JURNAL PENGEMBANGAN PENYULUHAN PERTANIAN
Volume 20 (2), Bulan 2023 : 169 - 180
https://jurnal.polbangtanyoma.ac.id/jp3/article/view/1130
p-ISSN : 1858-1625
e-ISSN : 2685-1725

Optimization Strategy for Organic Rice Business Management SNI (Standar Nasional Indonesia) Upland Project in the Highlands Magelang District Central Java Province

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Diterima : 16 November 2023 Disetujui : 27 Desember 2023

ABSTRAK

Upaya pengembangan beras organik di dataran tinggi Kabupaten Magelang didukung melalui kegiatan The Development of Integrated Farming System in UPLAND Areas (UPLAND), pada lahan padi seluas 2.000 ha. Kegiatan utama UPLAND project meliputi pengembangan dan rehabilitasi infrastruktur pertanian, pengembangan budidaya padi organik, bantuan alat mesin pertanian, alat transportasi, serta microfinance. Tujuan penelitian adalah menyusun strategi optimasi pengelolaan usaha beras organik berdasar SNI. Pendekatan penelitian bersifat diskriptif exploratory dengan responden 80 orang. Penentuan lokasi penelitian di 3 kawasan percontohan UPLAND di wilayah Kabupaten Magelang dilakukan secara purposive sampling, Penelitian dilaksanakan selama 3 bulan pada bulan Juli sd. September 2023. Analisis data meliputi uji validitas dan reliabilitas, analisis matriks IFE (Internal Factor Evaluation) dan EFE (Exsternal Factor Evaluation), analisis deskriptif general elektrik dilanjutkan SWOT . Hasil penelitian menunjukkan bahwa sinergitas subsistem agribisnis beras organik dari hulu hingga hilir berupa subsistem pengadaan dan penyaluran sarana produksi, subsistem usahatani (on farm), subsistem pengolahan dan penyimpanan hasil, subsistem pemasaran dan subsistem jasa penunjang untuk faktor strategis internal dalam kondisi sedang dengan nilai 2.50, sedangkan faktor strategis ekternal dalam kondisi kuat dengan nilai 3.30. Simpulan berdasarkan hasil analisis kondisi IFAS (Internal Factors Analysis Strategy) dan EFAS (External Factors Analysis Strategy) dalam mengembangan padi organik di 3 wilayah dataran tinggi Kabupaten Magelang yang paling ideal dengan Strategi S-O, yakni : 1) Optimalisasi ketersediaan dan teknologi alat/alat/mesin pertanian, usaha jasa peralatan dan mesin pertanian, sarana produksi pertanian, teknologi mitigasi iklim yang ada; 2) Memanfaatkan secara maksimal dukungan mitra kerja/fasilitas hulu dan lembaga pengawas/fasilitasi/swasta/pemerintah yang memberikan perhatian besar.

Kata kunci: Dataran Tinggi; Strategi Pengelolaan; Usaha Beras Organik

ABSTRACT

Efforts to develop organic rice in the highlands of Magelang Regency are supported through The Development of Integrated Farming System in UPLAND Areas (UPLAND) activities, on 2,000 ha of rice land. The main activities of the UPLAND project include the development and rehabilitation of agricultural infrastructure, development of organic rice cultivation, assistance with agricultural machinery, transportation equipment, and microfinance. The aim of the research is to develop an optimization strategy for organic rice business management based on SNI. The research approach was descriptive exploratory with 80 respondents. Determination of research locations in 3 UPLAND pilot areas in Magelang Regency was carried out using purposive sampling. The research was carried out for 3 months in July elementary school. September 2023. Data analysis includes validity and reliability tests, IFE (Internal Factor Evaluation) and EFE (External Factor Evaluation) matrix analysis, general electrical descriptive analysis followed by SWOT. The research results show that the synergy of the organic rice agribusiness subsystem from upstream to downstream is in the form of procurement and distribution of production facilities, farming subsystem (on farm), product processing and storage subsystem, marketing subsystem and supporting services subsystem for internal strategic factors in moderate conditions with a value of 2.50 , while external strategic factors are in strong condition with a value of 3.30. Conclusions based on the results of IFAS (Internal Factors Analysis Strategy) and EFAS (External Factors Analysis Strategy) condition analysis in developing organic rice in the 3 most ideal highland areas of Magelang Regency with the S-O Strategy, namely: 1) Optimizing the availability and technology of tools/equipment/ agricultural machinery, agricultural equipment and machinery service businesses, agricultural production facilities, existing climate mitigation technology; 2) Make maximum use of the support of upstream work partners/facilities and supervisory/facilitation/private/government institutions that provide great attention

***Keywords**: Highlands; Management Strategy; Organic Rice Business*

INTRODUCTION

The Indonesian population still consumes a significant amount of rice. In 2016, 44.0% of the calories consumed by Indonesians came from grains (Wardani et.al, 2019). Meanwhile, it was reported that the average per capita intake of meals containing rice was 98.05%, based on the 2015 national socio-economic survey findings. Indonesia establishes a strategy to achieve the production of food crops through four strategies or what is known as the four Strategies to achieve the production of food crops including: 1) Increase productivity 2) Expansion of the area and land optimization 3) Reduce rice consumption and develop food diversification and 4) Improve management (Agbachom et al., 2019; Pichler, 2015; Sulaiman et al., 2019; Utami et al., 2020). The high demand for organic and non-organic rice must be balanced with the sustainability of rice production in terms of availability, affordability and food safety. The sustainability of the organic rice value chain and its integration into food security must involve social, economic and ecological sustainability goals for organic farming (Melo, 2021).

The market prospects for organic rice abroad can be seen from the price of organic rice in Europe which

is estimated at 5 to 6 Euros. The largest organic rice exports in 2021 were to France at 51.5 tons, followed by the United States at 50 tons (32%) and Malaysia at 45.3 tons (29%). Several other export destination countries are Italy, Singapore, Germany, Hong Kong, Belgium and Australia (Portal Informasi Indonesia. 2022). The prospects for organic rice in the future will continue to increase, demand for rice will continue to increase as population growth remains unstoppable (Lestari et al., 2020). The opportunity for the rapidly growing organic rice market is being exploited by organic rice farmers in the highlands of Magelang Regency, Central Java Province by cultivating 2,000 ha of converted organic rice areas in 3 pilot areas The Development of Integrated Farming System in UPLAND Areas (UPLAND), namely the Merbabu slopes in Grabag District, the slopes of Merapi in Sawangan District, and the Sumbing Slopes in Bandongan, Kaliangkrik and Tempuran Districts (Fukushima, 2020). To achieve success and sustainability of organic rice farming, strategies are needed to improve the management of organic rice farming (Inawati, 2011). The aim of the research is to develop a strategy for developing SNI organic rice through the synergy of agribusiness subsystems from upstream to downstream.

MATERIAL AND METHOD

Descriptive research approach is obtained by exploring (exploratory) the field. The data source population as a sample consists of: 1) organic rice farmers in 3 areas (Grabag, Sawangan, Bandongan/ Kaliangkrik/ Tempuran) joined in 1 Gapoktan, 98 farmer groups, 39 Women Farmer Groups, 3 cooperatives in 33 villages as internal data sources . The research was conducted in 3 UPLAND pilot areas, namely the Merbabu slopes in Grabag District, the Merapi slopes in Sawangan District, and the Sumbing District (Shaharudin & Pani, 2010). Determining the research location was carried out purposively, selecting these 3 areas because they are highland areas that produce organic rice. The research was carried out for 3 months from July to October 2023 (Dominici, 2022). The total number of respondents in this study was 80 people consisting of 60 internal farmers, farmer groups, farmer associations and 20 external people from relevant stakeholders. For more details on the characteristics of the respondents. Characteristics of the internal respondents: average age 46 years old, gender 72 % man and 18 %woman, last average education junior high school equivalent, average farming/ farmer organization experience 16.2 year, and average land area 0.48 ha.

Data collection techniques are grouped into two, namely: primary data through: interviews using a questionnaire and documentation. The indicators in the research consist of 6 internal factors, including: 1) procurement subsystem and production facilities (upstream); 2) farming/ on farm cultivation subsystem; 3) product processing and storage subsystem (agro-industry); 4) results marketing subsystem; 5) supporting infrastructure subsystem; 6) coaching/ mentoring/ institutional subsystem. External factor indicators consist of 3 indicators: 1) work partners; 2) consumers; 3) supervisor/companion, all of which consist of 113 questions.

Data processing and analysis methods include: validity analysis and reliability analysis of questionnaires, SWOT descriptive analysis, IFE and EFE matrix analysis, general electrical descriptive analysis.

RESULT AND DISSCUSSION

Existing and Potential Resources

Magelang Regency has agro-climatic and natural resources in mountainous areas including Mount Merapi, Mount Sumbing, Mount Telomoyo, Mount Merbabu and sufficient good quality water sources so that it is very suitable for the development of various agricultural commodities including rice, besides that it is strategically located in the Joglosemar region (Jogja Solo Semarang).

The potential of the upstream agribusiness sub-system is in the form of: procurement of facilities and distribution of agricultural production facilities consisting of seeds, local seedlings, sources of organic fertilizer, herbal pest and disease control drugs, fuel, tools/machines. Support for the downstream agribusiness sub-system (product processing and storage) in the form of 3 rice milling units (RMU) and its accessories with a capacity of 6 tons per day. In 2023, based on the results of the Certification Commission Team's assessment and evaluation of organic certification, an area of 1348.7 ha of land was declared to have passed certification in accordance with Indonesian National Standard (SNI) 6729-2016 concerning Organic Farming Systems and has the right to include the organic logo on the products produced (Indonesia, 2022). In the marketing sub system, organic rice transportation facilities are available. In general, there are 2 marketing channels for organic rice (Illankoon, 2023). The first channel goes directly to consumers, the second channel sells to wholesalers, from wholesalers then sells to consumers/ BULOG (C et al., 2019). The subsystem of agribusiness institutional support services is extension, consultancy, finance and research.

In 2022, Magelang Regency rice production will reach 100,681 tonnes or 0.02% of the total production of Central Java province of 5,508,531 tonnes (Badan Pusat Statistik (BPS - Statistics Indonesia), 2023). The potential for organic rice production from 2000 ha is 688 tons with a transaction value of approximately Rp. 10,319,921,336,- or 2.16% of the rice transaction value of IDR 1,258,512,500,000,- per year.

Organic Rice Supply Chain Ecosystem

An ecosystem is a system that involves complex relationships between subsystems with each other and with the environment, including other ecological interaction factors (Vermeira & Verbekeb, 2008). The market target for organic rice from the highlands of Magelang Regency is still dominated by meeting the needs of the domestic market. Magelang Regency highland consumers not only come from within the district but also from several other areas and outside the province (Ling et al., 2018). The organic rice in the highlands of Magelang Regency that is marketed is rice that is used for consumption as a staple food by final consumers. Usually the rice marketed is rice packaged in sacks/plastic with a net weight of between 1 to 50 kg (Röder, 2020).

The development target in the supply chain is the creation of cooperation, coordination and use of technology that is able to improve supply chain performance for the quality, quantity, price stability, continuity and sustainability of organic rice. A more detailed description of the organic rice supply chain ecosystem in the highlands of Magelang Regency can be seen in the following image:

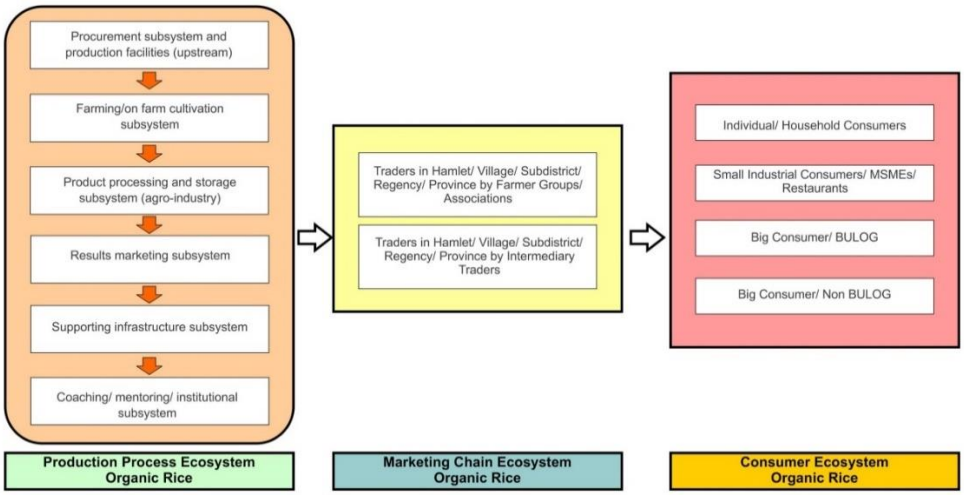

Figure 1. Organic Rice Supply Chain Ecosystem in the Highlands, Magelang Regency

Development of Organic Rice through the UPLAND Project

Magelang Regency is one of the 14 districts appointed by the Ministry of Agriculture to run the UPLAND program during 2020-2024 with organic rice commodities, sourced from IsDB Loans and IFAD (International Fund for Agricultural Development) with a total budget of USD 151.4 million or around Rp. 73,095,000,000,-.

The locations of CPCL UPLAND activities in Magelang Regency are in 3 highland areas. The essence and entity of the UPLAND project is to develop an organic highland rice farming system of high productivity, environmentally friendly and sustainable justice through: 1). supply chain improvement; 2). increasing marketing networks (domestic and export); and coaching and assistance to create an agricultural corporation; 3). coaching and assistance to create an agricultural corporation.

The UPLAND Project's performance achievements until 2022 consist of 4 main components, namely: 1). infrastructure development, increasing productivity and food security (agricultural production and management); 2) agribusiness development and livelihood facilitation (farmer institutional development, strengthening marketing networks and partnerships); 3) strengthening institutional systems (strengthening the capacity of government employees, collaboration with research institutions; 4) activity management (assistance of experts, operational management).

Result and Discussion

Based on variable validity test calculations, all questions have valid status, where the calculated r value (Corrected Item-Total Correlation) > r table is 0.378. Questionnaire Reliability Test Based on the reliability test carried out on the question items, the instrument reliability coefficient was 0.929 and had a "Cronbach's Alpha" value greater than 0.600, which means the instrument was declared reliable or met the requirements.

Internal analysis is a process in which all interacting components within an organization are evaluated to identify failures and areas of opportunity (Chen & Lobo, 2012). The main purpose of this type of analysis is to determine the strengths and weaknesses of the organization/institution (Aggarwal, 2022). Internal analysis assists management in making decisions for company strategy development, formulation, and implementation procedures. The internal factor analysis can be seen in the following table:

Table 1. Internal Factor Analysis

No	Internal Factor Strategic	Score	Rating	Score X Rating
	Strength			
1	1) Availability and technology of tools/machine equipment 2) Agricultural equipment and machinery services business 3) Agricultural production facilities 4) Rice quality (residue test, quality test)	0.25	4	1.0
2	Other facilities: natural resources, farming roads, farming irrigation networks, climate mitigation technology	0.25	4	1.0
	Sub Total	0.5		2

No	Internal Factor Strategic	Score	Rating	Score X Rating
	Weakness			
1	Implementation of Indonesian National Standard (SNI) 6729-2016 Organic Agricultural Systems and other legislation	0.15	1	0.15
2	1) Handling, transportation, storage, processing and packaging 2) Processing method (mechanical, physical or biological) 3) Packaging materials made from recycled materials or materials that can be recycled 4) Cleaning, disinfection and sanitation of food processing facilities 5) Storage and transportation 6) SOP- GAP Processing	0.10	1	0.10
3	Capital support subsystem, cooperatives, insurance, associations	0.10	1	0.10
4	Capital Support Subsystem, Cooperatives, Insurance, Associations	0.15	1	0.15
	Sub Total	0.5		0.5
	Total	**1**		**2.5**

External analysis is a process in which all interacting components outside an organization are evaluated to identify failures and areas of opportunity (Steven, 2023; Thanh, 2019). The main aim of this type of analysis is to identify opportunities and threats originating from outside the organization/institution. External analysis helps management in making decisions for company strategy development, formulation and implementation procedures that originate from outside the organization. The analysis of external factors can be seen in the following table 2:

Table 2. External Factor Analysis

No	External Factor Strategic	Score	Rating	Score X Rating
	Opportunity			

1	Upstream working partners/ infrastucture	0.2	4	0.8
2	Trustees/facilitators/private/government	0.3	4	1.2
	Sub Total	0.5		2.0

No	External Factor Strategic	Score	Rating	Score X rating
	Threat			
1	Trust of individual consumers and corporate/company/company consumers	0.3	3	0.9
2	Other organic rice producing areas (competitors)	0.2	2	0.4
	Sub Total	0.5		1.3
	Total	**1**		**3.3**

Description of existing conditions in the form of resources, potential, problems, prospects of the agribusiness subsystem ecosystem from upstream to downstream, namely the procurement and distribution of production facilities, farming subsystem (on farm), product processing and storage subsystem, marketing subsystem and organic rice supporting services subsystem in the highlands of Magelang Regency, internal strategic factors are in Medium condition with a value of 2.50, while external strategic factors are in Strong condition with a value of 3.30.

IFAS and EFAS Matrices

IFAS (Internal Factors Analysis Strategy) is a form of strategic analysis of internal factors of an organization. Analysis is carried out to obtain a portrait of the strengths and weaknesses of the organization. Meanwhile, EFAS (External Factors Analysis Strategy) is a form of strategic analysis of external factors of an organization (Castelein, 2022). Analysis is carried out to obtain a portrait of the opportunities and threats of the organization. An external portrait is needed to determine the level of readiness and alertness of the organization in facing forces and pressure from external organizations/companies/institutions, especially pressure from competitors (Isa, 2021; Sulistyono, 2018; Suswadi, 2021).

The IE matrix can provide information about the position or location of the company in a matrix which specifically consists of 9 cells (Jaroenwanit, 2021). Determining the position of developing organic rice in the highlands of Magelang Regency is based on the total score of internal and external strategic business factors. From the results of the analysis using the IFE and EFE matrices, the respective results were 2.50 and 3.30, which can be seen in the following image:

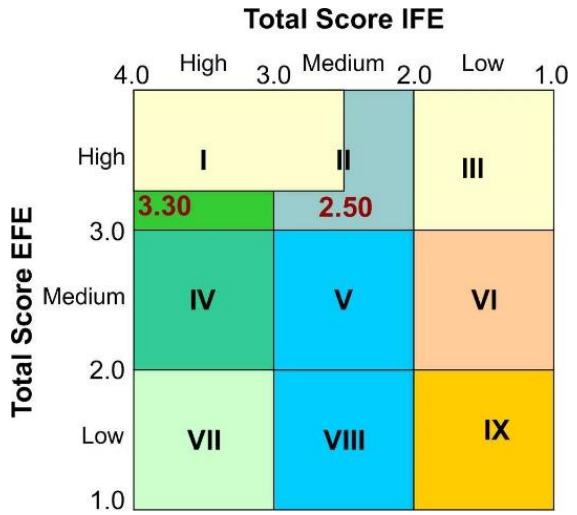

Figure 2. IFE and EFE Matrix for Organic Rice in 3 Highland Areas, Magelang Regency

Problems Faced

The problems faced in developing organic rice in 3 highland areas of Magelang Regency include:

Internal Problems: The Agricultural Equipment and Machinery Services (UPJA) business has not been running well, the quality of rice seeds and organic fertilizer is not yet stable, market reach is still narrow (within villages, sub-districts, districts), implementation of Indonesian National Standard (SNI) 6729-2016 organic farming system is not optimal, rice processing methods and RMU management are not optimal, sop-gap processing does not yet exist and has become a work culture, the capital support subsystem, cooperatives, insurance, associations are still very weak.

External Problems: The level of trust in organic rice, especially individual consumers, is still weak, Other organic rice producing areas (competitors) are starting to become more numerous.

SWOT Descriptive Analysis

The SWOT matrix analysis aims to match the opportunities and threats from the external environment faced by organic rice businesses with internal strengths and weaknesses in order to produce several alternative strategies. The SWOT matrix is prepared based on internal strategic factors (strengths and weaknesses) and external factors (opportunities and threats) that have been previously identified (Palaprom, 2018; Purnomo, 2020). The identification results from the IFE and EFE matrices are then combined to formulate several alternative strategies. Several alternative strategies that can be developed through the SWOT matrix are S-O (Strength - Opportunities) strategy, W-O (Weakness - Opportunities) strategy, S-T (Strength - Threat) strategy and W-T (Weakness - Threat) strategy (Tso, 2019).

Schematic representation of the SWOT matrix depicting existing conditions in the form of resources, potential, problems, prospects of the agribusiness subsystem ecosystem from upstream to downstream, namely the procurement and distribution of production facilities subsystem, farming subsystem (on farm), product processing and storage subsystem, marketing subsystem and subsystem organic rice support services in the highlands of Magelang Regency, internal strategic factors are in moderate condition with a value of 2.50, while external strategic factors are in strong condition with a value of 3.30.

Based on the analysis of the SWOT matrix, 4 types of organic rice development strategies were obtained in 3 Highland Areas of Magelang Regency which can be explained as follows:

S-O Strategy: 1) Optimize the availability and technology of agricultural equipment/tools/machines, agricultural equipment and machinery services business, agricultural production facilities, existing climate mitigation technology; 2) Make maximum use of the support of upstream work partners/facilities and supervisory/facilitating/private/government institutions that pay great attention.

W-O Strategy: 1) Expanding market reach which is still narrow to outside the region (district/province/export); 2) Implement the Indonesian National Standard (SNI) 6729-2016 Organic Farming System properly and prepare and implement SOP-GAP Processing has not yet become a work culture so that quality organic rice products are trusted by consumers; 3) Optimize RMU processing and management methods; 4) Strengthen the professionalism of the Capital Supporting subsystems, Cooperatives, Insurance, Associations.

S-T Strategy: 1) Increasing the independence and quality of rice seeds, organic fertilizer, other inputs, availability of input kiosks or input shops; 2) Strengthening the marketing of rice products into SNI (medium-premium) quality rice; 3) Increasing trust in organic rice for individual consumers through massive education and promotion of residue-safe organic rice; 4) Increase competitiveness with other organic rice producing areas (competitors) which are starting to grow in number.

W-T Strategy: 1) Running an Agricultural Equipment and Machinery Services Business (UPJA) as another source of income and the tool cycle is realized; 2) Improving the quality of rice seeds and organic fertilizer.

CONCLUSION

Conclusions based on the results of IFAS (Internal Factors Analysis Strategy) and EFAS (External Factors Analysis Strategy) condition analysis in developing organic rice in the 3 most ideal highland areas of Magelang Regency with the S-O Strategy, namely: 1) Optimizing the availability and technology of tools/equipment/ agricultural machinery, agricultural equipment and machinery service businesses, agricultural production facilities, existing climate mitigation technology; 2) Make maximum use of the support of upstream work partners/facilities and supervisory/facilitation/private/government institutions that provide great attention.

BIBLIOGRAPHY

Agbachom, E. E., Melvin, A., Amata, U., Ettah, O., & Ubi, G. M. (2019). Strategic Policies in Expanding Frontiers of Food Security among Cassava-based Farmers in Cross River State, Nigeria. *Annual Research & Review in Biology*, 1–12.

Aggarwal, S. (2022). Rice Disease Detection Using Artificial Intelligence and Machine Learning Techniques to Improvise Agro-Business. *Scientific Programming*, *2022*. https://doi.org/10.1155/2022/1757888

Badan Pusat Statistik (BPS - Statistics Indonesia). (2023). *Statistik Indonesia (Statistic Year Book of Indonesia) 2023*.

C, W., S, J. H., & A, S. (2019). Strategies And Technologies for The Utilization and Improvement of Rice. *J. Mech. Eng and Tech.*, *10*.

Castelein, R. B. (. (2022). Mechanization in rice farming reduces greenhouse gas emissions, food losses, and constitutes a positive business case for smallholder farmers – Results from a controlled experiment in Nigeria. *Cleaner Engineering and Technology*, *8*. https://doi.org/10.1016/j.clet.2022.100487

Chen, J., & Lobo, A. (2012). Organic Food Products in China: Determinants of Consumers Purchase Intention. *The International Review of Retail, Distribution*, *22*(3), 293–314. https://doi.org/10.1080/09593969.2012.682596

Dominici, L. (2022). Ecologically-oriented business strategy for a small-size rice farm: Integrated wetland management for the improvement of environmental benefits and economic feasibility. *Science of the Total Environment*, *838*. https://doi.org/10.1016/j.scitotenv.2022.156604

Fukushima, A. (2020). Varietal characteristics and cultivation techniques of rice for business use and feed in the Tohoku Region of Japan. *Japanese Journal of Crop Science*, *89*(1), 1–7. https://doi.org/10.1626/jcs.89.1

Illankoon, W. A. M. A. N. (2023). Evaluating Sustainable Options for Valorization of Rice By-Products in Sri Lanka: An Approach for a Circular Business Model. *Agronomy*, *13*(3). https://doi.org/10.3390/agronomy13030803

Inawati, L. (2011). Advancing Organic Agriculture in Indonesia: Future Opportunities and Challenges. *Paper Workshop on Bina Sarana Bhakti Foundation*.

Indonesia, P. I. (2022). *Beras Organik Indonesia Diminati Pasar Global*. https://indonesia.go.id/kategori/editorial/4587/beras-organik-indonesia-diminati-pasar-global?lang=1

Isa, M. (2021). Sustainability of Rice Business in Flood-Prone Areas. *Environmental Research, Engineering and Management*, *77*(4), 6–18. https://doi.org/10.5755/j01.erem.77.4.28096

Jaroenwanit, P. (2021). THE ROLE OF VALUE CHAIN IN ENHANCING COMPETITIVENESS AND OPERATIONAL EFFICIENCY OF ORGANIC RICE BUSINESS. *Journal of Management Information and Decision Sciences*, *24*, 1–15.

Lestari, P., Mulya, K., Utami, D. W., Satyawan, D., Supriadi, & Mastur. (2020). *Strategies And Technologies for The Utilization and Improvement of Rice*. IAARD PRESS. Indonesian Agency for Agricultural Research and Development.

Ling, T. P., Dominic, F. L., & Shanmugam, A. (2018). The Purchase Intention of Organic Foods among Working Adults in Penang, Malaysia. *Journal of Business and Management*, *20*(3), 48–59. https://doi.org/10.9790/487-2003064859

Melo, M. C. F. (2021). Sustainability Goals of Organic Rice Value Chain and Its Integration on Food Security in Oriental Mindoro, Philippines. *Review of Integrative Business and*

Economics Research, *10*(Supplementary Issue 3), 324.

Palaprom, K. (2018). A development of sustainable and successful business model for Thai local products: The mixed crispy rice noodle, Phra Na Khon Sri Ayutthaya Province. *MATEC Web of Conferences*, *204*. https://doi.org/10.1051/matecconf/201820403004

Pichler, M. (2015). Legal dispossession: State strategies and selectivities in the expansion of Indonesian palm oil and agrofuel production. *Development and Change*, *46*(3), 508–533.

Purnomo, D. (2020). Innovative social business model development for organic rice commodity entrepreneur using business model canvas (BMC) (Case study: Gapoktan Simpatik, local farmers group entrepreneur in Cisayong, Tasikmalaya). *IOP Conference Series: Earth and Environmental Science*, *443*(1). https://doi.org/10.1088/1755-1315/443/1/012071

Röder, M. (2020). (Stop) burning for biogas. Enabling positive sustainability trade-offs with business models for biogas from rice straw. *Biomass and Bioenergy*, *138*. https://doi.org/10.1016/j.biombioe.2020.105598

Shaharudin, M. R., & Pani, J. J. (2010). Purchase Intention of Organic Food in Kedah, Malaysia: A Religious Overview. *International Journal of Marketing Studies*, *2*(1), 90–103. https://doi.org/10.5539/ijms.v2n1p96

Steven, S. (2023). A Simulation Study on Rice Husk to Electricity and Silica Mini-Plant: From Organic Rankine Cycle (ORC) Study to its Business and Investment plan. *Waste and Biomass Valorization*, *14*(5), 1787–1797. https://doi.org/10.1007/s12649-022-01957-w

Sulaiman, A. A., Sulaeman, Y., Mustikasari, N., Nursyamsi, D., & Syakir, A. M. (2019). Increasing sugar production in Indonesia through land suitability analysis and sugar mill restructuring. *Land*, *8*(4), 61.

Sulistyono, N. B. E. (2018). Sustainability status of integrated rice-corn and beef cattle farming agriculture business in Jember regency. *IOP Conference Series: Earth and Environmental Science*, *207*(1). https://doi.org/10.1088/1755-1315/207/1/012025

Suswadi. (2021). Farmers Characteristics and Efficiency Levels of Organic Rice Businesses. *E3S Web of Conferences*, *316*. https://doi.org/10.1051/e3sconf/202131601002

Thanh, N. C. (2019). Linking Farmers and Businesses in Integrated Organic Rice and Shrimp Farming - The Best Way for Enhancing Farmer's Income and Sustainable Agriculture Development. *Journal of Agricultural Extension*, *3*(1), 58–66. https://doi.org/10.22377/AEXTJ.V3I1.135

Tso, C. D. (2019). Business groups, institutions, and the China-Vietnam rice trade. *Asian Survey*, *59*(2), 360–381.

https://doi.org/10.1525/AS.2019.59.2.360

Utami, N. W. F., Wirawan, I. G. P., Firn, J., Kepakisan, A. N. K., Kusdyana, I. P. G. A., Nicol, S., & Carwardine, J. (2020). Prioritizing management strategies to achieve multiple outcomes in a globally significant Indonesian protected area. *Conservation Science and Practice*, *e157*.

Vermeira, I., & Verbekeb, W. (2008). Sustainable food consumption among young adults in Belgium: Theory of planned behaviour and the role of confidence and values. *Journal of Ecological Economics*, *64*(1), 542–553. https://doi.org/10.1016/j.ecolecon.2007.03.007