e-ISSN: 2745-9535
No. 105/E/KPT/2022
Jurnal Pengabdian Masyarakat
Member of: A/JEBI
Editorial Office: Jl. Soekarno-Hatta, Rembuksari No. 1A, Malang, East Java, Indonesia, 65113
Contact: Phone: +62 (341) 478494 e-mail: jpm@asia.ac.id
The journal is published by Institut Teknologi dan Bisnis Asia Malang
Website: https://jurnal.stie.asia.ac.id/index.php/jpm
Indexed in: Google Crossref neliti GARUDA Journal Dimensions

Community Economic Empowerment through Sustainable Cocoa Cultivation in Bangbayang Village

[1]Ilham Andika Pratama*, [1]Umar Djihad Muchasim, [1]Dani Husni Mubarok, [1]Erna Wati, [1]Inas Nuwayyar, [1]Ina Lutfiatun Humaeroh, [1]Ine Susilawati, [1]Siti Nurfadilah, [1]Fika Saniatul Zulfa, [1]Alfi Hidayah, [1]Haizatul Himmah
[1]Sekolah Tinggi Agama Islam Brebes, Indonesia
*Corresponding author
E-mail: ilhamandik19@gmail.com

Volume
7
Issue
2
Edition
November
Page
656-662
Year
2026

Article History

Submission: 12-09-2026
Review: 15-09-2026
Accepted: 20-11-2026

Keyword

Economic Empowerment;
Cocoa Cultivation;
Sustainable Agriculture;
Bangbayang Village;

How to cite

Pratama, I. A., Muchasim, U. D., Mubarok, D. H., Wati, E., Nuwayyar, I., Humaeroh, I. L., Susilawati, I., Nurfadilah, S., Zulfa, F. S., Hidayah, A., & Himmah, H. (2026). Community Economic Empowerment Through Sustainable Cocoa Cultivation In Bangbayang Village. Jurnal Pengabdian Masyarakat, 7(2), 656–662. https://doi.org/10.32815/jpm.v7i2.3122

Abstract

Purpose: This community service activity aims to increase the economic capacity of cocoa farmers in Bangbayang Village through the implementation of sustainable cocoa cultivation, given the low productivity and farmers' dependence on the selling price of raw cocoa beans.

Method: The activity was carried out using an Asset-Based Community Development (ABCD) approach through socialization, cultivation and post-harvest training (plant rejuvenation, pruning, bean fermentation), farmer group mentoring, and market access facilitation, involving 30 farmers who are members of the Farmer Group over a period of four months.

Practical Applications: The results of the activity produced an empowerment model that can be replicated by other cocoa farmer groups, improved the quality of fermented cocoa beans, opened access to value-added markets, and strengthened the institutional capacity of the farmer group as a joint business unit.

Conclusion: This community service activity improved the knowledge, skills, and income of cocoa farmers in Bangbayang Village and encouraged the sustainability of farming businesses through institutional strengthening and diversification of processed cocoa products.

Introduction

Kakao (Theobroma cacao L.) is one of the leading plantation commodities and a primary source of livelihood for millions of smallholder farmers in Indonesia, including those in Bangbayang Village. This village has fairly extensive potential cocoa-growing land, but the productivity and quality of the cocoa beans produced remain low due to aging plants, minimal application of proper cultivation techniques, and limited knowledge of post-harvest handling such as bean fermentation. Most farmers still sell their cocoa beans in raw, unfermented form to middlemen, so the added economic value they receive is relatively small and highly vulnerable to market price fluctuations (Manalu, 2019).

This condition is consistent with the findings of various studies indicating that the sustainability of smallholder cocoa farming is largely determined by farmers' ability to manage cultivation, post-harvest, and market access in an integrated manner (Susilo, 2023; Irfany et al., 2020). Farmer-group-based empowerment programs have proven effective in strengthening the capacity of cocoa farmers in various regions, for example through an integrated farming system approach based on the green economy (Asriani, 2024) and the Rural Empowerment and Agricultural Development Scaling-Up Initiative, or READSI (Sulfiana et al., 2022). Beyond technical cultivation aspects, processing cocoa beans into value-added derivative products, such as cocoa powder, has also been shown to open new business opportunities for cocoa-producing village communities (Atmaja et al., 2026).

Community economic empowerment cannot be separated from the strengthening of local institutions, including farmer groups as a collective vehicle for accessing capital, training, and markets (Fitria, 2020). The Asset-Based Community Development (ABCD) approach was chosen for this activity because it emphasizes the use of assets and potential already possessed by the community, rather than focusing on the problems or shortcomings they face (Alhamuddin et al., 2020). Farmer characteristics, such as age, education level, and farming experience, also influence the extent to which the cultivation innovations introduced are adopted (Setiyowati et al., 2022), making these an important consideration in designing the training materials and mentoring methods.

Based on the foregoing, this community service activity was carried out in Bangbayang Village with the aim of empowering the economy of cocoa farmers through the application of sustainable cocoa cultivation practices, improving cocoa bean quality through fermentation, strengthening farmer group institutions, and facilitating market access. This activity is expected to become a model of community economic empowerment based on local commodities that can be replicated in other cocoa-producing villages

Method

This community service activity was carried out in Bangbayang Village with a cocoa farmer group over a period of four months, from the preparation stage through evaluation. The target participants were 30 cocoa farmers belonging to the farmer group, selected purposively based on ownership of active cocoa land and willingness to take part in the entire series of activities. The method used was the Asset-Based Community Development (ABCD) approach, which emphasizes identifying and utilizing the community's assets, potential, and local wisdom as the starting point of the empowerment program (Alhamuddin et al., 2020).

Implementation of the activity was divided into five stages. First, the socialization and Focus Group Discussion (FGD) stage, aimed at mapping the existing condition of the cocoa gardens, the problems faced by farmers, and the assets and potential possessed by the village. Second, the sustainable cocoa cultivation training stage, which covered techniques for rejuvenating old plants through side grafting, production pruning, balanced fertilization using organic fertilizer derived from garden waste, and integrated pest and disease control. Third, the post-harvest handling training stage, covering techniques for fermenting cocoa beans for 3–5 days, drying, sorting, and packaging fermented cocoa beans to meet the quality standards required for the value-added market.

Fourth, the intensive mentoring stage for the farmer group in applying the training results to their respective gardens, accompanied by periodic field visits from the service team. Fifth, the partnership and market access facilitation stage, including exploring cooperation with collectors and local chocolate-processing businesses willing to purchase fermented cocoa beans at premium prices.

Data were collected through field observation, semi-structured interviews, and a Knowledge, Skills, and Attitude (KSA) questionnaire administered before (pre-test) and after (post-test) the training to measure the increase in farmers' capacity. Participant characteristics, such as age and years of farming experience, were recorded as presented in Table 1, given that farmer characteristics also influence the extent to which the innovations introduced are adopted (Setiyowati et al., 2022). Quantitative data from the questionnaires were analyzed descriptively to examine the percentage increase in each aspect, while qualitative data from the FGD and interviews were analyzed thematically to support the interpretation of the activity results.

Table 1. Characteristics of Participants in the Bangbayang Village Cocoa Farmer Empowerment Program

No.	Participant Name	Position in Farmer Group	Age (Years)	Years of Farming (Years)
1	Abdul Kahfi	Chairperson	42	20
2	Sulthon	Vice Chairperson	51	26
3	Rosidin	Secretary	56	11
4	Abdul Rais	Treasurer	39	13
5	Ilman Fahmi	Member	34	18
6	Komari	Member	45	10
7	Nanang	Member	51	12
8	Bustan Arifin	Member	50	15
9	Abdul Hamid	Member	58	23
10	Urip	Member	52	16
11	Opik	Member	43	17
12	Caswadi	Member	40	27
13	Mulyadi	Member	36	15
14	Cahya	Member	46	13
15	Mahfud	Member	51	26
16	Mahmud Marhaba	Member	49	22
17	Asep	Member	30	11
18	Agus	Member	45	17
19	Nurhidayat	Member	42	18
20	Yanto	Member	38	12
21	Gufron	Member	46	18
22	Mukhlisin	Member	54	30
23	Khairudin	Member	47	22
24	Deni Saputra	Member	30	10
25	Wahyudin	Member	51	26

No.	Participant Name	Position in Farmer Group	Age (Years)	Years of Farming (Years)
26	Sarto	Member	57	32
27	Slamet	Member	32	14
28	Hartono	Member	53	29
29	Jamaludin	Member	44	23
30	Rasman Nur Arifin	Member	55	31

Source: Author's Work, 2026.

Result

This community service activity was implemented through a series of four training and mentoring sessions attended by 30 cocoa farmers who are members of the Farmer Group in Bangbayang Village. The participant characteristics presented in Table 1 show variation in age and length of farming experience, which formed the basis for adjusting the training materials so that they could be easily understood by all participants.

During the socialization and FGD stage, it was identified that most farmers had never fermented cocoa beans and still sold their harvest as wet beans to middlemen at prices far lower than those for fermented cocoa beans. The sustainable cocoa cultivation training successfully improved farmers' understanding of plant rejuvenation techniques, pruning, and organic fertilization, as reflected in the increase in knowledge scores on the KSA questionnaire. The post-harvest training produced fermented cocoa beans of better quality, marked by a more uniform aroma and bean color compared with unfermented cocoa beans.

From an institutional perspective, the mentoring activity strengthened the role of the Farmer Group as a joint business unit coordinating the collective sale of fermented cocoa beans. The partnership facilitation carried out by the service team succeeded in establishing cooperation with one local chocolate-processing business willing to purchase fermented cocoa beans at a premium price, higher than the price of unfermented cocoa beans that farmers usually received from middlemen. This increase in selling price directly contributed to increased income for the farmers participating in the program.

Beyond economic benefits, this activity also produced social impacts in the form of increased frequency of meetings and mutual cooperation (gotong royong) among farmer group members, as well as the emergence of initiatives by female participants to develop household-scale processed cocoa derivative products, such as cocoa powder and traditional chocolate drinks, as an additional source of income for farmers' families. Testimony from the farmer group's chairperson indicated that the mentoring provided opened new insights into the potential added value of cocoa that had not previously been optimally utilized.

Discussion

The results of this activity show that community economic empowerment through sustainable cocoa cultivation effectively improved farmers' technical and institutional capacity, consistent with findings from cocoa farmer empowerment programs based on an integrated farming system and green economy that were able to increase productivity while sustaining the environment (Asriani, 2024). The improvement in fermented cocoa bean quality achieved in this activity also reinforces the finding that farmers processing cocoa beans themselves can increase selling value and income compared with selling raw, unprocessed cocoa beans (Manalu, 2019).

Photo 1. Planting of Cocoa Seedlings by Community Service (KKN) Students Together with the Village Government, Agricultural Extension Officers, and the Farmer Group



Source: Private Documentation, 2026.

The empowerment flow, in which the strengthening of cultivation, post-harvest, institutional, and marketing aspects are interrelated, supports the economic sustainability of cocoa farmers. This pattern is consistent with the experience of the READSI program, which emphasizes the importance of continuous mentoring and the strengthening of farmer group institutions so that program benefits can be sustained after mentoring ends (Sulfiana et al., 2022). The diversification of processed cocoa products initiated by female participants in this activity is also consistent with findings that processing cocoa beans into value-added derivative products, such as cocoa powder, can open new business opportunities for cocoa-producing village communities (Atmaja et al., 2026). The involvement of women in post-harvest processing and product diversification activities in this program is likewise relevant to various studies on the role of women in the cocoa value chain, which show that women's access to processing skills and markets can serve as an important pathway toward the economic empowerment of rural women (Albornoz-Arias et al., 2025; Skalidou, 2020), while also underscoring the importance of ensuring a fair division of labor and benefits between male and female farmers in the cocoa production chain (LeBaron & Gore, 2020). Nevertheless, the sustainability of this empowerment program still faces a number of challenges, including fluctuations in global cocoa prices, limited access to capital for large-scale plant rejuvenation, and dependence on a single local chocolate-processing partner. Strategies to strengthen farmers' adaptive capacity, including farm business diversification and the strengthening of cross-stakeholder partnership networks, need to be continuously developed so that the empowerment program can be sustained in the long term (Mandra & Sahabuddin, 2025; Nurseha, 2025). Replication of this kind of local-commodity-based empowerment model has the potential to be applied in other cocoa-producing villages with similar socioeconomic characteristics.

Conclusion

This community service activity aims to empower the economy of cocoa farmers in Bangbayang Village through the application of sustainable cocoa cultivation. The results show that the Asset-Based Community Development approach, implemented through socialization, cultivation and post-harvest training, farmer group mentoring, and market access facilitation, was able to improve the knowledge, skills, and income of the 30 farmers who are members of the Farmer Group. The improvement in cocoa bean quality through fermentation has opened access to value-added markets and strengthened the farmer group's institutional capacity as a joint business unit, while the product diversification initiatives undertaken by female participants demonstrate the potential to expand economic benefits for farmers' families.

This activity nevertheless has certain limitations, particularly the relatively short duration of mentoring and the scope of marketing partners, which remains limited to a single local

chocolate-processing business. It is therefore recommended that follow-up mentoring be carried out to expand marketing networks, improve access to capital for cocoa plant rejuvenation, and document the good practices produced so that they can be replicated by other cocoa farmer groups in other villages. Further research and community service could also focus on evaluating long-term economic impacts and strengthening the role of women in the cocoa value chain in Bangbayang Village.

Acknowledgements

The service team would like to thank the Bangbayang Village Government and the management and members of the Farmer Group for their active participation throughout the activity. Thanks are also extended to Sekolah Tinggi Agama Islam Brebes, through its Institute for Research and Community Service (LPPM), for its funding support and facilitation of the activity, as well as to the local chocolate-processing business partner willing to establish a marketing partnership for fermented cocoa beans. Appreciation is likewise extended to all students and other parties who helped carry out this activity to completion.

Reference

Achmad, B., Sanudin, Siarudin, M., & Widiyanto, A. (2022). Traditional subsistence farming of smallholder agroforestry systems in Indonesia: A review. IOP Conference Series: Earth and Environmental Science.

Albornoz-Arias, N., Rojas-Sanguino, C., & Santafe-Rojas, A.-K. (2025). Empowering rural women in the cocoa production chain in Sardinata, Norte de Santander, Colombia. Social Sciences, 14(2), 94. https://doi.org/10.3390/socsci14020094

Alhamuddin, Aziz, H., Inten, D. N., & Mulyani, D. (2020). Pemberdayaan berbasis Asset-Based Community Development (ABCD) untuk meningkatkan kompetensi profesional guru madrasah di era industri 4.0. International Journal of Community Service Learning, 4(4), 321–331.

Asriani. (2024). Pemberdayaan petani kakao melalui penerapan integrated farming system (IFS) berbasis green economy pada tanaman kakao berkelanjutan di Desa Langgomali, Kabupaten Kolaka. Martabe: Jurnal Pengabdian Kepada Masyarakat, 7(8), 2879–2888.

Atmaja, I. S., Apriliani, A., Satar, R., Undiyatami, I. Z., Firdausha, A. E., Saliha, N. A., & Alfalak, I. (2026). Pemberdayaan masyarakat Desa Bebidas melalui pemanfaatan biji kakao menjadi bubuk cokelat bernilai ekonomis. Aksi Kita: Jurnal Pengabdian kepada Masyarakat.

Fitria, F. (2020). Pemberdayaan ekonomi masyarakat melalui Badan Usaha Milik Desa (BUMDes). Adl Islamic Economic, 1(1), 13–28.

Irfany, M. I., McMahon, P. J., Toribio, J.-A., Phan-Thien, K.-Y., Rifai, M. A., Yusdiyanto, S., Vinning, G., Guest, D. I., Walton, M., & Nuryartono, N. (2020). Determinants of diversification by cocoa smallholders in Sulawesi. International Journal of Social Economics, 47(6).

LeBaron, G., & Gore, E. (2020). Gender and forced labour: Understanding the links in global cocoa supply chains. Journal of Development Studies, 56(6), 1095–1117. https://doi.org/10.1080/00220388.2019.1657570

Manalu, W. (2019). Pengolahan biji kakao produksi perkebunan rakyat untuk meningkatkan pendapatan petani. Jurnal Ekonomi dan Kebijakan Publik.

Mandra, M. A. S., & Sahabuddin, E. S. (2025). Penerapan pertanian cerdas iklim: peluang, tantangan dan strategi peningkatan kapasitas adaptasi petani pada daerah irigasi Saddang di Sulawesi Selatan.

Nurseha, J. (2025). Strategi pemberdayaan masyarakat dalam program Kampung Nanas di Kalurahan Margoluwih, Kapanewon Seyegan, Kabupaten Sleman [Tesis, Politeknik

Pembangunan Pertanian Yogyakarta Magelang].

Schulte, I., Landholm, D. M., Bakhtary, H., Cabezas, S. C., Siantidis, S., Manirajah, S. M., & Streck, C. (2020). Supporting smallholder farmers for a sustainable cocoa sector: Exploring the motivations and role of farmers in the effective implementation of supply chain sustainability in Ghana and Côte d'Ivoire. Climate Focus.

Setiyowati, T., Fatchiya, A., & Amanah, S. (2022). Pengaruh karakteristik petani terhadap pengetahuan inovasi budidaya cengkeh di Kabupaten Halmahera Timur. Jurnal Penyuluhan, 18(2), 208–218.

Skalidou, D. (2020). Cocoa and the invisible women: Fairtrade Foundation research paper into the links between female participation in cocoa production and women's economic empowerment. Fairtrade Foundation.

Sulfiana, Deoni, A. S. A. R., & Ibrahim, H. (2022). Pemberdayaan petani kakao melalui kegiatan program READSI (Rural Empowerment and Agricultural Development Scaling-Up Initiative): Studi kasus di Desa Kalotok, Kecamatan Sabbang Selatan, Kabupaten Luwu Utara. Tarjih Agriculture System Journal, 2(1), 67–79.

Susilo, A. W. (2023). Dukungan inovasi teknologi untuk agribisnis kakao berkelanjutan. Talenta Conference Series: Agricultural and Natural Resources.