**STRENGTHENING FARMERS' INSTITUTIONS BASED ON SOCIAL CAPITAL**

**IN SUPPORTING FOOD SECURITY IN KUTAI KARTANEGARA DISTRICT** ,**Indonesia**

**ABSTRACT**

Institutional arrangement and strengthening can be done by utilizing the values ​​and governance of farmer institutions that already exist in the community as social capital as a reinforcement to become an institution that can support the guarantee of food availability. The purpose of the study was to identify the characteristics typology and existence of farmer institutions based on social capital, and analyze the factors that encourage and inhibit the existence and strengthening of farmer institutions needed to support food security in Kutai Kartanegara Regency. This research was conducted from June to August 2024 in the agricultural area of ​​Kutai Kartanegara Regency, especially in Bukit Pariaman Village, Tenggarong Seberang District, and in Manunggal Daya Village, Sebulu District. The respondent determination technique used a purposive sampling method originating from farmers who are heads of farmer groups, agricultural institutions, village officials, and managers of farmer institutions at the research location, determining the number of samples using the linear time function method, namely 30 respondents. Data analysis was carried out using a qualitative descriptive method. The results of the study indicate that farmer institutions in the buffer zone of the National Capital Region (IKN) of Kutai Kartanegara Regency are still not in accordance with the institutional characteristics recommended by the Ministry in supporting food security; The typology of farmer institutions based on community social capital in increasing food crop productivity and farmer income is accepted and included in the moderate category; In Bukit Pariaman Village, it shows that the role of Farmer Institutions is not optimal, while in Manunggal Jaya Village, the role of farmer institutions is quite optimal and provides high motivation for farmers to be more advanced; and the strategy of strengthening farmer institutions can be done by strengthening farmer capacity, improving farmer institutional management and the role of associations so that their existence can be sustainable and provide a significant impact to support food availability, food access, and food distribution, especially to meet food needs in the National Capital Region (IKN).

Keywords: Farmer Institutions, social capital, food security

**INTRODUCTION**

The agricultural sector is one of the sources of life for some of the population in Indonesia and the agricultural sector contributes to the regional and national economy. The development of the agricultural sector is focused on superior regional commodities so that the potential owned by the region can be utilized properly (Prawoto, 2010: Oktavia et al., 2016).

Agricultural development includes the development and improvement of factors such as technology, natural resources, human resources, and institutions (Uphoff, 1986; Johnson (1985) quoted by Syahyuti, 2003). These factors are sufficient conditions to achieve the desired development performance. This means that if one or more of these factors are not available or do not meet the required requirements, then the goal of achieving a certain desired performance cannot be achieved. One of the problems in managing agricultural resources is the problem of agricultural institutions that do not support them, one of which is farmer institutions.

According to Syahyuti (2003) and Surasdisastra (2008), there is a need for the development of farmer institutions based on the idea that (1) the agricultural process requires strong human resources supported by infrastructure, equipment, credit, and so on; (2) the development of farmer institutions is more complicated than natural resource management because it requires supporting factors and production units; (3) agricultural activities include three series: preparing inputs, changing inputs into products with labor and management efforts, and placing outputs as valuable; (4) agricultural activities require support in the form of policies and institutions from the center to the local level; and (5) the complexity of agriculture, which includes business units and institutions, makes it difficult to achieve optimal conditions. Farmer institutions play an important role in agricultural development, both in industrialized countries and developing countries such as Indonesia. However, the reality shows a tendency for farmer institutions in developing countries to be weak, as well as major obstacles in developing institutions in farming communities. Farmer institutions are expected to be able to help farmers out of the problem of farmer economic disparities, but until now they have not functioned optimally.

Developing farmer institutions (Farmer Groups and Farmer Group Associations) into farmer economic institutions is one strategy to increase farmer income and welfare so that the poverty rate of farmers in rural areas can be reduced. For this reason, the central government and local governments are obliged to encourage and facilitate the growth of these institutions, through a transformation process. The form of farmer institutions that are transformed into farmer economic institutions. In Indonesia, the number of Farmer Economic Institutions (KEP) has currently reached 12,429 groups in the form of Farmer-Owned Enterprises (BUMP), such as Agricultural Cooperatives, Limited Liability Companies, Commanditaire Vennootschap, Joint Business Groups, Agribusiness Microfinance Institutions, and others. Meanwhile, farmer institutions in the form of Farmer Groups are 720,307 groups and Farmer Group Associations are 64,522 groups. Indraningsih (2011) and Syahyuti (2017) stated that the problem faced in the development of farmer institutions (farmer groups) is that in general, farmer groups are formed based on technical interests to facilitate coordination when there are government activities or programs so that they are more program-oriented and less guarantee the independence and sustainability of the group. Groups like this will gradually disappear along with the absence of government programs. Meanwhile, groups that are formed because of motivation from the farmers themselves can continue to survive even though there is no financial assistance or government programs.

Efforts to increase productivity, farm efficiency, and farmer competitiveness are carried out through the development of agricultural institutions, including strengthening the institutional capacity of farmers. The reality shows that development programs are increasingly difficult to reach small farmers individually, whose numbers are very large (Khairunnisa et al., 2019).

Social capital is capital related to economics, society, and politics and social relations influence how markets and states work and vice versa, markets and states will also shape how social capital is in the community concerned (Syahyuti, 2003). Social capital in a community can be strengthened but requires the support of certain resources to strengthen it. To create good social and institutional relations, community members must support. Social capital can reduce the impact of market imperfections faced by traders. The existence of social capital provides a contribution that is not the same as the tangible capital owned but functions as a tool used by individuals to achieve the same goals in an organization, group, or individual (Velayati, 2018). In the development of the agricultural sector, the existence of social capital is considered to be able to make a positive contribution to improving farmer welfare (Cahyono dan Adhiatma, 2019), including in fulfilling local food security for farmers (Utami & Suprapti, 2020). The components that form social capital (trust, networks, and social norms) can be utilized to maintain food security components (Prayitno et al., 2019). So that the utilization of social capital can realize food security related to the adequacy, availability, and access of food in the family (Mulyati et al., 2020; Nurhadinat et at, 2019).

The purpose of the study was to identify the forms or patterns of farmer institutions in the Kutai Kartanegara Regency agricultural area; and to determine the role of social capital in strengthening farmer institutions to support food security in the Kutai Kartanegara agricultural area.

**2. RESEARCH METHOD**

**2.1. Time and Place**

This research was conducted from June to August 2024 in the agricultural area of ​​Kutai Kartanegara Regency, especially in Bukit Pariaman Village, Tenggarong Seberang District, and in Manunggal Daya Village, Sebulu District. This district was selected by purposive sampling because it is an agricultural area determined by the Kutai Kartanegara Regency Government (Kutai Kartanegara Regent Decree No. 01.1/590/PL/DPPR/II/2022 and is the village with the largest agricultural land.

**2.2. Sampling Method**

The technique of determining respondents uses the purposive sampling method, which is based on the number of farmer institutions at the research location, and the respondents are farmers who are heads of farmer groups, agricultural institutions, village officials, and managers of farmer institutions at the research location. The method used to determine the number of samples is a linear time function. According to Umar (2010), the Linear time function is commonly used for research that does not use the population in determining the number of samples so it uses an estimate of the research time, the number of samples/respondents is 30 respondents.

**2.3. Data Collection Method**

The data collected consists of primary data obtained through observation and interviews using a list of questions related to the research including the characteristics of farmers and farmer institutions, characteristics of social capital that are by local wisdom, farmer groups, farmers groups, rural institutions that support food security; and secondary data obtained from documentation from various agencies related to the research including the Regency/City Agriculture Service, the Central Statistics Agency, and various literature and publications.

**2.4. Data Analysis**

This study uses a qualitative method, namely a type of descriptive research. Descriptive analysis aims to explain or describe the characteristic data of farmer institutions at the research location.

Univariate analysis is an analysis carried out on each variable from the research results. This analysis only produces a frequency distribution of the presentation of each variable (Notoadmodjo, 2010). The frequency distribution formula is as follows: p = (F / N) x 100%

Description:

P = percentage; F = frequency of correct answers and N = number of questions.

**3. RESULTS AND DISCUSSION**

**3.1. General Description of Research Location**

Kutai Kartanegara Regency with an area of ​​27,263.10 km² is located between 115º26’ East Longitude and 117º36’ East Longitude and between 1º28’ North Latitude and 1º08’ South Latitude. Administratively, Kutai Kartanegara Regency consists of 20 sub-districts 193 villages, and 44 sub-districts (BPS, 2023).

The population of Kutai Kartanegara Regency in 2022 was 738,189 people an increase of 4,563 people or an increase of 0.62% compared to 2021. The population density of Kutai Kartanegara Regency in 2022 was 27.00 people/km2, the same as the number in the previous year. The sex ratio in 2022 is 108.00, meaning that for every 100 females in Kutai Kartanegara Regency, there are 108.00 or 108 males. This data shows that in 2022 the male population in Kutai Kartanegara Regency is greater than the female population.

**3.2. Agricultural Conditions in Kutai Kartanegara Regency**

Based on data from the Central Statistics Agency, rice production in East Kalimantan Province throughout 2023 reached 226.97 thousand tons of dry milled grain (GKG) with a planting area of ​​57,143.29 hectares. Among the 10 regencies/cities in East Kalimantan, Kutai Kartanegara Regency is the area with the largest rice harvest area in 2023, namely 26,744.87 hectares. Based on data from the Central Statistics Agency, the agricultural conditions in Kutai Kartanegara Regency in July 2024 were as follows: Farmer Exchange Rate (NTP) of 137.86; Food Crop NTP (NTPP) of 103.13; Horticulture NTP (NTPH) of 111.46; People's Plantation Crop NTP (NTPR) of 186.74; Livestock NTP (NTPT) of 106.77; Fishermen and Fish Farmers NTP (NTNP) is 99.65; and the Agricultural Household Business Exchange Rate (NTUP) is 142.23.

**3.3. Performance of Agricultural Institutions**

Based on the One Data of East Kalimantan Province in 2024, the state of extension data and the state of the number of Farmer Groups, Farmer Group Associations, and Farmer Economic Institutions in 2021, 2022, and 2023 are presented in Tables 1 and 2.

Table 1. Data on the State of Extension Workers

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. | Data List  Extension Data | 2021 | 2022 | 2023 | Unit |
| 1. | Civil Servant Agricultural Extension Worker | 630 | 525 | 513 | Person |
| 2. | Contract Extension Worker | 280 | 101 | 281 | Person |
| 3. | Self-Help Extension Worker | 295 | 295 | 353 | Person |
| 4. | Number of BPP | 84 | 85 | 85 | Unit |
| 5. | Farmer Groups | 5113 | 10153 | 10355 | Farmer Group |
| 6. | Contact the Leading Farmers and Fishermen Group | 1 | 1 | 1 | Group |

Source: One data, East Kalimantan, 2024

Table 2. Number of Farmer Groups, Farmer Group Associations, and Farmer Economic Development in East Kalimantan and Kutai Kartanegara Regency

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| No | Region | Farmer Groups | Farmer Group Associations | Farmer Economic Development |
| 1 | **East Kalimantan**  2021  2022  2023 | 9.968  10.159  10.344 | 679  683  687 | 74  80  77 |
| 2 | **Kutai Kartanegara Regency**  2021  2022  2023 | -  -  2.962 | -  -  162 | -  -  28 |
| 3 | **Indonesia**  2021  2022  2023 | 708.344  705.686  726.321 | 64.208  64.400  64.522 | 12.671  12.899  12.966 |

Source: Data processed from the Center for Agricultural Data and Information, 2024

**3.3.1. Characteristics of Farmer Institutions Current and Expected Conditions**

Institutions at the farmer level are organizations that are developed from, by, and for farmers whose main function is to fight for the interests of farmers, including agricultural commodity associations and councils, as well as farmer group associations or farmer groups. Farmer institutions play an important role in supporting agricultural development, so their existence needs to receive attention and good management so that their roles and functions can run optimally (Handayani, 2020).

**3.3.2. The Role of Social Capital in Strengthening Farmer Institutions**

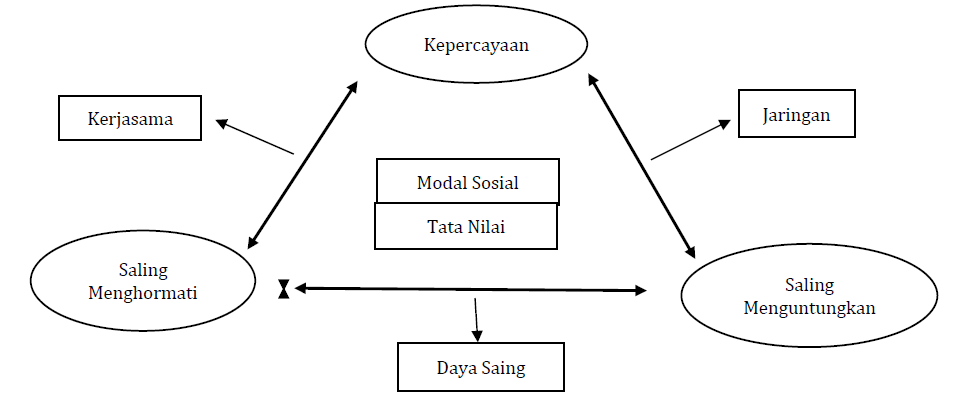
Institutions in community life are formed due to the encouragement related to social capital elements, namely trust, social networks, and social institutions. The role and function of institutions are very important in the development of productive economic efforts because, through institutional development, it has been proven to be able to overcome various social problems such as poverty. Institutions are also a driving factor that encourages the empowerment and development of society in terms of economic and social aspects to create a prosperous and competitive society (Syofian et al., 2020).

Trust, a relationship of mutual trust is formed because of honesty and tolerance between institutions (committees) and farmers in establishing cooperation. This condition of mutual trust is a supporter and guarantee for the smooth running of businesses such as distribution and payment of agricultural inputs, financing of cultivation, sale of agricultural products, and the process of transferring information and technology. Social networks, Social networks, include cooperation between farmers, participation and reciprocal relationships between institutions and farmers, and solidarity. Social institutions, Institutions include rules, values, norms, and behaviors that determine patterns of action and social relations, including social unity-social unity which is a concrete manifestation of the institution.

The social capital is related to the development of institutions in Bukit Pariaman Village and Manunggal Daya Village referring to the institutional policies of farmers both at the Kutai Kartanegara Regency Level and the policies of the Ministry of Agriculture. Social capital in the form of values ​​(norms) namely cooperation and togetherness in overcoming problems, gives rise to ideas that develop then form and influence the development of farmer institutions in Kutai Kartanegara Regency. This value is related to the vision, mission, and objectives of Agricultural Development and Agricultural Area Development.

The form of a relationship of mutual trust that arises between farmers and between farmer institutions and the community is that the community recognizes that the programs provided by the existence of farmer groups and farmer group associations will provide benefits. With such conditions, it facilitates cooperation and adaptation of the community and farmer institutions (farmer groups and farmer group associations) in realizing common goals.

Social capital networks in both villages in this study were found in the form of informal group participation, namely farmer groups farmer group associations, and Associations. Social capital as trust, cooperation, networks with mutual respect, and mutual appreciation will strengthen the social order to achieve goals in strengthening farmer institutions that are members of farmer groups and farmer group associations. Based on this, according to Fadilla (2023), this relationship can be described as follows:

Figure 1. Strengthening Social Capital in Farmer Institutions

Information :

Kepercayaan = Trust; Kerjasama = Cooperation; Jaringan = Link

Saling Menghormati = Mutual Respect; Daya Saing = Competitiveness; Saling Menguntungkan = Win-win Solution; Modal Sosial = Social Capital; and Tata Nilai = Values

Social capital is not something that can be easily created quickly, whereas social capital develops slowly, gradually, and over a long period. The discussion of social capital explained by Coleman, contains the relationship between shared desires between individuals and individual desires. Coleman also explains that social capital contains productive elements that can be used as support to achieve certain goals such as strengthening human resources.

**3.3.3. The Role of Farmer Institutions in Realizing Food Security**

In general, the roles played by farmer institutions to realize food security are as follows:

1. As a place for learning, cooperation, and exchanging information internally within the Institution. Providing mutual support in the farming business owned, helping each other, and working together to build the group to be more advanced.

2. Farmer institutions become a place to solve problems within the group, members help each other, and work together to solve farming problems.

3 Farmer groups must also become institutions that provide infrastructure and production facilities needed by members, in this case, farmer institutions that carry out management so that the existence and function of institutions can be felt by members and this makes member trust higher.

4. Farmer institutions become a place to provide capital and financing.

5. Provider of marketing systems and infrastructure

6. A place for education, mentoring, coaching, counseling, and empowerment for farmers to increase the capacity of farmers in farming that is insightful, independent, competitive, and modern in line with current developments.

7. Ease of access to science, technology, and information sources.

**3.3.4. Stages of Institutional Strengthening towards Farmer Economic Institutions (KEP)**

The stages of developing farmer economic institutions, including strengthening their capacity to become Farmer-Owned Enterprises (BUMP), are: preparation, formation, implementation of development, monitoring, and evaluation.

Strengthening farmer institutions can also be done in several ways, namely mentoring, meetings or discussions between farmers and community leaders, village officials, agricultural extension workers, and related agencies, a self-help approach, namely helping the community to learn to solve their problems, increasing the number of farmer economic institutions, increasing the development of agribusiness activities, and improving the performance of supervision and assistance of agricultural extension workers.

The results of the identification of farmer institutions in Kutai Kartanegara Regency and in 2 research village locations show that farmer institutions are still not well established and the existence of farmer economic institutions (farmer economic development) has not been formed.

Table 3. Identification of Farmer Institutions at Research Locations

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| No | Region | Farmer Groups | Farmer Group Associations | Farmer Economic Development |
| 1 | **Indonesia**  (2023) | 726.321 | 64.522 | 12.966 |
|  | **East Kalimantan**  (2023) | 10.344 | 162 | 77 |
| 2 | **Kutai Kartanegara Regency**  (2023) | 2.962 | 687 | 80 |
| 3 | Manunggal Daya Village  Kelompok P3A  Food Barn  Bukit Pariaman Village | 25  1  1  23 | 1  -  -  1 | -  -  -  - |

Source: Processed data (2024), Agricultural Extension Management Information System and Extension Programs; P3A = Association of Water Users Farmers.

Based on the data above, it shows that the Farmer Economic Institution has not been formed; For Manunggal Daya Village, there has been a P3A Langgeng institution since 2020, while the Farmer Group Association and the Langgeng Lestari Food Barn have been formed since 2019. Meanwhile, for the farmer group class that has been institutionally confirmed, there are still many that have not been confirmed and are experiencing stagnation in their farmer group class, and from the two villages, none have reached the Madya Group Class.

Table 4. Farmer Group Class Data

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | Region | Beginner | Advanced | Intermediate | Main | Not Yet Confirmed |
| 1 | Indonesia (2023) | 726.321 | 434.736 | 168.701 | 28.669 | 2.879 |
|  | East Kalimantan (2023) | 7.228 | 1.713 | 117 | 1 | 1.285 |
| 2 | Kutai Kartanegara Region (2023) | 1.946 | 620 | 57 | 1 | 338 |
| 3 | Manunggal Daya Village (2023) | 6 | 12 | - | - | 7 |
| 4 | Bukit Pariaman Village (2023) | 17 | 5 | 1 | - | - |

Source: Processed Primary Data, 2024

Based on the research results, several problems of farmer institutions were found in the 2 research location villages, namely:

**1. In Bukit Pariaman Village:** (1) management capabilities in Poktan are considered to be less participatory, the orientation of farming is not yet towards agribusiness, (2) the number of Farmer Group Meeting Houses is considered to be still lacking, and (3) farmers have not maximized the use of cooperative facilities in the Village / Farmer Group Work Area.

The agricultural production of food crops and horticulture is still relatively low due to several factors, namely: (1) lack of technical irrigation, so that rice and secondary crop planting patterns can be properly regulated, (2) the dam gates are too narrow so that water management is not by the existing pumping system, (3) high levels of pollution in existing water sources, due to waste from coal mining, (4) existing farm roads are not optimal, narrow and muddy in the rainy season, so cementing is necessary, (5) not all areas are planted simultaneously, (6) high prices for agricultural production facilities and means of production, (7) minimal knowledge of farmers in controlling plant pests, and (8) difficulty in obtaining labor when planting and harvesting rice fields.

**2. In Manungga Daya Village:** Farmer contacts and group administrators spread across the extension worker's supervised areas have different levels of ability in terms of leadership, ability to receive, and how to convey information. Factors that influence the ability of farmer contacts are: (1) there is still a selection of farmer contacts that uses a pointing system without looking at a person's ability and experience; (2) lack of cooperation between farmer contacts, leaders, administrators, and members; (3) the socio-economic status of farmer contacts also influences the spirit of leadership and group management, (4) the level of education and background of farmer contacts greatly influences their ability; (5) the development of knowledge, skills, and attitudes of the main actors in each farmer group is still in the improvement stage; (6) the preparation of RDK/RDKK by the main actors has not been implemented or accommodated in the need for subsidized fertilizer; (7) Farmer groups have not implemented knowledge of rice field land processing technology; (8) Around 80% of the main actors have not carried out jajar legowo innovation according to technical recommendations. (9) The main actors have not carried out and implemented intensive OPT control for rice plants, by the IPM principles (SL-IPM), namely 70%.

**3.3.5. The Importance of Management Structure in Farmer Institutions**

The management structure in farmer institutions is very important to help the organization achieve its goals. With a good management structure, farmer organizations can be an effective vehicle to help farmers improve their welfare. The management structure in farmer institutions is a composition of personnel who have the duties and responsibilities to manage and run the farmer organization. The management structure usually consists of several positions, including chairman, vice chairman, secretary, treasurer, and members. In addition to the positions above, the management structure in farmer institutions can also consist of several sections or fields, namely the production section, marketing section, membership section, and education and training section.

The management structure in farmer institutions has several uses, including: (1) dividing tasks and responsibilities; (2) increasing accountability; and (3) facilitating coordination.

Overall, the management structure in farmer institutions is very important to help the organization achieve its goals. The purpose and objectives of farmer economic institutions need a clear organizational structure to: (1) increase the efficiency and effectiveness of farmer economic activities; (2) increase transparency and accountability; (3) facilitate decision-making related to farming business activities; and (4) prevent conflicts between members of farmer economic institutions.

The organizational structure of farmer institutions and Farmer Economic Institutions is usually written in several documents, namely: (1) Articles of Association and Bylaws; (2) Organizational Regulations; (3) Farmer Institution and Farmer Economic Institution Guidebook; (4) Website or social media of farmer institutions and Farmer Economic Institutions; and (5) Other documents such as activity reports, proposals, or organizational profiles.

**3.3.6. Partnership in Strengthening Farmer Institutions**

Partnership According to Government Regulation Number 44 of 1997 is a business cooperation between Small Businesses Medium Businesses and/or Large Businesses accompanied by coaching and development by Medium Businesses and/or Large Businesses by considering the principles of mutual need, mutual strengthening, and mutual benefit. So the Agricultural Partnership is one of the efforts to help farmers in developing their commodities, both related to seed assistance, production, productivity, and increasing human resource capabilities in managing their land, as well as a clear and definite container or means to distribute or sell harvests.

There are several reasons why farmer institutions need partners in business development: (1) Limited resources: (2) Farmer institutions often have difficulty in marketing their products to the market; and (3) Sustainability of business where partners can help farmer institutions in developing sustainable businesses.

**3.3.7. Building Partnerships to Strengthen Farmer Economic Institutions**

A successful partnership requires careful planning, communication, and commitment from all parties involved. Here are some important things to consider in building and maintaining a partnership, namely: (1) choosing the right partner, (2) building clear and open communication, (3) determining clear goals and targets, (4) making a Clear Partnership Agreement, (5) respecting and trusting each other and (6) committing to the success of the partnership.

By doing the above, the partnership between KEP and business partners is expected to run successfully and provide optimal benefits for all parties and can contribute to the development of farming businesses and improve the welfare of farmers in Indonesia.

Partnership in farming is a mutually beneficial cooperative relationship between various parties involved in agricultural activities, ranging from farmers, entrepreneurs, and government, to non-governmental organizations. The main objective of this partnership is to achieve joint success in agricultural business. Some characteristics of farming partnerships are: (1) mutually beneficial; (2) all parties must have equal rights and obligations in this partnership; (3) all parties must trust and respect each other; (4) all parties must be open and transparent in communication and cooperation; and (5) all parties must be committed to achieving common goals.

Forms of farming partnerships include: (1) core plasma farming partnerships: (2) contract farming partnerships: in this pattern, farmers sign a contract with the company to supply their products at an agreed price and quality; and (3) cooperative farming partnerships: in this pattern, farmers work together through cooperatives to gain access to capital, technology, and markets.

The main objective of partnerships in farming is to achieve mutual success in agricultural business. This can be achieved by:

1. Improving farmer welfare: access to capital and technology, expanding market access, improving product quality, increasing income;

2. Improving food security: increasing production and improving its distribution.

3. Improving the sustainability of farming: implementing environmentally friendly farming practices and increasing the efficiency of resource use.

In addition, farming partnerships can also help improve farmer knowledge and skills, strengthen farmer institutions, and improve access to information. Overall, farming partnerships can provide many benefits for all parties involved and can be an effective strategy for developing the agricultural sector in Indonesia.

Farming partnerships are one strategy that can be used to improve farmer welfare and develop the agricultural sector in Indonesia.

**3.3.8. Indicators of Strengthening Farmer Institutions**

Strengthening farmer institutions is essential to improving productivity, bargaining power, and overall welfare. This process involves various strategies and indicators that reflect the effectiveness of farmer organizations and their ability to adapt to market demands and technological advances. Key indicators of institutional strengthening include the formation of strong farmer groups, increased access to resources, and improved decision-making capacity.

1. Formation of Farmer Groups: the formation and strengthening of farmer groups is the main entry point that must be carried out by farmer groups in increasing the dynamics, independence, and performance of farmer groups in a farming business (Rimbawati, Fatchiya, & Sugihen, 2018).
2. Access to Resources and Technology: Institutional strengthening often leads to increased access to agricultural technologies, which increases productivity and sustainability (Khairunnisa et al., 2019). Programs that support the adoption of innovative practices, such as overlapping and modern farming techniques, are critical to increasing farm incomes (Mudatsir & Syarif, 2023).

3. Increasing Bargaining Power: farmer groups are formed by and for farmers, to overcome common problems in farming and strengthen farmers' bargaining position, both in the input market and the agricultural product market (Harmanto and Swastika, 2011; Mananganta, et al 2019). Empowered farmer organizations can stabilize prices and improve farmers' negotiating position in the market (Sasmi et al., 2023).

While institutional strengthening is beneficial, challenges such as weak organizational structures and limited farmer knowledge can hinder progress. Addressing these issues requires targeted interventions and ongoing support from government and non-government organizations.

1. **CONCLUSION AND SUGGESTIONS**

**4.1. CONCLUSION**

1. Farmer institutions in the buffer zone of the Kutai Kartanegara Regency Capital City are still not by the institutional characteristics recommended by the Ministry in supporting food security, because there are only farmer group institutions and farmer group associations and 1 rice barn in Bukit Pariaman Village, there are no farmer economic institutions.

2. The typology of farmer institutions based on community social capital in increasing food crop productivity and farmer income is accepted and included in the moderate category. This shows that the first characteristic found in farmer institutions (Farmer Groups, Farmer Group Associations, and Farmer Group Associations in Kutai Kartanegara Regency has quite a lot of trust in farmer institutions. With trust, it will provide opportunities for farmers or economic actors and development to interact with each other to form social capital which will also have a major influence on the development of farmer productivity and income.

3. In Bukit Pariaman Village, the role of Farmer Institutions is not yet optimal, while in Manunggal Jaya Village, the role of farmer institutions is quite optimal and provides high motivation for farmers to progress further.

4. The development of farmer institutions towards farmer economic institutions is currently still in process considering that the condition of the farmer groups themselves is still not by the requirements and criteria to become economic institutions.

5. The strategy for strengthening farmer institutions can be carried out by strengthening farmer capacity, improving farmer institutional management, and the role of associations so that their existence can be sustainable and provide a significant impact to support food availability, food access, and food distribution, especially to meet food needs in the Capital City of the Archipelago.

**4.2. SUGGESTIONS**

1. There needs to be strengthening of internal and external factors, namely intensive assistance to farmers regarding land use, extension intensification, regular group meetings, and exchange of market information between farmers in farmer groups.

2. The role of groups is to continue to be improved by increasing the functions and roles of groups so that the existence of groups can become an economic institution for farmers.

3. The fact is that many farmer groups are still in the beginner class so group empowerment can continue to be improved.

4. The hope for the transformation of farmer groups into farmer economic institutions is something that must be targeted by all related parties, extension workers, agencies, and village officials so that farmer institutions can empower farmers in terms of organization and income.

Disclaimer (Artificial intelligence)

Option 1:

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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