



Strategy of Strengthening Social Capital of Farmer Group in Agricultural Development

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Abstract

In the village, the agricultural development is not certainly oriented to the economic aspect. The social intervention is very important and very helpful for the citizens and the development of the agricultural itself. The purpose of this research is to analyze the social existence, the social influence, and also the systematic strategy that can strengthen the society in developing the agriculture. The method used in this research is the qualitative analysis with phenomenology approach. The qualitative analysis is conducted by the direct observation in the field and in-depth interviews with the respondents that are selected by the purposive sampling. The result shows that a society has formed the farmer organization to have mutual coordination among the members. However, there are some problems that occur on this organization. The values and norms begin to fade and have become the major problem. Another problem is the sense of trust among the citizens and the unoptimal social network utilization. The conclusion is, the Analytic Network Process (ANP) shows that to make a progress of agricultural development, they need to strengthen the social relationship among the citizens to face all the problems that may occur.

Keywords : Vegetable Farmers, Social Capital, Analytic Network Process (ANP)

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INTRODUCTION

Indonesia is an agricultural country that makes the agricultural sector very important in the national economy and the majority of Indonesian population live in the rural areas as the farmers. The agricultural sector is able to give a contribution of 25.74% to the national GDP (BPS, 2011). The sector is also able to absorb the employment in large numbers, even it is recorded that until 2011 about 41% of the Indonesian workers are engaged in this sector (Census of Agriculture, 2013).

The complexion of agriculture in Indonesia in general is still agrarian and subsistent, although most have tended to be the modern agriculture. When the farm has reached the stage of production process, there are many factors to consider that is related to the production process.

A subsistent agriculture means that the majority of family farmers in Indonesia are just trying to fulfill the daily needs of their own life and their family from their farm, not commercially oriented yet.

Topographically, Semarang Regency is located on a plateau, so it is also famous as the production center of vegetable crops in Central Java. The production always increases every year in the period of 2009-2011. In 2014, the vegetable production of 1.136.061 kw rose by 6.45% over the previous year. The vegetable production in Semarang Regency is centered in Getasan District of 534.414 kw (Department of Agriculture and Plantation, Semarang Regency, 2014). This number makes Getasan District the largest vegetable producer in Semarang Regency. It creates a problem; there is a large agricultural potential in the District Getasan but is not followed by the powerful processing of the farmer group so that the agricultural

development runs slowly (An explanation from the Chairman of Tani Mardi Farmer Group in Getasan, May 2015).

Table 1. Data of Land Area and Vegetable Farming Production in Semarang Regency in 2008-2014

No	Year	Land Area (Ha)	Production (Kw)
1	2008	4838	714.732
2	2009	6246	921.685
3	2010	6604	943.922
4	2011	7851	1.183.900
5	2012	7638	1.162.005
6	2013	7374	1.136.061
7	2014	7993	1.209.415

Source: Department of Agriculture and Plantation, Semarang Regency, 2014

The data of farming and plantation indicates that the results of the agricultural sector in Semarang Regency increases every year but it is not followed by a significant increase in the welfare. It describes the condition of the vegetable farmers in Semarang Regency, especially at Getasan District, in operationally dealing with the problems that can be related to the social capital, such as the unoptimal utilization of the network, the erosion of the noble norms in the society, the unoptimal ability of managing the resources (inputs, capital, farmer institutional). The problem is one factor that can drive the poverty.

Pramono (2012) stated that there are many innovations in developing the poverty reduction program, one of which is growing the social capital that is seen as one way that can touch the root of the poverty problem. The social capital has three basic elements that mutually interact as the follows: networking, mutual trust, and norms that can be used optimally in the empowerment of the farmer communities. Putnam (1995)

defined a social capital as the characteristics of social organizations, such as social networking, mutual trust, and norms that facilitate the coordination and cooperation for the mutual benefit. Burt (1992) defined a social capital as the ability of people to perform the association (associated) with each other and then become a very important force not only for the economic life but also for every other aspect of social existence.

This research aims to determine the problems of farmer 'groups in the agricultural development in Getasan District, to determine the social capital in the groups in Getasan, and to analyze the strategy of strengthening the social capital of the farmer groups in solving the problems faced in Getasan. The early study by in-depth interviews and focus group discussion (FGD) shows the problems faced by the farmers in Getasan those are the means of production (inputs), marketing, capital and farmer institutional. These aspects are further associated with the condition of the existing social capital in the local communities and are identified based on the problems, and the solution consists of each sub aspect and the strategy of strengthening the social capital for the farmer groups. The strategy will be able to contribute to the creation of strengthening the social capital in the community. People who have high social capital will open up the possibility of resolving more easily the complexity of the problems that are grouped into the three aspects. By mutual trust, tolerance, and cooperation they can build networks within the community groups as well as with the other ones. A social capital is believed to be one of the main components in moving togetherness, mobility of ideas, mutual trust

and mutual benefit to achieve the common progress.

A social capital is one of the new concepts that are used to measure the quality of relationships within the communities, organizations, and society. According to Putnam (1995), a social capital is "complexly conceptualized as the network of associations, activities, or relations that bind people together as a community via certain norms and psychological capacities, notably trust, which are essential for civil society and productive of future collective action or goods, in the manner of other forms of capital". Putnam (1995) stated that a social capital refers to the essence of social organization, such as trust, norms, and social networks that allow the more coordinated implementation, and the members of society can participate and cooperate effectively and efficiently in achieving the common goal, and can affect the productivity either individually or in groups.

Agree with Putnam, Bourdieu (1988) stated that "*social capital is the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance recognition – or in other words, to a membership in a group --- which provides each of its members with the backing of the collectivity – owned capital*". Fukuyama (1995) added that the informal norms can encourage a cooperation between two or more people. The norms containing the social capital have a wide enough scope, ranging from the reciprocal values between friends to the very complex ones and those containing religious values.

The social capital can be summarized as a networking and the social values that can facilitate the individual and the community

to achieve the common goals effectively and efficiently. Some experts object to the term usage of "capital" in the concept of "social capital", because the term "capital" is frequently used for the economical meanings, which marks the transactional social exchange. However, a form of social capital does not always involve the exchange of material (Bourdieu, 1986). Bourdieu stated *"The structure and distribution of the different types and subtypes of capital at a given moment in time represents that immanent structure of the social world, i.e., the set constraints, inscribed in the very reality of the world, which govern its functioning in a durable way, determining the chances of success for practices. Economic theory has allowed to be foisted upon it a definition of the economy practices which is the historical invention of capitalism (1986:242)"*.

The norms or rules are the provisions of guide and guidelines to behave in the social life. The norms are the suggestion to behave well and the prohibition to behave badly in order to make life become better. The norms are rules, provisions, regulations, criteria, or requirements that contain the specific values that must be obeyed by the citizens in act and behave so that there will be orderly organized, and safe society.

Inayah (2012) argued that social norms are the set of rules that are expected to be obeyed and followed by people in a particular social entity. These rules are usually institutionalized and unwritten but understood as a determinant of good behavior pattern in the context of social relations so that there will be the social sanction if violated. The social norms will determine the strength of the relationship among the individuals because these stimulate the social cohesiveness that will

give the positive impact on the social development. Therefore, the social norm is referred to as one of the social capitals.

Putnam (in Lawang, 2005) described the norms as the set of rules that are expected to be followed by the members of society on a certain ethnic. The social norm will be able to significantly contribute to controlling every behavior in the society. The norms are expected to be obeyed and followed by the individual in a particular social entity. The rules are usually unwritten but understood by every individual in the context of socio-economic relations.

The social norms cannot be separated from the social networks, because the formation of social networks will build the social norms. There are three important things related to the social norms. First, the social norm appears from the mutual exchange. Second, it is a reciprocal norm, which contents regard the rights and obligations of the parties to guarantee the benefits of a particular activity. Third, the network that has been built up long and guarantees the profits of the parties evenly will raise the norms of justice (Lawang, 2005).

Trust is the core of social capital; it is an indication of the potential of community readiness to cooperate with each other. This cooperation goes beyond the limits of kinship and friendship and equality. The trust facilitates the life in a diverse society, encourages the tolerant behavior, and accepts the differences. Life becomes easier, happier, and more comfortable with the existence of trust in a heterogeneous society.

Fukuyama (1995) argued that the most important element in the social capital is the trust, which is an adhesive for the perpetuation of cooperation in the community.

Trust will make people cooperate more effectively. The social capital exists in the countries which social and economic life has been modern and complex. The element of social capital is a trust; there is a close relationship between the social capital and the trust. Fukuyama (1995) added that trust is a hope that appears in a community that behaves normally, honestly and cooperatively based on the common norms for the sake of other members in the community. The three types of behaviors in the community that support this trust are the normal, honest, and cooperative behavior.

Social network is one dimension of the social capital besides the trust and the norms. The concept of networking in the social capital focuses on the aspect of a bond between knots that can be a person or a group (organization). The social relationship here is bound by the trust that is maintained and kept by the existing norms. Based on this network, there are elements of working that through the medium of social relationship becomes the cooperation. The social networks are built from mutual understanding, mutual informing, mutual reminding, and mutual helping in carrying out or solving anything. In essence, the network concept in the social capital refers to all relationships with other people or groups that allow the activities to run efficiently and effectively (Lawang, 2005). Furthermore, the network itself can be built from inter-personal relationships, the relationship between individuals and institutions, and the networking among institutions. Social networks are the dimension that may require the support of the other two dimensions because the cooperation or the social network will not be realized without the basis of norms and mutual trust.

Norms, interpersonal trust, social networks, and social organizations as the form of social capital are important not only for the society but also for the economic growth (Coleman, 1990). A number of researches conducted by Ben Porath (1980), Oliver Williamson (1975, 1981), Baker (1983) and Granovetter (1985) (in Coleman, 1990) supported Coleman's statement, in which the linkages among the social organizations will affect the functioning of the economic activity. Trust is a major component in the social capital; trust plays an important role in all forms of activities of citizenship and moral values that regulate the social behavior. Helliwell (2002), Uslaner (2002), Delhey and Newton (2003) (in Rothstein and Uslaner, 2005) explained that at the micro level people generally trust other people around them, and also (i) have a quite positive assessment on the institutions of democracy and governance, (ii) participate more in politics and more active in social institutions, (iii) more contribute to social activities, (iv) more tolerant to minorities and people who dislike them, (v) more optimistic in looking at life, and (vi) more happy with life.

Aspects of trust become a major component of social capital formation in the rural areas, while other aspects (norms, social networks) will not be formed properly if not based on the establishment of a mutual-trust among the community members.

The power of cooperation networks formed in the community is the operational development and the mutual trust relationship among the community members in the field of socio-cultural, economic and governance. The definition of trust in the context of social life in rural areas should not be seen only as a matter of personality or

intrapersonal, but also cover the extra-personal and intersubjective aspects.

RESEARCH METHODS

This research uses a methodology of Analytical Network Process (ANP), which uses the primary data that is obtained from the interviews (in-depth interviews) with the experts, practitioners and regulators who have the understanding of the problems discussed. The respondents fill out the questionnaire at the next meeting. The data is then ready to be processed by the super decision software, by entering the variables of the respondents' assessment of the problems that become the object of research in numerical scale.

The respondents in this research are selected by the Snowball Sampling by considering how they understand the problems of strengthening the social capital of the farmer groups in the agricultural development. The respondents selected in this research are the experts, practitioners, farmers and regulators who have competence in the field of agriculture. They consist of the academics, farmer groups, farmers, and the government represented by the Department of Agriculture, Plantation, and Forestry. The ANP questionnaire is presented in the form of pairwise comparison between the elements in the cluster to compare how big the magnitude of the effect is and how big the difference is. The scale used is a numerical scale 1-9.

The data from the research will be analyzed by the method of Analytical Network Process (ANP), which is a method that can be used in various qualitative studies, such as decision making, forecasting, evaluation, mapping, strategizing, resource allocation, and so forth.

Table 2. Table of Comparison of Verbal and Numerical Scale

Definition	Intensity of Importance
<i>Equal Importance</i>	1
<i>Weak</i>	2
<i>Moderate Importance</i>	3
<i>Moderate Plus</i>	4
<i>Strong Importance</i>	5
<i>Strong Plus</i>	6
<i>Very Strong or Demonstrated Importance</i>	7
<i>Very, very Strong</i>	8
<i>Extreme Importance</i>	9

Source: Saaty (2001)

The stages on ANP method for strengthening the social capital in the agricultural development of farmer groups are as follows: (a) Model Construction. The construction model of ANP is arranged based on the literature review either theoretically or empirically and provides questions to the experts and practitioners of microfinance *syariah* and through in-depth interview or Focus Group Discussion (FGD) to study the information more deeply to acquire the real problems, (b) Model Quantification. The quantification model stage uses the questions in the questionnaire of ANP in the form of pairwise comparison between the elements in the cluster to determine which of the two that has larger (more dominant) influence and how big the difference is through a numerical scale 1-9. (Synthesis and Analysis) (c) Geometric Mean. To find out the results of the individual assesment of the respondents and to determine the results of the opinion on a group, an assessment is conducted by calculating the geometric mean. A question like comparison (pairwise comparison) of the respondents will be combined to form a consensus. Geometric

mean is the average calculating type that indicates a tendency or a certain value.

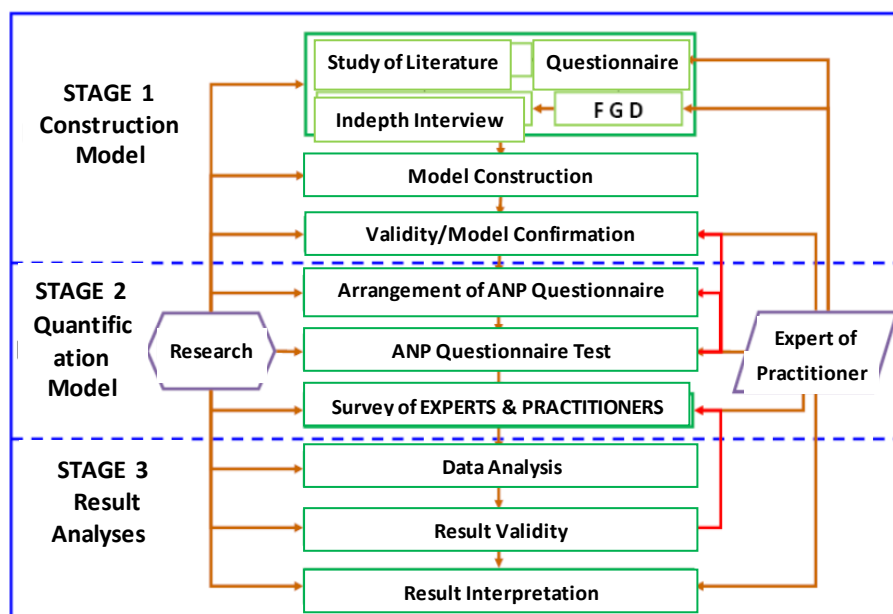
Rater agreement is a measure that indicates the level of conformity (approval) of the respondents (R_1 - R_n) to a problem in a single cluster. The tool used to measure the rater agreement is Kendall's Coefficient of Concordance (W ; $0 < W \leq 1$). $W = 1$ indicates a perfect fit. In calculating the Kendall's (W), the first is by providing rankings on each answer then add it (Ascarya, 2010), see in Figure 1.

ANP has three axioms that become the theoretical basis: 1) Reciprocal; it states that if PC (EA, EB) is the comparative value of the pair of elements A and B, seen from its parent element C, which indicates how many times element A has what is owned by element B, then PC (EB, EA) = $1 / P_c$ (EA, EB). For example, if A is five times larger than B, B is $1/5$ of A. 2) Homogeneity; it states that the comparative elements in the

skeletal structure of ANP should not have too big difference, which may cause a mistake in determining the supporting elements that influence the decision. 3) Priority; it is an absolute weighing by using the interval scale [0.1] and as a measure of the relative dominance. 4) Dependence condition; it is assumed that the arrangement can be composed into components that form parts in the form of clusters.

RESULTS AND DISCUSSION

The problems in terms of strengthening the microfinance *syariah* in Semarang can be grouped into four aspects that consist of aspects of the means of production (inputs), marketing aspects, aspects of agricultural capital, and institutional aspects of farmers. The whole clusters are grouped into clusters of problems, solutions and strategies.



Source: Ascarya (2010)

Figure 1. Stages of ANP Research

The identification result of the problem is as follows: First, the means of production (inputs) including all resources used for the production including the agricultural tools, seeds, fertilizers, pesticides, land and others become more expensive and limited. The problem of the means of production is divided into three subs: 1) The price of fertilizers and pesticides become more expensive. This condition burdensomes the farmers because the production costs will be more expensive at the time of planting. 2. There is a shortage of seed that has been certified to increase the comparative advantage. The development of the superior and certified seed for the vegetable farming sector is still very limited, not similar to the rice farming. In rice farming for instance, there are superior seeds like STIK 205, STIK 171, STIK 191, IPB 3S, and IPB 4S, and so forth. 3) There is reduction of arable land for agriculture. The agricultural land becomes more limited because many more lands convert from agricultural land to residential land or other commercial sectors. Second, the problem of marketing includes all the obstacles faced in activities concerning the distribution of agricultural commodities from the hands of producers to the hands of consumers. The marketing problem is divided into three subs: 1) The limited access of the farmers to the markets mainly concerning the information of product price. Having no information about the market clearly makes the farmers have no high bargaining power. Although the farmers are the producers but they cannot create the price (price maker) and can only receive the price (price taker). It is because most farmers have no ability to sell their production; they depend only on the traders who come to them. 2) The fluctuation in the price of vegetable farming products is very high. The

uncertainty of the selling prices of vegetable farming products makes the farmers difficult to develop due to the lack of adhesive cooperation between the provincial government in mapping the market, which makes the absence of a clear map of the market to know which areas have excess or shortage of agricultural products. The impact is on the farmers cropping pattern and the uncertainty of the selling price of agricultural products because sometimes the supply is higher than the demand. 3) The durability of the products is perishable. Vegetable products do not have the long durability so they have to be immediately sold, and in this case most of the vegetable farmers have not been able to make the product of crops have longer durability due to the limited knowledge and other supporting facilities either the seeds or tools packing, and also the limited information of the market. Third, the agricultural capital includes all resources used as the inputs to conduct the agricultural production process including the capital money and manpower. The problem of agricultural capital is divided into three subs: 1) The limited labors for the agricultural sector. The labors for the agricultural sector, especially the young workers in rural areas who are willing to plunge in the agricultural sector now become fewer in number. They consider that working in the agricultural sector is dirty and tiring, the wages they receive when working in the agricultural sector is not worth so they prefer to work in other sectors that earn more such as working in a factory as the labors or others. 2) There is a lack of financial assistance schemes or financial institution for the vegetable farming sector. The vegetable farmers face obstacles in obtaining the capital assistance to develop their business. The existing schemes have not been able to accommodate

the agricultural needs in the vegetable sectors, not similar to other commodities like rice, because rice has got facilities from banks to get credit with low interest while for vegetable crops it is still so limited that the vegetable farmers face many obstacles to borrow the capital. 3) There is no good business relationship between the stakeholders (triple helix concept). A good business relationship among the stakeholders has not created properly on the vegetable farming sector. Viewed from the condition of the vegetable farming sector development that is not maximal yet, it is due to no good business relationships among the government, academia and business that are expected to be able to create the climate of mutual benefit agro-industry.

Fourth, the institutional problems of farmers cover the norms or customs that are structured, patterned, and practiced continuously to fulfill the needs of the members of society related to the agriculture in rural areas that begins to fade in the rural communities. The problem of agricultural capital is divided into three subs: 1) The managerial of farmer groups is still weak. The organizing or managerial of the farmer groups in rural areas is still very weak or lacking in many things such as the less optimal division of tasks, the less good administrative group, and so forth. This can be caused by several factors such as the low level of education of rural people and the erosion of the noble values that are part of the social capital in rural communities as a result of the era development and the available technology. 2) There is a lack of skill in the division of group. The farmer groups are usually divided into divisions to help each other in developing the agriculture in the group such as marketing division,

cultivation division, packaging division and so forth. However, the skills of these divisions are still low because they, either individually or in groups, are still not able to perform their duties optimally due to the lack of experience and training. They get assistance of supporting tool facilities but lack of training to optimize the facilities that have been provided. 3) The initiative of the group members is still low. They have not considered that the group is a necessity but only as a means to get help from the government so that a sense of belonging and a desire to move forward together in a group have not grown up within each member. If the group leader does not offer any idea, the other members do not contribute their ideas; this is an obstacle for a group to develop more advanced.

The alternative solutions that can be conducted in strengthening the social capital of the farmer groups in the agricultural development includes: First, the means of production, which includes: 1) The development of organic fertilizer in conjunction with utilizing the animal manure or plant that is processed into organic compost instead of chemical fertilizers and reducing the use of pesticides. This is a form of social capital in teamwork, 2) The development of certified superior vegetable seeds by involving the academics and other interested parties to develop a research on vegetable seeds more deeply to create the superior vegetable seeds, and 3) The improvement of local agricultural land intensification by using the organic fertilizers for soil fertility and the setting up a green house to make the plants protected from the climate change so that the crops will be increased. The second one is the Marketing Solution, which includes: 1) The improvement of information networks

owned by the farmers about the market by utilizing the digital information network such as the internet media, the digital communication, and so forth, so that the farmers can obtain more easily the information related to the market and expand the marketing due to the increase in the social network. The impact is that their harvest products can be increased because the products can be more quickly absorbed by the market and can improve the welfare of the farmer families, 2) The improvement of post-harvest handling by renewing the way of packaging the harvest products using the styrofoam boxes and the plastic wrap so that it can improve the durability of vegetable crops, 3) The improvement of the harvest quality can be done by using the superior seeds, organic fertilizers and the green house, adopting the innovative technology in vegetable farming and developing the agricultural products vegetables by developing the refined products of the harvest to be the products that have a higher selling value such as the vegetable masks products and the refined foods from the basic material of the harvest.

The third one is the Agricultural Capital Solution, which includes: 1) Providing the education to all young people in rural areas by organizing the seminars on entrepreneurship in agriculture with the young farmers who have been successful in their fields in order to implant the values and trust to the young people in rural areas to be willing to engage in agriculture rather than work in other sectors, 2) Establishing a cooperative of farmer groups in which the related agencies help to facilitate in formulating a plan of farmer-group cooperative, which include: determining the structure of the cooperative managers, cooperative business and

technical preparations for the legality of the cooperative as one form of social capital in the form of trust, 3) Encouraging to accelerate the creation of a triple helix relationship among the business, government, and academia for the agricultural sector, especially the vegetable farming, which can be done by encouraging the universities to not just "print" the agriculture degree, but also provide the greater impact on the agricultural sector. The government also should immediately focus on a policy that can link and match the campus and the labor market to make the triple helix concept accomplished. The example of the successful implementation of the triple helix concept is Stanford University with Silicon Valley. The government must be able to create the other "Silicon Valley" especially in agriculture.

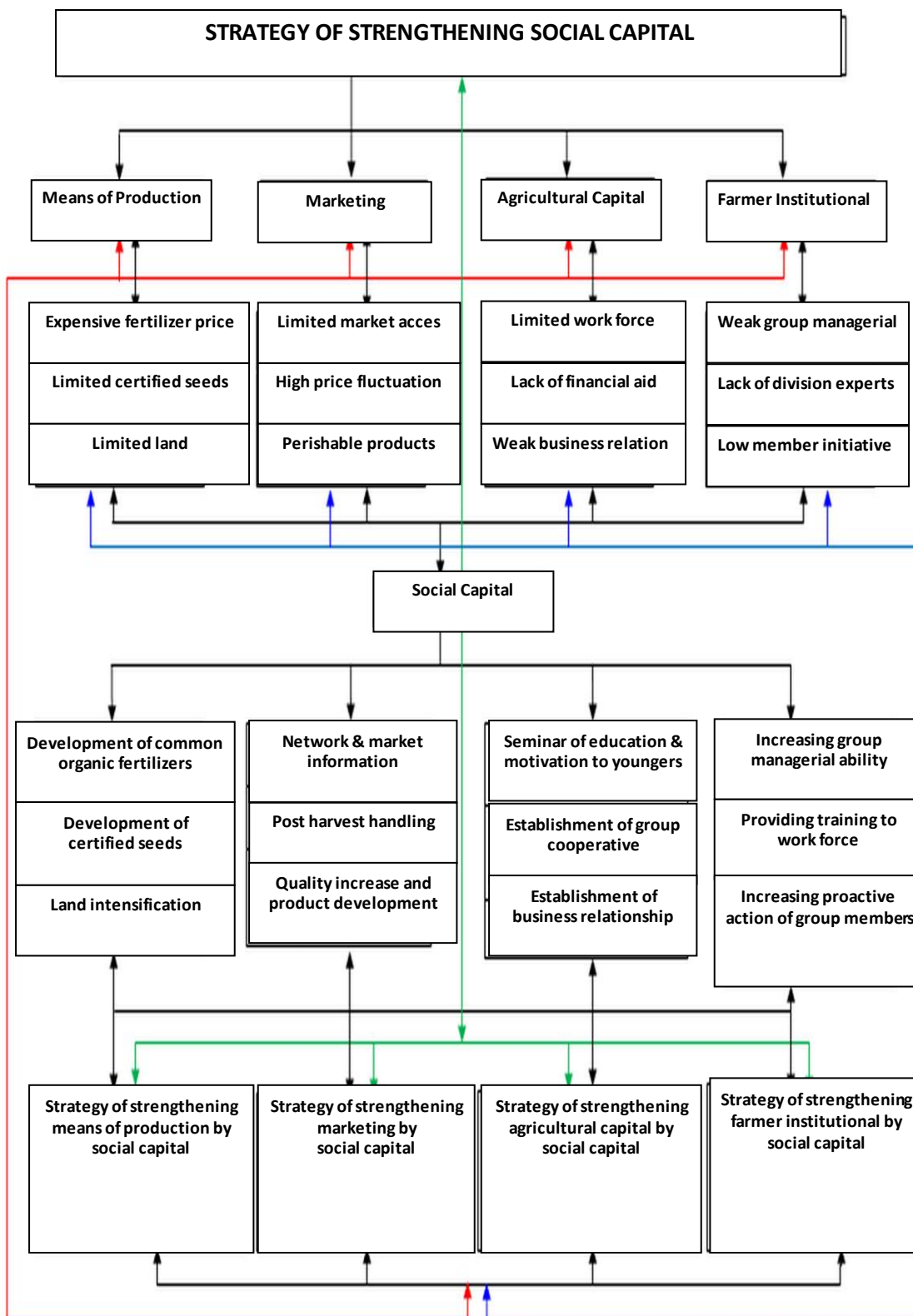
The fourth solution is The Institutional Farming, which includes: 1) Increasing the managerial capacity (ability) of the farmer groups by providing the training on managerial or organizational management so that the farmer groups can be more developed, 2) Providing the training and socialization of the latest innovations in the cultivation of vegetable commodities to the work force in the vegetable farming sector so that the product they produce will be more qualified and the production will be increased. Besides, the rate of technology adoption and innovation will be more evenly distributed, and 3) Improving the proactive action of the group members as a form of social capital in the form of trust and the local noble values by replanting the values of local wisdom that begin to fade on any activities involving the groups so that a sense of belonging to the group members is increasing and more active in achieving the common prosperity.

The problem identification and the solution conducted in this research produce a strategy in strengthening the social capital of the farmer group in the agricultural development as follows: 1) Strategy of strengthening the means of production by the social capital. Strengthening the elements of social capital is like collective actions in the form of mutual cooperation to develop the common organic fertilizer by the farmer groups by utilizing the dirt or vegetation made in organic compost fertilizer and the use of certified superior vegetable seeds as the development results by the researchers from academia or related parties and also the use of green house on the intensification of land in an effort to increase the comparative advantage, 2) Strategy of strengthening the marketing by the social capital. The utilization of digital information network can help to strengthen the social capital in rural areas such as solidarity and trust in improving the social networks and the information on the market for farmers and speeding up the coordination among the regions in order to create the market mapping that facilitate the farmers to sell their products. It is also very helpful for the farmers in managing their cropping in marketing their crops and can help to improve the quality and development of agricultural products through the enhancement of local knowledge, the technology adoption, and the handling of post harvest in order to increase the competitiveness of farmers and the harvest products, 3) Strategy of strengthening agricultural capital by the social capital. The government set regulations to accommodate the creation of conducive triple helix relationships among the business, government, and academia,

especially in the agricultural sector, which is able to accelerate the innovations and to encourage the creation of schemes and financial institutions that support the growth of vegetable farming such as the establishment of a cooperative group or another and to help provide the seminar of education or the character education to all young people in rural areas that are expected to replant the noble values of local wisdom, cooperation, mutual trust, and responsibility, and 4) Strategy of strengthening the farmer institutional by the social capital. Strengthening the social capital in terms of mutual trust among the society, social empathy, social awareness, and collective cooperation are by improving the managerial capability of the farmer groups by providing the training on group management and socialization on the innovations in the cultivation of vegetable crops that are expected to develop the farmer groups. If the farmer groups are improved, the group activities will be increasing and will also increase the proactive action of each member of the farmer group in order to achieve the common prosperity.

The results of the problem identification and the solutions are to make the structural network of ANP over the issue of strengthening the social capital of the farmer groups in the agricultural development of agriculture in Getasan District, like Figure 2 below.

Based on the ANP network, the analysis is continued by using the Pairwise Comparison. The data obtained from the questionnaires is then processed using the software of Super Decision 2.2.6 and Microsoft Excel 2007. The result of data processing is as shown in Table 3.



Source: data processed, 2015

Figure 2.Feedback Network in Strengthening the Social Capital in the Farmer Groups

Table 3. Summary of Processed Result of ANP

EXPLANATION		EXPERT	
Aspects of Problems		NR	R
Means of Production		0.12464	4
Marketing		0.46561	1
Agricultural Capital		0.25604	2
Farmer Institutional		0.15370	3
Aspects of Solution added by Social Capital			
	Development of common organic fertilizers	0.54310	1
Means of Production	Development of certified vegetable seeds	0.20064	3
	Increase in farming land intensification	0.25625	2
	Increase in network and information owned by farmers about market	0.53370	1
Marketing	Post harvest handling	0.11868	3
	Quality and development of farming products	0.34760	2
	Education and motivation to youngsters	0.32401	2
Agricultural Capital	Group cooperative	0.19426	3
	Triple helix relationship	0.48171	1
	Managerial of farmer group	0.33364	3
Farmer Institutional	Training and socialization to work force	0.20150	2
	Proactive action of group member	0.46484	1
ASPECTS OF STRATEGY			
Strategy of strengthening means of production by social capital		0.241795	3
Strategy of strengthening marketing by social capital		0.345820	1
Strategy of strengthening agricultural capital by social capital		0.163519	4
Strategy of strengthening farmer institutional by social capital		0.248865	2

Explanations: *NR = Average values, R = Average ranks

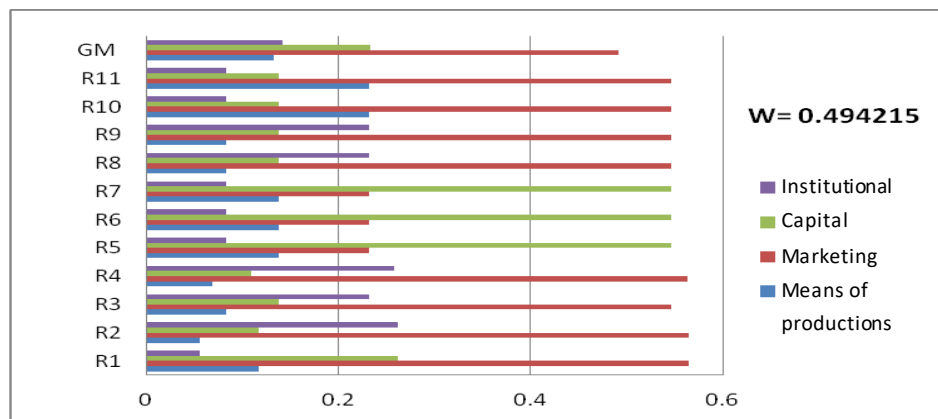
Source: Data processed, 2015 (based on processing by Software Super Decision 2.2.6)

The findings of this research based on the ANP calculation based on in-depth interviews and questionnaires include the priority of problems, solutions, and strategies. The more detailed descriptions of the above findings are:

1. Priority of Problems

The main problem in strengthening the social capital of farmer group in the agricultural development consists of problems in the aspect of inputs (means of production), marketing, agricultural capital, and farmer institutional. The ANP result shows that the priority of problems is: the

problem of marketing aspects. Each sub-priority of problems consists of each aspect as follows: in the marketing aspect, the priority of problem is that the access of information about the market for farmers is limited. The next is the aspect of agricultural capital; the main priority is that there is no creation of the conducted concept of triple helix relationship. And the farmer institutional aspect; the main priority is that the initiative of the members of farmer group is still low. The aspect of production facilities; the main priority is that the price of fertilizers and pesticide is increasingly rising.



Source: Data processed, 2015

Figure 3. Priorities of Aspects of Problems

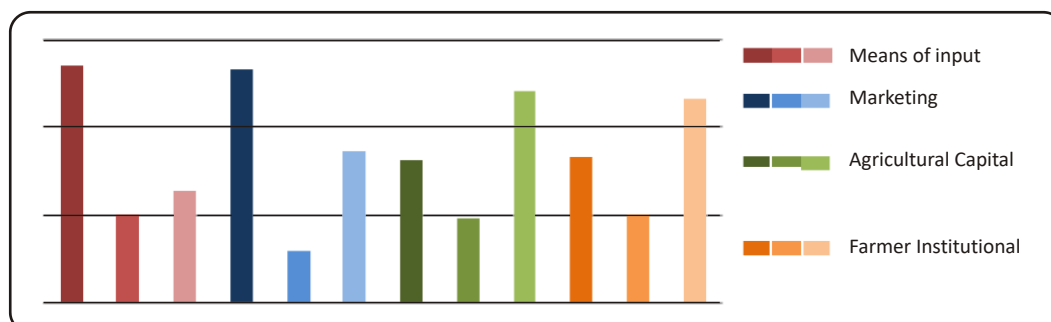
2. Priority of Solutions

Some solutions to strengthen the social capital of farmer groups in the agricultural development consist of solutions in the aspect of inputs, marketing, agricultural capital and farmer institutional. The ANP result shows that the priority of solution is the aspects of marketing that is in accordance with the problems in strengthening the social capital of farmer groups in the agricultural development. The sub-priority of solutions for each aspect is as follows: the aspect of inputs; the priority of solution is the development of organic fertilizer in groups. The marketing aspect; the main priority is the increase in network and

information owned by farmers about the market. The aspect of agricultural capital; the main priority is the creation of a triple helix relationship among the business, government, and academia. While the aspect of farmer institutional; the main priority of solution is to increase the proactive action of the group members (Figure 4).

3. Priority of Strategy

The research result of ANP formulates the alternative strategies on strengthening the social capital of farmer groups in the agricultural development, among others, the strategy of strengthening the means of production by the social capital, the strategy of strengthening the marketing by the social



Source : Data processed, 2015

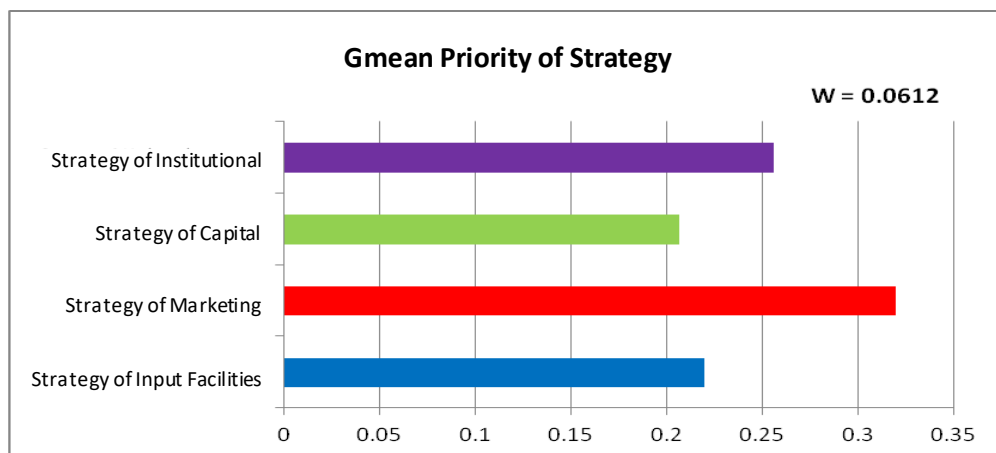
Figure 4. Priorities of Aspects of Solutions

capital, the strategy of strengthening the agricultural capital by the social capital, the strategy of strengthening the farmer institutional by the social capital. The ANP result shows that the main priority is the strategy of strengthening the marketing by the social capital through the utilization of digital information network that can help to strengthen the social capital in rural areas such as solidarity and trust in improving the social networks and the information on market for the farmers and to speed up the coordination among the regions in order to create the market mapping that facilitate the farmers to sell their products. It is also very helpful for the farmers in managing their cropping patterns in marketing their agricultural products and can help to improve the quality and development of their agricultural products through the increase in local knowledge, technology adoption, and post harvest handling in order to increase the competitiveness of the farmers and their harvest products.

Related to the potential in Getasan District, the people there are required to participate in the development of social

capital-based vegetable farming in the community. An institutional in the form of farmer groups, organizations or associations in Getasan District in supporting the agriculture will strengthen the social capital and one of the initial stages of the interaction between individuals to one another. The establishment of farmer groups will accelerate the agricultural development purposes rather than do it individually (Figure 5).

The successful agricultural development actually could be achieved by strengthening the existing social capital in the community because the dimension of social capital emphasizes on social togetherness to achieve the purpose of improving the quality of life, so it needs the development of values that must be adhered to by its members such as: participative attitude, mutual attention, mutual giving and taking and mutual trust. The dimension of social capital describes everything that makes the society join each other to achieve a common goal on the basis of unity, and therein it is bound by the values and norms that grow and are obeyed (Daguspa and Saregeldin in Cahyono 2012).



Source: Data processed, 2015

Figure 5. Priority of Strategy

Nurhidayati in Syahriar (2015) argued that the agro-tourism development has encouraged the social concern in strengthening the social capital in the research area by maximizing the role of individuals within the organization network, the aspect of reciprocity in the community, the increase in trust, the strengthening of values and social norms, and the increased networking. The factors that play the role in the development of social capital are as follows: the internal power in the form of internal motivation and awareness of the community/religious leaders and the role of government in providing the institutionals that accommodate the common interest of the agro-tourism development areas, such as Gapoktan (Farmer Group) of Apples, or the Association of Agro-Tourism Farmers, which will reduce any conflicts that arise because of the same interests in the development of agro-tourism.

Institutional in the sense of the rule of the game in an association is formed to create a rule to handle the problems that will arise in the society. It is also conducted by Mardi Santoso Farmer Group in organizing its members. It is similar to the research of Yuliarimi (2011), which argued that the institution is a rule that binds members of the formed group. The group activity based on a rule is an important stepping towards the sustainability of a particular activity. The good relations among them in a bond of social organizations such as the traditional institutions will form a trust that such bonding could be established continuously in the long term so there will be mutual beneficial bonding.

Situmorang et al (2012) also argued that the establishment of farmer groups based on common needs is an important factor in the

social capital formation of the farmer groups, such as the cooperation to improve the ability of each member in conducting to farm. The management coordination is led by the head of farmer groups. The unification of the members engaged in the same agricultural sector will make it easier to unify their visions and missions for the agricultural development and will not seem that each of them walks alone. A strong bonding within the community equipped with respect to their leaders will be potential to mobilize the members for participative planning in the local vegetable farming development and solve the problems faced by the farmers.

Pranadji (2006), Situmorang et al (2012), Rokhani (2012), Cahyono and Ardian (2012), agreed on the importance of farmer groups and the social capital that exists in the farmer groups to help the farmers in solving their problems. The strong social capital, according to research that they have conducted, can help the farmer groups to solve all the problems. The researchers divide these problems into four aspects as follows: problem aspects of the means of production, of marketing, of the agricultural capital and of the farmer institutional. It is also in accordance with the invention of Azkia and Firoozabadi in Safi Sis (2013) who found that the social capital within the group run the important role in solving the problems faced by the group so it can increase their income, and the decision-making and the management of production and the participation of members to be better.

The efforts to face the agricultural problems require solutions and strategies that use the social capital elements therein such as trust, social networks and norms. Putnam (1995) explained that social trust basically is a product of good social capital. A

good social capital is characterized by the presence of solid social institutions; the social capital creates a harmonious social life. To solve the problems in aspects of production facilities, the solutions and strategies use the social capital in the form of trust and norms that are shown through the cooperation in the manufacture of common organic fertilizers and the establishment of green house in every vegetable plantation land owned by farmers. The cooperation and mutual assistance can be realized if the social capital in the form of mutual trust and mutual help among members are formed strongly among the members of farmer groups.

The strengthening of social capital elements in the form of social network and trust in the solutions to solve the problems of marketing is very important to do, one of which is by increasing the use of digital information network that is considered to improve the social network of the farmers and improve the flow of market information received by the farmers in order to increase the farmers' income. Lyon (2000) in a research study on the tomato farmers in Brong Ahafo Ghana found that the relationship between the traders and the farmers established in the research region is based on the mutual trust that is strong and the social networks that are formed on the basis of trust is able to increase the income of both the traders and the farmers as well and it can make them widen their tomato product marketing network. The utilization of digital information networks and cooperation networking are also expected to help the vegetable farmers in Getasan District to adopt and take advantage of the innovations that have been developed for the vegetable farming sector.

Bulu et al (2009) found that the social capital and the rate of adoption of innovations have a reciprocal relationship or mutual influence. For instance, the rate of innovation adoption of the corn that increases consistently will strengthen the social capital. On the contrary, the social capital that becomes stronger consistently will increase the adoption of the corn innovation. The information and materials of innovations are obtained by the farmers through a network of communication and the cooperation with the sources of information and innovation. Similarly, the adoption of innovation requires a network of good cooperation both individually and collectively. The increased cooperation through the farmer institutional supported by the mutual trust and cooperation rules will create a collective decision to increase the adoption of innovation of the corn. The trust also means the process of "social associative". The trust is the basis of relationships among the individuals or groups that will be much energy of maintaining the "social cohesion" in the process of innovation adoption.

The interaction among the stakeholders in the area of research is still less synergizing, just sharing information in certain activities. The parties include the Department of Forestry, the academia, the farmer groups, and there is no overall collaboration between the government and the community in the farming management and planning. They still run their own activities appropriate to their own authority. Such a condition makes the vegetable farming development tend to be slow.

The lack of synergy among the stakeholders signifies that there is no intertwining of the good triple helix concept in the

research area, whereas this concept with the strengthening of the social capital therein can help to solve the problems of agricultural capital experienced by the farmers. The social capital and trust within the complex economic community mention that the trust is beneficial for the creation of the superior economic order, because it can be relied upon to reduce the costs. If people work in a company that trust each other and work according to a set of common ethical norms, the business only requires a small fee. Social trust, including honesty, cooperation exemplary, and a sense of responsibility towards others are very important to cultivate the virtues of individual (Fukuyama, 1995).

The creation of a good triple helix relationship through the social integration can also help to overcome the problems of capital faced by the farmers, which include: encouraging the creation of financial funding schemes that favor the vegetable farmers in particular and encourage the creation of farmer group cooperative so that the farmer groups can develop. Safi Sis (2013) in his study in the Taram City, Zanzan Province, Iran, found that a good social integration is an important part in determining the performance of cooperatives. This can be achieved by increasing the social capital in the community through a sense of cooperation, social empathy, security, mutual respect and tolerance among the religions. The creation of strong social capital is also the only way to create a synergy among the stakeholders and is expected to be a solution and a strategy for the agricultural capital.

The last solution and strategy to solve the agricultural problems in the aspect of farmer institutional using the social capital is by improving the managerial capacity of the

farmer groups and their members through the training and socialization of the organization and cultivation of vegetable farming in a group that is expected to increase the level of participation or the proactive actions of the members of farmer groups in order to achieve the common prosperity. Rokhani (2012) in his research explained that the strengthening of farmer group institutional is necessary because some government programs are channeled through a group approach. The group provides the convenience whether in terms of coaching/supervising, managerial development, aid and capital controls. The institutional according to the analysis of social capital is an important element because it enables the cooperation and building trust is an important element of the social capital.

According to Situmorang et al (2012), a cooperation that occurs in the farmer groups is capable to create the mutual trust among the members and towards the existing agricultural extension. The members of farmer group believe that the discussions or trainings they attend are able to solve the agricultural problems they face. Information, social networking, mutual trust and cooperation in the farmer groups are the important social capital in the successful vegetable farming development in Getasan District, Semarang Regency.

CONCLUSION

This study bring in several conclusions as follows: 1) Some aspects that form the basis on strengthening the social capital of the farmer groups in the agricultural development consist of four aspects: aspects of the means of production, aspects of marketing, aspects of agricultural capital, and aspects of farmer institutional, and each

aspect has its specific problem and solution. 2) The main priority as the problem on strengthening the social capital of the farmer groups in the agricultural development is consistent with the priority of solutions that is the aspects of marketing. 3) The strategy of strengthening the social capital of farmer groups in the agricultural development places the strengthening of marketing by the social capital as a priority. This strategy can be conducted through the utilization of the digital information network that can help to strengthen the social capital in rural areas such as the solidarity and trust in improving the social networks and market information for the farmers and to speed up the coordination among the regions in order to create the market mapping that facilitates the farmers to sell their harvest products. It is also very helpful for the farmers in managing their cropping patterns in marketing their agricultural products and it can help to improve the quality and development of agricultural products through the increase in local knowledge, technology adoption, and post harvest handling to increase the competitiveness of the farmers and their harvest products.

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