



Build of Farmer Welfare Through the Cocoa Village Model (CVM) Program in District of Blitar

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Abstract. The problem of Cocoa development in East Java is productivity that is still far from its potential ability. The average productivity of cocoa only 0.7 tonnes/ha, whereas when applying the technology optimally cocoa cultivation, productivity can reach 2.5 tons/ha. It is therefore necessary strategic steps and innovation in the management of the cultivation of cocoa in order to encourage the development of the cocoa plant particularly in the area of cocoa production centers, such as in the villages of Blitar in the form of Cocoa Village Model (CVM) Program. The research purposes to know the existence of the cocoa plant and how far the understanding and skills of farmers in district of Blitar in managing the cocoa plant, before and after implementation of the CVM program. The research method is a survey by setting 40 cocoa farmers as respondents by randomly sample from three villages namely Krenceng, Modangan, and Sumberasri in District Nglegok, Blitar. The collection of data through observation and questionnaires filled out by respondents and interviews. Data were analyzed as descriptively using frequency analysis (proportion). Empowerment of farmers in terms of understanding, skills and performance in technological innovation cocoa cultivation showed the acceleration of change for the better by referring to the technical guidelines. Realization of institutional innovation group of cocoa farmers and their role in accelerating the achievement of cocoa production. CVM Program can successfully meet the expectations of farmers .

Keywords: Cocoa · CVM · and Cultivation

1 Introduction

Cocoa is one of the plantation commodities mainstays of East Java which also plays an important role as a foreign exchange earner region, providing jobs and source of income for farmers. The needs of the world cocoa reached 6.7 million tons per year and can only be fulfilled 2.5 million. That is, still less 4 million tons more to meet the growing demands of the market, so that this condition is an opportunity and a challenge for Indonesia, especially in East Java in order to continue to improve the planting area and production of cocoa. Program or activity that has been carried out by the Ministry of Agriculture as

Cocoa Development Revitalization, empowerment of farmers in the level of on-farm and off farm, as well as the commitment of stakeholders is a driving factor in the development of cocoa agribusiness development in Indonesia [1]. Cocoa crop area in East Java in 2011 covering an area of 61.167 hectares divided into 23.634 ha smallholder, PTPN 26.480 ha and 11.053 ha Big Private Plantation. Cocoa is predominantly a smallholder crop, as more than 90% of world cocoa production originates from small farms. In Africa and Asia, a typical smallholder cocoa farm covers only 2 to 5 hectares of land [2].

The main obstacle in the development of cocoa production in East Java is still far from its potential. The current average annual cocoa production yield of about 0.7 tons/ha, this condition is still far from its potential can reach 2.5 tons/ha, when applying technology optimally cocoa. Observing the above conditions, the need for a strategy to improve cocoa productivity, especially in Blitar. In this regard the need for innovations in order to draw up strategic step in the management of the cultivation of cocoa, ie the area of cocoa production centers in the form of The Cocoa Village Model (CVM) program.

The Cocoa Village Model is an independent rural development program (community development program) designed a comprehensive and integrated in accordance dynamics problems by involving the various parties through the support and facilities. The Community Development Program in these words: "Community development is an attempt to bring about a social and economic transformation of village life through the efforts of the people themselves." [3]. Forward through the Cocoa Village Model (CVM) program is expected to cocoa could be the motor of rural economy in an effort to realize a prosperous society. The implication is also expected to affect and impact broadly in villages and surrounding districts. To realize the goal of the economic development, especially in the agricultural sector it is necessary to prepare a strategic policy to increase or accelerate the growth of the agricultural sector, in particular the increase in income and social welfare [4].

The purposes of this study was to know the condition of the existence of the cocoa plant and how understanding and skills of farmers in managing before the Cocoa Village Model (CVM) program and for the empowerment of farmers in cocoa cultivation technology innovation with reference to the technical guidelines and standards cocoa farming practices and encourage institutional innovation cocoa farming communities strong and independent through the Cocoa Village Model (CVM) program.

2 Research Methods

First, conduct an initial assessment portrait of the condition of the existence of the cocoa plant and how far the understanding and skills of farmers in managing the cocoa plant. For data collection was done by the method of survey respondents are set randomly to 40 cocoa farmers from three villages namely Krenceng, Modangan and Sumberasri in district of Blitar. Data collection had done by questionnaires and interviews with the respondents. Model questions on the questionnaire using a Likert scale with measures tiered from number 1 to number 5, then descriptive analysis the data by using frequency analysis (proportion). The figures only sequence alone, in the form of frequency analysis in units of percentage.

Second, provide training on how the cultivation of cocoa according to the guidelines, including how to plant seeds, fertilize, prune, bud grafting and control of pests and

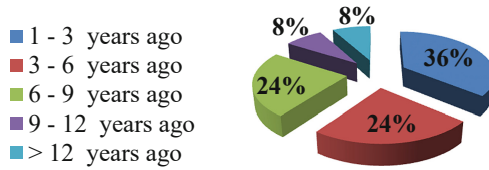


Fig. 1. Graphs of the period of farmers to know the cocoa plant

diseases. For this training the participants set by three farmer groups of 40 peoples. After training the farmers are expected to be able to manage and maintain their cocoa crop well, further forward can improve productivity and quality of cocoa. Then providing assistance cocoa crop seeds and tools needed by farmers such as saws, scissors cutting plants and hand sprayer to undertake maintenance activities the cocoa plant.

Third, monitoring and evaluate to farmers who have been given training and equipment assistance, with the method of interviews and direct observation in the cocoa farmers.

3 Results and Discussion

3.1 Initial Conditions Cocoa Farmers (Prior to the Implementation of the CVM Program)

Portrait of the cocoa farmers in three villages are Krenceng, Modangan and Sumberasri in the Sub-District Nglegok, District of Blitar, as follows:

Look at Fig. 1 shows that farmers in three villages turned out to be new to most of the cocoa plant 1–3 years ago. Reality is evident from the activity of farmers in managing cacao plant not comply with the technical guidelines are correct. On the other hand a small part of farmers, who have been long enough to know the cocoa plant was also not doing true cultivation techniques. Indications are visible from the garden or crop conditions cocoa farmers are not maintained, such as branches and twigs without any effort cuts, so that cocoa production cannot be optimal.

Furthermore, with regard to the time when farmers began planting cacao in the land can be observed in Fig. 2. In three villages, namely Krenceng, Modangan and Sumberasri it turns out most of the newly planted cocoa farmers around 1–3 years ago. It suggests that production cocoa was not expected because most of the plants not yet in production. Instead, a small percentage of cocoa plants are already in production, the cocoa plants aged more than five years. In fact, the plants are already in production, the results are not optimal because its cultivation technique is not correct.

Portrait measurement data understanding and skills of farmers before the training given, only a small percentage who understand and know the role of quality seedlings in the cultivation of cocoa. Instead, most farmers do not understand or know about it, for more details about the picture of farmers' understanding of the importance of seed quality can be seen in Fig. 3. This fact can be seen from the performance of cocoa farmers plant less good growth and production is also not optimal.

Therefore, efforts to constantly improve farmers' understanding of the role of cocoa seed quality is essential in the cultivation of cocoa. The future of farmers is expected

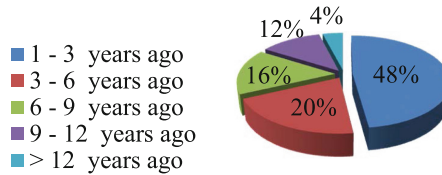


Fig. 2. Graph of farmers started planting cocoa in the yard or in the land

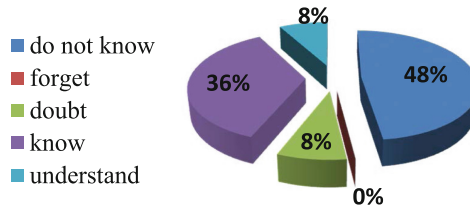


Fig. 3. Graph of farmers understanding of the role of quality cocoa seedlings

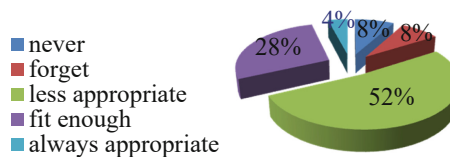


Fig. 4. Graph of farmers understanding on cocoa crop fertilization according to guidelines

to increase cocoa production of both quantity and quality. East Java cocoa agribusiness conditions are relatively favorable, because cocoa is a strategic commodity to raise the dignity of farmers. This is reflected in the amount of cocoa plants growing well, although the level of productivity is not maximized.

Another thing that should be taken into account and determine in cocoa cultivation is the problem of fertilization, which includes the type of fertilizer, how much and when to be given to the plant. During this turns farmers' understanding of the problem seems to be still less fertilizer, can be considered an indication of how farmers in fertilization, that is only a fraction have been referring to the manual cultivation of cocoa. Instead, most farmers have not done according to the guidelines, the data can be seen in Fig. 4. For example, in fertilization, visible way of fertilizer, especially organic fertilizers are still carelessly just stacked on the base of the plant, and even then not all of equal treatment plants. If it gives a good dose of chemical fertilizer and the time is also not appropriate. Indications of how the maintenance of cocoa plants by farmers in the District of Nglegok is evident from the growth of plants is not good, so that production can not be optimal.

Activity of farmers in pruning of cocoa plants, it turns out most of the farmers do not according with the guidelines and the other less according to guidelines. Conversely there aren't already farmers who has pruning cocoa plant according to the guidelines, the data can be observed in Fig. 5.

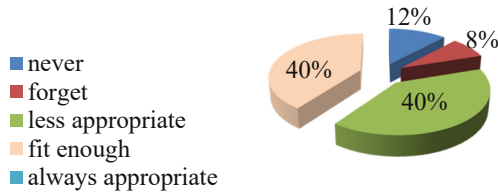


Fig. 5. Graph of farmers has pruning cocoa plant according to the guidelines

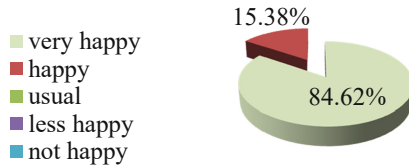


Fig. 6. Graph of farmers perception after receiving training of cultivation aid equipment and plant seeds of cocoa

The absence of farmers who has done pruning according to guidelines, because farmers usually to pruning by using a sickle or knife. Whereas the correct prune way is using a saw to rod plant and to branches by scissors. Disadvantages use sickle or knife is the cut cannot be average or even rupture especially if his sickle blunt, whereas with a saw or scissors cutting will produce a neat and flat piece.

3.2 The Condition of Cocoa Farmers After Getting Training, Equipment and Cocoa Seed

Results of a survey on the perception of farmers after a touch of cultivation training, support equipment and plant seeds of cocoa turned out to be mostly felt very happy while others feel happy, this data can be observed in Fig. 6. Ruled feeling very happy in the knowledge cocoa farmers are expected in the future will be motivated to improve their performance, so that in turn will increase the productivity of the cocoa plant. The sense of excitement in every individual human being is the basis in making a change in attitude and behavior. Increasing the quantity and quality of food in response to growing demand will require increased agricultural productivity. Good agricultural practices, often in combination with effective input use, are one of the best ways to increase smallholder productivity. Many agribusinesses are building sustainable supply chains to increase production and improve quality.

For cocoa farmers who have received training in theory and practice and is based on a strong motivation to change the way the management of cocoa cultivation, management wanted to start planting new cocoa using quality seeds. That the needs of cocoa farmers on quality cocoa seed availability is very important, it can be proven the data in Fig. 7. Most cocoa farmers consider that quality cocoa seedlings are needed, while others deem necessary. Usually, a training activity is only designed to provide training materials and practice alone, without the aid of tools, so that the implementation in the field, they cannot do well. Expected to be given a model of training and equipment assistance and adequate

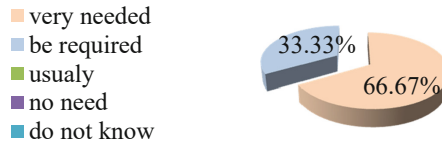


Fig. 7. Graph of farmers perceptions of the availability of high-quality cocoa seedlings

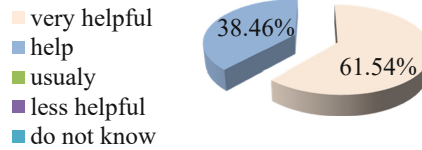


Fig. 8. Graph of role of both saws and scissors equipment for the cocoa farmers in the cultivation of cocoa plants

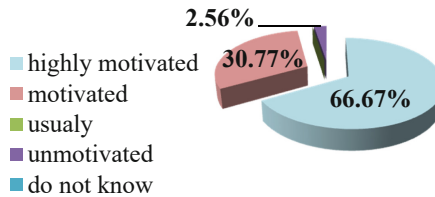


Fig. 9. Graph of farmers motivation after receiving training cocoa cultivation

seed as it has been carried out on this the Cocoa Village Model(CVM) Program can improve the skills and spirit of cocoa farmers in cocoa cultivation management. Because production risk is an inherent characteristic of agriculture and changes in production risk will affect the welfare of risk-averse producers [5].

Cocoa farmers in implementing new knowledge gained from the training turned out to be greatly helped with the help of tools such as saws and scissors cut. Results of evaluation of how far the role of equipment given to the performance of farmers in the cultivation of cocoa plants according to their understanding. The role of the equipment for cocoa farmers turned out to be very helpful according to most respondents, while others expressed support their work, as can be seen in Fig. 8.

After the cocoa farmers receive training, then they changed their perception of indifference toward the maintenance of the plant be motivated to manage their cocoa crop properly. Proven results are very encouraging, as can be presented in Fig. 9, where most farmers feel very motivated, while others feel motivated, although there are also farmers who have not been motivated, but the proportion is small.

Relating to the conviction of farmers to increase crop production of cocoa after they get the training, the seeds of the cocoa plant and equipment the Cocoa Village Model (CVM) program, was based on data obtained showed a positive thing. Given the many examples that show African smallholders investing and innovating when they have the chance, then there are reasons to hope that the modest growth of production

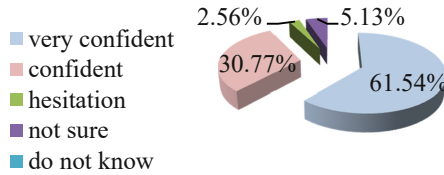


Fig. 10. Graph of the confidence of cocoa farmers to increase cocoa production after the CVM program

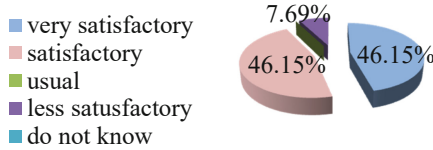


Fig. 11. Graph of perception of how far expectations the cocoa farmers to the CVM program has been implemented Team of UPN “Veteran” East Java

and productivity seen in the last two decades may accelerate in the future [6]. Feeling confident cocoa farmers to increase cocoa production in the future, the fact is the majority of states are very confident, then sure, while a small portion hesitation. But there are also some cocoa farmers who do not feel confident, the data can be seen in Fig. 10.

It is very encouraging the team of UPN Veteran East Java and the instructors, the majority of participants declare that the Cocoa Village Model (CVM) program is very fulfilling their expectations, then most of the other declare to expectations. Instead, a small percentage of other expressed less satisfactory these expectations, data can be seen in Fig. 11.

To further determine why a small percentage of cocoa farmers declare that the Cocoa Village Model (CVM) program does not meet their expectations, it turns out subjectively they say that this program should not only once. Their hope is Cocoa Village Model program can continue, given they feel need to be reminded and encouraged to do a good performance in the management of the cocoa plant.

For institutional cocoa farming community after the program was held Cocoa Village Model turns encourages farmers to form a new group of cocoa farmers, so that previously there were two groups of cocoa farmers now become three. Associated with the presence of groups of cocoa farmers, after the implementation of the Cocoa Village Model program is expected to serve and facilitate the needs of its members. The future institutional role of cocoa farmer groups are expected to accelerate the achievement of optimal cocoa production, which in turn can boost the economy in the region. Collective action through farmer groups can be an important strategy for smallholders to remain competitive in rapidly changing markets. Previous research has analyzed determinants of farmer participation in groups, equating participation with group membership. However, within groups the commitment of members can vary, as marginal benefits and costs are not the same for all individuals, and opportunities to free-ride exist. Low participation in

collective activities may reduce the ability of groups to provide useful services to its members [7].

4 Conclusions

Based on the description that has been presented above, it can be concluded as follows:

1. Before Cocoa Village Model program implemented, cocoa planting conditions have not been good and farmers are not referring to the pattern of cultivation of technical guidelines.
2. Successfully empower farmers in terms of understanding, skills and performance in technological innovation cocoa cultivation showed the acceleration of change for the better by referring to the technical guidelines.
3. Successfully realize institutional innovation groups of cocoa farmers and their role in accelerating the achievement of the production of cocoa farmers.
4. The Cocoa Village Model Program can successfully meet the expectations of farmers.

References

1. Apriyantono, A.: Agricultural development in Indonesia. Jakarta. Ministry of Agriculture (2006).
2. ICCO. www.icco.org/economy/production.html, last accessed 2021/11/21
3. Mondal, P.: The community development programme of India. www.yourarticlelibrary.com/india-2/the-community-development-programme-of-india-2405-words/4866, last accessed 2022/01/19
4. Saragih, B.: Agribusiness new paradigm for agriculture-based economic development. Yayasan Mulia Persada Indonesia (1998).
5. Orea, L., Wall, A.: Productivity and producer welfare in the presence of production risk. *Journal of Agricultural Economics* 63(1), 102-118 (2012).
6. Wiggins, S.: African agricultural development: Lessons and Challenges. *Journal of Agricultural Economics* 65(3), 529-556 (2014).
7. Fischer, E., Qaim, M.: Smallholder farmers and collective action: What Determines the Intensity of Participation?. *Journal of Agricultural Economics* 65(3), 683–702 (2014).

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