



Agro-Socioeconomic Newsletter

Indonesian Center for Agricultural Socio Economic and Policy Studies (ICASEPS)

Editorial

Dear Readers,

It is our pleasure to meet you through this newsletter. This time, we present some important information for your perusal. This information includes policies on: (a) the cost structure of rice farming, (b) agricultural development prospects for 2025–2030, (c) horticultural seed systems, and (d) trade performance of agricultural products.

Rice is Indonesia's flagship crop, and ICASEPS has the opportunity to publish a book on rice performance in several producing countries. This book can also serve as an important source of information on global rice issues. In addition, this newsletter also contains several other news items for your reference.

Thank you.

The Editor

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Policy Update



COST STRUCTURE OF RICE FARMING AND ITS URGENCY IN POLICY SETTING

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Introduction

Evidence-based policy making uses research and studies to help policymakers make well-informed decisions. Since the late 1990s, evidence-based policy-making has increasingly become a discourse among governments and academics. Evidence-based policy helps policymakers to produce policies that are rational, systematic, rigorous, and measurable. It clarifies what is known through scientific evidence and even informs what may not be known. Evidence-based policy methodology combines three approaches: knowledge, research, and policy. In developing countries, Sutcliffe and Court's (2005) study proved that the proper use of evidence-based policy has helped save lives, reduce poverty, and improve development performance.

The cost structure of rice farming is one piece of evidence from research/studies that the government can use it to determine food and agricultural development policies. Considering that rice is the main food of the Indonesian population, thoroughly understanding and analysing the cost structure of rice farming can provide valuable input for policy-making. This paper will discuss two main topics, namely (1) the comparison of the cost structure of rice farming according to agroecosystem types, and (2) the urgency of the cost structure of rice farming in determining agricultural development policies.

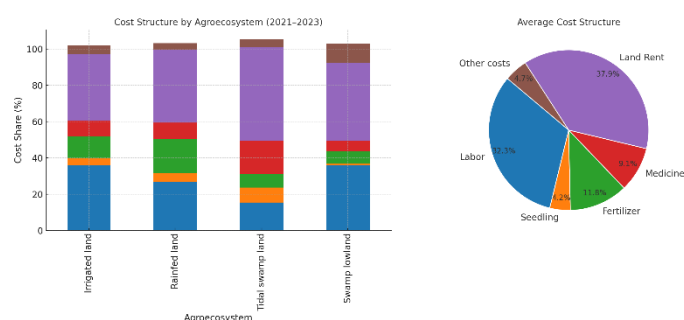
Methodology

The study was based on the National Farmer Panel (PATANAS) research data collected from the rice-farming respondents across different agroecosystems and provinces in Indonesia. Of the 920 surveyed farmers, 644 responded, distributed across 19 sub-districts and 23 villages. Irrigated ecosystems dominate with 520 farmers (360 respondents) across five provinces, i.e., West Java, Central Java, East Java, South Sulawesi, and North Sumatra, while rainfed systems include 240 farmers (160 respondents) in Central Java and South Sulawesi. Smaller shares are from wetland areas in South Kalimantan (80 farmers, 62 respondents) and tidal swamps in South Sumatra (80 farmers, 62 respondents).

Results and Discussion

Comparison of the Cost Structure in Rice Farming

In general, the largest share of the cost structure in rice farming is land rent and labor (Figures 1 and 2). These two cost components account for more than 65% of total rice production costs and contribute to the high production costs of dry harvested grain (*gabah kering panen*/GKP) relative to other rice-producing countries. The results of the IRRI study in 2015 indicated that Indonesia is a rice-producing country with the highest farming costs, driven by high land rent and labor costs. This means that over the last eight years (2016–2023), there has been no significant change in the structure of rice farming costs, where land rent and labor are still the main components of cost formation.



Figures 1 and 2. Cost structures of rice farming by agroecosystem (2021–2023)

The high cost of land rent will continue due to the imbalance between the supply and demand for rice fields. The update of data on the area of arable rice fields (*luas baku sawah*) in 2023, carried out by the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN), is expected to decrease from the original 7.46 million ha in 2019. On the other hand, the number of farmers has not decreased, despite the COVID-19 pandemic. Rural farming is considered an alternative and a buffer against the loss of livelihoods for urban migrants. During the COVID-19 pandemic, people returned to the village to work in the rice fields. This condition affects the increase in the number of Agricultural Business Households (RTUP). A comparison of SUTAS-2018 and ST-2023 data (census data) shows an increase in the number of RTUP by 2.67%, from 27.68 million in 2018 to 28.42 million in 2023. Moreover, the increase in the number of RTUPs is accompanied by a 9.11% rise in the number of small RTUPs (farmers controlling less than 0.5 hectares of land), from the original 15.81 million.

The high portion of labor costs in the cost structure of rice farming shows that the use of agricultural tools and machinery (*alsintan*) is relatively insignificant. The use of *alsintan* in rice farming in Indonesia is still relatively low compared to other rice-producing countries. The amount of horsepower (HP) in Indonesia in 2021 was only 0.11, far below Vietnam and Thailand, at 1.50 and 1.67, respectively, and even farther below China, at 7.75. Although during the 2010–2021 period, HP levels in Indonesia increased by 6.30% per year, efforts to increase the use of *alsintan* in the agricultural sector need to be intensified to improve farming and rice production performance. Labor costs in Indonesia account for more than 30%, compared with Vietnam (14.80%), Thailand (19.45%), and China (21.39%) (Moya et al. 2016). The intensity of *alsintan* use is observed in the tidal rice field agroecosystem.

The dynamic changes in research institutions in Indonesia, as they are integrated into the National Research and Innovation Agency (BRIN), also affect the availability of various high-yielding seed varieties, such as the *Inbrida* rice seed system. This situation makes it challenging to produce certified and labeled seeds (BR) while new seeds are emerging and being traded online. Online supervision of seed circulation is still difficult. As a result, seed prices have increased significantly over the past two years, from about IDR 15,000/kg to IDR 20,000/kg (an increase of around 33%).

The portion of fertilizer and pesticide costs is relatively low. Rice farmers receive fertilizer subsidies, so that the portion of the cost for fertilizer only ranges from 6.93% (at swamp rice fields) to 18.51% (at rainfed rice fields). The low cost of fertilizer is also influenced by farmers' behavior: in swamp rice fields, they apply fertilizer less intensively. Meanwhile, in terms of pesticide costs, farmers use relatively small amounts compared to the massive use in horticultural crops. Other cost components, such as taxes and farmer group contributions, are relatively low (between 3.74% and 10.46%).

All components of the cost structure of rice farming contribute to high production costs for GKP. Production costs range from IDR 3,572/kg (rainfed rice fields) to IDR 5,210/kg (swamp rice fields). In the swamp lowland (*rawa lebak* land), the type of rice cultivated is local rice with a growth period of about 6 months; production costs are high, and the price of GKP is also high. Meanwhile, rice production across the other three agroecosystems is relatively similar. The GKP production costs remain inefficient compared to those of other rice-producing countries. The production cost of GKP in Vietnam, for example, is only around 41.6% of that in Indonesia. Vietnam has become the world's leading rice exporter not only because of its abundant production surplus, but also because of its cost efficiency.

Urgency of the Rice Farming Cost Structure in Policy Determination

The cost structure of rice farming is needed in setting strategic policies in the agricultural sector. If the cost data are not collected using a reliable methodology, it will affect the quality of the policy. Given the broad impact of government policies, caution and attention are needed when collecting and analyzing data on this cost structure.



Yofa and Suharyono (2021) stated that there are at least four tasks in the analysis of the cost structure of rice farming, namely (1) Calculating the rationalization of the price of production input subsidies, for example

by using the principle of Value Marginal Product (VMP), the rationalization of fertilizer prices will be revealed; (2) Understanding the development of farming technology which is reflected in changes in the level of technical efficiency; (3) Evaluating agricultural development programs and policies using cost structure as instrument; and (4) Providing an overview and position of Indonesia's rice competitiveness compared to other major producing countries in the world. Moreover, the cost structure of rice farming is required in the calculation of the Government Purchase Price (HPP) for grain

and rice. It is also the primary consideration in determining the Highest Retail Price (HET) of rice.

Recommendations

Based on the results and discussion, at least two policy recommendations can be made. First, it is necessary to collect data with representative coverage and an adequate number of respondents to produce high-quality cost data on rice farming. The government plays a significant role in providing the budget and implementing the data collection activities. Data collection needs to be carried out regularly (at least once a year), as updating the cost structure of rice farming is very important for the dynamics of agricultural development policies.

Second, to reduce land and labor costs, short- and long-term policies are required. In the short term, the policy of optimizing land for rice cultivation needs to be balanced with the introduction of more massive use of *alsintan*. With intensive use of tools and machinery, the expansion of rice cultivation can be balanced with the labor cost efficiency.

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AGRICULTURAL DEVELOPMENT OUTLOOK 2025–2029 AND ITS ACHIEVEMENT STRATEGY

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Background and Objectives

This study is a foundational input for the Ministry of Agriculture's 2025–2029 Strategic Plan. It evaluates past agricultural performance (2020–2024), analyzes current trends, and formulates strategies for future development. The study applies both quantitative and qualitative methods, including a Multimarket Model and field surveys in West Java and South Sumatra. The focus is on the five core subsectors: food crops, horticulture, plantations, livestock, and agricultural services.

Performance of Agricultural Development (2020–2024)

The overall GDP growth of the narrow agricultural sector averaged only 2.58% per year, falling short of the 3.9% target. The plantation subsector was the only one to exceed its growth goal (7.58% vs. 4.9% target), mainly due to global commodity prices. In contrast, other subsectors underperformed, i.e., (i) Food crops: Targeted 2.8%, but declined by -2.34%. Key issues include reduced harvested areas and poor performance of legumes like soybeans (-6.20%); (ii) Horticulture: Achieved 4.1% (vs. 5.9% target). Strong growth in pineapple, avocado, and durian offset the declines in garlic and orange due to climate and price issues; (iii) Plantations: Mixed results. While exports benefited from higher prices, production of key commodities such as rubber and pepper declined. However, nutmeg and sago performed well; (iv) Livestock: Achieved 2.0% growth (vs. 4.0% target). Declines in beef and milk production contrast with increases in poultry and egg production, showing a shift in protein consumption patterns.

Challenges for 2025–2029

Several persistent and emerging challenges will shape Indonesia's agricultural development, namely: (1) Food security and population growth: With the population expected

to reach 295 million by 2029, food demand will increase significantly.

Maintaining food self-sufficiency will be a critical national objective; (2) Global Food Security Index decline: Food access, input availability, and diversification have declined due to import dependence, input price hikes, and institutional weaknesses; (3) Land and water resource pressure: (i) continued land conversion for non-agricultural use, (ii) water competition between agriculture and other sectors, and (iii) soil degradation and shrinking irrigation networks; (4) Climate change: Increasing unpredictability due to El Niño and La Nina affects planting patterns, crop yields, and pest outbreaks. Natural disasters also damage infrastructure and crops; (5) Aging workforce and institutional weakness: A shrinking and aging agricultural labor force, along with fragmented farmer institutions, impedes innovation adoption and economies of scale; (6) Geopolitical and economic volatility: Crises such as the Russia-Ukraine war, the COVID-19 pandemic, and fluctuating global commodity prices affect supply chains and inflation.



Opportunities

Despite challenges, Indonesia has significant development potential consisting of: (i) Large domestic market: Population size ensures a vast internal demand base; (ii) Underutilized land resources: Low cropping index and availability of swamp and drylands offer expansion opportunities; (iii) Irrigation infrastructure: New dams (61) can improve productivity and reduce climate risk; (iv) Global price trends: Historically high agricultural commodity prices offer export revenue potential; (v) Downstream development and value addition: The agricultural sector can drive up to 33 times its own GDP in upstream and downstream sectors, primarily through processed exports; (vi) Biodiesel expansion (B-50): Increasing the biodiesel mix to 50% (from palm oil) can reduce fossil fuel dependence and stabilize palm prices.

Goals and Key Performance Indicators (2025–2029)

To support the national target of 6–7% annual economic growth, agriculture is expected to grow at least 4.81% per year. Subsector-specific targets include: (i) food crops: 3.41% annual growth (focused on rice, corn, cassava); (ii) horticulture: 4.99% (chili, shallots, bananas, oranges); (iii) plantations: 5.69% (palm oil, rubber, coconut); and (iv) livestock: 5.68% (poultry meat, eggs, milk, beef).

Agricultural production targets by 2029 are as follows: (i) rice: 81.04 million tons, (ii) corn: 40.96 million tons, (iii) cassava: 40.35 million tons, (iv) palm oil (CPO): 70.2 million tons, (v) poultry meat: 5.41 million tons, and (vi) milk: 8.17 million tons.

The support programs required are: (a) downstream for added value and employment, (b) energy independence through palm biodiesel (B-50), (c) nutritious food provision to improve human capital, and (d) home-garden programs to strengthen household-level food security.

Strategic Programs and Approaches

1. Agricultural expansion, including: (a) optimization of dryland and swampland: cultivating 1 million hectares via

rice-palm oil intercropping and improved swamp land utilization; (b) irrigation rehabilitation: rehabilitating irrigation systems across 3 million hectares of existing farmyard; (c) new agricultural land: developing 3 million hectares of new agricultural land by 2027, with a focus on Papua, Kalimantan, and Sumatra; (d) modern clusters: establishing 250,000 hectares for intensive, cost-effective food production

2. Livestock development, including: (a) addition of 1 million breeding cattle (beef and dairy), supported by forage development and feed infrastructure; (b) involvement of the private sector in investment, processing, and logistics.
3. Agricultural intensification, consisting of: (a) the use of smart farming, mechanization, and high-yield seed varieties; (b) off-season cropping and good agricultural practices (GAP); (c) doubling of fertilizer subsidies to 9.55 million tons; and (d) crop rejuvenation for plantation productivity.
4. Infrastructure and logistics, comprising: (a) strengthening irrigation, agricultural roads, seed and fertilizer availability; (b) pest and climate impact control systems; and (c) cold storage and transport facilities to reduce post-harvest losses.
5. Institutional reforms and land policy, embracing: (a) land use regulation to prevent conversion; (b) reclaiming idle lands and accelerating land certification; and (c) agrarian reform to enhance tenure security and investment.
6. Capacity building, comprehending: (a) revitalizing extension services; (b) promoting cooperative farming and strengthening private sector partnerships; and (c) developing agricultural innovation hubs and R&D linkages
7. Financing and investment support, entailing: (a) expanding credit (e.g., KUR or People's Business Credit), agricultural insurance, and private investment incentives; (b) introducing targeted input/output subsidies; and (c) promoting export competitiveness and logistics integration

Strategic Focus: Nutritious Home Gardens & Food Security

The Nutritious Backyard Food Program (PPG) aims to enhance household-level food diversity and affordability. Cultivation focuses on: (a) leafy greens, chilies, fruit vegetables, tubers; (b) backyard livestock: chickens, ducks, fish; (c) urban farming, vertical gardens, and compost-based fertilization; and (d) efficient irrigation systems. This program is estimated to save IDR 1.4 trillion per year in household spending.

Key Support Strategies for Nutritional Programs

Poultry and Eggs. Production of these commodities requires: (a) synergies between large-scale and smallholder producers;



(b) cold chain infrastructure and DOC/feed supply regulation; (c) strengthening smallholder capacity in egg-laying, duck, and native chicken farming.

Meat and Milk. Enhanced production of both commodities necessitates: (a) expanding breeding and forage supply; (b) facilitating imports of productive livestock breeds; (c) strengthening livestock health, artificial insemination, and dairy facilities; (d) enhancing slaughterhouses and processing industries.

Strategies for the B-50 Energy Program. These entail: (a) expanding palm oil production by 3.95% per year; (b) increasing processing and engine compatibility for B-50 biodiesel; (c) addressing EU deforestation regulation challenges; and (d) strengthening ISPO and RSPO certifications for global market access.

Conclusions

The 2025–2029 agricultural development period represents a critical phase in Indonesia's transition toward high-income status and national food security. The sector must overcome long-standing productivity and institutional issues while capitalizing on high-value export opportunities and domestic demand. Climate resilience, sustainable land use, and integrated value chains are crucial themes.

Policy Recommendations

To support the outlined objectives, key policies include: (1) extensification: develop and optimize new agricultural lands, rehabilitate irrigation, and support grazing expansion; (2) intensification: use digital farming tools, quality seeds, and subsidized inputs to improve yields; (3) infrastructure development: build roads, irrigation, and input systems; (4) land use regulation: prevent farmland conversion and reclaim underutilized areas; (5) institutional strengthening: Reform extension services, farmer groups, and cooperatives; (6) financial support: expand credit, insurance, and investment incentives; (7) nutritious food systems: promote urban agriculture and small-scale poultry/fish farming; (8) bioenergy: achieve B-50 biodiesel goals while supporting sustainable palm oil development. This strategy aims to position agriculture as a transformative force in achieving Indonesia's economic, social, and environmental goals by 2029 and beyond.

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Policy Development

OPTIMIZING HORTICULTURAL SEED SYSTEMS: STRENGTHENING REGULATIONS AND INNOVATION AS KEY PILLARS

Introduction

The development of the horticulture subsector is highly dependent on the availability of high-quality horticultural seeds that meet farmers' needs. The current availability of

horticultural seeds comes from formal and informal seed systems, both of which play a role in the national seed industry. The formal seed system follows standardized procedures and seed certification processes. Meanwhile, in informal seed systems that generally occur in subsistence agriculture, seeds are not certified, are traditionally produced in limited volumes, and circulate only at the community level without a clear institutional structure. The demand for horticultural seeds is constantly increasing, and the national seed industry largely

meets domestic market demand. However, the national horticultural seed industry is dominated by large-scale multinational companies or Foreign Direct Investment (FDI). Multinational seed companies have much greater production capacity, more advanced technology, and broader market access than local seed producers or Domestic Investment (PMDN). Local seed producers, despite operating in the same market, often face difficulties growing and competing with multinational companies.

Seed System Regulation on the Availability of National Horticultural Seeds



The demand for horticultural products in the domestic market continues to grow, making the strategy to boost horticultural productivity highly important. One key

factor in increasing productivity is the availability of high-quality seeds. Domestically, horticultural seed production is carried out by private seed companies, seed breeders, farmers, and the government. Seeds produced by farmers are often of poor quality because they come from previous crops, reducing productivity and uniformity. Meanwhile, the Horticultural Seed Center (BBH) and the Directorate of Horticultural Seeds face limited budgets and a lack of human resources. As a result, many farmers prefer buying seeds from stores that offer guaranteed quality and efficiency.

Demand for vegetable seeds continues to increase, both in number and variety. Fulfilling this need involves both domestic production and imports. Some vegetable seeds can already be produced domestically, but production capacity is insufficient. In addition, some seeds cannot be produced locally and are still needed by farmers due to the diversity of market needs.

The study identified many types of vegetable seeds that could not be produced domestically or, if produced, were inefficient, yet farmers still demanded them. This condition aligns with the proposal by the Indonesian Horticultural Seed Producers Association (Hortindo) to the Ministry of Agriculture to register various types of vegetable seed varieties. Observing the dynamics that occurred above, especially related to the category of horticultural seeds that have not been or cannot be produced domestically, there is a misalignment of the implementation of Ministerial Regulations No. 15/2017, No. 17/2018, and No. 37/2016 that has an impact on the distribution of imported seeds in the domestic market. The seed industry and farmers need these seeds and are not limited to cabbage, radish, broccoli, and chicory.

The Impact of Seed Imports on the Dynamics of Seed Use in Farmers

The importation of horticultural seeds, especially in substantial quantities, has a significant impact on the domestic seed market, affecting prices and competitiveness. Even though the volume of imports is small, imported seeds that are considered higher quality can affect farmers' perceptions and preferences

toward local seeds. This could reduce incentives to improve the quality of domestic seeds. Interviews with vegetable farmers in West Java show that the quality of imported seeds is often considered better than that of locally produced seeds, even though this is due to difficulties and high costs in producing high-quality seeds.

However, one negative impact of seed imports is the potential for the emergence of new diseases that do not yet exist in Indonesia. Imported seeds must undergo testing at the Indonesian Agricultural Quarantine Agency (BKI) before distribution to prevent the spread of diseases and ensure seed quality. In addition, seed imports can also have negative economic impacts, such as increasing competition for the domestic seed industry. They can also create unemployment by reducing job opportunities in local seed production.

If the number of horticultural seed imports is limited, the impact on the domestic seed market and industry may differ from that with large imports. The positive impacts of small imports include maintaining the availability of specialty seeds that are not produced domestically and reducing the risk of over-reliance on imported seeds. Even though the volume of imports is small, high-quality imported seeds can affect farmers' perceptions and preferences, reducing incentives to improve the quality of local seeds. In addition, risks related to plant health and biosecurity remain, although the number of imports is small. The provision of seeds through imports must also consider the impact on seed market conditions, including seed prices, competitiveness, and related factors. The provision of seeds through imports should be a short-term strategy; in the future, domestic seed production must be able to meet all, or at least most, of domestic seed needs.

Conclusions

Some of the policy recommendations offered are: (a) harmonization between Ministerial Regulations No. 15/2017, No. 17/2018, and No. 37/2016 to ensure policy consistency related to the import and production of horticultural seeds; (b) support for research and innovation with greater support for the development of local improved seeds; (c) simplification of the regulatory and certification process; (d) improving support for domestic companies with policies that enhance domestic seed companies, including easier access to parental seed from abroad, increasing the capacity of human resources, and enhancing access to germplasm sources; (e) the use of digital technology for distribution to increase farmers' access to improved seeds; (f) strengthening the monitoring mechanism for seed distribution needs to be enhanced by involving digital technology for *real-time reporting and monitoring*; and (g) facilitating collaboration between business actors by encouraging cooperation between the Government, the private sector, and farmers in the seed distribution network.



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TRADE PERFORMANCE OF INDONESIAN AGRICULTURAL PRODUCTS AMONG BRICS COUNTRIES



The dominance of developed countries in the global economy has sparked a movement to reduce Western dominance and the power of the US

dollar as the sole currency in international trade. Brazil, Russia, India, China, and South Africa officially established BRICS in 2010. The weakening economic power of the United States and its allies in the G7 gave way to BRICS as an economic powerhouse in the southern hemisphere, with China as the leader. Geopolitical conflicts and embargoes imposed by Western countries exacerbated the conflict of interest between the two axes in the G-20 meeting. As a country that holds a free and active foreign policy, Indonesia seeks to become a member of both economic axes through accession to the OECD and has now officially become a member. In terms of export performance, Indonesia's export trend to BRICS countries is much better than that to OECD countries.

Indonesia's decision to join BRICS will open the door to closer collaboration with BRICS member countries, which have large economies and rapidly growing markets, such as China, India, and Russia. This could create new export opportunities for Indonesian products, especially in the agricultural sector. Currently, trade in agricultural products among BRICS member countries is already quite massive. Some member countries are the main exporters for other member countries and thus have considerable dependence. Likewise, in Indonesia, some of its agricultural commodities, such as palm oil, are among the main imports of BRICS member countries. However, the export of other agricultural products to BRICS member countries is still limited.

BRICS member countries not only have large market potential but also have strong industrial and economic strength. Indonesia needs to ensure that its domestic sectors are ready to compete in a more open market. This needs to be strengthened, as the various trade cooperation agreements Indonesia currently has have not yielded significant benefits for Indonesia's trade development. With Indonesia joining the BRICS, the various facilities and benefits it offers should be utilized as much as possible to encourage the export of agricultural products.

Indonesia's Trade Balance Position with BRICS

In terms of trade in agricultural commodities, Brazil is the source of Indonesia's imports, followed by China and India, with an increasing import trend in the period 2005–2023, especially for Brazil and India, while China tends to be stable. Indonesia's trade balance with BRICS member countries shows a strong pattern of interdependence. Indonesia's trade balance in agricultural products with BRICS countries in 2023 also yields a different result. A trade surplus of close to USD 13.6 billion is generated from exports to India, while exports to China are only USD 2 billion, and to Egypt are only USD 1 billion. Palm oil, coffee, and cocoa are commodities that can be

favorable in Indonesia's trade with BRICS. This dominance is contributed to by the high value of palm oil exports, for example, in 2023, the value of palm oil exports was recorded at USD 8.77 billion. Meanwhile, Indonesia experienced trade deficits with Brazil, Saudi Arabia, and Russia during the same period. The trade deficit with Brazil reached USD 34.9 million due to Indonesia's relatively high dependence on Brazilian agricultural products, especially soybeans, raw sugar, and beef. Most of Indonesia's agricultural exports to Brazil are in the form of primary or semi-finished products, which are of lower value than finished products such as beef imported from Brazil. Meanwhile, the value of Indonesia's trade with other BRICS members is relatively small.

Indonesia recorded a huge trade surplus with India. This surplus reflects Indonesia's high exports to India, including key commodities such as palm oil and coal. Indonesia also has a significant surplus with China, its largest trading partner, with trade volume reaching billions of US dollars per year. In 2023, this trade value was the highest, reaching 62.3 billion USD or 25.66 percent, mainly in the manufacturing sector and commodities such as palm oil, sugar, and coffee. In addition, Indonesia recorded surpluses with Egypt, the United Arab Emirates, Iran, and Ethiopia, although on a smaller scale. Indonesia's exports to Russia over the past five years (2019–2023) increased by 4.71 percent. Commodities exported in 2023 include palm oil, rubber, processed food, and brown fat.

However, despite recording surpluses with several countries, Indonesia remains challenged to reduce its sizable trade deficits with some other BRICS countries, especially key supplier countries such as Brazil and Saudi Arabia. The largest deficit was recorded with Brazil, which is likely due to high imports of food products such as soybeans and beef. Indonesia also had a deficit with Saudi Arabia, mainly due to oil and petrochemical imports. Russia was the next country to contribute to the deficit, driven by fuel and industrial product imports. However, Indonesia's agricultural exports to Russia have shown positive growth in recent years. From 2019 to 2023, the total value of exports to Russia increased by 4.71 percent, with various key commodities such as palm oil, rubber, and processed food continuing to dominate.

Palm oil and its derivatives remain Indonesia's leading exports to BRICS countries, while other plantation commodities, such as cocoa and coffee, have high export potential. The development of plantation commodities that can become other export leaders must be the target of agricultural development, especially the plantation sector. Indonesia also needs to examine China's behavior, which "dares" to import in very large volumes from Brazil. It should be suspected that China's readiness to open its market in parallel is achieved by encouraging the growth of the domestic processing industry and by increasing the export volume of processed products or final products made from imported raw materials.

Agricultural Trade Performances of BRICS Countries

Brazil demonstrates its prominence as a major exporter of agricultural products to BRICS countries and Indonesia. Over the period 2004–2023, Brazil was China's main importer, with import volumes and values ten times those of Indonesia. Brazil's largest export volume to China is soybeans (HS

120190), reaching 38 million tons in 2023. Besides China, Brazil also exports soybeans to Russia, averaging 517 thousand tons in the 2019–2023 period. On the other hand, India is also an important market for Brazil, with the main export commodity being sugarcane (HS 121291), which reached almost 2 million tons by 2023. Brazil's export trend to India and Indonesia is positive, while Russia's import trend is negative. Soybeans (HS 120190) are the main commodity Russia exports. In 2021, the export volume dropped by 90 percent from 1 million tons in 2020 to 100 thousand tons. Apart from wheat, Russia also imports decaffeinated coffee beans (HS 090111) and tobacco from Brazil, although in small volumes.

In terms of imports, Russia is Brazil's importing country, with import volumes increasing sharply since 2021. Indonesia is in second place, with other palm oil (HS 151190) being the main import commodity, with a volume reaching 1 million tons in 2021. Brazil's imports from Russia are dominated by vegetables, including non-vinegar preserved tomatoes (HS 200290), fresh carrots/rice (HS 070610), and fresh/chilled tomatoes (HS 070200). However, the strength of Brazil's agricultural sector is shown by its surplus trade balance before and after joining BRICS. It is interesting to learn more. The trend of Brazil's exports to China growing rapidly and in large volumes reflects the massive expansion of the food industry in China. The huge trade deficit with Brazil does not dampen China's ambition to reduce import volumes. Russia is the main supplier of agricultural products to Brazil, followed by China, Egypt, India, and Indonesia. Brazil's volumes grew positively after 2018. During 2019–2023, imports from Russia continued to increase, with a significant spike in 2023, reaching almost 1 million tons, dominated by wheat (HS 100199). Indonesia ranks second in palm oil exports (HS 151110), averaging 230 thousand tons. The biggest jump in imports in 2023, mainly

from Russia, is likely to be triggered by trade policy. Indonesia and China are Brazil's main trading partners, and import growth continues. India is still not a significant trading partner for Brazil, as indicated by the small volume and value of imports, and has tended to be stable over the last two decades. Brazil's imports from India are dominated by shallots (HS 070310).

Policy Recommendations

A comprehensive policy impact review is needed, given that Indonesia has decided to become a member of BRICS+, alongside the United Arab Emirates, Iran, Egypt, and Ethiopia, which joined earlier in 2024. BRICS is dominated by oil-producing countries. Indonesia needs to review the impact and reaction of the economic cooperation blocks built by the United States and its allies (G-7) versus the power of China and Russia (BRICS+).

In terms of its impact on the agricultural sector, the earlier review shows that the Ministry of Agriculture faced a dilemma in prioritizing agricultural trade cooperation. At the same time, there is a strong demand to increase production and ensure food availability for more than 284 million people. Nevertheless, socialization and a shared understanding among stakeholders responsible for leading commodities are needed to increase understanding of trade agreements and their use. Suppose there is no change in the “mindset” or perspective in seeing trade and economic cooperation agreements. In that case, certainly, the agricultural sector will again be left behind in taking advantage of Indonesia's membership in various multilateral forums, including BRICS+. The main BRICS member countries, such as Brazil, are not easy countries to penetrate. The strength of the country's agricultural sector makes Indonesia the main export destination, and it is unlikely that Indonesia will be able to penetrate the market massively.

ICASEPS Publications

RICE ECONOMY AND POLICY IN RICE PRODUCING COUNTRIES



In 2025, ICASEPS plans to publish a book titled *Ekonomi dan Kebijakan Perberasan di Negara Produsen Beras* (Economics and Rice Policy in Rice Producing Countries). This book is a collection of articles obtained from presentations delivered at the 2nd International Conference on Agriculture, Natural Resources, and Rural Development (2nd ICANaRD).

The conference was organized by

ICASEPS in collaboration with PERHEPI in 2023. The presenters were the Ambassadors of the Republic of Indonesia or representatives from rice-producing countries, namely Thailand, the Philippines, Japan, Vietnam, China, Bangladesh, and Egypt, and from Indonesia, presented by the Directorate General of Food Crops, Ministry of Agriculture.

The purpose of this book is to provide information on rice governance and policies across several rice-producing countries. Lessons learned from this book can contribute to thinking and enrich stakeholders' understanding of the rice

sector, thereby encouraging the achievement of rice self-sufficiency as planned by the government.

With the introduction from the Minister of Agriculture, followed by a Prologue by the Editors (Prof. Achmad Suryana, Dr. Sudi Mardianto, and Prof. Sahat M. Pasaribu), this book contains nine articles that are divided into two chapters. An epilogue is prepared at the end of the book. ICASEPS would like to thank all parties who participated in the compilation of the book, and is grateful to the Ambassadors of the Republic of Indonesia and their respective writing teams. Hopefully, this book is helpful for readers.

The titles of articles published in the book are (1) Dynamics of Rice Policy in Several Producing Countries: Lessons for Indonesia, (2) Rice Economic Policy in Indonesia, (3) Rice Economics and Policy in Thailand as a Major Exporting Country, (4) Climate Change Responsive Rice Farming Policy in Vietnam, (5) Rice Policy in China to Achieve Food Independence, (6) Rice Economics and Policy in the Philippines toward Achieving National Food Security, (7) Rice Policy in Bangladesh toward Achieving Rice Self-Sufficiency, (8) The Relationship between Rice Economic Dynamics in Egypt and the Policy of Limiting the Expansion of Rice Farming Areas, and (9) Rice Economics and Policy in Japan: Exploring the Role of Rice in Understanding Culture and National Welfare.

COURTESY VISIT OF THE KOREA RURAL ECONOMIC INSTITUTE



On February 18, 2025, ICASEPS received a courtesy visit from the Korea Rural Economic Institute (KREI). Established in 1978, the institute implements sustainable agricultural and rural development

programs in Korea through research activities and collaborative research with various international institutions. Dr. Wonkyu Cha, the Director of the Center for International Agricultural Partnership, led the KREI team.

In addition to sharing information about the profiles of ICASEPS and KREI, the meeting also discussed specific topics related to pesticide use in Indonesia. KREI is interested in discussing pesticides because it plans to conduct a study on this topic in Indonesia. By 2025, KREI plans to submit a pesticide study proposal and will require data and information from various sources in Indonesia.

On this occasion, the Director of ICASEPS explained that ICASEPS is currently conducting a study on pesticides. This study focuses on identifying the distribution, monitoring, and use of pesticides at the farmer level, particularly for food crops (rice) and vegetables. KREI greatly appreciates this specific study and hopes to receive the results so it can provide additional input for the proposal currently being prepared by KREI.

This study proposal is designed for a multi-year period (2026–2029), with the first two years allocated to the study and the second two to the development of a digital platform for pesticide distribution, monitoring, and use in Indonesia. This digital platform is expected to be utilized by stakeholders to monitor pesticide distribution and control in Indonesia.

SEMINAR ON IMPROVING AGRICULTURAL POLICY MATERIALS FOR 2025



On February 26, 2025, ICASEPS held a seminar to refine the policy materials formulated in the Framework of Reference for Agricultural Policy Analysis for the 2025

Fiscal Year. This seminar is expected to sharpen the outlined

activity plans so that the policy analysis can produce strong and applicable recommendations for policymakers.

Six topics were discussed in the seminar, which was divided into two sessions. The first session focused on (a) predicting the impact of the rice and corn planting area increase program on production in 2025, with the expected output resulting in recommendations for activities aligned with the Ministry of Agriculture's program, particularly regarding planting expansion; (b) strategies for developing food production centers in tidal areas to highlight the challenges and opportunities in utilizing tidal areas as sustainable food production areas; and (c) policies for managing plantation commodity seeds that guarantee the availability of quality seeds. The latter is considered an obstacle in seed management that can affect the availability and quality of seeds in the plantation sector.

In the second session, three discussion topics were presented, namely (a) strategies for increasing agricultural production and quality to support downstream and added value, emphasizing the importance of agricultural product quality in supporting the downstream industry; (b) identification of agricultural development programs to achieve RAN-GRK targets, highlighting the challenges in achieving the target of reducing greenhouse gas (GHG) emissions in the agricultural sector; and (c) identification of existing conditions of pesticide use in rice and vegetables at the farmer level related to pesticide use in the field.

At the conclusion of the seminar, Dr. Sudi Mardianto, the Director of ICASEPS, emphasized the importance of refining policy materials and recommendations. This is crucial to strengthening policy analysis in addressing challenges in the agricultural sector. All studies, scheduled for completion by the end of June 2025, are expected to produce policy summaries that will be presented as strategic input to national agricultural development policy.

JICA DETAILED PLANNING SURVEY VISIT

ICASEPS received an advance visit from the JICA team in March 2025. This meeting was a follow-up activity after the initial meeting held in January 2025. The discussion with JICA was aimed at elaborating the tasks and functions of ICASEPS as a policy unit under the Ministry of Agriculture.

The process of policy formulation, consultation, and dissemination has become JICA's concern during consultations with relevant parties within the Ministry of Agriculture. Currently, JICA is preparing a cooperation plan in the form of technical assistance to oversee the implementation of the Strategic Plan (Renstra) for the food and agriculture sector for 2025–2029.

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