# Effectiveness of the Use of Farmer Cards on the Distribution of Subsidized Fertilizer in Taliwang District, West Sumbawa Regency

# Herlina<sup>1</sup>, Zulkieflimansyah<sup>2</sup>, Ahmad Yamin<sup>3</sup> Universitas Teknologi Sumbawa

Article Info	Abstract
Article history:	The government has a policy to provide fertilizer to farmers through fertilizer
Received: 29 October 2024	subsidies. However, in its implementation, there are obstacles such as
Publish: 15 November 2024	supervision, procurement and distribution of fertilizers that are not on target,
	shortages, misuse and price increases for farmers. The government's effort to
	overcome this problem is by issuing the Tani Card program. This research
	discusses the effectiveness of the use of farmer cards in the distribution of
Keywords:	subsidized fertilizer in Taliwang District, West Sumbawa Regency. The objectives
Effectiveness;	of this research consist of; (1) to determine the effectiveness of the use of farmer
Utilization of Farmer Cards;	cards in Kec. Taliwang, West Sumbawa Regency, (2) to determine the
Farmer Cards;	effectiveness of subsidized fertilizer distribution in the district. Taliwang, West
Distribution of Fertilizer;	Sumbawa Regency, and (3) to determine the influence of the use of farmer cards
Subsidized Fertilizer.	on the distribution of subsidized fertilizer in the district. Taliwang, West Sumbawa Regency. The type of research used in this research is quantitative
	descriptive. The population in this research is all farmers receiving subsidized
	fertilizer allocations in Taliwang District who are officially registered in the
	Taliwang District e-RDKK in 2024, a total of 4,142 farmers. Sampling in this
	research was carried out using the Slovin Method, so the number of samples
	obtained was 97.64 samples and rounded up to 100 samples. Data collection
	methods applied in this research include: Observation, interviews,
	questionnaires and documentation. Data were analyzed using the Guttman Scale.
	Based on the research results, it can be seen that the overall effectiveness of using
	the Farmer's Card is categorized as quite effective because it has a percentage
	of 78% yes answers and 22% no answers. Apart from that, overall, the
	distribution of subsidized fertilizer is categorized as quite effective because it has
	a percentage of 67% answers yes and 33% answers no. The results of the
	Spearman Rank Correlation Test show that there is a significant relationship
	between the effectiveness of the use of farmer cards (EPKT) and the distribution
	of subsidized fertilizer (PPS). The correlation coefficient value of 0.342 indicates
	that there is a weak relationship between the variable effectiveness of the use of
	farmer cards and the distribution of subsidized fertilizer. So it can be concluded
	that the Effectiveness of the Use of Farmer Cards on the Distribution of
	Subsidized Fertilizer in Taliwang District, West Sumbawa Regency, has a
	significant influence.
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Corresponding Author: Herlina Universitas Teknologi Sumbawa Email: <u>herlina.marhaeningsih@gmail.com</u>

# 1. INTRODUCTION

The aim of agricultural development in Indonesia is to increase food security and improve the welfare of farmers. However, there are still obstacles in utilizing ineffective production components in an effort to achieve this goal. Fertilizer is one of the agricultural inputs that is very important in the production of agricultural commodities because it influences plant growth so that plants can produce maximum output (Fahmi and Maria, 2020). Implementing a policy of providing subsidized fertilizer to farmers is one of the government's efforts to increase agricultural production and productivity in supporting the country's economic growth and development.

PT Pupuk Indonesia (Persero) is responsible for the procurement and distribution of subsidized fertilizer domestically for the national agricultural sector, in accordance with Principle 6 (six) Right from Line I to Line IV, in accordance with Regulation of the Minister of Trade of the Republic of Indonesia Number 15/M- DAG/PER/4/2013 concerning Procurement and Distribution of Subsidized Fertilizer for the Agricultural Sector. Principle 6 (six) Right is the principle of providing and distributing subsidized fertilizer which includes the right type, right quantity, right price, right place, right time and right quality.

The government has a policy to provide fertilizer to farmers through fertilizer subsidies. However, in its implementation, there are obstacles such as supervision, procurement and distribution of fertilizer that is not on target, scarcity, misuse and price increases for farmers (Budi, et al., 2021). The government's effort to overcome this problem is by issuing the Tani Card program. The Tani Card Program is a government program to regulate and monitor the distribution of subsidized fertilizer to target farmers who meet the requirements (Ardhiansyah, et al., 2018).

Effectiveness is measured as the level of success in carrying out a task or to assess whether a goal or program has been achieved or not. Noormansyah, et al. (2023) found out how effective the use of the farmer's card program was in Manonjaya District using five indicators: understanding the program, right on target, on time, achievement of goals, and real change. On the other hand, Marindang, et al. (2023), revealed that effectiveness is closely related to the implementation of all existing main tasks, achievement of goals, timeliness, and active involvement of members. Effectiveness also represents the relationship between the goals and results set, as well as the suitability between the goals set and the results achieved.

West Sumbawa Regency is one of the regions that runs the Farmer Card Program. In the process of distributing subsidized fertilizer using farmer cards, Kec. In 2024, Taliwang will receive the largest allocation of subsidized fertilizer compared to other sub-districts. This requires that the distribution of subsidized fertilizer be carried out in accordance with applicable regulations, so that it can reach the rightful farmers directly.

However, it has not been proven whether the farmer card program has been implemented evenly and effectively in the district. Taliwang. Therefore, this research was conducted to determine the effectiveness of the use of the farmer's card program in the distribution of subsidized fertilizer in Kec. Taliwang, West Sumbawa Regency.

#### 2. RESEARCH METHOD

This research uses a quantitative descriptive approach based on statistical information. Data collection methods applied in this research include: Observation, Interviews, Questionnaires and Documentation. The population in this research are all farmers receiving subsidized fertilizer allocations in Taliwang District who are officially registered in the Taliwang District e-RDKK in 2024. Sampling in this study was carried out using the Slovin Method, so the number of samples obtained was 97.64 samples and rounded up. into 100 samples. Data collection methods applied in this research include: Observation, interviews, questionnaires and documentation. Data were analyzed using the Guttman Scale.

# 3. RESEARCH RESULT

Respondent characteristics describe the general profile of the respondents involved in this research. The respondents of this research are farmers registered in the e-RDKK application in Taliwang District, West Sumbawa Regency. The characteristic aspects of respondents in this study include gender, age, education level, occupation other than

farming, length of farming, land area, land status, and ownership of a farmer's card. This research used 100 farmers as respondents who came from all farmers in Taliwang District spread across 14 villages/districts.

Category	Indicator	Percentage (%)
Gender	Man	92 %
	Woman	8 %
Age	21 - 30	1 %
	31 - 40	8 %
	41 - 50	32 %
	51 - 60	41 %
	61 – 70	12 %
	> 70	6 %
Level of education	No school	6 %
	SD	40 %
	JUNIOR HIGH	13 %
	SCHOOL	
	SMA	34 %
	College	7 %
Labor America Errore Erroreine	<b>T</b> 1	57.0/
Jobs Apart from Farming	There is	57 % 43 %
	There isn't any	43 %
Farming for a long time	1 - 5	7 %
<u> </u>	6-10	3 %
	> 10	90 %
	0.70.77	
Land area	< 0.50 Ha	26 %
	0.5 Ha – 1.00 Ha	55 %
	> 1.00 Ha	19 %
Land Status	One's own	82 %
Land Status	Belonging to Others	18 %
	Deronging to Outers	10 /0
Farmer Card Ownership	There is	94 %

# Tabulation of Respondent Identification Results

#### Source: Primary data (2024), processed.

Based on the research results, the characteristics of the respondents show that gender is dominated by men, with a percentage of 92%, the remaining 8% of respondents are women. Respondents were in the productive age range (18 to 59 years), 82% of whom were elderly farmers ( $\geq 60$  years), 18%. The type of education level is dominated by elementary education level, namely 40%, followed by high school education level at 34%. The level of junior high school education is 13%, tertiary education is 7%, while those with no education are 6%.

Types of work other than farming are dominated by respondents who have jobs other than farming, namely 57%. The remaining 43% only earn their living as farmers. The majority of respondents consisted of farmers who had been running their farming business for more than 10 years, namely 90%.

Respondents were dominated by farmers who had land areas between 0.5 Ha - 1.00 Ha, namely 55%. Of the other respondents, 26% had a land area < 0.50 Ha and 19% had a land area > 1.00 Ha. Farmers who run farming businesses on their own land are 82%. Another 18% of respondents carry out farming on land owned by other people by cultivating or renting it. Research respondents were dominated by farmers who already had farmer cards, namely 94%. Meanwhile, another 6% of respondents have registered with e-RDKK but their farmer cards have not been issued by BRI bank.

Indicator	Percentage	Category
a. Program Understanding Indicators	77 %	Quite Effective
b. On Target Indicator	100 %	Very Effective
c. Timely Indicators for Program	80 %	Quite Effective
Implementation		
d. Indicators of Goal Achievement	52 %	Ineffective
e. Indicators of Real Change	93 %	Very Effective
Effectiveness of Farmer Card		Quite Effective
Utilization	78 %	

Percentage of Respondents' Answers Based on Each Indicator of the Effectiveness of Farmer Card Utilization

Source: Primary data (2024), processed.

Based on the research results, it can be seen that the overall effectiveness of using the Farmer Card is categorized as quite effective because it has a percentage of 78%. If we look at each indicator, the Program Understanding Indicator as a whole is included in the Fairly Effective category, because it has a percentage of 77%. The on-target indicator is categorized as Very Effective because it has a percentage of 100% where all respondents answered Yes or agreed to each statement. The Timely Indicator for Program Implementation is categorized as Quite Effective because it has a percentage of 80%. The indicator for achieving this goal is categorized as ineffective because it has a percentage of 52%. The Real Change Indicator is categorized as Very Effective because it has a percentage of 93%.

Percentage of Respondents' Answers Based on Subsidized Fertilizer Distribution Indicators

Indicator	Percentage	Category
a. Exact Aspect Amount	47 %	Ineffective
b. Exact Aspect Type	82 %	Effective
c. Aspect of the Right Place	89 %	Effective
d. Timely Aspect	66 %	Quite Effective
e. Quality Aspects	100 %	Very Effective
f. Aspect of Right Price	25 %	Very Ineffective
Distribution of Subsidized Fertilizer	67 %	Quite Effective

Source: Primary data (2024), processed

Overall, the distribution of subsidized fertilizer is categorized as quite effective because it has a percentage of 67%. If we look at each Program Implementation Sub-Indicator, the Exact Price Aspect is categorized as Very Ineffective with a percentage of 25%, the Exact Quantity Aspect is categorized as Ineffective with a percentage of 47%. The Timely Aspect is categorized as Quite Effective with a percentage of 66%, the Right Type and Right Place Aspects are categorized as Effective with a percentage of 82% and 89% respectively. Meanwhile, the Accurate Quality Aspect is categorized as Very Effective with a percentage of 100%.

		correlations		
			Kat_EPK	
			Т	Kat_PPS
Spearman' s rho	Kat_EPK T	Correlation Coefficient	1,000	.342**
		Sig. (2-tailed)		,000
		Ν	100	100
	Kat_PPS	Correlation Coefficient	.342**	1,000
		Sig. (2-tailed)	,000	
		Ν	100	100

# Spearman Rank Correlation Test Results Using SPSS Correlations

\*\*. Correlation is significant at the 0.01 level (2-tailed).

Source: Primary data (2024), processed.

The results of the Spearman Rank Correlation Test show that the correlation coefficient (r) is 0.342 and the significance value (2-tailed sig.) is 0.000. This shows that there is a significant relationship between the effectiveness of the use of farmer cards (EPKT) and the distribution of subsidized fertilizer (PPS). The correlation coefficient value of 0.342 indicates that there is a weak relationship between the variable effectiveness of the use of farmer cards and the distribution of subsidized fertilizer. Even though the correlation is weak, the positive coefficient value indicates that the increase in the effectiveness of the use of farmer cards is accompanied by an increase in the distribution of subsidized fertilizer. **Discussion** 

# Analysis of the Effectiveness of Farmer Card Utilization

Based on the results of the research conducted, it can be seen that overall, the effectiveness of the use of Farmer Cards is quite effective. This shows that the use of farmer cards in Taliwang District is not optimal.

# **Program Understanding Indicators**

Knowledge and understanding of a program is a very important aspect to maximize the implementation of a program or activity. (Marindang, et al, 2023). Based on the results of this research, it is known that overall, the understanding of farmers in Taliwang District regarding the Farmer Card program is quite effective. This shows that the understanding of farmers in Taliwang District is not optimal regarding the farmer card program. The government is conducting outreach and understanding of the farmer's card program to all related parties, such as the Agricultural Extension Center (BPP), Field Agricultural Instructors (PPL), subsidized fertilizer retailers, and farmer groups in Taliwang District. a. Sub indicators for the requirements for making farmer cards and sub indicators for issuing farmer cards

Based on the results of the research that has been carried out, it is known that respondents' understanding of the sub-indicators of the requirements for making farmer cards and the sub-indicators for issuing farmer cards is categorized as very effective. This shows that farmers in Taliwang District's understanding of the requirements for making farmer cards and issuing farmer cards is very optimal. The requirements for making a farmer's card referred to in this research are that farmers must be members of a farmer's group; farmers must collect a photocopy of their e-KTP and a photocopy of their Family Card to be registered by officers in the SIMLUHTAN application and farmers must be registered in the SIMLUHTAN application. The procedure for issuing a Farmer's Card referred to in this research includes taking a farmer's card which must be accompanied by an e-KTP and Family Card, a Farmer's Card given to farmers in the form of a special BRI Bank ATM card and a Savings Book. Collecting the Farmer's Card of course involves BRI Bank as the Farmer's Card issuer in Taliwang District and PPL as the officer accompanying the farmer Card program.

b. Sub indicator of farmer card benefits and sub indicator of purchasing subsidized fertilizer using a farmer card

Based on the results of the research that has been conducted, it is known that the level of respondents' understanding of the sub-indicator of the benefits of the farmer's card and the sub-indicator of purchasing subsidized fertilizer using the farmer's card is categorized as quite effective. This shows that the understanding of farmers in Taliwang District regarding the benefits of farmer cards and the procedures for purchasing subsidized fertilizer using farmer cards is inadequate. The majority of farmers do not know that purchasing fertilizer via a farmer's card is a transaction using an EDC machine (*Electronic Data Capture*) at retail kiosks makes it possible to display information regarding fertilizer, most farmers do not receive a receipt that includes information about the remaining fertilizer quota they have

Often the process of purchasing subsidized fertilizer in Taliwang District is carried out by farmers by handing over cash to the retail kiosk, the subsequent transaction is carried out by the retail kiosk themselves without the farmer knowing, the farmer even leaves his farmer's card for the retailer to keep. So the majority of farmers do not make their own transactions using the EDC machine. This is in accordance with research by Anisa and Adnan (2021), which states that farmer cards are not fully effective when used to purchase subsidized fertilizer. This situation is caused by machine network limitations *Electronic Data Capture* (EDC) required to swipe the farmer's card at the retail kiosk. Apart from that, the EDC machine often experiences problems and cannot read the subsidized fertilizer allocation for each farmer. In addition, most of the farmers' agricultural card balances have not been filled.

#### **On Target Indicator**

On target refers to the application of the target rules that have been set for Farmer Card recipients. The success of this target is determined by the background and program objectives. The background to the farmer card program focuses on problems related to inaccurate targeting of subsidized fertilizer recipients. Based on research that has been conducted, it is known that the farmer's card program has very effective targeting accuracy in distributing subsidized fertilizer. This shows the implementation of the farmer card program in Kec. Taliwang has run according to the desired targets.

Thus, the existence of a farmer's card can function as a control in the distribution of subsidized fertilizer to the community, especially to farmers. The main target of the Farmer's Card program is farmers who are registered with e-RDKK, with a land area of under 2 ha (hectares) and have a farming business on specified commodities, namely rice, corn, soybeans, chilies and shallots.

#### **Timely Indicators for Program Implementation**

The timeliness of program implementation refers to the extent to which a program is implemented according to the specified schedule. The effectiveness of program implementation can be measured from the actual use of time in distributing subsidized fertilizer using farmer cards. Based on the results of research that has been carried out, it is known that the timeliness of the farmer card program is quite effective. This shows that the implementation of the farmer card program in Kec. Taliwang has not fully run according to the expected time.

The transaction process for purchasing subsidized fertilizer using a farmer's card is quite fast, in line with the government's expectations. However, the process of issuing farmer cards assigned to Bank BRI, as well as the distribution of subsidized fertilizer, has not been implemented optimally or on time. In the opinion of Noormansyah, et al (2023), the time required for issuing farmer cards varies in processing, because the issuance of farmer cards is in collaboration with banks as financial institutions.

#### **Indicators of Goal Achievement**

The achievement of the goals of a program can be seen from the extent to which several goals that have been determined from the start can be implemented well. Based on the results of research that has been carried out, it is known that the Tani Card program is not effective in achieving its goals. This shows that the implementation of the Farmer Card program in Taliwang District is not in accordance with the stated objectives. The expected objectives of implementing the farmer's card include the use of the farmer's card by the community for saving, checking subsidized fertilizer balances, seeing the amount of subsidized fertilizer allocation and for subsidized fertilizer redemption transactions.

Apart from being used to get subsidized fertilizer, farmer cards can also be used to save like ATM cards in general. However, one of the obstacles faced in implementing the farmer card program in Taliwang District is the reluctance of people to save using farmer cards. In this study, only 2% of respondents used farmer cards to save. In accordance with the opinion of Noormansyah, et al (2023), the reason why farmers do not use and do not use farmer cards to save is for complicated reasons, which means they have to go to the bank or ATM, and the location is relatively far from where they live. Apart from that, most of the respondents in this study were elderly, namely the majority were over 50 years old. They rarely use ATMs and think that if they want to save, they don't need to use a farmer's card. Therefore, it is better to separate the farmer card from the program to develop savings habits.

Often the process of purchasing subsidized fertilizer in Taliwang District is carried out by farmers by handing over cash to the retail kiosk, the subsequent transaction is carried out by the retail kiosk themselves without the farmer knowing, the farmer even leaves his farmer's card for the retailer to keep. So the majority of respondents in this study did not use farmer cards to check their subsidized fertilizer balance or the amount of their subsidized fertilizer allocation.

#### **Indicators of Real Change**

Real changes can be seen from the real changes that occur in the distribution of subsidized fertilizer as a result of the implementation of the farmer card program. Based on research conducted, it was found that the farmer card program was very effective in providing real change. This shows that the impact of using farmer cards provides real changes that are optimally felt by farmers.

Most respondents felt that the implementation of the Tani Card program made it easier for farmers to obtain subsidized fertilizer. The price of subsidized fertilizer which is much lower compared to non-subsidized fertilizer helps reduce and reduce production costs. This has a good impact on increasing farmers' income in the district. Taliwang. According to Meliyanawati, et al (2020), economic reasons are the main factor that encourages farmers to use and implement the Farmer's Card, with the hope of being able to obtain subsidized fertilizer at more affordable prices, so that expenditure and costs of purchasing fertilizer can be reduced.

#### Analysis of the Effectiveness of Subsidized Fertilizer Distribution

Distribution of subsidized fertilizer includes distribution, control and supervision of subsidized fertilizer in accordance with the 6 right principles, namely right quantity, right type, right place, right time, right quality and right price. Based on the results of research that has been carried out, it is known that the overall distribution of subsidized fertilizer is quite effective. This shows that the distribution of subsidized fertilizer in Taliwang District is not optimal in implementing the 6th principle correctly.

a. Quality Aspect Indicators

Judging from the appropriate quality sub-indicators, the distribution of subsidized fertilizer is categorized as very effective. This shows that the distribution of subsidized fertilizer in Kec. Taliwang has been optimal in distributing subsidized fertilizer in line with the principles of appropriate quality. This is in accordance with the opinion of Permataningrum, et al (2022), seen from an exact quality perspective, the majority of farmers stated that the fertilizer they received met the expected quality standards, even though the quality was not as good as non-subsidized fertilizer. The subsidized fertilizer distributed is not fake fertilizer and its quality is always guaranteed every planting season. This subsidized fertilizer also contributes to the maintenance of plants managed by farmers. By ensuring the quality of this fertilizer, it is hoped that it will have an impact on the productivity of the crops cultivated by farmers.

b. Exact Type Aspect Indicator and Exact Place Aspect Sub Indicator

Judging from the sub-indicators of right type and right place, the distribution of subsidized fertilizer is categorized as effective. The distribution of subsidized fertilizer in Taliwang District is not yet fully optimal in accordance with the principles of right type and right place. In terms of the exact quantity and type, the majority of farmers have received subsidized fertilizer in accordance with the quantity and type proposed in the RDKK, and the type of fertilizer provided is also in accordance with the commodities they cultivate. Regarding the exact location, most farmers stated that the location to buy fertilizer was close to where they lived. Easy access to retailers, supported by good infrastructure and transportation, as well as good facilities from retailers, makes farmers understand the farmer card program better.

c. Timely Aspect Indicator

Judging from the timely sub-indicator, the distribution of subsidized fertilizer is categorized as quite effective. This shows that the distribution of subsidized fertilizer in Taliwang District has not been optimal in accordance with the principle of being on time.

# d. Exact Aspect Indicator Quantity

Judging from the exact quantity sub-indicator, the distribution of subsidized fertilizer is categorized as ineffective. This shows that the distribution of subsidized fertilizer in Taliwang District is not optimal according to the principle of right quantity.

The amount of subsidized fertilizer quota provided by the Ministry of Agriculture to West Sumbawa Regency is still less than the amount needed. The fertilizer quota provided is still insufficient, forcing the West Sumbawa Regency Agricultural Service to wisely regulate it so that this fertilizer shortage does not affect farmers' harvests. The policy taken is to divide the fertilizer allocation quota to each region proportionally according to the land area.

According to Raharjo (2022), there are still differences in perspectives between farmers, the government and agricultural extension workers regarding determining the quota amount for fertilizer requirements listed on the farmer's card, even though the fertilizer allocation has been adjusted to the Highest Retail Price (HET). The fertilizer quota set based on government policy is not sufficient to meet the agricultural needs of farmer groups, due to the reduction in the quota limit which does not reach 100%.

e. Price Precise Aspect Indicator

Judging from the appropriate price sub-indicator, the distribution of subsidized fertilizer is categorized as very ineffective. This shows that the distribution of subsidized fertilizer in Taliwang District is not optimal in accordance with the principle of right price.

# Analysis of the Effect of Effectiveness of Farmer Card Utilization on the Distribution of Subsidized Fertilizer

Based on the results of the statistical analysis that has been carried out, it can be seen that there is an influence between the effectiveness of the use of farmer cards (EPKT) and the distribution of subsidized fertilizer (PPS). The correlation coefficient value shows that there is a weak correlation between the effectiveness of the use of farmer cards and the distribution of subsidized fertilizer. This is due to indicators of the effectiveness of the use of farmer cards which do not fully support the distribution of subsidized fertilizer more effectively, as well as the government's very important role in implementing the farmer card program. Ideally, when buying subsidized fertilizer, farmers should bring their farmer's card to the designated retail kiosk and carry out the transaction by swiping the card on the available EDC machine or do it independently. However, the actual situation is that farmers tend to only hand over their farmer cards to retail kiosks, because they find it difficult to carry out transactions themselves, so the retail kiosks end up carrying out the transactions.

A positive correlation coefficient value indicates that the higher the effectiveness of the use of farmer cards, the higher the distribution of subsidized fertilizer. In terms of understanding the farmer's card program, this is a crucial factor in maximizing the program's implementation. By increasing farmers' understanding of the farmer's card program, the distribution or distribution of subsidized fertilizer in accordance with the six right principles will also increase. Apart from that, the real changes felt by farmers because they use farmer cards to redeem subsidized fertilizers can increase the effectiveness of subsidized fertilizer distribution.

# 4. CONCLUSION

Based on the research results, it can be concluded that:

- 1. Overall, the effectiveness of card uses in Taliwang District, West Sumbawa Regency is quite effective. Sequentially, indicators of program understanding are in the Quite Effective category, Target Accuracy is in the Very Effective category, Program Implementation Accuracy is in the Quite Effective category, Achievement of Goals is in the Ineffective category, Real Change is in the Very Effective category.
- 2. Overall, the effectiveness of subsidized fertilizer distribution in Taliwang District is quite effective.
- **3.** The effectiveness of the use of Farmer Cards on the Distribution of Subsidized Fertilizer in Taliwang District, West Sumbawa Regency, has a significant influence.

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