

Farmers' Social Capital in Supporting the Sustainability of Bird's Eye Chili Farming in Sukowiryo, Jelbuk District, Jember Regency

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ABSTRACT

Bird's eye chili farming plays a vital role in the horticultural sector, not only as a source of income for rural communities but also as a contributor to national food security. This study aims to analyze farmers' social capital, comprising social networks, norms, and trust in supporting the sustainability of bird's eye chili farming in Sukowiryo Village, Jelbuk District, Jember Regency. This research used Quasi-qualitative, with data collection techniques using in-depth interviews, passive participation observation, and documentation involving 15 informants. The results showed that social capital consisting of social networks, norms, and trust plays an important role in every stage of farming, starting from the procurement of seeds or seedlings, land processing, planting, maintenance, pest and disease control, harvest and post-harvest, to marketing. Social networks between farmers, families, labor, market actors, and formal institutions facilitate the flow of information and resources. Norms, both written and unwritten, serve as guidelines for cooperation. Trust built on shared experiences and common goals strengthens social cohesion and ensures the sustainability of cooperation. Social capital serves not only as a supporting factor but as a strategic resource in achieving the sustainability of bird's eye chili farming and improving farmers' welfare.

Keywords: *Bird's Eye Chili Farming, Networks, Norms, Social Capital, Trust.*

BACKGROUND

In rural farming communities, cooperation, trust, and close social relationships among farmers are essential elements in supporting agricultural activities. This phenomenon is also found among bird's eye chili farmers in Sukowiryo Village, Jelbuk District, Jember Regency. Farmers often rely on mutual assistance and social networks to overcome farming challenges such as price fluctuations, pest attacks, and limited access to production inputs, which reflect the existence of social capital sustaining the continuity of bird's eye chili farming. Horticultural commodities have great potential in meeting people's food needs, as a source of vitamins, minerals, protein and carbohydrates. Vegetable production in Indonesia in 2019 was recorded at 46,5 million tons (Effendi *et al.*, 2023). One of the much-needed vegetable commodities in the community is chili, which has a high economic value and growing demand (Barus *et al.*, 2022). Jember occupies a strategic position as a bird's eye chili production center, with total production reaching 194,612 quintals in 2023 (BPS Jember, 2023). One of the contributing sub-districts is Jelbuk, with total production reaching 30,732 quintals. Sukowiryo village has the highest production in Jelbuk sub-district, with 7,682 quintals from 105 hectares of harvested land (BPS Jember, 2023).

The preliminary survey showed that farmers in Sukowiryo Village cultivate two varieties of bird's eye chili, namely red bird's eye chili and green bird's eye chili. Green bird's eye chili is faster to harvest, but the price is lower than red bird's eye chili. Farmers obtain seedlings by sowing themselves or buying from seedling traders. The experience of buying seedlings with poor quality has caused farmers to lose trust in traders and change traders. In addition, issues such as climate change and high fertilizer prices are challenges that farmers continue to face. Disease attacks such as yellowing and wilting are more common during the rainy season. Despite the unstable price of bird's eye chili, farmers continue to choose this commodity because it can be harvested multiple times and allows for faster profits.

Bird's eye chili production is not always stable. Production fluctuations are caused by various factors such as harvest area, seedling quality, availability of fertilizers and medicines, and pest and disease attacks (Taufan *et al.*, 2022). If production is high during a bumper harvest, prices tend to fall, and vice versa prices will soar when production declines (Harun *et al.*, 2023). The amount of production has a direct impact on farmers' income and the sustainability of the farming business. In bird's eye chili farming, social capital has a very important role. According to Putnam (2000), social capital refers to the connections among individuals, social networks, and the norms of reciprocity and trustworthiness that arise from them. Social capital consists of three main components: social networks, norms, and trust. Social networks refers to the social relationships between individuals and groups that make up the social structure. Norms which are shared rules that govern behavior within the group, and are usually based on principles of trust and reciprocity. Meanwhile, trust is one of the key elements of social capital, which is created by norms of reciprocity and honesty built into social networks

Bird's eye chili farming is labor-intensive and capital-intensive, both in terms of financial and social capital. Social capital plays an important role in providing labor at every stage of farming activities, from seed or seedling procurement to crop marketing, through family relationships, friendships, and cooperation between farmers. Previous research has shown that strong social capital can foster collaboration and coordination among vegetable farmers, farmer groups, and related institutions in various aspects, such as the provision of facilities and infrastructure, training, extension services, and marketing activities (Halim *et al.*, 2024). This indicates that social capital among farmers help facilitate smoother transaction and distribution processes. Furthermore, good relationships between farmers and collectors allow more flexible transactions, including capital loans under the condition that the harvest must be sold to collectors. However, most previous studies have focused on horticultural farmers in general and have not specifically examined how social capital operates across each stage of bird's eye chili farming at the local village level. The dynamics of networks, norms, and trust in bird's eye chili farming, which is highly dependent on labor exchange, repeated harvesting, and close relationships with traders, may differ significantly from other commodities, yet this has not been explored in depth. This creates a research gap related to the limited understanding of how social capital is formed, maintained, and utilized by bird's eye chili farmers in Sukowiryo Village.

Social capital is an essential asset for building and maintaining social relationships. Previous research has shown that strong social capital reflected through trust, shared norms, and social networks encourages stakeholders to work together effectively to achieve common goals in agriculture-based activities (Juliansyah & Kurniawan, 2023). In this study, social capital refers to the Farmers' Social Capital of Bird's Eye Chili Farming in Sukowiryo, Jelbuk District, Jember Regency (Kumairoh *et al.*, 2026)

networks, norms, and trust formed among bird's eye chili farmers and utilized at every stage of farming activities, from seed procurement to product marketing. Social networks create norms that guide farmers' interactions. Adherence to these norms fosters mutual trust, allowing the established networks to remain sustainable, whereas violations of norms lead to distrust and the weakening of existing social ties. These three elements interact to foster cooperation and strengthen relationships among farmers in facing various challenges in bird's eye chili farming. Therefore, this study aims to analyze farmers' social capital in bird's eye chili farming in Sukowiryo Village, Jelbuk District, Jember Regency, encompassing the networks, norms, and trust that are formed and utilized throughout the farming process.

RESEARCH METHODS

The research was conducted in Sukowiryo Village, Jelbuk Subdistrict, Jember Regency, using a purposive method with the consideration that the village is a bird's eye chili production center. The research was conducted from January to March 2025. The research method used is a Quasi-qualitative method to gain understanding and explain the research objectives descriptively regarding farmers' social capital in bird's eye chili farming. The research conducted still departs from the theoretical framework with an orientation to prove or confirm. In this study, the theoretical concepts of social networks, norms, and trust (Putnam, 2000) were used as analytical lenses to examine whether the empirical findings align with, strengthen, or contradict the existing theory. The themes that emerged from interviews and observations were compared with the predefined theoretical components of social capital. Thus, the theory guided the coding, categorization, and interpretation process, allowing the researcher to assess the extent to which field data support the theoretical propositions. According to Bungin (2011), a Quasi-qualitative or pseudo qualitative design is a design that is not truly qualitative, because its form is still influenced by the quantitative tradition, especially in placing theory on the data it obtains.

Determination of informants used a purposive method with a total of 15 informants. Informants were selected based on explicit criteria: (1) individuals directly involved in bird's eye chili farming for at least two planting seasons, (2) persons who had knowledge and experience related to social capital practices in farming activities, and (3) individuals who were available and willing to participate in the interview process. The main informant was the head of the Hidayah Tani farmer group and supporting informants consisted of bird's eye chili farmers, traders, administrators and members of farmer groups, administrators of the Water User Farmers Association (HIPPA), and agricultural extension workers.

Data collection used in-depth interviews, passive participation observation, and documentation. To enhance credibility, a detailed analytic process was applied using Miles, Huberman, and Saldana (2018) model, which includes data condensation, data display, drawing and verifying conclusion. Analysis was conducted iteratively and continuously, allowing categories and themes to be refined until data saturation was achieved. Data validity was ensured through source triangulation, where information was cross-checked among various informants (bird's eye chili farmers, administrators and members of farmer groups, traders, administrators of the Water User Farmers Association (HIPPA), and agricultural extension workers). Source triangulation aims to

compare and verify the data that has been obtained, so that the research results become more credible and valid. This procedure aimed to compare perspectives, minimize bias, and strengthen the credibility and dependability of the findings.

RESULT AND DISCUSSION

Bird's eye chili farming is the cultivation of bird's eye chili commodities by utilizing existing resources to generate greater profits (commercial). Sukowiryo Village has an average daily temperature ranging from 24°C to 33°C throughout the year, with an altitude of 227 meters above sea level. The conditions of the region support the development of bird's eye chili commodities. Bird's eye chili plants can be cultivated in all seasons, both the rainy season and the dry season. However, during the rainy season, maintenance tends to be more difficult. Bird's eye chili cultivation consists of various stages of the process, procurement of seeds or seedlings, land processing, planting, maintenance, pest and disease control, harvest and post-harvest, and marketing.

Social capital is expected to generate new resources as needed. According to Alfitri (2023), social capital is a social resource possessed by a community that strengthens various existing social conditions. In community life, several types of capital are recognized, including natural capital, human capital, physical capital, and financial capital, while social capital serves as a driving force that enables these forms of capital to function optimally. In the context of bird's eye chili farming, social capital consists of networks, norms, and trust. Networks encompass all aspects of farming activities, from seed procurement to marketing. Norms refer to the rules that apply and must be obeyed by farmers, while trust reflects the confidence among parties that allows established relationships to continue.

Farmers' Social Capital in Bird's Eye Chili Farming

Social capital is an asset that is built and grows within each individual as a result of good social relations (Hamsah, 2017). The existence of social capital is an important element for individuals and groups because it acts as a strategic resource to achieve common goals, including in bird's eye chili farming activities. Every form of social interaction between farmers and other parties contributes to providing information, labor, and access to capital and marketing. Social capital is present in various stages of the bird's eye chili farming process, as described below:

Social Capital in Seed or Seedling Procurement

Social capital in the procurement of seeds or seedlings in bird's eye chili farming in Sukowiryo Village is reflected through various forms of social relations between farmers and seedling traders, agricultural shops, labor, and external parties such as PT Dharma Guna Wibawa. Social capital can be seen from three main elements, namely networks, norms, and trust, as presented in Table 1.

Table 1. Social Capital in Seed or Seedling Procurement

Network	Social Capital	
	Norms	Trust
Seedling trader	Full payment, down payment, or debt system	Easy payment and good quality seedlings. If quality declines, farmers can move to another trader
Agricultural shops	Habit of getting into debt due to routine transactions	Honesty and product recommendations from sellers
Labor	Piece-rate wage system for seedlings work. Soil filling IDR 100/plastic and cutting IDR 100,000 per thousand pieces	Satisfactory work results
PT Dharma Guna Wibawa	Farmers are members of farmer groups	Frequently provide product samples in the form of seeds

Source: Processed Primary Data, 2025

Table 1 shows that social networks are formed through interactions between farmers and seedling traders, farm shops, laborers, and PT Dharma Guna Wibawa. Closeness and involvement in farmer groups are the main supporting factors. Farmer groups became a bridge in facilitating cooperation with PT DGW in the form of providing product sample assistance such as seeds. This is in line with Anggraeni & Subekti (2022), the existence of groups is used as a forum for members to conduct social relations and cooperation.

There is a norm of flexible payment systems, either in full, with a down payment, or by way of debt in the purchase of seedling from seedling traders. In farm shops, long-standing relationships allow for debt transactions due to norms based on custom and previous experience. These norms indicate the existence of unwritten rules that are practiced together and form the basis for strengthening the relationship between farmers and seed traders and farm shops. Trust is an important component that underpins the network. Farmers show a high level of trust in seed traders and farm shops that provide quality seeds and are honest in their transactions. Trust is dynamic, if the quality of seeds received declines, farmers have a tendency to move to other traders. This shows that trust is built on reputation and real experience, not just personal closeness. This is supported Purbowo & Rahmadhani (2025) that trust is formed naturally along with information exchange activities or buying and selling transactions between the two parties.

In terms of labor, social capital is seen in the piecework wage mechanism and close social relations, especially with family members or neighbors who are often involved in nursery activities. Activities in the nursery consist of filling soil into plastic and cutting plastic. The commonly used wage is IDR 100 per plastic for filling the soil and IDR 100,000 per thousand pieces for cutting. This working relationship is not solely based on economic value, but also on mutual trust and satisfaction with the quality of work, indicating the existence of social capital based on interpersonal relationships.

This finding shows that the procurement of seeds or seedlings does not only depend on the availability of funds, but is also strongly influenced by the existence and strength of social capital. Social capital in this context acts as a social binding mechanism, helping them to obtain agricultural needs and maintain the smooth running of the farming business. This finding is in line with Hapsari

& Rokhani (2021) research which emphasizes that social capital is an important resource that arises from social relations and can be used to strengthen solidarity and achieve common goals.

Social Capital in Land Processing

Social capital in bird’s eye chili farming reflects the important role of social relations between farmers and the parties involved in supporting the smooth running of the farm, one of which is land processing. Land processing is one of the toughest stages in bird’s eye chili farming. Farmers need considerable capital and labor for this stage. Social capital accelerates the work process and helps farmers get help in the form of capital debt.

Table 2. Social Capital in Land Processing

Social Capital		
Network	Norms	Trust
Labor	Piece-rate wage of IDR 800,000/ scroll of mulch. Daily wages are IDR 40,000 if food is provided and IDR 50,000 if food is not provided. Daily working hours are 07.00 to 11.00 or 11.300.	Satisfactory work results
Family	Help each other with capital support	Strong family ties
Farmer	Help each other with capital support	Trust due to friendship
Agriculture Department	Obligation to report agricultural equipment and machinery assistance annually	Institutions provide tractor assistance
Bank Rakyat Indonesia (BRI)	Letter of agreement	Farmers believe because BRI provides capital; BRI believes because farmers make loan payments according to the agreement

Source: Processed Primary Data, 2025

Based on Table 2, bird’s eye chili farmers in Sukowiryo Village utilize various social networks in land processing. Local workers, most of whom are neighbors, are the main choice due to trust in the work and close social relations. A piecework wage system is also applied, which is IDR 800,000 per roll of mulch. The wage includes the cost of tractor rental and land cultivation, which includes plowing, making beds, applying mulch, and installing mulch on the beds. Meanwhile, daily wages range from IDR 40,000 to IDR 50,000, which is usually done per activity and calculated per day. Working hours start from 07.00 until 11.00 or 11.30 WIB. The difference in wages is based on the provision of consumption. If the wage is IDR 40,000 then consumption is provided, but for a wage of IDR 50,000, no consumption is provided. Flexibility in wage adjustment is an unwritten norm understood by farmers and laborers.

Family networks also play an important role in land processing, particularly by providing capital assistance. Although no written agreements are made, strong trust within family relationships enables farmers to access financial support without formal guarantees. This network functions as a safety net, allowing farmers to start or continue farming activities even when formal financial access is limited. A similar pattern is found in friendship networks among farmers. Close social ties facilitate mutual assistance, including informal capital loans that can be accessed quickly when needed. These interactions illustrate how networks operate, trust encourages resource sharing, norms ensure that Farmers’ Social Capital of Bird’s Eye Chili Farming in Sukowiryo, Jelbuk District, Jember Regency (Kumairoh *et al.*, 2026)

assistance is reciprocated, and long-term relationships maintain the continuity of support. This mechanism is consistent with the findings of Azis *et al.* (2022), who highlight that communities often help one another by lending money to relatives and neighbors in need.

Farmers' relationships with formal institutions are also part of the social network in land processing. The Department of Agriculture provides agricultural machinery assistance, and in return farmers are required to make annual reports as a form of accountability. In this context, reporting norms become a form of reciprocal agreement that reflects trust between farmers and government institutions. If the farmer groups receiving assistance do not make annual reports, it will have an impact on the provision of further assistance. In line with the research of Hapsari & Rokhani (2021), if the accountability report is not appropriate, the group is obliged to replace it. This sanction is given if the group misuses the assistance financially, for example for personal purposes, then the group leader must be responsible.

Farmers also establish relationships with financial institutions such as Bank Rakyat Indonesia (BRI) to obtain capital. This relationship is formal, characterized by a legally binding agreement. Trust is established because both parties have certainty and assurance of their rights and obligations. This pattern shows that although the interactions that occur are institutional, trust remains the main foundation in the sustainability of cooperation. Therefore, social capital in land processing is not only limited to informal support between individuals, but also includes the involvement of formal institutions.

Social Capital in Planting

Social capital in the planting stage of bird’s eye chili farming is seen through the involvement of various actors such as labor, family, fellow farmers, farmer groups, Water User Farmers Association (HIPPA), and financial institutions such as Bank Rakyat Indonesia (BRI). The social capital built in this social network makes it easier for farmers to access labor, capital, and relevant agricultural information.

Table 3. Social Capital in Planting

Social Capital		
Networks	Norms	Trust
Labor	The labor used is both male and female, with the same daily wage of IDR 40,000 to IDR 50,000	Satisfactory work results
Family	- Helping each other with capital - Help each other in planting	Farmers prefer to borrow capital from family; belief that family members will help without being asked
Farmer	- Help each other with capital - Mutual aid system in planting (reciprocity)	The existence of a friendship relationship and trust that the help given will be reciprocated
Farmer groups	The habit of helping each other by discussing the type of plants to be planted	Shared goals within the group
Water User Farmers	Obligation for farmers to consult on the type of crop to be planted	Farmers have more confidence in HIPPA knowledge and recommendations on

Social Capital		
Networks	Norms	Trust
Association (HIPPA)		water conditions for growing agricultural commodities
Bank Rakyat Indonesia (BRI)	Letter of agreement	Farmers believe because BRI provides capital; BRI believes because farmers make loan payments according to the agreement

Source: Processed Primary Data, 2025

Based on Table 3, social networks in the form of labor from neighbors, both male and female, play an important role in the planting process. Labor assists farmers in planting bird’s eye chili commodities. The daily wage given to male and female labor is the same, between IDR 40,000 and IDR 50,000. The difference in wages is due to the provision of consumption for labor. This shows that the work system is based on social agreements among farmers. The norms that apply in the utilization of labor are based on social relations and satisfactory work results. This is supported by Rahmaniyah & Rokhani (2021) who stated that the relationship is well established because they are close neighbors.

Family networks also play a role in supporting agricultural capital. The norm of mutual cooperation within the family strengthens trust between family members, accelerating the decision-making process and the implementation of farming activities. Meanwhile, fellow farmers apply the gotong royong system as a form of reciprocal norms in planting activities, where assistance provided will be reciprocated on other occasions. Reciprocity creates mutual trust and strengthens social solidarity among farmers.

The farmer group is a space for discussion that encourages the exchange of information on the types of crops to be planted. The habit of discussing in groups becomes a norm that strengthens the network between farmers. Trust is built on the basis of common goals in the group, namely the success of joint farming. In line with the research of Sari *et al.* (2022) which states that member trust can be maintained by information disclosure such as sharing information, consulting each other if there are problems or obstacles, accommodating member aspirations, and responding quickly to member questions or complaints.

The farmers also have a relationship with the Water User Farmers Association (HIPPA). Farmers consult with HIPPA on crop types that are suitable for the available water conditions. This reflects the norm of obligation to consult, which is accompanied by farmers' trust in HIPPA's knowledge and recommendations. On the other hand, the existence of formal institutions such as Bank Rakyat Indonesia (BRI) shows that while farmers still access formal financial institutions, trust remains an important element. A legally binding letter of agreement is a norm that strengthens the relationship between farmers and BRI. Farmers trust BRI because it provides access to capital, while BRI trusts them because there is a legally binding letter of agreement. The existence of an agreement letter as a written rule is in line with Rahmaniyah & Rokhani (2021) which shows that written norms in management consist of stamped agreements.

Social capital at the planting stage not only facilitates the planting process, but also reduces barriers in accessing labor, capital and information. The existence of strong social networks helps farmers to persevere in the face of production constraints and promotes a more sustainable farming system.

Social Capital in Maintenance

The maintenance stage in bird’s eye chili farming includes replanting, weeding, irrigation, and fertilization activities. At this stage, social capital plays an important role in facilitating the work process and strengthening social relations between farmers and various supporting actors, both individuals and institutions.

Table 4. Social Capital in Maintenance

Social Capital		
Network	Norms	Trust
Seedling trader	Payment for seedling orders can be made by full payment, down payment, or through a debt system with subscribed farmers	Easy payment and good quality seedlings. If quality declines, farmers can move to another trader
Labor	Daily wage system	Satisfactory work results
Agricultural extension workers	Norm of reciprocity	The role of extension officers for chili is still lacking, but farmers still trust them due to their good role in crop management
Cattle farmer (neighbor)	The relationship is reciprocal; farmers get cow dung for free, and cattle farmers do not need to spend extra money cleaning the barns	Mutually beneficial cooperation
Agricultural shops	Norms of honesty in transactions	Trust in honesty and product recommendations
Water Farmers Association (HIPPA)	<ul style="list-style-type: none"> - Gotong royong system for cleaning waterways - Comply with the water distribution schedule (during the day for North Sukowiryo and at night for South Sukowiryo) - Mandatory enrollment during dry season - Provide wages and dues to HIPPA 	<ul style="list-style-type: none"> - Trust that other members will carry out their obligations fairly and jointly - Farmers trust HIPPA because it is reliable for fair and equitable water distribution
Agriculture Department	Obligation to report alsintan assistance every year	Department of Agriculture provides sprayer assistance and training in making organic fertilizer
University of Jember	Respect each other, group members should participate in training activities	Farmers' trust in the University of Jember and hope that more trainings will be held
PT Dharma Guna Wibawa	Farmers are members of farmer groups	Frequently provide spray equipment and fertilizer product samples
Bank Rakyat Indonesia (BRI)	Letter of agreement	Farmers believe because BRI provides capital; BRI believes because farmers make loan payments according to the agreement

Source: Processed Primary Data, 2025

Table 4 shows that the social network between farmers and seedling traders shows flexibility in the payment system, whether in cash, down payment, or debt, especially for regular customers. This habit arises from long-standing social interactions, while trust is built on the quality of the seedlings provided. At the maintenance stage, farmers buy seedlings from traders to use in replanting activities. Farmers need new seedlings quickly to replace their dead plants. So, for replanting, farmers prefer to buy seeds directly from traders rather than sowing their own.

Labor is also important in the maintenance stage. Farmers need labor to spray, fertilize and weed. However, in the spraying process, some farmers do it themselves because they are worried that the method used by the labor is not in accordance with the farmer's habits. Labor is paid using a daily system. The daily wage system shows the existence of flexible work norms but still considers fairness and work results. The daily wage received by laborers is IDR 40,000 to IDR 50,000. Trust in labor is based on good work results.

The social relationship between farmers and agricultural extension workers forms a norm of reciprocity, although extension workers do not play a major role in the management of bird's eye chili. However, because extension officers play a good role in other food crops, farmers still put their trust and hope in the technical assistance provided. Reciprocity is also seen in the relationship between farmers and cattle farmers. Farmers get free manure, while cattle farmers are helped because they do not need to spend money and energy to clean the cowshed. This is a mutually beneficial norm and strengthens mutual trust between them. This is in line with Tedjaningsih & Sufyadi (2020), that reciprocity is the tendency to exchange kindness between individuals in one group and between groups in the form of social care and willingness to help fellow farmers and in farming activities.

Transactions with agricultural shops reflect the norm of honesty. Farmers trust the recommendation and honesty of the seller, especially if they have established a long relationship. At the maintenance stage, such as fertilization, farmers usually buy fertilizer from the agricultural shop. Similarly, HIPPA, an irrigation management organization, has a mutual cooperation system in cleaning water channels, a water distribution schedule, and a registration system in the dry season. The water distribution schedule is carried out during the day for the North Sukowiryo area and at night for the South Sukowiryo area. HIPPA consists of irrigation manager who organize water irrigation in each region. If the irrigation manager helps the farmer in maintaining the irrigation, then the farmer can provide wages in the form of money, animal feed, or cigarettes. The wages given are voluntary. Then farmers also have an obligation to pay fees to HIPPA when using irrigation water. This fee is used for common interests, such as maintenance and repair of irrigation channels. Trust in HIPPA arises because it is considered capable of regulating water distribution fairly and evenly, thus preventing conflicts between farmers. This is in line with research by Halim *et al.* (2024) that social capital can be used as a tool to pump the enthusiasm of farming communities, one of which is in building irrigation channels.

The Department of Agriculture is also part of farmers' social capital networks, where farmers receiving agricultural equipment and machinery assistance are required to submit annual accountability reports, and trust is built because the department not only provides sprayers but also offers beneficial training in organic fertilizer production. Collaboration with the University of Jember reflects an institutional relationship based on mutual respect and participation, while the involvement of PT Dharma Guna Wibawa through the provision of fertilizer samples and sprayers further strengthens farmers' trust in the partnership. Moreover, farmers' relationships with BRI represent a Farmers' Social Capital of Bird's Eye Chili Farming in Sukowiryo, Jelbuk District, Jember Regency

formal social network in accessing capital, characterized by clear legal agreements that provide security for both parties; farmers trust BRI as a capital provider, and BRI trusts farmers because loan repayments are made according to the agreement. These findings differ from the study by Badri *et al.* (2023), which found that credit agreements often face problems due to late payments by farmer groups, leading to distrust and prompting the bank to issue warnings, impose increasing penalties, and seize collateral when loans remain unpaid.

Social Capital in Pest and Disease Control

The pest and disease control stage is a crucial stage in bird’s eye chili farming because it determines the success of the harvest and the quality of the crop. At this stage, social capital functions as a source of collective strength for farmers to help each other identify and overcome the disturbance of the plant pest organisms

Table 5. Social Capital in Pest and Disease Control

Social Capital		
Network	Norms	Trust
Labor farmer	Daily wage system Help each other	Satisfactory work results Farmers have experience with each other
Agricultural extension workers	Norm of reciprocity	The role of extension officers for chili is still lacking, but farmers still trust them due to their good role in crop management
Agricultural shops	Norms of honesty in transactions	Provide the right product recommendations
Farmer groups farming community	Help each other Help each other	Shared goals within the group Trust among members to volunteer advice and assistance
Agriculture Department University of Jember	Obligation to report alsintan assistance every year Respect each other, group members should participate in training activities	Department of Agriculture provides sprayer assistance and training to farmer groups Farmers' trust in the University of Jember and hope that more trainings will be held
PT Dharma Guna Wibawa	Farmers are members of farmer groups	Frequently provide spray equipment and pesticide product samples
Bank Rakyat Indonesia (BRI)	Letter of agreement	Farmers believe because BRI provides capital; BRI believes because farmers make loan payments according to the agreement

Source: Processed Primary Data, 2025

Based on Table 5, the social network in pest and disease control consists of various interconnected stakeholders who contribute to the effectiveness of bird’s eye chili farming. Labor forms part of the local social network because they assist farmers with operational activities such as spraying and field maintenance. Their wages follow a daily wage system, and trust develops from satisfactory performance and close social ties, especially when laborers come from nearby communities. Farmers themselves also act as a horizontal social network where mutual help and experience sharing are common practices. This aligns with Nadzifah *et al.* (2024), who found that farmers help one another when someone faces difficulties in cultivation.

Agricultural extension officers represent a government-based institutional network. Although their involvement in bird’s eye chili is limited, farmers continue to trust them due to their proven competence in food crop management, demonstrating the norm of reciprocity. Agricultural shops function as part of an economic support network connecting farmers with agricultural inputs. Trust is built through the norm of honesty in transactions, as accurate pesticide recommendations are crucial to avoid crop damage.

Farmer groups serve as a formal community network that facilitates knowledge exchange, technical support, and collective action among members. Meanwhile, online farming communities—such as Facebook groups form a digital social network that enables farmers to voluntarily share experiences and solutions. Members frequently upload photos of diseased plants, and others respond with advice. This is supported by Suriyati *et al.* (2021), who stated that active community participation increases farmers’ knowledge and access to agricultural information.

The Department of Agriculture is part of the government institutional network that supports farmers through training programs and the provision of agricultural tools such as sprayers, essential for pest and disease control. The annual reporting requirement strengthens communication and accountability, building long-term trust. The University of Jember and PT Dharma Guna Wibawa are external partnership networks that enhance farmers' skills and access to technology. The university provides useful technical training, while the company supplies pesticide samples and spraying equipment, increasing trust through concrete contributions. Financial institutions such as BRI form a formal contractual network that provides capital loans. The loan agreement acts as a binding norm, and mutual trust is maintained as farmers repay their loans according to the agreed terms.

Social Capital in Harvest and Postharvest

The harvest and post-harvest stages involve various forms of social capital that facilitate farmers' activities. Female labor is used in harvesting because they are considered more patient, observant, and fast in picking bird’s eye chili. In line with research conducted by Hapsari & Rokhani (2021), an all-female workforce, especially mothers, was chosen because they were considered more tenacious in working. The wage system used is piecework and is calculated per kilogram based on the amount of bird’s eye chili picked.

Table 6. Social Capital in Harvest and Postharvest

		Social Capital	
Network	Norms	Trust	
Labor	Piece-rate system, calculated per kilogram	Farmers trust female labor more because they are more patient, observant, and quick in harvesting.	
Middlemen	Farmers sell to middlemen for pick-up service	Ease of transporting the harvest	
Collectors	Mutual respect between the two parties (farmers choose to deliver themselves if the harvest is small)	Trust and mutual understanding between farmers and collectors regarding harvest pick-up	
Agriculture Department	Obligation to report alsintan assistance every year	Department of Agriculture provides tricycle conveyance assistance	

Source: Processed Primary Data, 2025

Based on Table 6, farmers also utilize networks with middlemen to distribute their harvest. Middlemen usually provide services to pick up the harvest directly from the field or the farmer's house, which is considered practical and profitable. Trust is built due to ease of transportation and long-standing relationships. Relationships with collectors also show strong social value. Collectors are actually willing to pick up the bird's eye chili harvest. However, farmers tend to choose to deliver the harvest themselves if the yield is small, as a form of empathy and respect for the collectors. Pick-ups are usually only done during the main harvest or during the rainy season. This mutual respect strengthens mutual trust and understanding between farmers and collectors.

The involvement of the agriculture department also supports the post-harvest process by providing transportation assistance such as three-wheeled vehicles to farmer groups. Although there is an obligation to report the use of agricultural tools and machinery every year, farmers still show trust in the agriculture department because the assistance is very helpful in facilitating the distribution of crops. Three-wheeled transportation equipment is not only intended for bird's eye chili commodities, but also for other agricultural commodities. This is in line with Anggraeni & Subekti (2022), the fisheries department often provides assistance to community groups of cultivators to develop their activities such as seeds, boats, and buoys. The fisheries department becomes a facilitator through extension workers. In addition, Irmayani *et al.* (2022) stated that farmers who are members of farmer groups find it easy to get assistance from the government through proposals submitted in the form of ropes, nets, boats and machines.

Social Capital in Marketing

Table 7. Social Capital in Marketing

Social Capital		
Network	Norms	Trust
Middlemen	The harvest is paid immediately	Secure and fast payment system
Collectors	<ul style="list-style-type: none"> - Sale of crops paid immediately after weighing - If borrowing capital, the harvest must be sold to collectors - Debt payments can be directly deducted from the proceeds of bird's eye chili sales or in installments - Jika petani melanggar aturan, terdapat sanksi yaitu pinjaman harus dilunasi saat itu dan tidak diperbolehkan mencicil - If a farmer breaks the rules, there are penalties; the debt must be repaid at the time and cannot be paid in installments 	The price given is appropriate. Collectors also provide access to capital and flexibility in debt repayment.
Wholesalers	Payment by cash or transfer and reluctance to go into debt	trust in transparent and timely payments
Retailers	Retailers' habit of receiving crops in small quantities	Farmers often sell to these retailers when harvesting in small quantities

Source: Processed Primary Data, 2025

Table 7 shows that the marketing stages of bird's eye chili show the important role of social capital, especially in terms of networks, norms, and trust between farmers and market actors.

Middlemen are one of the marketing networks for farmers. The crops sold are paid on the spot, so a fast and certain payment system builds long-term trust between the two parties.

Relations with collectors also reflect complex social interactions. Collectors provide capital loans to farmers on the condition that the harvest is not sold to other traders. Farmers who previously borrowed capital from collectors have an obligation to sell their crops to collectors. In line with research by Azis *et al.* (2022), one form of trust between farmers and collectors is that collectors help farmers by providing capital space for farmers' needs.

Loan repayments to collectors can be made directly through deductions from sales proceeds or through an installment system. However, if farmers do not fulfill the agreement, sanctions will be imposed, namely direct repayment and prohibition of installments. In line with Iqlima & Wijaya (2022), which states that if one party violates the norms that have been made, it will be subject to social sanctions such as not being given trust again to carry out distribution cooperation. Despite the strict rules, trust is still built because the price offered by collectors is considered appropriate, and there is flexibility in loan repayment that helps farmers in difficult times.

Wholesalers are also an important marketing network. Payments are made in cash or through transfers, and farmers usually do not want their harvest payments to be owed by wholesalers. Transparency and timeliness of payments create strong trust from farmers towards wholesalers. At the local scale, retailers also play a role as part of the marketing network. The habit of receiving crops in small quantities is a solution for farmers with limited yields. Trust grows from long-standing relationships, as retailers are willing to buy even small quantities of chili. This relationship shows flexibility and mutual trust built through repeated transaction experiences. This is supported by the results of research by Iqlima & Wijaya (2022), that in distribution activities a strong network is needed between the actors involved, namely farmers, collectors, traders, and retailers. This network is formed because they need each other or have the same goals so that they work together to get effective benefits.

CONCLUSION AND SUGGESTION

Based on the results of the study, it shows that social capital plays an important role in every stage of bird's eye chili farming which includes procurement of seeds or seedlings, land processing, planting, maintenance, pest and disease control, harvest and post-harvest, and marketing. Social capital includes networks, norms, and trust built between farmers and fellow farmers, labor, traders, farmer groups, farmer communities, Water User Farmers Association (HIPPA), the Department of Agriculture, Bank Rakyat Indonesia (BRI), agricultural extension workers, educational institutions (University of Jember), and the private sector (PT Dharma Guna Wibawa). Social networks facilitate access to resources such as labor, production facilities, training, technical information, capital, and crop marketing. Social norms, both written and unwritten, create order, mutual support, and flexibility in farming activities, such as flexible payment systems, piece-rate wage systems, consultation obligations, mandatory reporting for government assistance, and collective work practices among farmers. Trust serves as the foundation that sustains these networks and norms, reflected in long-term relationships, honesty in transactions, reliability of information, and the competence of partner institutions. However, trust is dynamic and may decline when norms are violated or when relationship quality deteriorates. Therefore, social capital must be managed sustainably through strengthened Farmers' Social Capital of Bird's Eye Chili Farming in Sukowiryo, Jelbuk District, Jember Regency (Kumairoh *et al.*, 2026)

communication within farmer groups, increased transparency in transactions, compliance with assistance reporting requirements, the formulation of collective agreements on work systems and wages, active involvement of HIPPA in water management, and the development of collaborations with educational institutions and the private sector. These practical measures can ensure that social capital continues to support the sustainability and effectiveness of bird's eye chili farming. The findings are contextual and most relevant to Sukowiryo Village, so their application in other areas should consider local social and institutional characteristics.

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