Tinh Thai Van. Agricultural Insurance Development in Vietnam - Lessons from the National Agricultural Insurance Pilot Program. Institute of Policy and Strategy for Agriculture and Rural Development (IPSARD), Colombo. March, 2018.
14. World Bank. Agricultural insurance, 2009.
15. World Bank. Disaster Risk Management Programs for Priority Countries. Global Facility for Disaster Reduction and Recovery. World Bank, 2009.