

AVOCADO FRUITS PACKAGING
AND
AVOCADO OIL PRODUCTION
PROJECT
PROPOSAL



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EXECUTIVE SUMMARY

In Most avocado growing area in Tanzania farmers face the problem of fruits waste caused by the harvest of immature avocados, lack of storage facilities, while avocado oil consumers are expecting more high-quality products.

In this case, a solution is proposed that avocados oil is produced in the envisage project directly for the export market and high standard hotels, which belongs to the edible oil industry. Nowadays olive oil and walnut oil are very popular in most countries with labels Healthy products and Nutritious oil, and their prices are higher than others. Compared with them, avocado oil has been reported more nutritious and fit for high temperature cooking. However, the popularity of avocado is not as much as them due to the small production. Thus, a new factory will be set up in Itunduma village, Njombe DC, and adopt the cold press technology to produce extra-virgin avocado oil, also clean and package to be sold as fruits. Then, avocado oil will be sent to Middle East and others in bulks after well bottled and labeled.

The low cost will be a competitive advantage by the effective direct connection between the factory and the targeted market, instead of going around to developed countries such as Europe.

Besides, a series of marketing strategies such as free nutrition lectures, supermarket promotion, exhibitions, activities sponsoring, and public benefits program will be launched to advertise the avocado oil.

Regarding the financial plan, the first financial source is own money and a loan from the bank. The total investment cost of proposed project including working capital is estimated at \$10,000,000 for both packaging plant and oil extractor. The project will create many jobs opportunity, both skilled and unskilled workers.

The proposed project possesses wide range of economic and social benefits such as increasing the level of investment, tax revenue and employment creation, therefore

it is technically feasible, financially and commercially viable as well as socially and economically acceptable and the project is worth implementing.

1.INTRODUCTION

Avocado oil is a kind of plant oil extracted from avocados, which is rich in nutrition and widely used in various products such as soap, hair conditioner, face creams etc. This project mainly will focus on avocado as a fruit which will be cleaned and packaged and avocado oil which is pressed from smooth fresh buttery pulps of avocados. Avocado oil is more popular in China, USA and Middle East countries with the glory of avocados currently on the rise.

It is nutritious and fit for all human ages especially for children. However, it is very expensive due to less production. Avocado oil is good for babies, pregnancies and the seniors, which are our product's target consumers found in Tanzania (international hotels and large super markets), Arab countries and China by making promotion in all channels and that creates the need of avocado fruits and oil.

Avocado oil is natural with benefits of lowering blood fat and cholesterol, Rich in Omega-3, helps to keep a young and healthy heart, treat wounds, smooth sunburned skin, boost collagen products, reduce itching, inflammation and blood vessels blockage.

2.THE TECHNICAL ANALYSIS

2.1 MARKET ANALYSIS - PESTEL ANALYSIS

PESTEL analysis is a tool to analyse external macro-environmental factors and estimates their effects on the company, which consists of; Political, Economic, Social, Technological, Legal and Environmental factors.

2.1.1 POLITICAL AND LEGAL FACTORS

The government of Tanzania through the Ministry of Agriculture have TIB Development Bank and Private Agricultural Sector Support Trust funding project, which will help establish the refinery to create market for Avocado. This indicates that the government has full support on the area especially for investors that producing avocado by adding values. In general, the business is politically and legally acceptable.

2.1.2 ECONOMIC FACTORS

According to The Citizen newspaper dated Friday, May 14, 2021 Tanzania produced 39000 tonnes of avocados locally and only 8500-9000 tonnes were exported. Therefore, the refinery is economically viable.

2.1.3 SOCIAL-CULTURAL FACTORS

Tropical and sub-tropical fruit can make a significant direct contribution to the subsistence of small-scale farmers by providing locally generate nutritious food that is often available when other agricultural crops have not yet been harvested. Fruits are a versatile product that, depending on need, can be consumed within the household or sold. Marketing fresh and processed fruit products generates income which can act as an economic buffer and seasonal safety net for poor farm households. Diversification into fruit production can generate employment and enable small-scale farmers to embark on a range of production, processing and marketing activities to complement existing income-generating activities

2.1.4 TECHNOLOGICAL FACTORS

Cold extraction is the best way to produce high-quality edible avocado oil, while refined extraction method is better for cosmetic oil because of the residual chemicals in the oils. The requirements of cold extraction are more restricted than those of hot extraction, and it is better than hot extraction by keeping most of Avocado's nutrition and no additional preservative is needed. In this situation, avocados are pressed with controlled processing temperature under than 40-degree celcius, and the yield is reported 50% lower than that of hot extraction. Therefore, high quality unrefined extra-virgin avocado oils come from advanced technology and strict quality control

A totally enclosed cold extraction machine is the used to press avocados and keep its nutrition in oils. A full-closed sterile bottling machine is also used to control the quality of extra-virgin avocado oils by reducing sunlight and oxygen exposure. The yield of avocado oil depends on fruit types and maturity. Going by the main variety i.e. hass and fuerte and of full maturity i.e. Dry matter of above 35%, we can recover between 15-17% oil. That is to say, for every 1000kg of pulp, we can get about 150-170kg's of oil.

2.1.5 ECOLOGICAL FACTORS

Organic food is more and more popular nowadays, so it will be advocated in the plantations and also used in the marketing strategy. Organic avocados are environmentally friendly food and there are no chemicals involved in the cold extraction process. Moreover, the glasses bottles used to package avocado oils will be collected and reused, which is part of our sustainability strategy. Non genetic modified raw materials are also an ecological factor useful in the marketing strategy.

3.MARKETING PLAN

3.1. Objectives

To achieve a production of more than 50,250 liters of oil and to export at least 50000 tonnes of avocado fruits.

3.2. Target Market definition

Target market is defined as a segment of market by dividing customers into different groups according to gender, age, professions, demographics, income level , psychology, geographic, consumption habits, similar needs, wants and so on. To make our target market clear, following questions should be answered: Who could be our customers? How old are they? What do they do? Where do they live? Why does our avocado oil appeal to them? Where do they hang out online? How often do they purchase such kind of products? What are their comments and complains on such kind of products online? What are their expectations?

3.3 Marketing

Avocado oil is a product with great potential. Although it is a tangible product, marketing ideas of services also apply here. For example, the “basic”, “standard” and “deluxe” services apply to products by different products package.

The basic and standard ones is for just cooking food for babies, the seniors or the whole family, while the deluxe one is bundled with some “gifts” such as dietary supplements, milk powder, wines, teas or coffees. Besides, it is also an effective advertising approach to promote the avocado oils by personal selling and word-of-mouth channel.

3.4. Price

Pricing strategy plays an important key in the company revenue and profits. It aims to set an optimal price for a product or service by taking various internal and external factors into account, such as production and distribution costs, competitor products prices, target customers and consumers expecting and so on. On the one hand, sales must be affected adversely by higher prices than the normal standard of the industry if the segment is the low-end market. On the other hand, the business will not be sustainable if the price is too low. Therefore, it is critical to make a good pricing strategy.

There are 6 main pricing strategies we are planning on applying, they are, pricing at a premium, pricing for a market penetration, economy pricing, price skimming, psychology pricing and bundle pricing. Premium pricing is often used for unique goods in the early stage of a product's lifecycle. It is fit for the avocado oil targeted for the high-end market, such as luxury package.

The correspondent placement is high-end food shop with good decoration and professional salesman such as wine shops which sell foreign food, expensive wines, liquors, hams, cheese etc.

Economy pricing strategy is effective for prices-sensitive customers who prefer products with high performance to price ratio. It is widely used in large-scale companies such as the discount retailer Wal-Mart and some budget airlines. Our standard products without additions adopt that strategy. Moreover, odd pricing is an effective strategy on the basis of psychology. It will be adopted in making the retail market prices for the end shops.

3.5 Promotion

Quality of Tanzania avocados is more premium because the sufficient sunshine and stable temperature promote the photosynthesis throughout the year. Besides, the pesticide is less used in the such areas.

Avocado is not genetic modified fruit, and the organic certificate will also be selling points in marketing.

3.5.1 Setting Forms of Promotion: -

3.5.2 Advertising

Online advertising. For example, News and stories about avocado nutrition and recipe with avocado oil are updated every day online to maintain customers

loyalty on such social networks as Facebook, Telegram, Twitter, TikTok and also advertise on attractive websites and video platforms.

3.5.3 Attending some exhibitions and fairs

This will ensure one on one communication with potential customers and questions and answer forum.

3.5.4 Cooperating

Cooperation with some charity groups and donates some of the revenue to help children to get nutritious food in distant areas

Designing some packages with some high-end products such as milk power or wines in certain festivals such as Tanzania New year and Christmas festivals.

Holding some free cooking course or lectures for pregnant women or mothers to advertise avocado oil

Advertising on local newspapers and food magazines Promotional gifts (free samples and other materials

3.6 Placement

Edible avocado oil is placed as an alternative to such common cooking oil as peanut oil, olive oil, sunflower oil, canola oil, flax seed oil and so on. In the first stage, Avocado oil uses as many as distribution channels to penetrate the local market. Like:

- Wholesale traders, Retailers, Supermarkets, Health food stores, High-endhotels and restaurants, Pharmacies, Confinement centers, Mother and baby goods stores etc.

Avocado oil is different from olive and any other oil in that avocado oil produce a light cream smell while olive oil and other produce a little bit spicy grass flavor, so avocado oil is more preferred by babies. Apart from that, the vitamin A, B, C, D, E of avocado oil is four times more than that of same amount of olive oil.

Avocado oil is full of nutrition; rich omega 9 helps in anti-inflammation and the development of nervous system, mentality and vision as well. It can also lower the risk of atherosclerosis, cardiovascular diseases and stroke. Avocado is free of cholesterol, and low of sugar and starch.

4. PRODUCTION PROCESS

Our project aims at producing two products, that is; Avocado fruits and Avocado oils

4.1 Avocado fruits

The project has a 200 acres avocado plantation at Ng'alang'a village Tanzania. We will be growing our own fruits to exported as fruits and others to be produced as oils. The fresh avocados have to be delivered to the factory on the same day of harvesting. During the peak season, harvesting will be done daily except on Sundays

Once the avocados arrive at the factory packing house, the following steps are performed:

Hydrocooling – The bins of harvested avocados are hydrocooled upon arrival, either at night or early in the morning. During this step, water cools down the fruit to remove any residual field heat before being taken to the cooler.

Weighing of the Bins – After being cooled, the bins are taken to the packinghouse, where they are individually weighed and are dumped onto the packing line.

Wash Step – The avocados receive a single-pass wash with sanitizer as they pass through different colored brushes, where each brush serves a specific purpose: the green brushes are for agitation and application, the red brushes are for water removal and the black brushes are for polishing.

Sorting – There is an initial hand sorting step to separate out the defective fruit, including issues such as decay or sunburn, which is followed by an optical sorting step to remove any fruit that does not meet product specifications.

Labeling – Each avocado is labeled and then is transported to the designated packing line.

Box Formation – Depending on the customer, the avocados are tray packed, bulk packed or packed into bags. The tray packed and bulk packed avocados are packed into boxes. In this facility, there is a separate box formation room, where the boxes

are formed and are transported overhead to the packing area, where there is a worker that feeds the boxes to the packing line from the overhead carrier.

Tray Pack – For the tray packed avocados, workers fill trays with avocados, pass them down and pack them into boxes.

Cooling – The packed pallets of avocados are then taken to the cooler until further transport.

Transport – When a truck arrives to pick up a load of avocados, the avocados go through a quality check and the truck is inspected prior to loading the truck using a forklift.

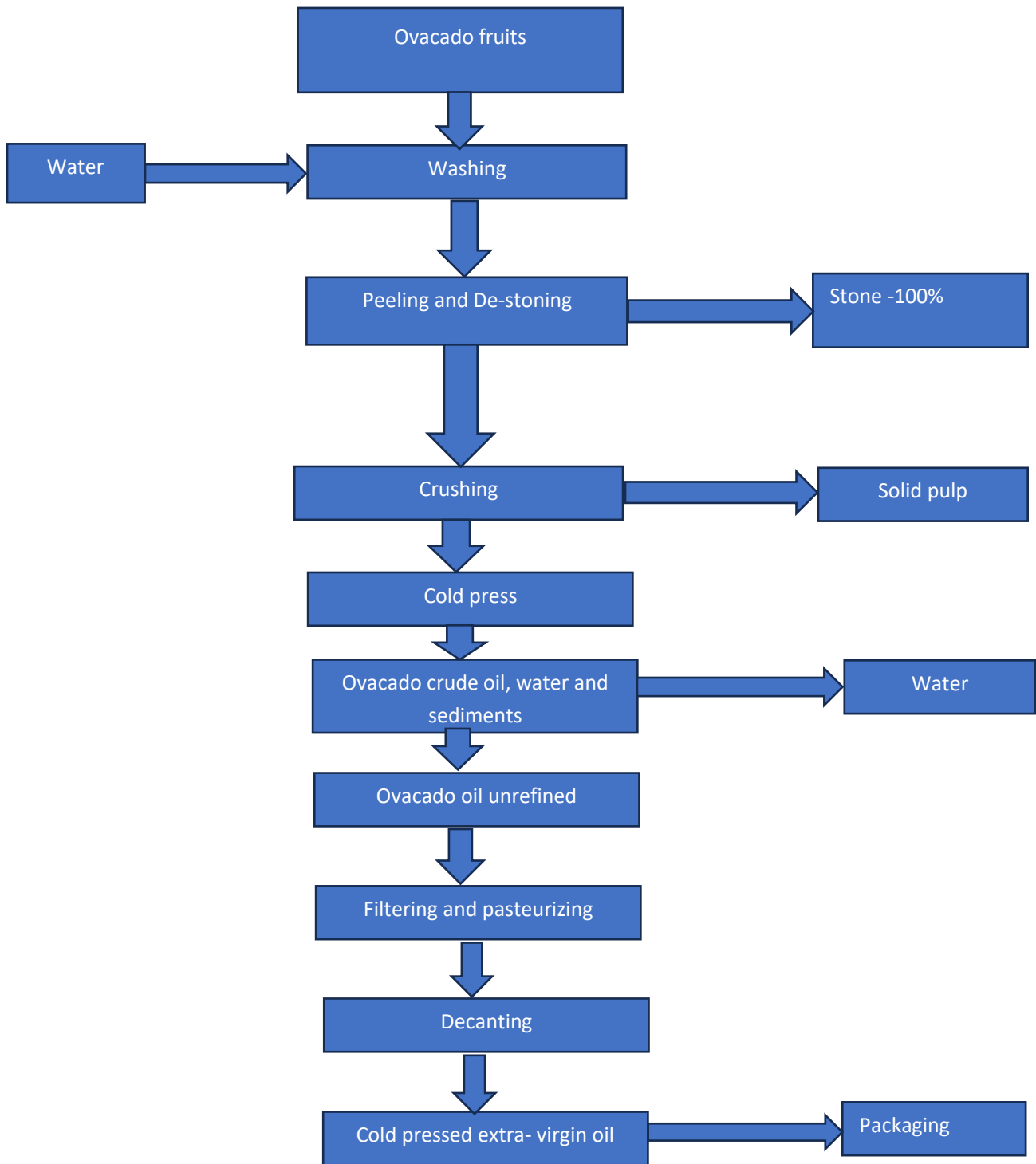
4.2 AVOCADO OILS

To produce avocado oils, the best quality avocado fruits will be selected. The following extraction method will be used.

4.2.1 Cold-pressed extraction process

Cold press technology is adopted to produce extra-virgin avocado oil, because it is the most effective way to maintain its nutrition.

The process used are as the following flow chart diagram;



4.2.2 Fruit washing, destoning, deskinning and mash preparation

Whole fruits are washed in a two-stage washing system. The first washing is performed by immersion in order to remove dust from the surface of the fruits. The soft water flow generated by a jet system gathers fruits by a plastic bucket elevator, which has two functions, i.e. Washing fruits a second time by showering them and working as a water dripping. The elevator takes then the fruits into the destoning machine, where pips and around 90% of skin are separated from the pulp.

Skin separation needs to be calibrated according to the disordered quality, since the proportion of skin into the processed mash may affect the pigment composition of avocado oil. Pigments are important for the intensity of the green color, its stability and its healthy effects. The pulp (which is crushed during destoning) with a variable proportion of skin is pumped into a disc crusher for further refining. The disc crusher rotates continuously at 1400 rpm.

The avocado mash is conveyed at the center and then sprayed towards the periphery by a toothed disc after the de-stoning process, the disc crusher is important to cut the filaments remained in the paste and, at the same time, to minimize the emulsion. This approach has enabled us to optimize oil extraction.

4. 3 PLANT CAPACITY AND PRODUCTION PROGRAMME

4.3.1 Plant Capacity

The total area to be constructed avocado oil cold pressing will be 10 ha. About a minimum of 603 tons of fresh fruit will be extracted annually.

The avocado oil pressing plant will have a production capacity of 100 % tones of the total yearly production of processed for avocado oil.

4.3.2 Production Program

The avocado oil pressing plant starts operation at 603 mt of avocado fruit of the rated capacity in the first year (on the same year of fruition) and shall progressively grow four-fold in the second and the third year since the rate of the production of avocado fruit increase as the age of the tree and its treatment increase and the fourth year and thereafter.

The processing plant will have at most 250 working days due to seasonal fruition of the avocado tree, operating in a single shift of 8hours a day.

4.3.3 Plant Raw Materials, Inputs and Utilities

4.3.3.1 Plant Materials and Inputs

The main raw materials and inputs required for the avocado oil manufacturing plant are fresh avocado Fruit, labeling papers and packing materials. Most of the raw materials can be obtained from the local agents

4.3.3.2 Utilities

Electricity, water, fuel and lubricant are the main utilities required for the envisaged avocado oil pressing firm.

4.3 Proposed Budget

S/N	ITEM DESCRIPTION	QUANTITY	COST (USD)
1.	Avocado cold- press oil extraction machine	Full set	500,000
2.	Packaging producing machine	Full set	200,000
3.	Heavy duty Generator	1	15000
4.	Workshop equipment (set)	1 set	90000
5.	Transformer and installing power line{250KV}	1	100000
6.	Water Tanks (10,000 liter)	6	30,000
7.	Preservatives (deep refrigerator)	2	44,000
8.	C o n v e y o r	1	15000
9.	Office Furniture and equipment's set		10,000
10.	D r y e r	1	5,000
11.	Packaging boxes and bottles	50000	10,000

12.	PPEs	50 pairs white gumboots. 50 plain white coats. 50 white head caps.	10,000
13.	Salary	6 months	100,000
14.	Avocadoes fruits	5,000 tonnes	
15.	Land lease	200 acres/10years	20,000
16.	Building cost	Factory buildings	3,000,000
17.	Lorries	3	200,000
18.	Folk lift	3	
19.	Tractor and attachments	3	200,000
20.	Maintenance costs		100000
21.	Avocado seedlings	1000,000	2,000,000
22.	Miscellaneous		3,351,000
	Total		10,000,000

4.4 Cash flow projections

Assumptions and Initial Inputs:

- Initial investment: \$10,000,000
- Cost structure (fixed and variable costs)
- Revenue streams (avocado sales, processed product sales, etc.)
- Growth rates (revenue, cost inflation, etc.)
- Operational metrics (yield per hectare, processing capacity, etc.)

Cash Flow Projections:

- Initial investment and capital expenditures
- Operational cash flows (revenue minus operating expenses)

- Financing activities (loans, interest payments, etc.)
- Taxes

Revenue Growth Statements:

- Annual growth rate for revenues
- Breakdown of revenue by product line (fresh avocados, processed products, etc.)

Profit & Loss (P&L) Statements:

- Revenue
- Cost of Goods Sold (COGS)
- Gross profit
- Operating expenses
- EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization)
- Depreciation and amortization
- EBIT (Earnings Before Interest and Taxes)
- Interest expenses
- Tax expenses
- Net profit

Let's start by outlining some basic assumptions:

Assumptions:

1. Revenue:

- Year 1 sales of fresh avocados: \$2,000,000
- Year 1 sales of processed products: \$1,000,000
- Annual growth rate for fresh avocados: 10%
- Annual growth rate for processed products: 12%

2. Costs:

- Initial capital expenditure: \$10,000,000 (for land, equipment, facilities, etc.)
- Variable cost as a percentage of sales: 40%
- Fixed annual operating costs: \$500,000
- Annual cost inflation rate: 3%

3. Other financial assumptions:

- Depreciation method: Straight-line over 10 years
- Corporate tax rate: 25%
- No additional financing or debt

Using these assumptions, we can build out the financial statements.

Cash Flow Projections:

1. Year 1:

- Initial investment: -\$10,000,000
- Revenue: \$3,000,000 (sum of fresh avocados and processed products)
- Variable costs: \$1,200,000 (40% of \$3,000,000)
- Fixed costs: \$500,000
- Depreciation: \$1,000,000 (straight-line over 10 years)
- EBIT: \$300,000 ($\$3,000,000 - \$1,200,000 - \$500,000 - \$1,000,000$)
- Interest expenses: \$0 (assuming no debt)
- Tax expenses: \$75,000 (25% of \$300,000)
- Net profit: \$225,000 ($\$300,000 - \$75,000$)

2. Subsequent Years:

- Incremental revenue growth based on annual growth rates
- Adjust costs based on cost inflation rate

Revenue Growth Statements:

Year	Fresh Avocados Revenue	Processed Products Revenue	Total Revenue
1	\$2,000,000	\$1,000,000	\$3,000,000
2	\$2,200,000	\$1,120,000	\$3,320,000
3	\$2,420,000	\$1,254,400	\$3,674,400
4	\$2,662,000	\$1,404,928	\$4,066,928
5	\$2,928,200	\$1,573,519	\$4,501,719
6	\$3,221,020	\$1,762,341	\$4,983,361
7	\$3,543,122	\$1,973,823	\$5,516,945
8	\$3,897,434	\$2,210,680	\$6,108,114
9	\$4,287,177	\$2,475,942	\$6,763,119
10	\$4,715,894	\$2,772,255	\$7,488,149

P&L Statements (for selected years):

Year	Revenue	Variable Costs	Fixed Costs	Depreciation	EBIT	Interest	Tax	Net Profit
1	\$3,000,000	\$1,200,000	\$500,000	\$1,000,000	\$300,000	\$0	\$75,000	\$225,000
2	\$3,320,000	\$1,328,000	\$515,000	\$1,000,000	\$477,000	\$0	\$119,250	\$357,750
3	\$3,674,400	\$1,469,760	\$530,450	\$1,000,000	\$674,190	\$0	\$168,548	\$505,642
4	\$4,066,928	\$1,626,771	\$546,364	\$1,000,000	\$893,793	\$0	\$223,448	\$670,345

Year	Revenue	Variable Costs	Fixed Costs	Depreciation	EBIT	Interest	Tax	Net Profit
5	\$4,501,719	\$1,800,688	\$562,755	\$1,000,000	\$1,138,276	\$0	\$284,569	\$853,707
10	\$7,488,149	\$2,995,260	\$652,070	\$1,000,000	\$2,840,819	\$0	\$710,205	\$2,130,614

These tables can be further detailed and adjusted based on more specific data and assumptions. For precise and customized financial projections, additional information on operational details, market conditions, and strategic plans would be needed.

4.5 Conclusion

In conclusion, our proposal for Avocado oil production presents a vital opportunity to foster economic growth and social development through jobs creation. By implementing targeted strategies, we aim to create lasting change that not only uplifts individuals but also strengthens entire communities.

While we acknowledge potential challenges, our proactive approach and strong local partnerships position us to navigate these effectively. We are dedicated to ensuring the sustainability of our production, with ongoing research and community feedback mechanisms in place. Together, we can transform lives and build a more inclusive future.

Thank you for considering our proposal and the opportunity to make a meaningful impact in underserved communities