

ANALYSIS OF THE EFFECTIVENESS OF FERTILIZER SUBSIDY POLICY FOR PADDY FARMERS IN SUKAMANAH VILLAGE, JATINUNGGAL DISTRICT

Teti Nurjanah¹ Yuyu Ulfah Marliani² Eni Kusumawati³

^{1,2,3}Faculty of Science and Technology, University of Muhammadiyah Bandung, Indonesia

Email Coressponding: yayu_ulfah@umbandung.ac.id

ARTICLE HISTORY

Received [27 Nov 2024]

Revised [03 Dec 2024]

Accepted [28 Dec 2024]

Abstract

In realizing food security which is by providing and increasing the production of food crops, especially paddy. The support provided by the government realizes this through the provision of fertilizer subsidies for rice commodities. The purpose of this study is to analyze the effectiveness of fertilizer subsidy policies for rice farmers in Sukamanah Village, Jatinunggal District. The research method uses a quantitative descriptive approach. The number of samples used in this study amounted to 39 respondents. The sampling technique uses cluster sampling using the two-stage cluster sampling method. The data analysis used is 4 indicators of effectiveness measurement, including the right price, the right amount, the right time, and the right place. The results of this study show that the fertilizer subsidy policy for rice farmers in Sukamanah Village is still categorized as ineffective. This is because the price indicator, quantity indicator and time indicator have not been met, while the right place indicator has been met. The implications of the study explain that the ineffectiveness of fertilizer subsidies keeps farmers facing high production costs and low yields, so that their income does not increase. This has implications for the difficulty of poverty alleviation among farming households. This is related to the Sustainable Development Goals (SDG's) at the point of zero poverty.

Keywords: Effectiveness, Fertilizer, Paddy, SDG's Subsidy policy,

How to Cite: Author, A.A., & Author, B.B. (2024). Instructions/Template for Preparing Manuscript for JISEB. *Jurnal Ilmiah Sosio-Ekonomika Bisnis*, 28 (02), 01-12. <https://doi.org/10.22437/jiseb.38712>



© 2024 by the author(s)

This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

INTRODUCTION

In order to provide and increase community food production as a form of domestic food security as outlined in Law Number 17 of 2007 concerning the National Long-Term Development Plan (RPJPN) for 2005-2025 and Presidential Regulation Number 18 of 2020 concerning the National Medium-Term Development Plan (RPJMN) for 2020-2024, the agricultural sector is expected to contribute to quality economic growth in Indonesia.

The direction of the food security policy is implemented in several government programs funded through the State Revenue and Expenditure Budget (APBN). Budget support is carried out through the provision of fertilizer subsidies. The purpose of providing fertilizer subsidies is given so that farmers can carry out farming at affordable costs so that they can increase agricultural commodity production and realize national food security and improve farmers' welfare.

In each planting season, fertilizers account for 9.43 percent of the total rice production cost per hectare (Table 1). Table 1 shows that fertilizers play a significant role in determining agricultural production. The government must provide subsidies for fertilizers as one of the important inputs of agricultural production. Therefore, this study discusses the extent to which fertilizer policies are effective.

Table 1. Average Paddy Farming Business Expenditure Per Crop Season Per Hectare Paddy Farming Business

No.	Rincian	Value (Rp)	Percentage(%)
1.	Seeds	510.000	3,80
2.	Fertilizer	280.000	9,44
3.	Pesticides	570.000	4,21
4.	Workforce	1.840.000	79,99
5.	Others (interest, loans, PBB, insurance premiums etc.	180.000	1,31
	Sum	3.380.000	100

Source: Central Bureau of Statistics (2017)

Table 1 show In the 2023 State Revenue and Expenditure Budget (APBN) Financial Memorandum, it is explained that the government allocates the Fertilizer Subsidy budget to support the increase in agricultural production and national food security programs. During the 2018-2021 period, the realization of fertilizer subsidies fluctuated, starting at IDR 33,612.7 billion in 2018 and decreasing to IDR 27,155.3 billion in 2021 (Ministry of Finance, 2023). For the 2022 outlook, fertilizer subsidies are estimated to reach IDR 25,276.6 billion. The allocation of subsidized fertilizers is focused on 2 types of fertilizers, namely Urea and NPK fertilizers. The current distribution of subsidized fertilizers follows the Regulation of the Minister of Trade (Permendag) No. 07/M-Dag/Per/2/2009 concerning the supply of fertilizer subsidies which is expected to improve the timely distribution of fertilizer subsidies. This regulation replaces the previous regulation, namely Permendag No.21/M-Dag/Per/6/2008 concerning a closed subsidized fertilizer distribution system that is limited only to farmers or farmer groups that have been registered. Improvement of regulations from the government related to the distribution of

subsidized fertilizers that should make it easier for farmers to get subsidized fertilizers.

Farmers in Sukamanah Village, Jatinunggal District, Sumedang Regency. Sukamanah Village is a producer of rice commodity food crops in Sumedang Regency in 2021 producing 262,037.80 tons, in 2022 it produced 298,163.00 tons, while in 2023 it produced 287,826.00 tons (Central Statistics Agency, 2023). To support the achievement of agricultural production targets, especially in increasing rice production, the Government facilitates various agricultural infrastructure and facilities, including through fertilizer subsidies for the agricultural sector. However, farmers still complain a lot about the availability of the amount so that their needs cannot be met. In reality, regulations on the supervision of subsidized fertilizer distribution are still weak. The majority of farmers have not been able to get subsidized fertilizer easily because official retailers can also easily sell to anyone. The government provides fertilizers that are not in accordance with the recommendations, there are still many farmers who get below the recommendations and above the recommendations. . Therefore, it is necessary to analyze the effectiveness of fertilizer subsidy policies

To measure the effectiveness of the fertilizer subsidy policy, it is measured based on six indicators, including place, type, time, quantity, quality, and price so that farmers can use fertilizer as needed. The effectiveness of fertilizer subsidies is important in supporting agricultural sector production.

RESEARCH METHODS

This research was conducted using a *cluster sampling* technique with the *two-stage sampling method* where in the first stage the population was selected based on the area of rice fields in each farmer group, two farmer groups were selected with the largest rice field area and the smallest rice field area. In the second stage, two farmer groups were selected based on the largest land area and The smallest number of respondents was determined using *proportionate random sampling*. Many samples taken are calculated using the slovin formula as follows:

$$n = \frac{N}{1+N(e)^2}$$

Information:

n = Sample size/number of respondents

N = Population Size

e = Percentage of leniency in the accuracy of sampling errors which is still tolerable to 15%

So to find out the research sample, with the following calculations:

$$n = \frac{346}{1+346(0,15^2)}$$

$$n = \frac{346}{8,785}$$

n = 39.38 then rounded to 39

The population of two farmer groups was selected from 9 farmer groups in Sukamanah Village, Jatinunggal District (Table 2).

Table 2. Farmer Group in Sukamanah Village, Jatinunggal District

No	Name Tani	Land Area (ha)	Number of Farmers (people)
1.	Sri Jaya	13.154	46
2.	Suka jaya	36.73	114
3.	Jaya Mukti	51.41	192
4.	Rich Man	123.9	300
5.	Mukti Jaya	50.54	129
6.	Medal Mulya	45.678	61
7.	Citra Bakti	24.762	70
8.	Cerah Jaya	51.75	82
9.	The Mainstay of the Priest	38.534	123

Source: UPTD Jatinunggal (processed)

Thus, the samples taken were adjusted to certain criteria relevant to the research objectives so that the sample used was 3 farmer groups (Table 3).

Table 3. Research Sample

No	Farmer groups	Populasi	Account	Sample
1.	Sri Jaya	46	$(46/346) \times 39$	5
2.	Rich Man	300	$(300/346) \times 39$	34
	Sum	346		39

Source : Secondary Data processed, 2024

Table 3 shows that the type of data collected by this researcher consists of primary data and secondary data. Primary data was obtained through observations, interviews with questionnaires and direct discussions with Sukamanah Village farmer groups. Meanwhile, secondary data will be obtained by related agencies such as the Jatinunggal District Agricultural UPTD and literature studies. The analysis used is quantitative descriptive, this method is to obtain data that aims to describe by measuring 4 indicators of effectiveness as follows:

A. Price Accurate Measurement Indicator

The measurement of price accuracy indicators is carried out by comparing the Highest Retail Price (HET) set by the government with the actual price received by farmers. To determine the difference in the average price of fertilizer at the farmer level compared to that suggested by the government, a formula (Marisa, 2011) is used in (Arisandi et al., 2016):

$$\text{Price fix: } \Delta P = Pr - Pp$$

Information:

ΔP = Price difference (Rp)

Pr = Price received by respondents (Rp)

Pp = Highest retail price (HET) from the government (Rp)

After the difference between the actual price and the highest retail price (HET) is known, a comparison is made between respondents who get the actual price according to the HET and the respondents whose actual price is not in accordance with the HET. (Arisandi 2016) in (Ikmal Kholis et al., 2020). The percentage of price accuracy is calculated using the formula:

$$\text{Price fix: } \frac{N_h}{N} \times 100\%$$

Information:

N_h = Number of respondents who obtained fertilizer in accordance with HET

N = Number of all respondents

B. Time Measurement Indicator

The timely measurement of indicators is based on respondents' opinions regarding the availability of fertilizer when needed. Then, a comparison was made in the form of a percentage between respondents who felt that fertilizer was always available when needed and those who experienced a shortage of fertilizer (Ikmal Kholis et al., 2020), using the formula:

$$\text{Punctuality} = \frac{N_w}{N} \times 100\%$$

Information:

N_w = Number of respondents who think fertilizer is available when needed/never has a shortage

N = Total number of respondents

C. Quantity Measurement Indicator

The measurement of the right amount indicator is carried out by comparing the recommended amount of fertilizer with the amount used by farmers. To find out the average difference between the amount of fertilizer used by farmers and the amount recommended by the government (Ikmal Kholis et al., 2020) the formula is used:

$$\Delta Q = Q_r - Q_p$$

Information

ΔQ = Difference in the number of kg ha⁻¹

Q_r = The amount of fertilizer used by the respondents kg ha⁻¹

Q_p = Amount of fertilizer recommended by the government kg ha⁻¹

After obtaining the difference between the amount of fertilizer used by the respondent and the amount that is in accordance with the recommendation, the next step is to make a comparison between respondents who use fertilizer according to the recommended and those who do not comply in the form of percentages. This comparison can be calculated using the following formula:

$$\text{Total Determination} : \frac{N_j}{N} \times 100\%$$

Information:

N_j = Amount of fertilizer used by respondents (kg ha⁻¹)

N = Amount of fertilizer recommended by the government (kg ha⁻¹)

D. Place Measurement Indicators

The measurement of the right indicator is carried out by evaluating whether the respondent buys fertilizer at an official kiosk in accordance with the RDKK or not. Furthermore, a comparison was made in the form of a percentage between respondents who bought fertilizer at official kiosks according to the RDKK and those who did not buy fertilizer (Ikmal Kholis et al., 2020), using the formula:

$$\text{Place accuracy} = \frac{N_t}{N} \times 100\%$$

Information:

N_t = Number of respondents who received subsidized fertilizer at official retailer kiosks according to the RDKK

N = Total number of respondents.

Based on the explanation above, effectiveness is generally used to assess the extent of the success of an activity or activity. The classification of the effectiveness value criteria using the reference of the Ministry of Home Affairs Research and Development Budiani (2009) in (Ikmal Kholis et al., 2020) is as follows:

- Category 1: 0 % - 39,99% very ineffective
- Category 2: 40%- 59,99% Ineffective
- Category 3: 60%- 79,99% quite effective
- Category 4: 80%- 100% highly effective

RESULTS AND DISCUSSION

Regulation of the Minister of Trade of the Republic of Indonesia Number 04 of 2023 concerning the procurement and distribution of subsidized fertilizers for the agricultural sector article 1 states that subsidized fertilizers are fertilizers whose procurement and distribution receive subsidies from the government for the needs of farmers carried out on the basis of government programs in the agricultural sector. In the distribution based on the Ministerial Regulation number: 69/permentan/SR.130/11/2012 paragraph 6 article (2) the distribution of subsidized fertilizers must be in accordance with the principle of 6 (six) the right type, quantity, price, place, time and quality. In this study, ensuring the distribution of subsidized fertilizers, those that are in accordance with the principle of effectiveness of fertilizer subsidy policies are evaluated based on four indicators of place, type, time, quantity,

and price, to ensure that farmers can utilize fertilizers according to their needs (Table 4).

Table 4. Average Subsidized Fertilizer Price Received by Respondents

No.	Description	Urea	NPK
1.	Average Purchase Price (rp/kg)	2.400	2.400
2.	Highest Retail Price (Rp/kg)	2.300	2.250
3.	Absolute Deviation (Rp/kg)	100	150
4.	Relative Deviation (Rp/kg)	3,00%	4,00%

Source: Processed questionnaire data,2024

Based on Table 4, it can be seen the price of fertilizer that should be received by the respondents. The types of subsidized fertilizers used by the respondents are urea and NPK. The Highest Retail Price (HET) for urea fertilizer set by the government is Rp 2,300/kg, while the average price paid by respondents reaches Rp 2,400/kg. This shows a difference of Rp 100/kg from the supposed price. Thus, respondents bought urea fertilizer at a price that was 3% higher than the set price. Respondents bought NPK fertilizer with a percentage 4% higher than the supposed price.

A. Price Indicator

The price determination can be seen from the difference between the price of subsidized fertilizer received by farmers and the government's Highest Retail Price (HET). The level of price determination for the price of subsidized fertilizers that obtain the right and inappropriate prices will be found in Table 5.

Table 5. Percentage of the Subsidized Fertilizer Price Determination Level

Types of Fertilizers	Price Compatibility with HET	Sum	Prasentase (%)
Urea	True	10	26
	Inappropriate	15	38
NPK	True	8	21
	Inappropriate	6	15
TOTAL	True	18	46
	Inappropriate	21	54

Source: Primary data, 2024

From Table 5, it can be seen that respondents use various types of fertilizers, namely urea and NPK. Data analysis showed that there was a difference between the price of fertilizer actually paid by respondents and the price they should have paid according to the HET set. It can be seen that 46% of respondents received the right HET at the price paid while the other 54% of respondents did not receive the right price.

The results of the study show that the price of subsidized fertilizers is ineffective. The price of fertilizer can rise up to Rp. 4,000 per kilogram, and the difference in weight of the scales adds to farmers' losses. This is because retailers add shipping costs to the price of the fertilizer. This is in line with Nugroho's 2018 research; Rigi 2019 which shows that the availability and need of fertilizers fluctuate

with a tendency to scarcity in several months and fertilizer prices exceed the government's recommended highest price.

B. Right Place Indicators

The determination of the place was measured by evaluating how many respondents reported the location of subsidized fertilizer purchase kiosks, whether they were within the village or outside the village. The results of the research on the right indicators will be described in Table 6

Table 6 Percentage of Subsidized Fertilizer Place Determination Rate

No.	Place	Sum	Prasentase (%)
1.	inside the village	39	100
2.	outside the village	0	0
TOTAL		39	100

Source: Primary Data,2024

Based on the results of the place indicator (Table 6), the respondents considered that the purchase of fertilizer in the village was very effective in the indicator of place accuracy, with an accuracy level of 100%. Because the farmer stalls in Sukamanah village are easily accessible to obtain subsidized fertilizer in the village environment so it is easy to obtain. The name of the official stall place in the village is Ganesha Agriculture. The Ganesha Agriculture kiosk is close to the respondent's house, so there is no difficulty in accessing fertilizer. In addition, road access is also well available. This is in line with Mamahit's (2021) research which revealed that infrastructure development affects the effectiveness of subsidized fertilizer distribution.

C. Timely Indicators

Punctuality indicators are measured by evaluating the extent to which subsidized fertilizers are consistently available when needed. This includes monitoring whether the fertilizer is accessible to farmers at the times needed to support the optimal growth of their crops. This means that the assessment is carried out to ensure that subsidized fertilizers are not only available at certain times, but also able to meet the needs of farmers throughout the planned use period. Based on the respondents' opinions, it will be shown in Table 7.

Table 7 Percentage of Subsidized Fertilizer Time Fixed Rate

No.	Timeliness	Number of respondents	Prasentase (%)
1	Fertilizer is always there	10	26
2	No fertilizer	29	72
TOTAL		39	100

Source: Primary Data,2024

Table 7 shows that as many as 26% of respondents stated that fertilizer always exists while 72% of respondents stated that fertilizer does not always exist. Respondents stated that there had been a shortage in December. Distribution of fertilizer subsidy through farmer cards, and the addition of Identity Cards (KTP). This makes it difficult for some farmers to access government-assisted fertilizers, causing many farmers to be unregistered or have invalid data. Some respondents stated that when fertilizers are not available, they are forced to buy non-subsidized fertilizers, while farmers who do not get fertilizers also have to buy from other farmers who sell subsidized fertilizers at higher prices. This results in farmers will experience the use of fertilizers that are not in accordance with recommendations that have an impact on their product yields. The timely results of the study show that punctuality is still considered ineffective.

D. Accurate Indicator of Quantity

The indicator of the amount of determination is measured by looking at whether the fertilizer used is as recommended or not as recommended. Research Results on the accuracy of the number Table 8

Table 8. Percentage of Determination of the Amount of Subsidized Fertilizer

No.	Timeliness	Number of Respondents (People)	Percentage (%)
1.	As recommended	6	15
2.	Not in accordance with the recommendations	-	-
3.	under the recommendation	15	85
4.	On top of the recommendation	18	-
TOTAL		39	100

Source: Processed questionnaire data, 2024

From Table 8, it can be seen that only 15% of respondents use the amount of fertilizer according to the recommendations based on their land area. Fertilization with the right dose is very important to support rice production. The use of appropriate fertilizers will have a positive impact on the soil and plants. Meanwhile, 85% of respondents provided fertilizer in amounts that were not in accordance with the RDKK recommendations, of which 15 people gave amounts below the recommended and 18 people gave the amount above the recommendations. This explains that the availability of difficult fertilizers in the field will result in farmers not being right in the amount of fertilizer given This is supported by (Nuryanti et al., 2023) who states that fertilizer scarcity is not only caused by the low volume of production, but also by consumption that exceeds the recommended dose. The right amount of fertilizer based on the government's recommendations is urea 375 kg/ha and NPK 170kg/ha (Regulation of the Minister of Agriculture). Therefore, the government needs to provide counseling to farmers on how to use fertilizers in accordance with the recommendations that have been set by the government so that their rice production is maximized. The use of fertilizers that are not in accordance with the recommendations, whether more or less than the recommendations, can have a negative impact on rice production. Overall, to determine the effectiveness of

the fertilizer subsidy policy from 4 indicators, namely price, place, time and amount presented in Table 9.

Table 9. Percentage of Fertilizer Subsidy Policy Effectiveness

No.	Indicators of Effectiveness	Exact (%)	Incorrect (%)	Total (%)
1.	Price	46	54	100
2.	Place	100	0	100
3.	Time	26	72	100
4.	Sum	15	85	100
Average		47	53	100

Source: Primary data, 2024

The results of a total of four indicators that measure the level of effectiveness of fertilizer subsidy policies in Table 9 are known that price indicators with a percentage of 54% are ineffective and effective ones are only 46%. The time indicator is ineffective with a percentage of 72% while the effective one is only 26%. The number indicator is ineffective with a percentage of 85% while the number indicator is categorized as effective 15%. Therefore, the average of the four effective indicators is 47%, while the ineffective indicators reach 53%. The overall percentage results show that the percentage of accuracy is lower compared to the inaccuracy. Because the accuracy percentage does not reach 80%, the fertilizer subsidy policy is considered ineffective. The ineffectiveness of the fertilizer subsidy policy is in line with the 2010 Susila research; Darwis & Supriyati 2016; Adiraputra 2021; Kurnia 2021; Nuryanti 2023; Daris 2024. The ineffectiveness of fertilizer subsidies keeps farmers facing high production costs and low yields, so their income does not increase. This has implications for the difficulty of poverty alleviation among farming households. This is related to the Sustainable Development Goals (SDG's) at the point of zero poverty

CONCLUSION

Based on the results of the analysis of the effectiveness of the fertilizer subsidy policy for rice farmers in Sukamanah Village, Jatininggal District, the following conclusions can be drawn, based on the results of four indicators that measure the level of effectiveness of the fertilizer subsidy policy as a whole, it can be categorized as ineffective. Therefore, improvements are needed in terms of the distribution of supervision, and other elements that support the policy. Some follow-up studies that can be carried out next are Economic impact and productivity, Linkage to the Sustainable Development Goals.

ACKNOWLEDGMENTS

Thank you to all parties who have helped so that the completion of this research can be carried out as planned.

REFERENCE

- Adiraputra, P., & Supyandi, D. (2021). Effectiveness of Fertilizer Subsidy Policy in Sukaasih Village, Sukatani District, Bekasi Regency Effectiveness of Fertilizer Subsidies In Sukaasih Village, Sukatani District, Bekasi Regency. *Journal of Scientific Community Thought with an Agribusiness Insight*. January, 7(1), 594-606. <https://doi.org/10.25157/ma.v7i1.4745>.
- Arisandi, N. W., Sudarma, I. M., & Rantau, I. K. (2016). The effectiveness of the distribution of organic fertilizer subsidies and its impact on the income of rice paddy farming in Subak Sungsang, Tibubiu Village, Tabanan Regency. *Journal of Agribusiness and Agrotourism*, 5(1), 1-10.
- Central Statistics Agency. (2023). Rice Commodity Production. Department of Agriculture: <https://sumedangkab.go.id/skpd/detail/21>
- Saputra, D., Rifki, M., & Ramadhan, F. 2024. Evaluation of Subsidized Fertilizer Distribution: Efforts to Improve Public Services in the Agricultural Sector. Undergraduate economics program, Universitas Padjadjaran
- Darwis, V. (2013). Fertilizer subsidies: Policy, implementation, and optimization of their utilization. *Agricultural Policy Analysis*, 11(1), 45-60. <https://doi.org/10.21082/akp.v11n1.2013.45-60>
- Agriculture Department of Agriculture of Sumatra District. (2023). Department of Agriculture, Food Crops, and Horticulture. A Sense of Purpose. From: <https://sumedangtandang.com/direktori/detail/dinas-pertanian-tanaman-food-and-horticulture>.
- Dorward, A., & Chirwa, E. (2011). The Malawi agricultural input subsidy programme: 2005/06 to 2008/09. *International Journal of Agricultural Sustainability*, 9(1), 232-247. <https://doi.org/10.3763/ijas.2010.0567>
- Erawati, I., Darwis, M., & Nasrullah, M. (2017). Effectiveness of Employee Performance at the Pallangga District Office, Gowa Regency. *Office Journal*, 3(1), 13. <https://doi.org/10.26858/jo.v3i1.3450>
- FAO. (2021). *The State of Food and Agriculture 2021: Making agrifood systems more resilient to shocks and stresses*. Rome: Food and Agriculture Organization of the United Nations. <https://doi.org/10.4060/cb4476en>
- Himayatul khusah, Ary Baktiar, M, Z. mazwan. (2013). The Effectiveness of the Subsidized Fertilizer Program Through Farmer Cards in Talun District, Blitar Regency. 2(2), 1272-1283.
- Ikmal Kholis, A., Setiaji, K., Economic Education, J., Economics, F., & Effectiveness of Fertilizer Subsidy Policy in Rice Farmers, A. (2020). Economic Education Analysis Journal how to cite historical articles. In *Economic Education Analysis Journal* (Vol. 9, Issue 2). <https://journal.unnes.ac.id/sju/index.php/eeaj>
- Jayne, T. S., Mather, D., & Mghenyi, E. (2010). Principal challenges confronting smallholder agriculture in Sub-Saharan Africa. *World Development*, 38(10), 1384-1398. <https://doi.org/10.1016/j.worlddev.2010.06.002>
- Jorgi, R. S., Gayatri, S., & Dalmiyatun, T. (2019). The Relationship between the Level of Knowledge of Farmers and the Effectiveness of the Implementation of the Farmer Card Program in Semarang Regency. *AGRARIS: Journal of Agribusiness and Rural Development Research*, 5(2). <https://doi.org/10.18196/agr.5278>
- Ministry of Finance. (2022). Financial Memorandum of the 2022 State Budget.

- Kurniawan, R. & T. W. (2017). Dynamics of Fertilizer Subsidy Policy & Food Security. Pt Granmedia Pustaka Utama.
- Kurnia, F. M., & Purwanti, E. Y. (2021). Effectiveness and Benefit Incidence Analysis of Subsidized Fertilizer Policy in Wedung District, Demak Regency. *Diponegoro Journal of Economics*, 9(2), 66-78.
- Mamahit, V. S., Singkoh, F., & Sampe, S. (2021). The Effect of Infrastructure Development (Road) on the Effectiveness of Subsidized Fertilizer Distribution in East Bolaang Mongondow Regency (Case Study in Mooat District). *GOVERNANCE*, 1(1).
- Morris, M., Kelly, V. A., Kopicki, R. J., & Byerlee, D. (2007). *Fertilizer use in African agriculture: Lessons learned and good practice guidelines*. Washington, DC: The World Bank.
- Nugroho, A. D., Siregar, A. P., Andannari, E., Shafiyudin, Y., & Christie, J. I. (2018). Distribution of subsidized fertilizers in Bantul Regency, Yogyakarta Special Region Province. *Agrisocionomics: Journal of Agricultural Socioeconomics*, 2(1), 70-82. <http://ejournal2.undip.ac.id/index.php/agrisocionomics>
- Nurmanaf, A. R., Syahyuti, & Sudaryanto, T. (2020). The effectiveness of fertilizer subsidy policies on increasing rice productivity in Indonesia. *Journal of Agroecconomics*, 38(1), 1-15.
- Nuryanti, T., Milla, A. N., & Astutiningsih, E. T. (2023). Effectiveness of Subsidized Fertilizer Distribution at the Farmer Level in Sukabumi District, Sukabumi Regency. *Agribusiness and Agricultural Economics Journal*, 6(1), 162-176.
- Rashid, S., Gulati, A., & Cummings, R. (Eds.). (2008). *From parastatals to private trade: Lessons from Asian agriculture*. Baltimore: Johns Hopkins University Press / IFPRI.
- Rigi, N., Raessi, S., & Azhari, R. (2019). Analysis of the effectiveness of subsidized fertilizer policies for rice farmers in Nagari Cupak, Gunung Talang District, Solok Regency. *Journal of Socio-Economics on Tropical Agriculture (JOSETA)*, 1(3).
- Smale, M., & Jayne, T. S. (2003). Maize in Eastern and Southern Africa: Seeds, soil, and stress. *Food Policy*, 28(4), 323-341. [https://doi.org/10.1016/S0306-9192\(03\)00047-4](https://doi.org/10.1016/S0306-9192(03)00047-4)
- Sularno, Irawan, B., & Handayani, N. (2016). Analysis of Policy Implementation and Distribution of Subsidized Fertilizers in Karawang Regency, West Java. *Journal of Agroscience and Technology*, 1(2), 74-86.
- Susila, W. R. (2010). Fertilizer subsidy policy: reviewed. *Journal of Agricultural Research and Development*, 29(2), 43-49.
- Susilowati, S. H. (2016). The problem of fertilizer subsidies and fertilizer distribution in Indonesia. *Agroeconomic Research Forum*, 34(2), 135-148.
- United Nations. (2015). *Transforming our world: The 2030 agenda for sustainable development*. New York: United Nations.
- Wiggins, S., & Brooks, J. (2010). *The use of input subsidies in developing countries*. OECD Food, Agriculture and Fisheries Working Papers, No. 64, OECD Publishing. <https://doi.org/10.1787/5kmmr6jv2k9p-en>
- World Bank. (2019). *Future of food: Harnessing digital technologies to improve food system outcomes*. Washington, DC: The World Bank.
- Yustika, A. E. (2019). *Subsidized Political Economy in the Agricultural Sector*. Malang: UB Press.

