STRATEGY FOR STRENGTHENING ARABICA COFFEE AGRIBUSINESS INSTITUTIONS THROUGH AN INTERPRETATIVE STRUCTURAL MODELLING APPROACH IN SOUTH SULAWESI, INDONESIA

by Turnitin

Submission date: 26-Jan-2025 05:46AM (UTC+0000)
Submission ID: 249208547
File name: bKhPNdjBf6uRfAZZmSDs.docx (4.55M)
Word count: 4320
Character count: 28709

Journal Agrisep: Kajian Sosial Ekonomi dan Agribisnis. 23 (2): 234-264 (2024)

AGRISEP: Journal Of Agricultural Socio-Economic and Agribusiness Studies

https://ejournal.unib.ac.id/agrisep/index

DOI: https://doi.org/10.31186/jagrisep.24.1.234-264

STRATEGY FOR STRENGTHENING ARABICA COFFEE AGRIBUSINESS INSTITUTIONS THROUGH AN INTERPRETATIVE STRUCTURAL MODELLING APPROACH IN SOUTH SULAWESI, INDONESIA

Irmayani[1)*]; Darmawan Salman[2)]; Abdul Azis Ambar[3)]; Ammang Latifah[4)]; Rafi'ah Nur[5)]; Muhammad Amri Rahman[6)]; Masnur[7)]

[1),3)]*Department of Agribusiness, Post Graduate Program, Universitas Muhammadiyah Parepare, Indonesia*

[2)]*Department of Agribusiness, Faculty of Agriculture, Hasanuddin University, Makassar, Indonesia*

[4),5)]*Department of English Language, Post Graduate Program, Universitas Muhammadiyah Parepare, Indonesia*

[6)]*Department of Agribusiness, Faculty of Agriculture, Hasanuddin University, Makassar, Indonesia.*

[7)]*Department of Informatic Engineering, Faculty of Engineering, Universitas Muhammadiyah Parepare, Indonesia*

* Corresponding Author: irmaumpar@yahoo.co.id

ABSTRACT

Coffee exports are high but productivity is low due to poor coordination, limited resources, and weak skills and infrastructure. The objectives of this research are to: (1) explain the role of agribusiness institutions in enhancing the competitiveness of Arabica Coffee, (2) identify the obstacles that hinder the effectiveness of agribusiness institutions in enhancing Arabica coffee production, (3) design strategic programs to improve Arabica coffee production. This research uses survey methods, interviews, and focus group discussions to obtain data by involving respondents or experts directly involved. The analysis used is Interpretative Structural Modeling to analyze institutional relationships and identify strategic points for policy intervention to increase Arabica

* Submitted: September 3, 2024
Revised: October 15, 2024
Accepted: January 22, 2025

Copyright (c) 2024, This work is licensed by

ISSN: 1412-8837 e-ISSN: 2579-9959

coffee production. The results of the ISM analysis show that the Department of Food Crops, Horticulture, and Plantations of Enrekang Regency has a strategic role in increasing Arabica coffee production through coordinated strategic programs. The main obstacle found is the lack of initial support for institutional involvement, which hinders inter-agency coordination. Strategic programs such as extension services focus on enhancing farmers' knowledge and skills to adopt sustainable technologies and practices.

Keyword: Arabica Coffee Productivity, Coordination, Institutional Barriers, Strategic Program

Cite as:
Irmayani, Salman, D., Ambar, A. A., Latifah, A., Nur, R., Rahman, M. A., & Masnur. (2024). Strategy For Strengthening Arabica Coffee Agribusiness Institutions Through An Interpretative Structural Modelling Approach In South Sulawesi, Indonesia. *Jurnal AGRISEP: Kajian Masalah Sosial Ekonomi Pertanian Dan Agribisnis*, 24(1), 1–22. https://doi.org/10.31186/jagrisep.24.01.1-22

INTRODUCTION

Research on strengthening Arabica coffee agribusiness in Enrekang Regency has been conducted previously, but tends to lack depth in identifying specific gaps related to institutional coordination, the effectiveness of farmer constraints, and the introduction of agricultural extension services. This study aims to fill these gaps by exploring how strengthening the institutional capacity of farmers can facilitate technology transfer, improve market access, and support the implementation of sustainable agronomic practices. Special emphasis is placed on the development of farmer institutions as catalysts for supply chain integration and the enhancement of Arabica coffee's competitiveness in the global market. By addressing this research gap, it is hoped that effective strategies can be designed to enhance the productivity and sustainability of Arabica coffee agribusiness in Enrekang Regency.

This concept is supported by the findings of Cooray and Özmen, who highlight the importance of institutional quality in managing environmental impacts, such as carbon emissions, where strong institutions can either mitigate or exacerbate emissions depending on their governance quality (Cooray & Özmen, 2024). Similarly, the study by Orlova and Shevchenko underscores the significance of sociocultural security within educational institutions, demonstrating that a secure and supportive environment can significantly reduce negative behaviors like drug abuse and delinquency, thereby enhancing the overall well-being and security of the educational environment (Orlova & Shevchenko, 2023).

Increasing farmer productivity, agricultural business efficiency, and competitiveness is indeed a multifaceted challenge, particularly for smallholder farmers who face numerous economic and social barriers. The development of

agricultural institutions and the enhancement of farmer organizations' capacity are crucial strategies to address these issues. For instance, participatory extension programs (PEPs) have been shown to support farmers by providing a platform for peer-to-peer learning, which helps them navigate the intertwined pressures of wellbeing, environmental sustainability, and profitability (Irmayani, Mokoginta, et al., 2024). The quality of institutions in Enrekang Regency still faces challenges, especially in terms of coordination among farmer groups and strengthening Arabica coffee farmer cooperatives. Although some farmer groups have begun to develop networks to improve market access, poorly structured institutions hinder the optimal management and distribution of coffee yields. Additionally, the welfare of coffee farmers in Enrekang remains limited, with fluctuating incomes due to a lack of technical training and support to improve production quality and access to broader markets.

RESEARCH METHOD

The research was conducted in Enrekang Regency, South Sulawesi Province, from December 2023 to February 2024 using purposive sampling, which is the deliberate selection of locations based on the specific qualities of the informants, according to Etikan (2016). The informants referred to are farmers, local government officials, agricultural extension workers, community leaders, and academics who are considered to have a direct relationship with the improvement of the arabica coffee institution. This approach was chosen because it ensures the involvement of key actors, such as farmers, local government officials, agricultural extension workers, community leaders, and academics, who possess knowledge, experience, and direct roles in the coffee agribusiness system. The justification for using purposive sampling is to obtain rich and contextual data, especially in studies that require a deep understanding of local institutional dynamics. However, this approach has limitations in terms of representativeness, as the results cannot be widely generalized to a larger population. Therefore, although purposive sampling is effective in uncovering specific information, this research acknowledges the importance of complementing the findings with other methods or considering additional variations to strengthen the external validity of the research results, (Creswell, 2009).

Sampling Procedure and Data Collection

The sampling procedure using purposive sampling includes extension workers, coffee farmers, and academics selected as key informants due to their strategic roles in the Arabica coffee agribusiness. Extension workers provide data on the implementation of field programs, farmers convey constraints and opportunities at the production level, while academics contribute theoretical

analysis and strategic solutions. Data collection techniques through in-depth interviews and focused discussions ensure accurate and relevant information for designing effective institutional strengthening strategies.

Data analysis

Interpretative Structural Modeling (ISM) analysis is a systematic approach to mapping the hierarchical relationships between elements in a complex system. The ISM process begins with identifying key elements through discussions or interviews with experts and stakeholders. After the main elements are identified, the Structural Self-Interaction Matrix (SSIM) is developed by asking experts to evaluate the relationships between the elements based on criteria such as direct influence and dependence. These relationships are expressed in the form of symbols (V, A, X, O) that indicate the direction and existence of the relationships. SSIM is then transformed into a Reachability Matrix with a validation step to ensure logical consistency, which involves iterations until the hierarchical structure is divided into four quadrants: autonomous, independent, dependent, and linking. ISM analysis is more effective because it can systematically map hierarchical relationships and interdependencies between elements, thereby determining key elements and strategy priorities based on the interaction structure, which cannot be comprehensively achieved by other analyses such as SWOT and AHP. The MATLAB application is used to facilitate matrix analysis and structure visualization, making ISM an effective tool in designing institutional strengthening strategies based on a deep understanding of the relationships between elements and interrealtions can be presented in Table 1.

Table 1. Elements and Sub-elements of Research on Institutional Strengthening of Arabica Coffee Agribusiness in Enrekang Regency, 2024

Elements	Sub Elements
Institutions that play a role in increasing Arabica coffee production	1. Enrekang Regency Food Crops, Horticulture and Plantation Service 2. Enrekang Regency Cooperative and SME Service 3. Enrekang Regency Regional Planning, Research and Development Agency 4. Agricultural Extension Center 5. Research Institutions/universities 6. Private companies 7. Coffee cooperative 8. Financial/banking institutions 9. Coffee organization 10. NGO 11. Farmer Group

ISSN: 1412-8837 e-ISSN: 2579-9959

Elements	Sub Elements
Institutional obstacles in increasing Arabica coffee production	1. Institutions were not involved from the start. 2. Weak institutional commitment 3. Lack of quality human resources 4. Limited human resource institutions 5. There is no acting institution that functions as a coordinator 6. Limited budget for coordination 7. Limited facilities to support coordination 8. Lack of institutional understanding of their respective roles 9. Lack of program integration and synchronization 10. Farmers' attitudes are difficult to develop
Strategic program to increase Arabica coffee production	Extension (upstream-downstream) 2. Production facilities assistance program 3. Increasing human resources for extension workers 4. Providing access to capital 5. Farmer institutional development program 6. Comparative study of institutions 7. Providing organic farming technology packages 8. Effective coordination between institutions 9. Extensification of plantation land 10. Establishment of farming business partnerships with companies 11. Establishment of a special research and development team for Arabica coffee

Source: Primary Data based on the results of FGD with the Agriculture Office, Academics, Arabica Coffee Farmers, and Coffee Marketing Institutions (2024)

RESULT AND DISCUSSION

The respondents in this study include five main groups, namely farmers, local government, agricultural extension workers, economic actors, and academics. Farmers were chosen because they are the main actors in the Arabica coffee agribusiness system and have direct experience related to production challenges, land management, and market access. Local governments are involved to provide insights into local policies that support the development of the coffee sector and institutional strengthening. Agricultural extension workers serve as facilitators who bridge the transfer of technology and innovation from institutions to farmers. Economic actors, such as processors, exporters, and market players, provide perspectives on supply chain dynamics and competitive market needs. Academics are involved to contribute theory-based analysis and relevant strategic recommendations for institutional development. By involving various respondents, the research obtains rich and multidimensional data, which is essential for designing holistic and adaptive institutional strategies in response to changing local and global conditions.

Copyright (c) 2024 (Authors' work)

ISSN: 1412-8837 e-ISSN: 2579-9959

The eleven sub-elements are divided into three quadrants: independent, linkage, and dependent. There are no sub-elements located in the autonomous quadrant according to Figure 1.

Figure 1.
Directional Graph (DP-D) of Institutions Playing a Role

The Enrekang Regency Food Crops, Horticulture and Plantation Service (A1) and the Regional Development Planning, Research and Development Agency (A3) are pivotal in enhancing Arabica coffee production in Enrekang Regency due to their high driver power and low dependence, indicating their significant influence and dominance over other sub-elements. This aligns with previous research highlighting the critical role of agricultural institutions in Indonesia's border regions (Santos-Rivera et al., 2024). However, the coffee agribusiness sector faces numerous challenges, including suboptimal cultivation practices, low productivity, and weak farmer institutional structures. These issues are compounded by limited capital and the need for better adherence to good agricultural practice standards (GAP). The importance of institutional support is further underscored by studies showing that agribusiness institutions play a crucial role in strengthening food security and improving the welfare of small-scale farmers (Jänicke & Müller, 2024). Additionally, nutrient management in coffee-based agroforestry systems is essential for soil nitrogen cycling, with optimal strategies involving a combination of pruning and mixed fertilizer application to maintain soil nitrogen levels and microbial biomass (Kurniawan et al., 2024). The dynamic relationship between agricultural product circulation efficiency and the development level of the APC service industry also highlights the need for modernized systems to support agricultural productivity in less-developed regions.

The dynamic relationship between the efficiency of agricultural product circulation and the development of the APC service industry indicates the need for a modern system that can support agricultural productivity in Enrekang Regency. Arabica coffee in Enrekang Regency has great potential due to its distinctive flavor profile, but it faces various challenges such as limited access to post-harvest technology, low supply chain integration, and suboptimal

institutional support. The application of modern technology and the strengthening of local institutions can help improve the quality, traceability, and competitiveness of Arabica coffee in Enrekang Regency. Moreover, supportive geographical conditions, when combined with sustainable agricultural practices, can ensure long-term productivity while maintaining environmental sustainability. This strategy is expected to strengthen the position of this Arabica coffee in both local and international markets and improve the welfare of farmers in the region.

Establishment of a Structural Model of Institutional Strengthening Constraints

The research results indicate that weak institutional commitment (A2), as the only sub-element in the independent quadrant, is the most significant constraint and has a wide-ranging impact on other sub-elements. Policy implications emphasize the importance of strengthening institutional commitment through the development of more targeted policies, such as the establishment of regulations that promote accountability and institutional transparency. From a practical standpoint, a collaborative approach between the government, farmers' associations, and extension workers can enhance coordination and strengthen relationships among the involved parties. To address constraint A2, strategic steps include enhancing managerial capacity through leadership training, performance-based incentives to encourage institutional accountability, and the establishment of effective oversight mechanisms. By addressing this weakness, other dependent or interrelated challenges can be managed more efficiently, thereby supporting the holistic and sustainable strengthening of institutions.

Figure 2.
Directional Graph (DP-D) Barriers Causing Weak Coordination

Some sub-elements in this quadrant require special attention because changes in one element can trigger changes in other elements, either directly or indirectly. This emphasizes the importance of a systemic approach in addressing coordination challenges in the institutional coffee agribusiness sector, as shown in Figure 2. Figure 2. shows a quadrant map that maps the relationship between driving power and dependence power of various sub-elements in the Arabica coffee agribusiness coordination system. The linkage quadrant displays seven main sub-elements, namely, A1 (delayed institutional participation), A3 (lack of quality human resources), A4 (limited institutional personnel), A5 (lack of effective coordinators), A6 (limited budget for coordination), A7 (limited infrastructure to support coordination), and A9 (lack of program integration and synchronization). These sub-elements have high driving and dependency power, indicating that they are not only influenced by other elements but also have a significant impact on other elements. For example, lack of quality human resources (A3) and limited budget for coordination (A6) are interdependent challenges that can affect the overall effectiveness of coordination. However, the explanation of weak coordination and lack of human resources needs to be adjusted to the context of South Sulawesi. The dynamics in this region indicate that coordination issues are more related to institutional fragmentation and the lack of synergy among stakeholders rather than just a shortage of human resources. For example, although the number of personnel in the Food Crops, Horticulture, and Plantation Service of Enrekang Regency is limited, the main issue lies in the uneven distribution of tasks and priorities among the related institutions. Additionally, weak coordination is often caused by the lack of effective communication mechanisms between institutions and the minimal shared understanding of the strategic goals of Arabica coffee agribusiness. Therefore, relevant solutions include strengthening multi-stakeholder governance mechanisms and enhancing institutional capacity to create more integrated collaboration, rather than just focusing on increasing the number of human resources.

An integrative strategy that takes institutional involvement and sustainable resource management into account is needed to increase Arabica coffee production in Enrekang Regency. In order to increase product competitiveness, strengthening agricultural institutions include improving human resource competencies, making sure that sufficient infrastructure is available, and creating effective marketing strategies. To guarantee the sustainability of economic and ecologically sustainable coffee production, it is also critical to establish cooperative governance among farmers, businesspeople, and local governments. The development of the Arabica coffee industry in the area will be largely dependent on local government support in the form of laws that encourage training, research, and agricultural extension (Paloma, 2022).

Maintaining the sustainability of Arabica coffee commodities can be strengthened by the involvement of local entities in their management.

The increase in Arabica coffee productivity in Enrekang Regency, some recommended strategies that can be adopted include the application of research-based agricultural techniques and technology, as implemented in Aceh Gayo Regency, which successfully improved production yields through superior seed breeding and integrated pest management. In addition, the development of partnerships between farmers and research institutions as well as the private sector for technology transfer can enhance production efficiency. Additionally, in Enrekang Regency, which borders Tanah Toraja, can collaborate in coffee management where the application of agroforestry techniques and sustainable soil quality maintenance have improved the quality and quantity of coffee production, which is also influenced by the promotion of coffee with geographical indications and strong local branding. Thus, post-harvest actions, including the development of specialty coffee and organic certification, have proven to add value and competitiveness to Arabica coffee, as implemented in the Kona region of Hawaii. Collectively, these insights underscore the need for integrated policies that address the specific challenges faced by coffee farmers, promote technological innovation, and ensure sustainable agricultural practices to improve the income and welfare of farmers globally.

Strategic Programs to crease Arabica Coffee Production in Enrekang Regency

The strategic program to increase Arabica coffee production in Enrekang Regency, as analyzed using the Interpretative Structural Modeling (ISM) tool, highlights the importance of three key sub-elements: upstream-downstream extension (A1), increasing human resources for extension workers (A3), and farmer institutional development program (A5). These sub-elements, categorized in the independent quadrant, are pivotal in enhancing coffee production due to their significant influence. The upstream-downstream extension program (A1) is crucial as it ensures a seamless flow of knowledge and resources from the initial stages of production to the final stages of marketing and distribution, similar to the comprehensive approach seen in the genetic diversity study of black pepper in Sri Lanka, which emphasized the need for a broad genetic base to enhance crop resilience. Increasing human resources for extension workers (A3) is akin to the rapid breeding methods used in wheat cultivation, where extending the light period and breaking dormancy in early harvested seeds were key to accelerating breeding cycles and improving crop traits (Aydın et al., 2024). The farmer institutional development program (A5) aligns with the findings from the silvopastoral systems (SPS) study, which emphasized the role of gender, resources, and knowledge in adopting sustainable practices, highlighting the importance of institutional support and training programs (Castro-Nunez et al., 2024). Additionally, the integration of

Trichoderma spp. in peanut cultivation, which improved plant growth and disease resistance, underscores the potential benefits of biocontrol and sustainable agricultural practices that could be incorporated into coffee production strategies. Lastly, the intensified cereal systems with mung bean in the Eastern Gangetic Plains demonstrated the importance of diversified cropping systems for increased profitability and resource efficiency, which could be a valuable consideration for coffee production systems. Thus, the strategic focus on these three sub-elements, supported by agribusiness institutions, is essential for achieving significant improvements in Arabica coffee production in Enrekang Regency.

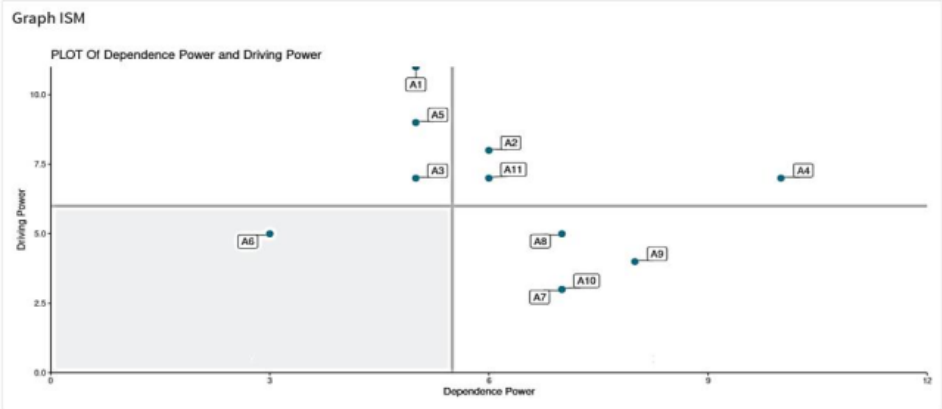

Figure 3.
Directional Graph (DP-D) Strategic Program to Increase Arabica Coffee Production

The linkage quadrant's sub-elements, such as the production facilities assistance program (A2), providing access to capital (A4), and the formation of a special team for Arabica coffee research and development (A11), play a crucial role in enhancing Arabica coffee production. These programs are interdependent and can influence each other and other quadrants. For instance, providing access to capital (A4) is essential for implementing organic agricultural technology packages (A7) and forming farming business partnerships (A10), which are in the dependent quadrant. The effectiveness of these programs can be seen in various agricultural contexts. For example, the adoption of silvopastoral systems (SPS) in livestock farming, which integrates trees, forages, and livestock, has shown that access to financial resources and gender roles significantly impact adoption rates and environmental conservation efforts (Castro-Nunez et al., 2024). Similarly, the provision of organic agricultural technology packages (A7) can be linked to the increased coexistence of antibiotic and metal resistance genes in organically fertilized soils, highlighting the need for careful management to safeguard public health. The formation of a special team for Arabica coffee research (A11) can draw parallels with the study on Trichoderma spp., which

demonstrated the benefits of microbial inoculation in enhancing plant growth and disease resistance, suggesting that focused research can lead to significant agricultural advancements. Additionally, the comparative study of institutions (A6) in the autonomous quadrant, though having low driver-power, can still motivate farmers by showcasing successful cultivation practices, similar to how Yemeni coffee farmers could benefit from improved traceability and sustainability practices using Near Infrared Spectroscopy (Santos-Rivera et al., 2024). Lastly, the extensification of Arabica coffee plantation land (A9) and the formation of farming business partnerships (A10) can be informed by the successful breeding programs for acid-tolerant maize in Angola, which improved productivity under various soil conditions. These interconnected programs collectively contribute to a robust strategy for enhancing Arabica coffee production.

CONCLUSION AND SUGGESTION

Conclusion

The institutions involved in strengthening the coffee institution are the Department of Food Crops, Horticulture, and Plantations of Enrekang Regency, which play a role in achieving production increases, environmental sustainability, and socio-economic welfare. Coordination between institutions has become an obstacle that must be addressed early on so that coordination runs effectively in the long term. Socially and economically, strengthening institutional capacity through technical training, participatory extension, and integration of farmer skill enhancement programs can improve product quality and market access.

Suggestion

The Enrekang Regency Government should establish an inter-agency coordination forum involving the Agriculture Office, farmers' cooperatives, research institutions, and the private sector to align work programs and ensure synergy in policy implementation. The introduction of a digital platform for sharing data and information in real-time to enhance the competitiveness of Enrekang Arabica coffee in the global market.

Copyright (c) 2024 (Authors' work)

REFERENCES

Ahmad, B., et al. (2024). Exploring The Influence Of Internet Technology Adoption On The Technical Efficiency Of Food Production: Insight From Wheat Farmers. *Frontiers In Sustainable Food Systems*, 8(1), 109-124. doi: 10.3389/fsufs.2024.1385935

Apriyani, V., et al. (2024). A Systematic Map Of Evidence On The Relationship Between Agricultural Production And Biodiversity In Tropical Rainforest Areas. *Environmental Evidence*, 13(17), 1-25. doi:10.1186/s13750-024-00339-0

Aydın, N., et al. (2024). Accelerated Breeding Strategies For Biochemical Marker-Assisted Backcross Breeding And Mapping Population Development In Bread Wheat (*Triticum Aestivum L.*). *Euphytica*, 220(7), 103-115. doi: 10.1007/s10681-024-03370-x

Castro-Nunez, A., et al. (2024). Unlocking Sustainable Livestock Production Potential In The Colombian Amazon Through Paddock Division And Gender Inclusivity. *Environmental Evidence*, 14(1), 1-15. doi: 10.1038/s41598-024-63697-2

Concas, A., et al. (2022). Chained Structure Of Directed Graphs With Applications To Social And Transportation Networks. *Applied Network Science*, 7(64), 1-25. doi: 10.1007/s41109-022-00502-x

Cooray, A., et al. (2024). Institutions And Carbon Emissions: An Investigation Employing STIRPAT And Machine Learning Methods. *Empirical Economics*. 11(67), 1015-1044, doi: 10.1007/s00181-024-02579-y

Dragan, F. F., et al. (2024). $$\alpha _i$$-Metric Graphs: Radius, Diameter and all Eccentricities. *Algorithmica*. 14(13), 276-290. doi: 10.1007/s00453-024-01223-6

Hariance, R., et al. (2020). The Entrepreneurial Spirit of Coffee Agroindustry Actors in Bukittinggi City. *Jurnal AGRISEP: Kajian Masalah Sosial Ekonomi Pertanian Dan Agribisnis*, 19(2), 275–288. doi: JAGRISEP.19.2.275-288

Hilário, S., et al. (2024). Comparative Genomics Reveals Insights Into The Potential Of Lysinibacillus Irui As A Plant Growth Promoter. *Applied Microbiology And Biotechnology*, 08(1), 370-385. doi: 10.1007/s00253-024-13210-6

Hoyte-West., et al. (2024). Institutional Translator Training. New York, Routledge, ISBN 978-1-032-12575-6. *CRS Press*. Routledge. New York.

Irmayani, I., et al. (2024). Energy Consumption And Sustainability Analysis In Organic Farming Systems On Arabica Coffee In Rural Farmer Latimojong Mountain In South Sulawesi, Indonesia. *International Journal*

Of Life Science And Agriculture Research, 3(07), 625–632. doi: 10.55677/IJLSAR/V03I7Y2024-19

Irmayani, et al. (2024). Strategy Analysis For Implementing Rice Transplanter Planting Machine Technology In Rice Farming Using The Interpretive Structural Modeling (ISM) Method In South Sulawesi. *Jurnal Penelitian Pendidikan IPA*, 10(4), 1827–1836. doi: 10.29303/JPPIPA.V10I4.7124

Jafari, A. M., et al. (2024). Enhancing Detection Of Labor Violations In The Agricultural Sector: A Multilevel Generalized Linear Regression Model Of H-2A Violation Counts. *PLOS ONE*, 19(5), 90-106. doi: 10.1371/journal.pone.0302960

Jänicke, C., & Müller, D. (2024). Revealing Agricultural Land Ownership Concentration With Cadastral And Company Network Data. *Agriculture and Human Values*, 41(2), 883-907. doi: 10.1007/s10460-024-10590-3

Kurniawan, S., et al. (2024). Soil Nitrogen Dynamics Affected By Coffee (Coffea Arabica) Canopy And Fertilizer Management In Coffee-Based Agroforestry. *Agroforestry Systems,* 98(3), 1323–1341. doi: 10.1007/s10457-024-01004-8

Kwesiga, D., et al. (2024). Exploring Women's Interpretations Of Survey Questions On Pregnancy And Pregnancy Outcomes: Cognitive Interviews In Iganga Mayuge, Uganda. *Reproductive Health*, 21(14), 132-143. doi: 10.1186/s12978-024-01745-w

Lü, L., et al. (2024). Bacterial And Fungal Communities Regulated Directly And Indirectly By Tobacco-Rape Rotation Promote Tobacco Production. *Frontiers in Microbiology*, 15(3), 55-67. doi: 10.3389/fmicb.2024.1418090

Ma, L., et al. (2024). Characteristics And Prediction Of Agricultural Ecological Efficiency For Coordination Between Economy And Environment. *PLOS ONE*, 19(5), 102-115. doi: 10.1371/journal.pone.0302971

Maulani, A. (2023). Revealing New Insights: Preserving Islamic Manuscripts In Eastern Indonesia. *Studia Islamika*, 30(3), 607–612. doi: 10.36712/sdi.v30i3.38647

Martial, T., et al. (2024). Enhancing Farm Household Income Through Efficient Arabica Coffee Cultivation In Simalungun, North Sumatera. *Jurnal*

AGRISEP: Kajian Masalah Sosial Ekonomi Pertanian Dan Agribisnis, 23(02), 425–452. doi: 10.31186/JAGRISEP.23.02.425-452

Merlos, F. A., et al. (2024). Adopting Yield-Improving Practices To Meet Maize Demand In Sub-Saharan Africa Without Cropland Expansion. *Nature Communications*, 15(1), 44-55. doi: 10.1038/s41467-024-48859-0

Morazzoni, C., et al. (2024). Proof Of Concept: Real-Time Viability And Metabolic Profiling Of Probiotics With Isothermal Microcalorimetry. *Frontiers in Microbiology*, 15(5), 73-81. doi: 10.3389/fmicb.2024.1391688

Najamuddin, E., et al. (2024). Selection And Molecular Identification Of Specific Entomopathogens In South Sulawesi And The Pathogenicity To Fall Armyworm (Spodoptera Frugiperda Je. Smith) (Lepidoptera: Noctuidae). *Egyptian Journal of Biological Pest Control*, 34(22), 44-53. doi: 10.1186/s41938-024-00786-4

Orlova, V. V, & Shevchenko, L. V. (2023). The Impact Of Drug Abuse And Delinquency On Educational Environment Security. *Emerging Science Journal*, 7(5), 1745-1761. doi: 10.28991/esj-2023-07-05-018

Paloma C. et al., (2022). The Effect Of Entrepreneurial Competency On Business Performance Of Small Scale Coffe Shop In Padang City With Structural Equation Modeling- Partial Least Square. *Jurnal AGRISEP: Kajian Masalah Sosial Ekonomi Pertanian Dan Agribisnis*, 21(2), 283–296. doi: 10.31186/JAGRISEP.21.2.283-296

Pereira, D., et al. (2024). Mechanical Resistance Of The Environment Affects Root Hair Growth And Nucleus Dynamics. *Dental Science Reports*, 14(1), 112-129. doi: 10.1038/s41598-024-64423-8

Santos-Rivera, M., et al., (2024). Identifying The Origin Of Yemeni Green Coffee Beans Using Near Infrared Spectroscopy: A Promising Tool For Traceability And Sustainability. *Dental Science Reports*, 14(1), 114-126. doi: 10.1038/s41598-024-64074-9

Slater, S., et al. (2024). The Rise Of Multi-Stakeholderism, The Power Of Ultra-Processed Food Corporations, And The Implications For Global Food Governance: A Network Analysis. *Agriculture and Human Values*. 41(2), 87-99. doi: 10.1007/s10460-024-10593-0

Suhandano, S., et al. (2023). Contesting "Growth" And "Sustainability" In Indonesia's Capital City Relocation: A Corpus Ecolinguistic Study. *Naučnyj Rezul'tat*, 9(3), 57-69. doi: 10.18413/2313-8912-2023-9-3-0-5

STRATEGY FOR STRENGTHENING ARABICA COFFEE AGRIBUSINESS INSTITUTIONS THROUGH AN INTERPRETATIVE STRUCTURAL MODELLING APPROACH IN SOUTH SULAWESI, INDONESIA

ORIGINALITY REPORT

6%	5%	5%	2%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Sriwijaya University Student Paper	2%
2	jurnal.uns.ac.id Internet Source	1%
3	iopscience.iop.org Internet Source	1%
4	www.e-journal.citakonsultindo.or.id Internet Source	<1%
5	I Ridwan, A Ala, Irfansyah T, Rafiuddin, M Farid BDR, F Haring. " Good Agriculture Practice (GAP) of arabica coffee (L.): Implementation on the smallholder estate in Enrekang Regency ", IOP Conference Series: Earth and Environmental Science, 2020 Publication	<1%
6	Nevzat Aydin, Bedrettin Demir, Halil Akdag, Sabri Gokmen et al. "Accelerated breeding strategies for biochemical marker-assisted	<1%

backcross breeding and mapping population development in bread wheat (Triticum aestivum L.)", Euphytica, 2024
Publication

7	ejournal.undiksha.ac.id Internet Source	<1 %
8	Masahiro Yoshimoto, Hiroshi Suzuki, Naoki Fukuda, Hiroyuki Takeda et al. "Discovery of Neutron-Rich Silicon Isotopes 45,46Si", Progress of Theoretical and Experimental Physics, 2024 Publication	<1 %
9	Waridin, Zulfikar Al-hafidz, Ika Suciati. "ANALYSIS OF THE TOBACCO FARMERS' DISTRIBUTION PATTERN: STUDY CASE IN BULU DISTRICT, TEMANGGUNG", Jurnal AGRISEP: Kajian Masalah Sosial Ekonomi Pertanian dan Agribisnis, 2023 Publication	<1 %
10	ejournal.unib.ac.id Internet Source	<1 %
11	journal.unpad.ac.id Internet Source	<1 %
12	Puneet Sharma. "Change in geo-environmental conditions and crop productivity", Elsevier BV, 2024 Publication	<1 %

Exclude quotes	Off	Exclude matches	Off
Exclude bibliography	On		