Creating Sustainable Supply of Sugarcane through Contract Farming Partnership (A Case Study at Sugar Factory "Kebon Agung", Malang – Indonesia)

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***Abstract*— Employing an interpretive research design with post-positivist paradigm, it was conducted in Kebon Agung Sugar Factory, Malang. The research informants were selected using snowballing technique. The informants include farmers and chairmen of farmers groups, plantation staff, company employees, and government agencies. To maintain the continuity and loyalty of sugarcane farmers to the company, the sugar factories provide various facilities, such as credit, inputs, guidance and counseling as well as technological assistance, and market guarantees for the products produced. The provision of incentives and facilities to partner sugarcane farmers is not merely for helping them meet their needs, but also for binding the farmers so that the sugarcane farmers are willing to sell all of their sugar to the Sugar Factory. To create supply sustainability of the sugar cane, the factory made several efforts including giving rewards to farmers with the best performance, providing sympathetic service and guidance, prioritizing loyal farmers and maintaining farmers' trust.**

***Keywords*—** *contract farming, partnership, nucleus-plasma, sugarcane, sugar factory*

1. Introduction

Based on the level of welfare of farmers and their contribution to the national revenue, Indonesia's agricultural development has not shown maximum results. This is due to the changing lifestyles of farmers, their lack of knowledge of the use and development of modern agriculture, agricultural politics, and the fading cultural and spiritual values of agricultural actors resulting in their inability to produce valuable and highly competitive products [1]. Therefore, a strong commitment to continuously improving the agricultural sector is very crucial. One strategic step that has been done by related parties to improve agriculture performance is building a partnership. Partnership is defined as a form of cooperation between small-scale enterprises and large-scale enterprises through which the large-scale enterprises provide guidance and sustainable development which take into account the principles of mutual needs, mutual strengthening and mutual benefits (Law No. 9, 1995). One form of partnership that has developed rapidly and spread out across various centers of agricultural production in Indonesia is contract farming. Researh from [2] and [3] has shown that there is an upward trend in contract farming in Asia triggered by an increase in demand for high-value agricultural commodities, supermarkets, processing and export-oriented agriculture.

Contract farming can be described as supply agreements between farmers and buyers. The agreements usually specify the purchase price or how it will relate to prevailing market prices, and may also contain clauses on delivery dates, quantities and quality [4],[5]. In many cases, the buyer, which is commonly an agro-processing company, makes a commitment to supply upfront inputs, such as credit, seeds, fertilisers, pesticides and technical advice; all of which may be charged against the final purchase price [6],[7]. From the farmers' point of view, this contractual arrangement can give them access to production and credit services as well as knowledge of new technologies [8],[9], while price arrangements set in the contract can reduce risks and uncertainty [10]. In this contract, local farmers are asked to plant certain agricultural commodities and submit their production with predetermined quantity and quality in exchange for inputs (credit, seeds, fertilizers, pesticides, technical services, etc.) that have been given upfront [11].

Contract farming has become an important aspect of agribusiness, because by contract farming, large companies no longer need to grow raw materials on their own land or buy directly in the open market, thereby minimizing transaction costs [12]. Not only does the contract model have the potential to increase the income of farmers participating in the contract, it also has multiplier effects for the rural economy and

IJSCM, ISSN: 2050-7399 (Online), 2051-3771 (Print)

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the economy on a broader scale [10]. However, from a company perspective, contract farming is not without difficulties. Sometimes farmers sell their products to outsiders, even though the products are produced using inputs provided by the company [13]-[9]. Conflicts may also occur because the strict agricultural calendars imposed by contracts often conflict with social and cultural obligations. This partnership model is also suspected to put farmers in a “weak” position because there is no equality between farmers and partner companies in terms of pricing, determining the quantity and quality of commodities produced, selection of technology used, planting time and harvest time [14], [15], [16].

Critics of contract farming contend that major agribusiness companies use contracts to take advantage of cheap labor, and to transfer production risks to farmers [17]. They also do not have to make expensive investments in land and manage a very large agriculture area. All risks that emerge in the production process, such as labor conflicts, and production failures will be transferred to farmers. In addition, companies do not need to look for raw materials in the open market. Thus, the supply of raw materials with quality standards and prices is guaranteed. This may reduce transaction costs. The conrtact farming system has also been criticized for the exploitative effects of monopsony control, whereby farmers are tied only to one buyer, which will lead to the farmers' dependence on the buyer [17].

This situation will get worse if farmers do not have the opportunity to diversify their business, to create or find other sources of income from non-agricultural activities, or produce several types of plants at the same time. On the other hand, companies generally do not face many difficulties in diversifying suppliers in order to reduce the risk of reliance at growers. Sometimes, the companies have their own land and employ workers to produce the same commodities that farmers grow so that the farmers' products are complementary to the products they produce. Companies often combine several supply methods, including buying raw materials from the free market.

There has been a lot of previous research on contract farming in Indonesia and other countries. Some of them have shown that contract farming can provide small-scale farmers with better market access [8] (Andri & Shiratake, 2005), better access to inputs for production [9], risk mitigation capability, higher returns and dispute resolution for the parties concerned [18]. Critics of contract farming argue, however, that large agribusiness firms use contracts to take advantage of cheap labor and transfer production risks to farmers [17]. Another problem is that, as companies continue to choose to partner with medium-and large-scale farmers, smallholders would be marginalized, exacerbating rural disparity [8]-[14] and a lack of environmental sustainability issues [18].

According to [5], there are three basic elements that contribute to the success of contract farming. These are incentives, trust, and commitment. Some early incentives for farmers, such as the credit scheme, can be used as a precondition for farmers to join the production alliance to access agricultural inputs. Confidence and dedication between partners is also a key element of the relationship [19]. They are the driving forces for farmers to join and engage in contract farming. Essentially, this partnership is only possible and sustainable if both companies and farmers have a clear benefit from this relationship. Addressing the phenomenon, this research is aimed at (1) describing the technical implementation of the contract farming partnership between sugarcane farmers and the sugar company; (2) identifying the potentials and constraints of the partnership, and (3) identifying factors affecting the success of contract farming.

2. Research Methods

Employing an interpretive research design with post-positivist paradigm, this study was conducted in Kebon Agung Sugar Factory in Malang. The research informants were selected using snowballing technique. The informants include farmers and chairmen of farmers group, plantation staff, company employees, and government agencies. By taking into account the real conditions in the field, the unit of analysis in this study is the interaction between individuals in partnership contracts between farmers and Kebon Agung Sugar Factory and the perceptions of the participants involved in the interaction. The interaction can be used for identifying the farmers' perceptions about contract farming. Several methods were used to collect data. The first method was in-depth interview with informants consisting of farmers, plantation staff, company employees and associations, and government agency (Departement of Plantation). The second method was observation. This activity is not only carried out on the realities that are seen, but also on the sounds. Various expressions and questions are part of the reality that can be observed [20]. The third method was document review. The analyzed documents include public document files (administrative sources), partnership contract agreements, interview records and photos of daily activities in the partnership contract between Kebon Agung Sugar Factory and sugarcane farmers.

3. Results and Discussion

The partnership between PG Kebon Agung and sugar cane farmers began when the Sugar Factory lacked the raw material supply of sugarcane and grinded sugarcane below the milling capacity, while the farmers did not have market guarantees and needed further processing so that the sugarcane was

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more valuable. Thus, there is a mutual relationship between the sugar mills and the sugar cane farmers.

3.1. Model of Partnership

Referring to Minister of Agriculture Decree No. 940 / Kpts / OT. 210/10/1997 concerning guidelines for agricultural business partnerships, the pattern used by PG Kebon Agung Malang with sugar cane farmers is classified as plasma core pattern. As the findings indicate, PG Kebon Agung acts as a partner/core company in partnership with sugar cane farmers (partner farmers / plasma) and farmer groups. Therefore, production activities can be carried out in a more coordinated manner with a certain minimum combined business scale. Core/ partner companies are obliged, among others, to: (a) supply and prepare land, (b) provide production facilities, (c) provide technical guidance on cultivation and post-harvest patterns, (d) provide financing such as land management, harvesting, and (e) lending.

Meanwhile, the plasma farmers do cultivation as recommended and give the results to the partner/ core company according to the agreement. The supply of sugar cane raw materials to the sugar factory plays a very important role in maintaining the sustainability of the sugar mill business. To maintain the continuity and loyalty of sugarcane farmers to the company, the sugar factories provide various facilities to farmers. The provision of incentives and facilities to partner sugar cane farmers is not merely to help them meet their needs, but rather as a binder so that the sugar cane farmers are willing to sell all of their sugar to the Sugar Factory.

In this farming partnership, the factory only provides sugar cane milling services to farmers with a wage of 34% of the sugar produced. In the contract, they agree to apply a profit sharing system, in which 66% sugar is given to farmers and 34% sugar is for Kebon Agung. The sugar produced will be sold through an auction held once a week. PG. Kebon Agung gives farmers the freedom to take up to 66% of the sugar or leave it to be auctioned, but PG. Kebon Agung will only auction 90% of sugar while 10% will be given to farmers in the form of sugar.

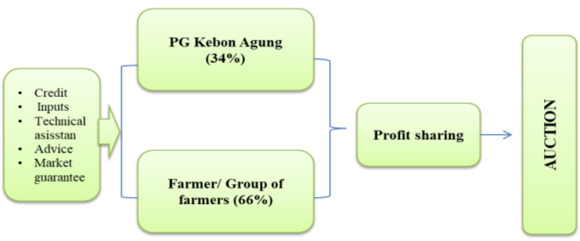


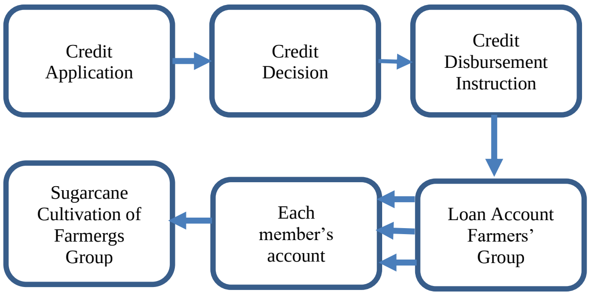
Figure 1: Partnership between PG Kebon Agung & Sugarcane Farmers

Some of the facilities provided by the core to plasma parties are as follows:

1). Provision of Credit.

In each planting season, farmers receive loan facilities for managing their sugar cane in the form of cash with funding from:

a) The Government through the Food and Energy Security Credit Scheme (KKPE). Farmers receive subsidized credit from the government that is channeled through the Executing Bank based on the recommendation of the Sugar Factory as the guarantor or avalis of all the loans. The credit given by the factory to smallholder sugar cane farmers in the KKP-E program is a grant for covering the costs of cultivation and fertilizer. The amount of funds received by each farmer is different, depending on the size of the land cultivated by sugarcane farmers. The KPP-E disbursement process is as follows:



Fgure 2: The KPP-E disbursement process

b). Companies. Farmers also get loans from companies in the form of bailout funds for the redemption of subsidized fertilizer, the purchase of seeds or tractor rental services to outside parties or third parties. Before the milling season, farmers obtain loans for the cost of hauling and transport to enable farmers to finance their sugarcane harvesting activities.

2). Supply of Inputs

Providing production input or production facilities will help farmers who experience difficulties in finding good seeds, so that they do not need to look for or buy in the market which will further increase transaction costs. Through the provision of these inputs, farmers will be motivated to have a partnership with companies so that their productivity levels increase with the new innovations and superior seeds provided by PG. Kebon Agung.

3). Provision of Counseling and Coaching.

In order for the partnership program to run well, pg kebon agung always provides guidance and counseling to farmers, especially related to the development and cultivation of sugarcane. Counseling is done by approaching farmers through the partnership gathering forum at the sugar factory level as well as the regional implementing consultative forum at the district level. It will be followed with a more intensive system of training and visits to each farmer. It is expected that the farmers will be willing to plant sugarcane with the correct cultivation techniques and expand their plantations to areas outside their working area, namely in the development area. The findings show that personal closeness between PG Kebon Agung officers and farmers is the key to success in building partnerships. The ability of

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field officers to act as directors and counselors is important. Therefore, various training and several work visits are conducted so that the officers have enough time to interact and communicate with farmers.

3.2. Maintaining Sustainability Supply

Various efforts were made by the factory to maintain the loyalty of sugarcane farmers to supply their sugarcane to PG Kebon Agung, including market guarantees to their partner farmers which would indirectly encourage the farmers to be loyal to the company and sympathetic guidance and service for the farmers. That way, both the company and farmers will feel mutually beneficial and can maintain business sustainability in achieving common goals.

To create sustainable supply of sugarcane, PG Kebon Agung also made various additional efforts as an extralegal guarantee to maintain their reputation in the view of farmers, such as maintaining the payment schedule of auction results, accuracy of cutting schedules, and continuing to maintain smooth queues. All of those efforts were done by the company to maintain the trust of farmers and maintain the continuity of their long-term cooperation with PG Kebon Agung. Some other efforts to maintain sustainable supply of sugarcane are as follows:

1). Provide Reward to the Best Performance

The performance of farmers in terms of sugarcane cultivation is highly dependent on their desire and willingness to increase their income. Taking this situation into account, PG Kebon Agung provides incentives to partner farmers who excel by giving rewards in the form of gifts, rewards, and awards. With this reward, it is expected that the farmers will be more motivated to achieve the best performance.

2). Giving Priority to Loyal Farmers

The company gives priority to farmers who have high loyalty. They will not take the risk of partnering with farmers who have lots of land but are not loyal. Therefore, the the priority of partnership contracts are given for farmers who have long been in a relationship with the company rather than with new ones. New farmers who want to make a contract with the company must first join a farmer group that has long partnered with the company, making it easier for field officers to conduct an assessment of their performances.

3). Maintaining Farmers’ Trust

The trust that is formed by companies and farmers to create sustainable partnerships is influenced by several factors, such as the speed of payment for the sugar auction results, the smooth queue of sugarcane trucks and the accuracy of the cutting schedule. The company releases the auction results once a week so that it can accelerate the return of farmers' capital. Those factors also attracted farmers to enter into a partnership contract with the company.

3.3. The Role of Government

Contract farming offers farmers the opportunity to know in advance when, to whom and at what price they are selling their products. This helps reduce the unpredictability of agriculture and enables them to better plan their production. It reduces risks associated with price fluctuations and can also help protect farmers from losses associated with natural disasters and climate change, as these risks can be shared with the purchaser under the contract. When buyers also have access to inputs, including finance and technical assistance, contract farming can lead to a substantial increase in yields and income.

The ideal partnership, however, still requires a long way to go, and success cannot be left entirely to companies and farmers. Government intervention to create a conducive partnership is urgently needed, specially in the following matters.:

a) Evaluate the various regulations and policies that hinder the development of agricultural businesses and contract farming and replacing them with regulations and policies that support the growth of farmers
b) Contract farming should be supported and protected by an effective legal system.
c) Development and improvement of infrastructure. Developed infrastructure is the key to improving access to a variety of services that would provide decent services and lead to major changes in people's living standards.
d) Protect farmers from exploitation by larger industries by examining the financial viability and managerial capacity of the industry.
e) Increasing the power of farmers' negotiations by building a platform for farmers to communicate and encourage information exchange between farmers, such as through cultural activities like traditional festivals, fun competitions related to agriculture during the slack seasons, and so on.

4. Conclusion

This research has demonstrated that contract farming can give benefits to both farmers and companies and to the economy if there are interdependence and cooperation which are symmetrical and mutually beneficial. However, contract farming system must be seen as a form of partnership, whose success is largely determined by the long-term commitment of both parties. The role of the government through various policies and programs is also very crucial to create a conducive business climate so that businesses can develop. In this case, the government acts as a facilitator, regulator, and motivator who must harmonize the relationship between these actors, so that the actors can interact proportionally and exploitation can be avoided. The role of financial institutions (banks) as institutions that help finance (credit) farmers and companies that run contract farming systems is also crucial. Banks can help farmers and companies by providing credit with easy procedures and requirements. Farmer groups have the potential to mobilize and empower farmers' economies. For this reason, contract farming system

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must be able to optimize the role of farmer groups and at the same time encourage and assist the group both in terms of funding and institutional management. If problems related to contract farming can be anticipated and the above policies can be implemented effectively, through the application of contract farming, the potential of the large national agricultural sector can gradually be realized. Thus, it can be argued that contract farming can be used as a new source of growth for improving the performance of sugarcane agriculture.

Acknowledgements
We especially appreciated the inspiring discussions we had with all informants involved in this research. The discussions had provided us with valuable insights into the essence of the partnership program. It was a real pleasure to exchange ideas and learn from highly experienced company management and staff of PG Kebon Agung Malang and their stakeholders. Our deepest gratitude also goes to the Research, Technology and Higher Education Ministry of Indonesia which has assisted us in financing this research

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