

# Consumer Preferences on Cut Rose Purchases in Malang Raya

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## ABSTRACT

**Purpose:** This research aims to identify the characteristics of cut-rose consumers in Malang Raya and analyze their preferences for purchasing cut-roses. Attributes for consumer preference regarding color attributes, bloom degree, and stem length.

**Design/Methodology/Approach:** Descriptive statistics and conjoint analysis are the methods used in this research. The respondents to this research study on preferences were individuals residing in the Malang Raya region who had previously purchased cut roses. The total number of respondents in this research study was 150.

**Findings:** The characteristics of the respondents, as indicated by the study's findings, were dominated by women aged 26 to 35 years, with incomes ranging from 3,000,000 to 6,000,000 rupiah and working in the private sector. In general, respondents stated that they purchased cut roses from florists rather than directly from farmers due to the convenience of accessibility. Consumer preference for cutting roses was obtained from a combination of red rose color attributes, a 75 percent bloom rate, and a stem length of more than 50 cm.

**Keywords:** *Consumer Behaviour; Consumer Preference; Cut Roses*

## INTRODUCTION

Indonesia is a country with abundant natural resources. One sector that has a vital role in the national economy is the agricultural sector. Gross Domestic Product, foreign exchange, supply of food and raw materials, poverty alleviation, and employment providers can prove that the agricultural sector has an important role. As much as 35 percent of the workforce is employed in the agricultural sector (Khairiyakh et al., 2016). In addition, the geographical conditions in Indonesia, which have a tropical climate, make it suitable for various plants to grow and develop. Indonesia has various kinds of agricultural commodities, including food crop commodities, plantation crop commodities, and horticultural crop commodities. Horticulture is one of the agricultural sub-sectors that can contribute to an increase in national income. Horticultural commodities consist of fruit, vegetable, medicinal, and decorative plants, which include cut flowers (Puspasari et al., 2017).

Cut flowers are part of horticultural commodities with high economic value and have been commercially propagated for a long time to meet increasing demand. It shows that the cut flower business can be a source of economic growth, which is quite strategic and reliable in agriculture. The growth of harvested land and the output of cut flowers in Indonesia have risen since 2014. However, in 2020, harvested area and productivity fell due to a pandemic in early 2020 (Kementerian Pertanian, 2020).

The cut flower industry, also known as floriculture, is developed in Indonesia to improve farmer welfare, expand existing employment opportunities, expand the travel and tourism industries, and develop a healthy and safe environment. Rose is a floricultural commodity classified as superior in Indonesia's popular cut flower group. In addition to having the potential for development, roses also have a high economic value when cultivated (Indrajati et al., 2022). With the appearance of beautiful, elegant roses and capable of producing fragrances in several varieties, this flower has its charm. It is always sought after by consumers at various events. The need for cut roses as a decorative plant is quite high. Demand can come from the industrial sector, such as hotels and decorations, as well as the household or domestic sector. Cut roses are one of the many decorative plants with high economic value. As one of the horticultural commodities, cut roses have considerable potential and advantages to be developed. Cut roses have a large following (Hasbullah et al., 2006). It is because cut roses have an exclusive aesthetic value and charisma that distinguish them from other cut flowers. Aside from that, the attractive physical appearance causes this flower to have a beautiful appearance, earning it the title of "queen of all flowers."

(Razak, 2016) suggests that consumer behavior is both a physical and mental activity of end consumers and business consumers that includes activities to obtain, consume, and discontinue using products and services, ideas, or certain experiences. Consumer behavior is an element that is important enough to be understood by business actors; besides that, it is also used to be able to find out how an individual will make a decision and make a choice before finally deciding to buy the desired product (Ardelia et al., 2021).

One of the ways to gauge consumer satisfaction is by measuring the level of consumer preference for each attribute of a product or commodity. Preferences can be interpreted as a consumer's likes, choices, or something they favor (Sumarwan, 2003). Preference is also defined as a subjective (individual) taste that is determined by the utility of the attributes possessed by a product or commodity. Later preferences will indicate the level of consumer demand for the offered goods. (Adelawati, 2020) explains that finding out what consumers want requires fairly accurate and detailed market information in which there is an analysis of consumer preference. Producers can find out all the information related to consumers' wants and needs by

conducting studies on consumer preference for a product or commodity.

One of the techniques used to find out the answers from respondents when developing a preference for a product is conjoint analysis. This analysis is based on the thoughts of each consumer in evaluating the value of an object, be it a product or commodity, for the combination of each attribute they have (Adelawati, 2020).

The Malang Raya area is one of the largest cut rose-producing areas in East Java. Malang Raya is a metropolitan area located in East Java. Malang Raya covers the areas of Malang City, Batu City, and Malang Regency. The Bumiaji district in Batu City, East Java, is one of the agricultural centers for rose production. The types of cut roses that are planted also tend to vary; sometimes, several variants are not appealing to consumers but are still cultivated by farmers. An analysis of consumer preference in choosing cut roses is needed to avoid variants that are not very appealing to consumers. It is done so that farmers and retailers can get maximum profits by increasing sales potential. The development of rose cultivation needs to be guided in the right direction for it to satisfy and match the market's demands. This research study will determine how consumers' preferences regarding their desire to purchase cut roses manifest in color, bloom degree, and stem length. Understanding consumer preference characteristics will be essential to develop risk and sales strategies for increasing profitability, market functionality, product quality, and prices (Hinson & Bruchhaus, 2008).

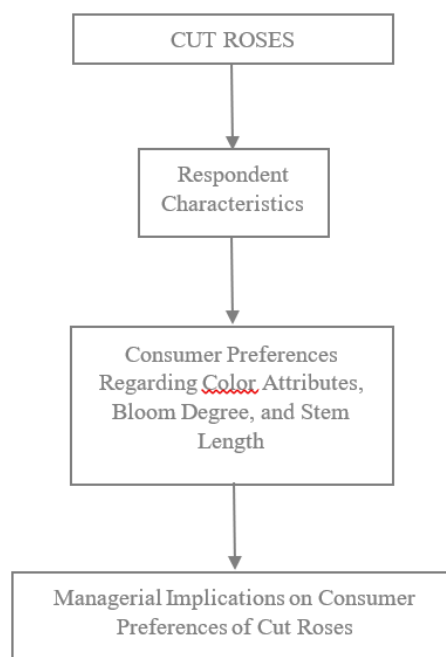
## **METHODS**

The quantitative research method is used in this preference research, and both primary and secondary data sources were used. Primary data collection in this study was carried out by distributing research instruments as questionnaires to the respondents. The questionnaire instrument used in this study consisted of two parts. The first part of the questionnaire explains the consumer characteristics of cut roses. In the meantime, the second part of the research instrument is a questionnaire about consumer preferences regarding cut roses. The second section of the questionnaire consists of assigning a leveled score to each combination of available attributes on a scale from 1 to 10. The order scale indicates the order for evaluating product combinations, from the least preferred to the most preferred by consumers of cut roses. Sampling for the conjoint analysis conducted in this study was based on the non-probability sampling technique, where respondents' information and knowledge were collected using the accidental sampling method. The method is implemented by conducting sampling based on chance. The number of respondents who participated in this study was 150, who had purchased cut roses. The data collection process was carried out in February–April 2023.

In the analysis of consumer characteristics, researchers use descriptive statistics to describe explanations that are expected to

provide a detailed description of each individual's characteristics, which can later influence the pattern of consumer behavior in purchasing a product. The characteristics of consumers discussed in this study include gender, age, occupation, and income.

Additionally, consumer preference analysis was brought out using a conjoint, where the analysis was used to identify the most preferred combination of attributes on cut roses and the relative interest of each attribute in the study. Attributes in this study were assessed using conjoint analysis, including color, bloom degree, and stem length. The conjoint analysis results will later be used to measure each attribute's utility value and interest value. The processing of conjoint analysis uses the SPSS 26 analysis tool and Microsoft Excel 2020. The thinking concept in this research can be seen in the framework in Figure 1.



**Figure 1. Conceptual Framework of the Research Model**

## RESULTS

### Consumer Characteristics

In terms of characteristics by gender, this study, conducted on 150 consumers of cut roses in Malang Raya, showed that 98 consumers were female and the remaining 52 were male. The next characteristic that can be seen from this study is age. In this study, the respondents' dominant age was 26-35 years, or 47.1%, followed by 36-45 years, or 30.4%, and the rest, ages 17-25 years, 46-55 years, and 56-65 years, or 13.7%, 7.8%, and 1%, accordingly. The characteristics of respondents based on income and occupation in this study were dominated by consumers with monthly incomes between Rp. 3,000,000 and Rp. 6,000,000 (46.1%). The occupation held by respondents in this study was as high as 47.1% in the private sector.

As many as 83.3% of respondents admitted buying cut roses at a flower shop or florist.

### Consumer Preference for Cut Roses Purchase

Based on the processing results in Table 1, it can be seen that each sub-attribute displays a distinct utility value. The highest utility value in the first attribute, color, is found in the Red sub-attribute, which equals 0.637.

**Table 1. Results of Utility Value**

Attribute	Sub-Attribute	Value	Consumer Preference
<b>Color</b>	Pink	-0.005	Red
	White	-0.631	
	Red	0.637	
<b>Bloom Degree</b>	50%	-0.035	75%
	75%	0.035	
<b>Stem Length</b>	50 cm	-0.091	More than 50 cm
	More than 50 cm	0.091	

Source: Primary data processed 2023

Table 2 shows the value of research interest. Of the three attributes utilized in the study, the Color attribute has the highest interest value. The color attribute has the greatest value among other attributes (bloom degree and stem length). It indicates that consumers, when purchasing, will consider the color attribute.

**Table 2. Interest Value**

Attribute	Value
<b>Color</b>	79.705
<b>Bloom Degree</b>	7.758
<b>Stem Length</b>	11.506

Source: Primary data processed 2023

Furthermore, to be able to see the accuracy that has been carried out through conjoint analysis in this study for the combination of each attribute with the results of consumer preference for purchasing cut roses, a correlation test was carried out with the results of the calculations which can be seen in Table 3. Based on Table 3, it can be seen that the resulting Pearson's R correlation value is 0.814. It can show a strong connection involving research attributes and consumer preference for buying cut roses. The significance value, which shows a value of  $0.042 < 0.05$ , can also describe a connection's existence.

**Table 3. Results of the Correlation Test**

Criteria	Value	Significance
<b>Pearson's R</b>	0.814	0.042
<b>Kendall's tau</b>	0.400	0.025

Source: Primary data processed 2023

## DISCUSSION

The characteristics of consumers based on gender are supported by research that has been conducted (Puspitasari, 2022) regarding the analysis of consumer preference and the purchasing decision process for the product attributes of cut flower bouquet arrangements (a case study at Citra Florist, Surabaya), which shows that most respondents at the florist are female. In this case, female consumers tend to buy flowers compared to male consumers. In addition, (Rasmikayati et al., 2020), it has been stated that most female consumers will have a sizable preference for a product, which can be seen based on the quality of the selected product. Moreover, the characteristics of consumers based on age are corroborated by research (Wijayanti et al., 2023), which shows that consumers of cut flowers are 30-49 years old.

The amount of consumer income will affect the purchase decision to be made. (Hardiyanti, 2019) explains that income and lifestyle significantly influence people's consumption patterns. Respondents in the study usually use cut roses as gifts for relatives or home decorations. Next, the jobs owned by the respondents in this study were mostly working in the private sector, with the rest working as civil servants, high schoolers or university students, and entrepreneurs. The location characteristics that consumers usually go to when buying cut roses in this study are flower shops or florists. It is due to the ease of access in reaching florists compared to buying directly from cut rose farmers. However, some respondents still prefer to buy directly from cut rose farmers. Typically, purchases are made directly from farmers due to the large number and frequency of purchases.

In this study, three types of attributes were used to determine consumer preference for cut roses in Malang Raya. The three types of attributes include color, bloom degree, and stem length. In the color attribute, there are three sub-attributes, namely pink roses, white roses, and red roses. The second attribute used in this study is the degree of efflorescence, or bloom degree, which has two sub-attributes: roses with a 50 percent bloom rate and roses with a 75 percent bloom rate. Finally, the third attribute, the stem length attribute, has two sub-attributes, including roses with a stem length of 50 cm and roses with a stem length of more than 50 cm. Consumer preferences for purchasing cut roses were analyzed using conjoint analysis. The conjoint analysis determines the relative interest value and the utility value of each attribute of cut roses. The results of the conjoint analysis carried out in this study can be seen in Table 1. It could mean that most of the respondents in this study who had purchased roses preferred red when making a purchase decision.

Furthermore, as seen in Table 1, the second attribute in this study is the bloom degree. Respondents in this study liked the blooming of cut roses, which had a blooming ratio of 75%. The last attribute, namely

the stem length, indicates that the respondents in this study liked cut roses with a stem length of more than 50 cm.

Table 2 shows the results of processing the interest value in the research study. Of the three attributes used to measure consumer preference for purchasing cut roses, the color attribute of roses has the highest value of interest. On top of that, it can be seen from the attribute's interest value which has the second and third highest values, namely the rose stem length attribute and the rose bloom degree attribute. It shows that the respondents in this study when making a purchase, the first thing that becomes an important factor in consideration is the color of the cut roses.

The result shows a strong connection involving research attributes and consumer preference for buying cut roses. Besides that, as seen from the significance value, it can also describe the existence of a connection. The next part can be seen in the test results, which also show that the conjoint analysis results in this study are acceptable for describing consumer preference for purchasing cut roses. Pearson's R correlation value in this study was used because the scoring method was used with a Likert scale.

## CONCLUSION

Judging from the results of the data processing in the research and the analysis conducted in the study, it can be concluded that the characteristics possessed by consumers of cut roses, in general, are dominated by female respondents aged 26–35 years who are domiciled across Malang Raya. In addition, the characteristics of consumers of cut roses are also dominated by those whose monthly income is 3,000,000 to 6,000,000 rupiah. Consumers of cut roses in this study generally buy cut roses at flower shops or florists for easy access.

Consumer preference for buying cut roses in Malang Raya based on the utility value of each sub-attribute gives a combination reference to roses with a red color, a 75% bloom rate, and a stem length of more than 50 cm. Furthermore, from the point of interest value, according to the respondents, the most important attributes in this study were color (79.7%), stem length (11.5%), and bloom degree (7.76%).

Based on the results of the analysis in this study, it is hoped that later producers, be they farmers or florists in Malang Raya who sell cut roses, can consider combination options based on consumer preference, namely roses with red color, 75% bloom rate, and stem lengths of more than 50 cm, or it can also be done by prioritizing the attribute that has the most important value for consumers, namely color so that forecasting can be done on the availability of cut roses to be sold to consumers and can meet the tastes of consumers of cut roses.

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