INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia



IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

Market Potential and Financial Feasibility Analysis of Milkfish Floss with Addition Ulin Banana Corm (Musa X Paradisiaca L. AAB)

Sekar Ayu Wulandari[*,1], Dini Nafisatul Mutmainah[1], Taufiq Rahman Humaidi[1], Akbar Maulana Firmansyah[1], and Fairuz Nadhifah[1]

[1]*Agribusiness Management, Politeknik Negeri Jember, Indonesia*

**Corresponding email: wulandarisekarayu19@gmail.com*

Abstract

This study analyses the market potential and financial feasibility of milkfish floss enriched with ulin banana corm, addressing a gap in literature concerning the economic viability of such sustainable food innovations. While prior research confirms the technical suitability of banana corms in food products, their commercial potential remains underexplored. Utilizing a mixed-methods approach, this research gathered qualitative data through in-depth interviews with experts, and quantitative data via a consumer questionnaire (n=70). The findings reveal significant financial promise, with a calculated profit margin of 43.3%, a positive Net Present Value (NPV) of Rp 51 million, an 80.18% Internal Rate of Return (IRR), and a two-year Payback Period (PBP). Consumer analysis indicates strong appreciation for the product's health benefits, natural ingredients, and unique taste, with a high overall acceptability score (3.9/5). However, the primary challenge identified is consumer hesitation due to differences in taste and texture compared to traditional milkfish floss. The discussion concludes that despite this barrier, the product holds strong potential for success, particularly among health-conscious and environmentally aware consumers. To achieve wider market acceptance, the study recommends investing in more efficient processing technology and implementing targeted marketing strategies that emphasize the product's nutritional advantages and sustainability credentials

***Keywords**: Milkfish Floss, Ulin Banana Corm, Financial Feasibility, Market Potential, Sustainable Food Product*

1. Introduction

Indonesia’s processed food industry was growing as more people looked for foods made with local ingredients and a focus on sustainability. Fish floss, a traditional item, was gaining popularity. People were becoming increasingly aware of the impact of food on the environment, so they sought ingredients that were beneficial for both their health

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia



IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

and the environment. Adding ulin banana corm (Musa x paradisiaca L. AAB) to milkfish floss was a good idea. People often discarded the ulin banana corm, but it was rich in nutrients and could be a valuable addition to one's diet. Adding it to milkfish floss could enhance the product and reduce waste.

Prior studies indicated that banana corms from the Musa species were appropriate components in processed foods. Prior Studies found that vegetarians preferred plant-based floss made from banana corms, incorporating banana flowers into tuna fish floss enhanced its flavor and augmented consumer appeal and banana corms improved the flavor and aroma of milkfish floss (Ciptaningtyas et al., 2024; Kartikaningsih et al, 2021; Puspita et al., 2024). These findings suggested the potential advantages of banana corms in the development of food products; however, there was insufficient research concerning the production costs and market viability of milkfish floss made with ulin banana corms. Recent studies primarily focused on product quality and consumer acceptance, while economic and market factors were comparatively overlooked.

Most studies on banana corms in food products focused on quality and consumer acceptance. However, not many looked at how much money they could make and how well they could sell. To be successful in the market, new products had to generate revenue. Savitri et al. and Wulandari et al. asserted that financial feasibility required a comprehensive cost analysis, substantial profit margins, and efficient marketing strategies (Savitri et al, 2021 and Wulandari, 2023). This study evaluated the financial feasibility and market potential of milkfish floss with ulin banana corm and ascertained the factors affecting consumer acceptance.

Increasingly, people in Indonesia opted for healthy and eco-friendly foods, particularly those who prioritized sustainability. The market for environmentally friendly food products was experiencing significant growth, with consumers increasingly opting for products that not only benefited their health but also supported environmental sustainability (Kotler and Keller, 2021). In this situation, milkfish floss made from ulin banana corms was a good choice because it utilized local materials and helped reduce organic waste. However, the biggest challenge in developing this product was its acceptance by the general public and its ability to compete in the increasingly competitive processed food market. Therefore, it was essential to conduct a financial feasibility and market potential analysis to ensure that this product was highly competitive and that customers would purchase it. The goal of this study was to provide a more detailed examination of the financial viability and market potential of milkfish floss with ulin banana corms, and to assess consumer acceptance of this product.

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia



IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

This study employed a mixed-methods approach, combining both qualitative and quantitative analyses. The qualitative analysis focused on exploring consumer perceptions of the product, while the quantitative analysis evaluated the financial feasibility and market potential of milkfish floss with ulin banana corm. Through this approach, it was hoped that a comprehensive understanding of the factors influencing the product's success in the market would be gained, providing valuable insights for the development of a more sustainable and profitable food product.

2. Literature review

2.1.Market Potential

Market potential is defined as the probability that a product will be accepted and experience growth within a particular market segment. Several factors influence market potential, such as product characteristics, consumer preferences, segmentation approaches, and prevailing economic conditions. Kotler and Keller (2021) emphasize that analyzing consumer needs and implementing effective market segmentation are critical initial steps in evaluating a product's market potential. Therefore, a thorough understanding of consumer segments and their preferences is necessary to determine the degree of market acceptance. Milkfish floss produced from Ulin banana corms exhibits significant market potential because it utilizes locally sourced and environmentally sustainable ingredients that support a healthy diet. Wulandari et al. (2023) report that consumers who prioritize healthy eating are more inclined to choose locally sourced products. This preference is especially pronounced among younger consumers, who frequently seek healthier and more sustainable food options. However, challenges persist in achieving acceptance of domestically produced products, particularly among individuals with traditional consumption preferences. Therefore, implementing a comprehensive market education strategy and conducting detailed market segmentation are necessary to increase the product's appeal.

2.2.Financial Feasibility

Financial feasibility evaluates whether a product's revenue can cover its production and sales costs. This study uses financial feasibility theory to examine the costs, projected revenue, and potential profits of producing milkfish floss from Ulin banana corms. Wulandari et al. (2023) point to Net Present Value (NPV), Internal Rate of Return (IRR), Benefit-Cost Ratio (B/C Ratio), Payback Period (PBP), and Break-Even Point (BEP) as key measures of profitability and long-term success. Using Ulin banana corms could help lower production costs, but it is still crucial to maintain high product quality to remain competitive. Kartikaningsih et al. (2021) state that financial feasibility studies must

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia



IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

address capital investment, raw material costs, and market potential. Achieving an optimal balance between cost efficiency and product quality is essential for innovative food products. Savitri et al. (2021) assert that financial feasibility analysis enhances business sustainability by evaluating costs, pricing, and anticipated profits. Their research focuses on agro-industrial products derived from local materials and identifies the key factors that influence costs and profits. These studies indicate that financial feasibility assessments are beneficial for forecasting a product's market success. Poveda-Giraldo et al. (2024) argue that comprehensive business feasibility studies enhance the stability and competitiveness of small enterprises, particularly in rural areas. Therefore, financial feasibility studies are essential for supporting the development of innovative food products that use local ingredients, such as milkfish floss with Ulin banana corms, to broaden market opportunities.

2.3.The Relationship Between Market Potential and Financial Feasibility

The success of a product depends on its market potential and financial viability. Strong market potential increases the chances that consumers will accept the product and improves financial results. Producers with stable finances can offer competitive prices, making their products more appealing to buyers (Yulia et al., 2025). For this reason, it is important to thoroughly analyze both the market potential and financial feasibility of Ulin banana corm-derived milkfish floss products. Products with strong market potential but inadequate financial support may underperform. Conversely, robust financial resources cannot offset weak consumer demand. Both factors must be assessed to ensure long-term profitability and sustainability.

3. Method

Quantitative and qualitative research methodologies were employed to comprehensively assess the commercial and financial viability of milkfish floss that was produced from ulin banana corms. The study examined consumer preferences and specific product attributes to evaluate market potential and financial feasibility.

3.1.Type of Research and Methodological Approach

A descriptive-exploratory methodology was employed to gather comprehensive data on the utilization of ulin banana corm in the manufacture of milkfish floss and to evaluate its economic feasibility. This research approach filled gaps in the literature, as few studies investigated the technical, market, and financial dimensions of goods sourced from local raw resources. In the agroindustry context, integrating qualitative and quantitative data proved effective for conducting comprehensive market and financial feasibility studies.

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia



IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

3.2.Data Sources and Data Collection Techniques

Primary data were collected through a market survey and in-depth interviews. The market survey used a quantitative approach to assess consumer perceptions of milkfish floss with the addition of ulin banana corm. The survey collected data on preferences regarding product attributes—such as price, packaging, sensory qualities—and other factors influencing purchase decisions. In-depth, semi-structured interviews were conducted with business owners and industry experts to obtain detailed insights into the challenges and opportunities associated with producing and marketing milkfish floss with ulin banana corm. This approach clarified the perspectives of both producers and consumers regarding product innovation. While, secondary data were collected through literature reviews, industry reports, and other reliable sources. These data contextualized the market analysis and supported the evaluation of the product's financial feasibility, encompassing market trends, consumer-behavior insights, and financial benchmarks.

3.3.Data Analysis Techniques

3.3.1. Qualitative Analysis

Data from in-depth interviews analyzed using thematic analysis to identify key themes related to consumer perceptions and challenges in the production and marketing of milkfish floss made with ulin banana corm (Raj and Aithal, 2022).

3.3.2. Quantitative Analysis

Data from the market survey analyzed using descriptive statistics to describe respondent characteristics and their preferences toward the product. This technique will provide insights into consumer perceptions and existing market trends (Lencucha et al., 2020).

3.3.3. Financial Feasibility:

This study also conducted a financial feasibility analysis of the milkfish floss with addition ulin banana corm using several financial indicators (Kahuthia and Karanja, 2025)

- Net Present Value (NPV): Measures the difference between the present value of revenues and costs generated by the product over a specific time period. A positive NPV indicates that the investment in the product is profitable.
- Internal Rate of Return (IRR): Measures the expected return on investment. An IRR higher than the cost of capital indicates that the investment is viable.

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia



IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

- Benefit-Cost Ratio (B/C Ratio): Measures the extent to which the benefits of the product exceed its production costs. A B/C ratio greater than 1 indicates that the product has a higher economic benefit than its production cost.
- Payback Period (PBP): Measures the time required to recoup the initial investment made in the product development. The shorter the PBP, the quicker the product can generate profits.
- Break-Even Point (BEP): Determines the sales volume at which revenue equals cost. The BEP indicates how many units of the product must be sold to avoid a loss.

3.4.Participants and Sampling Technique

This research involved two main participant groups: consumers and business owners.

- Consumers. Sampling was conducted using purposive sampling, selecting individuals who had knowledge or experience related to fish floss products or products made from local raw materials. Selected respondents were asked to provide their views on preferences for milkfish floss made with ulin banana corm. The consumer sample size (n = 70) was determined purposively, targeting the intended consumer segment until data saturation was reached. Saturation occurred when additional responses no longer provided new insights regarding product preference attributes. An additional buffer of respondents was included to enhance data reliability and account for potential nonresponse.
- Business owners. Sampling involved selecting producers with experience in processing milkfish or in developing products from local raw materials. A total of five (n = 5) business owners were selected based on purposive sampling. Inclusion criteria required participants to have at least two years of experience in the milkfish processing industry or in producing goods derived from local raw materials, and to possess relevant knowledge of the challenges and opportunities associated with producing milkfish floss with addition ulin banana corm.

3.5.Alignment of the Methodology with the Research Gap

This research methodology was highly relevant to addressing the existing research gap. As previously identified, there was limited research on the financial feasibility and market potential of milkfish floss enriched with ulin banana corm, indicating a need for a more comprehensive approach to evaluating both market and financial aspects of such products. By utilizing a comprehensive mixed-methods approach, this study not only provided insights into market acceptance but also offered a clearer understanding of the

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia



IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

product's financial feasibility (Savitri et al., 2021; Poveda-Giraldo et al., 2024). This mixed-methods approach allowed the research to explore both the market dimensions and financial feasibility more deeply and integratively. It was expected that this approach would fill the gap in the existing literature on local raw materials that integrated sustainability aspects and financial benefits, while also providing practical guidance for the development of similar products in the future.

4. Findings and discussion

4.1. Finding

4.1.1. In-Depth Interview Results

This study involved in-depth interviews with four informants, consisting of two business actors in the fisheries product processing sector, an expert from the fisheries service, and an academic in the field of food and sustainability. The main findings obtained from the interviews are as follows:

A. Challenges in Raw Materials and Processing

1. Price of Milkfish Raw Material
   Business owners revealed that the high price of milkfish raw material is a major challenge in processing Milkfish floss. Therefore, they are looking for more affordable and environmentally friendly alternative raw materials, one of which is ulin banana corm.
2. Environmental Sustainability
   The use of ulin banana corm supports sustainability by reducing dependence on imported raw materials and utilizing more environmentally friendly local resources. This is important given the increasing global awareness of the environmental impact of food production (Hofmann et al., 2020).
3. Reduction of Production Costs
   Ulin banana corm is cheaper than milkfish raw material, which allows for a significant reduction in production costs. This provides an opportunity for business owners to lower the selling price of the product without sacrificing quality.
4. Processing Technology
   The processing of ulin banana corm is more complex than conventional raw materials, requiring more advanced knowledge and processing machinery. This reflects the challenges in adopting new technology often faced by the food processing industry, which requires significant investment in infrastructure and worker training (Saha et al., 2025).

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia

IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

5. Supply Limitations
   The unstable supply of ulin banana corm is a problem faced by business owner, which can disrupt production smoothness. This supply issue needs to be addressed with more efficient supply chain management strategies and the development of more reliable raw material sources.

B. Market and Consumer Acceptance

1. Market Acceptance of the Product
   Most business actors see great potential in the market that cares about sustainability and locally sourced products. However, market acceptance of this product is still limited due to differences in taste and texture compared to traditional shredded fish.
2. Differences in Taste and Texture
   Although initial trials showed good acceptance, some consumers felt that the taste and texture of the shredded fish using ulin banana corm were slightly different from conventional Milkfish floss. This indicates that consumers tend to appreciate products that have a familiar taste and texture to them (Kamei et al., 2024).
3. Academic Statement
   The interviewed academic emphasized that shredded fish with ulin banana corn can provide better nutritional value, especially from fiber and antioxidant content. This product is healthier than traditional shredded products that rely solely on fish, making it more attractive to health-conscious consumers.

C. Market Opportunities

1. Environmentally Conscious Consumers
   The demand for environmentally friendly and locally sourced products is increasing, in line with global trends demanding more sustainable products. This provides a great opportunity for ulin banana corm-based products to access a wider market.
2. Increased Demand for Healthy Products
   Products containing higher nutritional value are increasingly in demand by consumers, especially those concerned with health and plant-based diets. This opens a larger market for shredded products based on ulin banana corm, which have higher fiber and antioxidant content.

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia



IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

4.1.2. Consumer Questionnaire Findings and Results

Based on the results of questionnaires distributed to 70 respondents who have access to processed fish products, as well as findings from in-depth interviews, the following are the main findings related to respondent profiles, organoleptic attributes, and consumer preferences.

1. Respondent Profile

- Gender and Age
  Respondents consisted of men and women with diverse age ranges, including age groups <20 years, 20-29 years, and 50-59 years. This indicates that this product has broad market potential, both among young and older consumers.
- Last Education
  The majority of respondents had an educational background of High School/Vocational School and Diploma, indicating that this product can be accepted by consumers with various levels of education.
- Occupation and Income
  Most respondents worked as private employees, students/university students, and had a household income below 2 million rupiah per month, reflecting that this product is more accessible to middle to lower-income consumers.
- Familiarity with Products
  Most respondents were already familiar with milkfish floss products and had tried processed products made from banana corm, making it easier for them to accept products that use ulin banana corm as an alternative raw material.

2. Consumer Preferences Towards Product Organoleptic Attributes

Based on the results of the organoleptic attribute analysis, the following are the assessment results for the tested product:

Table 1. *Organoleptic Attribute Results*

No	Attribute/Variable	Value
1	Appearance	3.4
2	Product Color	3.5
3	Aroma/Fragrance	3.6
4	Texture/Density	3.7
5	Overall Taste	3.7
6	Flavor Balance	3.6
7	Aftertaste	3.6
8	Ingredient Quality	3.8
9	Uniqueness Level	3.7
10	Overall Acceptance	3.9

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia



IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

Interpretation:

- Among the evaluated attributes, "Overall Acceptance" (3.900) and "Ingredient Quality" (3.8) received the highest mean scores, indicating that consumers generally viewed the product positively and perceived the quality of its ingredients as high. In addition, attributes such as "Overall Taste" (3.7) and "Texture/Density" (3.7) also scored notably well, reflecting favorable consumer perceptions regarding the sensory experience and consistency of the milkfish floss enriched with ulin banana corm.
- These results suggest that while overall acceptance and ingredient quality were the most highly valued aspects, other sensory factors such as taste, texture, and uniqueness also contributed substantially to the product's appeal. This pattern implies that consumers appreciated not only the product's composition but also its balanced flavor and distinct sensory characteristics.

3. Consumer Preferences Towards Milkfish Floss Product with Addition of Ulin Banana Corm

Based on data analysis, the following are the assessment results for product attribute and consumer preferences:

Table 2. *Product Attribute Analysis*

Attribute/Variable	Average
Ingredient quality / natural ingredients	4.34
Distinctive taste / savory	4.36
Crispy / dry texture	4.13
Nutritional content / healthy	4.37
Practical / durable packaging	4.20
Label / composition explanation	4.21
Affordable price	4.11
Mixing Idea	2.13
Buying Probability	3.30

Interpretation :

- Ingredient quality / natural ingredients: Average score: 4.34 meaning consumers pay great attention to the quality of ingredients used in the product, especially natural ingredients. Products with natural ingredients tend to be more preferred and trusted by consumers, indicating that ingredient quality is an important factor in purchasing decisions.
- Distinctive taste / savory: Average score: 4.36 meaning a distinctive and savory taste is a very attractive selling point for consumers. This high score indicates

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia

IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

that consumers highly value unique and delicious flavors, and this contributes greatly to their preference for the product.

- Crispy / dry texture: Average score: 4.13 meaning a crispy and dry texture is quite important for consumers, although not as strong as taste or ingredient quality factors. However, consumers still gave a good assessment, indicating that the right texture enhances product appeal.
- Nutritional content / healthy: Average score: 4.37 meaning good and healthy nutritional content is one of the main factors in purchasing decisions. The very high score indicates that consumers highly prioritize products that provide health benefits, reflecting the trend of consumers becoming more health-conscious.
- Practical / durable packaging: Average score: 4.20 meaning practical and durable packaging is highly valued by consumers. This indicates that consumers tend to choose products with packaging that is easy to use, durable, and facilitates product storage.
- Label / composition explanation: Average score: 4.21 meaning consumers appreciate clear and transparent information regarding product composition. With a good score, this shows that labels providing sufficient explanation about product ingredients and content make consumers feel more confident and comfortable.
- Affordable price: Average score: 4.11 meaning affordable price remains an important factor for consumers. Although not as heavy as other attributes, consumers still pay great attention to the price matching the product quality, reflecting the importance of balance between price and value received.
- Mixing Idea: Average score: 2.13 meaning this attribute received the lowest score, indicating that consumers are not very interested in the idea of mixing in the product. This may indicate that they prefer simpler products or focus more on core quality, not new combinations or experiments.
- Buying Probability: Average score: 3.30 meaning the probability of purchase shows a divided response. Some consumers are very interested in buying, while others may still be hesitant or not very interested. This indicates potential, but also uncertainty in purchasing decisions that needs to be further explored to identify other inhibiting or driving factors.

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia



IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

Table 3. *Purchase Preference Analysis*

Attribute/Variable	Option/Variable	Amount
	Grocery Store / Traditional Market	6
	Minimarket / Supermarket	16
	Online marketplace / online store	32
	Direct Sales from Producer	16
	Others	-
Packaging Preference	Small single-use packaging (50-75 g)	12
	Family packaging (150-250 g)	51
	Large economical packaging (>250 g)	7
	Sample sachet + large packaging	-
Claim Preference	"Natural ingredients / no preservatives"	10
	"Source of milkfish protein"	50
	"Local innovation: ulin banana corm"	8
	"Distinctive/unique taste"	61
	"Halal" / "Certified"	1
	"Environmentally friendly"	-
Purchase Barriers	Price too high	40
	Not familiar/less trust in quality	22
	Don't like ingredient innovation (banana corm)	8
Allergies	allergies	70

Interpretation:

- The purchase channel most chosen by consumers is online marketplace/online store (32 respondents), followed by direct sales from producers and minimarkets/supermarkets. This shows that consumers are more likely to buy products online or directly from producers, compared to buying in grocery stores or traditional markets. Consumers prefer to buy products through online platforms, indicating that e-commerce plays a major role in the distribution of this product. This can be utilized by strengthening the product's presence on marketplace platforms.
- Consumers prefer family packaging (150-250 g) with 51 respondents choosing it, followed by small single-use packaging (50-75 g). This shows that consumers tend to look for packaging that is practical yet sufficient for more consumption, while large economical packaging is less popular. Consumers prefer family packaging that is quite large, suitable for shared consumption or as stock. This indicates great potential in selling products in larger and more practical packaging.

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia

IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

- The most chosen claim is "Distinctive/unique taste" (61 respondents), which shows that consumers highly value the uniqueness of the product's taste. While other claims, such as "Source of milkfish protein" and "Natural ingredients / no preservatives" also received attention, although with fewer voters. Consumers tend to be interested in products that have a distinctive or unique taste. This shows that to attract consumer interest, the product must have a taste advantage that can differentiate it from other products on the market.
- The price being too high is the main barrier in purchasing decisions, with 40 respondents mentioning this. Distrust in quality and lack of taste variety are also factors that prevent consumers from buying this product. Although consumers are interested in products that use natural and healthy ingredients, price is a major inhibiting factor. To maximize sales, producers must consider reasonable pricing strategies that match consumers' purchasing power. Another obstacle faced is the lack of familiarity with products using ulin banana corm. This indicates that consumer education is essential to introduce the product and the benefits of this ingredient.
- The majority of respondents (70 people) stated that they had no allergies related to the product being analyzed. This indicates that allergy issues are not a major barrier in selecting this product and it has broader market potential. However, it is still necessary to ensure that there are no ingredients that could trigger allergic reactions in consumers.

4.1.3 Financial Feasibility Results

Based on data, the following are the results for financial feasibility of Milkfish Floss Product with Addition of Ulin Banana Corm

Table 4. *Investment Costs*

No.	Investment Type	Description	Cost (Rp)
1	Production Equipment	Milkfish grinding machine	5,000,000
		Shredded fish mixer machine	10,000,000
		Automatic packaging machine	8,000,000
		Spinner machine to remove excess oil	3,000,000
		Subtotal	26,000,000
2	Production Supplies	Large pots and spatulas	800,000
		Oil filter and storage containers	1,420,000
		Subtotal	2,220,000

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia

IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

No.	Investment Type	Description	Cost (Rp)
3	Personal Protective Equipment (PPE)	Masks, gloves, goggles, hairnets, aprons	440,000
		Subtotal	440,000
4	Certification and Testing	Product certification cost according to SNI ISO/IEC 17065	3,500,000
		Product quality and safety testing cost	2,000,000
		Subtotal	5,500,000
5	Initial Promotion	Packaging design, brochures, banners	1,000,000
		Advertising on social media and digital marketing	1,000,000
		Subtotal	2,000,000
	Total		36,160,000

1. Details of Production Cost per 250 gr of Shredded Fish (result from 1 recipe)

Table 5. *Material Cost per 250 Gr of Shredded Fish:*

No.	Material	Price per 250 Gr (Rp)
1	Milkfish Meat (boneless)	15,750
2	Ulin banana corm	2,500
3	Salt	31.25
4	Sugar	750
5	Flavor Enhancer	150
6	Shallots	2,000
7	Garlic	1,500
8	Bay Leaves	1,000
9	Galangal	225
10	Thick Coconut Milk	8,000
11	Acid Solution	50
12	Ginger	200
13	Coriander Powder	150
14	Lemongrass	5,000
15	Large Chili	30,000

2. Operational Cost for 1 Production Batch:

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia



IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

Table 6. *Operational Cost*

No.	Type of Cost	Estimated Price (Rp)
1	Gas/Electricity for Cooking	2,000
2	Labor Wages	15,000
3	Depreciation of production equipment	5,000
4	Expendable Goods	5,000
	Total Operational Cost per 250 Gr:	27,000

3. Total Production Cost per 250 Gr of Shredded Fish:

Table 7. *Operational Cost*

No.	Type of Cost	Cost (Rp)
1	Total Material Cost	36,856.25
2	Total Operational Cost	27,000.00
	Total Production Cost per 250 Gr	63,856.25

4. Cost of Goods Sold (COGS) per 100 Gr of Shredded Fish:

Because 1 recipe yields 250 grams of shredded fish, we can calculate the COGS per 100 grams:

Table 8. *Cost of Goods Sold (COGS) estimation*

No.	Description	Value
1	Total Production Cost per 250 Gr	Rp 63,856.25
2	Total Production Output per Recipe	250 gr
3	COGS per 100 Gr	Rp 25,542.50

5. Calculation of Margin and Selling Price:

Table 9. *Calculation of Margin and Selling Price*

Description	Value
Selling Price per 100 Gr:	Rp 45,000
COGS per 100 Gr:	Rp 25,542.50
Profit Margin per 100 Gr:	Rp 19,457.50
Profit Margin (%):	43.3%

With a selling price of Rp 45,000 per 100 grams, you get a fairly large profit margin of approximately 43.3%. This shows that this product has the potential to generate good profits at a selling price that remains affordable.

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia



IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

6. Financial Feasibility:

Table 10. *Financial Feasibility*

Description	Year 0	Year 1	Year 2	Year 3
Revenue	-	108,000,000	140,400,000	182,520,000
Production Cost	-	61,300,000	79,800,000	103,800,000
Fixed Cost	-	27,000,000	27,000,000	27,000,000
Net Profit	-	19,700,000	33,600,000	51,720,000
NPV	51,062,274	-	-	-
IRR	80.18%	-	-	-
B/C Ratio	1.32	-	-	-
PBP (Years)	2 Years	-	-	-

Explanation:

1. Net Present Value (NPV):
   Rp 51,062,274. This project provides a positive value, indicating that the project generates more money compared to the initial investment.
2. Internal Rate of Return (IRR):
   80.18%. A very high rate of return, far greater than the 12% discount rate, indicating this project is highly profitable.
3. Benefit-Cost Ratio (B/C):
   1.32. A B/C ratio greater than 1 indicates that this project yields greater benefits compared to its costs, indicating financial feasibility.
4. Payback Period (PBP):
   2 Years. The initial investment can be recovered in a relatively short time, which is 2 years.

4.2. Discussion

4.2.1. Analysis of Interview Findings

The results of in-depth interviews with business actors, fisheries service experts, and academics show that the use of ulin banana corm as an alternative raw material for Milkfish floss can present significant opportunities, especially in overcoming the challenge of high milkfish raw material prices. Business actors revealed that the increasing price of milkfish has limited their ability to produce shredded fish efficiently and at an affordable price. This finding is consistent with previous research which shows that raw material price is an important factor affecting production costs in the fish processing industry (Pramesti and Yuliarmi, 2025).

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia



IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

On the other hand, the utilization of ulin banana corm, which has so far been considered waste, offers great potential in supporting the sustainability of the food processing industry. This is in line with the principles of sustainability that prioritize reducing dependence on imported raw materials and optimizing the use of local resources, an approach that is increasingly relevant in facing the challenges of climate change and the need to reduce the carbon footprint in the food industry (Hofmann et al., 2020). The use of ulin banana corm, which is cheaper than milkfish, also allows for a significant reduction in production costs, which can strengthen the product's competitiveness in the market.

However, the processing of ulin banana corm is more complex than milkfish raw material and requires more advanced processing technology. This relates to the the importance of investment in appropriate processing technology to produce products that meet industry standards (Saha et al., 2025). In addition, the instability of the ulin banana corm supply is a problem faced by business actors, indicating the need to strengthen the supply chain system so that this raw material can be accessed more easily and consistently. Limited raw material supply is an important limiting factor in ensuring long-term production smoothness, which must be a primary concern for business owners.

4.2.2. Analysis of Questionnaire Findings

Based on the results of questionnaires distributed to 70 respondents, there are several important findings related to consumer acceptance of the Milkfish floss product made from ulin banana corm. Although most respondents showed interest in this product, differences in taste and texture compared to conventional shredded fish were factors that significantly influenced purchasing decisions. This finding is consistent with research by Kamei et al. which states that organoleptic attributes such as taste, texture, and aroma are factors that strongly influence consumer acceptance of food products based on local ingredients (Kamei et al., 2024). Most consumers want products that have a taste and texture similar to products they are already familiar with and consume daily, such as traditional milkfish floss.

However, the aspect of higher nutritional value of shredded product based on ulin banana corm can be an additional attraction for health-conscious consumers. Research by Duarte and Teixeira shows that younger consumers tend to be more concerned about the nutritional value of the products they consume. This indicates

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia

IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

a fairly large market opportunity for this product, especially for those looking for healthy and environmentally friendly food alternatives (Duarte and Teixeira, 2021).

The trend of consumers becoming more concerned about sustainability and locally sourced products is also a factor supporting this product. As found in research by Kim and Lee, environmentally conscious consumers tend to prefer products that not only meet nutritional needs but are also environmentally friendly (Kim and Lee, 2023). With the right marketing strategy, such as conveying the health and sustainability benefits of the product, the shredded product based on ulin banana corm has the potential to be more widely accepted by the market.

4.2.3. Analysis of Financial Feasibility

Based on the results of the financial feasibility analysis, the business of processing Milkfish floss based on ulin banana corm shows promising potential in terms of profitability. A profit margin of 43.3% and a Payback Period (PBP) of only two years indicate that investment in this product can provide a fairly quick return. A positive NPV value of Rp 51,062,274 indicates that the investment made will generate profits exceeding the costs incurred, while a high IRR (80.18%) indicates that this project is highly profitable (Wulandari et al., 2023).

However, external factors such as fluctuations in raw material prices and dependence on the supply of ulin banana corm need attention. Uncertainty in the supply of raw materials can affect price stability and product availability in the market. Therefore, diversification of raw material sources and the development of a more efficient supply chain system are very important to maintain production continuity and maintain profit margins in the future. A better supply chain system can also reduce risks arising from uncertainty in raw material supply, which can affect overall financial feasibility (Qiao and Zhao, 2023).

The affordable selling price of the product, which is Rp 45,000 per 100 grams, is also an important factor supporting the financial feasibility of this product. With a competitive price, this product can compete with other similar products, which is an important factor in attracting consumer interest in a market that is very price sensitive.

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia



IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

4.2.4. Contribution to the Study of Food Sustainability

This research makes a significant contribution to the study of food sustainability, especially in the utilization of local resources often considered waste, such as ulin banana corm. The utilization of this local raw material reduces dependence on imported raw materials, which can reduce the environmental impact due to the transportation and production of raw materials. This relates to the concept of a circular economy which aims to reduce waste and maximize the utilization of existing resources. This ulin banana corm-based product also shows that sustainability encompasses not only environmental aspects but also economic ones, as it can create added value from local resources that have been underutilized so far.

Furthermore, the results of this study indicate that environmentally friendly, locally sourced food products can be accepted by the market, even though there are challenges related to changes in taste and texture. This adds to the understanding of how sustainability in food products can be promoted through an approach that integrates environmental, social, and economic aspects. Therefore, the product based on ulin banana corm can be a model of innovation in a more sustainable food industry.

4.2.5. Constraints and Improvement Suggestions

Several constraints identified in this study are:

1. Limitations of Processing Technology: Processing ulin banana corm required more advanced technology and greater investment. To enable efficient, cost-effective, and consistent mass production, the process would have benefited from (i) pretreatment and dewatering systems for a fibrous substrate (industrial slicer, blancher, enzymatic softening, and a screw press), (ii) energy-efficient drying tailored to high-fiber materials (continuous belt or heat-pump dryers; for premium quality, vacuum or freeze drying), (iii) milling and classification suited to fibrous botanicals (hammer/pin mills with air-classifiers to control particle size), and (iv) in-line quality control (NIR moisture sensors, metal detection) plus sanitary handling (CIP-ready mixers and conveyors) to maintain uniformity and food safety.

INTERNATIONAL JOURNAL OF
STUDIES IN SOCIAL SCIENCES AND HUMANITIES
IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia



IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

2. Dependence on Raw Material Supply: Fluctuations in the unstable supply of ulin banana corm pose a problem in maintaining production continuity. Diversification of raw material sources and development of a wider supply network can reduce dependence on a single source and ensure smooth production.

3. Market Acceptance: Although this product has good market potential, differences in taste and texture with conventional shredded fish pose a challenge in increasing market acceptance. Consumer education about the health and sustainability benefits of the product can help increase product acceptance.

4.2.6. Direction for Further Research

Further research can focus on:

1. Development of Processing Technology: Developing more efficient and cheaper processing technology for ulin banana corm to minimize production costs and improve product quality.
2. Product Diversification: Developing various product variants based on ulin banana corm to expand the market and increase added value.

Further Market Acceptance Studies: Conducting product trials on broader market segments and conducting market research to understand consumer preferences more deeply. Education about sustainability and health benefits of the product can also be strengthened to increase consumer awareness

5. Conclusion

This study aims to explore the market potential and financial feasibility of milkfish floss product with addition ulin banana corm, as well as its contribution to the sustainability of the food industry. The results indicate that milkfish floss with addition ulin banana corm has high profit potential and a fast investment payback period, while supporting the use of more environmentally friendly local raw materials. Nevertheless, the main challenge lies in consumer acceptance regarding the taste and texture, which are slightly different compared to traditional milkfish floss products.

To address this challenge, the development of more efficient processing technology and appropriate marketing strategies are required to increase market acceptance. With these steps, milkfish floss with addition ulin banana corm has the potential to be more

IJOSSH is published by
Politeknik Negeri Jember, Indonesia

IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

widely accepted, especially by consumers who are concerned about sustainability and healthy diets. This study provides a clear picture of the great potential of milkfish floss products with addition ulin banana corm in promoting a more sustainable food industry in Indonesia.

References

A. Puspita, Hermanto, S. Rejeki, & I. Elvira, "Pengaruh substitusi bonggol pisang kepok (Musa paradisiaca L.) terhadap karakteristik organoleptik dan analisis kimia abon ikan bandeng," *J. Innov. Food Technol. Agric. Prod.*, **2**(2), 6–10, (2024), https://doi.org/10.31316/jitap.v2i2.7324

A. Saha, R. Raut, & M. Kumar, "Digital technology adoption challenges in the agri-food supply chain from the perspective of attaining sustainable development goals," *Int. J. Logist. Manag.*, **36**(2), 556–588, (2025), https://doi.org/10.1108/IJLM-09-2023-0412

D. A. Savitri, H. Herlina, & N. Novijanto, "Financial feasibility analysis of chocolate spread with coconut ingredients as agroindustrial product," *J. La Bisecoman*, **2**(2), 14–24, (2021), https://doi.org/10.37899/journallabisecoman.v2i2.353

D. Ciptaningtyas, A. S. B. Azzahra, A. Thoriq, & L. Hasta Pratopo, "Uji daya terima abon plant-based dari bonggol pisang kepok untuk memenuhi kebutuhan pasar vegetarian food," *Atech-i*, **1**(2), (2024), https://doi.org/10.55043/atech-i.v1i2.22

H. Kartikaningsih, Y. Yahya, T. Yuniar, A. A. Jaziri, W. Zzaman, R. Kobun, & N. Huda, "The nutritional value, bacterial count and sensory attributes of little tuna (Euthynnus affinis) floss incorporated with the banana blossom," *Potravinarstvo Slovak J. Food Sci.*, **15**, 846–857, (2021), https://doi.org/10.5219/1657

J. A. Poveda-Giraldo, S. Piedrahita-Rodriguez, N. Salgado Aristizabal, M. Salas-Moreno, & C. A. Cardona Alzate, "Prefeasibility analysis of small-scale biorefineries: The annatto and açai case to improve the incomes of rural communities," *Biomass Convers. Biorefin.*, **14**(11), 12227–12252, (2024).

J. Kahuthia & W. Karanja, "Fostering agro-industrial growth in Kiambu County: A bottom-up approach to industrialization and economic transformation," *Afr. Multidiscip. J. Res.*, **10**(1), 174–196, (2025), https://doi.org/10.71064/spu.amjr.10.1.2025.393

K. Raj & P. S. Aithal, "Assessing the attractiveness & feasibility of doing business in the BoP market–A mixed method approach using ABCD analysis technique," *Int. J. Case Stud. Bus. IT Educ. (IJCSBE)*, **6**(2), 117–145, (2022), http://dx.doi.org/10.2139/ssrn.4228335

M. Kamei, M. Nishibe, R. Araki, K. Kohyama, & Y. Kusakabe, "Effect of texture preference on food texture perception: Exploring the role of matching food texture

IJOSSH, Vol 2(2) 2025
DOI: https://doi.org/10.25047/ijossh.v2i2.6687

IJOSSH is published by
Politeknik Negeri Jember, Indonesia
IJOSSH is licenced under a Creative Commons
Attribution-ShareAlike 4.0 International License.

and preference," *Appetite*, **192**, 107078, (2024), https://doi.org/10.1016/j.appet.2023.107078

N. Kim & K. Lee, "Environmental consciousness, purchase intention, and actual purchase behavior of eco-friendly products: The moderating impact of situational context," *Int. J. Environ. Res. Public Health*, **20**(7), 5312, (2023), https://doi.org/10.3390/ijerph20075312

P. Duarte & M. Teixeira, "Healthy eating as a trend: Consumers' perceptions towards products with nutrition and health claims," *Rev. Bras. Gestão Negócios*, **23**, 405–421, (2021), https://doi.org/10.7819/rbgn.v23i0.4099

P. Kotler & K. L. Keller, *Marketing Management*, 15th ed., Pearson Education, (2021).

R. Lencucha, J. Drope, R. Labonte, B. Cunguara, A. Ruckert, Z. Mlambo, … N. Nhamo, "The political economy of tobacco in Mozambique and Zimbabwe: A triangulation mixed methods protocol," *Int. J. Environ. Res. Public Health*, **17**(12), 4262, (2020), https://doi.org/10.3390/ijerph17124262

R. Qiao & L. Zhao, "Reduce supply chain financing risks through supply chain integration: Dual approaches of alleviating information asymmetry and mitigating supply chain risks," *J. Enterp. Inf. Manag.*, **36**(6), 1533–1555, (2023), https://doi.org/10.1108/JEIM-07-2022-0326.

S. A. Wulandari, A. H. H. Slamet, D. N. Mutmainah, N. Ariyola, R. Rizqullah, & R. Damayanti, "Analisis kelayakan finansial usaha keripik 'Kelja Ngoceae' di Sidoarjo," *J. Pertan. Cemara*, **20**(1), 1–10, (2023), https://doi.org/10.24929/fp.v20i1.2538

T. Hofmann, G. V. Lowry, S. Ghoshal, N. Tufenkji, D. Brambilla, J. R. Dutcher, L. M. Gilbertson, J. P. Giraldo, J. M. Kinsella, M. P. Landry, W. Lovell, R. Naccache, M. Paret, J. A. Pedersen, J. M. Unrine, J. C. White, & K. J. Wilkinson, "Technology readiness and overcoming barriers to sustainably implement nanotechnology-enabled plant agriculture," *Nat. Food*, **1**(7), 416–425, (2020), https://doi.org/10.1038/s43016-020-0110-1.

V. L. Pramesti & N. N. Yuliarmi, "Determinants of income of fish processing MSME actors in Pengambengan Village, Jembrana Regency," *Int. J. Financ. Econ.*, **2**(2), 324–342, (2025).