

Preferences Of Consumers Citrus Fruit In The District Of Banyumas

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Abstract. The purpose of this study was to analyze consumer preferences of citrus fruit (*Citrus nobilis*) in Banyumas Regency, based on the attributes of fruit color, size, cleanliness, and thickness of the fruit skin, aroma and taste of fruit, texture of fruit flesh, the freshness of fruit, accessibility, and price of fruit per kg. Respondents collected 82 citrus fruit consumers who live in Banyumas Regency. Sampling was done by distributing questionnaires through Google form and analyzed by conjoint analysis. The results showed that the consumer preference for the citrus fruit (*Citrus nobilis*) is a fruit with a yellow color, medium size, clean skin hygiene, medium skin thickness, pungent aroma, sweet taste, medium fruit texture, freshness for very fresh, very easy to buy and the price is above RP. 12,000,- per kg. The value of the relative importance of consumer preferences for citrus fruit is the attributes of the fruit is the attributes of fruit taste, fruit skin color, and fruit size, respectively.

Keywords: citrus fruit, consumer preferences, attributes, Fishbein

1. Introduction

Citrus is a horticultural commodity that continues to grow and develop as a commodity that is in great demand by Indonesians. This development is influenced by the existence of public awareness of the importance of a healthy lifestyle that encourages increased consumption of national citrus. The total consumption of citrus at the household level in 2005 was 2.73 kilograms per capita per year or 697 tones, and until 2019 the level of consumption increased by an average of 0.52 percent per year. National citrus production has also increased by an average of 3.64 percent per year for the last five years. In 2015 the total national citrus production reached 2.4 million tons per year, increasing to 2.77 million tons in 2019[1].

The public consumption of citrus fruits has not been fulfilled by local production throughout the year, thus opening up opportunities for imported citrus fruits. The increasing import of citrus fruits indicates that imported citrus have been well received by the public, so that the abundance of imported citrus is feared to affect consumer decisions in buying local citrus. According to [2], due to the emergence of various foreign products, consumers are increasingly critical of the qualifications of fulfilling their needs and desires. Consumers' choices and their decision-making are influenced by their preferences. Consumer preferences can be formed through the mindset of themselves based on several reasons where there are previous experiences, so that if consumers feel suitable for consuming the product, they will continue to use the product and encourage them to make purchases.

Consumers are an important component in the agribusiness system. Understanding consumer behavior is important to market information for the agribusiness sector as an input for better planning, product development, and marketing. Consumer behavior is behavior that shows consumers in finding, buying, using, evaluating, and spending products and services that are expected to satisfy consumer needs. Consumer behavior is a direct action to obtain, consume, and spend products and services, including decisions that precede them and follow these actions. [3] suggests that consumer behavior is the buying behavior of end consumers, both individuals, and households who buy products for personal consumption. Many factors influence consumer purchasing behavior, including attitude factors.

Attitude is the result of the evaluation that reflects the likes or dislikes of the product, so that marketers can predict potential purchases and develop more effective marketing strategies [4]. To increase and retain consumers, it is necessary to know the characteristics of consumers and the consumer purchasing decision process for citrus fruits. A positive consumer attitude towards product attributes will encourage consumers to buy or consume the product stronger.

Product attributes are factors that are inherent in a product. Decisions regarding product attributes are product elements that are considered important by consumers and are used as the basis for purchasing decisions. The level of product performance can be measured or viewed at the level of importance based on the key attributes that have been identified by consumers. Therefore, product attributes are the starting point for evaluating consumers about whether or not the needs and desires of consumers expected from an actual product are met so that the attributes that accompany a product can be identified [2].

For agricultural commodities, the criteria of product attributes include visual or appearance quality, mouthfeel (taste in mouth), nutritional value (functional quality), consumption safety, ease of handling, and other quality properties. Meanwhile, Sabbe (2009) explains that the factors that influence consumers in choosing fruits are the sensory appeal, such as taste, texture, and fragrance, which are important attributes in purchasing fruit. Meanwhile, [5] explained that the important attributes are freshness, firmness, size, color, and fragrance. Fruit that looks attractive can arouse consumers' desire to buy and consume fruit. According to [6], consumers tend to buy good quality fruits, but they do not think that imported fruits are always of good quality, so that consumers are neutral towards imported fruits. Thus, fruit with an import label does not make consumers more positive, but consumer assessment of fruit determines consumer attitudes.

Banyumas Regency is one of the major districts in Central Java Province. In 2018, the total population was 1,679,124 people and experienced an annual population growth rate of 0.94% per year. Banyumas Regency is also experiencing economic growth, and the average expenditure per capita per month for fruits tends to increase every year [7]. This shows that Banyumas Regency is one of the potential fruit marketing destinations.

The problem that arises then is how the general characteristics of Siam Citrus fruit consumers in Banyumas Regency and what is the consumer preference for Siam Citrus in the Banyumas Regency. Through this research, it is hoped that further information will be known about the position of the Siam Citrus competitiveness circulating in Banyumas Regency from a point of view of consumer attitudes towards the attributes of Siam Citrus products. The consumer behavior model used in this study is a model of attitudes towards attributes that are applied to agribusiness products, especially for Siam Citrus. The citrus fruit attributes to be examined in this study were the color of the orange peel, the size of the orange, the cleanliness of the orange peel, the thickness of the orange peel, the aroma, the taste of the citrus fruit, the texture of the pulp, the freshness, the accessibility and the price of the chayote.

2. Research Methodology

The research was conducted in Banyumas Regency using a survey method. Sampling Method Respondents were conducted on respondents who had bought Siam Citrus and were over 17 years old. Samples were collected by distributing questionnaires to respondents residing in the Banyumas area

via a google form. The research design used was a descriptive survey method using quantitative data. In this study, the number of samples used was 85 respondents. Analysis of respondents' attitudes towards each indicator of fruit product attributes based on product quality criteria. For data processing, respondents' answers were identified using a Likert Attitude Model. Assessment of respondents' answers through the Likert Scale Approach which has alternative choices from negative to positive with a score of 1 to 5.

The attitude of consumers towards citrus fruits is determined by the attitudes of consumers towards the attributes of citrus fruits. The multi-attribute citrus fruit determined in this study were orange peel color, size of an orange, cleanliness of orange peel, the thickness of orange peel, aroma, the taste of citrus fruit, the texture of fruit flesh, freshness, accessibility, size, and price of chayote. Based on the quality criteria above, consumer trust attitudes can be formulated in selecting fruit attributes that consumers want. This study uses Pearson's correlation to test the attribute validity and to test the reliability used Cronbach's Alpha. All attributes used in this study are valid and the data generated from the questions in the questionnaire are reliable. The Fishbein Multi-Attribute Model was used to analyze consumer attitudes towards local citrus fruit. The Fishbein multi-attribute attitude model is a very useful tool for studying the process of forming, estimating, and analyzing consumer attitudes towards product attributes [8].

According to Engel et al. (1995), Fishbein's multi-attribute model describes consumer attitudes towards a product or brand of a product which is determined by two things, namely trust in the attributes of the product or brand (bicomponent) and evaluation of the importance of the attributes of the product (ie component). This model is described by the following formula.

$$A_0 = \sum_{i=1}^n b_i \cdot e_i$$

Where:

A₀ = Attitude towards objects

b_i = Strength of belief that an object has the attribute i

e_i = Evaluation of the importance of attribute i

n = Number of attributes owned by the object

3. Results And Discussion

The general characteristics of citrus fruit consumers in Banyumas Regency are described by gender, age, education level, occupation, number of family members, and level of expenditure. Respondents in this study consisted of 85 people, of which 31 people (36 percent) were male and 54 people (64 percent). This shows that more women are the decision-makers in shopping for citrus fruit than men. The complete characteristics of the Siam Citrus in Banyumas Regency are presented in Table 1.

Table 1. Respondent socio demographic characteristic in Banyumas Regency

Charateristic	Number (people)	Percentage (%)
Gender		
Male	31	36,47
Female	54	63,53
Age		
15 – 24	21	24,70
25 – 34	23	27,05
35 – 44	20	23,53
45 – 54	11	12,94
55 – 64	10	11,76
Educational level		
Junior high school	1	1,17

Senior high school	18	21,17
Diploma	4	4,70
Bachelor (S1)	42	49,41
Masters/PhD	20	23,53
Household size		
1 – 2	16	18,82
3 – 4	46	54, 11
>4	23	27,06
Job		
Civil servant/military	29	34,11
entrepeneur	10	11,76
employee	20	23,59
Student	16	18,82
housewife	10	11,76
average monthly Income		
< 1,5 million	15	17,64
1,5 million – 2 million	19	22,36
2 million – 2,5 million	4	4,70
2,5 juta – 3 million	7	8,23
> 3 million	40	47,06

Source: Primary data processed (2020)

Based on Table 1, it shows that various groups with various income levels are able to buy and consume citrus fruits to meet their food, especially for their nutritional needs.

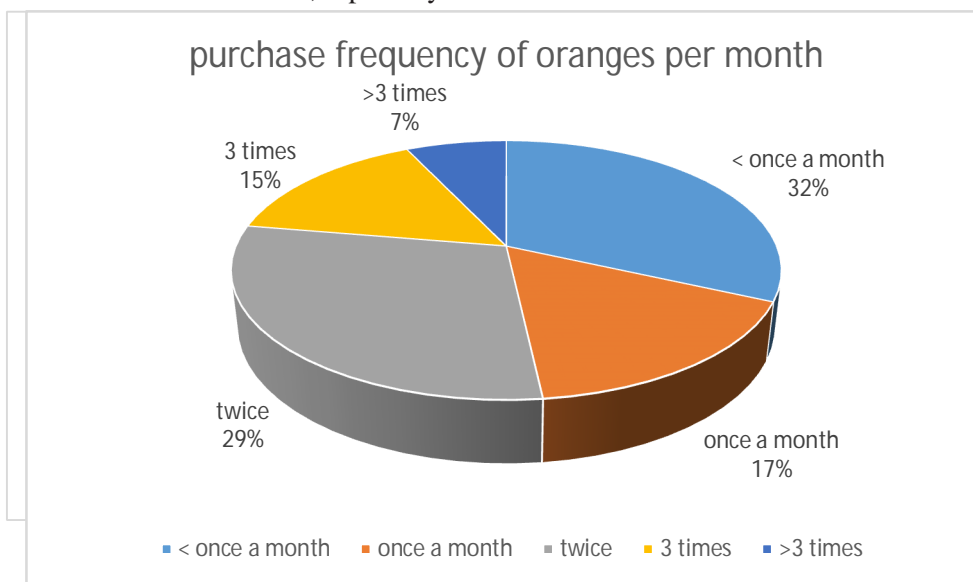


Figure 1. The frequency of the respondents buying oranges

Figure 1 shows that the frequency of buying Siamese Citrus in 1 month is at most, 32% of respondents shop <1 time a month, 29% of respondents usually shop twice a month, 17% of respondents usually shop once a month, 15% respondents usually shop 3 times a month and 7% usually shop more than 3 times a month. This is because in general, the characteristics of consumers make variations in buying fruits so that on average they only buy them 1-2 times a month.

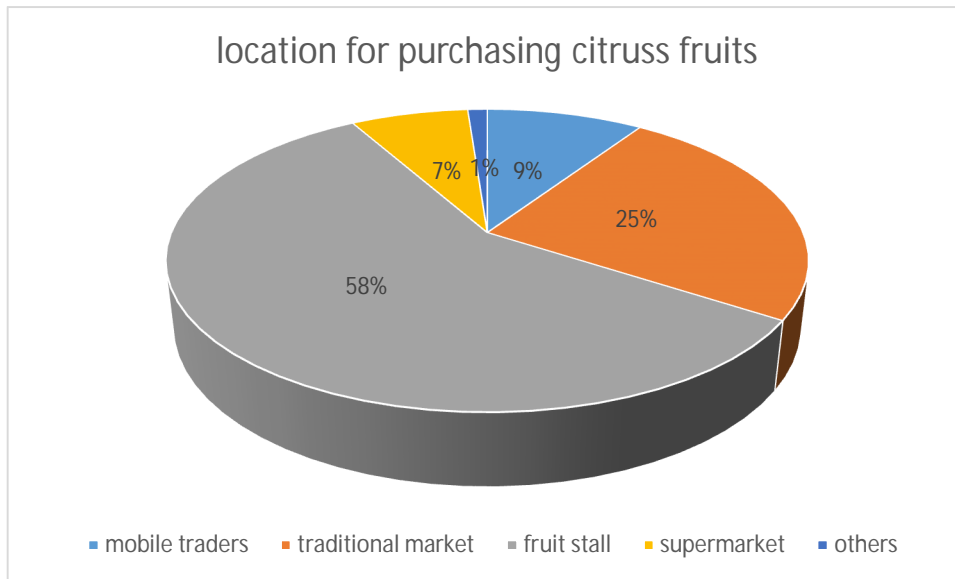


Figure 2. Locations for purchasing citrus fruits

The Buying Siam Citrus is usually done by consumers at fruit stalls (58%), traditional markets (25%), mobile traders (9%), supermarkets (7%), and others (1%). Most of the respondents purchase citrus fruits at kios, which are usually fresher, and available another type of fruit.

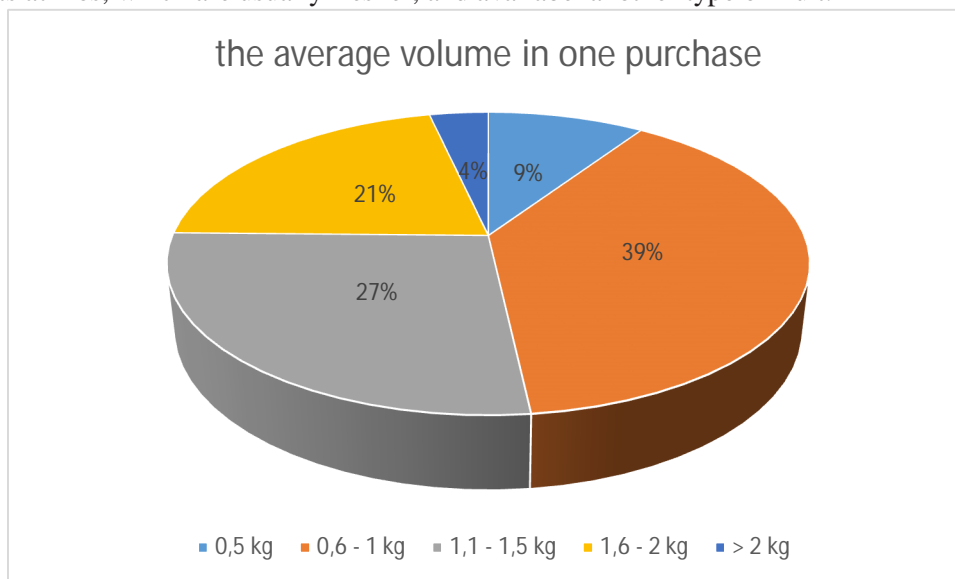


Figure 3. The average volume in one purchase

Figure 3 shows that the average volume in one time purchase of citrus fruit is 1.6 - 2 Kg (39%), 1.1 - 1.5 kg (27%), 0.6 - 1 Kg (21%), 0.5 Kg (9%) and > 2 kg (4%). This is because in general the characteristics of the fruits have not long shelf life, so that consumers don't want to buy in large quantities, but more frequent intensity if only for daily consumption, and to maintain the availability of fulfilling nutrition.

3.1. Consumer Trust in the Attributes of Citrus fruit

The results of the assessment of consumer confidence in citrus fruits are presented in table 2. In general, respondents believed that local citrus fruits found in the market were good. The results of the

respondent's assessment of the attribute trustworthiness of the Siamese citrus fruit which is often found in Banyumas Regency can be seen in Table 2.

Table 2. The value of consumer confidence in the attributes of tangerines in Banyumas Regency

Atribut	Skor (bi)	Kategori
Color	4,05	Good
size	3,49	Good
cleanliness	3,92	Good
hard rind	3,55	Good
Flavor	3,52	Good
Taste	4,00	Good
Fruit Textur	3,39	Ordinary
Freshness	4,08	Good
accessibility	4,07	Good
Price	3,84	Good

Table 2 shows that consumer attitudes towards the attributes of the Siamese fruit show an average score that varies from ordinary to important. Most consumers give important scores for the attributes given, except for the attributes of the fruit texture. This means that the attributes that are included in the important category indicate that these attributes are believed by consumers to be able to meet the criteria of citrus fruits that are in accordance with the desires of consumers, even though they are not very important attributes in the eyes of consumers. The texture attribute of the pulp is in the medium category. This shows that the texture of the chayote has not been able to meet the ideal standards for consumers. According to consumers, the texture of the chayote is still relatively coarse.

In general, consumers believe that the citrus fruit that is bought and sold in the market has the following attributes: it tastes sweet and fresh, the size is in accordance with what consumers want; (2) fruit peel is generally clean; (3) easy access to local citrus fruits; and (4) prices that are affordable to consumers

3.2. Consumer Evaluation of the attributes of Siamese citrus

The evaluation illustrates the importance of the attributes of Siam Citrus for consumers. The value of the consumer's evaluation of the attributes of the Siam Citrus is presented in Table 3.

Table 3. Consumer's evaluation of the attributes of the Siam Citrus in Banyumas Regency

Atribut	Skor (ei)	Kategori
Color	3,66	Important
size	3,48	Important
cleanliness	3,52	Important
hard rind	3,46	Important
Flavor	4,01	Important
Taste	3,55	Important
Fruit Textur	4,00	Important
Freshness	4,07	Important
accessibility	4,08	Important
Price	3,84	Important

Consumers of Siam Citrus in Banyumas Regency consider all the existing attributes important, but the accessibility and freshness of fruit is the most important attribute for consumers. In Banyumas

Regency, Siamese citrus is a commodity that is easily to found in fruit stalls, traditional markets, and mobile vegetable traders.

3.3. Attitudes of consumers towards attributes of siam orange in Banyumas District

Based on the data in Table 4, it is known that the attributes of the Siamese citrus fruit that have a high or preferred attitude value are taste, freshness and their accessibility. The attributes of freshness and accessibility are the highest attributes favored by consumers of Siam Citrus in Banyumas Regency

Table 4. Attitudes of consumers towards attributes of Siamese citrus fruit in Banyumas Regency

Atribut	Skor (A0)	Kategori
Color	14,83	Ordinary
size	12,21	Ordinary
cleanliness	13,78	Ordinary
hard rind	12,29	Ordinary
Flavor	14,11	Ordinary
Taste	16,00	Good
Fruit Textur	12,03	Ordinary
Freshness	16,63	Good
accessibility	16,63	Good
Price	14,77	Ordinary

4. Conclusion

The attributes that consumers consider for buying Siam Citrus in Banyumas Regency are freshness, ease of access, and taste. The taste and freshness of Siam Citrus are the basic considerations for the consumers to decide to buy it.

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