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ANALYSIS OF FERTILIZER PURCHASING DECISIONS FOR PALM OIL FARMERS ON THE INFLUENCE OF TYPE, QUANTITY AND PRICE OF FERTILIZER IN PARDAMEAN LABUHANBATU REGENCY

ANALISIS KEPUTUSAN PEMBELIAN PUPUK PETANI KELAPA SAWIT TERHADAP PENGARUH JENIS, JUMLAH, DAN HARGA PUPUK DI PARDAMEAN KABUPATEN LABUHANBATU

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ABSTRACT

The aim of this research is to find out how much influence the type of fertilizer, quantity and price of fertilizer has on the decision to purchase fertilizer among oil palm farmers in Perdamean Dalam Village, Rantau Selatan District, Labuhanbatu Regency. In this research, the sample used was 83 oil palm farmers. The data analysis method in this research is quantitative descriptive. The results of this research show that the type of fertilizer, quantity and price of fertilizer have a positive and significant effect on the decision to purchase fertilizer among oil palm farmers in Perdamean Village, Rantau Selatan District, Labuhanbatu Regency, while the type of fertilizer has a positive and but not significant effect on the decision to purchase fertilizer. Based on the results of simultaneous tests, the variables of fertilizer type, quantity and price of fertilizer influence purchasing decisions. Keywords: Fertilizer Type, Price, Purchasing Decision.

Key-words: fertilizer prices, fertilizer purchases, palm oil farmers, perdamean village

INTISARI

Tujuan penelitian ini adalah untuk mengetahui seberapa besar pengaruh jenis pupuk, jumlah dan harga pupuk terhadap keputusan pembelian pupuk pada petani kelapa sawit di Desa Perdamean Dalam Kecamatan Rantau Selatan Kabupaten Labuhanbatu. Dalam penelitian ini sampel yang digunakan adalah 83 petani kelapa sawit. Metode analisis data dalam penelitian ini adalah deskriptif kuantitatif. Hasil penelitian menunjukkan bahwa jenis pupuk, jumlah dan harga pupuk berpengaruh positif dan signifikan terhadap keputusan pembelian pupuk pada petani kelapa sawit di Desa Perdamean Kecamatan Rantau Selatan Kabupaten Labuhanbatu, sedangkan jenis pupuk mempunyai pengaruh positif dan signifikan terhadap keputusan pembelian pupuk pada petani kelapa sawit di Desa Perdamean Kecamatan Rantau Selatan Kabupaten Labuhanbatu. berpengaruh positif dan tidak signifikan terhadap keputusan pembelian pupuk. Berdasarkan hasil pengujian secara simultan variabel jenis pupuk, jumlah dan harga pupuk berpengaruh terhadap keputusan pembelian. Kata Kunci : Jenis Pupuk, Harga, Keputusan Pembelian.

Kata kunci : harga pupuk, pembelian pupuk, petani kelapa sawit, desa perdamean

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INTRODUCTION

This research focuses on the decision to use fertilizer for oil palm farmers in developing their oil palm farming yields. The aim is to obtain maximum production results and quality. Fertilizer is material given to plants or soil to provide nutrients to plants. Plants need fertilizer so they can develop and grow well. Fertilizer aims to increase plant productivity and improve the quality of the harvest. Fertilizers generally come in liquid form, some are solid and some are gaseous. Fertilizer is made from organic or inorganic materials. Fertilizer is very important because it can provide fertility to the soil that is given fertilizer.

According to Pinem, and Safrida, (2018), in making purchasing decisions there are several factors. These include the type of fertilizer, quantity and price of fertilizer. According to (Zulfida, I. 2023). Factors that influence a consumer's decision to buy a product usually come from the consumer themselves. And he is ready to accept future risks that will arise.

Types of fertilizer are a diversity of several categories of fertilizer on the market with different contents. (Della 2021). These factors influence purchasing decisions for oil palm farmers in using fertilizer for their agricultural land, including the type of fertilizer. The types of fertilizer available are generally divided into two main categories, namely, fertilizer made from animal waste and chemical fertilizer. Fertilizer from animal waste or what is usually called organic fertilizer is made from cow dung, as well as food and plant waste.

Farmer income also greatly influences farmer satisfaction in using fertilizer, because if the farmer has a low income but has a large number of family dependents then the farmer cannot buy subsidized fertilizer and use subsidized fertilizer. However, if the farmer's income is high and the family has many responsibilities, farmers will still be able to buy and use fertilizer. Farmers' income is obtained from the amount of production per kilo multiplied by the selling price.

Several types of organic fertilizer include while inorganic fertilizer is made through chemical industrial processes and consists of various kinds of nutrients. The quantity required for oil palm cultivation varies depending on the condition of the land or soil and other cultivation factors such as cultivar, age of the plant and altitude (Solehat et al., 2017). The quantity of fertilizer available on the market is also a consideration for oil palm farmers, because if the amount of fertilizer on the market is small or in other words it also becomes an obstacle for oil palm farmers in cultivating oil palm. Related to this research is the quality of fertilizer
(Nasution, and Wardana, 2020)

(The price of an item or product is also the basis before farmers make a decision to buy fertilizer for oil palm farmers in deciding what fertilizer to use so that oil palm farmers usually tend to use (Yudianto et al., 2023). Labuhanbatu Regency consists of nine sub-districts including Rantau Selatan District. Perdamean Dalam Subdistrict is the village with the largest majority of oil palm farmers in Rantau Selatan District. From these problems, it can be concluded that the problem in this research is how the type of fertilizer, quantity and price of fertilizer influence the decision to purchase fertilizer in Perdamean Village in Rantau Selatan sub-district, Labuhanbatu regency.

RESEARCH METHODS

The research method used in this research is the quantitative analysis method. Where the population in this study were 505 oil palm farmers in Perdamean Dalam Subdistrict.

Table 1 List of Palm Oil Farmers Perdamean Village

No.	Hamlet name	Number of Palm Oil Farmers
1.	Nausea	35
2.	In A	80
3.	In B	55
4.	Jati Mulyo	80
5.	Java A	35
6.	Answer	24
7.	Aek Bontar	30
8.	Advanced Java	16
9.	Mardugu	20
10.	Hope	45
11.	New village	10
12.	Happy Bookie	45
13.	Like Want	30
Amount		505

Source: BPS Labuhanbatu Regency.

Thus, using the Slovin calculation formula, the researcher determined as many samples as:83 respondents from the total population. This means that there will be 83 respondents in this study. The analytical method used in this research is multiple linear regression. Hypothesis testing is the T test and F test as well as the coefficient of determination test.

RESULTS AND DISCUSSION

Testing Research Instruments Validity Test

The data validity test was obtained from distributing questionnaires to 83 respondents, namely oil palm farmers in Perdamean Dalam Village, Rantau Selatan District, Labuhanbatu Regency.

Table 2 Validity test results for Fertilizer Types

No	r- count	Table r	Note
A.1	319	0.210	Really different
A.2	453	0.210	Really different
A.3	278	0.210	Really different
A.4	329	0.210	Really different

Source: Data Processed by Researchers, 2023.

Based on table 2, the validity test starts from the validity test of the fertilizer type variable (X1), the calculated r value is greater than the r table. Then it is declared valid.

Table 3 Quantity Validation Test Results (X2)

No. Statement Items	R value Calculate	r value Table	Information
B.1	284	0.210	Really different
B.2	386	0.210	Really different
B.3	273	0.210	Really different
B.4	461	0.210	Really different
B.5	292	0.210	Really different

Source: data processed by SPSS, 2023.

Based on table 3, the results of the validity test, the calculated r value is greater than the r table value of 0.213, so the question for the quantity variable is declared valid.

Table 4 Price Validity Test Results (X3)

No. Statement Items	R value Calculate	r value Table	Information
C.1	319	0.210	Really different
C.2	402	0.210	Really different
C.3	283	0.210	Really different

Source: data processed by SPSS, 2023.

Based on table 3, the results of the validity test, the calculated r value is greater than the r table value of 0.213, so the question for the price variable is declared valid.

Table 5 Validity Test Results Purchase Decision (Y)

No. Statement Items	R value Calculate	r value Table	Information
D.1	271	0.210	Really different
D.2	316	0.210	Really different
D.3	295	0.210	Really different
D.4	348	0.210	Really different
D.5	402	0.210	Really different

Source: Data in SPSS Processing, 2023.

Based on table 3, the results of the validity test, the calculated r value is greater than the r table value of 0.213, so the question for the Purchase Decision variable is declared valid.

Reliability Test Results

Table 6 Reliability Test Results

Variable	Number of Items	*Cronbach's Alpha*	Information
X1	4	0.795	Reliable
X2	5	0.962	Reliable
X3	3	0.806	Reliable
Y	5	0.938	Reliable

Data source processed by SPSS, 2023.

Based on table 3, the results of the value validity testCronbach's alpha was greater than 0.6.then the question for the Purchase Decision variable is declared valid.

Results of Multiple Regression Analysis

Following are the results of multiple regression analysis in table 7.

Table 7 Results of Multiple Regression Analysis**.**

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	**Std. Error**	**Beta**	**t**	**Sig.**
1	(Constant)	3,278	1,386		2,157	,001
	Fertilizer Type (X1)	,362	,079	,182	1,124	,001
	Fertilizer Strength (X2)	,374	,084	,314	2,306	,001
	Fertilizer Price (X3)	,392	,076	,318	1,253	,001

Source: Data Processed by Researchers, 2023.

The constant value is 3,278, meaning that if the value of fertilizer type, quantity and fertilizer price is 0, then the purchasing decision value will increase by 3,278. The coefficient of the fertilizer type variable is 0.362, meaning that every one unit increase will influence purchasing decisions by 0.362. The quantity variable coefficient is 0.374, meaning that every one unit increase will influence purchasing decisions by 0.374. The variable coefficient for fertilizer type is 0.392. Shows that if the fertilizer price variable increases by one unit, purchasing decisions will increase by 0.392.

Results of Coefficient of Determination Analysis

The following are the results of the research determination analysis:

Table 8. Coefficient of determination test results

Model	*R*	*R Square*	*Adjusted Square*	*R Std. Error of the Estimate*	*Durbin-Watson*
1	.924a	,850	,895	,541	2,531

Source: Data processed by SPSS, 2023

Based on table 8, the R-square value is 0.850. This means that purchasing decisions are influenced by the variable type of fertilizer, quantity and price of fertilizer by 85.0% and the remaining 15% can be explained by variables not studied.

t Test Results

Table 9 t test results

Model		*Unstandardized Coefficients*		*Standardized Coefficients*		
		B	*Std. Error*	*Beta*	*Q*	*Sig.*
1	(Constant)	3,278	1,386		2,157	,001
	Fertilizer Type	,362	,079	,182	1,124	,001
	Fertilizer Strength	,374	,084	,314	2,306	,001
	Fertilizer Prices	,392	,076	,318	1,253	,001

Source: Data Processed by Researchers, 2023.

Based on table 9, it can be seen from the calculated t value that it is greater than the t table value 1.124>0.682. and the significant value is 0.001 > 0.05, then the type of fertilizer has a positive and significant influence on fertilizer purchasing decisions. The calculated t value is greater than the t table value 2.346 > 0.682. and the significant value is 0.001 > 0.05, then quantity has a positive and significant influence on fertilizer purchasing decisions. The calculated t value is greater than the t table value 1.253 > 0.682. and the significant value is 0.001 > 0.05, then the price of fertilizer has a positive and significant influence on fertilizer purchasing decisions.

F test

The F test is used to test whether the independent variables together have an influence on the dependent variable. The following are the results of research regarding the test

Table 10 F Test Results

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	78,378	2	25,482	115,825	,000b
	Residual	15,401	83	,210		
	Total	91.804	83			

Based on Table 10, it can be seen that the significance level of the F test simultaneously or together has a significant influence on the purchasing decision variable. This is because the significance value is smaller than 0.05.

Discussion

Based on the results of the analysis of the author's research regarding "Analysis of the Influence of Type, Quantity and Price of Fertilizer on Fertilizer Purchasing Decisions for Palm Oil Farmers in Perdamean Village in Rantau Selatan District, Labuhanbatu Regency", the following conclusions were obtained: Partially the type of fertilizer (X1), Partially Fertilizer quantity (X2) has a positive and significant effect on the decision to purchase fertilizer (Y) in Perdamean Dalam Village, Rantau Selatan District, Labuhanbatu Regency. with a value of tcount (2.306) > ttable (0.213) with a significance level of 0.001 < 0.05. , Partially, the price of fertilizer (X3) has a positive and significant effect on the decision to purchase fertilizer (Y) in Perdamean Dalam Village, Rantau Selatan District, Labuhanbatu Regency. with a value of tcount (1.253) > ttable (0.213) with a significance level of 0.001 < 0.05. Meanwhile, simultaneously the type of fertilizer (X1), quantity of fertilizer (X2), and price of fertilizer (X3) or together have a significant influence on the fertilizer purchasing decision variable (Y) in Perdamean Village in Bilah District.

According to Zulfida *et al.* (2015), Through empowerment programs it is hoped that the government can collaborate with farming communities so that costs can be reduced or saved. The village community empowerment program, which generally involves farming, is like a "vitamin" that will increase economic vitality in rural areas. However, in order for these "vitamins" to be effectively implemented, incentives are needed, both in the form of fiscal ones such as tax relief, licensing and subsidies.

CONCLUSION

1. Type of fertilizer (X1), quantity of fertilizer (X2), and price of fertilizer (X3) both partially and simultaneously have a significant influence on the fertilizer purchasing decision variable (Y) in Perdamean Village in Bilah District.
2. Decisions to use subsidized fertilizer that have a real influence on the use of subsidized fertilizer include perception (5%) and knowledge (10%).
3. The level of farmer satisfaction with subsidized fertilizer, based on the range of consumer satisfaction index with the value obtained shows that the farmer satisfaction index

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