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Effectiveness of Subsidized Fertilizer Distribution for Lowland Rice Farmers in Baruga Subdistrict in Southeast Sulawesi

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ABSTRACT

This study aims to evaluate the effectiveness of subsidized fertilizer distribution for rice farmers. The research was conducted from October 2024 to March 2025 in Kelurahan Baruga in Kendari, Southeast Sulawesi. A sample of 25 farmers was drawn using simple random sampling from a population of 287 farmers. Data were analyzed using descriptive statistics based on a Likert scale to assess effectiveness on five accuracy indicators: timeliness, location, type, quantity, and price. Three indicators (type, quantity, and price) were classified as effective, while two indicators (timeliness and location) were considered moderately effective. Overall, the distribution of subsidized fertilizers was found to be effective; however, improvements are still necessary, particularly in ensuring timely distribution and availability of fertilizers at appropriate locations.

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INTRODUCTION

Agricultural sector plays a very important role in the national economy and food security in Indonesia. One of the main food commodities, lowland rice, is a staple crop in Indonesia (Saediman et al., 2019; Saediman et al., 2020), including in Southeast Sulawesi Province (Saediman, 2015), thus serious efforts are needed to increase its productivity (Saediman et al., 2023). In lowland rice farming, fertilizer is a key production input that provides essential nutrients to plants. Proper use of fertilizers has been proven to improve soil fertility, support plant growth, and increase rice yields (Suryani, 2024). Therefore, fertilizer is viewed as a highly strategic production input for rice farmers, and the government has devoted great attention to the availability and use of fertilizers at the farmer level.

To help farmers obtain fertilizer at affordable prices, the government implements a fertilizer subsidy program. Subsidized fertilizer is sold to farmers at a government-determined highest retail price (Harga Eceran Tertinggi, HET), with the government covering the difference between the production cost and the subsidized price (Darwis & Supriyati, 2014). Various important types of fertilizer are included in this program, such as urea (nitrogen fertilizer), SP-36 (phosphate), ZA (ammonium sulfate), NPK (compound fertilizer), as well as organic fertilizer (Zulaiha et al., 2018). The fertilizer subsidy policy aims to enhance farmers' ability to purchase fertilizer in recommended dosages so that they can implement balanced fertilization according to site-specific conditions, thereby optimizing agricultural production (Darwis & Supriyati, 2014). Through the provision of subsidized fertilizer, it is expected that food production (such as rice) will increase and farmers' income will rise, which in turn strengthens national food security (Saediman et al., 2019; Suryani, 2024).

The fertilizer subsidy policy in Indonesia has been in place since the late 1960s and has undergone various adjustments up to the present (Suryani, 2024). The policy is dynamic; for example, during 1999–2001 the government temporarily revoked fertilizer subsidies as part of economic liberalization measures following the 1998 crisis (Darwis & Supriyati, 2014). The removal of subsidies in the late 1990s caused fertilizer prices to surge and farmers had difficulty obtaining fertilizer when needed (Darwis & Nurmanaf, 2004). Recognizing the importance of fertilizer for the agricultural sector, the government resumed the subsidy program with various improvements, including implementing a closed distribution system since 2009 through the Definitive Plan for Group Needs (Rencana Definitif Kebutuhan Kelompok, RDKK) mechanism (Syah et al., 2015; Zulaiha et al., 2018). In the RDKK system, fertilizer needs are proposed by farmer groups so that subsidized fertilizer distribution can be better targeted to the needs of farmers in each region (Nurliana et al., 2022; Zulaiha et al., 2018). The latest implementation even requires farmers to join farmer groups and be registered in the electronic RDKK system (e-RDKK) in order to redeem subsidized fertilizer at official kiosks appointed by the government (Suryani, 2024).

Despite the various policies that have been pursued, the distribution of subsidized fertilizer on the ground still faces many challenges. A number of

classic problems are frequently reported, including fertilizer shortages in agricultural centers during planting season, delays in fertilizer arrival at the farmer level, and uneven distribution (Darwis & Supriyati, 2014). In addition, irregularities and leakage in the subsidized fertilizer distribution often occur, such as subsidized fertilizer being diverted to the commercial market or used by unauthorized parties, causing the subsidy to miss its target (Darwis & Supriyati, 2014). A weak monitoring system exacerbates these conditions and contributes to fertilizer shortages almost every year during the planting season (Darwis & Supriyati, 2014). Issues related to fertilizer supply and distribution can affect farmers' incomes and the competitiveness of rice farming, and worsen farmers' perceptions of the risks in rice farming (Geo & Saediman, 2019; Saediman et al., 2021a; Saediman et al., 2021b), and therefore must be addressed seriously.

The above conditions indicate that the effectiveness of subsidized fertilizer distribution has become an important issue that needs further study. Kelurahan Baruga in Baruga Subdistrict, Kendari Municipality, is one of the rice-producing areas with 287 farmers, who—like farmers elsewhere—are highly dependent on the availability of fertilizer to improve their productivity and welfare. This area also faces problems in subsidized fertilizer distribution, including frequent fertilizer shortages, delayed distribution, and subsidy delivery that is not yet fully on target. Therefore, this study was conducted to evaluate the effectiveness of subsidized fertilizer distribution for lowland rice farmers in Kelurahan Baruga. Specifically, this research aims to assess whether the subsidized fertilizer distribution in that area has fulfilled the "five right" principles (right type, right quantity, right price, right place, and right time) and to identify the constraints faced in its implementation.

METHODOLOGY

This research was conducted in Kelurahan Baruga, Baruga Subdistrict, Kendari Municipality. The location was selected purposively with the consideration that Kelurahan Baruga is one of the rice productions centers in Kendari Municipality. The study was carried out from October 2024 to May 2025. The population in this study comprised all lowland rice farmers in Kelurahan Baruga, totaling 287 individuals. The sample was selected by simple random sampling, meaning each member of the population had an equal chance of being chosen as a respondent (Sugiyono, 2013). The sample size was determined using the Slovin formula; based on the calculation, a total of 25 respondents was obtained.

The variables examined in this study covered two main aspects. First, the mechanisms for submitting fertilizer requirements and distributing subsidized fertilizer. Second, the effectiveness level of subsidized fertilizer distribution, measured based on the five "right" principles: right price, right type, right place, right time, and right quantity.

The collected data were analyzed using descriptive quantitative methods. Each questionnaire item was scored with a Likert scale to measure the respondents' attitudes or opinions regarding the phenomena studied (Sugiyono, 2013; Surni & Saediman, 2020). Each response option on the Likert scale has a specific score weight as presented in Table 1.

Table 1. Likert Scale Response Options and Their Score Weights

No.	Response Option	Score
1	Strongly Agree	5
2	Agree	4
3	Neutral	3
4	Disagree	2
5	Strogly Disagree	1

Sumber: Sugiyono, 2013

The scores from the respondents' answers were then averaged and categorized into three levels of effectiveness (Surni & Saediman, 2020) as shown in Table 2. These categories are used to facilitate the interpretation of the effectiveness level of subsidized fertilizer distribution in the field.

Table 2. Average Scopre and Interpretation of Effectiveness Level

Average Score	Effectiveness Category
1.00 – 2.33	Less Effective
2.34 – 3.67	Moderately Effective
3.68 – 5.00	Effective

Sumber: Surni & Saediman (2020)

RESULT AND DISCUSSION

Mechanism of Subsidized Fertilizer Application

Based on field observations, the mechanism for proposing subsidized fertilizer needs has been implemented in accordance with the latest regulations. The main requirements for farmers to receive subsidized fertilizer are being registered as members of an official farmer group, being listed in the Definitive Plan for Group Needs (RDKK), and having a cultivated land area not exceeding 2 hectares. These provisions are in line with Ministry of Agriculture Regulation No. 10/2022 on the procedures for determining subsidized fertilizer allocations, which emphasizes that only small-scale farmers organized in groups are entitled to receive subsidized fertilizer. In addition, Ministry of Trade Regulation No. 4/2023 requires farmers to be registered in the Agricultural Extension Management Information System (SIMLUHTAN) before they can be proposed in the RDKK. These requirements are intended to ensure the subsidy is properly targeted to farmers who truly need it (Adiraputra & Supyandi, 2021) and to prevent misuse by unauthorized parties (for example, traders or large landowners).

The subsidized fertilizer application process at the study site was carried out collectively through farmer groups with the assistance of agricultural extension agents.

1. First, prospective subsidy recipients register as members of the local farmer group (poktan). Based on interviews with respondents, each farmer submits photocopies of their Identity Card (KTP) and Family Card (KK) to the farmer group leader as proof of identity and membership. Farmers also report the area of rice field they manage to the group leader, because this information is used as the basis for calculating fertilizer needs in the RDKK.
2. Second, the farmer group leader forwards the data of these new farmers to the leader of the Farmers Group Association (Gapoktan). The Gapoktan leader then compiles a list of the group members along with their land areas and estimated fertilizer needs to be arranged in the RDKK form. The RDKK is a list of proposed subsidized fertilizer needs from each farmer group for one season or year, which becomes the basis for the government's fertilizer allocation.
3. Third, the RDKK compiled by the Gapoktan is submitted to the local agricultural extension officer. The extension officer is responsible for verifying and inputting the farmers' data and their needs into the SIMLUHTAN application. Once data entry is completed and the RDKK is uploaded into the system, the RDKK list is approved and forwarded to the distributor or official kiosks that will distribute the fertilizer in the field.

The RDKK-based application mechanism through farmer groups has a strong policy basis and justification. The government requires farmers to organize in groups so that distribution is more coordinated and easily supervised by extension agents and the local agriculture office. Through farmer groups, farmers' data can be verified collaboratively (for example, ensuring each member is indeed an active farmer in the area). The RDKK itself is considered an appropriate solution for distributing fertilizer according to farmers' needs in the field (Adiraputra & Supyandi, 2021; Ikhlas, 2022). Each farmer receives a subsidized fertilizer allocation that has been calculated based on their registered land area, making it more proportional to actual needs (Ikhlas, 2022). In other words, this system is designed to ensure the principles of "right quantity and right targeting" from the planning stage. Research findings in other locations also support the effectiveness of this application mechanism; Maleakhi (2024) found that in Blitar Regency, the implementation of the RDKK system by the local Agriculture Office contributed to the accuracy of the fertilizer amount delivered to farmers, so the subsidized fertilizer distribution was considered effective and aligned with the proposed needs. Similarly, Ikhlas (2022), in a case study in Pekalongan Regency, reported that RDKK became the main instrument for determining fertilizer allocations for farmers, although some farmers still felt their allocations were less or more than their needs. Those findings indicate that in general the above application mechanism has been running according to the rules and is quite effective, although refinements continue to be made (for example, data validation to make allocations more accurate).

The submission of subsidized fertilizer requests through RDKK in Kelurahan Baruga is carried out at the end of each year as preparation for the following year's planting season. This pattern is in line with the local planting calendar, which is usually twice a year. Interviews revealed that farmers can begin to redeem or purchase subsidized fertilizer about two months after the RDKK proposal is submitted to the extension officer. This lead time of approximately 1–2 months is needed for the process of determining allocations at the district/city level and for distributing fertilizer from producers to retailer kiosks. Field observations indicated that farmers understand this schedule and time their fertilizer purchases with the rice planting season. In this case, the scheduled proposal mechanism allows fertilizer stock to be provided before the planting season begins, thus supporting the timeliness principle in subsidized fertilizer distribution.

Mechanism of Subsidized Fertilizer Distribution

After the proposal and allocation determination stages, the mechanism for distributing subsidized fertilizer to eligible farmers is then carried out. The conditions for redeeming or receiving subsidized fertilizer fully refer to the approved RDKK list. In other words, only farmers whose names are listed in the RDKK and who meet the regulatory criteria can receive subsidized fertilizer. This provision is in accordance with Ministry of Agriculture Regulation No. 10/2022 and Ministry of Trade Regulation No. 4/2023, which state that subsidized fertilizer is only distributed to farmers who are members of farmer groups registered in the government system. The Agriculture Office together with fertilizer producers (via distributors) will prepare fertilizer stock according to the RDKK allocation to be distributed to the Baruga area. Subsequently, the subsidized fertilizer is distributed to a network of official retailer kiosks that have been appointed. Each retailer kiosk receives a certain supply quota in accordance with the total fertilizer needs of farmers in the RDKK for its service area. Before distribution to farmers, agriculture office staff usually announce the schedule and procedures for fertilizer redemption to the farmer groups so that the distribution proceeds in an orderly manner.

Farmers redeem (purchase) subsidized fertilizer individually at official retailer kiosks designated by the government. When the distribution time arrives (for example, the beginning of the planting season), farmers go to the kiosk with their original Identity Card (KTP) as proof of identity. The retailer kiosk then verifies the farmer's data by scanning the National Identification Number (NIK) on the KTP using a device or application connected to the RDKK database. This electronic verification step is the latest innovation to make distribution more accurate: the system will match the farmer's NIK with the list of recipients registered in SIMLUHTAN/RDKK. If the data matches and the fertilizer quota for that farmer is still available, then the farmer is allowed to buy subsidized fertilizer according to the predetermined quota (for instance, a certain number of kilograms of urea and NPK). Conversely, if the farmer is not registered or has already obtained their allotted amount, the system will deny any additional redemption, thereby preventing double allocation or misuse. This outcome is in line with government policy that subsidized fertilizer

purchases can only be made at designated official kiosks (Ikhlas, 2022; Kautsar et al., 2020). Field findings in Baruga showed that all farmer respondents purchased subsidized fertilizer at the appointed official kiosks (none bought through unofficial channels), thus compliance with the designated distribution outlets was achieved. This is consistent with the study by Ikhlas (2022) in Pekalongan, where 100% of respondents purchased subsidized fertilizer at official kiosks designated by the government. With farmers transacting only at appointed kiosks, subsidized fertilizer distribution can be monitored and controlled more effectively.

In the process of fertilizer handover at the kiosks, farmers usually receive fertilizer in official packaging (sacks) at the price according to the Highest Retail Price (HET) set by the government. Retailers are obligated to sell at the HET and must not exceed the per-farmer allocation listed. If there is a shortage or delivery delay, retailers are required to coordinate with distributors and report to the relevant agency. In the case of Kelurahan Baruga, most farmers reported no difficulty redeeming fertilizer at the kiosks; they felt the collection process went smoothly and the kiosk distance was reasonably reachable from their fields (although a few farmers admitted the kiosk was somewhat far) (Ikhlas, 2022).

Overall, the "right place" indicator of distribution was fulfilled at a moderately effective level in this area, meaning the distribution locations were as designated and accessible to farmers despite minor distance challenges for a few respondents. This condition aligns with the findings of Zulaiha et al. (2018), which concluded that nationally, subsidized fertilizer distribution at the "right place" was effective in most provinces in Indonesia. Exceptions may occur in areas with geographical obstacles (for instance, remote island regions) where fertilizer distribution becomes challenging. However, in Baruga's urban context, the official kiosk distribution mechanism has been running effectively and according to procedure. Oversight by the local government also helps ensure that fertilizer stock is available before the planting season and that each farmer receives their entitled share. The use of the KTP in place of a farmer card for fertilizer redemption has also greatly facilitated farmers (Antara, 2025). Thus, the combination of a proper proposal process (via RDKK) and an orderly distribution mechanism (through official kiosks with KTP verification) is expected to support the achievement of subsidized fertilizer distribution that is more effective, well- targeted, and accountable in Kelurahan Baruga.

Effectiveness Evaluation Based on Five "Right" Indicators

The effectiveness of subsidized fertilizer distribution was evaluated based on five "right principle" indicators: right time, right quantity, right type, right place, and right price. The following presents the research findings for each indicator, accompanied by narrative, justification, and discussion referring to field data from Kendari and relevant academic references.

Timeliness

Timeliness in this context means that subsidized fertilizer is always available when needed by farmers, so that there are no shortages or delays in distribution. In other words, fertilizer stock must be ready before the planting

season begins. Based on Table 3, the effectiveness level of subsidized fertilizer distribution for the timeliness indicator in Kelurahan Baruga had an average score of 3.65, which falls into the moderately effective category. In detail, fertilizer availability according to the planting season schedule received an average score of 3.89 (effective); absence of significant distribution delays scored 3.68 (effective); adherence to the fertilizer distribution schedule scored 3.72 (effective); and farmers never experiencing fertilizer shortages due to distribution delays scored 3.36 (moderately effective). These results indicate that the majority of farmers agreed subsidized fertilizer is generally available on time, although some farmers experienced delays or fertilizer scarcity in the field. Those conditions caused the overall timeliness to be rated only moderately effective.

Fertilizer shortages at planting time in Kelurahan Baruga have been complained about because the available subsidized fertilizer supply was far below the farmers' needs, causing a risk of farming activities coming to a halt (Nurliana et al., 2022). This finding is consistent with the subsidized fertilizer distribution problems often reported by farmers, namely fertilizer scarcity during the planting season due to delayed supply (Nurliana et al., 2022). However, the situation in Baruga Subdistrict is still better compared to what has been reported in Panggungrejo Subdistrict of Blitar (Maleakhi, 2024), Bontocani Subdistrict of Bone (Ramlayana et al., 2020), Montasik Subdistrict of Aceh Besar (Kautsar et al., 2020), and Kadugede Subdistrict of Kuningan, where subsidized fertilizer distribution was not effective in terms of timeliness.

Table 3. Effectiveness of Subsidized Fertilizer Distribution Based on Timeliness Indicator

No.	Item	Number of respondents					Mean	Category
		1	2	3	4	5		
1	Fertilizer available according to planting season schedule	0	1	5	16	3	3.89	Effective
2	No significant distribution delays	0	0	8	17	0	3.68	Effective
3	Adherence to fertilizer distribution schedule	0	1	5	19	0	3.72	Effective
4	Never experienced fertilizer shortage due to distribution delays	0	3	10	12	0	3.36	Moderately Effective
	Average						3.65	Moderately Effective

Note: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

The findings of this study are consistent with those of Hariningtyas (2014) in Kendal Regency, Central Java, where the distribution of subsidized fertilizer in terms of timeliness was considered highly effective. The effectiveness of the timeliness aspect was also observed in Tonjong Subdistrict,

Brebes Regency (Apriyana et al., 2023). Compared to the conditions in these two regions, the timeliness of fertilizer distribution in Baruga Village still needs improvement to reach an optimal level in which no farmer experiences fertilizer shortages during the planting season. The government's ongoing efforts to simplify the bureaucracy of fertilizer distribution are expected to improve timeliness in the field. Thus, while the timeliness indicator in Baruga is relatively good, it does not yet fully guarantee the availability of fertilizer exactly when farmers need it.

Right Quantity

Right quantity refers to the appropriateness of the amount of subsidized fertilizer distributed relative to the needs determined by the government. In this study, right quantity was measured as the match between the amount of subsidized fertilizer farmers received and the allocation data in the RDKK (Definitive Plan for Group Needs). Based on Table 4, the effectiveness of subsidized fertilizer distribution for the quantity indicator in Kelurahan Baruga had an average score of 3.70, which means it was classified as effective. In more detail: the conformity of the fertilizer amount with the RDKK allocation received an average score of 3.88 (effective); there was no reduction from the amount proposed by farmers in the RDKK, averaging 4.04 (effective); the sufficiency of fertilizer for farmers' needs averaged 3.40 (approaching moderately effective); and farmers not needing to purchase additional fertilizer outside the subsidy averaged 3.48 (moderately effective). These results show that distribution according to the RDKK quota was carried out well; farmers received fertilizer in the amount allocated without any reduction. The majority of respondents agreed that the subsidized fertilizer allocation they received was as stipulated (no cut in quota), although around half of the farmers were neutral to somewhat dissatisfied regarding the sufficiency of that fertilizer to meet all the needs of their land. In other words, in terms of distribution this program effectively guarantees that farmers receive the fertilizer quantity they were allotted, but in terms of sufficiency some farmers still feel that amount is not fully adequate, so they have to purchase additional non-subsidized fertilizer to meet their crops' needs.

Table 4. Effectiveness of Subsidized Fertilizer Distribution Based on Quantity Indicator

No.	Item	Number of Respondents					Mean	Category
		1	2	3	4	5		
1	Conformity with RDKK allocation	0	2	2	18	3	3.88	Effective
2	No reduction from proposed amount	0	0	1	22	2	4.04	Effective
3	Sufficiency for farmers' needs	0	3	9	13	0	3.40	Moderately effective
4	No need to purchase additional fertilizer	0	3	7	15	0	3.48	Moderately effective
	Average							Effective

							3,70	

Note: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

This study's results are far better than what was reported for 2019 and 2020 (Nurliana et al., 2022), when the volume of subsidized fertilizer actually received by farmers in Baruga Subdistrict was only around 7–8% of the total amount proposed via RDKK. The government could not fulfill all proposals due to limited subsidized fertilizer allocation and budget (Nurliana et al., 2022). As a result, nearly 92–93% of fertilizer needs had to be met by farmers with non-subsidized fertilizer, which potentially led to subsidized fertilizer scarcity during the planting season and forced farmers to seek supplies on the open market (Jamilatun et al., 2021; Nurliana et al., 2022). This explains why in the present study the "fertilizer sufficiency" indicator was rated only moderately effective. farmers felt the government's subsidized quota did not fully meet their optimal needs. This finding is consistent with reports from several regions where subsidized fertilizer distribution has not been effective (Ghassani & Supyandi, 2024; Nugroho et al., 2018).

Nevertheless, from the perspective of procedural quantity accuracy, the distribution in Baruga has been in accordance with regulations. Maleakhi (2024) found that subsidized fertilizer distribution in Panggungasri Village, Blitar, was also effective in terms of right quantity. Effective quantity accuracy was likewise reported by Ramlayana et al. (2020) and Apriyana et al. (2023). The implementation of the RDKK submission system by the local Agriculture Office ensured that fertilizer was distributed in the amount proposed by farmers, without reduction (Maleakhi, 2024). Similarly, in Kelurahan Baruga, the RDKK mechanism ensures farmers receive fertilizer according to the planned quota. To be even more effective going forward, the central government needs to balance allocations with the real needs of farmers. With more adequate allocation adjustments, the right quantity indicator will be not only effective in terms of distribution but also truly sufficient for farmers' needs, so that farmers will no longer have to incur additional costs for non-subsidized fertilizer.

Right Type

Right type refers to the appropriateness of the type of fertilizer distributed with respect to the needs and official recommendations; in this case, Urea and NPK fertilizers as stipulated by government policy. This indicator assesses whether farmers received the correct type of subsidized fertilizer as listed in the Definitive Plan for Group Needs (RDKK) and in accordance with the specific requirements of their rice crops. Based on Table 5, the effectiveness of subsidized fertilizer distribution in terms of the right type indicator in Kelurahan Baruga reached an average score of 3.95, which falls into the effective category. The component scores are as follows: the suitability of fertilizer type with crop needs had an average score of 4.16 (effective); conformity of fertilizer type with that listed in the RDKK averaged 4.20 (effective); the absence of receiving a different fertilizer than allocated averaged 4.04 (effective); and the perceived quality of subsidized fertilizer, compared to non-subsidized fertilizer, averaged 3.40 (moderately effective). These results

indicate that the majority of farmers strongly agreed that the type of subsidized fertilizer they received was appropriate for their crop needs and matched the listings in the RDKK.

Almost no farmers reported receiving an incorrect type of fertilizer—all of them obtained Urea and/or NPK as designated. This finding is consistent with the 2022 government policy that limits subsidized fertilizer types to Urea and NPK for key commodities, including rice, ensuring that the types of fertilizer received by farmers align with official recommendations. Most farmers also considered the quality of subsidized fertilizer to be comparable to that of non-subsidized fertilizer, although approximately half of the respondents expressed a neutral opinion regarding this aspect. The presence of neutral and slightly disagreeing responses regarding quality (reflected in the 3.40 score) suggests that some farmers were uncertain about whether subsidized fertilizer was as good as the non-subsidized alternative. This may be influenced by field experience, such as subsidized fertilizer that sometimes clumps or becomes damp due to storage conditions, or simply by perceptions related to its lower price. However, in general, there were no serious complaints regarding fertilizer quality; therefore, the right type indicator can be considered to be satisfactorily fulfilled in Kelurahan Baruga.

Table 5. Effectiveness of Subsidized Fertilizer Distribution Based on Type Indicator

No.	Item	Number of Respondents					Mean	Category
		1	2	3	4	5		
1	Suitability of fertilizer type to crop needs	0	0	0	21	4	4.16	Effective
2	Suitability of fertilizer type with RDKK	0	0	0	20	5	4.20	Effective
3	Never received a different fertilizer type	0	1	1	19	4	4.04	Effective
4	Quality as good as non-subsidized fertilizer	0	2	11	12	0	3.40	Moderately Effective
	Average						3.95	Effective

Note: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

The high effectiveness of the right type indicator is largely due to the RDKK mechanism that involves farmers in determining the types of fertilizer needed. Ramlayana et al. (2020) explained that under the RDKK concept, farmers themselves propose or order the fertilizer types according to their farming needs. Consequently, the type of fertilizer distributed is in accordance with what was requested. Overall, the right type indicator is categorized as effective—the fertilizer that farmers received was of the correct type as recommended by the government and needed by farmers, with its quality considered nearly on par with commercial (non-subsidized) fertilizer. Going forward, maintaining a consistently high quality of subsidized fertilizer remains

important, especially to ensure it continues to provide optimal benefits to the target farmers.

Right Place

Right place refers to the distribution of subsidized fertilizer through officially designated locations or kiosks, ensuring that eligible farmers receive fertilizer at the appropriate location. In the subsidized fertilizer distribution system, each farmer group is typically assigned to a specific official retailer kiosk as listed in the RDKK, and the designated retailer is only permitted to serve farmers whose names are registered (according to their group's allocation). As shown in Table 6, the effectiveness of subsidized fertilizer distribution in terms of the right place indicator in Kelurahan Baruga had an average score of 3.46, which falls into the moderately effective category. In detail, the highest average score was recorded for the item stating that farmers obtained fertilizer from the designated place (official kiosks), which was 4.32 (effective); the accessibility of the distribution point to farmers averaged 3.44 (moderately effective); the absence of significant additional costs (such as extra transport fees or other charges beyond the fertilizer price) averaged 3.08 (moderately effective); and the smoothness of the collection process (without administrative obstacles or long queues) averaged 3.00 (moderately effective). This pattern highlights two main points: first, all farmers received fertilizer at officially designated kiosks, meaning no farmers had to seek fertilizer from unauthorized sources. This is a positive sign, indicating that distribution did not deviate from its intended targets (i.e., no "leakage" to unauthorized parties; farmers received fertilizer from the designated location). Second, however, the accessibility and convenience of distribution could still be improved—some farmers found the kiosk locations less easily accessible, faced additional transport costs, and encountered a collection process that was not always smooth.

Although the majority of farmers agreed that they received fertilizer from the correct location and that the process was generally smooth, the average scores—around 3 (moderate)—for the aspects of access, cost, and convenience indicate that some farmers experienced difficulties. It is possible that, for certain respondents, the distance between their homes and the kiosks was far enough to require transportation costs (such as hiring a vehicle to transport fertilizer). In interviews, farmers indicated that they sometimes had to pay for motorcycle taxis or trucks to carry fertilizer from the kiosk to their fields, which added to their financial burden. In addition, the administrative procedures (such as presenting a national identity card and undergoing data verification) may have been perceived as cumbersome by some farmers, or they may have had to wait in long queues, especially during peak redemption periods before the planting season. These issues help explain why the right place indicator was not rated fully effective.

Table 6. Effectiveness of Subsidized Fertilizer Distribution Based on Place Indicator

No.	Item	Number of Respondents					Mean	Category
		1	2	3	4	5		
1	Obtained from designated location	0	0	0	21	4	4.32	Effective
2	Distribution location is easily accessible	0	0	0	20	5	3.44	Moderately Effective
3	No significant additional cost (e.g., transport)	0	1	1	19	4	3.08	Moderately Effective
4	Smooth retrieval process	0	2	11	12	0	3.00	Moderately Effective
	Average						3.46	Moderately Effective

Note: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

Nevertheless, from a macro perspective, the distribution of subsidized fertilizer in Baruga can be considered on track, as farmers continue to receive fertilizer at the designated locations. This finding contrasts with the report by Apriyana et al. (2023), which highlighted the ineffectiveness of fertilizer distribution in terms of the right place indicator. Improvement efforts may be focused on bringing services closer to farmers and simplifying the overall process. This result may also be compared with the study by Zulaiha et al. (2018), which analyzed the effectiveness of subsidized fertilizer distribution across various provinces. At the national level, the right place indicator was generally categorized as effective, with high scores recorded in many regions. East Java Province was noted as an exemplary case, demonstrating the highest level of place accuracy, meaning that nearly all farmers in the province obtained fertilizer at the designated locations without significant obstacles (Zulaiha et al., 2018). In contrast, provinces such as Riau Islands were assessed as ineffective in terms of place accuracy due to the geographical challenges posed by their archipelagic nature, which complicated distribution (Zulaiha et al., 2018).

Compared to such conditions, Baruga Village in Kendari City, located on the mainland of Southeast Sulawesi, is not as extreme in terms of geographic constraints; however, local accessibility challenges still exist, which explains the moderate effectiveness score. Limitations in transportation infrastructure and the uneven distribution of retail kiosks may represent obstacles that need to be addressed. Therefore, local governments may consider increasing the number or improving the spatial distribution of official retail points closer to farming centers, or facilitating coordinated fertilizer delivery to farmer groups, in order to enhance farmers' access. With such improvements, it is expected that the right place indicator could progress from moderately effective to effective or even highly effective in the future.

Right Price

Right price refers to the condition in which the price of subsidized fertilizer paid by farmers complies with the Highest Retail Price (HET) set by the government. This indicator also includes farmers' perceptions of whether the subsidized fertilizer price is indeed more affordable than non-subsidized fertilizer and whether the price difference provides them with economic benefits. The effectiveness of subsidized fertilizer distribution based on the right price indicator in Kelurahan Baruga yielded an average score of 3.84, which falls into the effective category (Table 7). The detailed component scores for this indicator are as follows: the conformity of fertilizer prices with the government-regulated HET scored an average of 3.96 (effective); the statement that fertilizer was never sold above the designated price (i.e., no price increase occurred at the farmer level beyond the stipulated rate) also scored 3.96 (effective); the perception that subsidized fertilizer is more affordable than non-subsidized fertilizer received an average score of 3.72 (effective); and the statement that the use of subsidized fertilizer provides significant economic benefits (e.g., reducing production costs) also received a score of 3.72 (effective). These results indicate that the majority of farmers strongly agreed that the price they paid for subsidized fertilizer was in accordance with the official HET and that there were no irregular price increases. None of the respondents selected "strongly disagree" or "disagree" for the price conformity statements, indicating that instances of fertilizer being sold above the HET in Baruga were nearly non-existent. Only one or two farmers responded neutrally or slightly disagreed with the statement "never experienced a price increase above the official rate," possibly suggesting isolated or infrequent cases where prices slightly exceeded the HET, though such occurrences appear to be minimal.

In general, retail prices at the kiosks complied with government regulations—for example, IDR 112,500 per sack (50 kg) for Urea, as stipulated by the 2024 HET—and farmers obtained fertilizer at that price. Farmers also reported benefiting from this subsidized pricing: subsidized fertilizer was clearly cheaper than commercial fertilizer, thereby reducing their production cost burden. Nearly all respondents agreed that the subsidized price was more affordable and contributed positively to their economic well-being, although a small number (some who responded neutrally) may have felt that the economic benefit was rather ordinary. Overall, the right price indicator can be considered well-fulfilled—there were no pricing issues observed in the distribution of subsidized fertilizer in Kelurahan Baruga. This finding contrasts with studies by Ramlayana et al. (2020), Maleakhi (2024), Nugroho et al. (2018), and Ghassani & Supyandi (2024), which reported that subsidized fertilizer distribution in other regions had not yet been effective in terms of the right price aspect.

Table 7. Effectiveness of Subsidized Fertilizer Distribution Based on Price Indicator

No	Item	Number of Respondents					Mean	Category
		1	2	3	4	5		
1	Conformity with the official HET price	0	0	1	24	0	3.96	Effective
2	Never experienced price above the set rate	0	1	0	23	1	3.96	Effective
3	More affordable than non-subsidized fertilizer	0	1	5	19	0	3.72	Effective
4	Provides significant economic benefits	0	0	8	16	1	3.72	Effective
	Average						3.84	Effective

Note: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

The findings here are supported by several studies. For instance, Ikhlas (2022) in Pekalongan reported that all farmers in the groups received subsidized Urea and NPK at the HET set by the government. The same result was reported by Apriyana et al. (2023). This means that in terms of right price, distribution was very effective (100%) with no farmers paying above the official price. Similarly, in Baruga the vast majority of farmers paid the HET. The government's policy of setting a fixed HET for subsidized fertilizer is intended to ensure the subsidy is truly enjoyed by farmers and not taken as profit by distributors. From the above data, it can be concluded that this objective was achieved in Kelurahan Baruga—farmers obtained fertilizer at an affordable official price in accordance with the policy, which helped reduce farming costs and increase relative profits for farmers. Going forward, maintaining a high performance on the right price indicator remains important, especially through consistent supervision. As long as fertilizer availability is guaranteed and distribution is well-targeted, practices of selling above the HET can be prevented so that subsidized fertilizer continues to provide optimal economic benefits for the intended farmers.

CONCLUSIONS AND RECOMMENDATIONS

The mechanisms for applying for and distributing subsidized fertilizer in Kelurahan Baruga have been carried out in accordance with government regulations. The distribution procedure follows Ministry of Agriculture Regulation No. 10/2022 on the procedures for establishing subsidized fertilizer allocations. Farmers who wish to obtain subsidized fertilizer are required to be members of a farmer group and registered in the electronic system (SIMLUHTAN). Farmers prepare the RDKK through their farmer group/ Gapoktan leader as the basis for proposing their fertilizer needs. Another requirement is that farmers have a maximum cultivated land area of 2 hectares (as per Ministry of Agriculture Regulation No. 4/2023 on the Procurement and

Distribution of Subsidized Fertilizer). Fertilizer redemption is conducted at official retailer kiosks that have been designated, by showing a KTP which is scanned for verification of the farmer's data. In general, this mechanism has been implemented in Baruga; the respondent farmers reported understanding the procedure and following those steps from registration through to fertilizer collection.

The overall effectiveness level of subsidized fertilizer distribution in Baruga was high, although there are some indicators that need to be improved. Measurement of the five "right" indicators showed that three indicators reached the effective category, namely: right quantity, right type, and right price. This means the fertilizer distribution in Baruga was in accordance with the allocated amount (no shortfalls), the type of fertilizer distributed matched the needs (Urea/NPK as in the RDKK), and the selling price at the farmer level complied with the HET (farmers paid the official affordable price). Meanwhile, two indicators were in the moderately effective category, namely: right time and right place. Timeliness was still moderately effective because although the majority of fertilizer was received before the planting season, there were times when delays occurred or stock thinned out at critical moments. Right place was also moderately effective because even though farmers obtained fertilizer at the designated official kiosks, some farmers encountered access and process difficulties. Thus, in brief it can be said that subsidized fertilizer distribution in Kelurahan Baruga has been effective in terms of quantity, type, and price, but further improvements are needed in terms of time and place so that fertilizer service for rice farmers in this area becomes even more optimal.

Based on the above conclusions, several suggestions can be given to relevant stakeholders. Farmers should always be part of an official farmer group registered in SIMLUHTAN and be proactive in the RDKK preparation process each year. If any difficulties arise in obtaining subsidized fertilizer, farmers should promptly report to their farmer group leaders, local agricultural extension officers, or the Agriculture Office. For government agencies, it is recommended to strengthen supervision and coordination in subsidized fertilizer distribution. The government should also ensure fertilizer stock is sufficient and available well in advance of the planting season. In addition, outreach and assistance to farmers regarding the RDKK procedures and fertilizer redemption should be continuously carried out, so that no farmer is left uninformed.

FURTHER STUDY

It is suggested to conduct qualitative research on non-technical constraints in the field, such as retailer behavior, bureaucratic hurdles, or farmers' experiences, which may not be revealed through quantitative surveys.

REFERENCES

Adiraputra, P., & Supyandi, D. (2021). Efektivitas Kebijakan Subsidi Pupuk di Desa Sukaasih Kecamatan Sukatani Kabupaten Bekasi. *Mimbar Agribisnis: Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis*, *7*(1), 594–606. https://doi.org/10.25157/ma.v7i1.4745

Antara. (2025, January 27). Petani Terdaftar Cukup Bawa KTP untuk Tebus Pupuk Bersubsidi. *Antaranews.Com*. antaranews.com

Apriyana, M. A., Khatimah, K., & Mudmainah, S. (2023). Efektivitas Penggunaan Kartu Tani Terhadap Pendistribusian Pupuk Bersubsidi di Kecamatan Tonjong Kabupaten Brebes. *Jurnal Pertanian Peradaban*, *3*(1), 19–27.

Darwis, V., & Nurmanaf, A. R. (2004). Kebijakan Distribusi, Tingkat Harga dan Penggunaan Pupuk di Tingkat Petani. *Forum Penelitian Agro Ekonomi*, *22*(1), 63–73.

Darwis, V., & Supriyati. (2014). Subsidi Pupuk: Kebijakan, Pelaksanaan, dan Optimalisasi Pemanfaatannya. *Analisis Kebijakan Pertanian*, *11*(1), 45–60.

Geo, L., & Saediman, H. (2019). Rice farming to brick production: What are major drivers of livelihood shift? *Bioscience Research*, *16*(4), 3640–3647.

Ghassani, R., & Supyandi, D. (2024). Efektivitas Pelaksanaan Program Pupuk Bersubsidi pada Petani Padi Desa Tinggar Kecamatan Kadugede Kabupaten Kuningan Jawa Barat. *Mimbar Agribisnis: Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis*, *10*.

Hariningtyas, F. C. S. (2014). *Pengaruh Efektivitas Subsidi Pupuk Terhadap Produksi Padi di Kabupaten Kendal*. Universitas Negeri Sebelas Maret.

Ikhlas, S. (2022). Efektivitas Pupuk Bersubsidi dalam Meningkatkan Perekonomian Masyarakat (Studi Kasus Petani Muslim Di Desa Jetak Kidul, Kecamatan Wonopringgo, Kabupaten Pekalongan). *JIEF – Journal of Islamic Economics and Finance*, *2*(1), 80–93.

Jamilatun, S., Suryantini, A., & Astuti, A. (2021). Persepsi Petani Terhadap Pupuk NPK Subsidi dan Non Subsidi di Kecamatan Seyegan Kabupaten Sleman. *Agritas*, *5*(2), 88–100.

Kautsar, R., Sofyan, & Makmur, T. (2020). Analisis Kelangkaan Pupuk Bersubsidi dan Pengaruhnya Terhadap Produktivitas Padi (Oryza sativa) di Kecamatan Montasik Kabupaten Aceh Besar. *Jurnal Ilmiah Mahasiswa Pertanian*, *5*(1), 97–107.

Maleakhi, J. (2024). Efektivitas Program Pupuk Bersubsidi di Desa Panggungasri. *Jurnal Riset Mahasiswa Ekonomi (RITMIK)*, *6*(4), 377–384.

Nugroho, A. D., Siregar, A. P., Andannari, E., Shafiyudin, Y., & Christie, J. I. (2018). Distribusi pupuk bersubsidi di Kabupaten Bantul Provinsi Daerah Istimewa Yogyakarta. *Agrisocionomics: Jurnal Sosial Ekonomi Dan Kebijakan Pertanian*, *2*(1), 70–82.

Nurliana, Taufik, Y., & Daud, L. (2022). Dinamika Penyediaan Pupuk Subsidi pada Usaha Tani Padi Sawah Melalui Mekanisme Rencana Definitif Kebutuhan Kelompok Tani (RDKK) di Kota Kendari. *Jurnal Ilmiah Inovasi Dan Komunikasi Pembangunan Pertanian*, *1*(1), 17–26.

Ramlayana, Ansyari, I., & Sudarmi. (2020). Efektivitas Penyaluran Pupuk Bersubsidi Bagi Petani Padi di Desa Langi Kecamatan Bontocani Kabupaten Bone. *Kajian Ilmiah Mahasiswa Administrasi Publik*, *1*(3), 949–962.

Saediman, H. (2015). Prioritizing Commodities in Southeast Sulawesi Province of Indonesia Using AHP based Borda Count Method. *Asian Social Science*, *11*(15), 171–179. https://doi.org/10.5539/ass.v11n15p171

Saediman, H., Aisa, S., Zani, M., Limi, M. A., & Yusria, W. O. (2019). Food Security Status of Households in A Cassava Growing Village in Southeast Sulawesi, Indonesia. *Journal of Agricultural Extension*, *23*(1), 199–209.

Saediman, H., Asria, H. F., & Indarsyih, Y. (2023). Efficiency of input usage in rice farming in Muna district of Southeast Sulawesi. *AIP Conference Proceedings 2596*, 100034. https://doi.org/10.1063/5.0118729

Saediman, H., Astuti, R. W., Alwi, L. O., Zani, M., & Mboe, I. S. (2021). Comparative profitability of small-scale rice and horticultural farming in South Konawe District of Southeast Sulawesi Comparative profitability of small - scale rice and horticultural farming in South Konawe District of Southeast Sulawesi. *IOP Conference Series: Earth and Environmental Science*, *782*, 022036. https://doi.org/10.1088/1755-1315/782/2/022036

Saediman, H., Indarsyih, Y., Abdullah, S., Fyka, S. A., & Mboe, I. S. (2021). Assessing major drivers of crop shifting from rice to horticultural production: a case of Landono sub-regency in Southeast Sulawesi. *IOP Conference Series: Earth and Environmental Science*, *724*, 012006. https://doi.org/10.1088/1755-1315/724/1/012006

Saediman, H., Lasmin, L. O., Limi, M. A., Rianse, U., & Geo, L. (2020). Rice Farmers' Perception of Climate Variability in South Konawe District of Southeast Sulawesi. *International Journal of Scientific and Technology Research*, *9*(2), 3128–3132.

Saediman, H., Mustika, Nalefo, L., Tufaila, M., & Zani, M. (2019). Cost and Return Analysis of Rice Farming and Brick Making in South Konawe District of Southeast Sulawesi. *International Journal of Scientific & Technology Research*, *8*(10), 835–838.

Sugiyono. (2013). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Alfabeta.

Surni, S., & Saediman, H. (2020). Gender participation in palm sugar processing in Kolaka district of Southeast Sulawesi. *WSEAS Transactions on Environment and Development*, *16*, 34–39. https://doi.org/10.37394/232015.2020.16.4

Suryani, A. S. (2024). Meningkatkan Ketahanan Pangan dengan Pupuk Bersubsidi. *Isu Sepekan Bidang Ekuinbang Komisi IV*. berkas.dpr.go.id

Syah, K., Wasiati, I., & Akmur, M. H. (2015). Pelaksanaan penyaluran pupuk bersubsidi di Desa Ajung Kecamatan Ajung. *Jurnal Ilmu Administrasi Negara*, *1*(1), 1–14.

Zulaiha, A. R., Nurmalina, R., & Sanim, B. (2018). Kinerja Subsidi Pupuk di Indonesia. *Jurnal Aplikasi Bisnis Dan Manajemen*, *4*(2), 271–283. https://doi.org/10.17358/jabm.4.2.271