

# Implementation of the Subsidized Fertilizer Program for Subak in West Selemadeg District, Tabanan Regency, Bali Province

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## ABSTRACT

The government facilitates various agricultural facilities and infrastructure as an effort to increase food productivity, one of which is by implementing a fertilizer subsidy policy. The realization of subsidized fertilizer redemption in West Selemadeg District in 2023 is still not effective. The aim of the research is to analyze the implementation of the subsidized fertilizer program in West Selemadeg District, Tabanan Regency, Bali Province by analyzing farmers' perceptions of subsidized fertilizer policies, and analyzing the effectiveness of subsidized fertilizer distribution. The data collection method uses the interview method with a questionnaire as the main instrument in the research. The sample in this study consisted of 68 farmers. The data analysis used is Likert Scale analysis. The results of the research showed that farmers' perceptions of the subsidized fertilizer policy in West Selemadeg District were in the good category and the effectiveness of subsidized fertilizer distribution in West Selemadeg District was in the fair category.

**Keywords:** Effectiveness, Perception, Subsidized Fertilizer

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## 1. INTRODUCTION

The government facilitates various agricultural facilities and infrastructure as an effort to maintain and increase food productivity in Indonesia, one of which is by implementing a subsidized fertilizer policy. There are three types of fertilizer subsidized by the government for 2023, namely urea, NPK and special formula NPK.

Data from the West Selemadeg District Agricultural Extension Center (BPP) shows that the realization of subsidized fertilizer redemption by farmers in West Selemadeg District in 2023 will only reach

around 36% for urea fertilizer, 55% for NPK fertilizer, and 22% for special formula NPK fertilizer from the amount of allocation, meaning that the distribution of subsidized fertilizer has not been effective. Departing from this problem, it is interesting to research the implementation of the subsidized fertilizer program for Subak in West Selemadeg District, Tabanan Regency, Bali Province regarding farmers' perceptions of subsidized fertilizer policies and the effectiveness of subsidized fertilizer distribution.

## 2. METHODS

Researchers carried out research on subak throughout the West Selemadeg District, Tabanan Regency, Bali Province. This is based on the consideration that all Subak in West Selemadeg district receive the subsidized fertilizer program. Research data was collected by researchers using the interview method using a questionnaire as a research instrument. The research population was farmers who received the subsidized fertilizer program in West Selemadeg district spread across 14 Subak. The total number of research samples was 68 farmers. Sixty eight samples were divided proportionally into 14 Subak. The analytical tool used is the Likert Scale. The interval categories used are.

1. 1.00 - 1.80 : very bad
2. 1.81 - 2.60 : not good
3. 2.61 - 3.40 : sufficient
4. 3.41 - 4.20 : good
5. 4.21 - 5.00 : very good

## 3. RESULT AND DISCUSSION

### 3.1. Farmers' Perceptions of Subsidized Fertilizer Policy

Perception is a response formed in the human mind to an event after receiving stimulation to their five senses. Factors that influence perception are divided into two, namely internal factors and external factors. (Hakim *et al.*, 2021).

The following are farmers' perceptions of the subsidized fertilizer policy in West Selemadeg District.

TABLE I  
Farmers' Perceptions of Subsidized Fertilizer Policy in West Selemadeg District

No	Indicator	Score	Percentage	Average	Category
1	Benefit	244,30	71,80	3,60	Good
2	Information	222,00	65,30	3,30	Enough
3	Proposing Subsidized Fertilizer	219,60	64,60	3,20	Enough
4	Subsidized Fertilizer Redemption	231,30	68,00	3,40	Enough
5	Price	258,70	76,10	3,80	Good
6	Quality	260,00	76,50	3,80	Good
Overall Average Number		239,30	70,40	3,50	Good

Source: Processed Primary Data, 2024

TABLE I shows that farmers' perceptions of the subsidized fertilizer policy in West Selemadeg District are at a total score of 239.30 with a percentage of 70.40% and the average value is 3.50. Farmers' perceptions of subsidized fertilizer policies fall in the interval 3.41 to 4.20. This means that farmers' perceptions of the subsidized fertilizer policy in West Selemadeg District are in the good category. From the data above it can be seen that the indicators

for subsidized fertilizer proposals, information and subsidized fertilizer redemption are the three indicators that have the lowest average values, namely each having an average value of 3.20, 3.30, and 3.40 and only included in the sufficient category. These three indicators must be considered to be improved in the future. Farmers assume that information regarding the provisions and criteria for implementing subsidized fertilizer has not

been received by all farmers, which has the impact of farmers being unable to propose and redeem subsidized fertilizer quickly and accurately. The lack of optimal information being delivered to farmers is caused by the rules set by the government regarding the provisions and criteria for implementing subsidized fertilizer which always change every year so that the rules regarding the provisions and criteria for implementing subsidized fertilizer must be re-socialized to farmers every year. Apart from that, the lack of information to farmers is also due to the lack of agricultural extension resources in West Selamadeg District so that information cannot be conveyed to all farmers quickly. In the future, the central government is expected to be able to make regulations related to the provisions and criteria for implementing subsidized fertilizer better by paying attention to problems and conditions in the field more precisely so that the regulations related to the provisions and criteria for implementing subsidized fertilizer do not need to be changed every year and the regional government of Tabanan Regency is expected to be able to increase the amount of resources agricultural instructors in Tabanan Regency so that the central government's recommendations regarding the ideal conditions for one instructor to develop one village can be achieved. So that disseminating information to farmers, especially information related to subsidized fertilizers, can be more effective.

The indicator for assessing farmers' perceptions of the benefits of subsidized fertilizer policies is at a total score of 244.30 with a percentage of 71.80% and an average value of 3.60. The conclusion is that farmers' perceptions of the benefits of

subsidized fertilizer policies in West Selamadeg District are included in the good category. This means that farmers think that the subsidized fertilizer policy still provides benefits for farming activities. The benefits felt by farmers are related to obtaining fertilizer at a cheaper price. Using cheaper subsidized fertilizer helps farmers reduce production costs. Farmers also think that the cheaper price of subsidized fertilizer makes it easier for farmers to buy and fulfill all fertilizer needs for their rice farming. With adequate nutrition for rice plants, rice production and productivity will also be maintained. Difficulties in administering the redemption of subsidized fertilizer were experienced by farmers in Subak Jeran Dewa, Subak Amerta, and Subak Angkah who throughout 2023 did not redeem the subsidized fertilizer that had been allocated to the subak, so that the benefits of the subsidized fertilizer could not be felt by the subak. Difficulties are caused by the inability of Subak administrators and the lack of activeness of Subak members to complete the administration required to redeem subsidized fertilizer, such as submitting colored ID cards and signatures of all members who receive subsidized fertilizer. Based on information obtained from the BPP West Selamadeg District, the problem faced in Subak Jeran Dewa is that some of the members of Subak Jeran Dewa come from three different villages, namely Lumbung Village, Angkah Village, and Tiyinggading Village, because the position of Subak Jeran Dewa is right at the meeting of these three villages. Subak administrators find it difficult to gather and coordinate actively with all Subak members because they do not come from the same village. Difficulties are felt by Subak administrators, apart from the long

distance between Subak members living in different villages, which hampers communication, it is also caused by busyness and social activities in each different village so that Subak administrators find it difficult to gather all Subak members. at the same time. The impact arising from the difficulty of coordinating with all Subak members is that Subak administrators have difficulty collecting KTP and signatures of all Subak members in order to complete the administrative requirements for subsidized fertilizer redemption. Specifically for Subak Angkah, various information and assistance efforts have been attempted by the West Selemadeg District BPP to help facilitate the redemption of subsidized fertilizer in Subak Angkah. However, various efforts have not received a good response from the Subak Angkah Pekaseh, meaning that the Subak Angkah Pekaseh activeness in managing the administration of subsidized fertilizer is still lacking. The lack of activity of the Subak Angkah Pekaseh is influenced by their low level of education so they cannot receive and absorb information well and tend to ignore information that cannot be absorbed well. Farmers with good education usually have an open way of thinking in accepting innovation and new technology so that they can take agriculture in a better direction (Gusti *et al.*, 2021). In a group there is usually an opinion leader. An opinion leader is someone who is able to provide information about an innovation to other members. The group leader should be the opinion leader in the group. They must be able to actualize themselves in conveying all kinds of ideas, thoughts and technical abilities to their members (Nugroho, 2018). The low level of education of Pekaseh Subak has an impact

on the inability to become an opinion leader in the Subak organization and the inability to receive, absorb and disseminate information to all Subak members.

The indicator for assessing farmers' perceptions regarding information related to subsidized fertilizer policies is at a total score of 222.00 with a percentage achievement of 65.30% and an average score of 3.30. So it can be concluded that farmers' perceptions of information related to subsidized fertilizer policies in West Selemadeg District are only in the sufficient category. This means that farmers think that information related to the provisions and criteria for implementing subsidized fertilizer has not been properly conveyed to all farmers. One of the causes of delays in the distribution of subsidized fertilizer is that there are still farmers who do not understand the procedures for applying for and redeeming subsidized fertilizer due to the lack of information obtained by farmers. In conveying information related to subsidized fertilizer policies, it is hampered by inadequate extension resources. BPP West Selemadeg District in 2023 will only have five agricultural instructors holding two to four target areas, making it difficult for agricultural instructors to convey information regarding the subsidized fertilizer policy evenly to all farmers quickly. The role of Subak management is expected to be able to provide information related to subsidized fertilizer policies to all members, but in fact this has not been successful. In line with Wahid *et al.*, (2021) that supporting resources are an important need because they will influence the optimization of policy implementation. No matter how well the policy concept is planned and created, if it is not supported

by the availability of good supporting resources, policy implementation will not run optimally.

The indicator for assessing farmers' perceptions regarding the proposal for subsidized fertilizer is at a total score of 219.60 with a percentage achievement of 64.60% and an average value of 3.20. So it can be concluded that farmers' perceptions regarding the proposed subsidized fertilizer in West Selemadeg District are only in the sufficient category. This means that not all farmers and Subak administrators have the knowledge and skills regarding the procedures for proposing subsidized fertilizer. This is caused by information related to subsidized fertilizer policies that farmers do not receive in full and the inability to absorb the information provided by BPP and agricultural extension workers. The farmer's education level greatly influences the farmer's ability to absorb the information provided. The lower or higher the education you have will influence the absorption of information (Thamrin *et al.*, 2012). Education is one of the determining factors in assessing and filtering information that has been disseminated. (Rohman *et al.*, 2012). According to Hariyani *et al.*, (2014) that the level of education can influence the ability to receive and understand the information provided. Apart from that, the success of proposing subsidized fertilizer also depends on Subak ability to prepare the RDKK. Ideally, all Subak are able to make RDKK for their fertilizer needs independently so that they can meet the fertilizer needs of all subak members appropriately, but in reality all Subak in West Selemadeg District hand over the preparation of the RDKK to agricultural extension workers. So it is feared that the

compiled RDKK does not reflect the actual conditions in the field. Subak inability to prepare the RDKK independently is related to their lack of mastery of IT, especially computers, to create the RDKK.

The indicator for assessing farmers' perceptions regarding the redemption of subsidized fertilizer is at a total score of 231.30 with a percentage achievement of 68.00% and an average value of 3.40. So it can be concluded that farmers' perceptions regarding the redemption of subsidized fertilizer in West Selemadeg District are included in the sufficient category. This means that not all farmers and subak administrators have the knowledge and skills to redeem subsidized fertilizer quickly. There are still many mistakes made, especially by Subak administrators, regarding making power of attorney to redeem subsidized fertilizer, such as photocopies of KTPs that are not clear or cut off and farmers' signatures that do not match the signature on the KTP with the signature on the power of attorney, which results in Subak administrators having to repeat themselves. make a power of attorney to redeem subsidized fertilizer which could result in the subsidized fertilizer not being received by farmers on time. This is caused by information related to subsidized fertilizer policies that farmers do not fully accept and the inability to absorb the information provided by BPP and extension workers.

The indicator for assessing farmers' perceptions of subsidized fertilizer prices is at a total score of 258.70 with a percentage achievement of 76.10% and an average value of 3.80. So it can be concluded that farmers' perceptions of subsidized fertilizer prices in West Selemadeg District are in the good category. The price of subsidized fertilizer

is set according to the HET (Lowest Retail Price) set by the government in government regulation 10/2022 where the price of urea is at IDR 2,300/Kg and NPK at IDR 3,000/Kg. The subsidized fertilizer price set by the government is well received by most farmers who think that this price is quite affordable compared to the price of non-subsidized fertilizer. Because the redemption of subsidized fertilizer is carried out collectively and the fertilizer is received directly by farmers in each subak, there is an additional cost for transporting subsidized fertilizer which is borne by farmers. The additional transportation costs can be well received by farmers who think that these additional transportation costs will not be too burdensome for farmers. In line with Kartini (2020) that the subsidized fertilizer prices received by farmers are not in accordance with the HET set by the government because there are transportation costs charged by kiosks to farmers. Many farmers are located far from the kiosk so retailers add transportation costs from the kiosk to the farmer's land so that there are varying transportation costs which are accumulated into fertilizer costs. The indicator for assessing farmers' perceptions of the quality of subsidized fertilizer is a total score of 260 with a percentage achievement of 76.50% and an average score of 3.80. This means that the quality of subsidized fertilizer received by farmers is good, for urea and NPK fertilizer the quality is no different from non-subsidized fertilizer. According to information from PT. There is no difference in the content of Indonesian fertilizer for urea fertilizer, both subsidized and non-subsidized, both contain 46% Nitrogen (N). The difference between

subsidized and non-subsidized urea is only in color. Subsidized urea fertilizer is pink while non-subsidized urea fertilizer is white. This color differentiation is carried out as a form of preventing irregularities in the fertilizer trade system in the field and misuse of subsidized fertilizer by irresponsible parties.

For NPK fertilizer, there is a difference between subsidized and non-subsidized fertilizer. In subsidized NPK fertilizer, according to government requests, the content made is 15% Nitrogen (N), 15% Phosphate (P<sub>2</sub>O<sub>5</sub>) and 15% Potassium (K<sub>2</sub>O) which is different from the content of non-subsidized Phonska Plus NPK fertilizer which contains 15% Nitrogen (N), 15% Phosphate (P<sub>2</sub>O<sub>5</sub>) and 15% Potassium (K<sub>2</sub>O) with additional Zinc (Zn) of 2000 ppm. Even though there are differences in content between subsidized and non-subsidized NPK fertilizers, the quality of the two fertilizers is not different because they contain the same macro nutrients Nitrogen (N), Phosphate (P<sub>2</sub>O<sub>5</sub>) and Potassium (K<sub>2</sub>O).

### **3.2. Effectiveness of Subsidized Fertilizer Distribution**

According to Ravianto in Masruri (2014) explains that effectiveness is an assessment to measure how well a program or work is implemented, the extent to which people get results as expected. This means that if a job can be completed according to plan, both in terms of time, cost and quality, it can be said to be effective. If the effort or results of the work and actions taken are appropriate so that the goal or target is achieved, then it is said to be effective.

The following is the effectiveness of subsidized fertilizer distribution in West Selemadeg District.

TABLE II  
Effectiveness of Subsidized Fertilizer Distribution in West Selemadeg District

No	Indicator	Score	Percentage	Average	Category
1	On time	225,80	66,40	3,30	Enough
2	Exact Amount	221,00	65,00	3,30	Enough
3	Exact Type	259,00	76,20	3,80	Good
4	Right Place	259,00	76,20	3,80	Good
5	Right Quality	259,00	76,20	3,80	Good
6	Right Price	151,00	44,40	2,20	Not Good
Overall Average Number		229,10	67,40	3,40	Enough

Source: Processed Primary Data, 2024

TABLE II shows that the effectiveness of subsidized fertilizer distribution in West Selemadeg District is at a total score of 229.10 with a percentage of 67.40% and an average value of 3.40. It can be concluded that the effectiveness of subsidized fertilizer distribution in West Selemadeg District in West Selemadeg District is in the 'sufficient' category. From the data above it can be seen that the indicators on time and the right amount are indicators that must be considered for improvement because they have a low mean number of 3.30 and are only included in the sufficient category. Especially for the correct price indicator, although it only has an average figure of 2.20 which is included in the bad category, this is not a disturbing problem because all Subak in West Selemadeg District carry out collective redemption of subsidized fertilizer so that the price received by farmers does not match the HET. which was determined by the government because there were additional costs for transporting subsidized fertilizer which had to be borne by Subak. The amount of additional transportation costs is the result of a mutual agreement between Subak and the retail kiosk. An assessment of farmers'

perceptions shows that these additional transportation costs do not burden farmers. The on-time indicator is at a total score of 225.80 with an achievement percentage of 66.40 percent and the mean value is 3.30 and is included in the sufficient category. Most of the subsidized fertilizer for subak in West Selemadeg District has been received by farmers on time, that is, the fertilizer has been received by farmers before tilling the land. So that when farmers go down to the fields to till the soil, fertilizer is already available. With the assistance provided by the West Selemadeg District BPP in making a power of attorney to redeem subsidized fertilizer, it became easier for Subak to apply for subsidized fertilizer. However, in Subak Getar Bang Posting, during the first planting season in January 2023, there was a delay in the distribution of subsidized fertilizer to farmers. The delay occurred because until January 2023 the Regent's Decree regarding the allocation of subsidized fertilizer for 2023 had not yet been issued so the subsidized fertilizer could not be redeemed. In fact, not all farmers and Subak administrators have the knowledge and skills to redeem subsidized fertilizer quickly, however, with the willingness and

activeness of Subak administrators to communicate with BPP and agricultural extension workers about the problems they face, it will be easier to solve problems because there is a commitment from BPP West Selemadeg District. to help farmers with the redemption of subsidized fertilizer. There are still Subak who have difficulty making a power of attorney to redeem subsidized fertilizer quickly, but subsidized fertilizer can still be distributed on time because there is an appeal from the West Selemadeg District BPP to arrange a power of attorney to redeem subsidized fertilizer early one to two months before planting so that there is enough time to correct any errors.

The exact number indicator is at a total score of 22.00 with a percentage achievement of 65% and the mean value is 3.30 and is included in the sufficient category. According to the West Selemadeg District BPP, the realization of subsidized fertilizer redemption in West Selemadeg District in 2023 is still not effective. Difficulty in completing the complete power of attorney to redeem subsidized fertilizer, such as a photocopy of KTP and signature of Subak members, has caused several Subak, such as Subak Jeran Dewa, Subak Angkah, and Subak Amerta, during 2023 not to redeem subsidized fertilizer and only a small portion of Subak Merta Sari and Subak members Subak Semaja which redeems subsidized fertilizer. Apart from that, many Subak do not make up for all the subsidized fertilizer allocations obtained according to the RDKK. The only Subak that redeemed all of their subsidized fertilizer allocations were Subak Gading Wani and Subak Samsaman Editing. Other factors such as the El Nino phenomenon have the risk of causing drought and have the potential to increase the potential for

puso and crop failure in the agricultural sector, especially rice. To anticipate the impact of El Nino, Subak Lumbung in West Selemadeg District has postponed planting for the second planting season. This resulted in Subak Lumbung not redeeming subsidized fertilizer for the second planting season in 2023. Damage to irrigation which disrupted irrigation in Subak Lumbung, Subak Jeran Dewa, Subak Tiyenggading and Subak Antosari also affected the distribution of subsidized fertilizer because farmers in the four Subak did not planting rice so as not to pay for subsidized fertilizer and even until February 2024 there are still rice fields that have not been planted because they have not received water for irrigation. The land conversion phenomenon that will occur throughout 2023 in West Selemadeg District will also affect the effectiveness of subsidized fertilizer distribution in West Selemadeg District. Farmers who were initially registered to receive subsidized fertilizer ultimately did not redeem the subsidized fertilizer because they were no longer cultivating their rice fields. Many rice fields were left abandoned by their owners, converted into plantation land or sold by their owners. One of the phenomena of land conversion occurred in Subak Mertasari, according to data obtained from BPP West Selemadeg District, of the 25.6 hectares of rice fields in Subak Mertasari that were registered to receive subsidized fertilizer, only around 5 hectares of rice fields redeemed subsidized fertilizer. Most of the land that did not receive subsidized fertilizer has changed its function or been left uncultivated by its owners. The planned construction of the Gilimanuk – Mengwi toll road also has the potential to impact the conversion of rice fields affected by the construction of the toll road.



The correct type indicator is at a total score of 259.00 with a percentage achievement of 76.20% and an average value of 3.80, and is included in the good category. This means that farmers receive fertilizer according to the type of fertilizer stated in the RDKK and the type of fertilizer received by farmers is in accordance with the farmer's needs.

The exact indicator in place is at a total score of 259.00 with a percentage achievement of 76.20% and an average score of 3.80, which is included in the good category. This means that the subsidized fertilizer has been received by farmers in each subak and received by the right farmers. There is no effort to trade subsidized fertilizer to other Subak and subsidized fertilizer is actually used for subak needs.

The appropriate indicator of quality is the total average score of 259.00 with an achievement percentage of 76.20% and an average score of 3.80 and is included in the good category. Subsidized fertilizer is received by farmers in good condition, meaning there is no damage during the distribution of subsidized fertilizer to farmers. Starting from storing subsidized fertilizer in warehouses to transporting and distributing subsidized fertilizer to farmers, it has been done well.

The correct price indicator is at an overall average score of 151.00 with a percentage achievement of 44.40% and the mean value is 2.20 and is included in the not good category. As has been stated, although the correct price indicator only has a mean figure of 2.20 which is included in the bad category, this is not a disturbing problem because all Subak in West Selamadeg District carry out collective redemption of subsidized fertilizer so that the price received by farmers is not appropriate. The HET is set by the government because there

are additional costs for transporting subsidized fertilizer which must be borne by Subak. The amount of additional transportation costs is the result of a mutual agreement between Subak and the retail kiosk. An assessment of farmers' perceptions shows that additional transportation costs do not burden farmers.

#### 4. CONCLUSIONS

1. Farmers' perceptions of the subsidized fertilizer policy in West Selamadeg District are in the good category.
2. The effectiveness of subsidized fertilizer distribution in West Selamadeg District is in the sufficient category.

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#### REFERENCE

- Gusti, I.M., Gayatri, S., & Prasetyo, A.S. (2021). *The Influence of Age, Education Level and Years of Farming on Farmers' Knowledge Regarding the Benefits and How to Use Farmer Cards in Parakan District. Central Java Province Research and Development Journal*. 19(2); 209-221.
- Hakim, F.B., Yunita, P.E., Supriyadi, D., Isbaya., & Ramly, A.T. (2021). *Perception, Decision Making, Self-Concept and Values. Diversity. Journal Ilmiah Pascasarjana* 1(3) : 155-165.
- Hariyani, E. B., Mardikanto, T., & Ihsaniyati, H. (2014). *Farmers' Perceptions of the Corporate-Based Food Production Increase Movement (GP3K)*

*Program in Jati Village, Jaten District, Karanganyar Regency. Journal of the Agribusiness Study Program, Faculty of Agriculture, Sebelas Maret University. 4(11) : 1–11.*

- Masrusi. (2014). Analysis of the Effectiveness of the National Office Community Empowerment Program. Padang: Akademia Permata.
- Nugroho, A.D., Siregar, A.P., Andannari, E., Shafiyudin, Y., & Christie, J.I. (2018). *Distribution of Subsidized Fertilizer in Bantul Regency, Yogyakarta Special Region Province. Journal Agrisocionomics. 2(1) : 70-82.*
- Rohman, M.F., Gunawan., & Romadi, U. (2021). *The Effect of Communication Media Integration on the Knowledge of Agricultural Education Tourism Visitors in Bono Village, Boyolangu District, Tulungagung Regency. Journal Penyuluhan 18(1) : 36-48.*
- Thamrin, M., Herman, S., & Fahrul, H. (2012). *The Influence of Socio-Economic Factors on the Income of Areca Farmers. Journal Agrium, 17(2) : 103–108.*
- Wahid, A.A., Nubatonis, A., Gayatri, S., & Proyoga, K. (2021). *Problems with the Implementation of the Farmer's Card Program in the Working Area of the Agricultural Extension Center, Bonang District, Demak Regency. Journal Ekonomi Pertanian dan Agribisnis (JEPA). 5(3).*