

Understanding Consumer Preferences for “Gogumoy” Cookies through Refined Kano across Demographic Profiles

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Abstract. The development of “Gogumoy” cookies utilizes local composite flours, specifically modified cassava flour (Mocaf) and purple sweet potato flour, to reduce dependency on imported wheat while enhancing health benefits through natural antioxidants and a low glycaemic index. In new product development, identifying and fulfilling specific customer needs is fundamental to achieving optimal satisfaction. This study employs the Refined Kano Model to analyse customer requirements, as this model enhances the traditional Kano approach by integrating attribute importance levels to provide a more comprehensive understanding of satisfaction drivers. A survey was conducted with 182 respondents in the Surakarta, categorized by age and income levels. The findings reveal that consumer preferences and attribute priorities vary significantly across demographic profiles. Attributes classified as High Value Added—such as balanced flavour combination, secure packaging, and halal certification—emerged as top priorities that significantly drive satisfaction. High Attractive attributes serve as competitive features to strengthen market positioning. Notably, older demographics identified a “sandy mouthfeel” as a Reverse attribute, suggesting it should be eliminated for those segments. These results indicate that product quality improvement strategies must be tailored to the specific characteristics of the target market to ensure effective resource allocation and maximized impact.

1 Introduction

The Indonesian snack market shows a growing demand for cookies, with consumption rates rising annually [1]. However, the industry’s heavy reliance on imported wheat flour—which saw a 14.94% increase in 2024—presents a significant risk to supply chain stability. To address this, “Gogumoy” cookies were developed using local composite flours: modified cassava flour (Mocaf) and purple sweet potato flour. This innovation is not merely a substitution but a functional enhancement. Both Mocaf and purple sweet potato flour offer:

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a) Low Glycaemic Index –values of 44 for purple sweet potato [2] and 46 for Mocaf [3], catering to health-conscious consumers, b) Antioxidant Properties –high anthocyanin content (155.17 mg/100 g) from the purple sweet potato [4], and c) Market Alignment –the product leverages the global "Goguma Ppang" trend, combining health benefits with modern food aesthetics [5].

In businesses, meeting customer needs is crucial to achieve both satisfaction and profit. Customer satisfaction plays a pivotal role, as satisfied consumers tend to repurchase, whereas dissatisfaction may drive them to the competitors [6]. Consequently, producers must prioritize identifying and fulfilling customer needs before defining product design and development strategies [7]. Furthermore, in a competitive market, simply meeting general needs is insufficient for long-term profitability. Customer preferences are not monolithic; they vary significantly based on demographic characteristics such as age and purchasing power. Traditional satisfaction models often fail to distinguish between attributes that are "must-haves" and those that truly provide a competitive edge.

Various analytical methods can be used to understand customer needs, most notably the Kano Model developed by Dr. Noriaki Kano in 1984. This model employs functional and dysfunctional questions to categorize attributes based on their impact on customer satisfaction. While it has been applied across various food industries—including packaging redesign [8] and restaurant services [9]—the traditional Kano Model has a fundamental weakness: it does not consider the relative importance of quality attributes to the customer. Customers evaluate quality based on attributes they perceive as significant; thus, understanding the level of importance is vital for accurate quality assessment. To address this limitation, this study utilizes the Refined Kano Model. This model enhances the traditional approach by adding an "importance" dimension to each analysed attribute. By integrating functional, dysfunctional, and importance queries, the Refined Kano Model provides more detailed information on which customer requirements must be prioritized.

The Refined Kano Model has been applied in various fields such as learners' need for teaching videos [10], assistive devices for disabilities [11], footwear production [12], and fast-food Chain-Restaurant [13]. However, limited research utilized the Refined Kano Model for developing food products. In addition, customer need analysis should consider demographic factors, as preferences may vary depending on demographic characteristics [14]. Identifying target markets is essential in marketing to determine the most suitable customer segments for development [15] to ensure that product development is focused and effective. Accordingly, this study applies the Refined Kano Model to "Gogumoy" cookies while considering age and income levels to provide targeted, consumer-centric recommendations for quality improvement.

2 Material and Methods

2.1 Materials

The observed product in this research is the "Gogumoy" cookie, a product innovation inspired by the "Goguma Ppang" (Korean sweet potato bread) trend. While the original Korean snack is a semi-wet product with a short shelf life, "Gogumoy" adapts this concept into a dry cookie format to extend durability. According to SNI 2973-2022, these cookies are classified as biscuits made from soft dough, resulting in a crunchy texture with a moisture content of less

than 5%. The final product is designed to have a purple appearance reflective of its sweet potato base, a compact texture, and a crunchy exterior with a soft filling.

2.2 Methods

The research was conducted in several stages, including formulating and making the “Gogumoy” cookies, identifying the product quality attributes, developing questionnaires or instrument to evaluate consumers perception to the product quality attributes, collecting and analyzing the questionnaire data. The process of making the cookies includes mixing, dough weighing, dough filling and baking. Meanwhile the ingredients used are Mocaf, purple sweet potato flour, eggs, sugar, milk, margarine, vanilla, baking powder, and sweet potato flavor. A focus group discussion involving 11 panelists comprising food technology lecturers and practitioners in the food industry, was conducted to define the quality attributes of the “Gogumoy” cookies. Garvin quality dimension i.e., performance, features, durability, aesthetics, and perceived quality, is used to categorised those attributes. Further, the The Refined Kano questionnaire, as seen in **Table 1**, was used to evaluate the the quality attributes based on customer perspective.

Table 1. Refined Kano Questionnaire Design

Question	Response Option
Q1: Functional (If the product has ‘this attribute’, how do you feel?)	1. I enjoy it that way, 2. I expect it that way, 3. I am neutral, 4. I dislike it but I can accept it that way 5. I dislike it, and I cannot accept it
Q2: Dysfunctional (If the product does not have ‘this attribute’, how do you feel)	1. I enjoy it that way, 2. I expect it that way, 3. I am neutral, 4. I dislike it but I can accept it that way 5. I dislike it, and I cannot accept it
Q3: Importance Level (How important is the presence of ‘this attribute’ in the product?)	1. Extremely unimportant 2. Very unimportant 3. Slightly unimportant 4. Neutral 5. Slightly important 6. Very important 7. Extremely important

The responses of Q₁ (functional) and Q₂ (dysfunctional) were classified according to the traditional Kano model categories. Meanwhile, responses of Q₃ (importance level) were added to improve the traditional Kano. An attribute will be categorised into “high importance,” when the importance score was higher than the average score of all attributes, and “low importance,” when it was below the average. Based on these results, the categories in the traditional Kano is refined, as represented by **Table 2**.

Table 2. Categories of Quality Attributes in Unrefined and Refined Kano’s Model

Categories of quality attributes in Kano’s model	Categories of quality attributes with high importance in refined model	Categories of quality attributes with low importance in refined model
Attractive	High Attractive	Less Attractive
One Dimensional	High Value Added	Low Value Added
Must Be	Critical	Necessary
Indifferent	Potential	Care Free

3. Results And Discussion

3.1 Respondent Demographic Profiles

The panelist or respondents used in this research were individuals who expressed an interest in innovative cookies products and did not have any allergies to foods containing eggs or milk. Data collection was primarily conducted in Surakarta, a key city within the Central Java province. This study involved 182 respondents with the distribution across demographic groups summarized in **Table 3**. Based on the data provided in Table 3, the demographic distribution of the 182 respondents reflects a young and entry-level income population in the region. The age distribution shows a significant skew toward the younger demographic (17–25 years old). This is the largest group, representing approximately 52.2% of the total sample. This group’s high participation suggests that "Gogumoy" cookies—inspired by the Korean "Goguma Ppang" trend—appeal strongly to the Gen Z segment. Meanwhile 26–35 years old and above >35 years old group respectively represents 23.1% and 24.7% of respondents.

Table 3. Distribution of Respondents by Age and Income Levels

	Demographic Profiles	Respondents (n)
Age	17–25 years old	95
	26–35 years old	42
	>35 years old	45
Income	<1.500.000	97
	Rp1,500,000–Rp2,500,000	50
	>Rp2,500,000	35

Still from Table 3, the income levels reflect the purchasing power of the respondents in the region. The majority of respondents (53.3%) fall into the lowest income categories (less than Rp1,500,000). This aligns with the high number of younger respondents (17–25 years), who may be students or entry-level workers. Further, Rp1,500,000–Rp2,500,000 group accounts for 27.5% of the sample while the >Rp2,500,000 is the smallest segment, comprising 19.2% of respondents.

3.2 The Quality Attributes

From the Focus Group Discussion (FGD) 22 quality attributes were obtained and categorised based on five quality dimension as presented in **Table 4**, while the validity and reliability test for those attributes can be seen result presented in **Table 5** and **Table 6**. As can be seen at **Table 5**, all attributes have value of R higher than 0.146, showing that all attributes are valid. Similarly, **Table 6** shows the value of Cronbach’s Alpha is higher than 0.6 meaning that the attributes are reliable for being used in this study.

Table 4. Quality Attributes of “Gogumoy” Cookies Product

Quality Dimensions	Quality Attributes
Performance	P1 Purple colour appearance of the product
	P2 Balanced filling portion (cheese/strawberry/blueberry/coconut)
	P3 Sweet potato aroma
	P4 Buttery aroma
	P5 Compact texture of the product
	P6 Sweet taste of the product
	P7 Balanced flavour combination between cookies and filling
	P8 Flavour consistent with the filling type (cheese/blueberry/strawberry/coconut)
	P9 Sweet flavour of the product
	P10 Sweet potato flavour of the product
	P11 Crunchy-textured cookies with soft filling
	P12 Slightly sandy mouthfeel when consumed
Features	F13 Gluten-free claim (no wheat flour content)
	F14 Additional information on the packaging beyond BPOM labelling standards (e.g., storage instructions, social media information)
	F15 Convenient and easy-to-carry packaging
	F16 Packaging tightly seals the product
Durability	D17 Long product shelf life
Aesthetic	A18 Attractive packaging design
	A19 Filling positioned at the centre of the cookies
Perceived Quality	PQ2 0 Presence of halal certification label
	PQ2 1 Strongly perceived product superiority and quality
	PQ2 2 Affordable product price

Table 5. Validity Test

Attributes		Importance			Performance		
P1	R (actual)	R Table	Remark	R (actual)	R Table	Remark	
P1	0.523	0.146	Valid	0.628	0.146	Valid	
P2	0.499	0.146	Valid	0.652	0.146	Valid	
P3	0.45	0.146	Valid	0.538	0.146	Valid	
P4	0.326	0.146	Valid	0.628	0.146	Valid	
P5	0.451	0.146	Valid	0.593	0.146	Valid	
P6	0.46	0.146	Valid	0.587	0.146	Valid	
P7	0.359	0.146	Valid	0.641	0.146	Valid	
P8	0.375	0.146	Valid	0.621	0.146	Valid	
P9	0.467	0.146	Valid	0.615	0.146	Valid	
P10	0.495	0.146	Valid	0.549	0.146	Valid	
P11	0.473	0.146	Valid	0.738	0.146	Valid	
P12	0.461	0.146	Valid	0.571	0.146	Valid	
F13	0.393	0.146	Valid	0.487	0.146	Valid	
F14	0.453	0.146	Valid	0.463	0.146	Valid	
F15	0.465	0.146	Valid	0.434	0.146	Valid	
F16	0.404	0.146	Valid	0.649	0.146	Valid	
D17	0.384	0.146	Valid	0.421	0.146	Valid	
A18	0.363	0.146	Valid	0.656	0.146	Valid	
A19	0.33	0.146	Valid	0.648	0.146	Valid	
PQ20	0.429	0.146	Valid	0.475	0.146	Valid	
PQ21	0.439	0.146	Valid	0.654	0.146	Valid	
PQ22	0.43	0.146	Valid	0.472	0.146	Valid	

Table 6. Reliability test

	Cronbach's Alpha	Remark
Importance	0.78	Reliable
Performance	0.89	Reliable

3.3 Refined Kano Model

The Refined Kano categories based on demographic profiles of respondents can be seen on **Table 7** and **Table 8**. Based on **Table 7**, the categorization of “Gogumoy” cookies attributes using the Refined Kano Model reveals variations in customer preferences across the three groups. For the 17–25 years old group, attributes P7, F15, F16, and PQ20 fall in to High Value Added category, indicating that these attributes strongly contribute to customer satisfaction. The fulfillment of these attributes leads to a significant increase in satisfaction, whereas their absence considerably decreases it. Therefore, these attributes should be prioritized for product improvement. Furthermore, quality enhancement can be directed toward attributes categorized as High Attractive—namely P2, P4, P8, P9, P11, F14, D17, A18, PQ21, and PQ22—as they have the potential to create added value and strengthen the product’s competitive advantage. Meanwhile, attributes P1, P3, P5, P10, P12, and F13 belong to the Care Free category, and P6 and A19 are classified as Less Attractive, indicating a relatively minor influence on both satisfaction and dissatisfaction. Thus, maintaining these attributes at a stable performance level would be sufficient to optimize cost efficiency without compromising the overall quality perception.

For the 26–35 years old group, the attributes that should be prioritized are F16 and PQ20, categorized as High Value Added due to their substantial impact on customer satisfaction. Subsequently, attributes belonging to the High Attractive category—P2, P6, P7, P8, P9, P11, F14, F15, D17, A18, PQ21, and PQ22—should be enhanced, as they can serve as competitive leverage for the product. Attributes classified as Less Attractive (P1, P3, P4, F13, A19) and Care Free (P5, P10) may be maintained at a stable level since their contribution to satisfaction is relatively small. Additionally, attribute P12 falls into the Reverse category, suggesting that it should be eliminated, as consumers in this age group tend to dislike its presence.

For the >35 years old group, the Refined Kano analysis indicates that most attributes fall into the High Value Added category—namely P2, P7, P8, F14, F15, F16, A18, PQ20, PQ21, and PQ22—which should be prioritized because they significantly enhance customer satisfaction. Attributes P9 and P11, categorized as High Attractive, may also be improved to provide added value and reinforce the product’s competitive advantage. Moreover, the attribute P6, classified as Low Value Added, should be consistently fulfilled to prevent a decline in satisfaction, while attributes P1, P3, P4, P5, P10, F13, D17, and A19 in the Less Attractive category can be maintained at stable performance levels due to their limited effect on satisfaction. Similar to the 26–35 years old group, attribute P12 is categorized as Reverse and should be minimized or removed, as consumers in this group tend to perceive it negatively.

As seen in **Table 8**, the categorization of “Gogumoy” cookies quality attributes using the Refined Kano Model indicates variations in preferences among the three income groups. For the <Rp1,500,000 income group, attributes P7, F15, F16, and PQ20 are classified as High Value Added, signifying that they have a substantial influence on customer satisfaction. The fulfillment of these attributes can significantly enhance satisfaction, while their absence may reduce it. Therefore, these attributes should be the primary focus of quality improvement. Further enhancement can be directed toward High Attractive attributes—P2, P4, P6, P8, P9, P11, F14, D17, A18, PQ21, and PQ22—which can strengthen competitiveness through product appeal and differentiation. Meanwhile, attributes P3, P5, P10, P12, and F13 fall under the Care Free category, and P1 and A19 are categorized as Less Attractive. Both categories exert minimal impact on satisfaction, thus maintaining them at a stable level is sufficient to ensure resource efficiency without compromising perceived product quality.

For the Rp1,500,000–Rp2,500,000 income group, the key priority attributes include F15, F16, and PQ20, classified as High Value Added for their strong contribution to consumer satisfaction. Attributes categorized as High Attractive—P2, P4, P7, P8, P9, P11, F14, D17, A18, PQ21, and PQ22—should also be emphasized, as they can enhance product appeal and market competitiveness. Meanwhile, Less Attractive attributes (P1, P3, P6, P9, P10, F13, A19) and Care Free attributes (P5, P12) may be maintained at a consistent performance level, considering their relatively minor influence on customer satisfaction.

For the >Rp2,500,000 income group, most attributes fall under the High Value Added category, including P2, P6, P7, P8, F14, F15, F16, PQ20, and PQ22, which should be prioritized due to their direct and significant impact on satisfaction. The High Attractive attributes—P9, P11, A18, A19, and PQ21—can serve as the next focus for improvement, as they provide added value and enhance product quality perception. Meanwhile, Less Attractive attributes (P3, P4, P5, D17) and Care Free attributes (P1, P10, P12, F13) should be maintained at stable performance levels, as their contribution to satisfaction remains relatively low.

Overall, the application of the Refined Kano Model reveals that consumer priorities are not uniform; rather, they are shaped significantly by life stage and purchasing power. Across

all age groups, F16 (Tight sealing packaging) and PQ20 (Halal certification) consistently fall into the High Value Added category, establishing them as foundational requirements for market entry. However, distinct variations emerge in other attributes. The 17–25 years old group, representing 52.2% of respondents, prioritizes F15 (Easy-to-carry packaging) as High Value Added. Their preference for portability aligns with a mobile lifestyle. Meanwhile, the 26–35 years old group identifies a broader range of High Attractive attributes, such as P6 (Sweet taste) and P7 (Balanced flavor), suggesting they are more focused on the sensory experience as a competitive differentiator. Further, the oldest group (>35 years old) is the most demanding, classifying 10 different attributes as High Value Added, including A18 (Attractive design) and PQ22 (Affordability). Notably, both this group and the 26–35 segment categorize P12 (Sandy mouthfeel) as a Reverse attribute, indicating a strong dislike that could lead to dissatisfaction if not addressed. On the other hand, priorities also shift as disposable income increases, moving from a focus on basic functionality to comprehensive quality. The <Rp1,500,000 Group primarily values F15 (Convenient packaging) and PQ20 (Halal label) as High Value Added. Most sensory attributes remain in the High Attractive category, meaning they are "delighters" but not yet "must-haves" for this segment. Differently, the higher-income segment (>Rp2,500,000) promotes sensory performance attributes—such as P2 (Balanced filling), P6 (Sweet taste), and P8 (Flavor consistency)—to the High Value Added category. For these consumers, consistent taste and quality are non-negotiable requirements.

Based on the result, it is suggested that to optimize resource efficiency, attributes like P1 (Purple color), P3 (Sweet potato aroma), and F13 (Gluten-free claim) should be maintained at stable levels rather than aggressively improved, as they are largely categorized as Care Free or Less Attractive across segments.

Table 7. Refined Kano Category Results for “Gogumoy” Cookies Based on Age

Quality Attributes	17-25 years old			26-35 years old			>35 years old		
	Category in Kano's model	Importance (mean)	Refined Kano's model	Category in Kano's model	Importance (mean)	Refined Kano's model	Category in Kano's model	Importance (mean)	Refined Kano's model
	P1	Indifferent	4.16	Care Free	Attractive	4.62	Less Attractive	Attractive	4.42
P2	Attractive	6.04	High Attractive	Attractive	6.05	High Attractive	One Dimensional	6.00	High Value Added
P3	Indifferent	4.00	Care Free	Attractive	4.71	Less Attractive	Attractive	4.33	Less Attractive
P4	Attractive	5.85	High Attractive	Attractive	5.52	Less Attractive	Attractive	5.67	Less Attractive
P5	Indifferent	4.96	Care Free	Indifferent	5.24	Care Free	Attractive	5.16	Less Attractive
P6	Attractive	5.55	Less Attractive	Attractive	5.90	High Attractive	One Dimensional	5.64	Low Value Added
P7	One Dimensional	6.52	High Value Added	Attractive	6.40	High Attractive	One Dimensional	6.47	High Value Added
P8	Attractive	6.05	High Attractive	Attractive	6.31	High Attractive	One Dimensional	6.40	High Value Added
P9	Attractive	5.66	High Attractive	Attractive	5.90	High Attractive	Attractive	5.73	High Attractive
P10	Indifferent	4.41	Care Free	Indifferent	5.05	Care Free	Attractive	4.76	Less Attractive
P11	Attractive	6.01	High Attractive	Attractive	5.95	High Attractive	Attractive	5.91	High Attractive
P12	Indifferent	3.77	Care Free	Reverse	4.07	-	Reverse	3.42	-
F13	Indifferent	4.71	Care Free	Attractive	5.24	Less Attractive	Attractive	4.44	Less Attractive
F14	Attractive	6.19	High Attractive	Attractive	6.45	High Attractive	One Dimensional	6.53	High Value Added
F15	One Dimensional	6.43	High Value Added	Attractive	6.60	High Attractive	One Dimensional	6.58	High Value Added
F16	One Dimensional	6.41	High Value Added	One Dimensional	6.48	High Value Added	One Dimensional	6.64	High Value Added
D17	Attractive	5.67	High Attractive	Attractive	6.02	High Attractive	Attractive	5.31	Less Attractive
A18	Attractive	6.09	High Attractive	Attractive	6.02	High Attractive	One Dimensional	6.42	High Value Added
A19	Attractive	5.44	Less Attractive	Attractive	5.62	Less Attractive	Attractive	5.49	Less Attractive
PQ20	One Dimensional	6.59	High Value Added	One Dimensional	6.79	High Value Added	One Dimensional	6.89	High Value Added
PQ21	Attractive	5.96	High Attractive	Attractive	6.38	High Attractive	One Dimensional	6.18	High Value Added
PQ22	Attractive	6.08	High Attractive	Attractive	6.29	High Attractive	One Dimensional	6.60	High Value Added
	Mean	5.57		Mean	5.80		Mean	5.68	

Table 8. Refined Kano Category Results for “Gogumoy” Cookies Based on Income

Quality Attributes	<Rp1,500,000			Rp 1,500,000- Rp 2,500,000			> Rp 2,500,000		
	Category in Kano's model	Importance (mean)	Category in Refined Kano's model	Category in Kano's model	Importance (mean)	Category in Refined Kano's model	Category in Kano's model	Importance (mean)	Category in Refined Kano's model
P1	Attractive	4.27	Less Attractive	Attractive	4.58	Less Attractive	Indifferent	4.14	Care Free
P2	Attractive	6.04	High Attractive	Attractive	6.14	High Attractive	One Dimensional	5.86	High Value Added
P3	Indifferent	4.25	Care Free	Attractive	4.56	Less Attractive	Attractive	3.80	Less Attractive
P4	Attractive	5.78	High Attractive	Attractive	5.76	High Attractive	Attractive	5.54	Less Attractive
P5	Indifferent	5.07	Care Free	Indifferent	5.00	Care Free	Attractive	5.17	Less Attractive
P6	Attractive	5.70	High Attractive	Attractive	5.46	Less Attractive	One Dimensional	5.80	High Value Added
P7	One Dimensional	6.54	High Value Added	Attractive	6.40	High Attractive	One Dimensional	6.43	High Value Added
P8	Attractive	6.28	High Attractive	Attractive	6.04	High Attractive	One Dimensional	6.20	High Value Added
P9	Attractive	5.76	High Attractive	Attractive	5.64	Less Attractive	Attractive	5.80	High Attractive
P10	Indifferent	4.69	Care Free	Attractive	4.76	Less Attractive	Indifferent	4.34	Care Free
P11	Attractive	6.03	High Attractive	Attractive	5.98	High Attractive	Attractive	5.80	High Attractive
P12	Indifferent	3.69	Care Free	Indifferent	4.06	Care Free	Indifferent	3.49	Care Free
F13	Indifferent	4.75	Care Free	Attractive	4.92	Less Attractive	Indifferent	4.57	Care Free
F14	Attractive	6.34	High Attractive	Attractive	6.42	High Attractive	One Dimensional	6.20	High Value Added
F15	One Dimensional	6.57	High Value Added	One Dimensional	6.50	High Value Added	One Dimensional	6.34	High Value Added
F16	One Dimensional	6.66	High Value Added	One Dimensional	6.26	High Value Added	One Dimensional	6.31	High Value Added
D17	Attractive	5.72	High Attractive	Attractive	5.66	High Attractive	Attractive	5.51	Less Attractive
A18	Attractive	6.28	High Attractive	Attractive	5.78	High Attractive	Attractive	6.37	High Attractive
A19	Attractive	5.51	Less Attractive	Attractive	5.38	Less Attractive	Attractive	5.63	High Attractive
PQ20	One Dimensional	6.73	High Value Added	One Dimensional	6.66	High Value Added	One Dimensional	6.71	High Value Added
PQ21	Attractive	6.18	High Attractive	Attractive	6.14	High Attractive	Attractive	5.89	High Attractive
PQ22	Attractive	6.28	High Attractive	Attractive	6.12	High Attractive	One Dimensional	6.40	High Value Added
	Mean	5.69		Mean	5.65		Mean	5.56	

4 Conclusion

The analysis of customer needs using the Refined Kano Model for “Gogumoy” cookies revealed differences in attribute priorities across demographic groups, both in terms of age and income level. Attributes categorized as High Value Added should be the primary focus of quality improvement efforts, followed by High Attractive attributes, which serve as competitive tools to enhance product positioning and market advantage. These findings provide valuable insights for producers in determining which quality attributes should be prioritized for improvement within each consumer segment according to the targeted market. As a follow-up, it is recommended to conduct a quantitative measurement of customer satisfaction to assess the performance of each attribute more accurately.

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