

# Agricultural Institutions in Cibanteng Village: Development Strategies and Challenges

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ARTICLE INFO	ABSTRACT
<p><b>Keywords:</b> first keyword, second keyword, third keyword, fourth keyword, fifth keyword</p> <p><b>DOI:</b> <a href="http://dx.doi.org/10.22437/jssh.v9i1.38788">http://dx.doi.org/10.22437/jssh.v9i1.38788</a></p> <p><b>Received:</b> April 02, 2025</p> <p><b>Reviewed:</b> May 04, 2025</p> <p><b>Accepted:</b> Juni 06, 2023</p>	<p><i>Agricultural institutions have a strategic role in supporting sustainable agricultural development and improving farmer welfare. This research aims to analyze strategies for strengthening agricultural institutions to make them more responsive and adaptive to the needs of local communities, identify challenges in accessing technological innovation and market-oriented training, and provide practical recommendations for increasing the productivity and competitiveness of farmers in Cibanteng Village. With a qualitative approach, data was obtained through in-depth interviews, participant observation, and document analysis. The research results show that agricultural institutions in Cibanteng Village face various challenges, including low access to training and technology and weak coordination between farmers and external parties. To overcome this, a strategy is needed that includes market needs-based training, strengthening cooperation networks, and agricultural technology innovation. This research recommendation emphasizes the importance of cross-sector support in developing adaptive and innovative agricultural institutions to encourage sustainable resilience and the welfare of farmers.</i></p>

## 1. Introduction

Cibanteng Village is an area with strong agrarian characteristics, where the majority of the population depends on the agricultural sector as the primary source of livelihood (Armansyah & Handayani, 2020; Simamora & Luik, 2019). Food crops such as rice, crops, and various horticultural commodities are the mainstays of agricultural activities. Supported by fertile land and adequate water resources, this village has excellent potential for the sustainable development of the farming sector. However, without an explicit institutional strategy and support from various parties, this great potential may not be utilized optimally.

Despite having great potential, Cibanteng Village faces various challenges in managing agricultural institutions. Some of the main obstacles include limited access to technological innovation, lack of market-oriented training, and weak coordination between farmers' government agencies and the private sector. In addition, climate change, market price fluctuations, and the modernization of the agricultural sector also complicate the conditions faced by farmers. This condition is further exacerbated by the existence of organizations that can endanger the safety of residents, especially in high-level landslide-prone areas, with characteristics in the form of high density of houses and a relatively large number of non-stilt and walled houses (Puspita et al., 2016). If not addressed immediately, this challenge has the potential to reduce agricultural productivity, weaken farmers' competitiveness, and hinder sustainable local economic development. Therefore, institutional-based and market-based policy interventions are urgently needed to ensure the sustainability of the agricultural sector.

According to institutional theory, the sustainability of the agricultural sector is highly dependent on the structure and function of institutions that are market-oriented and can adapt to external changes. Li et al. (2019) stated that the interaction between rural areas and the external environment determines whether agricultural communities can develop or actually regress. In this context, institutional strengthening through livelihood diversification, the establishment of market-based institutions, and the strengthening of social capital are key to increasing the resilience of the agricultural sector (Gorenstein et al., 2007). Therefore, institutional challenges must not only be seen as obstacles but also as opportunities to build more resilient and adaptive agricultural systems (Purbayu BudI et al., 2022; Wahyuni et al., 2023).

Other studies also show that strengthening agricultural institutions is very important in facing the challenge of climate change. Anderson et al. (2020) emphasized that climate change affects agricultural yields through temperature changes, rainfall, and increased extreme weather events. Therefore, adaptation strategies such as plant diversification, more efficient management of water resources, and the use of more advanced agricultural technology are crucial steps to maintain agricultural productivity. In addition, the research of Partey et al. (2018) highlights that the successful adoption of climate-smart agriculture technologies is highly dependent on strengthening local institutions and multi-stakeholder involvement, including farmers, governments, and the private sector. If an inclusive institutional approach is implemented, the sustainability of the agricultural sector in Cibanteng Village can be more assured amid the increasingly real threat of climate change.

Furthermore, a study by Masud et al. (2017) revealed that institutional factors such as access to agricultural information, funding, and technical support play a key role in improving the resilience of the agricultural sector to climate change. (Qadir et al., 2010) added that efficient management of water resources and irrigation practices should be part of a strengthened institutional strategy, primarily to address the challenges of climate change and land degradation. Meanwhile, Diao et al. (2010) highlighted the importance of the role of agriculture in regional economic development, especially in reducing poverty and improving the welfare of farmers through policies that support investment in the agricultural sector. Thus, institutional strengthening is not just a technical necessity but also a strategy to improve the welfare of the village community as a whole.

In addition to institutional challenges, Jayne et al. (2010) identified that limited access to land and low adoption of agricultural technologies are significant obstacles for smallholders in increasing their productivity and competitiveness in the market. Another factor that also affects the dynamics of agricultural institutions is the pressure on land due to population growth and

urbanization. Jayne et al. (2014) noted that increasing pressure on land in rural areas requires institutional reforms that can encourage more efficient and sustainable land use. Therefore, without policies that support sustainable agricultural systems, the food security of rural communities will continue to be vulnerable.

Horlings & Marsden (2011) highlighted that the modernization of agricultural ecology is an important step to improve the efficiency of food production sustainably. They emphasized the need for a shift from industrial farming models to more ecologically based approaches and farmer participation. Shiferaw et al. (2013) also point out that although the Green Revolution has significantly increased food production, more sustainable agricultural models with increased plant variety resilience are a significant challenge for the future of global agriculture. It further emphasizes that sustainable agricultural development must consider the balance between productivity, environment, and socio-economic resilience of farmers (Malik, 2023; Naab et al., 2019).

Usman (2020) highlights that nanotechnology in agriculture can play an important role in improving the efficiency of food production, including the use of nano-based fertilizers and pesticides to reduce waste and improve crop nutrient absorption. Meanwhile, Walter et al. (2017) underlined that smart agriculture based on information and communication technology (ICT) has great potential to optimize agricultural land management, increase input efficiency, and reduce the environmental impact of conventional agricultural practices. If this technology is applied correctly, then Cibanteng Village can be a successful example for other villages in adopting modern agricultural systems based on technology and data.

Collier & Dercon (2014) emphasized that more flexible institutional reforms are needed to ensure sustainable growth of the agricultural sector, especially in developing countries that still rely on small-scale agriculture. In addition, Aryal et al. (2020) show that adaptation to climate change requires strong institutional support so that farmers can access new technologies, financial resources, and broader market information. Therefore, the development of agricultural institutions is not only a technical need but also the primary key to creating food security and farmers' welfare in the long term.

On the other hand, Poulton et al. (2010) affirm that one of the biggest challenges in the provision of agricultural services is the lack of coordination between the different institutions responsible for the development of this sector. They emphasized that a sustainable agricultural system requires not only adequate infrastructure but also effective coordination mechanisms between the public and private sectors (Orr, 2018; Petriv, 2023). With the right intermediation, agricultural services can be more accessible to smallholders, thereby increasing their production efficiency and competitiveness in the global market (Gelgo et al., 2023; Hashem et al., 2023; Ismiasih et al., 2024).

Thus, research on agricultural institutional development strategies in Cibanteng Village is fundamental. By understanding the existing dynamics and exploring practical solutions that can be applied, this research is expected to make a real contribution to building an adaptive, innovative, and sustainable agricultural institution. If these measures can be implemented effectively, Cibanteng Village will not only survive in facing global challenges. However, it will also become a model for the development of the agricultural sector in other regions.

## **2. Literature Review**

### **2.1 Institutional**

An institution is an order and pattern of relationships between community members in an organization that is bound by formal and non-formal norms to achieve common goals. According to Koentjaraningrat (1997), an institution is a system of activities from human behavior in its culture, which consists of ideal norms and behaviors as well as cultural and physical equipment. Institutions not only play a role in shaping social structures but also in determining sustainable patterns of social interaction in society.

Institutional theory develops from various perspectives, one of which is the institutionalism approach proposed by North (1990). He explained that institutions include formal and informal rules that shape social and economic behavior in a society. North emphasized that institutions have a key role in economic growth because they can reduce uncertainty and transaction costs in social interactions. Scott (2008) added that institutions consist of three main elements, namely regulative, normative, and cultural-cognitive elements. The regulatory element includes formal rules that are enforced through laws and policies, while the normative element includes social norms and values that dictate individual behavior within the organization. The cultural-cognitive element is concerned with how individuals understand and interpret social reality based on prevailing cultural constructs.

Ostrom (1990), in his study of collective institutions, introduced the concept of *Governing the Commons*, which highlights how communities can organize common-pool resources through participatory institutions and social rules. Ostrom pointed out that institutions that are formed collectively are more effective than top-down regulations.

In addition, DiMaggio and Powell (1983), in their study of institutional isomorphism, explain how organizations tend to adopt similar practices and structures due to regulative, normative, and mimetic pressures. Regulatory isomorphism occurs due to external policies or regulations, and normative isomorphism is influenced by professionalism and industry standards. In contrast, mimetic isomorphism occurs when an organization imitates the successful practices of other organizations to reduce uncertainty.

Ruttan and Hayami (1984) introduced the theory of Induced Institutional Innovation, which explains that institutions develop in response to changes in technology and economic conditions. Meanwhile, Knight (1992) emphasizes the role of social conflict in the formation of institutions, where institutions emerge as a result of negotiations between groups with different interests. Veblen (1899), in *The Theory of the Leisure Class*, also discusses how institutions in capitalist society are formed based on consumption habits and social status. He criticized how the upper social class created consumption norms, which were then adopted by the broader community as a symbol of status and prestige.

With these various perspectives, it can be concluded that institutions are not just a collection of rules but a dynamic social structure that continues to evolve based on social interaction, external pressure, and technological and economic changes.

## **2.2 Agricultural Institutions**

Agricultural institutions refer to the structures and organizations that regulate agricultural activities in an area, including community participation in the management of agricultural resources. According to Anantanyu (2011), this institution includes farmer groups, farmer organizations, and government institutions that function to support sustainable agricultural development and improve farmers' welfare. In the study (Santoso & Darwanto, 2015), it was explained that in Bonto Daeng Village, farmer groups play an active role in food security programs supported by the government. The program assists in the form of livestock and training to increase productivity and encourage local economic growth. Research (Ratna et al.,

2023) shows that the existence of farmer groups can increase collaboration between farmers and strengthen the marketing network of agricultural products (Syamsul Adiaksa et al., 2023).

One of the innovations implemented in Cibanteng Village is the integration between agriculture and livestock through cicada cultivation. This cultivation not only reduces feed costs by utilizing agricultural waste but also opens up new business opportunities for the community (S. Ginting et al., 2024). This activity involves counseling residents to improve their knowledge and skills in managing agricultural businesses. The results show an increase in community income and the opening of new jobs (Paduloh et al., 2021). Despite its great potential, agricultural institutions in Cibanteng Village face various challenges, including low levels of education and technical knowledge of farmers regarding modern agricultural practices (Setiawan et al., 2024). In addition, access to resources and markets is also a significant obstacle.

Programs such as *SIBUCINTA* from IPB University show how collaboration between academics and the community can create positive change in the agricultural sector. This program focuses on sustainable agricultural practices and organic waste management to improve crop yields and the quality of agricultural products. Thus, the sustainability of agricultural institutions is highly dependent on the active participation of the community and support from various parties. Agricultural institutions in Cibanteng Village have an important role in the development of the local economy through various empowerment programs. Efforts to strengthen this institution must continue to be carried out so that the existing potential can be utilized optimally.

### **2.3 Development of Farming Communities**

The development of farming communities is a process that aims to empower farmers to improve their quality of life and welfare. According to (Chambers, 2015), the empowerment of farming communities involves the active participation of the community in the planning, implementation, and evaluation of programs related to agriculture. This process focuses not only on increasing agricultural production but also on institutional strengthening and access to the necessary resources. One of the main approaches in the development of peasant communities is the formation of farmer groups, which serve as a forum for farmers to collaborate, share knowledge, and increase their bargaining power in the market (Gardner et al., 2003). Farmer groups have an important role in improving the welfare of farmers through various activities, such as training and counseling. Farmer group coaching can help farmers develop their skills and knowledge about modern agricultural practices and farming management (Swanson & Rajalahti, 2010). In addition, farmer groups also function as mediators in the procurement of production facilities and marketing of agricultural products so that farmers can obtain better prices for their products (van den Berg & Jiggins, 2008). Thus, the existence of farmer groups is very strategic in facing the challenges of agricultural development in the modern era.

However, challenges remain in the development of farming communities. Many farmer groups experience problems such as lack of member participation, weak management, and lack of access to market information (Wibowo, 2020). Therefore, continuous efforts are needed to strengthen farmer institutions through relevant education and training. Research shows that empowerment programs involving active participation from farmers can increase the effectiveness of the program and have a positive impact on their well-being (Mangowal, 2013). Overall, the development of farmer communities through farmer group institutions is an effective strategy to increase farmers' productivity and welfare. With support from the

government and related institutions, it is hoped that farmer groups can function optimally in empowering their members and contributing to sustainable agricultural development.

### **3. Research Methodology**

#### **3.1 Research Design**

The research entitled *Agricultural Institutions in Cibanteng Village: Development Strategies and Challenges* uses a qualitative research design based on a case study approach to gain a deep understanding of agricultural institutions in Cibanteng Village. This approach allows for an in-depth exploration of the development strategies and challenges faced by agricultural institutions in the specific context of the village. The qualitative design is suitable because it enables the research to capture the complexities and nuances of agricultural practices, institutional roles, and socio-economic factors that influence agricultural development in this area.

#### **3.2 Participants**

The selection of informants was determined by *the purposive sampling* method. *Purposive sampling* is a respondent determination technique used when researchers deliberately select individuals who are considered most suitable for the study (Palinkas et al., 2015). Respondents are selected based on specific characteristics relevant to the research. These informants will be interviewed to obtain preliminary data on agricultural institutions as well as their challenges and development strategies. In addition, informants are also actively involved in farmer groups who have direct experience related to the institutional development strategy (Campbell et al., 2020; Powell et al., 2015).

#### **3.3 Instruments**

The research instruments used in this study include interview guidelines, observation sheets, and document analysis. These three instruments are used in an integrated manner to obtain accurate and in-depth data on agricultural institutions in Cibanteng Village.

Interview guidelines are used in in-depth interviews with key informants, such as Gapoktan chairmen, farmer group members, and other stakeholders. The interviews were conducted in a semi-structured manner with open-ended questions that focused on the institutional structure, development strategies, and challenges faced. This approach provides flexibility in digging up more detailed information according to the informant's experience and perspective. Observation sheets are used to record findings from participatory observations in the field. Observation is focused on agricultural and institutional activities, interactions between farmer group members, and the application of strategies in institutional management. This instrument allows researchers to understand actual conditions that cannot always be revealed through interviews. Document analysis is carried out to examine various agricultural institutional documents, such as organizational regulations, activity reports, government policies, and other administrative documents. This study aims to strengthen data from interviews and observations and provide a more comprehensive understanding of the development of agricultural institutions in Cibanteng Village.

The use of this structured instrument ensures that the data collected is highly reliable and valid when describing the development strategy and challenges of agricultural institutions in the village.

### 3.4 Data Analysis Procedures

The data analysis in this study was carried out in a qualitative descriptive manner through three main stages, namely data reduction, data presentation, and conclusion drawing and verification (Miles & Huberman, 1994; Mayring, 2022). The first stage is data reduction, where information obtained from interviews, observations, and document analysis is selected and simplified. This process aims to sort out the data that is most relevant to the focus of the research, namely development strategies, and challenges in agricultural institutions in Cibanteng Village. Data reduction is carried out systematically so that only information with high analytical value is used in research (Chenail, 2012; Kiger & Varpio, 2020).

According to Fadli (2021), after the data is reduced, the next step is to present the data in the form of descriptive narratives, tables, or thematic categories. This presentation is carried out so that the data is more straightforward to interpret and helps identify patterns, relationships, and trends that occur in agricultural institutions. With a structured presentation, analysis can be carried out in a more in-depth and systematic manner (Herniyanti & Supriadi, 2024; Campbell et al., 2020). The final stage is conclusion drawing and verification, where the results of the analysis are compared and confirmed through data triangulation. This method is carried out by matching findings from interviews, observations, and documents to ensure consistency and increase the validity of research results. The conclusions produced are not only based on one data source but also on testing various existing perspectives, resulting in a more holistic and accurate understanding of agricultural and institutional conditions in Cibanteng Village. Through these three stages, data analysis can systematically describe how agricultural institutions develop, the challenges faced, and strategies that can be applied to their development.

## 4. Findings

### 4.1. Responsive and Adaptive Institutional Strengthening Strategies

Institutions in the context of agriculture are structures and organizations that regulate agricultural activities in an area and play a role in connecting farmers with various resources needed to achieve a common goal, namely improving the welfare of farming communities. This institution is formed from patterns of human behavior that are governed by norms and rules, both formal and informal. In its management, agricultural institutions involve various elements, such as farmer groups, farmer organizations, and government institutions that support the development of sustainable agriculture.

In Cibanteng Village, the institution of Gapoktan Tani Mandiri plays an important role in managing agricultural resources and improving the welfare of farmers. However, to ensure its sustainability, an appropriate development strategy is needed, as well as readiness to face various challenges in the current management of agricultural land. The agricultural sector has a vital role in economic growth, including in Indonesia. Innovations in the agricultural sector, such as hydroponic plant cultivation, are one example of success in the use of agricultural institutions in Cibanteng Village. This agricultural system does not require large tracts of land, allowing farmers to cultivate crops in their yards efficiently. In addition, this method is also

environmentally friendly, has high productivity, and can take advantage of limited space to increase agricultural yields.

The successful application of hydroponic technology shows that strong agricultural institutions are able to introduce innovations and support the diversification of agricultural businesses that benefit the community. In addition, the involvement of the younger generation in sustainable agriculture can be an inspiration for the next generation. Their role in continuing the legacy of sustainable agriculture will help maintain the sustainability of natural resources and shape a brighter future for agriculture.

Cibanteng Village has excellent potential to integrate agricultural and livestock businesses to create new jobs and increase community income. Members of the Independent Farmers group, for example, can cultivate hydroponic plants that do not require soil but instead use a nutrient-rich water medium. This system is typically implemented in greenhouses, allowing for better control over the environmental conditions of the plants.

In addition to increasing food production, the integration of agricultural and livestock businesses can also enrich the mindset of farmers so that they do not depend only on one type of agricultural commodity. Thus, farmers can recognize and take advantage of other, more profitable business opportunities. This approach will make agricultural institutions more adaptive to changes in market needs and more resistant to economic shocks that may occur.

#### **4.2 Challenges Faced by Agricultural Institutions in Cibanteng Village**

Agricultural institutions in Cibanteng Village face various challenges that affect their sustainability. One of the main obstacles is the limited technical knowledge of agriculture with modern innovations due to the low level of farmer education. Most of the farmers in this village are over 50 years old, while the interest of the younger generation in the agricultural sector is still very low. This condition hinders the adoption of new technologies that are more efficient and environmentally friendly and slows down the development of the agricultural sector as a whole.

In addition, access to more modern agricultural technology is still minimal. Many farmers still rely on traditional methods of farming, which has an impact on agricultural yields that are not optimal. The limitation of tools and technology that suit local needs is a challenge in increasing agricultural productivity. Therefore, policies that support easy access to technology and innovation, such as the use of more efficient and environmentally friendly agricultural tools, are urgently needed.

In facing this challenge, empowerment programs involving the active participation of farmers are one of the effective solutions. Programs designed to involve farmers in the planning and evaluation process have been proven to increase the success of the implementation of agricultural strategies. One example of an empowerment program that has been successfully implemented in Cibanteng Village is a collaboration between the community and academics that focuses on sustainable agricultural practices and more optimal resource management. Programs like this not only improve farmers' skills in applying better technology but also strengthen agricultural institutions through community-based learning.

Overall, strengthening agricultural institutions in Cibanteng Village requires a comprehensive approach. Efforts are needed to strengthen farmer groups, improve education and training for farmers, and expand access to better technology, markets, and resources. With continued support from the government, academia, and the private sector, agricultural

institutions can be an effective instrument in improving the welfare of farmers and encouraging more sustainable agriculture in the village.

### **4.3 Solutions for Agricultural Institutions in Cibanteng Village**

Strengthening agricultural institutions in Cibanteng Village requires various strategies that can increase the capacity and welfare of farmers. One of the main steps that needs to be taken is to improve the competence of farmers through education and training tailored to local needs. Farmers need to gain a better understanding of modern agricultural technology, farming business management, and digital marketing strategies to increase their independence and competitiveness.

In addition, the development of agricultural infrastructure, especially in terms of adequate irrigation systems, is a key factor in ensuring the sustainability of agricultural production. Collaboration between the government and farmer groups in planning and implementing infrastructure that suits their needs will help increase agricultural productivity in this village. Business diversification and the implementation of integrated agricultural systems are also solutions that can be adopted to increase farmers' income. The application of modern agricultural methods such as hydroponics can be an alternative for areas that have limited arable land. In addition, processing agricultural products into value-added products can increase the selling value of products and strengthen farmers' competitiveness in the market.

The empowerment of farmer groups must also be strengthened by making them the center of innovation and development of farming businesses. Apart from being a forum for sharing information, farmer groups can also play a role in facilitating farmers' access to more profitable means of production and markets. Farmer regeneration is an aspect that should not be ignored, so there is a need for a program that can attract the interest of the younger generation to be involved in the agricultural sector, both through education and attractive incentives.

Ease of access to capital and financial support from financial institutions or the government are also important factors in strengthening agricultural institutions. Cooperation with educational institutions and research institutions can help accelerate the adoption of innovations that are in accordance with local conditions. In addition, the role of the government in creating supportive policies, such as subsidies and easy market access, is indispensable to improve the welfare of farmers. By implementing these strategies synergistically, agricultural institutions in Cibanteng Village are expected to develop to be more resilient and adaptive in facing various existing challenges. It will encourage the creation of a more productive, sustainable agricultural sector and improve the welfare of farmers in the future.

## **5. Discussion**

Agricultural institutions have an important role in connecting farmers with the resources needed to improve their welfare. A study by Hall et al. (2020) shows that strong agricultural institutions can accelerate the adoption of technological innovations, such as hydroponic systems, that have been implemented in Cibanteng Village. With this system, farmers can increase productivity without requiring large plots of land, which is in line with research conducted by Van der Ploeg et al. (2019) on the sustainability of small-scale agriculture. The success of innovation in hydroponic systems shows that adaptive institutions are able to support the diversification of agricultural businesses. According to Rivera et al. (2021), farmer groups that are active in innovation are better able to survive market changes and economic conditions.

Therefore, institutional strengthening must include increasing the capacity of farmers through continuous training and education.

As revealed by Darnhofer et al. (2018), one of the main challenges in the development of agricultural institutions is the low level of farmer education and the lack of participation of the younger generation. This condition also occurs in Cibanteng Village, where most farmers are over 50 years old and lack access to modern agricultural technology. In addition, access to resources such as capital and infrastructure is still limited, hindering the development of farming businesses. According to an analysis from Klerkx & Proctor (2019), policies that support easy access to technology and markets are urgently needed to increase farmers' competitiveness. Therefore, collaboration between the government, academia, and the private sector is key to overcoming this challenge.

To overcome these challenges, several strategic solutions need to be implemented. First, the education and training of farmers should be increased so that they are better prepared to adopt technological innovations. Based on the findings from Pretty et al. (2020), community-based empowerment programs have proven to be effective in increasing farmers' capacity. Second, agricultural businesses can be diversified through an integrated agricultural system that combines agriculture and livestock. Research by Altieri & Nicholls (2020) shows that this approach can increase farmers' economic resilience as well as reduce the risk of dependence on one type of commodity. Third, the empowerment of farmer groups as a center for innovation and development of farming businesses. According to a study by Spielman et al. (2021), farmer groups that are facilitated by access to markets and capital have a more significant opportunity to develop sustainably.

Finally, the role of the government in creating policies that support market access, subsidies, and ease of capital is crucial in strengthening agricultural institutions. With this strategy, agricultural institutions in Cibanteng Village are expected to develop to be more resilient, adaptive, and able to improve the welfare of farmers sustainably.

## 6. Conclusion

Strengthening agricultural institutions in Cibanteng Village is a strategic step in encouraging the development of a sustainable agricultural sector. The existence of the Independent Farmers Gapoktan has a crucial role in managing agricultural resources and improving the welfare of farmers. However, the challenges faced, such as the low rate of technology adoption, the lack of regeneration of young farmers, and limited access to modern resources, are still obstacles that need to be overcome immediately.

A responsive and adaptive strategy is needed to answer these challenges. Institutional strengthening can be realized through education and training in accordance with the needs of farmers, business diversification with the application of hydroponic plant cultivation, and the integration of technology and innovation in agricultural practices. In addition, revitalizing the role of farmer groups as empowerment centers, collaborating with academics and research institutions, and partnering with the private sector are important steps in building a more resilient and competitive agricultural institution. The main results of this study should be presented concisely in the Conclusion section without repeating the previous section.

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