



## **Rice Production, Policies, and Their Implications on Food Security Indonesia - Thailand Perspective**

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### ABSTRACT

Rice serves as the primary commodity in the staple food supply in Asia, with Indonesia being the number one consumer of rice in Southeast Asia. Despite having the largest land area in Southeast Asia and being located on the equator, which provides favorable conditions for agriculture, Indonesia, particularly, imports rice from Thailand. The national agricultural sector in Indonesia has proven to be significant, but the country is considered lagging behind Thailand in terms of rice commodities. From an economic perspective, rice remains a strategic commodity, both for food security and the agricultural sector, especially for farmers. This article employs a qualitative descriptive method, focusing on the land area, the existence of agricultural banks, fair pricing, farming orientation, modernization of agricultural tools, and government policies. The research findings emphasize the need for the development of new rice varieties to address climate change and increase resistance to pests. It also stresses the importance of accurate fertilizer subsidies, vigilance regarding global food crises due to conflicts in Russia-Ukraine and the Middle East, and anticipated climate change impacts. Indonesia must play a role in future rice exports, considering the high agricultural potential in the country

## INTRODUCTION

Indonesia is a country with the largest land area in ASEAN, ranking 14th globally with a landmass of approximately 1.905 million km<sup>2</sup>. In contrast, Thailand ranks 3rd in ASEAN and 50th globally, with a land area of about 513,120 km<sup>2</sup>. Indonesia's land area is 3.7 times larger than that of Thailand. With such a vast territory, Indonesia has the potential to harness natural resources, particularly in agriculture, to boost its economy and serve as an economic defense if utilized optimally.

The agricultural sector's role in the national economy has empirically proven to be significant, both in normal and abnormal conditions. This is

evident in the sector's contribution to the Gross Domestic Product (GDP) and employment generation (Haryanto, 2009). Since the era of the Indonesian kingdoms, the country has been utilizing the agricultural industry sector by trading spices. Today, this sector stands as a flagship in the economy. However, some of Indonesia's agricultural products still fall behind those of Thailand, and the country even imports certain items, particularly rice, from Thailand. Rice, as a commodity, will remain crucial and strategic indefinitely because it serves as a staple for a significant portion of the population in various countries, especially in Asia (Arifin, 2020).

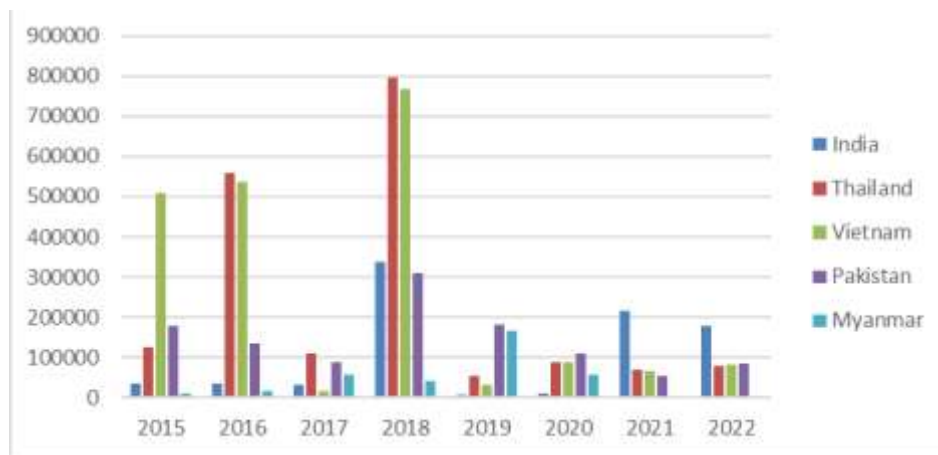


Figure 1. Rice Imports by Main Country of Origin, 2000-2022

Source: Badan Pusat Statistik, 2024

The agricultural sector in Indonesia can be considered lagging behind compared to Thailand, which is notably the rice king in Southeast Asia, both in terms of management and production. That is why Indonesia needs to improve and emulate the management procedures of the Elephant Country. Thailand's economy heavily relies on the export sector, with approximately 60% of the total workforce in Thailand employed in the agricultural sector, including the value of exports and imports (Chapakiya, 2019). It is not easy for a country to build and enhance food security. Food security in a region is closely interconnected, as it is controlled through uniform standards of living for the entire country as a whole and each individual subject separately (Zhichkin et al., 2021). For a country where 97% of its population considers rice as the primary staple food, rice must be a primary focus in

increasing domestic production. Concerning food security and considering the total population, Indonesia should also have a larger rice reserve given the current global food crisis. Currently, Indonesia imports a significant amount of rice, and addressing food security necessitates a larger domestic rice reserve to mitigate the impact of global food crises.

According to (Reidy, 2022), as reported by world-grain, the Foreign Agricultural Service (FAS) stated that the depreciation of the Thai Baht has made the country's rice export prices attractive and competitive. FAS also revealed that traders expect an increase in demand for Thai rice in the remaining months of 2022, as the current prices are competitive with other exporting countries. As a result, many countries are showing interest in purchasing rice from Thailand. Sending agricultural produce abroad contributes foreign exchange for the country. The

agricultural sector is considered a strategic component that forms the foundation of the rural economy, playing a dominant role in the lives of a significant portion of the population. It absorbs more than half of the total workforce and even serves as a pillar of security in facing economic crises in Indonesia (Arifin, 2004).

## **METHODS**

This research takes the form of descriptive analysis based on statistical data, export and import data, production consumption, as well as information related to government initiatives and policies regarding agriculture.

## **RESULTS AND DISCUSSION**

1. Land area of plantations, production yields, and population size. Indonesia's land area is much larger than that of Thailand; it is 3.7 times larger. Therefore, in terms of land area, Indonesia has a greater potential in the agricultural sector. According to BPS in 2022, Indonesia had a harvested rice area of approximately 10.45 million hectares, producing a total of 34.4 million tons of rice, with a total consumption of 36.3 million tons of rice (BPS, 2022). In contrast, Thailand, with 11.168 million hectares, produced 21.4 million tons of rice, with a total consumption of 14.6 million tons of rice (Statista, 2022). Due to the difference in population size and consumption, Indonesia still experiences a shortage of domestic rice supply, unlike Thailand, where the high rice production and low consumption align with the population, enabling Thailand to export rice in significant quantities (Hermawan, 2013).
2. Government attention to the rice cultivation area. In Thailand, in 2015, the rice cultivation area was around 9.6 million hectares, and by 2018, it had decreased to 8.9 million hectares. However, the Thai government refocused on expanding the cultivation area, leading to an increase again to 11.168 million hectares by 2022 (Statista, 2022). Considering the land shift due to settlements and development, along with
3. Agricultural banks play a crucial role, and Thailand's establishment of an agricultural bank was one of the government's initiatives that began in 1966, during the reign of King Chulalongkorn. This agricultural bank was founded because the Thai government deemed the agricultural sector highly important and essential to be maintained and developed to achieve domestic food security. The bank's regulations in 1983, which allowed crops as collateral and included diversification with relatively low-interest rates, encouraged farmers to borrow money for increasing capital to enhance production. This has been a key factor in the success of the agricultural sector (BAAC, n.d.). Meanwhile, Indonesia does not have an agricultural bank.
4. The Thai government sets a fair selling price for domestic agricultural production to ensure that farmers are not disadvantaged and receive a reasonable price for each product they produce. Indonesia has also implemented pricing policies, but in reality, these policies are mainly to prevent farmers from being excessively harmed. The baseline prices set for farmers' products tend to be lower than the fluctuating market prices. As a result, in the short term, the prices of rice or grains often disadvantage both farmers and consumers, with traders sometimes benefiting from price fluctuations (Jamal, 2006).
5. Agriculture in Thailand has indeed been geared towards export orientation, evident in its dominance in exporting agricultural products such as rice, cassava, sugarcane, and others. Although Thailand's agricultural exports contribute only 8.4%, below the electronics sector which reaches 34% in 2022, the

depreciation of the Thai currency makes it a prime target for other countries looking to purchase rice for import, including Indonesia. Meanwhile, Indonesia continues to import to meet and maintain rice stock in case of deficits in domestic rice production (Trading Economics, 2023). Meanwhile, Indonesia focuses on domestic needs due to high consumption levels that align with the population size.

6. Thailand is known for modernizing its agricultural equipment to enhance production and make it more efficient in terms of labor. Meanwhile, Indonesia has not uniformly adopted modern farming equipment because many farmers in Indonesia rely on individual self-sufficiency. Agricultural modernization involves expanding the economy and population growth beyond the limited availability of agricultural land resources (Rifkian & Suharjo, 2017).
7. Government policies in the agricultural sector are still weak in Indonesia, and rice imports remain a controversy in the country, fueled by differing statements and data from relevant institutions. The Minister of Agriculture claims that Indonesia has a rice surplus, while the National Logistics Agency (Bulog) states that there is enough rice for the next 6 months but allocates funds to import 500,000 tons of rice by the end of 2022. By the end of 2023, rice prices in Indonesia start to rise, and the management of rice reserves remains ineffective and inefficient. Importing rice in Indonesia is often done near the harvest season, a step that is considered highly detrimental to farmers.

## CONCLUSION

Observing the decline in production yields in Thailand and Indonesia over the past 5 years, while the world is currently experiencing a food crisis, both countries require new thinking in the development of the agricultural industry, particularly in the rice sector. The utilization of land resources for agricultural development needs to consider their

potential, aiming for optimal results in both quality and quantity (Hidayat, 2009). Pertaining to the development of new varieties that can adapt to changing climate conditions, ranging from extreme weather to pest attacks, Indonesia needs to embark on establishing and forming a comprehensive agricultural bank. This is crucial to assist farmers with capital, ensuring that government programs align seamlessly with agricultural production. Furthermore, transitioning to the modernization of farming equipment is essential. Modernization signifies a significant transformation in agricultural practices, shifting from traditional methods to more sophisticated or modern approaches. This encompasses various areas, including agricultural institutions, agricultural technology, natural resource development, and regulations. Agricultural modernization is a substantial shift in farming patterns, embracing more advanced or modern methods, covering a range of aspects such as agricultural institutions, technology, resource development, and regulations (Rifkian et al., 2017). "With the existence of an agricultural bank, farmers can have the opportunity to acquire modern farming equipment, enabling the realization of agricultural modernization for rice farmers. There needs to be more attention to subsidies because, aside from subsidies still seeming misdirected to small-scale farmers, the prices of non-subsidized fertilizers are excessively high and not proportional to selling prices.

The World Food Situation Update reports that food prices have reached an all-time high for the cereal, vegetable oil, and meat indexes. This price surge occurred after the invasion of Ukraine, exacerbating existing trends and conflicts in the Middle East, aligning with climate change scenario predictions (Mavroeidis et al., 2022). Considering the decline in production yields in Thailand and Indonesia over the past 5 years, along with the current global food crisis, both countries need new thinking in the development of the agricultural industry, particularly in the rice sector. This involves the development of new varieties that can adapt to increasingly extreme climate conditions and address

pest-related issues. Additionally, Indonesia needs to initiate the establishment and formation of a comprehensive agricultural bank to assist farmers with capital, ensuring that government programs run synergistically with agricultural production. There should be more attention to subsidies, as they still seem to miss the mark for small-scale farmers, and the prices of non-subsidized fertilizers are excessively high and not in line with selling prices. Indonesia must take on the role of a rice exporter on the international stage for the coming years because of its vast agricultural potential and stable equatorial weather conditions. However, Indonesia still faces challenges in meeting domestic needs. Rice can be a pillar in challenging times due to the high level of domestic demand, as the agricultural sector remains resilient amid the pandemic. Serving as a cornerstone in the food sector, agriculture continues to grow positively while other sectors contract. Moreover, this sector also contributes to exports if domestic needs can be met (Airlangga, 2021).

Hopefully, in the future, the Indonesian government will formulate policies emphasizing the importance of food security and seize the opportunity presented by Indonesia's agricultural potential to meet the domestic demand for rice and other commodities.

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