Journal of Agribusiness Management and Development, Vol 5 No 1 March 2024, Page 69-79
ISSN 2775-0248 (Print) ISSN 2775-0256 (Online)
Available at https://journal.ugm.ac.id/v3/JAMADEV/

DETERMINANT FACTORS OF FARMERS' DECISIONS IN PURCHASING LIQUID ORGANIC BIOFERTILLIZER PT GREAT GIANT FOODS LAMPUNG

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Received : 4 January 2024 Accepted : 7 February 2024 Published : 30 March 2024

ABSTRACT

In Indonesia, organic fertilizer was known before the green revolution era. However, the green revolution led farmers to choose inorganic fertilizer because it was cheaper and more practical. Increased use of inorganic fertilizers has resulted in reduced agricultural productivity and land degradation, thereby reinvigorating interest in organic farming. In fact, agricultural land in South Lampung Regency in 2013 experienced an increase of 6.91% in the last 10 years. PT Great Giant Foods (PT GGF) as the largest pineapple industry in Indonesia, processes its production waste into Liquid Organic Biofertilizer (LOB) organic fertilizer. The objectives of this research are (1) to determine farmers' behavior in making decisions to purchase LOB organic fertilizer; and (2) to determine the external and internal factors that influence farmers' purchasing decisions for LOB organic fertilizer in South Lampung Regency. The method used in this research is descriptive analysis to answer the first problem and multiple linear regression analysis for the second problem, which is then implemented in the form of descriptive analysis. The results of this research show that: (1) farmers use organic fertilizer to improve production quality. Their main source of information is fellow farmer friends or neighbors. Other organic fertilizer options used are guano fertilizer and manure. The decision to use LOB is influenced by fellow farmers and heads of farmer groups with purchasing locations from agents. Farmers' responses to LOB were positive, especially in protecting plants from pests and increasing plant growth; (2) LOB purchasing decisions are influenced by external factors such as culture, reference group, and family, as well as internal factors including motivation, the role of age, and the role of education.

***Keywords**: consumer behavior, external factors, internal factors, LOB, purchasing decision.*

INTRODUCTION

In Indonesia, organic fertilizer was known to farmers before the green revolution era. After the green revolution, the majority of farmers switched to artificial fertilizers because of their practicality, greater availability, more affordable prices, but the negative impacts on the environment and agricultural production began to be felt. Awareness of these impacts has encouraged several farmers to switch to organic farming (Roidah, 2013).

Various research results have identified that the productivity of most agricultural land has decreased and has experienced land degradation, especially due to the very low organic content in the soil, namely 2%. In fact, to obtain optimal productivity, around 2.5% organic carbon is needed. Organic fertilizer is very useful for increasing agricultural production, both quality and quantity, reducing environmental pollution, and improving land quality in a sustainable manner (Ariani, 2020). Based on the results of the census conducted by the South Lampung Regency Central Statistics Agency in 2013, the average area of agricultural land controlled by agricultural business households in South Lampung Regency has increased compared to the census results 10 years ago. The average area of land controlled per household is 8,627.77 m^2, an increase of 6.91% compared to 10 years ago which was recorded at only 5,371.40 m^2 with the number of agricultural households in South Lampung Regency decreasing from 159,866 households in 2003 to 134,152 households in 2013 (ST2013 BPS South Lampung Regency).

PT Great Giant Foods (PT GGF), the world's third largest pineapple producer in Lampung, is one of the main players in the production of Liquid Organic Biofertilizer (LOB) organic fertilizer. Pineapple production liquid waste is used to produce LOB which is rich in nutrients, containing microbes, phytohormones and bacteria that are beneficial to plants (Sutanto and Lubis, 2017). LOB has the advantage of restoring soil nutrients, increasing fertility and increasing plant resistance.

The factors that influence farmers' decisions in purchasing PT GGF LOBs are the focus of research, considering that purchasing decisions are influenced by criteria such as farmers' needs, tastes and purchasing power, as well as internal and external factors that influence farmer behavior (Kotler and Keller, 2009; Dharmmestha and Handoko, 2016).

This research, entitled "Factors that Influence Farmers' Decisions in Purchasing Liquid Organic Biofertilizer PT Great Giant Foods Lampung," is expected to contribute to the development of the liquid organic fertilizer industry in Indonesia.

METHOD

Basic Method

This research uses a descriptive analysis method to provide an overview of farmers' purchasing decisions for Liquid Organic Biofertilizer (LOB) organic fertilizer from PT Great Giant Foods. This method aims to create a systematic, factual and accurate picture of the facts and characteristics of the population in an area. Data is collected through gathering information regarding farmers' decisions in purchasing LOBs.

Sampling Method

The research was carried out at the agricultural shop "Inbio Tani Nusantara," a subsidiary of PT Great Giant Foods, which markets and distributes LOB. The location was chosen in Candipuro District, South Lampung Regency, because it is a marketing target for PT Great Giant Foods and has a significant area of agricultural land. The purposive sampling method was used for location selection.

The research population was farmers of productive age (15-64 years) in South Lampung Regency (134,152 households). Samples were taken using purposive sampling and snowball sampling methods, identifying farmers who use LOB. The number of respondents taken was 65 people, following Bailey's Theory which recommends at least 30 respondents for statistical analysis.

Types, Sources, and Collection of Data

The data collected is primary and secondary data. Primary data is obtained directly from respondents through questionnaires, including information about name, age, address, gender, education level, occupation, income, and factors that influence LOB purchasing decisions. Secondary data is data obtained from indirect sources. This data contains a general description of the research location and research-related matters (Sugiyono, 2012). The methods used in collecting data for this research were questionnaires, interviews, observation, literature study and documentation.

Data analysis method

The data analysis method used to answer the first problem is the descriptive analysis method, while to answer the second problem is to use multiple linear regression analysis, then implemented in the form of descriptive analysis, before carrying out multiple linear regression analysis, an instrument feasibility test is required (validity and reliability tests) and assumption tests (normality, multicollinearity and heteroscedasticity tests).

The data needed for the second problem are external factor variables (culture, social class, reference group, and family) and internal factors (motivation, perception, role of age, work in farming, and role of education).

1. Validity and Reliability Test

In this research, validity testing was carried out using IBM SPSS Statistics 25.0 software. The validity test is seen based on the calculated R value which is compared with the table R value. Table R value, which is obtained based on the number of samples. In this study the number of samples was 65, and the alpha value used was 10%, so that based on the calculated R table, the R table value was 0.2058. If the calculated R value > R table, then the question items in the questionnaire are declared valid.

Reliability testing in this research was carried out using IBM SPSS Statistics 25.0 software. The question item for each variable is declared reliable if the Cronbach's Alpha value is > 0.6 (Sugiyono, 2011)

2. Normality, Multicollinearity and Heteroscedasticity Tests

The normality test is carried out to evaluate the normal distribution of the regression model, confounding variables, or residuals. Successful regression analysis requires the assumption of normality of distribution. The normality test was carried out using One Sample Kolmogorov-Smirnov, with Asymp results. Sig (2-tailed) > 0.05 indicates that the data has a normal distribution.

The multicollinearity test aims to identify the existence of correlation between independent variables in the regression model. The regression model is considered good if the independent variables do not have a high correlation. To evaluate multicollinearity, tolerance values and *variance inflation factor* (VIF) values are used, with a VIF value < 10 indicating that multicollinearity does not occur (Nugraha, 2022).

The heteroscedasticity test is carried out to check whether there is unequal variance in the residuals between observations.

Heteroskedasticity can be found by looking at the scatterplot graph. If there is no special pattern and the variance does not change significantly, then the model is considered free from heteroscedasticity. A good regression model is one that does not show heteroscedasticity (Ghozali, 2016).

3. Multiple Linear Regression Test

Multiple linear regression analysis was used to test the second hypothesis, namely, knowing the factors that influence the decision to purchase LOB organic fertilizer.

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + b_7 X_7 + b_8 X_8 + b_9 X_9 + e$$

Information:

Y	= Fertilizer Purchase Decision Organic LOB (Score)
a	= Constant Value
b1 – b9	= Regression coefficient
X1	= Culture (*Score*)
X2	= Social Class (*Score*)
X3	= Reference Group (*Score*)
X4	= Family (*Score*)
X5	= Motivation (*Score*)
X6	= Perception (*Score*)
X7	= RoleAge (Score)
X8	= Work Efficiency in Business Tani (Score)
X9	= Role of Education (*Score*)
e	= Error factor

Hypothesis test:

Ho: It is suspected that external factors (culture, social class, reference group, and family), internal factors (motivation, perception, the role of age, work in farming, and the role of education) do not significantly influence farmers' decisions in purchasing LOB organic fertilizer in South Lampung .

Ha: It is suspected that external factors (culture, social class, reference group, and family), internal factors (motivation, perception, the role of age, work in farming, and the role of education) have a significant influence on farmers' decisions in purchasing LOB organic fertilizer in South Lampung.

In multiple linear regression analysis using SPSS 25.0 software, the test results will provide the following information:

a) R square or coefficient of determination will show the percentage of the dependent variable that can be explained by the independent variable. If there are more than two independent variables being tested, it is recommended to use the adjusted R square value. The R square or adjusted R square value ranges from 0 to 1. The higher the value, the greater the contribution of the independent variable in explaining variations in the dependent variable.

b) The ANOVA test or F test is used to find out whether the independent variables together influence the dependent variable. If the significance value (sig) in the ANOVA test results is less than the α value (10%), then it can be concluded that at least one independent variable significantly influences the dependent variable. This means that there is a significant relationship between the independent variables as a whole and the dependent variable.

c) The T test is used to evaluate the influence of each independent variable on the dependent variable individually. Conclusions can be drawn based on the significance value (sig) in the T test results. If the sig value is less than the specified α value (10%), then the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted, which means there is a significant influence of the independent variable on the dependent variable. However, if the sig value is greater than or equal to the α value, then Ho is accepted and Ha is rejected, which means there is no significant influence of the independent variable on the dependent variable.

RESULTS AND DISCUSSION

1. Farmer Behavior in Making Decisions to Purchase Liquid Organic Biofertilizer (LOB) Organic Fertilizer in South Lampung Regency

The farmer's organic fertilizer purchasing decision process involves five stages, starting from identifying the situation and awareness of needs to searching for product information, evaluating alternatives, making purchasing decisions, and finally the post-purchase experience which includes satisfaction regarding the use of the organic fertilizer that has been purchased.

a. Identify Needs

Farmers begin the process of purchasing organic fertilizer when they feel the need due to the transition to organic farming. Inbio Tani Nusantara agricultural shop as a distributor of Liquid Organic Biofertilizer (LOB), needs to understand farmers' expectations to offer appropriate products.

The results of data analysis show that 84% of farmers buy organic fertilizer to improve production quality, 11% to increase production quantity, and 5% to reduce the risk of pests and diseases.

The majority of farmers, 84%, focus on improving the quality of their produce, especially in rice crops, with the hope that the yield will be more nutritious and rich. Although the percentage is lower, 11% of farmers prioritize increasing production levels, while 5% believe organic fertilizer can reduce the risk of pests or disease. These findings indicate farmers' emphasis on improving the quality of agricultural products through the use of organic fertilizer.

b. Information search

After identifying needs, farmers look for information about organic fertilizer for agricultural land. They consult with friends, farmer group leaders and relatives to increase their agricultural knowledge.

The results of data analysis show that 77% of the information came from friends or neighbors of fellow farmers, 15% from farmer group leaders, and 8% from relatives. Field findings show that fellow farmers are the main source of knowledge about Liquid Organic Biofertilizer (LOB) organic fertilizer. The involvement of fellow farmers in sharing information is very important because they have direct experience in using LOB organic fertilizer on their respective farms, providing farmers with a practical understanding of the benefits and effects of LOB organic fertilizer.

c. Evaluation of Alternatives

The third stage in a farmer's purchasing decision to use organic fertilizer is evaluating alternative products. After getting information about organic fertilizer products, farmers carry out evaluations to choose products that suit the farmer's needs.

Based on findings in the field, there are various types of organic fertilizer available in relatively large quantities. Therefore, farmers must carefully consider the type of organic fertilizer that will be an alternative choice for use on their agricultural land other than Liquid Organic Biofertilizer (LOB) organic fertilizer. Some alternative organic fertilizers that are widely used by the public are 55% guano fertilizer, 31% manure, 8% green manure, and 6% compost.

Guano fertilizer is the choice most widely used by farmers with a percentage of 55%. Guano fertilizer is a solid organic fertilizer made from animal waste, namely bats, and contains rich nutrients such as nitrogen, phosphorus and potassium. Guano fertilizer is a type of organic fertilizer that is effective in improving soil conditions and providing nutrients for plants, and to increase the organic matter content of the soil and improve the physical properties of the soil, especially soil structure and porosity so that the amount of nutrients needed by plants is more available (Lukman, 2022).

Manure is a solid form of fertilizer that comes from the manure of livestock such as chickens, goats, cows, and others. Manure is the second choice with a percentage of 31%. This shows that this fertilizer is also considered effective and beneficial for a large number of farmers.

Only a small number of farmers choose to use 8% green manure and 6% compost. Green fertilizer is liquid fertilizer that comes from the decomposition of plant residues, while compost fertilizer is liquid fertilizer in the form of a solution from the decomposition of organic materials originating from plant residues, animal and human waste. Even though both are known to be beneficial for soil fertility, these fertilizers are less popular than guano or manure fertilizer.

d. Buying decision

At this stage, farmers make decisions regarding purchasing organic fertilizer. Fertilizer purchasing decisions are influenced by external factors, such as external parties who encourage farmers to buy and choose Liquid Organic Biofertilizer (LOB) organic fertilizer.

Based on findings in the field, it was found that 70% of farmers bought organic fertilizer at the encouragement of friends/neighbors, 15% of farmer group leaders, 12% of relatives, and 3% of extension workers. Based on the research results, it was found that the majority of farmers, with a percentage of 70%, chose to buy LOB organic fertilizer because they received encouragement or advice from their friends or neighbors. This shows that opinions or experiences from friends and neighbors have a big impact on farmers' decisions to buy LOB type fertilizer.

Then as many as 15% of farmers decided to buy LOB organic fertilizer based on advice or encouragement from the head of their farmer group. This indicates that in the farming community, farmer group leaders still have little influence in providing product recommendations to their members.

As many as 12% of farmers bought LOB organic fertilizer based on recommendations or advice from their relatives. This shows that families have an important role in making purchasing decisions, which may be based on positive experiences or information they have about the fertilizer.

As many as 3% of farmers purchased LOB organic fertilizer based on advice from extension workers. Even though the percentage is small, this shows that there are still some farmers who trust the direction of extension workers in agricultural matters, especially regarding fertilizer products.

Furthermore, based on findings in the field, the place to purchase Liquid Organic Biofertilizer (LOB) organic fertilizer also has a significant role in determining the purchase of organic fertilizer. Places where farmers purchase fertilizer vary.

The research results show that the majority of farmers, with a percentage of almost 69%, choose to buy LOB organic fertilizer from their neighbors who are agents or partnerships of the Inbio Tani Nusantara agricultural shop. This is due to the limited access experienced by farmers in reaching official shops, so agents are considered the best solution because they have locations that are closer or more easily accessible to farmers. Apart from that, the limited information regarding the Inbio Tani Nusantara store makes agents act as intermediaries who provide further explanations or provide additional encouragement for purchases.

As many as 31% of farmers choose to buy LOB organic fertilizer at the Inbio Tani Nusantara agricultural shop. This shows that there are some farmers who prefer to get LOB organic fertilizer from official stores. This happens because of the ease of access for some farmers to reach the official Inbio Tani Nusantara shop, because their agricultural land is not too far from the official shop. Apart from that, some farmers choose to buy from official stores because they offer standard prices.

e. Post-Purchase Behavior

After the farmer purchases Liquid Organic Biofertilizer (LOB) organic fertilizer, the farmer will evaluate the results of the purchase. This evaluation can be in the form of a positive response from farmers towards the fertilizer. The beliefs and attitudes formed at this stage will influence their purchasing intentions in the future. Farmers' responses to organic fertilizers are also very diverse.

Based on the research results, researchers can conclude that farmers' responses to Liquid Organic Biofertilizer (LOB) organic fertilizer are relatively positive. The more positive the farmer's response to a product, the higher the farmer's desire to use the LOB organic fertilizer product. Farmers' positive response to LOB organic fertilizer will also influence fertilizer use in the future.

Based on Table 6.1.5, it was found that as many as 23% of farmers responded very well to LOB organic fertilizer. They explained that by using LOB organic fertilizer, the harvest results were better and they were satisfied with the results obtained. Apart from that, using LOB organic fertilizer is also considered easy.

As many as 63% of farmers responded well to LOB organic fertilizer. They stated that by using LOB organic fertilizer on rice plants, the plants were safe from pest and disease attacks. Plant growth also looks relatively good with green leaves. Apart from that, for corn and chili plants, the plants become fresh, healthy and sturdy after using LOB organic fertilizer.

Meanwhile, 14% of farmers gave normal/medium responses to LOB organic fertilizer. They stated that LOB organic fertilizer is good, but when it is applied when it rains, it is not effective on plants. Apart from that, the smell of LOB organic fertilizer is considered very strong. Even though the results obtained are quite good, the price is still considered quite expensive for cultivating chili plants.

2. External and Internal Factors that Influence Farmers in Decisions to Purchase Liquid Organic Biofertilizer (LOB) Organic Fertilizer in South Lampung Regency

There are several factors that are thought to influence farmers in their decision to purchase Liquid Organic Biofertilizer (LOB) organic fertilizer in South Lampung Regency. The factors that are thought to influence are divided into two, namely internal factors and external factors. The external factors tested in this research consist of culture, social class, reference group, and family for external factors, while the internal factors consist of motivation, perception, the role of age, work in farming, and the role of education.

Testing of these factors is carried out using multiple linear regression analysis which will be tested using IBM SPSS 25. The dependent variables used are culture, social class, reference group, family, motivation, perception, the role of age, work in farming, and the role of education. The following is the first hypothesis test regarding the factors that influence consumers' decisions to purchase Liquid Organic Biofertilizer (LOB) organic fertilizer in South Lampung Regency.

a. Hypothesis test

Ho: Fexternal actors (culture, social class, reference group, and family), internal factors (motivation, perception, the role of age, work in farming, and the role of education) do not significantly influence farmers' decisions in purchasing LOB organic fertilizer in South Lampung.

Ha: Fexternal actors (culture, social class, reference group, and family), internal factors (motivation, perception, the role of age, work in farming, and the role of education) significantly influence farmers' decisions in purchasing LOB organic fertilizer in South Lampung.

b. Significance Level

This research uses a significance level of 10% or 0.1 with N= 65.

c. Statistic test

The factors that influence farmers in their decision to purchase Liquid Organic Biofertilizer (LOB) organic fertilizer in South Lampung Regency can be seen from the results of multiple linear regression analysis tests in table 1.

Table 1. Factors determining the decision to purchase LOB organic fertilizer

Variable	*Expected sign*	Regression Coefficient (b)	*Standard Error*	tcount	sig
(Constant)	+	13,627***	1,308	10,415	0,000
Culture	+	0.517***	0.124	4,174	0,000
Social class	+	-0.010^{NS}	0.076	-,132	0.896
Reference Group	+	0.125*	0.069	1,814	0.075
Family	+	0.210**	0.073	2,866	0.006
Motivation	+	0.235**	0.096	2,335	0.036
Perception	+	-0.118^{NS}	0.076	-1,558	0.125
The Role of Age	+	-0.175**	0.086	-2,043	0.046
Employment in Farming	+	-0.102^{NS}	0.112	-,917	0.363
Role of Education	+	0.349***	0.065	5,387	0,000
Adjusted R Square	0.457				
Fcount	6,978				0,000

Note:*: Significant at 10% alpha
**: Significant at 5% alpha
***: Significant at 1% alpha
NS: Not significant
Source: Primary Data Analysis, 2023

Based on Table 1, it can be seen from the results of multiple linear regression analysis of the factors determining the decision to purchase Liquid Organic Biofertilizer (LOB) organic fertilizer. The table displays the Fcount value of 6.978 > Ftable 1.75 with a significance value (Sig) from the research results of 0.000 < 0.1, meaning that H0 is rejected and Ha is accepted so it can be concluded that the dependent variable on the decision to purchase LOB organic fertilizer is jointly influenced by the independent variables are culture, social class, reference group, family, motivation, perception, the role of age, work in farming, and the role of education. So that the variables of culture, reference group, family, motivation, and the role of education together have a significant positive influence on the decision to purchase LOB organic fertilizer. On the other hand, the variables of social class, perception, the role of age, and work in farming together have a significant negative influence.

Then, it can be seen that the Adjusted R Square value is 0.457 which states that the variables culture, social class, reference group, family, motivation, perception, the role of age, work in farming, and the role of education can explain the dependent variable in the decision to purchase Liquid Organic Biofertilizer organic fertilizer. (LOB) was 45.7%, while the other 54.3% was influenced by other factors not examined in this study. Furthermore, based on the results of multiple linear regression analysis in Table 1, the following regression equation is obtained.

$Y = 13,627 + 0,517\ X_1 - 0,010\ X_2 + 0,125\ X_3 + 0,210\ X_4 + 0,235\ X_5 - 0,118\ X_6 - 0,175\ X_7 - 0,102\ X_8 + 0,349\ X_9 + e$

Information:

Y	= Fertilizer Purchase Decision Organic LOB (Score)
a	= Constant Value
b1 – b9	= Regression coefficient
X1	= Culture (*Score*)
X2	= Social Class (*Score*)

X3 = Reference Group (*Score*)
X4 = Family (*Score*)
X5 = Motivation (*Score*)
X6 = Perception (*Score*)
X7 = RoleAge (Score)
X8 = Work Efficiency in Business Tani (Score)
X9 = Role of Education (*Score*)
e = Error factor

From the results of the regression equation above, a constant value of 13,627 is obtained. This shows that if the conditions of the cultural variables, social class, reference group, family, motivation, perception, role of age, work in farming, and role of education are considered zero or have not changed, then the average score of purchasing decisions for Liquid Organic Biofertilizer (LOB) produced was 3,41, which indicates that farmers will refer to purchasing LOB organic fertilizer. The following is a description of the factors determining the decision to purchase Liquid Organic Biofertilizer (LOB) organic fertilizer in South Lampung Regency.

Based on Table 1, it shows the results of multiple linear regression analysis. In this table, you can see all the independent variables that are considered to be factors that have a significant or insignificant influence on farmers' decisions in purchasing Liquid Organic Biofertilizer (LOB) organic fertilizer in South Lampung Regency. The independent variable is said to influence variable Y (Decision to purchase LOB organic fertilizer) significantly if it has a significance value (Sig.) of more than alpha or 0,1. The following are the results of the criteria for testing factors that are thought to have an influence on farmers' decisions in purchasing Liquid Organic Biofertilizer (LOB) organic fertilizer in South Lampung Regency.

1. Culture

Based on Table 1, it is known that the cultural variable has a regression coefficient (b) of 0.517 with a significance value of 0.000. This significance value is smaller than the value $\alpha = 0.1$ (10%). This means that cultural variables have a real and significant influence on the decision to purchase Liquid Organic Biofertilizer (LOB) organic fertilizer.

This research shows that a culture of sustainable agriculture and a preference for practicality and efficiency influence decisions to purchase Liquid Organic Biofertilizer (LOB) organic fertilizer by farmers in South Lampung Regency. LOB contains indigenous microbes such as Bacillus Pumilus, Bacillus Subtilis, Bacillus Thuringensis (Biocontrol), Pseudomonas sp, and phytohormones, which can stimulate soil nutrients, providing an alternative solution to restore agricultural land productivity. Using LOB organic fertilizer is considered easy and fast, saves time, so cultural factors have a significant influence on purchasing decisions in South Lampung Regency.

This finding is in line with research by Nasution and Prana (2020) which shows that culture is an external factor that influences purchasing decisions. Multiple linear regression analysis shows that cultural variables have a positive and significant influence on the decision to purchase LOB organic fertilizer. The regression coefficient for cultural variables on purchasing decisions is 0.517, indicating that a one unit increase in cultural variables will increase purchasing decisions for LOB organic fertilizer by 0.517. Thus, the higher the culture where farmers live, especially sustainable agriculture and practical and efficient tendencies, the higher the decision to purchase LOB fertilizer in South Lampung Regency.

2. Social class

Based on Table 1, it is known that the social class variable has a regression coefficient (b) of -0.010 with a significance value of 0.896. This significance value is greater than the value $\alpha = 0.1$ (10%). This means that the social class variable does not have a real and significant effect on the decision to purchase Liquid Organic Biofertilizer (LOB) organic fertilizer. The expected sign value for the social class variable is positive, while the regression coefficient results are negative, this shows that the relationship between the social class variable and the decision to purchase LOB organic fertilizer in South Lampung Regency is inversely proportional. This means that the higher the social class variable, the lower the decision to purchase LOB organic fertilizer in South Lampung Regency.

This research shows that the farmer's social class, which includes middle income and secondary education level, does not influence the decision to purchase LOB organic fertilizer. Increasing farmer income does not increase LOB purchases, because farmers prefer other liquid organic fertilizers with higher quality and benefits. This finding is in line with research by Rinendy et al., (2023) which states that individuals with high incomes prefer quality products. The farmer's secondary education level also has no impact on the decision to purchase LOB organic fertilizer, because farmers, regardless of education level, still make purchases based on practical knowledge. They can gain knowledge through experience, training, or counseling. This finding is consistent with research by Nasution and Prana (2020) which shows that social class does not significantly influence purchasing decisions.

3. Reference Group

Based on Table 1, it is known that the reference group variable has a regression coefficient (b) of 0.125 with a significance value of 0.075. This significance value is smaller than the value $\alpha = 0.1$ (10%). This means that the reference group variable has a real and significant influence on the decision to purchase Liquid Organic Biofertilizer (LOB) organic fertilizer.

This research shows that reference groups, such as the influence of mass media advertising and participation in farmer groups, influence the decision to purchase LOB organic fertilizer. Mass media advertising, such as pamphlets, provides educational information about the benefits and advantages of LOBs, increases farmer understanding, and encourages purchasing. Participation in farmer groups builds a sense of trust between members, making recommendations from fellow members more credible and convincing.

In the multiple linear regression test, the reference group variable (the influence of advertising and farmer groups) has a positive and significant effect on LOB purchasing decisions. The analysis shows that the higher the influence of the reference group, the higher the LOB purchasing decision. This finding is consistent with research by Sumarwan (2011) which shows that reference groups can influence consumer choices because they are believed to have better knowledge.

4. Family

Based on Table 1, it is known that the family variable has a regression coefficient (b) of 0.210 with a significance value of 0.006. This significance value is smaller than the value $\alpha = 0.1$ (10%). This means that the family variable has a real and significant influence on the decision to purchase Liquid Organic Biofertilizer (LOB) organic fertilizer.

The expected sign value and the regression coefficient results are both positive, this shows that the relationship between family variables and the decision to purchase LOB organic fertilizer in South Lampung Regency is directly proportional. This means that the higher the family variable, the higher the decision to purchase LOB organic fertilizer in South Lampung Regency.

The family in this research is the family as the provider of recommendations and suggestions and influences from families who also use LOB organic fertilizer. This is in line with research conducted by Towoliu and Tumbuan (2017) which states that the family has a significant influence on purchasing decisions. The family factor has an influence because farmers will tend to feel more confident and trusting if relatives in the family recommend the product, moreover farmers will be more confident and trusting if their relatives have used the product so farmers will buy LOB organic fertilizer because its quality has been tested.

5. Motivation

Based on Table 1, it is known that the motivation variable has a regression coefficient (b) of 0.235 with a significance value of 0.036. This significance value is smaller than the value $\alpha = 0.1$ (10%). This means that the motivation variable has a real and significant influence on the decision to purchase Liquid Organic Biofertilizer (LOB) organic fertilizer.

The motivation in this research is satisfaction with the results obtained and previous experience of use which is based on statements from farmers in the field stating that their motivation for buying LOB organic fertilizer is to improve and improve the soil quality of their agricultural land where LOB organic fertilizer itself is able to stimulate nutrients. macro and micro soil so that it can be used as an alternative solution for improving agricultural land by restoring the physical, chemical and biological properties of the soil to make it more productive again.

After farmers have experienced the benefits of LOB organic fertilizer in improving soil quality, they will tend to feel satisfied with the benefits they have obtained so that farmers will make another purchase due to their previous experience of using it. This means that the more farmers are motivated by the positive results they experience, the more their need to buy LOB organic fertilizer will increase. This is reinforced by research conducted by Nasution and Prana (2020) which suggests that one of the internal factors that influences purchasing decisions is motivation.

6. Perception

Based on Table 1, it is known that the perception variable has a regression coefficient (b) of -0.118 with a significance value of 0.125. This significance value is greater than the value $\alpha = 0.1$ (10%). This means that the perception variable has no real and significant influence on the decision to purchase Liquid Organic Biofertilizer (LOB) organic fertilizer.

Perception does not influence purchasing decisions because each person has a different perception of a product. Farmers in this study stated that LOB organic fertilizer was easy to apply. However, when spraying, clumping or deposition often occurs in the sprayer. Even though

the price of LOB organic fertilizer is considered affordable, with 1L costing IDR 45,000.00, 2L costing IDR 78,000.00, and 5L costing IDR 190,000.00, there are still other liquid organic fertilizer products that are cheaper. This makes some farmers think twice before buying LOB organic fertilizer.

On the other hand, farmers recognize the benefits and high quality of LOB organic fertilizer. This fertilizer acts as a decomposer for chemical fertilizers that settle in the soil and contains seven types of microbes. These microbes function as nitrogen fixers, phosphorus solvents, potassium solvents, and produce natural phytohormones from their metabolism. However, the effectiveness of this fertilizer decreases when it rains because it is easily dissolved by water and has a quite strong odor. This is reinforced by research conducted by Kotler and Armstrong (2003) which states that under the same circumstances, a person's perception of a product can vary, this is due to the selection process of various existing stimuli.

7. The Role of Age

Based on Table 1, it is known that the role of age variable has a regression coefficient (b) of -0.175 with a significance value of 0.046. This significance value is smaller than the value $\alpha = 0.1$ (10%). This means that the variable role of age has a real and significant influence on the decision to purchase Liquid Organic Biofertilizer (LOB) organic fertilizer.

The role of age in this research is that the role of age influences the farmer's insight in choosing the right organic fertilizer, and the role of age influences the farmer's experience in using organic fertilizer that is suitable for the plants being cultivated. The results of the multiple linear regression test show that the role of age has a negative and significant effect on the decision to purchase LOB organic fertilizer. The role of age variable has a negative regression coefficient, indicating that the higher the farmer's age, the lower the decision to purchase organic fertilizer LOB.

The difference between a positive expected sign and a negative regression coefficient result is caused by age influencing farmers' insight and experience. Older farmers tend to have certain habits and methods of farming, are less open to innovation, and are more comfortable with familiar products. This is reflected in data on the age of LOB organic fertilizer consumers, where elderly farmers (46-65 years) contribute 44%, while farmers under 46 years account for 56%. This finding is consistent with research by Hudani (2020) which shows that the role of age is significant in purchasing decisions.

8. Employment in Farming

Based on Table 1, it is known that the work variable in farming has a regression coefficient (b) of -0.102 with a significance value of 0.363. This significance value is greater than the value $\alpha = 0.1$ (10%). This means that the work variable in farming does not have a real and significant effect on the decision to purchase Liquid Organic Biofertilizer (LOB) organic fertilizer.

The results of this research show that work in farmers' farming businesses consists of conditions where farmers have practical reasons so that they save time and labor costs do not influence farmers in purchasing LOB organic fertilizer. This is because in the decision to purchase LOB organic fertilizer, work in the farming business is not an influential factor because work in the farming business itself requires a lot of time and energy so farmers feel that farmers do not have enough time to evaluate or try new products such as organic fertilizer. LOB.

Farmers tend to stick with what is already known and proven to be effective for farmers, whereas in terms of saving labor costs, higher income farming farmers have other financial priorities and feel that investing in new agricultural products is not a top priority for them. This research is in line with research conducted by Artaningsih (2022), which states that work does not play a role as a factor influencing purchasing decisions.

9. Role of Education

Based on Table 1, it is known that the role of education variable has a regression coefficient (b) of 0.349 with a significance value of 0.000. This significance value is smaller than the value $\alpha = 0.1$ (10%). This means that the variable role of education has a real and significant influence on the decision to purchase Liquid Organic Biofertilizer (LOB) organic fertilizer.

This shows that the role of education has a significant influence where higher education tends to provide farmers with wider access to knowledge and information about agriculture, sustainability and the benefits of LOB organic fertilizer so that it can influence farmers' mindsets, with farmers being more educated. then you will be more likely to understand how LOB organic fertilizer can help improve soil quality, fertility and crop yields.

In addition, farmers with higher education also tend to be more aware of the importance of using organic fertilizer to maintain ecosystem balance and reduce negative impacts on the environment. This causes farmers who have higher education to be more selective in choosing the fertilizer they use. Therefore, they prefer LOB

organic fertilizer because it is considered more environmentally friendly compared to chemical fertilizer. This research is in line with research conducted by Faot (2022), which states that the role of education plays a role as a factor influencing purchasing decisions.

CONCLUSIONS

Based on this research, it can be concluded that at the needs identification stage, farmers are looking for organic fertilizer to meet their organic farming needs, especially in improving the quality of production results.

The information search stage involves consulting various sources, especially friends or neighbors, fellow farmers, to obtain information about organic fertilizer.

The alternative evaluation stage shows that farmers compare and choose organic fertilizers based on needs and preferences, with guano fertilizer and manure being common alternatives to Liquid Organic Biofertilizer (LOB) organic fertilizer.

In the purchasing decision stage, farmers begin to make decisions regarding purchasing organic fertilizer. Purchasing decisions are influenced by external factors, especially encouragement from friends or neighbors, and many farmers buy LOB organic fertilizer from neighboring agents who collaborate with the Inbio Tani Nusantara shop.

At the post-purchase behavior stage, farmers responded positively to the use of LOB organic fertilizer, observing its benefits on plant growth and health.

Factors that influence purchasing decisions include culture, reference group, and family (external factors), as well as motivation, the role of age, and the role of education (internal factors). Thus, understanding these factors can help develop marketing and extension strategies to increase the adoption of LOB organic fertilizer in South Lampung Regency.

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