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Accelerating the Development of Arabica Coffee Production and Processing to Encourage Business and Economic Improvement of the Kintamani Bali Community

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ABSTRACT

This study focuses on accelerating the development of Arabica coffee production and processing in Kintamani, Bali, to enhance local business and economic growth. Kintamani, renowned for its distinctive Arabica coffee, faces challenges in productivity, post-harvest processing, and global market access. The program employed a combination of face-to-face methods, counseling, training, and hands-on practices to improve cultivation techniques, post-harvest methods, marketing strategies, and collaboration networks. The method involved direct practice guided by experts, with training on sustainable agricultural practices, modern post-harvest processing technologies, and effective marketing strategies. Results show a significant increase in participants' knowledge, with an understanding of marketing strategies improving from 21.05% to 84.21%, and awareness of product certification rising from 10.53% to 84.21%. These outcomes demonstrate the program's effectiveness in empowering local communities and fostering sustainable development. Recommendations include leveraging social media, certification systems, and stakeholder collaborations to enhance market access and ensure business continuity.

Contribution to Sustainable Development Goals (SDGs):

SDG 1: No Poverty

SDG 2: Zero hunger

SDG 9: Industry, Innovation, and Infrastructure

SDG 12: Responsible Consumption and Production

SDG 13: Industry, Innovation, and Infrastructure

SDG 17: Partnerships for the Goals

1. INTRODUCTION

1.1. Research Background

Kintamani, located in the Indonesian province of Bali, is widely recognized as one of the country's most prominent coffee-producing regions, renowned for the exceptional quality of its

Arabica coffee beans [1]. The region's geographical and climatic advantages, such as the ideal altitude and cool temperatures, result in a distinctive flavor profile for Kintamani Arabica coffee, characterized by soft acidity, floral aromas, and a touch of fruitiness. This unique quality has led to the recognition of Kintamani coffee in both domestic and international markets. In addition, Kintamani coffee is also one of the Indonesian products that has received Geographical Indication certification, which is



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proof of the authentication of the quality and origin of the product [2], [3].

However, despite its great potential, the Kintamani coffee farming community still faces complex challenges. Productivity issues, post-harvest processing, and access to the global market are the main obstacles affecting farmers' income [4]. Other challenges include the lack of adoption of modern technology in the process of processing and managing crops, as well as the low capacity of farmers to understand sustainable agricultural practices [5][6]. This condition shows the need for strategic measures oriented toward empowering farmers, increasing efficiency, and diversifying products to increase the added value of Kintamani coffee [7], [8].

To encourage the development of the Arabica coffee sector in Kintamani, a holistic approach is needed, including aspects of improving production quality, introducing environmentally friendly processing technology, and strengthening digital-based marketing. The use of appropriate technology in the production and processing process is expected to increase efficiency and produce products that meet global market standards [9], [10]. In addition, training and mentoring programs for coffee farmers are an important step to build the capacity of local communities in managing coffee businesses professionally, from cultivation to marketing.

Collaboration between stakeholders, including governments, research institutions, non-governmental organizations, and the private sector, will be an important foundation in creating a supportive business ecosystem. With this synergy, Kintamani coffee is not only expected to be able to compete in the global market but also contribute significantly to improving the welfare of the local community (Yulianti et al., 2020). Through an integrated approach, this program is expected to have a positive impact in the form of increasing income, creating new jobs, and strengthening the sustainable economy in the Kintamani area.

1.2. Literature Review

Arabica coffee, renowned for its premium quality and distinct flavor profiles, holds a central position in the global coffee market. Its cultivation, primarily in high-altitude regions with favorable climates, not only supports rural economies but also creates opportunities for entrepreneurs [11], [12]. The rising demand for specialty coffee has encouraged producers to focus on sustainability and quality, leveraging the unique characteristics of Arabica coffee to gain a competitive edge. However, challenges such as climate change, price volatility, and production risks have prompted stakeholders to explore innovative marketing and entrepreneurial solutions to ensure long-term growth and resilience.

Marketing strategies have become integral to enhancing the value of Arabica coffee, especially for small-scale producers and entrepreneurs [13], [14]. Geographical indications (GIs) and certifications, such as organic and fair trade, are increasingly used to differentiate products in competitive markets. Entrepreneurs often utilize digital marketing platforms and storytelling to reach global audiences, emphasizing the origins, ethical practices, and artisanal qualities of their coffee [15]. By connecting directly with consumers through e-commerce and social media, they bypass traditional intermediaries, increasing profitability while meeting the growing demand for transparency and sustainability.

Entrepreneurship in the Arabica coffee sector extends beyond cultivation, driving innovation across the value chain

[16]. Producers are increasingly adopting value-added processes, such as creating coffee-based products like cold brews, cosmetics, and gourmet blends, to capture niche markets. Women entrepreneurs in coffee-producing regions are particularly instrumental in fostering community development and inclusive growth. Furthermore, integrating sustainable practices and emerging technologies like blockchain for traceability provides new opportunities for differentiation. By combining marketing expertise with entrepreneurial innovation, Arabica Coffee serves as a model for sustainable economic development in the global coffee industry [17].

1.3. Research Objective

The objectives are to enhance the production of Arabica coffee by improving both quantity and quality through applying proper cultivation techniques and selecting superior seeds. Additionally, they aim to improve the processing capacity by equipping farmers and business operators with modern post-harvest methods, processing and packaging skills. Strengthening marketing networks is also a key focus, including building solid distribution channels, accessing local and international markets, and enhancing the branding of Kintamani coffee. Furthermore, the use of innovative technologies in coffee production and processing is encouraged to increase efficiency and effectiveness. Ultimately, these efforts seek to improve the welfare of coffee farmers and local business operators by boosting their income through higher production and added value in coffee products.

2. MATERIALS AND METHODS

The method of implementing IRT-UM activities of the Selulung and Belantih Coffee Processing Groups in Selulung Village, Kintamani District, Bangli Regency is planned to use:

- a. Face-to-face methods and provide counseling, training, and hands-on practice so that partners gain knowledge about cultivation management, post-harvest, and coffee processing.
- b. Direct practice, which is guided by instructors who are competent in their fields, so that partners can apply the technology provided and can handle problems in handling post-harvest coffee.

The scope of this activity includes various aspects related to the development of Arabica coffee production and processing, as well as the improvement of the business and economy of the Kintamani community. Here is a breakdown of the scope of the activity:

2.1. Coffee Cultivation.

(1) Cultivation Technique Training: Providing training to farmers on good and correct coffee cultivation techniques, including selection of superior seeds, fertilization, and pest control; (2) Implementation of Sustainable Agricultural Practices: Encourage the use of environmentally friendly and sustainable agricultural practices to maintain soil and ecosystem quality.

2.2. Post-harvest processing.

(1) Processing Techniques: Training in post-harvest coffee processing techniques, starting from picking, drying, to processing coffee beans; (2) Innovation in Processing: The

application of new technologies in the processing process to improve quality and efficiency.

2.3. Marketing and Branding.

(1) Marketing Strategy: Development of marketing strategies to increase sales of Kintamani coffee products, both locally and internationally; (2) Product Branding: Establish the brand identity of Kintamani Arabica coffee to increase its attractiveness in the market.

2.4. Collaboration Network.

(1) Partnership with Stakeholders: Building partnerships with government agencies, academics, and the private sector to support the development of coffee businesses; (2) Organizing Exhibitions and Promotions: Organizing exhibitions and promotional activities to introduce Kintamani coffee products to a wider market.

2.5. Education and Training.

(1) Continuous Training Program: Provide continuous training programs for farmers and business actors to improve their knowledge and skills; (2) Workshops and Seminars: Holding

workshops and seminars on innovations in coffee production and processing.

2.6. Monitoring and Evaluation.

(1) Activity Progress Monitoring: Conduct periodic monitoring to evaluate the progress of activities and their impact on the community; (2) Economic Impact Assessment: Measuring the impact of activities on improving the business and economy of the Kintamani community

3. RESULT AND DISCUSSION

3.1. Result

The results of the questionnaire calculation showed a significant increase in participants' understanding of various aspects of IRT-UM (Household Industry-Micro Business) business development after participating in the program. Initially, only 5.26% of participants knew how to build a Kintamani Arabica coffee brand to be better known to consumers, but this figure jumped to 78.95% after the program. Understanding the importance of collaboration between farmers, entrepreneurs, and the government has also increased dramatically from 0% to 84.21%.

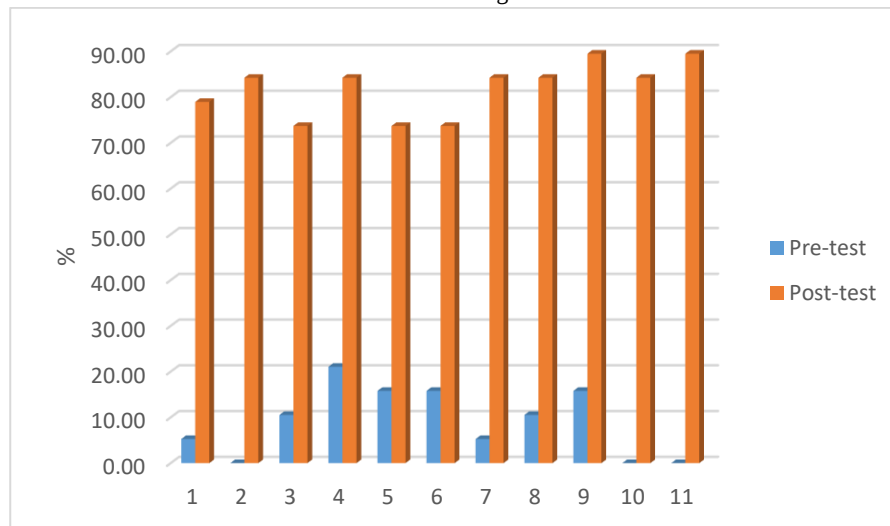


Figure 1. Pre-test and post-test results

3.2. Discussion

Increased participants' understanding of marketing strategies, regional diversification, product certification, consumer satisfaction surveys, and appropriate technology demonstrated the success of the training program in strengthening participants' ability to develop their businesses. For example, the understanding of marketing strategies that was previously only 21.05% increased to 84.21%. This is in line with studies that show that intensive training in marketing strategies can improve participants' skills to identify new market opportunities and increase the income of small and medium-sized businesses [18].

Marketing diversification, both offline and online, plays a crucial role in expanding the product reach. The increase in participants' understanding from 15.79% to 73.68% supports the literature stating that the diversification of digital marketing channels not only increases consumer engagement but also business competitiveness in the digital era [19][20].

Product certification, such as PIRT, is a strategic step that supports consumer competitiveness and trust. In this context, participants' understanding of the importance of certification

increased significantly from 10.53% to 84.21%. According to research, product certification can expand formal market access and increase product added value in local as well as international markets.

In addition, consumer satisfaction surveys and the application of appropriate technologies are key elements for increased efficiency and market development. The increase in understanding up to 89.47% shows that participants now understand the importance of continuous evaluation to adjust business strategies to consumer needs. Research shows that the integration of appropriate technologies can optimize production processes, reduce operational costs, and improve product quality [21].

The initial steps taken, such as the use of social media and product legality through PIRT, are an important foundation in modern marketing strategies. Social media, for example, has proven to be an effective tool for building brands and expanding markets through direct interaction with consumers [22]. The existence of a PIRT permit not only provides legality but also

opens up opportunities to enter formal markets such as supermarkets and marketplaces.

To maximize results, participants are advised to apply this knowledge consistently, build data-driven marketing strategies, and develop collaborations with various parties to scale their efforts. These measures will support the sustainability and growth of the business in the future.



Figure 2. Socialization activities and coffee plant pruning practices



Figure 3. Kintamani Coffee Packaging

4. CONCLUSION

The program has successfully improved participants' understanding of various strategic aspects of business development, including sales, marketing, product certification, customer satisfaction surveys, and the application of Appropriate Technology. The significant increase in comprehension, averaging over 70%, reflects the program's effectiveness in providing practical and relevant knowledge. Initial steps, such as creating social media accounts and obtaining PIRT (Home Industry Product Certification), serve as strategic foundations for expanding product reach and building consumer trust. Moving forward, the focus should be on applying the acquired knowledge, optimizing social media use, and leveraging PIRT certification to access formal markets such as retail stores and online marketplaces, ensuring sustainable business growth for the participants.

REFERENCE

- [1] G. Sedana and N. D. Astawa, "Establishment Of Inclusive Business On Coffee Production In Bali, Bali Province, Indonesia: Lesson from the Coffee Development Project in Nusa Tenggara Timur Province, Indonesia".
- [2] L. P. K. Pratiwi, M. Budiasa, and N. Yudiari, "The role of the geographic indication certification of Arabica coffee as an effort of local farmers," *Int J Res*, vol. 9, pp. 330–338, 2021.
- [3] P. W. H. Hananto and R. R. Prananda, "The Urgency of Geographical Indication As a Legal Protection Instrument Toward Traditional Knowledge in Indonesia," *Law Reform*, vol. 15, no. 1, pp. 62–84, 2019.
- [4] I. I. G. B. Udayana, D. K. T. Sukmadewi, S. Si, I. M. Suwitra, I. G. A. M. P. Sanjaya, and I. N. K. Mardewi, *Budidaya Kopi Arabika dan Kopi Robusta Yang Baik (Good Agriculture Practices/GAP On Arabica and Robusta Coffee)*. SCOPINDO MEDIA PUSTAKA.
- [5] G. B. Udayana, "Model Development Industrial Cluster Coffee Arabica in The District Bangli , Province of Bali," *Int. J. Advanced Sci. Eng. Inf. Technology*. 20015. No.4. ISSN2088-5334, vol. 5, 2015.
- [6] G. B. Udayana, "Marketing Strategies Arabica Coffee with Information Technology in Kintamani District Bangli," *Int. Res. J. Eng. IT Sci. Res.*, vol. 3, no. 3, pp. 93–102, 2020, [Online]. Available: <https://sloap.org/journals/index.php/irjeis/article/view/568>
- [7] L. Suriati *et al.*, "The Development of Taro Processed Product in Women Farmers Group in Baru Village, Tabanan Bali Indonesia," *AJARCDE | Asian J. Appl. Res. Community Dev. Empower.*, vol. 6, no. 1, pp. 28–34, 2022, doi: 10.29165/ajarcde.v6i1.83.
- [8] L. Suriati, I. G. Pasek Mangku, G. A. S. Widya Krisnawati, and A. A. Ngurah Surya Girindra, "The Impact of Chitosan at the Physical Performance of the Coffee Skin-Based Edible Film," *J. Agric. Crop.*, vol. 9, no. 92, pp. 156–163, 2023, doi: 10.32861/jac.92.156.163.
- [9] J.-M. Clairand, M. Briceno-Leon, G. Escrivá-Escrivá, and A. M. Pantaleo, "Review of energy efficiency technologies in the food industry: trends, barriers, and opportunities," *IEEE Access*, vol. 8, pp. 48015–48029, 2020, doi: 10.1109/ACCESS.2020.2979077.
- [10] J. I. Boye and Y. Arcand, "Current trends in green technologies in food production and processing," *Food Eng. Rev.*, vol. 5, pp. 1–17, 2013, doi: <https://doi.org/10.1007/s12393-012-9062-z>.
- [11] K. A. Maspul and F. A. Almalki, "Preserving Local Wisdom: Unaizah's Coffee Culture and Dates Farming Sustaining Cultural Heritage," *J-CEKI J. Cendekia Ilm.*, vol. 2, no. 6, pp. 639–664, 2023.
- [12] E. Raimondo, "Coffee industry market strategies in developing countries," 2022, *Politecnico di Torino*.
- [13] E. S. Yusuf *et al.*, "Sustainability of Arabica coffee business in West Java, Indonesia: A multidimensional scaling approach," *Open Agric.*, vol. 7, no. 1, pp. 820–836, 2022, doi: <https://doi.org/10.1515/opag-2022-0144>.
- [14] N. M. Muriuki, "Influence of Marketing Strategies and Stakeholder's Engagement on Sales Growth of Coffee Export in Kenya," *Int. J. Bus. Ecosyst. Strateg.*, vol. 4, no. 4, pp. 83–88, 2023, doi: 10.36096/ijbes.v4i4.366.

- [15] S. P. Luthfiyyah, R. F. Dalimunthe, I. Manajemen, and U. S. Utara, "Literature Review Study: Analysis Of The Role And Opportunities Of Technopreneurship In Indonesia," *Neraca Manajemen, Ekon.*, vol. 4, no. 12, 2024, doi: 10.8734/mnmae.v1i2.359.
- [16] K. F. SM, "Entrepreneurial Leadership in the Coffee Industry in Africa: A Phenomenological Analysis of the Relationship between Leadership and Innovation in the African Coffee Value Chain," 2018, *Regent University*.
- [17] S. Purwanto and A. Sumantri, "Sistem irigasi pertanian berbasis mikrokontroler arduino uno di desa wanajaya cikarang kabupaten bekasi," *J. Ilmu Komput.*, vol. 5, no. 1, 2022, [Online]. Available: <https://jurnal.pranataindonesia.ac.id/index.php/jik/article/view/108>
- [18] K. Hallberg, *A market-oriented strategy for small and medium scale enterprises*, vol. 63. World Bank Publications, 2000.
- [19] M. Fahrurrozi and M. M. SE, *Entrepreneurship & Digitalisasi: Mengembangkan Bisnis di Era 5.0*. Universitas Hamzanwadi Press, 2023.
- [20] A. Riswanto *et al.*, *Ekonomi Bisnis Digital: Dinamika Ekonomi Bisnis di Era Digital*. PT. Sonpedia Publishing Indonesia, 2024.
- [21] S. Devaraj, L. Krajewski, and J. C. Wei, "Impact of eBusiness technologies on operational performance: the role of production information integration in the supply chain," *J. Oper. Manag.*, vol. 25, no. 6, pp. 1199–1216, 2007, doi: <https://doi.org/10.1016/j.jom.2007.01.002>.
- [22] E. Constantinides, "Foundations of social media marketing," *Procedia-Social Behav. Sci.*, vol. 148, pp. 40–57, 2014, doi: <https://doi.org/10.1016/j.sbspro.2014.07.016>.