LA SALLE GREEN HILLS
Learning Community 6

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Evaluating the Marketability of a Cassava-Based Multi-Purpose Oil Absorbing Mat for Household Kitchen Owners in Mandaluyong City

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ABSTRACT

This study explores the feasibility of marketing a multipurpose, oil-absorbing kitchen mat made from cassava as a sustainable alternative to the synthetic polyester mats commonly used in household kitchens. The increasing awareness of environmental issues, particularly improper disposal of cooking oil and the widespread use of non-biodegradable household materials, has emphasized the need for practical, eco-friendly innovations. Many households continue to dispose of used cooking oil down sinks or drains, unaware of the long-term consequences such as clogged pipelines, unpleasant odors, and water contamination. Likewise, synthetic kitchen mats contribute to solid waste accumulation due to their slow decomposition. These concerns highlight the importance of examining natural materials like cassava as viable replacements for conventional kitchen products.

The purpose of this study is to understand consumer acceptability of a cassava-based oil-absorbing kitchen mat, focusing specifically on household cooks in Mandaluyong City. Using a quantitative research design, the study centers on participants' lived experiences, perceptions, and personal attitudes toward both their current kitchen mats and the possibility of adopting a biodegradable alternative. Rather than relying on numerical measurements, the research prioritizes descriptive insights that reflect the everyday realities of home cooking and household maintenance.

Data were collected through in-depth interviews and focused group discussions with household cooks. These conversations provided participants the opportunity to share narratives about the challenges they encounter when dealing with oil spills, the criteria they look for when choosing kitchen mats, and their reflections on sustainability as part of their daily routines. The quantitative approach allowed the researcher to gather rich, detailed accounts that reveal not only what consumers prefer but also why these preferences matter to them. Observational notes were also incorporated to understand how participants interact with their existing kitchen products and how a cassava-based mat might fit naturally into real household settings.

Preliminary themes emerging from interviews suggest that consumers value practicality, durability, and affordability in kitchen items, but many are becoming increasingly open to eco-friendly alternatives when these offer clear functional benefits. Participants expressed interest in products that reduce waste, are safe for the environment, and still perform effectively in everyday tasks. The idea of a cassava-based mat was generally received with curiosity, with many participants acknowledging its potential to address oil-related cleaning concerns while reducing dependence on synthetic materials.

The findings of this study are expected to provide insight into the market readiness for sustainable household products within urban Filipino communities. By examining consumer perceptions and willingness to consider biodegradable alternatives, the research aims to guide future product development, marketing strategies, and community-based sustainability efforts. Additionally, the successful introduction of cassava-based products could contribute to new livelihood opportunities for local cassava farmers by expanding the economic value of the crop beyond food production.

Overall, this quantitative study highlights the importance of integrating natural, biodegradable materials into everyday household tools. Through the lens of consumer experience and perception, the research underscores the potential of a cassava-based oil-absorbing kitchen mat to contribute not only to environmental sustainability but also to community empowerment and greener household practices.

KEYWORDS: *Cassava-based products, oil-absorbing mat, sustainability, eco-friendly innovation, household kitchen practices*

INTRODUCTION

Background of the Study

Over 80% of Filipino consumers prefer eco-friendly products, reflecting a growing awareness of environmental issues such as the improper disposal of cooking oil. In Metro Manila, leftover grease and cooking oil from restaurants have been one of the leading contributors towards clogged drainage systems, especially during the rainy season. In 2015, workers had to clear the clogged drains along Tomas Morato Avenue in Quezon City after they found out that oil waste from nearby food establishments was blocking the water flow (GMA News, 2015). Balaria et al. (2021) also found that the improper disposal of waste cooking oil is more than just a cleanliness issue. It could clog drainage pipes and pollute waterways, making floods worse and affecting nearby communities.

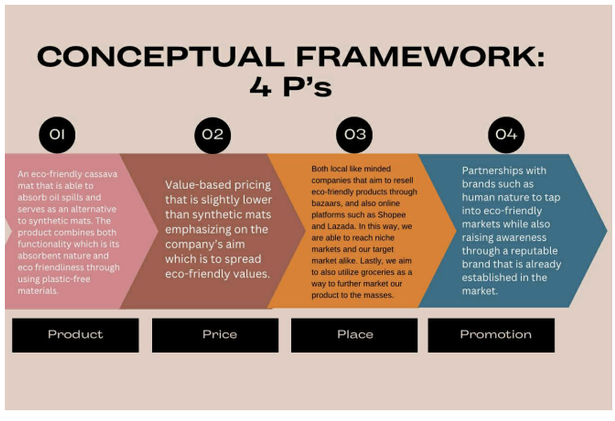
Cassava is used in many industries, like the food industry, with products like tapioca pearls, cassava chips, and noodles. Another one is the use of cassava starch, which is made into biodegradable packaging that can be an alternative to plastic. (Maitha et al., 2024). There is existing research that focuses on cassava starch having potential as an oil absorbent (Ali et al., 2020). However, there is a lack of existing research in terms of developing cassava-based textile designed for oil absorption, leaving a gap in the exploration of its full potential in fabric or cloth-based applications. A cassava-based oil-absorbing mat is an alternative option to polyester oil absorbent cloth that is harmful to the environment because of its synthetic properties, micro plastic pollution and the release of harmful chemicals during its production and washing (Keiderly, 2021). This alternative option is affordable and eco-friendly and can be used for everyday kitchen activities in households and strengthens local manufacturing, job creation, and alignment with environmental policies like the Ecological Solid Waste Management.

The main problem this study looks into is how non-biodegradable kitchen mats and waste cooking oil contribute to pollution and harm to marine life, especially in Metro Manila. Kitchen mats today are predominantly made of polyester, which is harmful to the environment in manufacturing and disposal. In response to this, this study will focus on finding out whether household consumers are willing to shift to cassava-based multi-purpose oil-absorbing kitchen mats, how much they are willing to pay, and what factors influence their decision-making.

Though there have been many previous studies focusing on the environmental hazards associated with improperly disposed waste cooking oil, this research is much more practical and focused on communities. The research aims to address that gap in sustainable household practices by developing a mat that absorbs the oil before it becomes a disaster. While Balaria et al. (2021) were good at detailing the hazards of oil that has been discarded improperly, this study attempts to keep the discussion moving in a sustainable direction and explores whether consumers are ready to adopt eco-friendly alternatives. This is particularly relevant in Metro Manila, where there are recurring issues with drainage and flooding. Since the product is still in development, the study then provides a way to link environmental awareness to daily kitchen habits, and provide real-world value beyond academia pursuing sustainability.

Conceptual Framework

1. Price - Value-based pricing that is slightly lower than synthetic mats emphasizing on the company's aim which is to spread eco-friendly values.
2. Place - Both local like minded companies that aim to resell eco-friendly products through bazaars, and also online platforms such as Shopee and Lazada. In this way, we are able to reach niche markets and our target market alike. Lastly, we aim to also utilize groceries as a way to further market our product to the masses.
3. Product - An eco-friendly cassava mat that is able to absorb oil spills and serves as an alternative to synthetic mats. The product combines both functionality which is its absorbent nature and eco friendliness through using plastic-free materials.
4. Promotion - Partnerships with brands such as human nature to tap into eco-friendly markets while also raising awareness through a reputable brand



that is already established in the market.

Research Objectives (descriptive) /Statement of the Problem (inferential PR2 & III)

The major problem of this study is the marketability of a cassava-based multi-purpose oil-Absorbing kitchen mat for household kitchen owners in Mandaluyong city. As Filipinos start to develop environmental awareness, the improper disposal of waste cooking oil and usage of non biodegradable kitchen materials like polyester mats is still an ongoing issue, mostly in urban areas like Metro Manila. Past research shows the existing properties of cassava as an oil-absorbent. However, there is little to no research on cassava as an eco-friendly textile that can be used in household settings. For this reason, this study aims to address whether a cassava-based mat can be a biodegradable alternative to existing synthetic oil-absorbing products that are currently in the market.

1. 1. What are the demographic characteristics of the household kitchen owners in Mandaluyong City in terms of:
   1.1 Age
   1.2 Occupation status
   1.3 Monthly Household Income

2. What is the level of consumer awareness, preference, perceived value, and willingness to buy the cassava-based kitchen mat?

3. What factors affect the marketability of cassava-based kitchen mat, and is there a significant difference in consumer acceptance when grouped according to demographic profiles?

Hypothesis

There is no significant difference in the overall marketability of cassava-based multi-purpose oil-absorbing mats compared to polyester kitchen mats in terms of customer intent, preference, and perceived value.

Scope and Delimitation

This study focuses on the marketability of cassava-based oil-absorbing kitchen mats. It does not include laboratory testing of the mat's oil absorption capacity, durability, or biodegradability. Instead, the study will examine consumer behavior, preferences, pricing expectations, and purchase intentions.

Thirty (30) household kitchen owners from Mandaluyong City will participate in this study, chosen through purposive sampling to ensure they regularly use kitchen mats or similar products. Data collection will take place from August to November 2025. The findings will primarily inform marketing strategies and assess the commercial viability of cassava-based kitchen mats.

Significance of the Study

With over 80% of Filipino consumers preferring eco-friendly products (Pulse Asia, 2023), this study supports the development of a cassava-based kitchen mat to benefit kitchen owners, green entrepreneurs, and future researchers exploring cassava's non-food potential (DOST, 2023).

The findings of this study can be beneficial to the following:

Cassava Farmers - This study may pave the way to new and stable market opportunities for cassava farmers, particularly the cassava farmers in Pililia, Rizal.

Polymer Manufacturers - Through this research, it may provide insights and ideas into exploring cassava fibers as an opportunity for green solutions. It can be a way for manufacturers to look at practices that diversify product offerings while promoting eco-friendly innovations.

Future research - This study may be a potential source for future research regarding cassava-based innovations, consumer choices, and sustainable product development. This may serve as a body of knowledge or foundation for future studies to be able to develop new applications of cassava fibers in different industries.

Filipino Consumers - This study benefits eco-conscious customers by offering a sustainable alternative to synthetic polymer that competes with its price while still aligning to their values. It also encourages consumers who are less familiar with sustainable options to consider making environmentally responsible choices through showcasing the potential of cassava fibers.

METHODS

Research Design

This study will use a quantitative descriptive research design to examine the attitudes and behaviors of household kitchen owners toward a cassava based kitchen mat. Quantitative research focuses on measuring variables using numerical data and statistical analysis to describe patterns and trends in human behavior and attitudes (Ahmed, 2024). In particular, the descriptive method of research will be employed because it is a fact finding approach that provides accurate and

precise descriptions of the current situation or condition of interest (Furidha, 2024).

Through the use of survey questionnaires and descriptive statistics such as frequencies, percentages, means, and standard deviations, this design will allow the researchers to describe the level of consumer awareness, preference, perceived value, and willingness to buy the cassava based kitchen mat. Rather than establishing cause and effect, the study will focus on presenting a clear picture of the current consumer behavior and attitudes toward cassava based kitchen mats.

Population and Sampling

This study will use random sampling to engage thirty (30) household cooks from Mandaluyong City. Participants will be selected based on their frequent cooking practices and regular use of kitchen mats or similar products, ensuring relevant and practical consumer insights. They will provide direct feedback on the functionality, convenience, and appeal of a cassava-derived oil-absorbing multi-purpose mat. These insights will be essential in evaluating the product's desirability, usability, and overall market potential, aligning development with consumer needs and preferences.

Data Gathering Procedure

1. **Development of Survey Instruments**
   To gather specific information for the study, the researchers designed a survey questionnaire for the cooks and an interview guide for cassava consumers.

2. **Review of Instruments**
   The survey questionnaires were vetted by experts for feedback to revisit and amend the materials prior to the fieldwork phase.

3. **Choice of Participants**
   The researchers focused on two specific groups: the cooks from Mandaluyong City and people with experience in using cassava products.

4. **Consent and Permissions**
   All respondents were sent letters of consent which, for minors, required consent from a parent

5. **Survey Implementation**
   The surveys were distributed using Google Forms. Respondents were sent reminders, and responses were monitored to ensure they met submission deadlines.

6. **Interview Implementation**
   Respondents participated in the scheduled interviews, which were conducted either virtually or in-person. All interviews were recorded and transcribed.

7. **Data Collection and Verification**
   Data collection concluded with a set deadline. All responses submitted were verified and the necessary adjustments were made to ensure the completeness of their responses.

   The confidentiality and privacy of all participants was maintained throughout the study.

8. **Data Arrangement**
   Survey responses were coded and collated into a spreadsheet, interview responses were transcribed and thematically grouped.

Instrumentation

The central instrument of this research is a survey intended to assess consumer opinions and behavior toward cassava-based mats. It is designed to elicit quantitative and descriptive data of participants' cooking behaviors, kitchen nuisances, and perceptions of sustainable kitchen mats. The first part of the questionnaire asks demographic information including age, employment, and cooking experience within the home to ensure that respondents fit the parameters outlined for the study.

The second part of the survey focuses on attitudes towards cassava-based mats for the kitchen, and focuses largely on their design, ease of use, environmental impact, and overall acceptance by consumers. To quantify perceptions and attitudes, answers will be analyzed using a Likert Scale (1 meaning "strongly disagree" to 7 meaning "strongly agree"). In advance of the actual survey distribution, a pilot study will be conducted in the presence of two volunteers to clarify questions and validate. Using the electronic format will make survey distribution much more streamlined, user-friendly, and (to some extent) standardized.

Ethical Guidelines and Informed Consent

In gathering data from respondents, the researchers would be establishing ethical guidelines as mandated from the National Privacy Commission and the Data Privacy Act of 2012 (RA 10173). All data collection will be private and anonymous. Participation is purely voluntary and volunteers have the option to withdraw at any time without consequence.

The outcome of this study relies on the trust and cooperation of participants. The researchers will be giving a consent form, this is a requirement for the participants to read and sign before participating and data collection. The ethical guidelines to be followed are:

1) Scope of data- This summarizes the type of data to be collected, the focus of the study, and the possible questions.

2) Nature of participation- This highlights that participating in this study is voluntary and no one is pressured, forced, or obligated to give information.

3) Consent- This requires participants to give the signed written consent form before taking part in the study.

These ethical guidelines that will be considered are for the purpose of proper handling of information, protection of all involved individuals, and support the integrity of the research.

RESULTS

The present study aimed to evaluate the marketability of a cassava-based multi-purpose oil-absorbing mat for household kitchen owners in Mandaluyong City. The descriptive quantitative methodology involved conducting online surveys among household kitchen owners in Mandaluyong City to assess consumer attitudes and behaviors toward cassava-based kitchen mats.

Table 1.1. Distribution of Respondents by Age

Frequencies of Age:

Age:	Counts	% of Total	Cumulative %
18–24	7	23.3%	23.3%
25–34	4	13.3%	36.7%
35–44	7	23.3%	60.0%
45+	12	40.0%	100.0%

The sample of the study is mainly made up of older respondents, those aged 45 and above, representing the largest single group at 40.0%. Therefore, the implications of the study results mostly reflect the opinions of older household owners of kitchens.

Table 1.2 Distribution of Respondents by Occupational Status

Frequencies of Occupation status

Occupation status	Counts	% of Total	Cumulative %
Employed	14	46.7%	46.7%
Retired	2	6.7%	53.3%
Self-employed	6	20.0%	73.3%
Student	6	20.0%	93.3%
Unemployed	2	6.7%	100.0%

The majority of respondents are currently working, with the Employed group the largest at 46.7% and the Self-employed group the second at 20.0%. These results suggest that most respondents are indeed working individuals, which may have implications for the consumer behavior reflected in the study.

Table 1.3. Distribution of Respondents by Monthly Household Income

Frequencies of Monthly Household Income

Monthly Household Income	Counts	% of Total	Cumulative %
Above ₱80,000	7	23.3%	23.3%
Below ₱10,000	5	16.7%	40.0%
₱10,001 – ₱30,000	7	23.3%	63.3%
₱30,001 – ₱50,000	6	20.0%	83.3%
₱50,001 – ₱80,000	5	16.7%	100.0%

The income of respondents is distributed across a fairly even range of income levels. The two groups with the highest frequency of respondents, the above-₱80,000 income level and the ₱ 10,001 – ₱30,000 income level, both had 23.3% of respondents in them. This distribution suggests that there are respondents in both high-income and middle-income levels within the sample.

Table 2. Awareness Indicators of Preference Indicators of Respondents Toward the Cassava-Based Kitchen Mat.

Descriptives

	N	Mean	SD
I usually notice new household products through platforms like social media, TV, or in-store displays.	30	5.50	1.196
Promotions of household mats are often clear in explaining product benefits.	29	5.90	1.145
Promotions for kitchen mats are usually designed to be visually attractive and appealing to shoppers.	30	6.13	0.819
The promotions of the cassava kitchen mat convinces me it is a product worth repurchasing	30	6.13	1.074
I expect ads for a kitchen mat to be honest represent the product's true features and benefits.	30	6.10	1.029

Consumer awareness in regard to promotional features is high, with the highest mean of 6.13 indicating that mat promotions are perceived as visually appealing and attractive to shoppers. Additionally, respondents strongly expect advertisements to accurately represent the real features and benefits of a product, based on a mean of 6.10.

Descriptive Statistics for the Respondents' Awareness Level.

Descriptives

	N	Missing	Mean	Median	SD	Minimum	Maximum
Awareness Composite	29	1	5.97	6.00	0.787	4.40	7.00

The overall level of awareness by the consumer was decidedly high, as indicated by a composite mean of 5.97. This means proximity to the maximum score indicates the marketing cues that communicated the product were well-received. Additionally, the standard deviation (0.787) of the response means this high awareness has consistency across the sample.

Respondents Toward the Cassava-Based Kitchen Mat.

Descriptives

	N	Mean	SD
I would be interested in a kitchen mat designed to reduce oil mess when cooking.	30	6.00	1.203
Long-term durability is important to me when choosing a kitchen mat.	30	6.10	1.242
Quick-drying ability is an important factor when buying a kitchen mat.	29	6.17	0.889
Eco-friendliness influences my decision to purchase a kitchen mat.	30	5.93	1.311
Having a mat that keeps counters cleaner and safer from oil spills is valuable to me.	30	5.90	1.423

The quick-dry function was indicated as the single most important factor for preference (mean: 6.17), very closely followed by long-lasting (Mean: 6.10). The core function of the mat to reduce oil-mess was also highly preferred (mean: 6.00). Lastly, the sustainable impact of the mat was also indicated to be a meaningful influence on purchasing (Mean: 5.93).

Descriptive Statistics for the Respondents' Preference Level

Descriptives

	N	Missing	Mean	Median	SD	Minimum	Maximum
Preference Composite	29	1	6.05	6.00	0.982	2.20	7.00

The preference composite score for the characteristics of the cassava-based mat is very high, with a composite mean of 6.05. This metric indicates that consumers are practicing a strong level of acceptance toward the proposed features and benefits. The composite preference score demonstrates high central tendency, with a median of 6.00, supporting the desirability of the product concept design.

Perceived Value Indicators of Respondents Toward the Cassava-Based Kitchen Mat.

Descriptives

	N	Missing	Mean	Median	SD	Minimum	Maximum
The cassava kitchen mat is priced fairly compared to other kitchen mats.	30	0	5.63	5.50	1.10	4	7
The cassava kitchen mat is affordable for household use.	30	0	5.77	6.00	1.10	3	7
The cassava kitchen mat provides good quality for its cost.	30	0	5.77	6.00	1.01	4	7

The mat is perceived as high value, as participants agreed that a mat is priced to afford, reflecting a mean of 5.77 and provides sufficient quality for the price paid, shown by a mean of 5.70. This high point of view about value for money means this mat has a price point that is competitive and reasonable. Overall, it is judged to be fairly priced compared to that of an existing mat, measured at a mean of 5.50.

Descriptive Statistics for the Respondents' Perceived Value

Descriptives

	N	Missing	Mean	Median	SD	Minimum	Maximum
Preference Composite	29	1	6.05	6.00	0.982	2.20	7.00

The composite mean of the perceived value of the cassava-based mat indicates that the overall perceived value of the mat is high,

with a composite mean of 5.72. This indicates that participants feel that the benefits offered by the mat justify the price paid. The composite value also substantiates the value proposition against the established value considerations for household kitchens.

Willingness to Buy Indicators of Respondents Toward the Cassava-Based Kitchen Mat.

Descriptives

	N	Missing	Mean	Median	SD	Minimum	Maximum
I would be willing to buy the cassava kitchen mat at its suggested price of ₱200	30	0					
I pay attention to product displays when shopping for household mats.	29	1	5.83	6	1.28	1	7
Convenient availability (online or in nearby stores) is important to me when buying a household mat.	30	0	5.93	6.00	1.11	3	7

Participants showed a strong willingness to purchase the product at the priced amount of P200, measured at a mean of 5.67. They equally stressed that ease of availability (whether in stores or online) is another key aspect of their decision to purchase, supported by a mean of 5.67. Additionally, they mentioned that product displays are also counted as a good influence towards purchasing, averaging a mean of 5.83.

Descriptive Statistics for the Respondents' Willingness to Buy Composite.

Descriptives

	N	Missing	Mean	Median	SD	Minimum	Maximum
Willingness Composite	30	0	5.85	5.70	1.05	2.30	7.00

Overall, willingness to buy the mat made of cassava is rated as High, with an indicative composite mean of 5.85. As demonstrated by this high score, strong purchase intention reflects high market potential for the READY mat. Since all responses were reported consistently, the data indicates a strong likelihood of consumer purchasing.

Table 3. Summary of Factors Affecting the Marketability of the Cassava-Based Kitchen Mat

All measured factors scored in the high range; therefore, they are an important contributing factor to the marketability of the cassava kitchen mat.

The cassava mat has a high level of marketability across all factors measured. The Preference Composite received the highest mean rating of 6.05, which is consistent with consumer interest in the mat's primary characteristics, such as reducing grease and drying quickly. The mean scores for Perceived Value (5.72) and Willingness to Buy (5.85) indicate that consumers find this product price-worthy and that they intend to purchase the product.

Table 4. The different demographic profiles affect the marketability of cassava-based kitchen mats to the household kitchen owners in Mandaluyong City.

Descriptives

	N	Missing	Mean	Median	SD	Minimum	Maximum
Marketability Composite	28	2	5.93	5.85	0.848	3.24	7.00

Marketability scores do not differ significantly across age groups; all were high, and the overall score for the 25–34 age range was 6.09. The high scores indicate that age was not an important factor when assessing whether to purchase the product. All age demographics appear to enjoy eco-friendly household products.

Marketability Scores by Age Group

Descriptives

	Age:	Mean
Marketability Composite	18–24	5.98
	25–34	6.09
	35–44	5.82
	45+	5.91

Marketability scores do not differ significantly across age groups; all were high, and the overall score for the 25–34 age range was 6.09. The high scores indicate that age was not an important factor when assessing whether to purchase the product. All age

demographics appear to enjoy eco-friendly household products.

Marketability Scores by Occupational Status

Descriptives

	Occupation status	Mean
Marketability Composite	Employed	5.93
	Retired	5.16
	Self-employed	5.94
	Student	6.04
	Unemployed	6.25

Marketability scores are consistently high regardless of occupational status, reflecting an employed mean of 5.93, suggesting that acceptance is widespread. This finding shows the assertion, discussed in this paper, that occupation has no significant impact on consumer purchasing willingness. Ultimately, the features of the product attracted consumers, not their occupation.

Marketability Scores by Monthly Household Income

Descriptives

	Monthly Household Income	Mean
Marketability Composite	Above ₱80,000	6.38
	Below ₱10,000	5.34
	₱10,001 – ₱30,000	5.65
	₱30,001 – ₱50,000	6.00
	₱50,001 – ₱80,000	6.00

Marketability scores are consistently high, regardless of income tiers, though the Above P80,000 had the highest score, measured at 6.38. This study, again, concluded there is only an incidental role of income on acceptance. This establishes a wide market appeal for eco-friendly products across diverse incomes.

DISCUSSION

According to the findings of this research, a large proportion of kitchen owners in Mandaluyong City showed an affirmative disposition towards the green kitchen innovations like the cassava oil-absorbing mat.

A significant number of the surveyed people had a very positive view of the mat in terms of its capability to minimize oil mess and its being an eco-friendly option to the synthetic ones. Several respondents also showed a favorable inclination towards buying sustainable household items, particularly if they are not expensive and are readily available.

This is an indicator of the changing mindsets of the Filipino consumers towards the environment, as it supports Pulse Asia's (2023) finding that more than 80% of the Philippine population opts for eco-friendly products. Most of the respondents preferred online platforms or supermarkets as their purchasing sources which meant that consumer acceptance is greatly influenced by the accessibility and the marketing strategies that are applied.

The respondents also supported the idea of good and honest product advertisements, which is the reason why they think transparency can boost trust and thus result in repeat purchases. This is also in sync with CarbonBright (2022) that has pointed out the case of sustainability marketing being successful when product benefits are well-communicated and the brand is trustworthy.

To sum up, the research backs up the idea that the cassava-based kitchen mat is a product with a great market potential but only if it is well-priced, widely distributed, and advertised as a genuinely eco-friendly alternative.

Conclusion

The main objective of this research was to assess the potential market of a cassava-derived multi-purpose oil-absorbing kitchen mat made for the use of every household kitchen owner in Mandaluyong City. The investigators intended to find out the impact of different demographic profiles on consumer acceptance, to assess the level of awareness, preference, perceived value, and willingness to buy, and to isolate the major factors affecting marketability.

The researchers found that the surveyed population mostly held positive views about adopting environmentally friendly innovations in the home. A large part of the respondents was very much in favor of the idea that a kitchen mat which would help with oil spills and made from non-toxic materials would be a plus for households. This indicates that the market is already welcoming the idea of going green with products that are both practical and eco-friendly.

The findings of this study indicated that demographic variables like age, sex, and income played only a minor role in the respondents' preferences and their readiness to buy the cassava-based kitchen mat. Participants of both age groups showed a common liking for eco-friendly household products, implying that environmental consciousness and sustainable living have become widely accepted norms among Filipino consumers.

This statement is in line with the Pulse Asia's (2023) research that reported over 80% of Filipinos who prefer sustainable options without considering their social class or demographic background; therefore, the cassava-based kitchen mat can appeal to a larger and more diverse consumer base in the local market. Besides, the respondents were very much aware of and in favor of the products that are environmentally friendly, and they were able to point out the mat's oil absorption capability and its role in preventing the disposal of synthetic materials as waste.

Their readiness to come out with the cassava-based mat indicates a gradually increasing acceptance of eco-friendly inventions when the products are practical, good priced, and available. Such findings are in line with those of CarbonBright (2022) and Growth Market Reports (2024) which have pointed out that the sustainable kitchenware market is constantly expanding as long as environmental responsibility is accompanied by cost-efficiency and convenience.

In addition, the research concluded that the three major factors that are accessibility, product visibility, and honest promotion, decide product marketability. The consumers were stated to buy the products which were the easiest to obtain both in virtual and real stores and to support ads that show the product's environmental advantage. Transparency in marketing and fair pricing have been viewed as factors in building consumer trust and thus, leading to repeat purchases, which is a similar conclusion to that of PriceFX (2023), wherein it is said that taking sustainable products to the market by giving them consumers' acceptance and values become easier.

All in all, the cassava-derived multi-purpose oil-absorbing mat has huge market potential as a product that is practical, eco-friendly, and affordable since it is able to meet the demand of the Philippine market, which is increasingly becoming environmentally conscious, while at the same time promoting sustainability and supporting local innovation.

In summary, the cassava-based kitchen mat is a great market opportunity as a green substitute to synthetic mats. It is a green solution of waste management, responsible consumption, and income source for local cassava growers. The findings of this research stress the need for combining sustainability with utility in product innovation. In a nutshell, the study says that the cassava-based multi-purpose oil-absorbing mat is feasible and marketable, coinciding with the increase in the number of environment-friendly consumers in the Philippines.

Recommendations

Given the research results and deductions, several suggestions are made to enhance the cassava-based multi-purpose oil-absorbing kitchen mat regarding its development, marketing, and shooting of further research.

For Manufacturers and Entrepreneurs: Enhance the cassava-based mat quality and performance to reach or even surpass the synthetic counterparts. Do more tests on oil absorption and the mat's lifetime, and market the product honestly, using eco-friendly strategies highlighting its low price and sustainability.

For Local Communities and Cassava Farmers: Local businesses should be engaged more closely to provide cassava fiber to produce eco-friendly products. The Government and NGOs should work together in training and funding so that farmers can improve their cassava utilization, thus creating more job opportunities.

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For Future Researchers: The research should be expanded by surveying more participants and different regions to understand the issue better. Moreover, the next research should also take the mat's biodegradability, cost-effectiveness, and comparison with other green materials into consideration to advance the eco-friendly household innovations even more.

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APPENDIX A: Pertinent Letters

October 1, 2025

Mr. Harold A. Diokno
ABM-R Strand Coordinator
La Salle Green Hills Senior High School

Dear Mr. Diokno,

Greetings in St. La Salle!

We are a group of Grade 12 students consisting of Jacob Deonito F. Pascasio, Shamira L. Tariman, Gabriel Xavier Y. Ponce, And Precious Marie G. Gil, Samantha Gail P.De Borja from section A are undertaking research entitled "*Evaluating The Marketability Of A Cassava-Based Multi-Purpose Oil Absorbing Mat For Household Kitchen Owners In Mandaluyong City.*". We are humbly asking for your permission to conduct interviews for the study.

Attached are the validation certificates, research instruments specification sheets request for your reference. We assure you that all safety protocols and PPE use specified in our attachments would be followed and that adult supervision would be constant and recorded during testing.

We are looking forward to our request and would merit your positive response.
Thank you very much!

Respectfully yours,

Jacob Deonito F. Pascasio
Leader

Gina F. Pascasio
Parent

Noted by

Ms. Margarette Sibayan
Practical Research 2 Teacher

Approved

October 1, 2025

Mr. Harold A. Diokno
ABM-Research Strand Coordinator
La Salle Green Hills- Senior High School

Dear Mr. Diokno,

Greetings in St. La Salle!

We are a group of Grade 12 students consisting of Jacob Deonito F. Pascasio, Shamira L. Tariman, Gabriel Xavier Y. Ponce, And Precious Marie G. Gil, Samantha Gail P.De Borja from section A are undertaking a research entitled, "*Evaluating The Marketability Of A Cassava-Based Multi-Purpose Oil Absorbing Mat For Household Kitchen Owners In Mandaluyong City*."

We are humbly asking for your permission to conduct surveys at Pioneer Heights, Sheridan Street, Barangay Barangka Ilaya, Mandaluyong City, as the residents represent our target household kitchen owners who can provide relevant insights for our study on the cassava-based oil-absorbing kitchen mat. We would be providing survey questionnaires and other items necessary for our research on October 18, 2025 and October 25, 2025. Attached herewith are the validation certificates and research instruments. We would be accompanied by Ms. Evelyn Fajardo Flor, who will oversee the data-gathering process at all times.

We assure you that all research ethical guidelines will be followed and will abide with the Data Privacy Act of 2012.

We are looking forward to our request and would merit your positive response. Thank you very much!

Respectfully yours,

Jacob Deonito F. Pascasio
Research Team Leader

Shamira L. Tariman
Research Member 1

Gabriel Xavier Y. Ponce
Research Team Member 2

Precious Marie G. Gil
Research Member 3

Samantha Gail P.De Borja
Research Team Member 4

Consented by:

Gina F. Pascasio
Team Leader's Parent

Lenjielle Lim Tariman
Parent 1

Mitzy G. Gil
Parent 2

Katrina Y. Ponce
Parent 3

Lualhati Paz De Borja
Parent 4

Noted by:

Ms. Margarette Sibayan
Practical Research 2 Teacher

Approved by:

Mr. Harold A. Diokno
Strand Coordinator, ABM-Research

Ms. Rubilita Vasco
Learning Community 6 Coordinator

CERTIFICATE OF VALIDATION

This is to certify that the instrument for the study prepared by Jacob Deonito F. Pascasio, Shamira L. Tariman, Gabriel Xavier Y. Ponce, Precious Marie G. Gil, and Samantha Gail P.De Borja, Grade 12-A students from La Salle Green Hills, had undergone validation. The teachers can attest that the *questionnaire/instrument/methodology* had passed through careful examination and was observed to be substantially useful for their research**.**

CERTIFIED BY:

Mr. Amiel Lacorte
Practical Research Teacher
Validator

Ms. Margarette Pearl G. Sibayan,LPT
Practical Research 2 Teacher

APPENDIX B: TOS

TOS for Question Validation PR1-PR2-III

Section/Grp #:	12A Group #4		Group Members:	De Borja, Samantha Gil, Precious Marie G. Pascasio, Jacob Deonito F. Ponce, Xavier Y. Tariman, Shamira L.	
Title:	Evaluating the Marketability of a Cassava-Based Multi-Purpose Oil Absorbing Mat for Household Kitchen Owners in Mandaluyong City				
Research design	Exploratory mixed method	Instrument type	Interview	Validator Name: Mr. Dexter John C. Collo, LPT, MSE, EdD	Signature:

Question #	Variable	Indicator	Question type	Question	Validation (Accept, Revise, Reject)
Sample 1	Function	Functionality	Main	How would you design the designer table organizer in terms of functionality?	
Sample 2		Prototype	Filter	Are you creating a prototype?	
Sample 3		Usability	Follow-up	How would you assess the usability of the designer table organizer's functions?	
1	Product	Oil Absorbency	Main	I would be interested in a kitchen mat designed to reduce oil mess when cooking.	Accept
2	Product	Durability	Main	Long-term durability is important to me when choosing a kitchen mat.	Accept
3	Product	Drying	Main	Quick-drying ability is an important factor when buying a kitchen mat.	Accept
4	Product	Cleanliness	Main	Having a mat that keeps counters cleaner and safer from oil spills is valuable to me.	Accept
5	Product	Eco-friendliness	Main	Eco-friendliness influences my decision to purchase a kitchen mat.	Accept
6	Price	Affordability	Main	The cassava kitchen mat is affordable for household use.	Accept
7	Price	Worth	Main	The cassava kitchen mat is worth the price being asked.	Accept
8	Price	Quality for Cost	Main	The cassava kitchen mat provides good quality for its cost.	Accept
9	Price	Willingness to Bu	Main	I would be willing to buy the cassava kitchen mat at its suggested price.	Accept
10	Price	Fairness	Main	The cassava kitchen mat is priced fairly compared to other kitchen mats.	Accept
11	Place	Store Availability	Main	I prefer to buy household mats from familiar places (e.g., online, supermarkets, or specialty stores).	Accept
12	Place	Product Placeme	Main	I expect to find a kitchen mat in the cleaning or kitchen section of a store.	Revise
13	Place	Accessibility	Main	I prefer having the option to purchase a kitchen mat online or from a nearby store.	Accept
14	Place	Visibility	Main	I pay attention to product displays when shopping for household mats.	Accept
15	Place	Convenience	Main	Convenient availability (online or in nearby stores) is important to me when buying a household mat.	Accept
16	Promotion	Advertising	Main	I usually notice new household products through platforms like social media, TV, or in-store displays.	Accept
17	Promotion	Clarity	Main	Promotions of household mats are often clear in explaining product benefits.	Accept
18	Promotion	Attractiveness	Main	Promotions of household mats are usually easy to understand.	Revise
19	Promotion	Frequency	Main	The promotions of the cassava kitchen mat make me interested in trying it.	Revise
20	Promotion	Truthfulness	Main	I expect ads for a kitchen mat to highlight its most useful product benefits.	Revise

Note: In submitting this form digitally, please include in a google drive folder with digital files/links of your I-M or Chapter 1 and 3 manuscripts and a validation certificate for signing. Please allow 3-5 working days for processing by the

APPENDIX C: PACKAGING

APPENDIX C: Promotional Materials


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