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The Role Of Millennial Farmers in Supporting Agricultural Product Exports in Indonesia

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INDEXING	ABSTRACT				
Keywords:	This study aims to determine the increasing interest of the millennial				
Keyword 1; Millennial farmers	generation in utilizing information and communication technology so that				
Keyword 2; Export	the distribution and marketing of agricultural products becomes more				
Keyword 3; Agriculture	effective and efficient. The method used in this research uses descriptive,				
Keyword 4; Indonesia	qualitative analysis with literature comparison. The results of the study show				
	that the millennial generation has great potential as agents of change in the				
	agricultural sector through the integration of digital technology and modern				
	agricultural innovation. The government has also launched various				
	programs, including the Millennial Farmer program, to increase the				
	involvement of the younger generation in agriculture. Although there are				
	still challenges such as low interest and negative image of the farming				
	profession, the role of millennial farmers has proven significant in driving				
	agricultural productivity and export competitiveness in the global market.				

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INTRODUCTION

As a developing country, the agricultural sector plays an important and strategic role in supporting national economic growth and development (Bukhtiarova et al., 2019), proven during the Covid-19 pandemic, it is still growing positively. Indonesia is starting to focus on developing agriculture towards exports as one of the keys to economic growth. Indonesia has quite large export potential, but currently its export growth is getting weaker and it is losing its competitiveness in both international and domestic markets. This is reflected in the increasing import value from year to year. Another supporting factor for exports is the era of free trade through the ASEAN Economic Community (AEC) which was agreed upon in 2015. The large potential for labor absorption in the agricultural sector has not received a positive response among the millennial generation because the image of the agricultural sector is considered less prestigious and less promising of adequate rewards, resulting in slow regeneration at the farmer level. the development of post-modern society as it is now. The crisis of farmers is easy in the sustainable agricultural sector, especially in agricultural productivity, market competitiveness, rural economic capacity, which ultimately threatens food security and the sustainability of the agricultural sector (Volyk et al., 2023). To overcome the problem of declining interest of the younger generation in agriculture, the Ministry of Agriculture has a program to increase the number of millennial farmers by 25 million people by changing the perception of the younger generation that the agricultural sector is a promising sector if managed professionally (Coffey et al., 2018). Various efforts have also been made to re-attract young people's interest in agriculture,

both by structured community organizations and by individual community groups.

The purpose of this study is to determine the role and contribution of millennial farmers in increasing agricultural productivity and efficiency and also to develop strategies to increase the role and contribution of millennial farmers in the agricultural sector.

LITERATURE REVIEW

Definition

Export performance in the agricultural sector shows quite good development, especially in the plantation sub-sector. So far, this sub-sector has always been a mainstay because it is considered capable of contributing significant foreign exchange to the country, such as coffee, rubber, vegetable oil, fat, sugar, cocoa, cocoa products, tea, and spices. It is hoped that exports of agricultural commodities will continue to increase and provide a large foreign exchange contribution to the country. Innovation development, product diversity, and improving the quality of export commodities in order to compete in the global market must continue to be pursued. The main commodities that provide positive contributions are the plantation sub-sector, including palm oil, rubber, coffee, cocoa, and coconut. The large value of agricultural export commodities in Indonesia is focused on plantation products (Sulaiman et al., 2020). Exports of agricultural commodities are expected to continue to increase and provide large foreign exchange for the country. Development of innovation and product diversification as well as having competitiveness in the international market need to continue to be developed. Obstacles to exporting secondary crops are the elimination of subsidies for production facilities and the unavailability of soft credit for secondary crops farming. As a result, production costs increase, weakening the competitiveness of farming businesses. Indonesian exports as a driver of the domestic economy so far still rely heavily on comparative advantage factors as determinants of competitiveness, such as cheap labor wages and abundant natural resources.

However, to be able to continue to compete in the global market, special technology and expertise are needed to determine the competitiveness of Indonesian export products so that they can survive abroad. The quality of human resources who are able to master technology and have special expertise is an important factor (Anggraeni et al., 2023)

Explanation

The young generation of farmers has the potential to be a driving force for change. Cooperation between millennial farmers and local farmers that is mutualistic in agricultural cultivation needs to be carried out, for example in terms of marketing partnerships, either through conventional marketing. Millennial farmers are farmers aged around 19-39 years. With the existence of millennial farmers, it will increase community innovation, especially in the field of employment and produce entrepreneurs regardless of age, young and old. The agricultural sector is also expected to adapt in the field of technology and information so that the role of millennial farmers will be the initiators in the future. Millennial farmers must utilize smartphones and use an application that encourages the sustainability of agriculture in Indonesia.

The majority of farmers generally only have elementary school education, and the number of farmers with higher education is very limited. This situation is one of the factors that hinders the progress of agriculture in Indonesia. The level of education is very crucial, especially in the current era where competition relies on technological and communication developments. In addition, small farmers usually work only to meet their daily needs. With limited land, they cannot make a significant contribution to

market supply. Small farmers also often depend on the season and often face crop failures, which often have an impact on weak financial conditions.

On the other hand, the application of technology in farming requires a fairly large investment According to (Takács-György, 2008)

RESEARCH METHOD

This study uses qualitative descriptive analysis with literature comparison and triangulation methods. Researchers will look for secondary data sources from journals, books, online newspapers and websites related to tax increases. With this, the researcher will compare and explain in detail from these sources. Through the triangulation method, the researcher will collect data, verify, analyze and conclude all data related to the research topic, as well as described by Donkoh and Mensah (2023).

RESULT AND DISCUSSION

Millennial farmers are not just young farmers. They are a generation that understands technology, who do not only rely on traditional methods, but also combine digital innovation in their daily agricultural activities (Janssen et al., 2017) The description from Paktanidigital.com dated August 24, 2021 also discussed the same thing, namely that it is hoped that the millennial generation will not only function as farmers, but can also be liaisons, buyers, and even have a key role as leaders in agricultural companies in their respective regions. This generation needs to motivate the agricultural sector to implement innovation in the tools, techniques, and methods used in the agricultural ecosystem. With this step, it is hoped that the smart farming program for millennials can function optimally as a driver of progress in the agricultural sector in Indonesia (Wastutiningsih et al., 2024).

Table 2. Percentage of agricultural sector workforce 2016-2020

Generasi	2016	2017	2018	2019	2020	Rata-rata
Generasi Z (15–19 th)	3.78	4.16	3.89	3.44	3.95	3.85
Generasi Milenial (Y) (20–40 th)	35.49	34.53	33.57	32.82	31.85	33.65
Generasi X (40–55 th)	43.53	43.69	43.70	44.04	43.03	43.60
Generasi <i>Baby Boomer</i> +veteran (56 th ke atas)	17.20	17.62	18.84	19.70	21.17	18.91

Source: BPS (2016-2020), processed data

Based on Table 2, only about 37.5% of the younger generation (millennials and generation Z) have been involved in the agricultural sector in the last five years, while 62.51% of the older generation (generation X, baby boomers, and veterans) are skilled workers in this field. For young people, a career in the agricultural sector is considered a traditional and less prestigious job. Differences in ways of thinking and interests in the world of work are factors that influence decisions between generations in choosing the type of work.

Food Security Conditions in Indonesia: In Indonesia currently, there are around 1.9 million people facing food shortages (Timmer, 2004). In Indonesia currently, there are around 1.9 million people facing food shortages (Timmer, 2004). Indonesia ranks third as the largest food producing country in the world, with rice yields exceeding the average global rice production. Based on information from WHO, between 1994 and

2021, the average total rice production in Indonesia reached 54,517,783.83 tons, placing it in third place after China and India (Timmer, 2004). The data shows great potential for Indonesia to contribute to the world's food availability in terms of rice. However, the reality is that Indonesia is currently still importing rice to meet domestic needs. According to the Tanjung and Muhafidin report in 2023, Indonesia's total rice imports reached 407,741.4 tons, with the largest import countries of origin being India, Thailand, Vietnam, and Pakistan (Tanjung & Muhafidin, 2023).

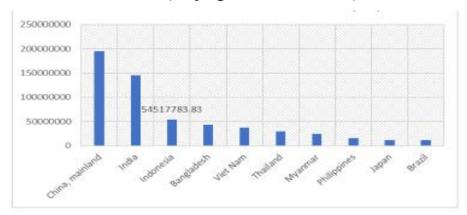


Figure 1. Rice production and average from 1994-2021 (tons)

Data on the 10 largest rice producing countries in the world based on average production from 1994 - 2021 (FAO, 2023)

CONCLUSION

Millennial farmers have an important role in supporting Indonesian agricultural exports through the use of information and communication technology. Although the interest of the younger generation in agriculture is still low because it is considered less prestigious, the role of millennial farmers can be a solution to this challenge. The government has encouraged the involvement of the younger generation through special programs, including the provision of funds and training. Millennial farmers are expected not only to be farmers, but also innovators, leaders, and connectors in the modern agricultural value chain. With better education and the ability to master technology, they are able to increase the efficiency, productivity, and competitiveness of Indonesian agricultural products in the global market. Therefore, continued support for millennial farmers is needed to ensure the sustainability of the national agricultural sector.

REFERENCES

Journal Articles

Bukhtiarova, A., Hayriyan, A., Chentsov, V., & Sokol, S. (2019). Modeling the impact assessment of agricultural sector on economic development as a basis for the country's investment potential. *Investment Management and Financial Innovations*, 16(3), 229–240. https://doi.org/10.21511/imfi.16(3).2019.21

Coffey, J., Threadgold, S., Farrugia, D., Sherval, M., Hanley, J., Askew, M., & Askland, H. (2018). 'If You Lose Your Youth, You Lose Your Heart and Your Future': Affective Figures of Youth in Community Tensions Surrounding a Proposed Coal Seam Gas Project. *Sociologia Ruralis*, 58(3), 665–683. https://doi.org/10.1111/soru.12204

- Donkoh, S., & Mensah, J. (2023). Application of triangulation in qualitative research. *Journal of Applied Biotechnology and Bioengineering*, 10(1), 6-9.
- Janssen, S. J., Porter, C. H., Moore, A. D., Athanasiadis, I. N., Foster, I., Jones, J. W., & Antle, J. M. (2017). Towards a new generation of agricultural system data, models and knowledge products: Information and communication technology. *Agricultural systems*, 155, 200-212.
- Takács-György, K. (2008). Economic aspects of chemical reduction in farming future role of precision farming. Food Economics Acta Agriculturae Scandinavica, Section C, 5(2), 114–122. https://doi.org/10.1080/16507540903093242
- Tanjung, A. M., & Muhafidin, D. (2023). Rice Import Policy: Assessing the Income of Farmers from Agriculture in Indonesia. *AgBioForum*, 25(2), 129-136.
- Volyk, S., Kukhar, O., & Bril, M. (2023). Management Of The Agricultural Enterprises' Competitiveness In The Context Of Food Security. *Baltic Journal of Economic Studies*, 9(4), 88–95. https://doi.org/10.30525/2256-0742/2023-9-4-88-95
- Wastutiningsih, S. P., Partini, P., Nugroho, N. C., & Fatonah, S. (2024). Transformation Of Millennial Farmers: Between Expectations And Reality. *Agrisocionomics: Jurnal Sosial Ekonomi Pertanian*, 8(3), 657-669.

Proceedings

- Anggraeni, S. A., Suhariadi, F., & Nadia, F. N. D. (2023). Analyzing The Role of Information Technology in Improving Human Resource Quality. *RSF Conference Series: Business, Management and Social Sciences*, 3(3), 271–279. https://doi.org/10.31098/bmss.v3i3.672
- Sulaiman, A., Ali, M. S. S., & Ahmad, A. (2020). Encouraging comparative advantages of export-oriented Indonesian agriculture products. *IOP Conference Series:* Earth and Environmental Science, 575(1), 012073. https://doi.org/10.1088/1755-1315/575/1/012073

Internet Sources

Timmer, P. (2004). Food security in Indonesia: current challenges and the long-run outlook. *Center for global development working paper*, (48). https://www.files.ethz.ch/isn/35741/2004 11 12.pdf