

A feasibility study on starting a kalabasa chips business in San Jose, Occidental Mindoro

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Abstract

This feasibility study, using a descriptive research design, examines the potential of establishing a Kalabasa Chips business in San Jose, Occidental Mindoro, as a nutritious, affordable, and community-based snack enterprise. The study assessed consumer demand, local supply availability, and financial viability through surveys, interviews, and supply chain analysis. Findings reveal that Kalabasa Chips, made simply from squash and salt, are widely accepted by consumers who prefer healthier alternatives to conventional snacks. The abundance of squash in the province ensures a sustainable, low-cost supply of raw materials. At the same time, financial projections indicate that the business can recover its initial investment within 1 year and 9 months, confirming both technical and economic feasibility. Beyond profitability, the project supports local farmers, promotes value-added processing, and contributes to livelihood and community development. The study further highlights the importance of strategic location, cooperative linkages, and branding in establishing market presence. Based on these findings, small-scale production, targeted promotional strategies, and gradual expansion are recommended to ensure long-term sustainability and growth.

Keywords: Kalabasa Chips, value-added processing, healthy snacks, local supply availability, local farmers

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1. Introduction

In the Philippines, food plays a big role in shaping cultural identity, bringing communities together, and supporting the economy. From lively fiestas to daily family meals, Filipino cooking shows both creativity and resourcefulness (Broadsheet Asia, 2025). A key part of this tradition is turning local crops into nourishing and marketable products. One example is squash (*Cucurbita moschata*), known locally as kalabasa, which is widely grown and thrives in the tropical climate of Occidental Mindoro (Cagayan Valley Department of Agriculture, 2021). Even though squash is available all year and used in many Filipino dishes, it is not often made into value-added food products. In farming towns like San Jose, Magsaysay, Rizal, and Calintaan, farmers face an oversupply, low prices, and limited options for processing their harvests after picking (Philippine Information Agency, 2022). This creates a chance to develop products that last longer, reflect local culture, and help increase income, reduce waste, and support local businesses.

This study examines whether it is possible to start a Kalabasa Chips business in San Jose, Occidental Mindoro. Fried Kalabasa Chips are thin slices of squash cooked until crispy, making a tasty, local snack that is both cheap and filling. Compared to dried versions, the researcher observes that the fried chips have more flavor and crunch, making them a favorite among people seeking a healthier snack alternative to regular junk food and supporting local farmers. Squash is rich in beta-carotene, vitamins A and C, and fiber, which can help people make healthier food choices (StuartXchange, 2021). The product matches current health trends and supports the local economy by turning abundant crops into innovative snacks. Early feedback from San Jose and nearby towns shows interest in new but familiar products (University of Northern Philippines, 2025). By selling Squash (Kalabasa) Chips in school canteens, sari-sari stores, weekend markets, and online platforms, the business can reach a wide range of customers. Beyond profitability, the project promotes inclusive growth, strengthens food security, and empowers the community, positioning Kalabasa Chips as a distinctive product that stands out in today's competitive snack market (Cajayon et al., 2024).

Objectives of the Study - The study aims to assess the viability of establishing a squash (*kalabasa*) chips business in San Jose, Occidental Mindoro, by introducing a healthy, innovative snack made from locally grown squash, identifying market demand and target consumers, and determining startup costs, pricing, and overall financial feasibility. It also seeks to identify the optimal location and operational requirements for the business, while supporting local farmers by promoting value-added uses of squash. Ultimately, the project intends to contribute to community development by fostering livelihood opportunities and encouraging entrepreneurship in the area.

Significance of the Study - The significance of this study lies in demonstrating how a squash-based snack enterprise in San Jose, Occidental Mindoro, can generate multi-sectoral benefits: for farmers, it creates new market opportunities, reduces post-harvest losses, and strengthens farm-to-market linkages; for students, it provides a practical model that bridges classroom theories with real-world business planning and product development; for aspiring entrepreneurs, it serves as a guide to resource-based enterprise creation and confidence-building in applying business strategies; for local communities, it fosters job creation, supports rural businesses, and contributes to regional economic growth; for academic institutions, it promotes research-driven entrepreneurship and community involvement; and for consumers, it introduces a healthy, affordable snack that reflects local tastes while meeting the growing demand for nutritious and sustainable food choices.

Scope and Delimitation of the Study - The study investigates the feasibility of establishing a small-scale Kalabasa Chips enterprise in San Jose, Occidental Mindoro, with a focus on transforming locally grown squash (*Cucurbita moschata*) into a healthy, affordable snack that reflects community tastes and culture. Its scope covers

marketing, production, management, financial planning, and socio-economic impact, with data collected in September 2025 through field observations and surveys of OMECO employees and local snack buyers. While squash is also cultivated in nearby municipalities, the study is delimited to San Jose to maintain focus, emphasizing modest production and localized distribution through school canteens, sari-sari stores, pasalubong centers, and online platforms, excluding export and large-scale automation. By projecting feasibility over five years (2026–2030), the research aims to introduce a nutritious snack, identify market demand, estimate startup costs, ensure financial viability, select an appropriate location, support local farmers, and foster community development.

Sources of Data - This study used both primary and secondary data. Primary data came from surveys and field observations with squash farmers in San Jose, Calintaan, and Rizal, as well as OMECO employees who represent potential customers. Farmers shared harvest schedules and supply capacity, while employees gave insights on snack preferences. Secondary data were obtained from reports of the Department of Agriculture (2020) and the Philippine Statistics Authority (2022), as well as marketing references by Armstrong and Kotler (2022). These sources guided the technical, financial, and market analysis of the squash (*Kalabasa*) Chips enterprise.

Ethical Considerations - This study was conducted with strict adherence to ethical research standards to ensure fairness, transparency, and respect for all participants and stakeholders. Respondents, including farmers and OMECO employees, were informed of the study's purpose and voluntarily participated, with their identities kept confidential and data reported only in aggregate form. The researcher upheld honesty and accuracy by recording and analyzing information truthfully and properly acknowledging secondary sources, thereby maintaining academic integrity. Respect for participants was prioritized by designing surveys and interviews to avoid discomfort and ensuring that participation was voluntary. Beyond protecting individuals, the study emphasized community benefit by promoting livelihood opportunities, supporting local farmers, and encouraging sustainable practices. Environmental responsibility was also considered, with waste disposal and resource use planned to minimize ecological impact. Finally, the researcher declared no conflict of interest, ensuring that the feasibility analysis was conducted objectively to benefit both academic and community stakeholders.

2. Methodology

This study employed a descriptive research design to assess the availability and supply capacity of squash in San Jose, Occidental Mindoro. Data were gathered through surveys with OMECO co-workers and interviews conducted in person and online, providing both numerical and qualitative insights into local production practices. Six respondents provided harvest details—volume, timing, and location—indicating an annual yield of approximately 27,250-29,250 kilograms, sufficient to sustain continuous chip production. Squash planting can occur year-round, but optimal schedules follow seasonal patterns: October to December in lowland areas and May to July in upland areas. Aligning barangay planting with these cycles ensures a steady supply, minimizes risks, and supports reliable processing for the Kalabasa Chips enterprise.

3. Market Study

3.1 Market Description

San Jose is the largest and busiest municipality in Occidental Mindoro. It covers an area of 446.70 square kilometers and had a population of 153,267 people according to the 2020 Census (Philippine Statistics Authority, 2021). As the main center of business and public services in the province, San Jose hosts banks, restaurants, and trading centers, as well as the headquarters of OMECO, which supplies electricity throughout the province. The municipality also serves as a hub for education, health services, and government offices, drawing people from nearby towns for work, study, and trade. The OMECO Employees Multi-Purpose Cooperative, Inc. (OEMCO) canteen is located in a strategic spot, just a short walk from PNB, Land Bank, and the municipal center. Every day, employees and residents pass through the area, making it an ideal place to introduce a healthy and affordable snack like Kalabasa Chips. Because it is part of a cooperative, the canteen naturally supports local products. Staff are

familiar with community-based enterprises and are likely to welcome initiatives that help farmers and small businesses, ensuring that the project is closely tied to community development.

To reach more customers, the business will also use online platforms. Selling both in person and online allows kalabasa chips to reach buyers not only in San Jose but also in nearby towns. Online selling gives flexibility in marketing, such as offering promotions during harvest season or bundling chips with other local goods. This combined approach, sales through the cooperative canteen and online channels, helps build a wider market presence and positions kalabasa chips as a sustainable local product that highlights the agricultural strength of Occidental Mindoro (Sales et al., 2024; Baylon et al., 2025).

3.2 Demand Analysis

The demand analysis evaluates consumer interest and market prospects by examining behavior and survey outcomes, emphasizing that production aligned with consumer preferences is critical for market success (Guru et al., 2024) and that community-based distribution enhances local product acceptance (Gong, 2021). In San Jose, Occidental Mindoro, surveys reveal a strong interest in kalabasa chips, with 83% of respondents expressing support or willingness to purchase (see Table 5), indicating clear market potential. This demand is reinforced by seasonal squash supply, effective marketing strategies, and localized distribution channels, including school canteens, sari-sari stores, pasalubong centers, and online platforms (Philippine Statistics Authority, 2022; Department of Agriculture, 2020).

Table 1

Consumers' Willingness to Patronize Squash (Kalabasa) Chips (n=160)

Respondents	Frequency	Percentage
Yes	133	83.00
No	0	0.00
Maybe	27	17.00
Total	160	100.00

Surveys conducted in San Jose, Occidental Mindoro, reveal strong consumer interest in kalabasa chips, with 133 of 160 respondents (83%) expressing willingness to purchase, 27 (17%) undecided, and none rejecting the product. Identified through OMECO co-employees across barangays, the respondents provide a reliable picture of local demand (Philippine Statistics Authority, 2022). This high acceptance rate indicates clear market potential, supported by seasonal squash supply, effective marketing, and local distribution strategies (Department of Agriculture, 2020; PSA, 2022). Consistent with studies emphasizing the importance of aligning production with consumer preferences and community-based distribution (Guru et al., 2024; Gong, 2021), the findings also highlight opportunities for cooperative marketing, shared processing, and value-adding initiatives that can enhance local income and reduce reliance on raw squash sales.

Table 2

Demand per Purchase among respondents

Quantity per purchase	Number of Respondents	Percentage
1 pack	63	39.40
2-3 packs	56	35.00
4-5 packs	27	16.90
More than five packs	14	8.70
Total	160	100.00

Table 2 shows strong consumer interest in kalabasa chips, based on a survey of 160 respondents in San Jose, Occidental Mindoro, with 83% expressing willingness to buy, 17% answering “maybe,” and none indicating they would not buy. These results indicate clear market potential and highlight opportunities for cooperative marketing, shared processing, and value-adding initiatives that can boost local income (Colesio et al., 2025) and reduce reliance on selling raw squash alone (Cajayon et al., 2024)

Table 3

Price Range Acceptance Among Respondents

Price Range(PHP)	Frequency	Percentage
Below 20.00	20	12.50
20.00-30.00	78	48.80
31.00-40.00	50	31.30
Above 40.00	12	7.50
Total	160	100.00

Table 3 shows the price range acceptance of kalabasa chips among 160 surveyed consumers in San Jose, Occidental Mindoro. Nearly half of the respondents (48.8%) preferred the ₱20.00–30.00 range, making it the most favored price point for regular purchases. Another 31.3% were willing to pay ₱31.00–40.00, showing openness to slightly higher pricing for larger packs or better quality. A smaller group (12.5%) preferred prices below ₱20.00, reflecting budget-conscious buyers, while only 7.5% accepted prices above ₱40.00. No respondents suggested alternative pricing.

Table 4

Frequency and percentage of preferred chips

Snacks	Respondents	Percentage
Banana Chips	103	64.00
Camote Chips	14	9.00
Kangkong Chips	31	19.00
Potato Chips	12	8.00
Total	160	100.00

Table 4 shows that banana chips remain the dominant local snack in San Jose, with 103 respondents (64%) preferring them, followed by kangkong chips (31, 19%), camote chips (14, 9%), and potato chips (12, 8%). The popularity of banana chips reflects cultural familiarity, affordability, and wide availability, while the results suggest that although consumers are open to alternative snacks, traditional favorites continue to lead. This underscores the role of small businesses in balancing innovation with cultural tradition to ensure both relevance and acceptance among local buyers (Chaniago, 2021).

3.3 Supply Analysis

The supply of squash in San Jose, Occidental Mindoro, is largely managed by local farmers who adjust planting schedules according to rainfall and elevation, with lowland planting from October to December and upland planting from May to July (Department of Agriculture, 2020). Although squash can grow year-round, peak harvest occurs between August and November, ensuring a strong supply during these months (Philippine Statistics Authority, 2022). Farmers typically collaborate on sorting and collecting harvests to secure fair pricing and timely delivery. From 20 kilograms of raw squash, about 17–18 kilograms of clean flesh remain, yielding roughly 5 kilograms of chips or 100 packs at 50 grams each (Department of Trade and Industry, n.d.). By coordinating with both lowland and upland growers, the enterprise can maintain a steady supply year-round, ensuring sufficient raw materials for production while providing income for farmers and supporting the growth of local enterprises in Occidental Mindoro (Department of Agriculture, 2020; PSA, 2022).

Table 5

Estimated Annual Squash Production by Identified Farmers in Occidental Mindoro

Harvest Range	Number of Farmers	Percentage
1-5 sacks	1	16.67
More than 20 sacks	3	50.00
Others (80 sacks)	1	16.67
Others (150 sacks)	1	16.67
Total	6	100.00

Table 5 shows the harvests of six farmers in San Jose, Occidental Mindoro. One farmer gathered only 1–5

sacks, and none reported gathering between 6–20 sacks, indicating that medium-scale production is limited. Half of the farmers harvested more than 20 sacks, while two produced very large amounts of 80 and 150 sacks.

3.4 Demand-Supply Analysis

The demand for kalabasa chips is driven by consumers seeking healthier, affordable, and convenient snacks. Surveys in San Jose, Occidental Mindoro, show strong interest and repeat-purchase potential, with many respondents indicating they would buy 2–3 packs at a time. This reflects national trends favoring ready-to-eat nutritious snacks among students, professionals, and health-conscious buyers. On the supply side, the enterprise benefits from consistent squash availability from local farmers, ensuring reliable, low-cost raw materials, and a planned daily output of 100 packs that is both manageable and sustainable. Seasonal harvest patterns and packaging costs remain key considerations. Overall, the balance between strong consumer demand and stable supply supports profitability while fostering community development through cooperative marketing and value-adding initiatives (Khanal et al., 2024).

Table 6
Five-Year Projected Demand and Supply for Kalabasa chips

Year	Projected Demand	Projected Supply	Demand and Supply Gap	Unsatisfied Demand
2026	150,026	106,685	43,341	41%
2027	152,141	108,189	43,952	41%
2028	154,286	109,715	44,571	41%
2029	156,461	111,261	45,200	41%
2030	158,667	112,830	45,837	41%

Table 6 shows the five-year demand and supply projections for Kalabasa Chips from 2026 to 2030. Demand consistently exceeds supply, leaving a gap each year. In 2026, demand is 150,026 units while supply is 106,685 units, leaving 43,341 units unmet. The same trend continues: in 2027, the gap is 43,952 units; in 2028, it is 44,571 units; in 2029, it rises to 45,200 units; and by 2030, the shortfall reaches 45,837 units. This pattern highlights the need to expand production capacity to meet growing demand (Hemathilake & Gunathilake, 2022).

3.5 Graph of Market Share

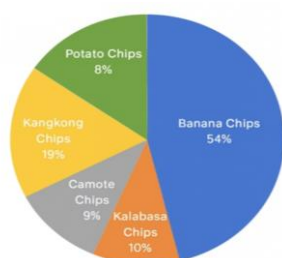


Figure 1. Graph of Market Share

Based on survey results from OMECO, kalabasa chips show strong market potential, with 83% of 160 respondents expressing willingness to purchase the product. Applying a conservative 10% market share estimate, the business anticipates around 16 regular buyers at launch, an approach that strikes a balance between opportunity and risk management (Mask & Archie, 2024; Gong, 2021).

3.6 Marketing Strategies

To promote Kalabasa Chips in San Jose, Occidental Mindoro, the business will use a community-based approach. This means the product will be introduced in ways that connect directly with local people. Tarpaulins will be placed in busy areas to attract local attention, while online platforms such as Facebook and community groups will be used to reach a wider audience. This mix of on-site visibility and online presence ensures that Kalabasa Chips are easy to discover, convenient to buy, and steadily supported by the community (Armstrong & Kotler, 2020; Kemp, 2025).

Product. The company will make Kalabasa Chips, a nutritious and inexpensive snack produced from squash cultivated in San Jose, Occidental Mindoro. Squash is naturally high in fiber and contains vitamins A and C. It

provides essential minerals such as potassium, calcium, and iron, making it a healthier option than potato or banana chips (Food and Nutrition Research Institute, 2023). The chips are thinly sliced and gently salted, with no artificial preservatives. They are packaged in resealable, eco-friendly bags for freshness and convenience. Initially, they will be sold in 50-gram packs, providing a convenient serving size that blends affordability and satisfaction. This idea turns a local crop into a crispy, flavorful, and nutritious snack. Kalabasa Chips are more than just a product; they help farmers increase the value of their harvests, develop community agriculture, and promote healthy eating habits.

Price. Price affects not only the amount spent but also how customers view a product's quality, usefulness, and benefits (Armstrong & Kotler, 2022). To make Kalabasa Chips affordable for low-income purchasers, the price will be based on survey results and current market levels (Philippine Statistics Authority, 2022). The product will remain competitive with other snack brands while maintaining excellent quality and benefiting local squash producers in San Jose (Department of Agriculture, 2023). Furthermore, incentives for bulk purchases and repeat customers will be implemented to foster loyalty and broaden market reach (Armstrong & Kotler, 2022; Department of Agriculture, 2023).

Distribution Channel. Kalabasa Chips will be distributed through local outlets and online platforms to ensure accessibility. Direct supply to the OEMCO canteen provides employees with affordable snacks, while night markets target families and workers. Online platforms such as Facebook Marketplace and Shopee expand reach, and sari-sari stores, pasalubong centers, and neighborhood groceries enhance community visibility.

Promotion. Kalabasa Chips will be promoted through both online and offline strategies to highlight them as a healthy, local snack. Online promotion will use Facebook, Instagram, TikTok, and Messenger to showcase product features and customer feedback. Offline efforts include tarpaulin displays in high-traffic areas, free tasting sessions at community events, and a referral reward system to encourage word-of-mouth. Collaboration with local outlets, such as the OEMCO canteen, night market vendors, sari-sari stores, and pasalubong centers, ensures accessibility and community presence (Sales et al., 2024).

3.7 Product Description

Kalabasa Chips are a healthy, affordable snack made from locally grown squash, naturally rich in vitamins A, C, fiber, and antioxidants. Thinly sliced, fried until crisp, lightly seasoned, and packed in 50g portions with proper labeling, they offer a convenient, ready-to-eat option for health-conscious consumers, students, and professionals. Positioned as a healthier alternative to potato or corn-based snacks, the product supports local farmers in San Jose, Occidental Mindoro, by sourcing directly from them, ensuring freshness and community impact. With an estimated shelf life of 3 months under proper storage conditions, Kalabasa Chips provide a nutritious, sustainable, and locally relevant snack option (Villanueva et al., 2024).

3.8 Production Process

Kalabasa Chips are prepared through a step-by-step process to ensure crispness, flavor, and food safety. Fresh squash from local farmers is washed, peeled, and sliced into uniform pieces (2–3 mm thick). The slices are soaked in cold water for 10–15 minutes to reduce sugars and starch and then air-dried for 30 minutes to enhance texture (Food and Nutrition Research Institute, 2023). They are fried in palm oil at 170–180 °C for 2–3 minutes until golden and crisp, drained of excess oil, and lightly seasoned with iodized salt. After cooling at room temperature for 10–15 minutes, chips are weighed into 50-gram portions, packed in moisture-resistant pouches, sealed at 120–150 °C, labeled, and stored in a cool, dry place below 30 °C.

Table 7 presents the daily ingredient cost of kalabasa chips at ₱668, equivalent to ₱17,368 per month, with squash comprising the largest share, followed by palm oil, and salt contributing minimally (Department of Agriculture, 2022; Philippine Statistics Authority, 2022). These results show that production can be sustained at relatively low cost, ensuring affordability for consumers while maintaining product quality and supporting long-

term sustainability.

Table 7*Ingredients for 100 packs of Squash (Kalabasa) chips*

Ingredients	Measurement	Purpose
Raw Squash	20.00 Kg	Main vegetable base
Palm Cooking Oil	3.00 L	Frying medium
Iodized Salt	.10 Kg	Flavoring and preservation

3.9 Selling Process

Kalabasa Chips will be sold through community-focused outlets and online platforms to ensure accessibility. Distribution begins at the OEMCO canteen, local night markets, and nearby stores, integrating the product into everyday life. Online sales via Facebook Marketplace and Shopee extend reach and convenience for households. Prices remain affordable while maintaining quality, with discounts for bulk buyers and resellers to encourage loyalty and create small income opportunities. This approach keeps Kalabasa Chips visible, affordable, and rooted in the local community while supporting farmers, promoting entrepreneurship, and sustaining local enterprise (Department of Agriculture, 2023; Philippine Statistics Authority, 2022).

Table 8*Office Equipment, Production Equipment, Tools, Materials, Supplies, Service Vehicle, and Furniture & Fixtures in Producing Kalabasa chips*

Office Equipment						
Description	Usage	Life (years)	Span	Quantity	Unit Cost (PHP)	Total (PHP)
Cellphone	For communication	5		1 unit	1,999.00	1,999.00
Electric Fan	For ventilation	5		1 unit	750.00	750.00
Total						2,749.00
Production Equipment						
Description	Usage	Life (years)	Span	Quantity	Unit Cost (PHP)	Total (PHP)
Commercial Machine Slicer	Ensures accurate and uniform slicing of raw materials	5		1 unit	7,500.00	7,500.00
Heavy-duty Gas fryer	For cooking the product	5		1 unit	4,000.00	4,000.00
Heat sealer	For sealing the package	5		1 unit	500.00	500.00
Total						12,000.00
Production Tools						
Description	Usage	Quantity	Unit Cost (PHP)	Total (PHP)		
Precision Digital Scale	for accurate measurement	1 unit	500.00	500.00		
Large Basins	for washing squash and catching chips from the frying machine	1 unit	100.00	100.00		
Tong	for stirring chips in hot oil	2 units	50.00	100.00		
Stainless draining trays	for removing excess oil to improve quality	2 units	500.00	1,000.00		
Chopping board	for a clean, stable cutting surface	2 units	75.00	150.00		
Knife	for cutting, chopping, and slicing	2 units	90.00	180.00		
Measuring Cup & Spoons	for precise measurement of ingredients	2 units	70.00	140.00		
Total						2,170.00
Production Supplies						
Description	Usage	Quantity	Unit Cost (PHP)	Daily (PHP)	Monthly (PHP)	
Packaging Materials	Resealable pouches and product label. (Single use)	100 pcs	1.50	150.00	3,900.00	
Total						3,900.00
Office Supplies and Materials						
Description	Usage	Quantity	Unit Cost (PHP)	Total (PHP)		
Ballpen	For the transactions	1 box	160.00	160.00		
Calculator	For computation	1 unit	650.00	650.00		
Record Book	For recording transactions	1 pc	135.00	135.00		
Whiteboard, wall mount 2'x4.4.'	For order and reminders	1 pc	650.00	650.00		
Whiteboard marker	For writing	1 pc	49.00	49.00		
Marker refill	For marker refill	1 pc	105.00	105.00		

A feasibility study on starting a kalabasa chips business in San Jose, Occidental Mindoro

Fire Extinguisher	For emergency fire	1 unit	1,000.00	1,000.00
Total				2,749.00
Janitorial Supplies				
Description	Usage	Quantity	Unit Cost (PHP)	Total (PHP)
Broom & Dustpan	For ensuring cleanliness and proper sanitation in the workplace	1 set	300.00	300.00
Disinfectant		5 liters	75.00	375.00
Floor mop		1 pc	250.00	250.00
Liquid Detergent		4 bottles	60.00	240.00
Sponge		1 dozen	75.00	75.00
Trash can		2 units	100.00	200.00
Total				1,440.00
Service Vehicle				
Description	Usage	Quantity	Unit Cost (PHP)	Total (PHP)
E-bike with a back seat	For the delivery of the product	1 unit	35,000.00	35,000.00
Total				35,000.00

Table 8 presents the essential resources to ensure efficient production, safe handling, and smooth operations. Production equipment supports cooking, storage, and food safety, enabling consistent product quality. Office equipment, such as a cellphone and an electric fan, facilitates communication, coordination, and workplace comfort, while office supplies ensure accurate recording and transactions. A service vehicle is included to support logistics, enabling the timely delivery of raw materials and finished products to outlets and customers. Janitorial supplies maintain sanitation standards critical for food safety, preventing contamination and ensuring product quality. Together, these resources provide reliable production, effective management, clean facilities, and efficient distribution, sustaining the delivery of high-quality Kalabasa Chips.

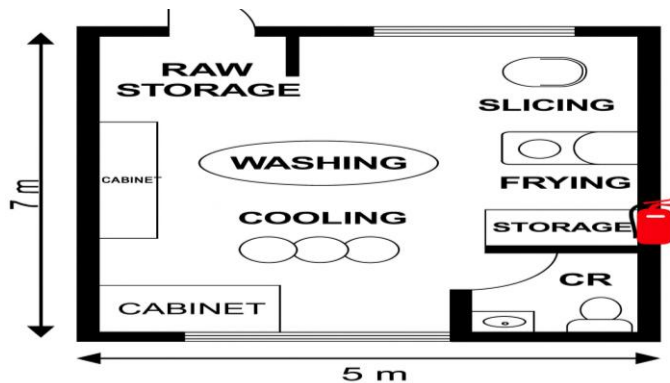


Exhibit 1. Floor Plan of the Production Area for the Proposed Business

Exhibit 1 shows the proposed location and layout of the production area. The facility is housed in a separate building from the researcher's residence, ensuring that production activities are conducted independently and in compliance with food safety standards.

4. Organization and Financial Study

The proposed business will hire two personnel, one manager and one worker/helper. The organizational chart shows the flow of the business operation.

Source of Financing

Table 9
Total Project Cost

Items	Description	Cost	Total Cost
Property, Plant and Equipment	Production Equipment	12,000.00	
	Production Tools	2,170.00	
	Service Vehicle	35,000.00	
	Office Equipment	2,749.00	
	Furniture and Fixtures	3,299.00	55,218.00

	Raw Materials	17,368.00	
	Packaging Costs	3,900.00	
	Office Supplies and Materials Expense	2,749.00	
	Renovation Expense	5,000.00	
	Janitorial Supplies	1,440.00	
Pre-Operating Expenses	Utilities Expense	2,300.00	
	Personal Protective Supplies Expense	980.00	
	Permits and Licenses	5,000.00	
	Promotional Expenses	1,240.00	
	Employee Salary	17,500.00	
	Government Mandatory Contributions	2,537.00	60,014.00
Total			115,232.00

The proposed business will be registered as a sole proprietorship. The initial capital outlay required to start operations is ₱115,232.00, which includes fixed assets totaling ₱55,218.00 and pre-operating expenses of ₱60,014.00. This capital will be sourced from the proponent's personal savings. The initial capital outlay required to begin operations amounts to ₱115,232.00, as shown in Table 9, comprising ₱55,218.00 for fixed assets, including production equipment, tools, office equipment, a service vehicle, and furniture. The remaining costs cover pre-operating expenses, including renovation, permits and licenses, promotional activities, and one month of production inputs (materials, packaging, utilities, salaries, and government contributions). Annual provisions for office, janitorial, and protective supplies are also included to ensure readiness before the official start of production.

Financial Assumptions - The proposed business will operate with a daily production capacity of 100 pouches, increasing by 10% annually, and a selling price of 20 pesos per pouch, also increasing by 10% annually. Production is planned for 26 days per month, totaling 312 days per year. Ingredient and packaging costs, office supplies, janitorial supplies, utilities, personal protective equipment, permits, licenses, and promotional expenses are expected to rise by 5% annually. Salaries, 13th-month pay, and mandatory government contributions will increase by 2% per year, while the spoilage allowance is set at 1% of production. Business assets will be depreciated using the straight-line method. The enterprise will register as non-VAT and pay a 3% Other Percentage Tax based on sales, ensuring compliance with tax regulations while maintaining cost efficiency.

5. Financial Projections

The financial projections for Kalabasa Chips were developed using a conservative model that assumes 26 days of production per month (312 days annually), starting with 100 packs per day and increasing output by 10% each year. With an initial selling price of ₱20 per pack and a corresponding 10% annual price increase, projected sales revenues steadily rise from ₱624,000 in Year 1 to ₱1,338,790 in Year 5. This growth reflects both incremental expansion in production capacity and strategic price adjustments, resulting in more than a twofold increase in annual sales over the five years, thereby demonstrating the enterprise's potential for sustainable profitability.

Financial ratios and analysis

Net profit margin (NPM) is a key indicator of the profitability of the proposed Kalabasa Chips enterprise, calculated by subtracting all business expenses from total revenue (Nariswari & Nugraha, 2020). In the first year, the NPM is projected at 5%, meaning that for every peso of sales, the business earns ₱0.05 in net profit. Over the succeeding years, profitability improves significantly, with margins rising to 16% in Year 2, 24% in Year 3, 31% in Year 4, and 37% in Year 5. Although the initial margin is relatively low, the upward trajectory demonstrates the enterprise's capacity to improve efficiency and profitability over time, supporting its financial viability and long-term sustainability.

Gross Profit Margin. Measures profitability by comparing gross profit to total sales. For the Kalabasa Chips enterprise, gross profit steadily increases from ₱368,784 in 2026 to ₱880,975.68 in 2030, while sales rise from ₱624,000 to ₱1,333,762.56. The gross profit ratio improves consistently, from 59% in 2026 to 66% in 2030, reflecting efficient cost management and growing profitability. This upward trend indicates that the business can

sustain operations, expand market reach, and strengthen financial stability over time.

Return on Investment (ROI) is a financial metric that evaluates the efficiency and performance of a company's investments by comparing the returns generated relative to the initial cost (Majka, 2024). For the proposed Kalabasa Chips enterprise, projections indicate that 30% of the initial capital outlay will be recovered within the first year of operations. Furthermore, the entire capital invested is projected to be fully recouped in just 1 year and 9 months, underscoring the business's ability to generate rapid returns and validating its financial sustainability over a reasonably short period.

Cash flows. The projected cash flow of the Kalabasa Chips enterprise from 2026 to 2030 demonstrates sustained liquidity and financial stability. Annual inflows are derived from the initial investment and steadily increasing sales revenues, while outflows cover equipment, operating costs, salaries, taxes, and other expenses. Despite rising expenditures, the business maintains a positive year-end cash balance, beginning at ₱105,572.64 in 2026 and reaching ₱1,330,217.60 by 2030. This consistent upward trend highlights the enterprise's ability to remain liquid, meet obligations, and support future growth (Laghari et al., 2023).

6. Socio-economic aspect

The socio-economic impact of the proposed Kalabasa Chips enterprise highlights its role in fostering inclusive growth and rural development in San Jose, Occidental Mindoro. By creating jobs accessible to women, youth, and barangay workers, the project enhances household incomes and community skills while providing local squash farmers with a stable market, reducing post-harvest losses, and increasing farm profitability. The owner benefits from a sustainable livelihood that transforms a common crop into a value-added product, strengthening local entrepreneurship and branding. Moreover, the government gains from increased tax revenues and alignment with livelihood and microenterprise programs of agencies such as DTI, DA, DOLE, and TESDA. Collectively, these outcomes demonstrate how the enterprise contributes to economic resilience, resource efficiency, and community empowerment, positioning Kalabasa Chips as both a profitable venture and a driver of socio-economic development.

7. SWOT and potential analysis

Strengths - The Kalabasa Chips enterprise benefits from several strong internal factors that support its viability. The abundant supply of squash in San Jose ensures a consistent source of raw materials, while market surveys reveal that 83% of consumers are willing to purchase the product within the ₱20–₱30 price range. Financial projections confirm profitability without reliance on debt, and the branding slogan "Squash Your Cravings!" reinforces local identity and community appeal, positioning the business as both sustainable and culturally relevant (Elarabi & Khalifa, 2024).

Weaknesses - Despite these advantages, the enterprise faces notable limitations. The chips have a short shelf life if not packaged in moisture-proof materials, which may affect product quality and consumer trust. Production capacity is constrained by small-scale equipment, limiting the ability to meet rising demand. Furthermore, consumer unfamiliarity with squash chips requires significant awareness-building efforts to establish market recognition and acceptance (Ekman, 2010).

Opportunities - Externally, the business is well-positioned to capitalize on favorable market conditions. Rising demand for affordable, nutritious snacks among health-conscious consumers creates strong growth potential. Marketing opportunities exist in schools, pasalubong centers, weekend markets, and online platforms, while support from LGUs, cooperatives, and DTI programs provides valuable assistance in financing and promotion. Additionally, introducing new flavors and innovative packaging can attract a broader range of buyers and strengthen market presence (Shukla et al., 2022).

Threats - The enterprise must also contend with external risks that could hinder expansion. Intense competition

from bananas, potatoes, and imported chips hinders market penetration. Fluctuating farmgate squash prices, ranging from ₱20 to ₱40 per kilo, may affect profit margins, while changing weather threatens harvest stability. Regulatory requirements, such as FDA permits and labeling, could delay entry, and shifting consumer preferences, combined with limited awareness outside San Jose, may slow broader market acceptance (Oeconomedia, 2023).

Fallback Strategies - To mitigate these risks, the enterprise has outlined proactive fallback measures. Supply chain instability will be addressed by sourcing squash from nearby towns and farmer cooperatives, while spoilage risks will be minimized through moisture-proof packaging and strict production standards. Slow market acceptance will be countered with free tasting activities, promotions, and partnerships with schools and barangays. Financial limitations will be managed by starting small and expanding gradually with support from LGUs, cooperatives, or microfinance programs. Rising farmgate prices and weather disruptions will be mitigated by diversifying suppliers and maintaining flexible production schedules. At the same time, regulatory delays can be reduced by preparing documents early, attending food safety training, and consulting with government agencies to ensure compliance (Berdegué et al., 2025).

8. Conclusions

The study confirmed that establishing a Kalabasa Chips business in San Jose, Occidental Mindoro, is feasible, financially sound, and supported by strong market potential. Results show that the enterprise is practical and financially viable, with clear opportunities in the local market. Respondents expressed genuine interest and willingness to purchase the product at a competitive price, while the abundant supply of squash in San Jose ensures sustainable production. A sole proprietorship was identified as the most suitable form of management for this small-scale enterprise, requiring only modest capital investment and achieving break-even in less than two years. Beyond profitability, the business contributes to socio-economic development by creating jobs, supporting local farmers, reducing post-harvest losses, and promoting healthier food choices. Its strategic location in San Jose further strengthens its viability, as it is close to both raw material sources and target consumers. Collectively, these findings affirm that Kalabasa Chips is not only a profitable venture but also a catalyst for community growth and innovation.

Recommendations - Based on the study's findings and conclusions, several recommendations are offered to strengthen the viability and sustainability of the Kalabasa Chips enterprise. First, the owner should organize a cluster of squash growers in San Jose to secure a consistent supply of raw materials and strengthen farm-to-processor linkages. Management is encouraged to collaborate with the Department of Agriculture and the Department of Trade and Industry to conduct market research and identify seasonal risks that may affect squash production and chip processing. To increase visibility and sales volume, a mix of marketing strategies should be adopted, including sari-sari store placements, cooperative canteen promotions, and online selling platforms. Production staff is advised to attend food safety and value-added processing seminars offered by TESDA and DOST to improve product quality and operational efficiency. After one year of successful operations, the feasibility of expanding distribution to pasalubong centers and school canteens across Occidental Mindoro should be studied. The owner is further encouraged to explore sustainability practices, such as converting squash peels and seeds into compost or animal feed to reduce waste. Finally, future researchers are recommended to investigate other aspects of squash-based enterprises, including baked chip variants, shelf-life improvement, and the impact of packaging innovations on consumer behavior.

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