Analysis of Price and Product Quality Factors in the Shallot Delayed Sales System (Converting From Kitchen Spices To Seeds) In Rejoso District

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Abstract

The high price fluctuation of shallots poses income uncertainty for farmers, particularly during the harvest season. This study aims to analyze the effects of price and product quality on the delayed selling system, a strategy in which farmers postpone selling shallots until market prices improve. A quantitative approach with multiple linear regression analysis was employed. A total of 96 respondents were selected using the Lemeshow formula, consisting of shallot farmers in Rejoso District, Nganjuk.

The findings reveal that both price and product quality have a positive and significant influence on farmers' decisions to apply the delayed selling strategy. Partially, both variables contribute to the effectiveness of shallot marketing when sold as seeds rather than as consumption products. The study suggests improving seed quality and post-harvest management to support farmers' income stability.

Keywords: price, product quality, delayed selling system shallots seed, farmers.

INTRODUCTION

The marketing of shallots in Indonesia faces various challenges, one of which is extreme price volatility. Onion prices tend to rise during lean seasons and major religious holidays such as Ramadan and Eid al-Fitr, and drop drastically during the peak harvest season. This situation creates uncertainty for farmers and all stakeholders in the supply chain. Amid this price instability, farmers are the most disadvantaged due to their low bargaining power and limited access to market information (Nurjati, 2024).

To maximize their income, red onion farmers need to design and implement various appropriate and sustainable strategies for managing their harvests. One effective strategy that has been adopted by some farmers is the delayed-sale system, which involves postponing the sale of the harvest until market prices rise significantly (Laily, 2024). This strategy allows farmers to earn higher profits compared to selling immediately during the peak harvest season, when prices tend to be low due to an abundance of supply. Additionally, as a form of business diversification and value addition, farmers are also beginning to shift part of their harvest—which was previously used solely as a kitchen spice for daily consumption—into high-quality seeds that command a higher selling price.

Farmers employ the delayed sales system as a marketing strategy to manage fluctuations in agricultural commodity prices, especially for shallots. In this context, delayed sales are defined as the practice of postponing the sale of harvested crops when prices are low—such as during peak harvest seasons (when there is an oversupply)—and selling them at a later date when prices have risen and are more profitable. The primary objective is to increase farmers' income by capitalizing on higher market prices. This plan makes sense because red onions only grow in certain seasons. During the dry season, production is high, but prices fall, while during the rainy

season, production declines and prices surge. Therefore, delayed selling serves as an income stabilization mechanism (Arbi, 2011).

Red onions *(Allium ascalonicum)* are one of the agricultural commodities in high demand in the market. In Indonesia, red onions are not only used as a cooking ingredient but also hold significant economic value. According to the Badan Pusat Statistik (B.P.S., 2024), Rejoso Subdistrict in Nganjuk Regency has proven to be the largest producer of red onions over the past three years, specifically from 2022 to 2024. Based on official data, shallot production in Rejoso reached 644,110 quintals in 2022 and increased to 646,996 quintals in 2023. Although there was a slight decline in 2024 to 566,177 quintals, this figure still makes Rejoso the subdistrict with the highest production volume compared to other subdistricts in the region.

Rejoso's prominence as a shallot production hub is due to various supporting factors, such as the extensive farmland dedicated to shallot cultivation, farmers' skills in intensive crop management, and soil and climate conditions that are highly conducive to shallot growth. This strategic position makes Rejoso a key pillar in the shallot supply chain in East Java and even at the national level.

When implementing the delayed-sale system, farmers consider several factors, including price. Price significantly impacts farmers' income; it is one of the most critical factors underlying farmers' decisions to adopt the delayed-sale system. This system involves not selling the harvest immediately during the peak harvest season but storing it first to sell when market prices are deemed more profitable. The primary reason farmers adopt delayed sales is that during the peak harvest season, red onion production is so abundant that market prices tend to drop. If farmers sell immediately when prices are low, their income is minimal. Conversely, by delaying sales until prices improve, farmers have the opportunity to secure higher selling prices, which directly leads to increased income (Chasanah, 2020).

In a deferred sales system, in addition to price, farmers must consider other factors, such as product quality. Nganjuk shallots are smaller than Brebes shallots. Nganjuk shallots measure only 2.5 centimeters, while Brebes shallots can reach 3 centimeters (Basamalah, 2023). Selling Nganjuk shallots in the form of seeds is a strategic step that can increase the product's value. Tajuk varieties of red onion seeds from Nganjuk Regency have the advantages of relatively long shelf life, high adaptability, and the potential to produce optimal bulb productivity and quality. This variety is known as a superior local variety from Nganjuk that is suitable for medium-term storage (3–4 months), without reducing growth potential and yield (Dardiri, 2019).

When implementing a delayed-sale system, farmers always consider several factors. First is the price factor; price has a significant impact on farmers' income and is one of the most crucial factors underlying farmers' decisions to adopt a delayed-sale system (Chasanah, 2020). Second is product quality; the Tajuk variety of shallot seeds from Nganjuk Regency has the advantage of relatively long shelf life, high adaptability, and the potential to produce optimal bulb productivity and quality (Dardiri, 2019).

This study aims to analyze the influence of two main factors—price and product quality—on the delayed sales system applied in the trade of shallot seeds. A delayed sales system is a strategy that postpones sales until market conditions become more favorable. In this context, the researchers seek to determine the extent to which each factor influences farmers' or business operators' decisions to delay the sale of seeds. Additionally, this study focuses on identifying which factor has the most dominant influence on the delayed sales system. By identifying the most influential factor, the findings of this study are expected to serve as a basis for

strategic decision-making in the marketing and distribution of red onion seeds, making these activities more efficient and profitable.

Based on the background above, the research questions are as follows:

Does the price factor have a partial effect on the delayed sales system for red onions?

Does the product quality factor have a partial effect on the delayed sales system for red onions?

Do the price and product quality factors have a simultaneous effect on the delayed sales system for red onions?

LITERATURE REVIEW

The Marketing Management

According to Dr Saida Zainurossalamia ZA (ZA & S, 2019), marketing management is defined as the art and science of selecting target markets and attracting and retaining consumers by creating, delivering, and communicating superior value to them. The goal is to make a deal that works for both the company and the target market.

Companies use a combination of effective strategies to achieve their marketing objectives through a set of marketing variables known as the marketing mix. This concept was first introduced by Neil Borden, inspired by James Cullington's ideas, and later popularised in the form of the 4Ps by Jerome McCarthy (Adelia et al., 2023).

The marketing mix serves as a strategic planning tool for companies in determining the best approach to attract and retain customers. Effective implementation of the marketing mix can enhance a company's competitiveness, align product strategies with market needs, improve marketing efficiency, and build customer loyalty. Overall, the marketing mix is the cornerstone of marketing management, helping companies make integrated and systematic marketing decisions to create sustainable value for both consumers and the company itself (Adelia et al., 2023).

Price

According to Adelia et al., (2023), price is defined as the amount of money or other form of consideration that consumers must pay to obtain a product or service. However, more than just an exchange value, price also reflects consumers' perceptions of a product's value. In marketing strategy, price plays a crucial role because it determines a product's market positioning. High-priced products are often associated with premium quality, while low prices can attract price-sensitive markets. Additionally, price is the only element in the marketing mix that directly generates revenue for a company, making it a strategic tool in business competition.

Product Quality

According to Adelia et al., (2023), product quality is one of the key elements of the marketing mix that plays a major role in creating customer satisfaction and loyalty. Product quality refers to the extent to which a product is able to meet consumers' needs and desires as promised. In a marketing context, product quality is not limited to the durability and basic functionality of the product but also encompasses aesthetic appeal, design, uniqueness, and the product's ability to offer additional benefits compared to its competitors.

High-quality products can enhance consumer-perceived value and serve as a strong competitive advantage. In marketing strategies, companies must be able to identify product attributes that consumers consider important, such as reliability, ease of use, and quality assurance or warranties. In this way, products are not only functionally appealing but also emotionally and symbolically appealing in the eyes of consumers.

Consumer purchasing decisions closely link to product quality. The higher the quality perceived by consumers, the more likely they are to make repeat purchases, recommend the product to others, and become loyal customers. Therefore, companies need to

consistently maintain and improve the quality of their products to remain relevant and competitive in an ever-changing market (Adelia et al., 2023).

Deferred Sales System

The deferred sales system emerged as a solution to a classic problem in the agricultural commodity production cycle: sharp price fluctuations between the harvest season (dry season) and the planting season (rainy season). When the main harvest occurs and supply increases, the price of shallots drops sharply, causing losses for farmers who sell directly. The delayed sales system provides farmers with an alternative to store their harvest temporarily and sell it when prices rise again (Arbi, 2011).

Red onion farmers employ the delayed sales system as a strategy to postpone the sale of their harvest until market prices rise. This strategy emerged as a response to sharp price fluctuations, particularly during the peak harvest season when supply is abundant and commodity prices drop drastically. Some farmers have adopted this system to minimize losses caused by low market prices during harvest. Deferred sales become an effective alternative when farmers have adequate storage facilities and access to funding during the sales deferral period (Laily, 2024)

Conceptual Framework or Theoretical Framework.

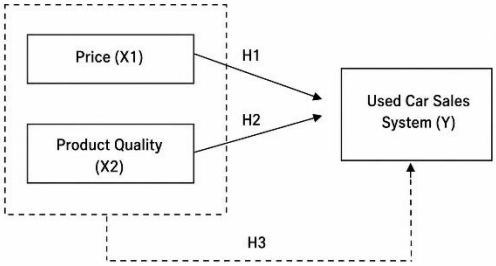


Figure 1. Conceptual Framework

H1: There is a positive and statistically significant partial effect of price on the deferred sales system in Rejoso Subdistrict.

H2: There is a positive and statistically significant partial effect of product quality on the deferred sales system in Rejoso Subdistrict.

H3: There is a positive and statistically significant simultaneous effect of price and product quality on the deferred sales system in Rejoso Subdistrict.

RESEARCH METHODOLOGY

Research Type and Design

The approach used in this study is quantitative, as it involves the calculation of numerical data, which is then analyzed using statistical analysis conducted with the aid of Statistical Product and Service Solutions (SPSS) Version 23.

According to (Sugiyono, 2020), quantitative research is a research method based on the philosophy of positivism. Researchers use this approach to study a specific population or sample by collecting data through standardized research instruments, such as questionnaires or tests. The data obtained is then analyzed quantitatively or statistically, using both descriptive and inferential statistical techniques, with the primary aim of testing previously formulated hypotheses. Quantitative research is deductive in nature, meaning the thought process proceeds from general theories or concepts toward empirical data in the field.

Location: This research was conducted in Rejoso Subdistrict, Nganjuk Regency. Time: This research was conducted from April to June 2025.

Population

A population is defined as the domain of generalization consisting of objects or subjects that share specific characteristics identified by the researcher for study and the drawing of conclusions. In quantitative research, the population must be clearly defined and measurable and share characteristics that align with the variables

under study. The population serves as a crucial foundation for sampling to ensure the validity and generalizability of research findings (Sugiyono, 2020).

The population in this study consists of all farmers who have ever grown shallots and reside in Rejoso Subdistrict, Nganjuk Regency.

Sample

A sample is a portion of the population that possesses specific characteristics or conditions deemed representative. This sample is selected using a specific selection method to ensure it adequately represents the entire population and is expected to yield data relevant to the research (Sari, 2023). A sample is taken when the researcher cannot study the entire population due to limitations in time, manpower, and cost (Sugiyono, 2020).

In this study, the researcher employed a nonprobability sampling technique. Nonprobability sampling is defined as a sampling technique that does not provide equal chances or opportunities for every element or member of the population to be selected as a sample (Sugiyono, 2020).

The method used for sampling was incidental sampling. Incidental sampling is a technique for determining a sample based on chance; that is, anyone who happens to encounter the researcher and is deemed suitable as a data source may be included in the sample. This technique is often used in practical situations or when the researcher lacks the time or access to design a more systematic or complex sampling method (Sugiyono, 2020).

The specific criteria that must be met to qualify as a sample in this study are the following:

a. Farmers in Rejoso Subdistrict.
b. Farmers who have grown shallots.
c. Farmers who have sold shallot seeds.

The sample size in this study was determined using the Lemeshow formula, which is used to determine the sample size in research, particularly when the population under study is not precisely known. The reason for its use is to obtain an accurate representation of a large and undefined population. The Lemeshow formula (Sugiyono, 2018) is as follows: Based on the sample calculation using the Lemeshow formula, a sample size of 96.04 was obtained, rounded to 96 respondents.

Operational Definitions of Variables

Price (X1)

Price is the amount of money or other form of consideration that consumers must pay to obtain a product or service (Adelia et al., 2023). There are several price indicators related to the delayed sales system, such as price fluctuations as a trigger for delayed sales, price as a sales timing factor, a significant influence on the decision to delay sales, strategies for dealing with market instability, and farmer income.

Product Quality (X2)

According to Dardiri, (2019), the quality of Tajuk shallot seeds plays a crucial role in supporting the success of the deferred sales system. According to Dardiri, (2019), product quality indicators that can influence the delayed sales system include seed storage life, germination rate after storage, impact on productivity, quality consistency during storage, and economic potential in the seed market.

Deferred Sales System (Y)

The deferred sales system is a strategy employed by red onion farmers to delay the sale of their harvest until market prices rise (Laily, 2024).

Data Collection Techniques and Instruments

Primary Data

Primary data is obtained directly from the source by the researcher, typically through data collection techniques such as interviews, questionnaires, and direct field observations. This data is unaltered, having never been processed or used previously, and is therefore considered more accurate in depicting the actual conditions of the research subject.

Primary data is particularly crucial when researchers require specific, relevant, and contextually appropriate information aligned with their research objectives (Sugiyono, 2020).

Secondary data

Secondary data consists of information that has been collected, processed, and presented by others and is subsequently reused by researchers to support or supplement ongoing research. Secondary data may include official documents, reports from previous studies, statistical data from government agencies, or scholarly literature such as books and journal articles. Although secondary data is not as up-to-date as primary data, its availability is highly beneficial for expanding theoretical understanding, saving time, and providing an initial framework for analysis. The choice between primary and secondary data depends on the research objectives, the availability of data sources, and the depth of information required (Sugiyono, 2020).

Research data collection instruments

Data collection instruments are defined as tools used to measure research variables objectively and systematically. These instruments are standardized and designed to collect data that can be measured numerically and analyzed using statistical techniques. Types of instruments in quantitative research include tests, questionnaires, structured interview guides, and systematic observation guides (Sugiyono, 2020). In this study, the researcher selected a questionnaire using a Likert scale. The Likert scale is based on the summation of respondents' attitudes toward responding to statements related to indicators of a concept or variable being measured. In this case, the commonly used Likert scale is a five-point scale with a neutral label in the middle.

Instrument Validity and Reliability

Validity Test

A validity test is used to determine whether an instrument is valid for the variables under study. According to Sanusi (2011: 76), in order for the data obtained to have a high level of accuracy and consistency, the research instrument used must be valid and reliable. An instrument is considered valid if it measures what it is intended to measure. The validity test in this study involves correlating the scores obtained for each item or statement with the total score (Sanusi, 2011).

If the calculated r value is greater than the table r value at the 5% significance level, it can be concluded that the statement or question is valid; conversely, if the calculated r value is less than the table r value, the statement or question is invalid (Sanusi, 2011).

Reliability Test

Reliability is a measure of the consistency of measurement results when the same instrument is used by the same person at different times or by different people at the same time or at different times (Sanusi, 2011). Reliability is measured using the Cronbach's alpha statistic with the following criteria:

a. If the alpha value is > 0.60, the instrument is deemed reliable.
b. If the Alpha value is < 0.60, the instrument is deemed unreliable.

Data Analysis Techniques

Classical Assumption Tests

According to Rukajat, (2018), the classical assumption test is one of the statistical techniques that determine whether research data is acceptable, aiming to obtain relevant information to solve a problem.

RESULTS AND DISCUSSION

Results of Classical Assumption Tests

Data Normality Test

In this study, the One-Sample Kolmogorov-Smirnov normality test was used. The results of the normality test show that the standardized Asymp. Sig. value is 0.201, which is greater than 0.05; therefore, it can be concluded that the data are normally distributed.

Multicollinearity Test

The multicollinearity test aims to determine whether there is a high correlation between the independent variables in a regression model by examining the VIF and tolerance values. If the VIF is less than 10 and the tolerance is greater than 0.1, multicollinearity is deemed not to exist. The results of the multicollinearity test can be seen in the following table.

Table 1 Results of the Multicollinearity Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig	Tolerance	VIF
1	Constant	1.784	.660		2.703	.008		
	Price	.131	.162	.139	2.106	.038	.284	3.632
	Product Quality	.774	.862	.822	12.444	.000	.266	3.759

Dependent Variable: Deferred Sales System
Source: Data processed by the researcher, 2025

Heteroscedasticity Test

Heteroscedasticity is a condition in which the variances of the residuals differ across all observations in a regression model. A satisfactory regression model is expected to be free of heteroscedasticity. In this study, the method used to test for heteroscedasticity is the Glejser test.

The Glejser test is conducted by regressing the independent variable against the absolute value of the residuals. Simply put, a residual is the difference between the actual observed value and the predicted value, and the absolute value is the absolute magnitude of that difference. If the significance level between the independent variable and the residuals is greater than 0.05, it can be concluded that there is no heteroscedasticity (Priyatno, 2008).

The results in Table 1 show that the variables Price (X1) 0.699 and Product Quality (X2) 0.134 have significance values greater than 0.05; therefore, it can be concluded that the regression model used in this study is valid and that there is no heteroscedasticity.

Multiple Linear Regression Test

Multiple linear regression is a regression model involving more than one independent variable; multiple linear regression analysis is conducted to determine the direction and magnitude of the influence of independent variables (Ghozali, 2018). Multiple linear regression is used to predict how the dependent variable will fluctuate when two or more independent variables serve as predictor factors. Multiple regression analysis is performed when there are at least two independent variables (Sugiyono, 2017:275).

The regression equation derived from this regression test is:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2$$

$$Y = 1.784 + 0.131\ X1 + 0.774\ X2$$

From the equation above, it can be seen that:

a. The value of $\alpha = 1.784$ refers to the intercept or constant value in relating the deferred sale system variable (Y) to price (X_1). 0.131 and Product Quality (X2) 0.774, which indicates the point where the regression line intersects the Y-axis when the values of these two independent variables are the coefficients.

b. The coefficient β1 for the price variable (X1) is 0.131, meaning that every 1-unit

increase in the price variable will increase the deferred sales system (Y) by 0.162.

c. The β_2 coefficient for the Product Quality variable (X_2) is 0.774, meaning that every 1-unit increase in the Product Quality variable will increase the Deferred Sales System (Y) by 0.862.

Hypothesis Testing Results

t-Test (Partial)

The purpose of this partial test (t-test) is to test for a significant partial effect between the independent variable and the dependent variable. The testing criteria used are as follows:

- If the calculated t-value is greater than the critical t-value at a significance level of less than 5% or 0.05, then the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted.
- If the calculated t-value is less than the critical t-value at a significance level of less than 5% or 0.05, then Ho is accepted and Ha is rejected.

To consult the t-distribution table using a significance level of 5% and 2 = 2.5%, the degrees of freedom (df) for testing the effect are df = n - k - 1, where n is the number of data points and k is the number of independent variables. The calculation of the t-table value is as follows: df = n-k-1 = 96-2-1 = 93. With a two-tailed test (significance level of 0.025 or 5%), the result for the t-table value is 1.986.

Table 2 Results of the T-Test (Partial)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig
1	(Constant)	1.784	.660		2.703	.008
	Price	.131	.162	.139	2.106	.038
	Product Quality	.774	.862	.822	12.444	.000

Dependent Variable: Deferred Sales System

Source: Data processed by the researcher, 2025

Based on Table 2 above, the results of the t-test for each variable can be explained as follows:

a. From the table above, it can be seen that the calculated t-value for the price variable (X1) is 2.106 with a significance value of 0.038. In addition, the critical t-value is 1.986 at a significance level of 0.05. This indicates that the calculated t-value of 2.106 is greater than the critical t-value of 1.986, and the significance value of 0.038 is less than the significance level of 0.05. Therefore, we can conclude that the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. This means there is a significant effect of the price variable (X1) on the deferred sales system variable (Y).

b. It can be seen that the calculated t-value for the product quality variable (X2) is 12.444 with a significance level of 0.000. Furthermore,

Thus, the critical t-value is 1.986 with a significance level of 0.05. These results indicate that the calculated t-value of 12.444 is greater than the critical t-value of 1.986, and the significance value of 0.000 is smaller than the significance level (0.05). Thus, we can conclude that the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. This means that there is a significant effect of the Product Quality variable (X2) on the Sales Deferral System (Y).

F-Test (Simultaneous)

The F-test is designed to assess the combined effect of parameters, meaning the extent to which the independent variables collectively influence the dependent variable. In the F-test, the following two conditions apply:

- If the F significance value is < 0.05, then the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. This means that all independent variables have a significant effect on the dependent variable.
- If the F significance value is > 0.05, then Ho is accepted and Ha is rejected. This indicates that none of the independent variables have a significant effect on the dependent variable.

Using a 5% significance level (α = 0.05) for a two-tailed test, the degrees of freedom (df1) is the number of variables minus 1, and (df2) = n-k-1, where n is the number of data points and k is the number of independent variables. The calculation of the F-table value is performed as follows:

df1 = Number of variables - 1 = 3 - 1 = 2. df2 = n - k - 1 = 96 - 2 - 1 = 93.

With a two-tailed test (significance level of 0.025 or 5%), the F-table value is found to be 3.094 for the following F-test results:

Table 3 Results of the F-Test (Simultaneous)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig
1	Regression	739.077	2	369.538	383.782	.000[b]
	Residual	89.548	93	.963		
	Total	828.625	95			

Dependent Variable: Delayed Sales System
Predictors: (Constant), Product Quality, Price
Source: Data processed by the researcher, 2025

From the results in Table 3, it can be seen that the calculated F-value is 383.782 with a significance level (sig) of 0.000; furthermore, the critical F-value is 3.94 with a significance level of 0.05. From this comparison, it is evident that the calculated F-value of 383.782 is greater than the critical F-value of 3.94, and the significance value of 0.000 is smaller than the significance level of 0.05. Therefore, we can conclude that the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. Thus, it can be concluded that there is a simultaneous (joint) positive and significant effect of the Price (X1) and Product Quality (X2) variables on the Deferred Sales System (Y) variable.

Coefficient of Determination (R^2)

The coefficient of determination is used to measure how much of the variation in predicting the value of Y can be reduced by using the data or information provided by X. If we assume that the value of X makes no contribution to predicting Y, then the best prediction for the value of Y is Y itself. It can be shown that the value of R^2 ranges from 0 to 1. A high R^2 value calculated from a sample does not necessarily mean that the resulting model fits the data in the population. For example, if we use only two data points in a simple regression analysis, we will obtain $R^2 = 1$. Similarly, in general, if we use k data points in a regression analysis with k parameters (k-1 dependent variables), we will always obtain $R^2 = 1$ (Suyono, 2015:83). The following are the results of the coefficient of determination test in this study.

In this study, an R-squared value of 0.892, or 89.2%, was obtained. R-squared,

also known as the coefficient of determination, is a statistical measure that indicates how well the variability of the dependent variable (Deferred Sales System) can be explained by the independent variables (Product Quality and Price).

The adjusted R-squared value from this study was found to be 0.890, or 89%. These results indicate that the regression model involving the variables Product Quality and Price is quite effective in explaining the Deferred Sales System variable.

Discussion

The discussion in this study is based on the application of the t-test and F-test, examining the effects of price (X1) and product quality (X2) on the deferred sales system variable (Y).

The effect of price on the deferred sales system

From the results of the t-test analysis, it can be seen that the calculated t-value for the Price (X1) variable is 2.106 with a significance value of 0.038. In addition, the table t-value is 1.986 with a significance level of 0.05. This indicates that the calculated t-value of 2.106 is greater than the critical t-value of 1.986, and the significance level of 0.038 is less than the significance level of 0.05. Therefore, we can conclude that the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. This means that there is a significant effect of the Price variable (X1) on the Delayed Sale System variable (Y).

These results indicate that price plays a significant role in influencing farmers' decisions to adopt a delayed sales system for shallots. This finding aligns with Chasanah, (2020) view, who explains that price fluctuations are the primary factor driving farmers to delay the sale of their harvest. When market prices drop due to an abundance of supply during the peak harvest season, farmers prefer to delay sales until prices stabilize or rise again.

In the marketing mix theory proposed by Adelia et al., (2023), price is one of the main elements that serves as an indicator of a product's value in the eyes of consumers and as the basis for marketing decisions. In the context of the delayed sales system, price functions not only as a transactional tool but also as a determinant of distribution strategies and timing of sales so that farmers can achieve optimal income.

Thus, the results of this study reinforce the theory that in the marketing of agricultural products, particularly shallots, a price-based delayed-sale strategy can be an effective solution for improving farmers' economic well-being, as also supported by relevant previous research.

The effect of product quality on the delayed sales system.

From the t-test analysis, the calculated t-value for the Product Quality variable (X2) is 12.444 with a significance level of 0.000. Additionally, the critical t-value is 1.986 at a significance level of 0.05. These results indicate that the calculated t-value of 12.444 is greater than the critical t-value of 1.986, and the significance value of 0.000 is smaller than the significance level (0.05). Thus, we can conclude that the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. This means that there is a significant effect of the Product Quality variable (X2) on the Sales Deferral System (Y).

The Tajuk variety of red onion plays a crucial role in delayed-sale practices. According to Dardiri, (2019), Tajuk variety red onion seeds offer advantages in terms of relatively long shelf life, high adaptability, and consistent quality during storage. Maintaining product quality allows farmers to delay sales for a certain period without

worrying about a decline in quality or the seeds' germination capacity.

In marketing mix theory, product quality is a key element influencing consumer satisfaction and market competitiveness (Adelia et al., 2023). High-quality products have better market value and are more sought after by consumers, especially in the shallot seed market, which demands superior quality and optimal growth potential.

Therefore, the results of this study demonstrate that when implementing a delayed-sale system, farmers consider not only price but also the quality of the products they offer. The combination of favorable prices and maintained product quality serves as an effective strategy for red onion farmers in Rejoso Subdistrict to increase their income and ensure the sustainability of their farming operations.

The Effect of Price and Product Quality on the Deferred Purchase System

The calculated F-value is 383.782, with a significance level (sig) of 0.000, as indicated by the results of the calculated F-table. Additionally, the F-table value is 3.094 with a significance level of 0.05. From this comparison, it is evident that the calculated F-value of 383.782 is greater than the table F-value of 3.094, and the significance value of 0.000 is smaller than the significance level of 0.05. Therefore, we can conclude that the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. Thus, it can be concluded that there is a positive and significant simultaneous (joint) effect between the Price (X1) and Product Quality (X2) variables on the Deferred Sales System (Y) variable.

These results indicate that the decision of shallot farmers in Rejoso Subdistrict to implement the delayed sales system is jointly influenced by considerations regarding price and product quality. The better the product quality and the more carefully farmers monitor price fluctuations, the greater their chances of achieving more profitable sales through the delayed sales strategy.

The results of this study align with the marketing mix theory as proposed by Adelia et al., (2023), which asserts that marketing decisions are not determined by a single factor but rather by a combination of several elements, such as price and product quality. Furthermore, in line with Arbi's (2011) view, the delayed-sale system as a marketing strategy in agriculture is influenced by various economic and technical factors, with product price and quality playing a dominant role.

In practice, these results show that farmers who want to use the delayed-sale system successfully need to achieve a balance between the two. Focusing on price without considering product quality has the potential to reduce the product's competitiveness in the market, while maintaining product quality without considering market price dynamics can lead to losses due to storage costs that are not commensurate with the profits obtained.

Thus, this study supports previous theories and research findings and provides an indication that the optimal delayed sales strategy for shallots in the Rejoso Subdistrict is significantly influenced by the synergy between price and product quality factors.

CONCLUSION

Summarize Based on the results of a study conducted among shallot farmers in Rejoso Subdistrict, the following conclusions can be drawn:

1. The price factor has a partial effect on the shallot deferred sales system.
2. The product quality factor has a partial effect on the shallot deferred sales system.
3. The price and product quality factors have a simultaneous effect on the shallot deferred sales system.

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