

A feasibility study on the production and marketing of organic eggs in San Jose, Occidental Mindoro

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Abstract

Eggs are a staple food that is a rich source of nutrients our bodies need. With the ever-changing risks to health, people are becoming conscious of their food intake and choosing healthy foods. Transitioning to organic food is familiar to everyone. This study aims to determine the feasibility of producing and marketing organic eggs in San Jose, Occidental Mindoro. The study's objectives include assessing market demand, analyzing technical requirements, estimating financial investments, and evaluating socio-economic impacts. A descriptive research design was employed, using a survey questionnaire, interviews with respondents, and secondary data from books, journals, feasibility studies, and theses. The survey results revealed a strong market potential, with 99% of the respondents showing interest and willingness to purchase organic eggs. The project's production area is in Buslugan, Bubog. The initial capital requirement and project cost are Php 810,757.57. The financial projection indicates profitability from the first year of operation, with a projected return of 191% in the second year and a promising 404% by 2029. The study concludes that the production and marketing of organic eggs in San Jose, Occidental Mindoro, is viable and holds significant potential. The proposed project is expected to benefit the owner and contribute to the economy by creating job opportunities, supporting local farmers, increasing local government collections, and giving healthy food options to consumers. Based on the findings, recommendations include collaborating with local egg producers, conducting market research on threats to egg production, exploring effective marketing strategies, developing feed management, and attending training on organic egg production.

Keywords: organic egg production, staple food, financial investments, profitability, job opportunities

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1. Introduction

The human body needs nutrients to sustain its growth and development. Eggs, which are commonly sourced from poultry, are a good source of these nutrients. The poultry industry in the Philippines has been experiencing steady growth due to increasing urbanization and changing dietary preferences (Philippine Poultry Broiler Industry Roadmap 2022-2040, 2022). The poultry business is a key player in the production of eggs and meat and a significant contributor to the food industry. Poultry farming is the most progressive agribusiness venture in the Philippines (Dar, 2021). In the Philippines, poultry farming has three main types: commercial production, which includes broiler and egg production, which is the most significant and most common activity in the country; backyard chicken raising; and cage-free growing. Poultry farming is concentrated mainly in Luzon, followed by Visayas and Mindanao (National Chicken Council, 2023). With the growth in the population, egg production also grows, and production volume from July to September 2023 was recorded at 185.26 thousand metric tons, a 4.7% increase from the previous year of the same quarter. CALABARZON remains the top producer, with 58.53 thousand tons, or 31.6% of total chicken egg production during the quarter, followed by Central Luzon, Northern Mindanao, Central Visayas, and Western Visayas (Philippine Statistics Authority, 2023).

With people becoming health-conscious, there is now a preference for organic eggs. Organic egg production prioritizes sustainable agriculture, lower carbon footprints, and improved animal welfare. It also enhances nutritional quality and avoids harmful chemicals. Organic eggs come from hens, which are allowed to roam outside during the day and are kept safe and secure in sheds at night (Bulkeley, 2022). The main distinction between organic and free-range eggs is that organic eggs are produced without chemicals. Consumer health consciousness and environmentally friendly practices are turning the poultry industry toward organic and free-range farming methods. Consumers' awareness of production is making poultry producers adopt eco-friendly practices and rely on organic products. Organic eggs are nutritious. It is a high source of protein and omega-3 fatty acids. Its fats help reduce inflammation and are essential for growth. It also contains vitamins like A, beta-carotene, and E. Vitamin A keeps the skin and immune system strong. In contrast, beta-carotene acts as an antioxidant, protecting the cells. Vitamin E supports skin health and fights off harmful chemicals (Alderfer, 2018). Organic eggs are produced without antibiotics, hormones, or pesticides, making them an excellent choice for health-conscious individuals. Adding them to the daily meals will boost nutrition and support a healthier lifestyle.

Objectives of the Study - The main objective of this study is to assess the feasibility of producing and marketing organic eggs in San Jose, Occidental Mindoro. The specific objectives of this study are as follows are: to determine the demand for organic eggs, to analyze the capacity of existing egg producers in San Jose, Occidental Mindoro, to determine the initial capital requirement and operational costs, to determine the cost of the product, to identify the location for the proposed project, and to determine the impact of the production and marketing of organic eggs on the local community.

Significance of the Study - An egg is a universal food. Everybody, irrespective of nationality, age, gender, and status in life, consumes eggs. Hence, the study's result will benefit the following: First, this study will benefit the local farmers. By using their produce as raw materials for feed, they can generate additional income. Second, this study would also benefit consumers. They could have access to healthier egg options, which could help them improve their dietary choices and overall health. Third, the project provides livelihood and job opportunities to the local community, which can improve the employees' and their families' standard of living. Fourth, the project can also benefit the local government. It can create job opportunities, generate additional income from permits and clearances, and foster additional business opportunities, boosting San Jose's economic development. Lastly, this study determines the profitability of the project for the researcher. This will also benefit future researchers who

want to explore organic poultry farming, specifically organic egg products.

Sources of data - The data for this study were gathered primarily through surveys and interviews with OMECO employees, Barangay Poblacion 8 and Bubog residents, and egg vendors in San Jose, Occidental Mindoro. Secondary sources such as books, journals, theses, and feasibility studies were also used. The respondents for this study concentrated on OMECO employees, where the proponent is currently working. These employees are residents of different barangays in San Jose, Barangay Poblacion 8, and Bubog, where the proponent's residence is located, with a total population of eleven thousand four hundred thirty-four (11,434) based on the April 2024 approved Plantilla of Positions of OMECO and the 2020 census from the Philippine Statistics Authority. Out of the total population, the researcher arrived at a 372-sample size using Raosoft with a five percent (5%) margin of error and a ninety-five percent (95%) confidence level. Simple random sampling was used to determine the respondents. The researcher also collected data from fifteen egg sellers, who have their outlets located near public markets and grocery stores in San Jose, Occidental Mindoro, through guided questionnaire interviews.

2. Methodology

This study used a descriptive research design, using a survey questionnaire and an interview. Since the type of questionnaire used was mainly answerable by yes or no and checked only the data presented, the researcher did not validate the questionnaire, and no reliability was used. Her adviser checked the questionnaire, revised it, and, once approved, distributed it to the respondents. The survey was conducted with respondents from San Jose, Occidental Mindoro, using a combination of in-person and online interviews and a survey questionnaire. The participants were OMECO employees, residents of Barangay Poblacion 8, and Bubog. The possible customers of the project were selected randomly to evaluate the market. Additionally, interviews were conducted among egg vendors in San Jose, Occidental Mindoro.

3. Market Study

Market Description - San Jose is a coastal and first-class municipality in Occidental Mindoro. According to the 2020 Census of the Philippine Statistics Authority, it has 153,267 inhabitants, or 29.17% of Occidental Mindoro's total population. It covers 446.70 square kilometers (172.47 square miles), which accounts for 7.63% of Occidental Mindoro's total area. It consists of 39 barangays. San Jose is Occidental Mindoro's commercial, financial, cultural, and educational center (PhilAtlas, 2024). San Jose has a diverse economy, but agriculture dominates, with most of the workforce engaged in it (San Jose Water District, 2020). The town significantly contributes to Occidental Mindoro's palay and rice production, which supplies Manila and other areas. Vital agricultural products include corn, garlic, onions, and root crops. The town has notable commercial livestock and poultry farms producing layers, broilers, and meat products. The San Jose Public Market is one of the public markets in San Jose, Occidental Mindoro, and sells different products such as fresh fruits, vegetables, meat, seafood, and household items. It is accessible to the people of San Jose and adjacent municipalities. Tricycle terminals surround the public market, making it more accessible and appealing to many visitors. This accessibility makes it an ideal location for introducing and selling organic eggs. The target market for this study, the San Jose public market, would be the chosen initial market area aside from the farm location, as it is near essential services such as grocery stores to bring the product closer to the consumers. This positioning makes it great for marketing and selling organic eggs. San Jose's public market has a huge potential for organic eggs, as they can accommodate many consumers. In addition to meeting consumer demands and increasing the business reach, sari-sari store delivery, online ordering, and delivery services will also be offered.

Demand Analysis - Demand, in economics, is the quantity of a good or service that customers are willing to buy in a given timeframe (Arnold, 2019; Gong, 2021). Further, according to Yadav (2023), it is the individual's ability and willingness to pay. Hence, it is critical to understand how price affects sales (McGee & Knight, 2015).

Table 1*Respondent's Willingness to Purchase Organic Eggs (n=372)*

Respondents	YES		NO		TOTAL	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Are you willing to patronize organic eggs if we were to introduce them in San Jose, Occidental Mindoro?	367	99	5	1	372	100

Table 1 shows the respondents' willingness to purchase organic eggs; 367 out of 372 of the respondents show interest and willingness to buy organic eggs, representing a significant 99 percent of the surveyed population, while one percent showed unwillingness to patronize the organic eggs.

Supply Analysis - Supply refers to the quantity of a good that manufacturers are willing to sell at a given time and a given price. A commodity's supply is its available quantity, which may vary from its present output because of fluctuations in inventories. It is a flow with a time unit, usually per day, week, or month, and is determined by the producer's willingness to sell at different prices (Dhingra, 2020). It relates to the cost of manufacturing, specifically the cost of delivering a commodity to market (Inoua & Smith, 2020). Based on the data gathered from the survey of vendors of traditional eggs in San Jose, Occidental Mindoro, egg supply in San Jose came from Central, one of the barangays of San Jose; neighboring provinces, Oriental Mindoro and Batangas, and Manila. According to data from the vendors interviewed, Batangas dominates the egg supply in the San Jose Public Market. Additionally, there is no available organic egg producer in San Jose based on data from the Bureau of Agriculture and Fisheries (BAFS). For this reason, the researcher can easily penetrate the market since there are no existing competitors.

Table 2*Percentage and Frequency Distribution of Non-Organic Egg Suppliers*

Outlet	Source of Non-Organic Eggs	Quantity Sold per Day	Frequency	Percentage
K Robins	San Jose	60		
Public Market Stall #4	San Jose	180		
Public Market Stall #6	San Jose	210		
DWCEA Coop	San Jose	300	750	9.0
Public Market Stall #1	Batangas	450		
Public Market Stall #2	Batangas	900		
Public Market Stall #3	Batangas	300		
Public Market Stall #5	Batangas	300		
Public Market Stall #8	Batangas	600		
Public Market Stall #9	Batangas	600		
Store in Liboro St.	Batangas	3,000	6,150	75.0
Public Market Stall #7	Oriental Mindoro	600		
Store in Pandurucan	Oriental Mindoro	300	900	10.9
Gessnec	Manila	300	300	3.6
Robinson Supermarket	Source not identified	120	120	1.5
Total			8,220	100%

Table 2 shows the results and tabulations of the survey conducted among vendors of commercial eggs in San Jose, Occidental Mindoro. The survey included only 15 vendors, primarily in commercial areas of San Jose, including public markets, grocery stores, cooperatives, and stores near the public market. As per the survey result, the total eggs supplied were 8,220. Since the proponent decided to start her organic egg production in 2025, a five percent increase was projected. The projected supply in 2025 will be 8,631. The current source of supply is Batangas, 6,150, 75 percent, followed by Oriental Mindoro, 900, San Jose, 750, Manila, 300, and a meager 120, or 1.5% of the respondents, did not identify.

Supply and Demand Analysis - A market comprises supply and demand, and the factors that affect supply and demand (Gong, 2021). The demand for goods and services depends on the income and preferences of the consumers and their members and on how much the cost is; on the other hand, supply covers the members of the competitors in the given market, the price of the goods and services, also government regulations and the local and national taxes imposed, added to that the technology, research and development and expectation of the future price (Arnold, 2019). A conservative estimate is a conventional rough calculation of the value of the products or services that is probably less than the real amount (Collins, 2024). In this study, the proponent's conservative estimate is 6% market share for a total of 518 from the 2025 estimated daily projected supply of 8,631. The proponent will start a daily production of 500 pieces and an annual increase of 20%.

Table 3

Demand and Supply Analysis of the Product

Year	Projected Demand	Projected Supply	Demand and Supply Gap	Unsatisfied Demand	Market Share
2025	12,005	8,631	3,374	39%	6%
2026	12,605	9,063	3,542	39%	6%
2027	13,235	9,516	3,719	39%	6%
2028	13,896	9,992	3,904	39%	6%
2029	14,590	10,492	4,098	39%	6%

Table 3 shows the projected daily demand of 12,005 for 2025 from the combined current population of respondents of 11,434, with an estimated increase of 5% yearly. The proponent used the total population because, based on the survey, all respondents are eating eggs. The projected daily supply is 8,631 for 2025, with an estimated 5% increase from the current daily supply of 8,220, resulting in a daily demand and supply gap of 3,374. With a 39% unsatisfied demand, the proponent's conservative estimate is a 6% market share.

Marketing Strategies - Marketing strategy is a business game plan for reaching prospective consumers and turning them into customers. Part of the marketing strategy is profiling potential customers. (Investopedia, 2024). The following marketing strategies will be based on the marketing mix to ensure and make the proposal is feasible.

Product. The enterprise will be dedicated to producing quality organic eggs through organic farming. These organic chicken eggs, sourced from free-range chickens, are not only more nutritious than commercial eggs due to their chemical-free environment but also free from antibiotics and hormones. The layers are raised without any animal or fish by-products, ensuring the highest-quality organic eggs (Alderfer, 2018). To differentiate the eggs from those readily available in the market, the product and farm will be certified, ensuring the customers that the eggs are truly organic. This certification not only guarantees the organic production of our eggs but also assures that the chicken layers are grown in adherence to the animal welfare standards. Furthermore, the use of environmentally friendly packaging emphasizes the dedication to freshness and sustainability. Organic eggs, raised using organic materials, offer a richer and more nutritious taste than regular table eggs. They can be used as an ingredient in a wide variety of dishes and desserts. The organic eggs can be cooked, boiled, poached, fried, or scrambled.

Price. Price refers to the amount of money a buyer pays a seller in exchange for a good or service (Asmundson,

2013). Price can also be interpreted as measuring a product's value because people are prepared to pay a specific monetary amount to purchase it (Montevirgen, 2024). To cater to all customers, organic eggs will be available at a reasonable price in readily available outlets. The current price of regular table eggs in the public market and grocery stores ranges from 7.50 to 10.00 pesos, depending on the size. The proponent priced its product a little bit higher but guarantees it is produced using organic materials and the environment. The product is produced organically and adheres to the Organic Certification Center of the Philippines and animal welfare standards. It also patronizes the produce of the local farmers, which means that every organic egg purchase helps the farm's owner and the local farmers of San Jose. The business will also offer discounts to frequent product buyers as a starter.

Distribution Channel. The main distribution channel of the product would be from producers to retailers, mainly sari-sari stores, local markets, and supermarkets, to consumers. Aside from that, the researcher will also take advantage of the use of online platforms, such as Facebook Marketplace. The business will also offer wholesale, pick-up, and delivery services.

Promotion. The proposed business will use traditional and digital marketing to promote organic eggs. The proponent will prepare an informative infographic highlighting the key differences between organic and regular table eggs. This infographic will cover aspects such as certification, animal treatment, physical attributes, and the distinct taste of organic eggs. These materials will be displayed strategically, including the farm's premises and retail outlets, to educate and inform our customers. The proponent will also use free social media such as Facebook and Messenger to connect with potential customers. In addition, collaborations will be conducted with local restaurants, grocery stores, and bakeries to promote eggs and encourage them to use the product. Moreover, samples will be provided during marketing and for first-time buyers.

Product Description - The proposed business is organic egg production and marketing. Organic eggs are produced by chickens raised outdoors and fed organic feeds and supplements. These chickens are generally free from antibiotics, chemicals, and hormone products. The eggs will be sorted based on their size. The color of the eggs is brown, and they should be free from cracks, blood, and manure stains. Organic egg production will follow the organic farming standards stated in the Organic Agriculture Program. The proposed business will breed Rhode Island Red chickens. Rhode Island Reds are known for being good layers and can adapt to the Philippine climate. One rooster will be for every ten laying hens to maximize egg production. The proponent will purchase the breed from the neighboring province of Pola, Oriental Mindoro, as it can produce the required quantity. Each pullet costs 110 pesos for females and 300 pesos for males. Organic eggs are a high source of protein. They can be consumed anytime, but they are commonly eaten during breakfast. They can be boiled or fried and used in baked goods, desserts, and various dishes. The shelf life of organic eggs is two weeks if unrefrigerated and three to five weeks if refrigerated.

Production Process - The proposed business's production process will start with building the facilities and area, managing stocks and feeding, and collecting and sorting organic eggs. The business will begin by constructing facilities and planting forages at the project location, serving as food for the poultry. This phase also includes farm cleaning and sanitation. The building facility for this project will be a 10-door house used as a laying area and for the poultry's night stay. The production process includes procuring chicken stocks, starting with 714 female and 72 male chicks. Upon arrival at the farm, the chickens will be managed according to the Philippine National Standard on Organic Agriculture (PNS-OA). From day one, they will be fed using the PNS feed formulation until retirement. The farm will produce its feed based on the formulation approved by the PNS-OA. During the day, the chickens can roam outdoors, eat the forages, and drink the available water. The feed ration will also be based on the PNS-OA formulation. The egg collection and sorting process will start when the chicks reach maturity, estimated to be four months. The breed used on the farm can produce 5-6 eggs per week per hen, averaging 270 eggs annually. Egg collection will be conducted manually twice a day, once in the morning and once in the afternoon. Egg sorting will be done using an egg sorting scale. Eggs will be placed in the storage area and delivered to the distribution channels daily, following the first-in, first-out inventory management system to avoid spoilage. Cleaning, sanitizing, and disinfecting the area will also be done daily as biosecurity measures.

Selling Process - The selling process will involve distributing the product to public markets, sari-sari stores, and grocery stores, which will serve as retailers of the organic eggs. Delivery services will also be available for customers. Additionally, orders placed through online platforms will be accepted.

Table 4*Equipment, Tools, Supplies, and Service Vehicles in Producing and Marketing Organic Eggs*

Production Equipment	Life Span (years)	Quantity	Unit Cost (PHP)	Total Costs (PHP)
Egg Sorting Scale	5	2 units	500.00	1,000.00
Collecting baskets (bamboo)	5	10 pieces	100.00	1,000.00
Rake	5	2 units	350.00	700.00
Shovel	5	2 units	250.00	500.00
Water Tumbler	5	10 units	200.00	2,000.00
Solar Lights	5	4 pieces	1,000.00	4,000.00
TOTAL				9,200.00
Office Equipment	Life Span (years)	Quantity	Unit Cost	Total Costs
Electric Fan	5	1 unit	549.00	549.00
Cellphone	5	1 unit	3,999.00	3,999.00
TOTAL				4,548.00
Personal Protective Supplies	Quantity	Unit Price (PHP)	Total Price (PHP)	Annually
Boots	2 units (6 months)	699.00	1,398.00	2,796.00
Hard Hat	2 units (1 year)	260.00	520.00	520.00
Eye Goggles	2 units (1 year)	115.00	230.00	230.00
Mask	500 pcs	1.00	500.00	500.00
Gloves	2 units (1 year)	235.00	470.00	470.00
Rain Coats	2 units (1 year)	350.00	700.00	700.00
Apron	2 units (6 months)	179.00	358.00	716.00
TOTAL				5,932.00
Production Supplies	Life Span (years)	Quantity	Unit Cost	Total Costs
Chick Feeder (Bamboo)	3 months	10 bamboos	100.00	1,000.00
Chick Feeder and Waterer (Plastic)	1	50 pieces	30.00	1,500.00
Laying Basket	1 year	200 pieces	20.00	4,000.00
Rice Husk	1 month	20 sacks	20.00	400.00
Disinfectant	(1 month)	4 galloons	600.00	7,200.00
TOTAL				21,500.00
Office Supplies and Materials		Quantity	Unit Price (PHP)	
Ballpen		1 box	168.00	
Calculator		1 unit	650.00	
Record Book		1 piece	135.00	
Whiteboard, wall mount, 2' x 4'		1 piece	895.00	
Whiteboard marker		1 piece	49.00	
Whiteboard marker refill		1 piece	105.00	
Fire Extinguisher		1 unit	800.00	
TOTAL				2,802.00

Janitorial Supplies	Quantity	Unit Price (PHP)	Total Price (PHP)	Annually
Broom Soft	1 unit	50.00	50.00	50.00
Broom Stick	2 pieces (1 month)	25.00	50.00	300.00
Dust pan	1 piece	95.00	95.00	95.00
Detergent powder	1 kilo (1 month)	70.00	70.00	840.00
Detergent Bar	1 bar (1 month)	45.00	45.00	540.00
Trash Bin	1 unit	100.00	100.00	100.00
Sprayer	1 unit	500.00	500.00	500.00
TOTAL				2,425.00
Delivery vehicle (Tora-Tora)	5	1 unit	40,000.00	40,000.00
TOTAL				40,000.00
Furniture and Fixtures	Life Span (years)	Quantity	Unit Cost	Total Costs
Table and Chair	5	1 set	2, 599.00	2, 599.00
Storage Cabinet	5	1 unit	1,500.00	1,500.00
TOTAL				4,099.00
Building and Fences			Life Span (years)	Total Price
Chicken Houses A			5	149,512.00
Fence (fish net fence)			5	13,417.00
Office, Storage, Sorting Area, Brooding Area			5	103,221.00
TOTAL				266,150.00

Table 4 shows the production equipment, including egg sorting scales, collecting baskets, rakes, shovels, water tumblers, and solar lights. This equipment will be used daily on the farm for activities such as egg collection and sorting, water storage, and providing light for the production site. The office equipment, such as electric fans and cellphones, is essential to the employees' day-to-day tasks so they can work efficiently and effectively. Cell phones are also used for communication and promotional purposes. Moreover, personal protective supplies are needed to ensure employees' safety and minimize exposure to hazards during disinfection. In addition, the items needed in the production area include a chick feeder and waterer, laying baskets, and rice husk. These items are used in the feeding management and egg production. Rice husk will serve as a bedding material. Office supplies and materials are needed for the daily recording and monitoring of farm operations. Furthermore, janitorial supplies are needed to maintain hygiene and sanitation in the area. The proposed service vehicle is a second-hand tricycle (tora-tora) type delivery vehicle, which will be used to deliver the products to the distribution channels and consumers and purchase raw materials needed on the farm, as shown in Table 4. The furniture and fixtures are needed to provide a productive working environment for staff. Lastly, the projected cost of building the fences to be constructed on the project site, the materials and labor needed for this construction, and the cost are presented. The total projected cost for these buildings and fences is PHP 266,150, with a lifespan of 5 years.

Location

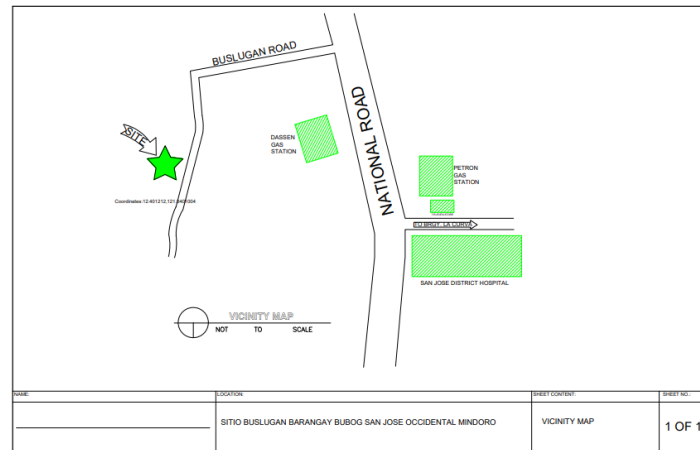


Figure 1. Vicinity Map of the Production Area for the Proposed Business

Figure 1 shows the vicinity map of the proposed business's production area, which is located in Sitio Busluga, Barangay Bubog, San Jose, Occidental Mindoro. The property is accessible through the national road. The lessor's area is approximately 2.1 hectares, but the researcher will only rent the 1-hectare land area that can accommodate the proposed production area of the project and the yearly increase in the number of heads. The area is agricultural land and not near any residences. Traveling to the San Jose public market will take at least 30 minutes. It is 3 minutes or 1.3 km from the National Road and 1.9 km or 5 minutes from the San Jose District Hospital. The only way to access the area is through the National Road. In the proposed project location, the proponent plans to construct one building for storage, a brooding area, a sorting area, and an office area. Additionally, the proponent will build 10-door chicken houses in the first year of operation to accommodate the starting head requirement of 786 heads, with an additional 169 heads in preparation for the 2nd year's projected production. In addition, the proponent will then construct an additional 10-door chicken house during the last quarter of the 2nd year of operation in preparation for the increase in the number of heads during the 3rd year due to the retirement of layers and roosters and the procurement of new layers.

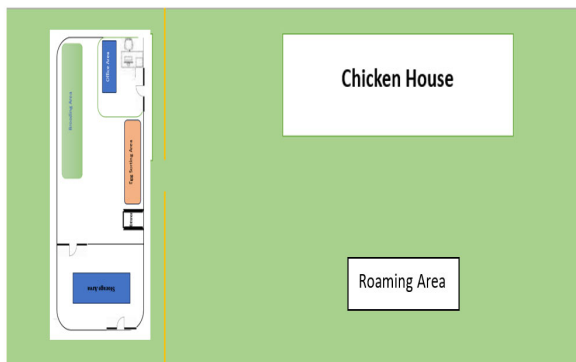


Figure 2. Lay out of the Production Area

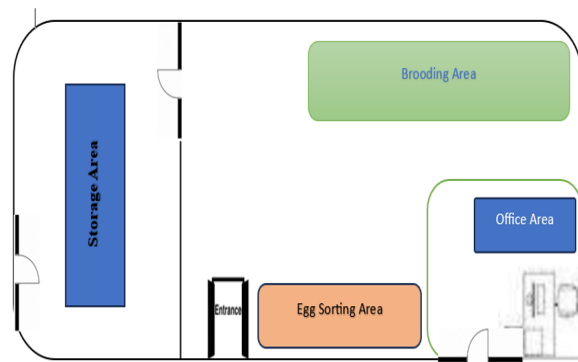


Figure 3. Office Floor Plan

Figures 2 and 3 show the layout of the production area and the office floor plan of the proposed business. The land area is 1 hectare, which can accommodate the roaming area of the chicken. The proposed 10-door chicken houses have been designed in strict adherence to the Philippine National Standard for Free Range Chicken. This standard dictates that the indoor stocking density should not exceed 6 birds/m² and that there should be a 31cm aerial perch space per hen. The 10-door chicken houses, each accommodating 100 heads, have been constructed to meet these requirements, with a length of 4 meters by 5 meters per door. Furthermore, the outdoor stocking density for layers is a maximum of 1 bird per m², with the proposed land area. The required density will be accommodated. See Appendix E for a sample picture of the chicken house.

Production Capacity and Scheduling - The breed used in the production is the Rhode Island Red, known for its high egg production rate of 270 eggs annually. This productivity is further highlighted by the assumption that each hen can lay 5-6 eggs per week, resulting in a daily production of 528 eggs from a total of 714 layers. This capacity accounts for breakage and spoilage. Furthermore, the eggs that are not suitable for selling will be repurposed as feed ingredients. The proponent is taking a 6% market share, which was determined based on a thorough market analysis. A yearly increase of 20% paralleled the increase in production with the number of heads needed. The business will operate seven days a week, from Monday to Sunday. Each employee will have a twelve-hour shift but the active working hours are only from 6:00 to 9:00 in the morning to accommodate delivery, egg collection, sorting, and feeding and 2:30 to 6:00 in the afternoon to egg collection, sorting, cleaning, and disinfecting the area and feed and secure the chicken for the night.

Table 5*Cost of Packaging-Egg Trays*

Year	Annual Demand	No of Trays (30 pcs/ tray)	Unit Price	Yearly
2025	122,500	4,084	5.00	20,420.00
2026	219,000	7,300	5.00	36,500.00
2027	262,800	8,760	5.00	43,800.00
2028	315,360	10,512	5.00	52,560.00
2029	378,505	12,617	5.00	63,085.00

Table 5 shows the cost of the trays needed to package the organic eggs; the quantity is based on the projected demand (shown in Table 6) to be sold each year. In the first year of operation, which will start on May 1, 2025, the total number of days will be 245 multiplied by the yearly production of 500 pieces per day, with a yearly increase of 20%. Each tray contains 30 pieces multiplied by 5 pesos per unit.

4. Organization and Financial Studies

Form of Business Ownership - The proposed business is an organic egg production and marketing business that the sole proprietor will operate. The owner will be in charge of the overall operation of the business and will invest the full capital required to start the business.

Personnel and Manpower Requirements - The proposed business will hire personnel: the first farmworker will be in charge of the farm's daily operation, and the other will also be involved in the farm's daily operation and product delivery.

Source of Financing - Since the proposed business is a sole proprietorship, the proponent will shoulder all the expenses. The source of funds would be the savings. The estimated project cost would be about Php810,757.57. Being the sole proprietor, the owner will make all the necessary decisions and manage the entire operation of the proposed business.

Table 6 shows the needed facilities and equipment that will be acquired in the first month of operation and the purchase of biological assets, which are the pullets with a starting quantity of 714 females and 72 males. Furthermore, the 4-month purchase of raw materials for feeds and veterinary products, as well as the doctor's fee, is included in the start-up project cost. The projected initial cost includes purchasing office supplies and equipment, janitorial supplies, personal protective equipment, production supplies, permits and licenses, and promotional expenses, excluding the free sample taste. It also includes the four-month requirement for fuel, rent, utilities, salary, and employee benefits, excluding the 13th month's pay, which will be given on the 12th month of the year. The production will begin in the fifth month of operation.

Table 6*Project Cost of the Proposed Business*

Items	Descriptions	Cost (In Philippine Peso)	Total Cost (In Philippine Peso)
Facilities and Equipment	Building and Fences	266,150.00	
	Production Equipment	9,200.00	
	Service Vehicle	40,000.00	
	Office Equipment	4,548.00	
	Furniture and Fixtures	4,099.00	
	Water System	28,400.00	
	Biological Assets	100,140.00	452,537.00
Direct Materials	Feeds	111,081.57	
	Veterinary Requirements	15,720.00	126,801.57
Pre-Operating Expenses	Production Supplies	21,500.00	
	Office Supplies and Materials	2,802.00	
	Expense		
	Janitorial Supplies	2,425.00	
	Personal Protective Equipment	5,932.00	
	Expenses		
	Fuel Expense	24,000.00	
	Rent Expense	10,000.00	
	Utilities	10,000.00	
	Salary Expense	104,000.00	
	Employee Benefits	14,680.00	
	Permits and Licences	32,000.00	
	Promotional Expense	4,080.00	231,419.00
TOTAL PROJECT COST			810,757.57

Financial Assumptions - The basic financial assumptions of the study are (1) production and demand will start at 500 pieces in the first year and increase by 20% in the following years. (2) The selling price will be an average of 12 pesos in the first year, 13 pesos from the second to fourth year, and 14 pesos in the fifth year. (3) Feed costs will increase by 5% per kilogram per year. (4) Depreciation expense is computed using a straight-line method with an estimated useful life of 5 years. The depreciation expense on the 1st and 2nd of operations will increase because of the additional chicken house, which will be constructed in the 4th quarter of the 2nd year of operation. (5) Salaries, 13th-month pay, and mandatory government contributions will increase by 2% annually. (6) Rent, promotional expenses, production supplies, office supplies, personal protective equipment, and janitorial supplies will increase by 2% annually. (7) Fuel and utilities expenses, such as electricity and telecommunication, are estimated to increase by 5% annually. (8) The increase in the cost of packaging is based on the number of required productions per day, with a constant cost of five pesos per tray. (30 pcs per tray). (9) The production of organic eggs will start in the fifth month of the first year of operation. (10) The proponent will buy a pullet that needs a 4-month preparation before it begins producing eggs. (11) The feed formulation will be based on the Department of Agriculture's feed formulation for organic chicken raising. (12) The organic egg daily production has a net 3 % allowance for breakage. The amount was not considered in the financial data because the eggs not suitable for selling will be repurposed as feed for the chickens. (13) The proponent estimated a one percent mortality rate for chickens. The requirements for mortality were not considered in the financial data, particularly in the feed cost and veterinary requirements. They were only included in the cost of layers in the other revenues and the projected cost of biological assets. (14) After the 2.5-year life span of laying hens and roosters, they will be disposed of at one hundred per kilo, with an estimated weight of two kilos per chicken, serving as the business's other revenue. (15) The proponent will register as VAT to take advantage of the tax laws, as organic eggs are

included in the tax-exempt agricultural products in their original state.

5. Financial Projections

Financial Ratios and Analyses

Gross Profit Ratio. The gross profit ratio is a financial tool that measures the business's profitability. The ratio shows how much the businesses make after paying the cost of goods sold. It indicates that in the first year of operation, there is a 67% gross profit ratio. It also shows that for every peso of revenue, 0.67 would be the business's profit, which can be used to pay other company expenses not directly used in the production. The same goes for the 2nd to 5th years of operation, with 77%, 74%, 75%, and 75%, respectively. A high gross profit margin suggests that when the business grows, it will likely become very profitable. A low gross profit margin suggests that profitability is unlikely to be attained for the business (Ciptawan & Frandjaja, 2022).

Net Profit Ratio. The net profit ratio, also known as net profit margin, is a financial tool that measures profitability after taxes and operating expenses are deducted. It shows that in the first year of operation, which covers only eight months, there is a 23% net profit ratio. It shows that the business earns 0.23 net profit for every peso of revenue. Unlike the gross profit ratio, this ratio shows an accurate company's financial health. In the 2nd year of operation, there was a 235% increase in the business's net profit due to the full year and 12-month operation. The profitability continues in the 3rd-5th year of operation with 54%, 58%, and 62%, respectively. The ability of the business to generate net income from sales is correlated with its net profit margin, which indicates its effectiveness and efficiency. Naturally, this will influence investors' willingness to invest, resulting in continued growth in the company's profits and the achievement of its profit targets for the upcoming year (Handayani & Winarningsih, 2020).

Return on Investment. Return on investment (ROI) is typically used as an index to compare the effectiveness of investments or to gauge how well an investment performed on a particular project or business (Hassanzadeh & Bigdeli, 2019). In the first year of operation, with a 41% ROI, 41% of the investment has already returned to the investor. In the second through fifth years of operation, there are 191%, 225%, 292%, and 404%. The figures show that the organic egg production and marketing business is very profitable. ROI analysis provides a clear indicator for funding allocation, investment prioritization, reviewing previous investments, and project improvement for higher returns (Kousky et al., 2019).

Socio-Economic Aspects - The proposed business, organic egg production, will be established not only to generate revenue but also to benefit the community. Aside from the owner, the business will be significant to the local community and government. It will also serve as an encouragement to others in the community who wish to start similar businesses. The proposed firm will also benefit local farmers. This enterprise has the potential to benefit other sectors of government. Furthermore, the new business will provide consumers with healthier food options. The proposed business's first beneficiary is the owner. The poultry industry is very profitable, and with proper management, the owner can generate income and attain financial stability. The proposed business will also showcase the owner's entrepreneurial and managerial abilities. Proper networking with other professionals in the poultry industry will open up more significant sources of new opportunities. Businesses need a workforce to operate. Although the business is a sole proprietorship, the owner also needs a workforce to assist in daily operations. The proposed business will provide employment and livelihood to the community. Construction workers must build the fence and chicken houses during the start-up phase. A stable workforce will be needed during the operational phase, which will help reduce community unemployment.

Furthermore, the proposed business will support not just the individual workers but also their families, helping improve their living standards. Additionally, employees will gain valuable experience in business operations through the production and marketing of the product. This project will benefit the municipality of San Jose and the local barangay of Bubog through increased clearances, permits, and tax collection. Additionally, the proposed business will help address the area's unemployment problem. The industry also promotes sustainable agriculture.

The project will supply quality and healthy eggs to the market. The proposed business will also benefit the local farmers by increasing the demand for raw materials, specifically their farm produce, which will serve as feed in organic farming. The owner will prioritize purchasing products from local farmers to ensure the use of local produce. This project will also help aspiring local poultry farmers gain insight into the production of organic chicken and eggs within the community. The proposed business will produce organic eggs and chicken, which are healthier and more nutritious than the available eggs in the market. The products are raised using organic materials such as madre de agua leaves, coconut meat, vegetable oil, rice and corn bran, salt, and fermented fruit juices. They are free from chemicals such as synthetically produced fertilizers, vitamins, antibiotics, and supplements. The proposed business will also provide healthier options for health-conscious individuals.

6. SWOT and Potential Problem Analysis

Strengths - Eggs are Filipinos' staple food and part of their daily diet. The proposed business of organic egg production will be sustainable, as different feed sources will be locally available. The product is also antibiotic-free and chemical-free, which makes it healthier compared to the currently available products in the market. Additionally, it will be the first certified organic egg production in San Jose.

Weaknesses - Organic farming relies on organic materials for feed and medicines. The unavailability of feed ingredients, medicines, and supplements in the local market may lead to low production rates of the layers and increased production costs when sourcing these organic materials, thereby increasing the cost of the organic eggs. Furthermore, farm mismanagement due to a lack of skills and training of the management and the caretakers may also lead to low farm performance and productivity. Mismanagement can also lead to risks in the cancellation of certification when it fails to comply with organic standards.

Opportunities - Organic egg production has a high potential for product innovation and processing. This project aims to meet San Jose, Occidental Mindoro's demand for organic eggs as the sole supplier in the municipality. It would also present an opportunity for market expansion into neighboring municipalities.

Threats - When a business is proven to be profitable, competition may arise. Although surveyed buyers expressed a willingness to purchase the products, there is still the possibility of rejection due to the high price compared to the market availability. Another risk is the spread of infections and viruses if biosecurity measures are not effectively implemented on the farm.

Potential Problem and Action Response - The main potential problems of the proposed business are the virus and disease outbreaks. Possible chicken health problems, including colds and other infections, may arise, but the outbreak might end the farm's production. With this, the owner should have strict biosecurity measures like regular disinfections of the facilities, proper waste management, and control of access to the farm. They are limiting farm visitors or implementing protocols for necessary visitors, such as wearing protective clothing and following proper hygiene to minimize the risk of possible diseases. Health monitoring and early detection, by regular monitoring of the poultry to detect any signs of illnesses, also includes regular check-ups and separation of sick birds to prevent disease transmission. Vaccination programs can be implemented by working with the veterinarian to establish a vaccination schedule that complies with organic farming standards, proper education and training of the farm workers. Another possible problem for the proposed business is the supply of poultry food supplements. Organic farming requires organic materials to sustain its market distinction. Proper food supplements are essential for the chicken's health and good egg production. With this, the owner should coordinate with similar organic farmers to learn more about their management practices. Attend training and workshops, conduct benchmarking for continuous improvement of farm management, and establish a good supply chain of supplements for organic chicken.

San Jose always experiences a high heat index, which is also a problem in poultry farming in terms of egg production, reduced food intake of layers, stress, low egg quality, and reduced growth of layers. With this, the owner should have proper ventilation and cooling system in the chicken houses, provide proper shade and ample

water to hydrate and make the chicken cool, feeding adjustment; the management should feed the chicken during more excellent parts of the day, and lastly, proper monitoring of the chicken's temperature and behavior.

7. Conclusions

The study's results proved the financial viability, feasibility, and market potential of organic eggs in San Jose, Occidental Mindoro. Based on the findings of the study, the proponent has attained the following conclusions: There is a demand for organic eggs, as shown by the respondents' interest and willingness to support the project. The proposed project can provide an organic egg supply in San Jose at a competitive price. The proposed project's strategic location is beneficial because the organic egg can be easily transported to the market, maintaining their freshness. Since it is a small-scale business, sole proprietorship is the ideal management type. Poultry farming is not capital-intensive and requires only a small investment. Poultry farming will generate employment within Barangay Bubog, additional revenue for the government, and consumer access to healthier foods.

Recommendations - Based on the findings and conclusions presented in this study, the proponent has arrived at the following recommendations: (1) The owner should organize a quality circle of egg producers by creating an association of egg producers in Occidental Mindoro. (2) Management should collaborate with the Department of Agriculture to conduct market research on the potential threat to egg production. (3) The owner should explore more effective marketing strategies to improve sales and conduct further research on the best proportion of the feeds to sustain egg production by maximizing the consultancy and licensing from the Organic Certification Center of the Philippines (OCCP). (4) The farm workers should attend competency training on organic egg production by the Technical Education and Skills Development Authority (TESDA). (5) After years of successful operations, the researcher will study the feasibility of setting up another organic egg poultry in the Mangyan Education Center (MEC). (6) The owner should also consider crowdfunding to raise capital and support the egg production business. (7) Future researchers should explore other aspects of organic egg production, particularly in the production of organic feeds, other chicken breeds, and innovation in organic poultry farming.

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