



<https://ojs.unud.ac.id/index.php/soca>

## The Role of Farmer Groups and Willingness to Pay in Farmers' Interest in Paddy Farming Insurance (AUTP)

Tutik Dalmiyatun<sup>✉</sup>, Wulan Sumekar and Kadhung Prayoga  
Agribusiness Study Program, Department of Agriculture, Faculty of Animal and Agricultural  
Science, Universitas Diponegoro, Semarang, Indonesia  
<sup>✉</sup>Corresponding author: [tdalmiyatun@gmail.com](mailto:tdalmiyatun@gmail.com)

Submitted : 22<sup>nd</sup> April 2024; Accepted : 24<sup>th</sup> June 2024

### Abstract

**Keywords:**  
agricultural  
insurance;  
interest;  
role; farmer  
groups;  
willingness  
to pay

Agricultural insurance is a preventive measure to protect farmers from crop failure losses. Despite the availability of insurance, the interest of farmers in Pekalongan remains low. This study aims to analyze the role of farmer groups in the interest in the paddy farming insurance product (AUTP) and to analyze farmers' willingness to pay. The research was conducted using a quantitative approach, with the population being paddy farmers in Tirto District, Pekalongan Regency. The location was determined purposively, targeting areas implementing the AUTP program. Respondents included both land-owning and tenant paddy farmers. Secondary data included supporting data related to the AUTP program. Data were analyzed descriptively and with multiple regression to assess the role of groups and willingness to pay in influencing respondents' interest. The study found that 82.98% of respondents were of productive age, with predominantly low education levels, mostly elementary school, and farmland areas of less than 1 hectare. About 51% of respondents earned an agricultural income of approximately IDR2,000,000 per month. The study results indicate that willingness to pay and the role of groups, particularly in learning classes, influence interest in the AUTP program. Farmer groups play an educational role where farmers receive information on procedures and claims of AUTP through group information and coordination. The role of farmer groups significantly aids farmers in the AUTP program implementation process, thus requiring increased awareness through intensified assistance.

### How To Cite (APA 6th Style):

Dalmyatun, T., Sumekar, W., & Prayoga, K. (2024). The Role of Farmer Groups and Willingness to Pay in Farmers' Interest in Paddy Farming Insurance (AUTP). *SOCA: Jurnal Sosial Ekonomi Pertanian*, 18(2), 199–214. <https://doi.org/10.24843/SOCA.2024.v18.i02.p07>

## INTRODUCTION

Agriculture is a type of enterprise fraught with risks and uncertainties. The natural environment is a source of risk and uncertainty related to natural conditions, climate, disasters, and pest attacks (Marphy & Priminingtyas, 2019; Vandawati et al., 2019). Socio-economic environmental aspects, related to the behavior of agricultural input and output markets, social conflicts, and the dynamics of business relationships, also play a significant role. People still lack the capacity to cope with and adapt to climate change (Hidayati & Suryanto, 2015; Ministry of National Development Planning, 2021; Nafi'ah, 2021). Climate change, which alters the geographical and temporal distribution of rainfall, is very difficult to predict. Climate change leads to increased drought, floods, and landslides, along with the degradation of environmental resources. Disasters not only occur more frequently but also tend to have a broader impact. These conditions also increase the risk of explosive outbreaks of pests and plant diseases (Adrianto et al., 2016; Nafi'ah, 2021; Sayugyaningsih et al., 2022). Farmers must be protected from hazards such as climate change-induced floods, droughts, and pest attacks. There is a belief that individual risk-sharing systems are insufficient to provide agricultural protection to communities (Maman et al., 2020).

The Law on Farmer Protection and Empowerment, No. 19 of 2013, seeks to protect farmers through agricultural insurance. This law was followed by the Minister of Agriculture Regulation No. 40 of 2015 on Agricultural Insurance Facilitation to encourage farmers to protect their crops (Ministry of Agriculture, 2016). Agricultural businesses face many risks, such as the impacts of climate change, price fluctuation risks, and the risks of pest and disease attacks. Consequently, agricultural insurance emerged. These risks lead to reduced agricultural production or even crop failure, resulting in decreased income for farmers and livestock breeders. Farmers and breeders sometimes suffer significant losses, making them unable to repay credit and leaving them without capital. According to Bappenas, climate change losses are estimated to reach Rp544 trillion in 2020–2024 (Ministry of National Development Planning, 2021).

Farmers do not view agricultural insurance as beneficial due to the existing uncertainties and risks. The fact that this insurance has not met expectations is evident in the numerous challenges faced by farmers, leading many to reject the program. Research on the implementation of the AOTP program indicates that farmer engagement remains low. It is crucial to investigate the reasons why farmers are not interested in the AOTP program. The concept is to help farmers pay for damages

caused by natural events and uncertainties. According to several studies, demand and interest in agricultural insurance remain low (Cole et al., 2012; Daninga, 2016; Enjolras et al., 2012; Hill et al., 2013; Leblois & Quirion, 2013).

Farmers' awareness and response to the AOTP program are major obstacles to its implementation. During the implementation of AOTP, it is important to evaluate whether farmers understand the program's objectives and expected outcomes, whether insufficient information reaches the farmers, or whether they are unable to participate despite receiving government subsidies. Previous studies have examined how the agricultural insurance program is implemented. Research by Siswadi and Syakir (2016) explored how farmers' responses are influenced by socio-economic factors in the context of AOTP. Other studies (Marphy & Priminingtyas, 2019; Sayugyaningsih et al., 2022) found that in the implementation of AOTP, farmer membership status, the role of state-owned enterprises (BUMN), and program information dissemination methods are important internal and external factors affecting farmer participation. Further research (Putri, Yamin, Anggraini, and Hayati, 2019; Siswadi & Syakir, 2016) on the application of AOTP insurance revealed that the following factors contribute to the low participation in Paddy Agricultural Insurance in the study area: 1) limited role of agricultural extension workers; 2) low understanding of AOTP; 3) low income; 4) low education levels; 5) land conditions; and 6) insurance premiums that farmers have to pay.

Farmer groups play a significant role, ranging from learning classes, cooperation vehicles, production units, and business units. Meetings among farmers in these groups can serve as a platform to exchange opinions, share information, and experiences in participating in the AOTP. The role of these groups as institutions used by farmers for coordination has not been extensively studied. Additionally, the aspect of farmers' ability to pay is another area that has not been thoroughly examined, as the willingness and ability to pay fundamentally determine whether someone will participate in the program. Due to the limited research on the institutional aspects of farmer groups and their ability to pay, further in-depth investigation is needed. The findings are expected to complement previous research on why farmer participation in the AOTP program remains low. Based on these conditions, further research is needed on: 1) Farmers' interest; 2) The role of farmer groups and the ability to pay in influencing farmers' interest in participating in the AOTP program. The study of the role of groups and farmers' ability to pay is expected to be one of the answers to why the AOTP program has not been effectively felt by farmers.

## RESEARCH METHODS

This research was conducted in Pekalongan Regency, specifically in Tirto District. The location was determined purposively, a sampling method based on intentionality with specific considerations. The reason for selecting this location is that it is one of the sites for the implementation of the Paddy Farming Insurance (AUTP) in Central Java Province. The research was conducted over two months using a quantitative approach. The study population consisted of paddy farmers in Tirto District, Pekalongan Regency. Respondents were selected purposively, focusing on paddy farmer groups participating in AUTP, including both land-owning and tenant farmers. Subsequently, farmers within these groups were randomly sampled, totaling 47 farmers. Data collection included primary and secondary data. Primary data were obtained from questionnaires, interviews, and observations related to interest in participating in the AUTP program, the role of groups, and the ability to pay. Secondary data included documentation and records related to the implementation of the Paddy Farming Insurance (AUTP).

The analysis for the first objective, which focuses on farmers' interest in the AUTP program, was conducted descriptively by depicting the reasons farmers tend to be interested in the AUTP program. For the second objective, the influence of the role of groups and willingness to pay on farmers' interest was analyzed using multiple regression. Data processing was assisted by the SPSS (Statistical Package for the Social Sciences) application after being tabulated using Microsoft Excel. Instrument testing and classical assumption analysis were conducted before performing multiple linear regression analysis. The classical assumption test was used to determine whether the results of the multiple linear regression were biased. According to Sigilipu (2013), classical assumption tests are used to predict unbiased related variables. Sugiyono (2010) states that before a regression model is used to test a hypothesis, the classical assumptions are tested first. The regression analysis equation is as follows:

$$Y = a + bX_1 + bX_2 + bX_3 + e$$

where:

Y = Adoption interest

a = Regression coefficient

X<sub>1</sub> = Willingness to pay

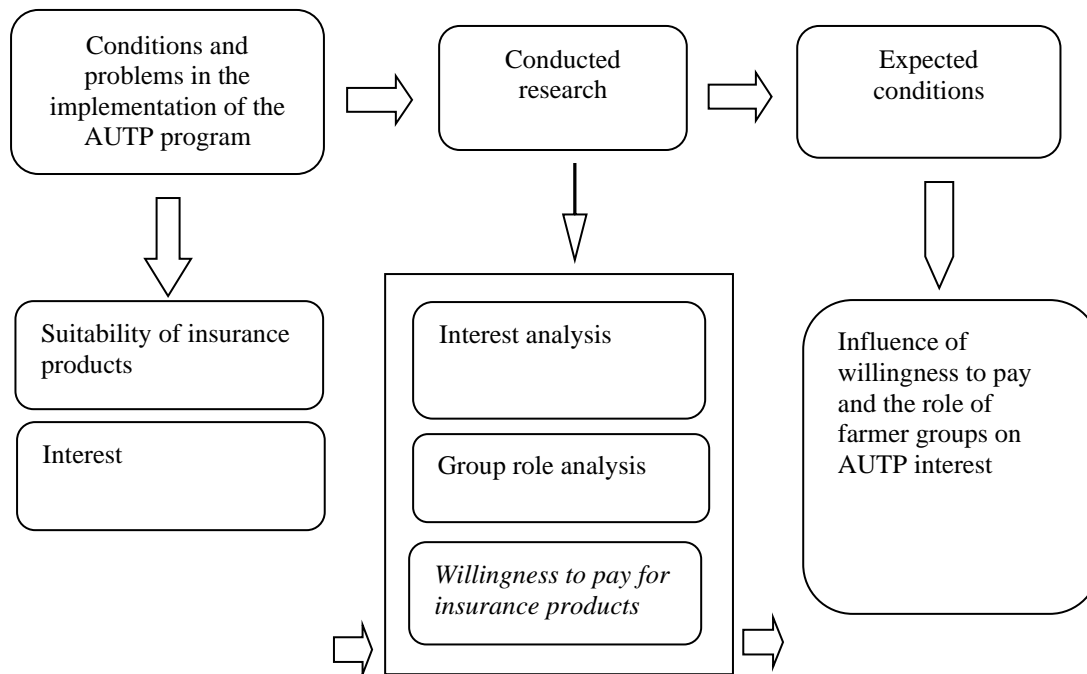
X<sub>2</sub> = Learning class

X<sub>3</sub> = Cooperation vehicle

X<sub>4</sub> = Production unit

X<sub>5</sub> = Business unit  
 e = Error coefficient

The research framework related to the problem is as follows:



**Figure 1. Framework of the Role of Groups and Farmers' Willingness to Pay**

**RESULTS AND DISCUSSION**

**Farmers' Interest in the AOTP Program**

Farmers' interest and decision to participate in the AOTP program are influenced by their personal and environmental characteristics. Factors such as gender, education, age, number of family dependents, income, and land area are related to how farmers make decisions. These characteristics are detailed in Table 1.

**Table 1. Characteristics of Paddy Farmers in Tirto District, Pekalongan Regency**

No.	Characteristic	Description	Number	Percentage (%)
1.	Gender	Male	45	95.75
		Female	2	4.25
2.	Education	Elementary School	30	63.83
		Junior High School	14	29.79
		Senior High School	2	4.25
			1	2.13

		Bachelor's Degree		
3.	Age (years)	30-64	39	82.98
		>64	8	17.02
4.	Number of family members	<3 persons	13	27.66
		3-6 persons	31	72.34
5.	Monthly income from paddy farming	≤ Rp2 million	24	51.06
		> Rp2 million – 4 million	23	48.94
6.	Land area (Ha.)	≤ 5000 – 10000	30	63.83
		10001 – 20000	14	29.79
		>20001 – 25000	3	6.38

Source: Processed Primary Research Data, 2022

Most farmers participating in the AOTP program are male, with 82.98% of the respondents in the productive age group. The youngest farmer is 31 years old, and the oldest is 69 years old. Productive age allows farmers to manage agriculture optimally. Additionally, they are open to new ideas and willing to try unconventional methods, making them more interested in learning and taking risks. According to Adawiyah et al. (2018), who researched factors influencing the adoption of innovations related to rice, corn, and soybeans, their study showed that productive age encourages a high level of curiosity, interest in new things, and the ability to accept innovations. More than 50% of respondents have low education levels, or elementary school. The education level of farmers reflects the knowledge and insights they possess. Since the farmers' mindset also affects how they make decisions, formal education can influence how farmers understand and analyze new technologies. More educated farmers are more aware that participating in the AOTP program minimizes the impact of losses.

The respondent farmers have more than three dependents. Based on their land area, 70% of the farmers have land between 5000 and 10,000 hectares, and the total production per hectare is less than 5000–10,000 kg (63.83%). Respondents mentioned that one of their considerations for participating in AOTP is the land area they own, as it relates to the risk of losses they might face. Research conducted by Siswadi and Syakir (2016) and Taufiqurrahman et al. (2022) examined farmers' responses to the AOTP program. The opportunity for farmers to participate in AOTP

is the same for those with small or large land areas. The results showed that 51.06% of respondents earned less than Rp2 million per month from agriculture. This income refers to the total money received by respondents each month. This study differs from research conducted by Maman et al. (2020) and Marphy and Priminingtyas (2019), which stated that the higher the income, the greater the interest in participating in the program. In addition to the farmers' characteristics, their perception of the AOTP program is also important. Perception shapes understanding and is a driving factor in decision-making (Nguyen-Trung et al., 2023). Farmers' perceptions of the AOTP program are detailed in Table 2.

**Table 2. Respondents' Perceptions of the AOTP Program**

No.	Considerations for Participating in AOTP	Number (individuals)	Percentage (%)
1	Premium costs are not expensive	6	12.76
2	Insurance protects against several likely risks	29	61.70
3	Easy insurance requirements	6	12.76
4	The amount covered by insurance is proportional to the risks	5	10.63
5	Ease of making claims	1	2.12

Source: Processed Primary Research Data, 2022

Based on the research, 61.7% of respondents are interested in participating in the AOTP program because the insurance protects against several likely risks (Srinivasa Rao et al., 2016). Each farmer group has one policy, one insured, and one rice insurance policyholder. It is ensured that rice crops are protected against damage or loss due to floods, droughts, and certain pest attacks. The study indicates that farmers generally underestimate the severity and frequency of the risks they face. Previous research also mentions the limited educational levels of farmers, a lack of trust in insurance product providers, and a high reliance on traditional mechanisms to cope with agricultural risks, such as selling agricultural assets or borrowing money from family (Holland & Rammohan, 2019).

Agricultural insurance typically protects farming businesses against weather, fire, theft, and losses (excluding agricultural buildings and equipment) (Food and Agricultural Organization, 1992). Types of agricultural insurance include crop insurance, livestock insurance, fishery insurance, and forestry insurance. All farmers can have access to and the right to be protected by agricultural insurance. According to Bulkis et al. (2020), the main goal of agricultural insurance in Indonesia

is to protect farmers from losses so that their income is still sufficient to meet their needs and to increase farmers' awareness of adopting agricultural technology. It is expected that agricultural insurance can help farmers reduce losses and risks, thereby enhancing their competitiveness in business development. AUTP protects farmers by ensuring that their businesses can survive due to disasters and crop failures related to technical factors such as pests and diseases (Vitharana & Mapa, 2020).

An indicator of frequent crop failure is experiencing it at least twice a year, while in the respondent's location, it usually occurs only once a year. It is suspected that farmers' participation in agricultural insurance is influenced by crop failure. Farmers who have experienced crop failure are more likely to be interested in participating in the AUTP program. Research findings show that the experience of crop failure significantly influences farmers' decisions to participate in insurance (Kawanishi & Mimura, 2015; Marphy & Priminingtyas, 2019).

Tirto District, which is often affected by floods and droughts, only received the AUTP program in 2019. Farmers face drought problems during the dry season, while floods occur during the rainy season. In the dry season, farmers struggle to find water sources because several irrigation systems are damaged. If they want to use groundwater, they cannot do so because the water is saline or brackish and unsuitable for irrigating rice fields. These conditions lead to a water shortage for rice plants, resulting in poor growth. Drought causes a decrease in rice production. AUTP protects farmers from floods, droughts, and pest attacks. The limitations include floods inundating farmland during the growth period, drought caused by unmet water needs, which reduces production, and pest and disease factors that cause rice plant death (Vandawati et al., 2019).

### **The Role of Groups and Willingness to Pay in the AUTP Program**

The Decision of the Minister of Agriculture of the Republic of Indonesia No. 30/Kpst/SR.210/B/12/2018, concerning guidelines for rice farming insurance premium assistance, regulates AUTP. To disseminate information to various farmer groups, the Agriculture Office receives assistance from Agricultural Extension Agents (PPL). Registering for agricultural insurance is very easy and can be done online (Vandawati et al., 2019).



**Table 3. Number and Percentage of Respondents Based on Willingness to Pay and Role of Groups**

No.	Variable	Category	Number (individuals)	Percentage (%)
1	Willingness to Pay	High	12	25.53
		Medium	31	65.96
		Low	4	8.51
	Learning Class	High	24	51.06
		Medium	21	44.68
		Low	2	4.26
	Cooperation Vehicle	High	18	38.30
		Medium	21	44.68
		Low	8	17.02
	Production Unit	High	6	12.76
		Medium	23	48.93
		Low	18	38.31
	Business Unit	High	12	25.53%
		Medium	8	17.03
		Low	27	57.44

Source: Processed Primary Research Data, 2022

The results of the multiple linear regression equation are  $Y = 12.899 + 4.003X_1 + 2.100X_2 + 0.40X_3 + 0.61X_4 + 0.119X_5 + e$ . The results of the multiple regression analysis indicate that interest in the AOTP program is influenced by willingness to pay and the role of farmer groups, particularly the learning class aspect; however, the cooperation, production, and business units do not partially affect the adoption interest in the AOTP program. The significance value of willingness to pay is 0.000, along with the role of the learning class group. Willingness to pay and the role of the group, namely the learning class, affect 63% of the respondents' interest in the AOTP program, according to the R-value of 0.636.

Interviews revealed that four respondents experienced financial difficulties. Despite these financial struggles, the respondents were still willing to pay the premiums. There were no financial issues for 43 respondents in paying the premiums. The current Paddy Agricultural Insurance premium is 3%. The insured area determines the amount of premium payment. Farmers pay 20% or Rp36,000, and receive government assistance of 80% or Rp144,000 per hectare per planting season (Relawati et al., 2022). Slightly more than half of the respondents (51.06%)

view the role of the group as a learning class, where they gain knowledge through guidance or sharing information with other group members. Before the AOTP program began, the Agriculture Office, with the help of extension workers, disseminated information. The first outreach was conducted at the district level in Kajen in early 2019. During the agricultural insurance claim process, extension workers provided information about the benefits of agricultural insurance, objectives, registration procedures, and requirements (Kawanishi et al., 2016; Ministry of Agriculture, 2022; Leblois & Quirion, 2013).

**Table 4. Percentage of Farmers' Participation in AOTP Information**

<b>Dissemination</b>				
<b>No.</b>	<b>Statement</b>	<b>Participation</b>	<b>Number (individuals)</b>	<b>Percentage (%)</b>
1	Received information about AOTP	Yes	41	87.2
		No	6	12.8
2	Received an offer about AOTP	Yes	41	87.2
		No	6	12.8
3	Felt the need for AOTP products	Yes	30	63.9
		No	17	36.1

Source: Processed Primary Research Data, 2022

The implementation of AOTP in Tirto District, Pekalongan Regency generally follows the same mechanism as that of the government (Ministry of Agriculture, 2022). A notable difference found in the field is that only farmer groups interested in participating in the AOTP program received information dissemination. This is due to the large number of farmer groups in Pekalongan Regency and the limited resources of the extension workers. AOTP registration is collected by the group leader after the self-funded premium payment is made by the farmers. Subsequently, the group leader forwards it to the extension worker and not through Jasindo officers. Farmers' initial responses were neither positive nor negative. Farmers could not yet feel the benefits and considered it just an explanation, hence their neutral response. Farmers did not show high enthusiasm for this program. They expressed that the program could help farmers in need of capital when crop failure occurs, but they could not immediately respond positively or negatively because the information provided was not sufficient to convince them to make a decision.

Extension workers, POPT, and Jasindo disseminate AOTP information according to field conditions. The information dissemination by extension workers, Jasindo, and POPT happens only once; afterward, it is up to the farmer groups to

independently relay the information to their members. The group leader and officials play a crucial role in delivering information and motivating farmers. For inactive groups or farmers, it becomes difficult to obtain valid information and understand the program. Information dissemination also involves feedback between extension workers and farmers. When the AOTP program is not well-informed to farmers, the received information becomes less effective, reducing the farmers' opportunities to participate in the program (Maman et al., 2020).

The first challenge faced is the lack of information dissemination, leading to insufficient awareness about the program. Second, there is a lack of human resources to support the program's sustainability; field extension workers and Jasindo employees are still inadequate. Third, there are issues with the disposition or attitude of the implementers, particularly from Jasindo, as many do not have an understanding of agriculture. The fourth factor is the unmet bureaucratic structure, as Jasindo's implementers do not realize the program according to the established SOPs. Other roles of the group, including cooperation vehicles, production units, and business units, do not significantly influence the interest in the AOTP program. This is because AOTP is an individual farmer's decision; while there is group assistance in coordination, it does not show the complexity of cooperation among farmers. Additionally, a farmer's decision to be interested in the AOTP program does not involve the role of the farmer group as a production or business unit. Research by Adawiyah et al. (2018) and Sayugyaningsih et al. (2022) found that the frequency of extension services has a positive effect on technical inefficiency. Extension workers in the research area have a significant workload, limiting their reach to assist farmers, making it necessary for farmers themselves to act as agents of innovation diffusion to other farmers (Hill et al., 2013; Maman et al., 2020).

The researchers revealed that the weaknesses of the agricultural insurance program include the lack of group roles, no data verification, no participant eligibility assessment, farmers not paying premiums, no coordination between Jasindo and farmers, and no monitoring and evaluation. The objectives and benefits of the program in Curug Bitung Village have not been achieved, especially since community involvement is still minimal, resulting in weak program effectiveness. Program implementers must raise farmers' awareness from the beginning and intensify information dissemination through media easily accessible to farmers. One key to the success of agricultural insurance is the role of farmer groups. Strengthening farmer groups and leadership from the group leaders is necessary to bridge information and create synergy among farmers in the AOTP program participation

process. If farmers want to integrate into the global value chain, awareness and risk management through insurance are crucial (Hilmiati, 2020; Vitharana & Mapa, 2020).

## **CONCLUSION**

The research findings show that farmers' participation and interest in the AOTP program remain low. The low interest among farmers is due to limited awareness and knowledge about the urgency of participating in the AOTP program. Their limited income also affects their ability to pay the agricultural insurance premiums. While they can afford it, doubts about the claims process make farmers reluctant to join the AOTP program. This study concludes that generating interest requires a process and stages to build farmers' trust in the program. Additionally, support through increased knowledge and access is needed. Farmer groups play a significant role as institutional platforms to approach farmers, enhancing their awareness and capacity. Farmer groups provide roles and benefits to farmers by offering information and technical knowledge on implementing the AOTP program. Intensifying group assistance through learning classes and cooperation is necessary to adopt the government program. Strong institutions are expected to help farmers collaborate, whether in government programs or farm management. The learning class process needs to involve the leadership of group leaders and administrators to accelerate the knowledge transfer process.

Further research is needed on techniques and effective farmer group approaches to accelerate the adoption of government programs. The right approach model is expected to be one strategy to increase farmers' interest and adoption.

## **RECOMMENDATIONS**

The recommendations to be conveyed include encouraging extension workers to enhance collaboration with Jasindo for comprehensive information dissemination. Information dissemination should be conducted periodically and more than once to monitor implementation. It is also necessary to involve the participation of actors within farmer groups to increase the participation of group members, thereby raising awareness about agricultural insurance participation.

## **ACKNOWLEDGEMENT**

The authors extend their gratitude to the Faculty of Animal and Agricultural Sciences, Universitas Diponegoro, for providing research funding.

**AUTHOR CONTRIBUTIONS**

<b>1</b>	<b>Tutik Dalmiyatun, S.Pt., M.Sc.</b>	
	Institution	Assistant Professor, Agribusiness Program, Faculty of Animal Husbandry and Agricultural Science, Semarang, Indonesia
	Contributions	Coordinated the preparation of the research proposal, survey, data collection, data analysis, data interpretation, and publication preparation
	Homepage	<a href="https://sinta.kemdikbud.go.id/authors/profile/6083825">https://sinta.kemdikbud.go.id/authors/profile/6083825</a>
<b>2</b>	<b>Dr. Ir. Wulan Sumekar, M.S.</b>	
	Institution	Associate Professor, Agribusiness Program, Faculty of Animal Husbandry and Agricultural Science, Semarang, Indonesia
	Contributions	Conducted literature review, data interpretation, and assisted in writing
	Homepage	<a href="https://sinta.kemdikbud.go.id/authors/profile/6038150">https://sinta.kemdikbud.go.id/authors/profile/6038150</a>
<b>3</b>	<b>Kadhung Prayoga, S.P., M.Sc.</b>	
	Institution	Assistant Professor, Agribusiness Program, Faculty of Animal Husbandry and Agricultural Science, Semarang, Indonesia
	Contributions	Assisted in data collection, data analysis, and data interpretation
	Homepage	<a href="https://sinta.kemdikbud.go.id/authors/profile/6684811">https://sinta.kemdikbud.go.id/authors/profile/6684811</a>

**REFERENCES**

- Adawiyah, C. R., Sumardjo, N., & Mulyani, E. S. (2018). Faktor-Faktor yang Memengaruhi Peran Komunikasi Kelompok Tani dalam Adopsi Inovasi Teknologi Upaya Khusus (Padi, Jagung, dan Kedelai) di Jawa Timur. *Jurnal Agro Ekonomi*, 35(2), 151. <https://doi.org/10.21082/jae.v35n2.2017.151-170>
- Adrianto, J., Harianto, H., & Hutagaol, M. P. (2016). Peningkatan Produksi Padi Melalui Penerapan Sri (System of Rice Intensification) di Kabupaten Solok Selatan. *Jurnal Agribisnis Indonesia*, 4(2), 107. <https://doi.org/10.29244/jai.2016.4.2.107-122>
- Bulkis, S., Rahmadanih, R., & Nasruddin, A. (2020). Rice farmers' adoption and economic benefits of integrated pest management in South Sulawesi province, Indonesia. *Journal of Agricultural Extension*, 24(2), 31–39. <https://doi.org/10.4314/jae.v24i2.4>
- Cole, S., Bastian, G. G., Vyas, S., Wendel, C., & Stein, D. (2012). *The effectiveness of index-based micro-insurance in helping smallholders manage weather-related risks*. (Issue July).
- Daninga, P. D. (2016). Sustainability of Experimental Drought Insurance in Tanzania: Analysis of Smallholders' Willingness to Hold Contracts. *Online) EPRA International Journal of Research and Development (IJRD)*, 7838(5), 2455–7838. [www.eprajournals.com](http://www.eprajournals.com)
- Enjolras, G., Capitanio, F., & Adinolfi, F. (2012). The demand for crop insurance: Combined approaches for France and Italy. *Agricultural Economics Review*, 13(1), 5–22. <https://doi.org/10.2139/ssrn.1836798>
- Food and Agricultural Organization. (1992). *Glossary of Terms for Agricultural Insurance and Rural Finance*. [http://www.fao.org/ag/Ags/subjects/en/ruralfinance/PDF/Glossary\\_E.pdf](http://www.fao.org/ag/Ags/subjects/en/ruralfinance/PDF/Glossary_E.pdf)

- Hidayati, I. N., & Suryanto. (2015). Pengaruh iklim terhadap tanaman. *Jurnal Ekonomi Dan Studi Pembangunan*, 16(1), 42–52.
- Hill, R. V., Hoddinott, J., & Kumar, N. (2013). Adoption of weather-index insurance: Learning from willingness to pay among a panel of households in rural Ethiopia. *Agricultural Economics (United Kingdom)*, 44(4–5), 385–398. <https://doi.org/10.1111/agec.12023>
- Hilmiati, N. (2020). Farmer Group Institution's Typology and Agricultural Innovation Implementation Sustainability. *SOCA: Jurnal Sosial, Ekonomi Pertanian*, 14(2), 204. <https://doi.org/10.24843/soca.2020.v14.i02.p02>
- Holland, C., & Rammohan, A. (2019). Rural women's empowerment and children's food and nutrition security in Bangladesh. *World Development*, 124. <https://doi.org/10.1016/j.worlddev.2019.104648>
- Kawanishi, M., Guritno, C. S., & Farid, F. Y. (2016). Assessment of Farmer Demand for Crop Insurance: A Case Study in Indonesia. *Japanese Journal of Risk Analysis*, 26(1), 31–39.
- Kawanishi, M., & Mimura, N. (2015). Assessment of insurance for paddy production: a case study in Indonesia. *Climate and Development*, 7(3), 257–266. <https://doi.org/10.1080/17565529.2014.951022>
- Leblois, A., & Quirion, P. (2013). Agricultural insurances based on meteorological indices: Realizations, Methods and research challenges. *Meteorological Applications*, 20(1), 1–9. <https://doi.org/10.1002/met.303>
- Maman, U., Aminuddin, I., & Hermawan, R. (2020). Persepsi dan Partisipasi Petani terhadap Program Asuransi Usaha Tani Padi (AUTP) dengan Minat Bertani. *Nucleus*, 1(2), 62–73. <https://doi.org/10.37010/nuc.v1i2.169>
- Marphy, T., & Priminingtyas, D. (2019). Analisis Faktor-Faktor yang Mempengaruhi Tingkat Partisipasi Petani dalam Program Asuransi Usahatani Padi (AUTP) di Desa Watugede, Kecamatan Singosari, Kabupaten Malang. *Habitat*, 30(2), 62–70. <https://doi.org/10.21776/ub.habitat.2019.030.2.8>
- Ministry of Agriculture. (2022). Pedoman Bantuan Premi Asuransi Usaha Tani Padi (AUTP) Tahun Anggaran 2022. *Pertanian.Go.Id*, 1.
- Ministry of National Development Planning. (2021). *Executive-Summary Climate Resilience Development Policy 2020-2045*. 1–44.
- Nafi'ah, H. H. (2021). Upaya Peningkatan Produksi Padi dengan Aplikasi Pupuk Hayati di Desa Kersamenak Kecamatan Tarogong Kaler Kapupaten Garut. *Jurnal Aplikasi Ipteks Untuk Masyarakat*, 10(1), 34–37. <https://doi.org/10.24198/dharmakarya.v10i1.24179>
- Nguyen-Trung, K., Matthewman, S., & Uekusa, S. (2023). Understanding risk-taking behaviours through the practice-oriented risk habitus and multiple-capital model (P-HAC): A case study of disaster-affected farmers. *International Journal of Disaster Risk Reduction*, 91(April), 103699. <https://doi.org/10.1016/j.ijdrr.2023.103699>
- Putri, N. E., Yamin, M., Anggraini, E., dan Hayati, A. (2019). Persepsi Petani Terhadap Asuransi Pertanian sebagai Upaya Meminimalkan Risiko Gagal Panen di Lahan Sawah. *Jurnal Ekonomi Pertanian Dan Agribisnis*, 3(3), 459–469. <https://doi.org/10.21776/ub.jepa.2019.003.03.1>
- Relawati, R., Iriany, A., Prihartini, I., & Ramli, M. F. (2022). Farmers' Willingness to Pay Bio-Activators to Maintain Soil Fertility. *SOCA: Jurnal Sosial, Ekonomi*

- Pertanian*, 16(3), 234. <https://doi.org/10.24843/soca.2022.v16.i03.p01>
- Sayugyaningsih, I., Suprehatin, & Mahdi, N. N. (2022). Faktor-Faktor yang Memengaruhi Petani Mengikuti Asuransi Usahatani Padi (Autp) Di Kecamatan Kaliori, Rembang. *RISALAH KEBIJAKAN PERTANIAN DAN LINGKUNGAN Rumusan Kajian Strategis Bidang Pertanian Dan Lingkungan*, 9(2), 104–122. <https://doi.org/10.29244/jkebijakan.v9i2.33746>
- Sigilipu, S. (2013). Pengaruh Penerapan Informasi Akuntansi Manajemen dan Sistem Pengukuran Kinerja terhadap Kinerja Manajerial. *Emba*, 1(3), 239–247.
- Siswadi, B., & Syakir, F. (2016). Respon Petani terhadap Program Pemerintah Mengenai Asuransi Usahatani Padi (Autp). *Seminar Nasional Pembangunan Pertanian*, c, 169–177.
- Srinivasa Rao, C., Gopinath, K. A., Prasad, J. V. N. S., Prasannakumar, & Singh, A. K. (2016). Climate Resilient Villages for Sustainable Food Security in Tropical India: Concept, Process, Technologies, Institutions, and Impacts. *Advances in Agronomy*, 140, 101–214. <https://doi.org/10.1016/bs.agron.2016.06.003>
- Sugiyono, D. (2010). Metode penelitian kuantitatif kualitatif dan R&D. In *Penerbit Alfabeta*.
- Taufiqurrahman, M., Nikmatullah, D., & Syarif, Y. A. (2022). Partisipasi Petani Padi dalam Program Asuransi Usaha Tani Padi di Desa Bulukarto Kecamatan Gadingrejo Kabupaten Pringsewu [Rice Farmers Participation on Rice Farming Insurance Program in Bulukarto Village], Gadingrejo District, Pringsewu Regency. *Journal of Extension and Development ISSN*, 4(01), 62–68.
- Vandawati, Z., Dermawan, R., & Sabrie, H. Y. (2019). Perjanjian Asuransi Pertanian pada Program Ketahanan Pangan oleh Pemerintah. *Jurnal Hukum & Pembangunan*, 49(3), 592. <https://doi.org/10.21143/jhp.vol49.no3.2189>
- Vitharana, U. W. A., & Mapa, R. B. (2020). Soil survey, classification and mapping in Sri Lanka: Past, present and future. In *Agricultural Research for Sustainable Food Systems in Sri Lanka: Volume 1: A Historical Perspective* (Vol. 1). [https://doi.org/10.1007/978-981-15-2152-2\\_4](https://doi.org/10.1007/978-981-15-2152-2_4)