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INTERNATIONALIZATION PLAN FOR DEHYDRATED DRAGON FRUIT, CASE STUDY ECUADOR-CANADA

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ABSTRACT

Dehydrated dragon fruit stands out for its high vitamin content and health benefits. An analysis of the product and the world market revealed a high demand for dried dragon fruit in Canada, a major importer of dried fruits. While Ecuador ranks among the top 10 exporters of fresh dragon fruit, it has yet to establish a presence in the dried dragon fruit market. Seeing this opportunity, the team analyzed the Canadian market environment and generated two sales projections. The technical feasibility analysis pointed to scenario II as the most profitable option. Finally, a financial profitability analysis solidified scenario II as the best course of action for entering the Canadian market with dehydrated dragon fruit, a segment currently untapped by Ecuadorian exporters.

Keywords: Trade Policy - Trade Balance - Merchandise Agreements - Trade Route - Export

RESUMEN

La pitahaya deshidratada destaca por su alto aporte vitamínico y beneficios para la salud. Se realizó un análisis del producto y del mercado mundial, que demostró que Canadá tiene gran demanda de productos como la pitahaya deshidratada y es de los principales importadores de frutas deshidratadas. Ecuador se encuentra entre los 10 principales exportadores de pitahaya fresca, aunque no de la deshidratada. Para abordar esta oportunidad, se analizó el entorno de mercado y se generaron dos proyecciones de ventas. Luego, se analizó la factibilidad técnica de la operación de internacionalización, lo que indicó que el escenario II sería óptimo. Finalmente, un análisis de rentabilidad financiera justificó la implementación del segundo escenario en el plan de internacionalización de pitahaya deshidratada from Ecuador hacia Canadá, destacando que este mercado no ha sido explotado por Ecuador.

Palabras clave: Política comercial - Balanza Comercial - Acuerdos sobre mercancías - Ruta Comercial - Exportación

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Introduction

This project seeks to establish a clear and accurate description of the product and mitigate any risks associated with certifications, the Canadian market, logistics, and feasibility, which could affect the product. This requires extensive research and the collaboration of certain producers of dried dragon fruit. The project aims to demonstrate why the Canadian market is a profitable option for the internationalization of dehydrated dragon fruit from Ecuador since the product is gaining popularity over time and is a good alternative considering the national production of fresh dragon fruit.

According to Itac Professional, (2022) dried fruits benefit health due to their high content of vitamins B1, B2, B3, B6, and E, minerals, and fibers. They stand out for their antioxidant properties, satiating effect, and for concentrating their flavor and nutrients, which generates a high added value for the end consumer. These characteristics inspired the development of this project, the importance of the study is highlighted since in Ecuador the exports of dried fruits are very scarce, thus generating an opportunity in the supply for the expansion of this product towards the Canadian market.

A quantitative and qualitative methodology is used where numerical and descriptive data are obtained to carry out the objectives. The document begins with Chapter 1 analysis and description of the raw material where its benefits, diversity, data about the world market of fresh dragon fruit, characteristics of both fresh and dehydrated dragon fruit are emphasized, main producing provinces in Ecuador, superfoods, their added value and product presentation.

Continuing in Chapter 2 with an analysis of the market environment where a PESTAL analysis is conducted, examining the political, economic, social, technological, environmental, and legal environments of Canada. This provides a broad reference to the environment needed for internationalization. Demand is analyzed with data on exports of dried fruits from Ecuador in 2023, world imports in 2022, global exporters in 2022, and exports from Ecuador to Canada in recent years. This allows you to estimate sales for the project. In addition, the Ecuadorian supply of the product, its prices in Ecuador and Canada, and the marketing channels in Canada are evaluated for effective distribution.

Chapter 3 examines the technical feasibility of the internationalization of dried dragon fruit, covering the establishment of the company and the projection of sales. Two scenarios are developed: a pessimistic scenario and a more optimistic one based on the amount Canada imports, the annual increase in imports, inflation, and selling prices in Canada and Ecuador. An operation flowchart is created from collection to the port of departure and another for export, detailing steps, documentation, and costs. In addition, Canadian regulation and labeling are studied. Likewise, a cost and investment analysis is carried out for both scenarios, including investment budget, operational and administrative costs, export budgets, and financial costs.

Chapter 4 discusses financial profitability, using Net Cash Flow tables for both of them over five years demonstrating the most favorable scenario. This makes it possible to determine the internal rate of return and evaluate the profitability of the project for each situation. It highlights the importance of proper management of prices, quantities, investments, and bank loans for optimal growth in the internationalization of dehydrated dragon fruit from Ecuador to Canada.

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CHAPTER 1

1. PRODUCT ANALYSIS AND DESCRIPTION

Introduction

This chapter focuses on dragon fruit, also known as pitaya, providing a detailed description of its origin, varieties, nutritional value, and health benefits. In addition, it highlights Ecuador's crucial role as one of the world's leading producers and exporters of this exotic fruit. The chapter details the principal producing regions, the volume exported in recent years, and the harvest season. It examines the different forms available on the market, with an emphasis on dried dragon fruit as a promising snack option for introduction into the Canadian market, and analyzes its position within the superfruit sector.

1.1 Definition of foreign trade

To understand a little more about the issue of internationalization of pitahaya, it is important to take into account the concept of trade and its relevance in the global exchange of goods and services. According to Casanova & Zuaznábar (2018), commerce is defined as the economic activity that involves the exchange of legal and free goods and services in the market, through purchase and sale transactions, either for direct use or for their transformation at the international level. This exchange, also known as international trade, encompasses the movement of goods and services between different countries and their respective markets. It is carried out through the use of currencies and is subject to regulations established by both the participants in the exchange and the governments of the countries involved.

By participating in international trade, countries can benefit each other by improving the position of their products and accessing new foreign markets. This process is framed within International Economic Relations (IER) and is supported by mechanisms, instruments, and specialized institutions to overcome trade barriers and define specific trade policies for each country (Casanova & Zuaznábar, 2018).

1.2 Description of raw material

To Verona et al. (2020) pitahaya is an exotic fruit, known worldwide by the name "Dragon Fruit", this agricultural product has several physicochemical and nutritional properties, and is considered a functional food thanks to its bioactive compounds, which gives it an added value and is widely used in different presentations thanks to its excellent organoleptic characteristics, this fruit can be found in Latin America in countries such as Mexico, Venezuela, Colombia, Brazil, Costa Rica, and Ecuador, since it is produced in tropical and subtropical regions, One of the Ecuadorian regions in which pitahaya is most produced is in the Palora canton, Province of Morona Santiago.

According to the Agri-Food and Fisheries Information Service (2017), the word pitahaya is of Antillean origin and means scaly fruit. It comes from the cactus family and its scientific name is Hylocereus. Its fruit is ovoid, rounded, and elongated, with red, white, or yellow pulp and small black seeds.

This fruit is also known internationally as dragon fruit or Thanh Long, of Vietnamese origin, since its growth habit is climbing and the plant that produces it climbs on the trunks of trees and intertwines, giving the shape of the body of a dragon, a famous mythological animal on the Asian continent (Agri-Food and Fisheries Information Service, 2017).

In Ecuador, two types of pitahaya are grown, the yellow one, which is characterized by having an outer rind of this color, with flexible spikes and an aromatic white pulp with small black seeds inside, and the red pitahaya, which, instead of having spikes, flexible on the outside like the yellow one, it has green bracts, its pulp can be white or light red, with small black seeds (SotoMayr et al., 2019).

According to the National Institute of Statistics and Censuses (2012), the red pitahaya differs from the yellow pitahaya not only in the color of the fruit, since the red one is less aromatic and more tasteless since it has a less sweet flavor compared to the yellow, and in both variations of pitahaya, you should avoid chewing the seeds unless you want to use it as an energy purgative.

It was determined that the red and yellow pitahaya have common ancestors, so they share many characteristics and have been classified as sister taxa (that is, they share a common

ancestor). The characteristic shape of their fruit is like that of a berry, with a diameter that is between 10 to 12 cm and weighs between 200 and 570 grams (Corzo-Rios et al., 2016).

Figure 1
Pitahaya

(Stereo Villa, 2019).

According to Vargas et al. (2020, p. 12), pitahaya has several health benefits, because it contains 80% vitamin C, fiber, carbohydrates, and water. Some of its best-known benefits is its antioxidant capacity, its use as a laxative thanks to pitahaya oil, its seeds, which help relieve stomach problems and reduce blood cholesterol. In addition, it helps regulate blood glucose levels, and iron deficiency and controls high blood pressure, which reduces the risk of suffering a heart attack or stroke.

Dragon fruit stands out as a promising product for marketing and sale to the public, backed by scientific research that reveals its various health benefits. This tropical fruit, appreciated for its flavor and nutritional properties, is gaining ground in the global fruit market.

Recent statistics highlight this growing interest: in 2022, Ecuador registered 121,742 million dollars in export revenue from pitahaya (with subheading 081090: Covering pitahaya, fresh tamarinds, cashews, jackfruit, lychees, zapotillos, passion fruit, star fruit and other edible fruits), of these $121,742 million of export income from pitahaya with subheading 081090, more than $99 million were only from pitahaya with subheading 0810.90.40.00, a notable increase compared to the $99,707 million received from sales in

2021 with subheading 081090 mentioned above, as well as the $69,241 million entered in 2018. These data reflect the continuous growth in demand and production of this fruit, consolidating it as a valuable resource in the commercial and agricultural field (TRADE MAP, 2023).

1.3 Global Market Data

1.3.1 Exports by country of fresh dragon fruit in the world, in 2022

In this part of the study, it is important to have a quantitative overview or approach of the world market, according to Trade Map. (2024) Exports by country of fresh dragon fruit on the world market were:

Table 1
Export participation and growth, 2022 period. Top exporters of dragon fruit in the world period 2022 081090

No	Country	Quantity exported in tons (2022)	Share of total export value	Value of exports 2022 (in millions USD FOB)	Export growth (2021-2022)	Export growth (2018-2022)
1	Vietnam	367,481	23,4%	$842,705	-35%	-13%
2	Thailand	568,314	16,8%	$604,264	-28%	-1%
3	Netherlands	92,664	8,1%	$292,433	-11%	+2%
4	China	116,866	5,6%	$202,240	-19,64%	+5%
5	Egypt	55,604	3,8%	$135,460	+89,49%	+12%
6	Ecuador	31,551	3,4%	$121,742	+22%	+31%
7	Turkey	180,080	3,3%	$119,180	-11,42%	+4%

8	United Arab Emirates	31,203	3%	$108,007	+12%	+14%
9	Colombia	26,431	2,7%	$98,775	+5%	+7%
10	Spain	50,539	2,4%	$87,610	-13%	-0%

Note. Adapted from Trade Map, List of exporters for selected product: 081090, 2023,

https://www.trademap.org/Country_SelProduct_TS.aspx?nvpm=3%7c%7c%7c%7c%7c081090%7c%7c%7c6%7c1%7c1%7c2%7c2%7c1%7c2%7c1%7c1%7c1

In 2022, according to the Ministry of Production, Foreign Trade, Investment and Fisheries, and Trade Map, Ecuador exported more than 23 thousand tons of Dragon Fruit, thus acquiring more than 99 million US dollars of this fruit alone, specifically within subheading 0810904000, which positions it in sixth place among dragon fruit exporting countries worldwide. If we analyze the table, we can see the great growth that the export of this fruit has had since, compared to 2021, it increased by 22% in 2022 and 31% in the years 2018-2022, becoming the second country with the most growth in exports after Egypt (Ministerio de Producción, Comercio Exterior, Inversiones y Pesca, 2023), (Trade Map, 2023).

1.3.2 Imports by country of fresh pitahaya in the world, in 2022

Table 2

Imports of fresh pitahaya in the world by country, 2022.081090

No	Country	Imported quantity in tons (2022)	Value of imports in thousands of dollars (2022)	Import growth rate (2021-2022)	Import growth rate (2018-2022)
1	China	1,171,374	1,268,562	-12%	+13%
2	USA	244,676	306,31	+11%	+9%

3	Netherlands	114,598	281,54	-7%	+5%
4	Hong Kong	114,032	146,84	-51%	+4%
5	Germany	52,433	138,92	-4%	+1%
6	Indonesia	72,702	108,01	+18%	+2%
7	Russia	83,732	87,46	+6%	+5%
8	France	43,972	72,56	-9%	+4%
9	Saudi Arabia	137,843	59,84	-22%	-4%
10	Canada	29,691	44,54	+8%	+11%

Note. Adapted from TradeMap, List of exporters for the selected product: 081090,2023,

https://www.trademap.org/Country_SelProduct_TS.aspx?nvpm=3%7c%7c%7c%7c%7c081090%7c%7c%7c6%7c1%7c1%7c1%7c2%7c1%7c2%7c1%7c1%7c1

As can be seen, the two largest powers, China and the United States are the largest importers of dragon fruit in the world, but among the three largest importers are the Netherlands, which is also the third largest exporter of this fruit in the world, as demonstrated in table 1, which shows us that this nation imports pitahaya to market.

One of the nations with stable growth in its dragon fruit imports is Canada, with a growth rate of 11% between 2018 and 2022, which demonstrates the growing interest in this fruit in this country.

1.4 Quantity exported by Ecuador in recent years

According to ProEcuador (2021), the dragon fruit market in the United States and Canada has seen significant growth in recent years. In 2018, its value reached $129.15 million, and it is estimated that by 2027 this market will reach $194 million, with an annual growth rate of 4.7% between 2019 and 2027. This increase is mainly attributed to the growing consumer demand for healthy products and exotic fruits.

Ecuador advances in the internationalization of dragon fruit: An important milestone was marked on April 10th, 2023, when the country began exporting this fruit to the People's Republic of China. This achievement was possible thanks to four exporting companies located in Palora, Morona Santiago province. In the first 2 weeks, 17 shipments of dragon fruit were made to China, representing a total of 11,432.50 (weight) in 4,573 boxes. (Ministerio de Producción Comercio Exterior Inversiones y Pesca, 2023).

According to Agrocalidad. (2022), 2021 Ecuador exported a total of 17,895 tons of dragon fruit, which were within the 5,975 shipments made abroad, this showed a significant increase compared to 2020 where a total of 11,260 tons were exported, in 2022 it had splendid growth in the field of export as it exceeded 23 thousand tons. For the date of July 2023, a total of 4,779 shipments of dragon fruit from Ecuador were registered, representing 29 thousand tons exported. This increase is thanks to the start of exports that Ecuador had with China, only to date exceeds the total of the year 2022. See the following table:

Figure 2

Tons of fresh pitahaya exported from Ecuador

Ecuador has 58 recipient countries of this fruit, with the United States being the main market with 84% of the total volume exported, followed by Canada, Colombia, and Singapore. The cultivation of dragon fruit represents a significant foreign exchange income for Ecuador. (Ministerio de Producción Comercio Exterior Inversiones y Pesca, 2023).

1.5 Production and season characteristics

According to the research carried out by Vargas et al. (2020) dragon fruit comes from hemiepiphytic plants, which means that they absorb water both through the stem or pods and

through their roots; a land with primary and secondary drainage constructions is needed where necessary fertilizers and fertilizers are placed; the optimal altitude for their production is between 500 and 1900 meters above sea level. Maintaining relative humidity of between 70% and 80% and a temperature ranging between 18 to 25 C°, dragon fruit can adapt outside these mentioned ranges. However, this affects the crop and reduces its production capacity. The most common method for planting is through the asexual form, that is, through various methods such as rooting, grafting and in vitro.

Dragon fruit production in Ecuador varies by region, creating a year-round supply. Nationally, the highest yields occur between February and March, accounting for 60% of the harvest. Production is also significant between mid-November and the first week of December (20%). Smaller harvests occur in June (5%) and September-October (15%). Interestingly, Palora exhibits distinct seasonality with peak production months in January, March, April, November, and December. (Vargas et al. 2020).

1.6 Main dragon fruit producing provinces in Ecuador.

According to data registered by Agrocalidad up to December 31, 2021, 2,051 dragon fruit production sites have been registered for export, which are distributed in 21 provinces of Ecuador. Morona Santiago leads with 65% of the production sites registered nationwide, followed by Manabí with 8% and Pichincha with 5.5%. According to Agrocalidad, there was an increase of almost 60% in the production of this fruit at the end of 2021 compared to 2020.

At the end of 2021, Agrocalidad had 167 collection centers registered and distributed in 9 provinces of Ecuador, which are:

Table 3
Number of collection centers registered by Agrocalidad in 9 Provinces

Province	Number of collection centers
Morona Santiago	80
Pichincha	42
Guayas	15

Manabí	12
Los Ríos	7
Tungurahua	4
Cotopaxi	3
Santo Domingo de los Tsáchilas	2
Pastaza	2

Note. Adapted from Agrocalidad, dragon fruit exports grew almost 60% in 2021, 2022, https://www.agrocalidad.gob.ec/exportaciones-de-pitahaya-crecieron-casi-60-en-2021/#:~:text=Morona%20Santiago%20cuenta%20con%20el,con%20el%205%2C5%25.

In 2022, Ecuador possessed 1,528 hectares dedicated to dragon fruit production. Additionally, 2,260 producers were registered for export and overseen by Agrocalidad. The Ministry of Agriculture and Livestock *Ministerio de Agricultura y Ganadería* (MAG) offers technical assistance to farmers through Agrocalidad specialists, intending to optimize production and reduce costs. Growers process the fruit in registered and approved collection centers, which guarantee the absence of pests. (Agrocalidad, 2022)

1.7 Added value of dehydrated pitahaya

Fruits, due to their high levels of humidity, are extremely susceptible to the proliferation of microorganisms such as molds and yeasts, which can cause decomposition. For example, pitahaya, with a moisture content of 80%, represents a favorable environment for the development of these microorganisms. Fruit deterioration is the result of chemical reactions and microbial activity that occur in an environment rich in moisture and nutrients (Cajamarca et al., 2020).

Dehydration stands out as one of the oldest and most effective methods of preserving food. Its relevance persists to this day, especially for its ability to reduce the weight of food and prolong its conservation. This technique significantly facilitates the transportation of food, being especially useful in fruits such as pitahaya, which, due to their high moisture content, tend to deteriorate quickly during transportation. (Cajamarca et al., 2020).

According to Ecuador Agroalimentario (2020), dehydrated pitahaya emerges as a sweet and healthy snack, offering an innovative option to enjoy fruits and adopt a healthy lifestyle. This product is appreciated for its exquisite flavor, nutritional value, and original texture. In addition, it provides a wide range of minerals and vitamins, as well as a notable dose of energy.

For these reasons, dehydrated pitahaya becomes an optimal option as a healthy snack at any time of the day. In addition to being a concentrated source of nutrients, it contains 95% of the vitamins present in fresh fruit. It is especially rich in minerals such as calcium, phosphorus, iron, and potassium, as well as vitamins A, C, E, B1, B2, and B3, with antioxidant properties. Its low-calorie content helps regulate blood pressure and blood sugar levels, promoting satiety and improving digestion. (Happy Fruit, 2023).

1.8 Dehydrated dragon fruit in the world of superfoods

The consumption of superfoods is becoming increasingly popular. People are more concerned about their health and are opting for new, healthier options due to the significant health benefits superfoods provide. These nutrient-rich foods are packed with essential vitamins and minerals, and bioactive compounds that contribute to overall health and well-being. Some key characteristics of superfoods include antioxidant nutrients that prevent aging and cell damage, healthy fats that help prevent heart disease, and fiber that aids in digestion and may help manage diabetes. (Infinitia, 2022)

Consumers are increasingly looking for health-promoting and disease-preventing foods, willing to pay a premium for these benefits. This trend translates to a growing preference for food products with healthy characteristics. Superfoods, such as fruits, vegetables, and whole grains, perfectly align with this demand by offering high nutritional performance. Their popularity has soared in the last decade, leading to a steady increase in their availability. According to Infinitia (2022), nuts stand out as an excellent option to enrich the diet with protein, fiber, and other essential nutrients. These qualities make them highly valuable superfoods.

In addition, according to Pro Chile (2022), the global superfruit market will grow at a compound annual rate of 9.2% during the forecast period from 2022 to 2027, as after the COVID-19 pandemic the demand for packaged functional foods that have health benefits

grew exponentially, and emphasizes that the popularity of superfoods increased as consumers are now more inclined towards healthier and more natural ingredients

1.9 Dragon Bite product presentation

This project focuses on the internationalization of dehydrated dragon fruit with added value to the Canadian market, considering it as a superfood. This product is offered in dehydrated dragon fruit presentations in plastic bags from 20 grams to 500 grams, with the option of packages of 1kg or more in sheets as requested by the importing customer. However, we consider that the optimal option would be to send individual packages of 40 grams of dehydrated dragon fruit in biodegradable plastic bags inside boxes with a capacity for 26 packages and each package measuring 20x6x5 centimeters, to meet the needs of the end consumer, since in the same way, the Canadian consumer is concerned about acquiring products from companies that are friendly to the environment.

Below is the presentation of the product for the end consumer, which reflects the freshness of the dragon fruit through the design of the product using "fresh" and striking colors, which the name of the project (Dragon Bite), the product in sheets, the quantity per package, country of origin, certifications and the commitment to the environment is announced. Above all, the package will be in English and French, in addition to its labeling required by the Canadian government.

Figure 3

Dehydrated Dragon fruit package

Made by authors using Chatgpt 4.0

Figure 4

Dehydrated dragon fruit

(Pita Cava, 2020)

CHAPTER 2

2. Analysis of the market environment

Introduction

For this chapter, a quantitative and qualitative methodology will be used with a research approach based on the collection and analysis of numerical and descriptive data, which will help us with the necessary information to carry out the proposed objectives, obtaining information from the Central Bank of Canada, Gabriel Baca Urbina, Santander Trade, ICEXS of Spain and the Government of Canada, ProChile, among others, determining whether market conditions do not impede implementing the internationalization plan, a PESTAL analysis will be carried out, analysis of demand in Canada, analysis of the offer, its suppliers, prices and marketing channels. (Baca Urbina, 2013, p. 25)

2.1 Analysis of the PESTEL (Political, Economic, Social, Technological, Environmental and Legal) Environment of Canada

The PESTEL analysis will show us the political system which focuses on power, the economic system which focuses on the production and consumption of its resources, the social environment shows how people interact with each other, the technological system covers everything in terms of an interpretation in the advances of science, the environmental analyzes and controls macro-environmental factors and the legal is based on the contractual regime, the rules and their application (Countries, 2020).

2.1.1 Analysis of the political environment:

Canada's political structure is characterized by being a constitutional monarchy (part of the Commonwealth), parliamentary democracy, and federation. Its political system is federal and parliamentary, attached to a solid democratic tradition. As Governor General is Mary Simon, Prime Minister: Justin Trudeau in a liberal party, as head of state in Canada, is King Charles III (SantanderTrade, 2023).

The general administration of the Canadian economy is the responsibility of the Ministry of Finance, among its responsibilities is advising the government on fiscal and economic matters, social measures, security issues, tax and tariff policy, financial stability,

preparation of the annual federal budget and Canada's international commitments (Government of Canada, 2024).

For its part, the Ministry of Foreign Affairs (Global Affairs Canada) plays a crucial role in Canada's trade policy, as it shapes and promotes Canadian interests and values globally in a difficult current environment. They manage and administer the diplomatic relations of the North American country, promote international trade, and provide consular assistance. They have a very strong commitment to strengthening national security and the development of international law, with efforts to promote international development, humanitarian assistance, peace and security (Government of Canada, 2024).

According to the Economic and Commercial Office of Spain in Ottawa (2023, p. 8), the Ministry of Foreign Affairs (Global Affairs Canada) is responsible for participating in the preparation, negotiation, and administration of trade agreements and rules, and resolving trade disputes involving Canada. This Ministry covers three ministerial areas, International Cooperation, International Trade, and Foreign Affairs, which are also responsible for promoting foreign trade and attracting foreign investment, using its global network of commercial delegations collaborating with various private organizations such as Canadian Commercial Corporation, Canada-United States-Mexico Agreement (CUSMA) Secretariat, Canadian Section, Export Development Canada, Invest in Canada.

The Canada Border Services Agency is in charge of Customs, which in turn depends on the Ministry of Public Safety and Civil Protection. The ministers of foreign affairs are Melanie Joly, Harjit Sajjan of International Cooperation, and Mary Ng of International Trade. (Economic and Commercial Office of Spain in Ottawa, 2023, p. 8).

Canada stands out as a country extremely open to foreign trade, thanks to its membership and active participation in a variety of international economic, commercial, and financial organizations such as the World Trade Organization (WTO), the World Bank, the International Monetary Fund (IMF), theFinancial Action Task Force, the Organization for Economic Cooperation and Development and the Financial Stability Fund, in addition to being part of the G7, which is a forum made up of seven of the most advanced and developed economies in the world, and the G20, which in this case would be 20 participating nations. The Department of Finance of Canada leads the management of the country's activities in various international institutions. Additionally, it plays a leading role in negotiating trade

agreements with other nations and monitoring how these agreements benefit Canada's interests (Government of Canada, 2023).

Canada's Sustainable Economic Growth (SEG) Strategy focuses on fostering business and investing in people around the planet, building economic foundations in partner developing countries. In line with this strategy, its bilateral agreement program prioritizes trade facilitation and assistance. For example, the Canada-Asia Trade and Investment for Growth Program (TRIGR) is a technical assistance program notable for its focus on trade facilitation (World Trade Organization, 2023).

In addition, Canada provides support to multilateral trade facilitation projects, outsourcing their activities through regional and international organizations for their selection, management, and implementation. As one of the founding donors, Canada supports the World Bank Group's Trade Facilitation Support Program (TFSP), and has also contributed to various initiatives, such as the Aid for Trade Program offered by the African Development Bank (with an investment of 15 million dollars); the Canada-Americas Business Environment Reform implemented by the International Finance Corporation (with an investment of $11 million); the WTO Trade and Standards Development Fund (with an investment of 7.5 million dollars); among other projects (World Trade Organization, 2023).

2.1.2 Analysis of the economic environment

In the economic outlook, according to data from the World Bank (2022), the currency in Canada is the Canadian dollar, which has an exchange value of 1.3 Canadian dollars per 1 US dollar (2022). The total GDP is $2.16 trillion, and its GDP per capita is $55,522, with an annual growth of 3.8%.

To analyze purchasing power parity in Canada, the GDP indicator based on purchasing power parity (PPP) will be used, which is a measure that adjusts the Gross Domestic Product (GDP) of a country to take into account differences in costs of living and purchasing power between countries. It is calculated by converting national GDP to a common currency, usually US dollars, using purchasing power parity rates. This allows us to compare the level of economic development between countries more precisely, so, with information collected from the International Monetary Fund database (2024), the Canadian GDP in the PPP index in current prices is 2.27 billion dollars. Americans in 2022.

Regarding the primary economic sector, according to the Economic and Commercial Office of Spain in Ottawa (2023, p. 9-10), the agricultural sector at the domestic level represents 2% of Canadian GDP, and generated employment for 257,000 people in 2022, in the provinces of Alberta, Saskatchewan, and Manitoba is dominated by the production of livestock and cereals, while in the eastern provinces of Ontario, Quebec, Nova Scotia, New Brunswick, and Prince Edward Island, the production and export of fruits and vegetables stand out. There is a decrease in the number of agricultural exports due to the impact that new technologies have had on the productivity and profitability of large-scale agricultural operations.

The record of imports of these agricultural products was 15,101,000 dollars, while exports of agricultural products from Canada in 2022 were 30,459,000 dollars, having Oilseeds and vegetable oils, Cereals, and wheat as its sectors most important for export (Economic and Commercial Office of Spain in Ottawa, 2023, p. 10).

2.1.2.1 Important trade agreements in which Canada participates

The most important trade agreement of which Canada is a part is the Canada-United States-Mexico Free Trade Agreement (USMCA), which has generated great employment opportunities and economic growth for its citizens, which helped raise their level of income. life. In addition, Canada has hundreds of different bilateral and multilateral trade agreements. (Global Affairs Canada, 2024).

The entry into force of the Trade Agreement between Canada and the European Union, known as CETA, has eliminated agricultural tariffs between both parties, which especially benefits the European Union in exporting cheese to Canada. In addition, CETA will protect certain geographical indications of European food products in Canada, including 27 Spanish ones, mainly related to olive oil, fruits, and meat products (Economic and Commercial Office of the Spanish Embassy in Toronto, 2022).

Furthermore, in the case of agreements between Canada and Ecuador, the Canadian cabinet approved the initiation of negotiations for a trade agreement between the two countries. This means a great step towards bilateral cooperation and demonstrates the interest of the two nations in reaching an agreement. greater economic and commercial integration, for the benefit of both markets, which will allow Ecuador to better integrate into international trade chains and an increase in added value to the exportable offer of this country. These

negotiations will begin in March 2024. (Ministry of Production Foreign Trade Investments and Fishing, 2024).

2.1.2.2 Analysis of foreign trade from Canada to the world

According to the World Trade Organization (2023), the main groups of products exported in 2021 by Canada are manufacturing with 42.1% of the Canadian export market, agricultural products 17.2%, and fuels and extractive products with 31. 8%, with the main recipient countries being the United States, the European Union, and China, with a clear predominance of the United States receiving 76.9% of Canadian merchandise exports.

The main countries that export their goods to Canada are the United States, China, and the European Union, and the main agricultural products imported by Canada, which occupies 9.6% of the imported products market, are fresh grape wine, bakery products or pastries, Coffee and other food preparations (World Trade Organization, 2023).

2.1.2.3 Opportunities in the Canadian Food Market

In recent years, there has been a change in the consumption pattern in Canada, moving from a preference for fresh products to preserved products. This change is attributed to the context of the pandemic in 2021, during which Canadian households largely opted for fresh and homemade foods. This increase in demand for fresh products resulted in greater competition and an increase in prices for these types of products. As a consequence, in 2022, consumers showed a preference for preserved products, which was reflected in an 11% increase in sales of these products. In addition, sales volumes of canned fruits and vegetables, which include frozen, canned, and dehydrated products, among others, experienced growth compared to the total food market. (Farm Credit Canada, 2023)

Currently, the expenses of Canadian households are more diversified when it comes to food consumption, and the affordability of products and their nutritional values is very important, so it is necessary to know how to adapt to a changing market, knowing the needs of the consumer. in a context in which, although spending and economic resources are increasingly limited, the consumer demands a quality product. (Farm Credit Canada, 2023).

According to Farm Credit Canada (2023), the proportion of sales of Canadian food product manufacturers has fallen by more than 4% in 2022 compared to the record in 2021, representing 44% of the total market. This opens a great opportunity for imported products to take the place that national manufacturers are leaving.

2.1.3 Analysis of the social environment:

According to information from the WORLD BANK (2022), the Canadian population reached 38,929,902 people, with an average annual population growth of 1.1%. Taking into account that the global percentage is at 1.2%, it can be understood that this is a stable growth. (World Development Indicators | The World Bank, n.d.).

Regarding non-communicable diseases, the percentage of people with obesity and overweight in the age group of 18 years and older was 31% in 2016. For its part, the percentage of people who consume tobacco was 14% in the same year. This year, these trends are high compared to the established global objectives, added to the population with high blood pressure in adults over 18 years of age 17%, and diabetes 7% of the population, demonstrating a lack of compliance with national and global objectives of health (World Health Organization, 2018).

According to the Pan American Health Organization (2021), Canada's population is aging, with a growing proportion of people over 65 years of age, and this aging is expected to continue in the coming years. This demographic change presents health challenges, such as non-communicable diseases, mental health, and health emergencies such as COVID-19. Cardiovascular diseases and cancer are the leading causes of death and disability. Additionally, more than 3.4 million Canadians live with diabetes, and Indigenous communities have higher rates of chronic diseases. Opioid overdoses are also on the rise, with more than 7,000 deaths recorded in 2021.

2.1.3.1 Consumer Trends in Canada

The Canadian market is very broad and open to different types of food products and gastronomic fusions since there is extensive multiculturalism due to the high levels of immigration that this country has suffered over the years, so health and well-being stand out among the main consumer trends in this market today, since for Canadians a good state of health is increasingly important, which is associated with good nutrition, that includes

sustainable and organic nutrition, given that Organic products have gained greater importance in this market. In the same way consumer habits have migrated to a hybrid consumption between e-commerce and purchasing in a physical store (Economic and Commercial Office of the Spanish Embassy in Toronto, 2022).

In the case of food distribution, the Canadian population on a large scale chooses supermarkets for its marketing, significantly surpassing convenience stores and small businesses that have no relevance in this market, the main food distribution groups by sales volume. They are Metro, Empire Company (parent of Sobeys and Safeway Canada), and Loblaw Companies (Economic and Commercial Office of the Spanish Embassy in Toronto, 2022).

According to the Economic and Commercial Office of the Spanish Embassy in Toronto (2022), the Canadian market presents significant challenges due to the intense competition between consolidated products, saturation in various sectors, as well as geographical barriers and, to begin with, in addition to cultural differences. Despite these obstacles, factors such as economic stability, the high level of per capita income, the growth of the gourmet segment of the market, and the implementation of the CETA Agreement have mitigated these difficulties to some extent.

In addition, Canada's major cities, such as Toronto, Montreal and Vancouver, are urban centers with informed consumers who value good nutrition as disease prevention. As the population ages, there is a growing demand for organic and healthy products, reflecting a shift towards a healthier lifestyle. In addition, Canada is known to be a niche market for functional foods, where consumers are well informed about food contents and show particular interest in natural ingredients (Pro Chile, 2022).

The market for functional foods and natural health products in Canada is steadily growing and is expected to reach a value of $19.2 billion by 2026. These foods are not only highly nutritious, but are also linked to a variety of health benefits, such as the prevention of chronic diseases like diabetes and heart disease. Growing awareness of the nutritional benefits of these products is further driving their demand in the Canadian market. Demanding and willing to pay more for quality products, Canadian consumers are looking for value-added options and prefer to shop in specialty stores or supermarket chains that offer a wide variety of healthy products (Pro Chile, 2022).

2.1.4 Analysis of the Technological Environment

Technological advances in plant breeding have resulted in new techniques, such as genetic analysis and gene editing, which are allowing the development of more efficient and effective plant varieties than traditional methods. This benefits both farmers and consumers by providing access to seeds with desirable characteristics, such as resistance to extreme weather conditions and pests, contributing to more sustainable food production. These innovations also help keep food costs low and ensure safety for humans, animals, and the environment (Government of Canada, 2023).

Additionally, the Pest Management Center (PMC) leads initiatives to mitigate the risks associated with pesticide use. Through these initiatives, the PMC has developed new technologies to implement Integrated Pest Management (IPM), to support farmers in their efforts to adopt more environmentally sustainable agricultural practices. (Government of Canada, 2024).

In the 2023 World Innovation Index, Canada is ranked number 15, forming part of a ranking that analyzes 132 countries. The country is behind powers such as Germany, France and Israel. This index evaluates the level of influence in science, technology, and innovation, to identify metrics that reflect the situation of social innovation (Canada Action, 2023).

In Canada, innovation in the natural resources sector has resulted in significant reductions in emissions associated with operations. For example, since 1981, net agricultural emissions have decreased by 10%, primarily due to innovative management practices in intensive agricultural regions. Likewise, since the early 1990s, the forestry sector has reduced its total greenhouse gas emissions by 70%, thanks to innovative improvements in efficiency and the use of renewable bioenergy. Between 2012 and 2021, oil and natural gas producers have managed to reduce their GHG emissions by 24% while increasing production by 21%, largely thanks to innovative practices such as reducing gas flaring (Canada Action, 2023).

2.1.5 Analysis of the Environmental Environment

He is responsible for preserving and improving the quality of the environment, and for developing policies and programs to meet environmental objectives the Environment and Climate Change Canada, a department within the portfolio of the Ministry of the

Environment, is responsible for administering more than a dozen pieces of legislation within Parliament that are important in addressing and reporting on complex environmental issues, including They can highlight: 1. Control the level of toxic substances in commercial products. 2. Allow and, where necessary, prevent international trade in hazardous waste, hazardous recyclables, and endangered species. 3. Promote, inspect, and enforce regulatory requirements (Government of Canada, 2017).

Additionally, responsible for detecting and preventing food safety incidents in Canada is the Canadian Food Safety Information Network (CFSIN), which is led by the Canadian Food Inspection Agency and associated with different national and federal organizations that have to do with food safety. These associations are designed to protect the health and provide safety in the food that is delivered to the Canadian population (Government of Canada, 2024).

If we talk about the ecological footprint, according to National Geographic (2022) Canada has the seventh per capita rate of carbon dioxide emissions, with a biocapacity of 14.92 hectares per inhabitant, this is 5.5 times more than the world average.

2.1.5.1 Impact of climate change on Canadian agriculture

Climate change will affect Canadian agriculture with increasing intensity every year due to increasing temperatures, changes in precipitation patterns, and changes in the intensity of extreme weather events, all of which will provide opportunities and, above all, challenges to the agricultural sector in Canada (Government of Canada, 2020).

According to the latest national climate risk report, carried out by the Government of Canada in November 2023, the lack of rain persists in a large part of the land used for agriculture in Canada, reaching 66% coverage. In the west of the country, dry conditions have improved somewhat with fall rains, but significant moisture deficiencies remain. The effects of drought, such as water and forage shortages, continue to be a concern for many farmers, with moderate to exceptional drought affecting more than 87% of the agricultural landscape in this region (Government of Canada, 2023).

Among the opportunities that climate change may provide to Canadian agriculture is being able to expand the growing season due to less aggressive and shorter winters, which can result in the cultivation of new and more lucrative crops, and it is expected that the

concentrations of atmospheric carbon dioxide (CO2) will increase, which will benefit the growth of certain crops such as corn, by improving photosynthesis and efficiency in water use. Future warming is expected to affect northern countries more, as in this case. Canada (Government of Canada, 2020).

The challenges due to climate change that may arise in the agricultural sector can be significant, as reflected in rising temperatures, longer growing seasons, and changes in precipitation patterns. This leads to greater dependence on irrigation and water resource management, as well as the need to deal with extreme events such as floods, forest fires, and storms, which can affect agricultural and livestock production, as well as infrastructure and energy systems. Additionally, rising temperatures pose specific challenges, such as heat stress in crops such as canola and wheat, and negatively impact livestock production, which could have implications for the export of Canadian agricultural products. Variability in growing seasons also represents a challenge for planting and harvest management, especially for fruit tree crops, while changes in pollinator prevalence could further alter agricultural production in the country (Government of Canada, 2020).

2.1.6 Analysis of the Legal Environment

Food safety and regulatory compliance are fundamental aspects of international food trade, especially in countries like Canada, which have developed and strengthened their laws over time. Since the centralization of food inspection and quarantine services under the Canadian Food Inspection Agency (CFIA) in 1997, to the enactment of the Safe Food for Canadians Act (SFCA) in 2012, the country has been making important changes in its laws to ensure that food is safe for everyone. They have brought together different food laws into a single regulation to make things clearer and more effective. These new rules include important topics, such as improving how food safety is monitored and tracked from production to store shelves (Ottawa Office of Agricultural Affairs for U.S., 2022).

Food regulations in Canada, framed within the SFCA and its associated regulations, establish mandatory requirements for food-related businesses, such as obtaining licenses, implementing preventive controls, and ensuring traceability throughout the supply chain. These requirements, which came into effect in January 2019 for most food products, represent a solid foundation for the new food safety regulatory environment in the country. In addition, the CFIA offers online resources to help companies understand and comply with

these regulations, highlighting the importance of close collaboration between stakeholders and the need to be aware of future regulatory changes that may affect the food sector. (Ottawa Office of Agricultural Affairs for U.S., 2022).

According to Article 4 of the Canadian Food Inspection Agency Act and medicines, from the Government of Canada (2024), No person shall sell an article of food that;

a) Has in or on it any poisonous or harmful substance;

b) It is not suitable for human consumption;

(c) Consists wholly or partially of any filthy, putrid, disgusting, rotten, decomposed, or diseased animal or vegetable substance;

(d) It is adulterated;

(e) Was manufactured, prepared, preserved, packaged, or stored under unsanitary conditions.

Additionally, under the Safe Food for Canadians Act, no food product that is prohibited under Article 4 may be imported. from the Canadian Food Inspection Agency Act and medications (Government of Canada, 2023).

According to the Economic and Commercial Office of Spain in Ottawa (2023, p. 41), the importation of food products into Canada is regulated by the Customs Law and follows a fairly open trade model, since most products can be imported without the need for special permits. However, some foods do require a prior license, among which dehydrated dragon fruit is not found. However, it must meet requirements such as being free of pests and diseases that may affect the Canadian population.

Under the Safe Food for Canadians Regulation (SFCR), some products must meet specific requirements regarding grades or quality standards, and in some cases, additional certificates or permits may be required to verify that the product food is safe for the health of consumers. However, in most cases, only certain requirements need to be met that have to do with the granting of licenses, preventive controls, and traceability applied to the majority of food products (Government of Canada, 2024).

According to the regulations of the Canadian Food Inspection Agency, dehydrated dragon fruit, which is among the products established as processed fruits or vegetables, such

as dried, frozen, and canned, does not have any type of restriction or requirement to enter Canada (Government of Canada, 2024).

The Safe Food for Canadians Regulations states that the Minister may, upon application, (a) register a person, or issue a license to a person, authorizing the shipment or transportation from one province to another, or the import or export, of a prescribed food product, or register a person and issue a license; and (b) register a person, or issue a license to a person, authorizing the carrying out of a prescribed activity in respect of a prescribed food product that has been imported or is to be exported or shipped or transported from one province to another, or both register a person and issue a license. With the obligation that the holder of the registration or license must comply with all the conditions to which the registration or license is subject, the registration or license cannot be transferred (Government of Canada, 2024).

In addition, the Minister may, upon application, register an establishment as one in which (a) a prescribed imported food product is to be shipped or transported, in its imported condition, for the exercise of the powers of an inspector under this Act concerning that food product; or (b) a prescribed activity may be exercised in respect of a prescribed food product that has been imported or is to be exported or is to be shipped or transported from one province to another. It should be taken into account that the applicant concerning an establishment is the owner of the registration (Government of Canada, 2024).

2.1.6.1 Import requirements for "other (dried) fruits"

According to the automated import reference system (AIRS), the import requirements for nuts of Ecuadorian origin and human consumption are;

Be accompanied by the Safe Food for Canadians (SFC) license. According to these regulations, a non-resident exporter is not allowed to apply for a license to export processed fruits to Canada, so food must be exported to Canada through a Canadian importer. authorized, or have a fixed place of business in Canada that allows you to apply for a license as an importer located in this country (Government of Canada, 2021).

Importers are responsible for ensuring that the food they import for sale in Canada meets the requirements of all applicable Canadian legislation, including the Safe Foods for

Canadians Act and its regulations and the Food and Drugs Act and its regulations (Government of Canada, 2021).

2.1.6.2 Labeling requirements for "other fruits (dried)"

The labeling requirements applicable to imported processed fruit and vegetable products are; Common name, net quantity, standard container sizes, filling standards for processed fruit and vegetable products, specifying that the product must be filled to at least 90% of the package capacity, name and principal place of business, country of origin, quality name for processed fruit or vegetable products, size designation for processed fruit or vegetable products, nutritional labeling, lot code, ministerial exemptions, and voluntary claims and declarations (Government of Canada, 2024).

2.2 Demand analysis

Below is a table detailing the destinations of dehydrated fruit exports from Ecuador in the year 2023, including weight in tons and FOB value in dollars, which provides an overview of the distribution of dehydrated fruit exports from Ecuador during the year mentioned under subheading 0813400090:

Table 4
Destination of dehydrated fruit exports from Ecuador 2023 subheading 0813400090

Destination of dehydrated fruit exports from Ecuador 2023 Subheading 0813400090		
Country	**Weight in tons**	**FOB - DOLAR**
Sierra Leona	54,60	141.600,00
United States	1,70	25.100,00
Australia	0,20	7.400,00
Japan	0,10	3.600,00
Netherlands	0,10	1.700,00
Guatemala	0,10	1.600,00
Panama	0,10	1.300,00

Hong Kong	0,10	1.300,00
Chile	0,10	500,00
TOTAL GENERAL:	57,10	184.100,00

Note. Adapted from Central Bank of Ecuador, Foreign Trade, 2024, https://sintesis.bce.fin.ec/BOE/OpenDocument/2303281959/PlatformServices/service/app/error.do

With these statistics we can see that in 2023 the exports of dried fruits were mostly destined for Sierra Leone and the United States, in Canada, there were no exports for this merchandise, in 2021 it was exported in FOB $65,900, in 2022 74,600 and 2023 184,100 dollars, which indicates strong growth, However, the Canadian market is not being exploited at the moment.

The table below provides information on the top 10 importing countries of dried fruit in 2022, including weight in tons, share of world imports, and value imported in dollars under nomenclature 081340.

Table 5

Global Importers of Dehydrated Pitahaya, Year 2022

Global Importers of Dehydrated Pitahaya, Year 2022 ***Subheading 081340***			
Country	**Tons**	**Share of global imports**	**Imported value**
United States	18.026,00	19%	$227.904
China	148.934,00	18%	$207.410
Germany	11.042,00	10,70%	$125.333
United Kingdom	7.005,00	4,40%	$52.039
Canad	3.957,00	3,80%	$44.638
Rusia	6.553,00	3,10%	$36.055
Vietnam	4.361,00	2,80%	$33.295

Netherlands	4.596,00	2,60%	$30.578
Malaysia	18.201,00	2,00%	$23.804
Italy	10.894,00	2,00%	$23.785
Others		32,00%	
Total	**233.569,00**	**100%**	

Note. Adapted from TradeMap, 2023, https://www.trademap.org/Country_SelProduct.aspx?nvpm=3%7c%7c%7c%7c%7c081340%7c%7c%7c6%7c1%7c1%7c1%7c1%7c1%7c2%7c1%7c1%7c1

Canada is in the fifth place of countries that import the most dried fruits under subheading 0813.40, indicating that it is a country that demands a lot of these products, with a percentage that increases by 2.74% annually between 2021 and 2022 with a negative trade balance of $83.8 million since it produces much less than it imports ($11.7 million exported, $95.5 million imported) OEC WORLD (2024)

Similarly, the following table presents data on the top ten exporting countries of dried fruits during the year 2022, detailing the weight in tons, the share in world imports and the value exported in dollars, all under the nomenclature 081340.

Table 6

World Exporters of Dried Fruits Year 2022

World Exporters of Dried Fruits Year 2022			
Subheading 081340			
Country	**Tons**	**Share of global imports**	**Exported value**
Thailand	192.089,00	21,10%	$272,963
China	35.989,00	18,20%	$235,651
Germany	4.006,00	6,90%	$89.603
Spain	54.908,00	6,30%	$81.461
United States	8.482,00	5,70%	$73.738

Pakistan	4.371,00	3,10%	$39.930
Turkey	3.603,00	2,90%	$38.063
South Africa	6.244,00	2,70%	$35.372
Netherlands	15.216,00	2,70%	$35.234
Serbia	994,00	2,70%	$34.687
Poland	2.520,00	2,50%	$32.737
OTHERS		25,20%	
Total	**328.422,00**	**100,00%**	

Note. Adapted from Trade Map, 2023, https://www.trademap.org/Country_SelProduct.aspx?nvpm=3%7c%7c%7c%7c%7c081340%7c%7c%7c6%7c1%7c1%7c2%7c1%7c1%7c2%7c1%7c%7c1

In terms of exports, Ecuador is not among the countries that export the most, on the other hand, it is in 57th place, indicating that it is not a country that exploits this market, which would put us in a position of pioneers in exporting this product.

Below, there is a table summarizing Ecuador's exports of dried fruits to Canada between 2013 and 2023. The table includes information on the weight in kilograms exported, the FOB value, the total percentage of the weight over the ten years, the total percentage of the FOB value, and the unit sales value:

Table 7

Exports of dried fruits from Ecuador to Canada in the last years:

Exports of dried fruits from Ecuador to Canada in the last years:, source: Banco Central del Ecuador / Subheading 0813400090					
Year	*Weight - Kilograms*	*FOB - $*	*% OF TOTAL WEIGHT*	*% OF TOTAL FOB - $*	*UNI VALUE*
2017	*300,00*	*10.200,00*	*16,67%*	*26,56%*	*34,00*
2018	*100,00*	*2.600,00*	*5,56%*	*6,77%*	*26,00*

2019	-	-	*0,00%*	*0,00%*	-
2020	*1.300,00*	*25.200,00*	*72,22%*	*65,63%*	*19,38*
2021	*100,00*	*400,00*	*5,56%*	*1,04%*	*4,00*
2022	-	-	*0,00%*	*0,00%*	-
2023	-	-	*0,00%*	*0,00%*	-
TOTAL	***1.800,00***	***38.400,00***			***20,85***

Note. Adapted from Banco Central del Ecuador, Comercio Exterior, 2024, https://sintesis.bce.fin.ec/BOE/OpenDocument/2303281959/PlatformServices/service/app/error.do

While Canada is not listed as a regular destination for Ecuador's dried fruit exports, it presents interesting potential for this sector. In 2020, a peak in exports was observed, reaching a volume of 1,300 Kg with a FOB value of $25,200. In terms of prices, an average of $20.85 per kilogram is recorded between 2013 and 2023.

2.3 Analysis of the Ecuadorian supply of dehydrated dragon fruit

For the analysis of supply, we will consider competition in a market that is open to international trade, allowing exports to Canada under specific requirements, conditions, and licenses. In a country where market share is determined by quality, service, and price, dried fruit exports to Canada will be examined. According to the demand analysis, the nut market from Ecuador to Canada is underdeveloped, which represents an opportunity to be a pioneers in the export of dried dragon fruit from Ecuador to the Canadian market.

In 2020, dried fruit exports to Canada accounted for only 2.62% of the total exports, with a value of $25,200. For 2021, the amount exported to Canada was only $380.25, equivalent to 0.04% of the total of $90,473.47 exported. In 2022, no exports to Canada were recorded. In 2023, out of a total export of $576,419,931, no company exported dried fruits to Canada. Pioneering companies in the production of dehydrated dragon fruit in Ecuador include HappyFruit, Alibu, Organpit, Diesfrut, Puravidagranel and Pitacava. However,

according to the data collected, none of these companies export their products to Canada. (Datos Ecuador, 2024).

2.4 Price analysis

Given the growth in demand for dragon fruit, both in its natural and dehydrated form, in the Canadian market, as we can see in the tables published in point 2.1 Demand analysis, it is reasonable to anticipate an increase in prices. This expectation is based on the significant differences between retail prices in Ecuador and Canada. For example, on the Amazon platform, a 70-gram bag of dehydrated red dragon fruit is offered at $20 in Canada, and on page Etsy.com (Etsy, 2024) we find dehydrated dragon fruit in the presentation of 40 grams at $24.09, 80 grams at $32.41 and 200 grams at $67.05, this without counting shipping costs. Compared to the price in the Ecuadorian market, the company Happy Fruit sells bags of 40 grams at $2.50. On the other hand, the company Alibú, located in Palora, offers presentations of 100 grams at $5.14, 250 grams at $12.84, and 500 grams at $25.68. This suggests a potential adjustment in prices to meet growing demand in Canada.

As for the prices at which Canada imports per kilo of fresh dragon fruit from Ecuador in 2021 it was $4.71, for 2022 it was at $5.22 per kilo and in 2023 it amounted to $5.93 indicating a positive growth rate in the last 3 years.

According to Trade Map, 2023, In 2022, Canada imported under subheading 081090 with the highest price per kilogram of the following countries:

Table 8

Price per kilo according to origin

Country	Price per unit/Kg
Australia	14,12
Argentina	9,88
South Africa	9,25
Trinidad and Tobago	7,60
France	7,00

Nicaragua	7,00
Thailand	6,67
Philippines	6,50
Belgium	6,00
Portugal	6,00
Sri Lanka	5.77
China	5.72
Ecuador	5.22

Note. Adapted from TradeMap, 2023,

https://www.trademap.org/Country_SelProductCountry.aspx?nvpm=3%7c124%7c%7c%7c%7c081340%7c%7c%7c6%7c1%7c1%7c1%7c1%7c1%7c2%7c1%7c1%7c1

Ecuador boasts a unique advantage for supplying dehydrated dragon fruit to the Canadian market. First, Ecuadorian dragon fruit commands some of the highest prices per kilogram globally, reflecting its perceived quality and value. Furthermore, despite this premium pricing, Ecuador remains a leading supplier of dragon fruit to Canada, surpassing even higher-priced competitors. This combination of quality and volume positions Ecuador as a highly attractive and reliable option to satisfy Canada's growing demand for dehydrated dragon fruit.

2.5 Marketing channels in Canada for the distribution of dried dragon fruit

The distribution of functional foods in Canada is done through different channels:

Traditional distribution: In this channel, some importers play the role of intermediaries between international suppliers and local distributors, some wholesalers are the ones who receive the products from the importers and distribute them to supermarkets, specialized stores, or in turn directly to the final consumers. Finally, the supermarkets, Loblaw chain (Real Canadian Superstore, No Frills, Loblaws, Maxi, Dominion, T&T, Atlantic Superstore, Zehr's, Fortino's, Provigo, ValuMart, Extra Foods, Freshmart, SaveEasy, SuperValu, Wholesale Club, Your Independent Grocer), SOBEYS (Sobey's, IGA, FreshCo, Thrifty Foods, Foodland, Safeway) and Metro Richelieu (Metro, Food

Basics, Super C) are the main players as well as Costco and Walmart are also important distributors.

Direct distribution: Some direct importers transform imported products and sell them in their stores or through deliveries to supermarkets and specialized stores.

Specialty stores: WholeFoods, Goodness Me, and Healthy Planet and Rachelle Béry and Avril are examples of small or medium-sized stores with a focus on healthy functional foods.

Functional food distribution in Canada is done through a diverse network of channels, including importers, wholesalers, supermarkets, specialty stores, and direct importers. The Loblaw, SOBEYS and Metro Richelieu chains are the main players in the supermarket segment, while WholeFoods, Goodness Me, Healthy Planet, Rachelle Béry and Avril stand out in the specialty store segment. (ProChile, 2022)

Citing ProChile (2022), Canadian consumers mainly purchase these products in specialized stores since demanding consumers look for value-added products, both local and imported, in gourmet, small or national chain stores such as The Green Corner, City Market, and Fresko. These products usually have a higher cost due to the scarcity and benefits provided by superfoods; for that same reason, the specialized distribution channel is the best option to sell our dehydrated dragon fruit since people are going to look for those specific products.

2.6 Conclusion PESTEL analysis

The Canadian market presents an interesting opportunity for the export of dehydrated dragon fruit as a snack, due to its high purchasing power, commercial openness, the trend towards healthy eating, and the growth of the snack market. However, problems must be considered, such as the fact that a non-resident exporter cannot obtain a license to enter processed fruits into Canada, so an authorized Canadian importer will have to be used.

Additionally, it is essential to comply with the labeling and health rules that govern the Canadian market. This includes providing clear and accurate information about the product, such as name, ingredient list, country of origin, and storage instructions. It is also necessary to obtain the necessary certifications to demonstrate that the product meets all health requirements.

Ultimately, dried dragon fruit has the potential to become a successful product in the Canadian market, as long as it is approached strategically and the challenges presented by this market are considered.

2.7 Conclusions from the market environment

After analyzing the market, it is highlighted that Ecuador is one of the main exporters of fresh dragon fruit, and Canada is among the top five destination countries. However, the market for dried dragon fruit for export has not yet been exploited. In places like Canada, snacks of this type, considered superfoods, are in high demand. Canada is the seventh country that imported the most nuts in 2022 and the fifth under subheading 0813.40.

These data represent an excellent opportunity to become pioneers in the export of dehydrated dragon fruit from Ecuador, given that the supply in the country for its export is still limited. Canadian consumers value the quality of fresh Ecuadorian dragon fruit, which could make our dehydrated product highly sought-after if we offer competitive prices.

According to the data collected, it is expected to enter the market with 305.45 kg of Ecuadorian product in the first year, the sales of the project in year 1 would be 61.09 kg with an approximate annual increase of 7.8%.

CHAPTER 3

3. Technical feasibility of operation in internationalization

Introduction

This chapter will present two sales projections. The first scenario will start with an export volume of 1,000 kilos of dehydrated dragon fruit to Canada. This will provide specific figures on initial exports and projected earnings over the next five years.
Since current exports under the 0813400090 nomenclature are limited, scenario II will explore a more ambitious approach. We will aim to increase sales to 3,000 kilos of dehydrated dragon fruit exported to Canada, capturing only 0.07% of the Canadian nut import market. This target is achievable considering that Canada imported 3,957 tons of nuts in 2022. By increasing both market share and export quantity, scenario II allows for a more realistic estimation of potential profits.

Subsequently, a cost analysis will be carried out that includes the procurement of the final product (dehydrated dragon fruit), packaging in 40-gram bags, labor, and logistical expenses associated with exporting. This analysis will allow us to assess the financial viability of our internationalization strategy.

3.1 Sales projection development

According to OEC World (2024), Canada is now the seventh-largest importer of dried fruits globally, showing a significant increase compared to November 2023. In January 2024 alone, Canada exported 371 thousand dollars and imported 10.6 million dollars, with a growth in imports of 7% according to OEC World (2023).

Based on this data, a sales projection was made with a 7% growth in exports to Canada, using the approximate initial price of the RRP of dehydrated dragon fruit in Ecuador.

The added value of dehydrated dragon fruit should be considered as it is appraised a super fruit. For scenario II, an initial export in year 1 of 3,000 kilograms is assumed, maintaining the same compound annual growth percentage and the reference prices of the national retail price of dehydrated dragon fruit.

3.1.1 Sales forecast analysis of export plan scenario I

After making the sales forecast during the 5 years, we have as a result that the projected sales as a company in kilograms during the 5 years would be approximately 5,750 Kg which is equivalent to a total of 143. 750 packages of 40 grams to Canada. Given that the supply of dehydrated pitahaya for export to Canada is very scarce and in recent years has been null, the initial unit price will be $2.00 per 40 grams, the increase in price and costs for the following years is due according to (INEC, 2024), to the average inflation of 2.27% taking as reference the years 2021-2023. The total sales revenue of our project was obtained by multiplying the number of sales of the project by the unit price, which gives us as a result the amount of $301,762.62.

Table 9

Export Plan Sales Forecast Analysis Scenario I

FORECAST OF EXPORT PLAN SALES IN THE NEXT 5 YEARS Scenario I					
	YEAR 1	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**
TOTAL SALES QUANTITY KG	1.000	1.070	1.145	1.225	1.310
NUMBER OF 40 G PACKS	25.000	26.750	28.625	30.625	32.750
UNIT PRICE (US$)	$2,00	$2,05	$2,09	$2,14	$2,19
TOTAL REVENUE (US$)	$50.000,00	$54.714,45	$59.878,65	$65.516,53	$71.652,99

Elaborated by the authors

3.1.2 Export Plan Sales Forecast Analysis Scenario II

Scenario II adopts a more realistic and profitable approach by assuming initial exports of 3,000 kilos in year one. This target aligns well with Canada's nut import volume of 3,957 tons in 2022 (Trade Map data). By capturing just 0.07% of this market, we achieve a realistic market share.

Over five years, the project would export a total of 17,252 kilograms, equivalent to 431,300 packages of 40 grams. Year one sales would reach 75,000 packages, generating an estimated revenue of $150,000.

To remain competitive with potential future exporters, we've established a sales price of $2 per 40-gram package. This is slightly lower than the average national RRP of $2.50. By increasing sales volume, the total projected revenue for scenario II reaches $905,880.75, presenting a significantly more optimistic outlook compared to scenario I.

Table 10

Export Plan Sales Forecast Analysis Scenario II

FORECAST OF EXPORT PLAN SALES IN THE NEXT 5 YEARS Scenario II					
	YEAR 1	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**
TOTAL SALES QUANTITY KG	3.000	3.210	3.435	3.675	3.932
NUMBER OF 40 G PACKS	75.000	80.250	85.875	91.875	98.300
UNIT PRICE (US$)	$2,00	$2,05	$2,09	$2,14	$2,19
TOTAL REVENUE (US$)	$150.000,00	$164.512,50	$179.478,75	$196.612,50	$215.277,00

Elaborated by the authors

3.1.3 Details of the company's establishment

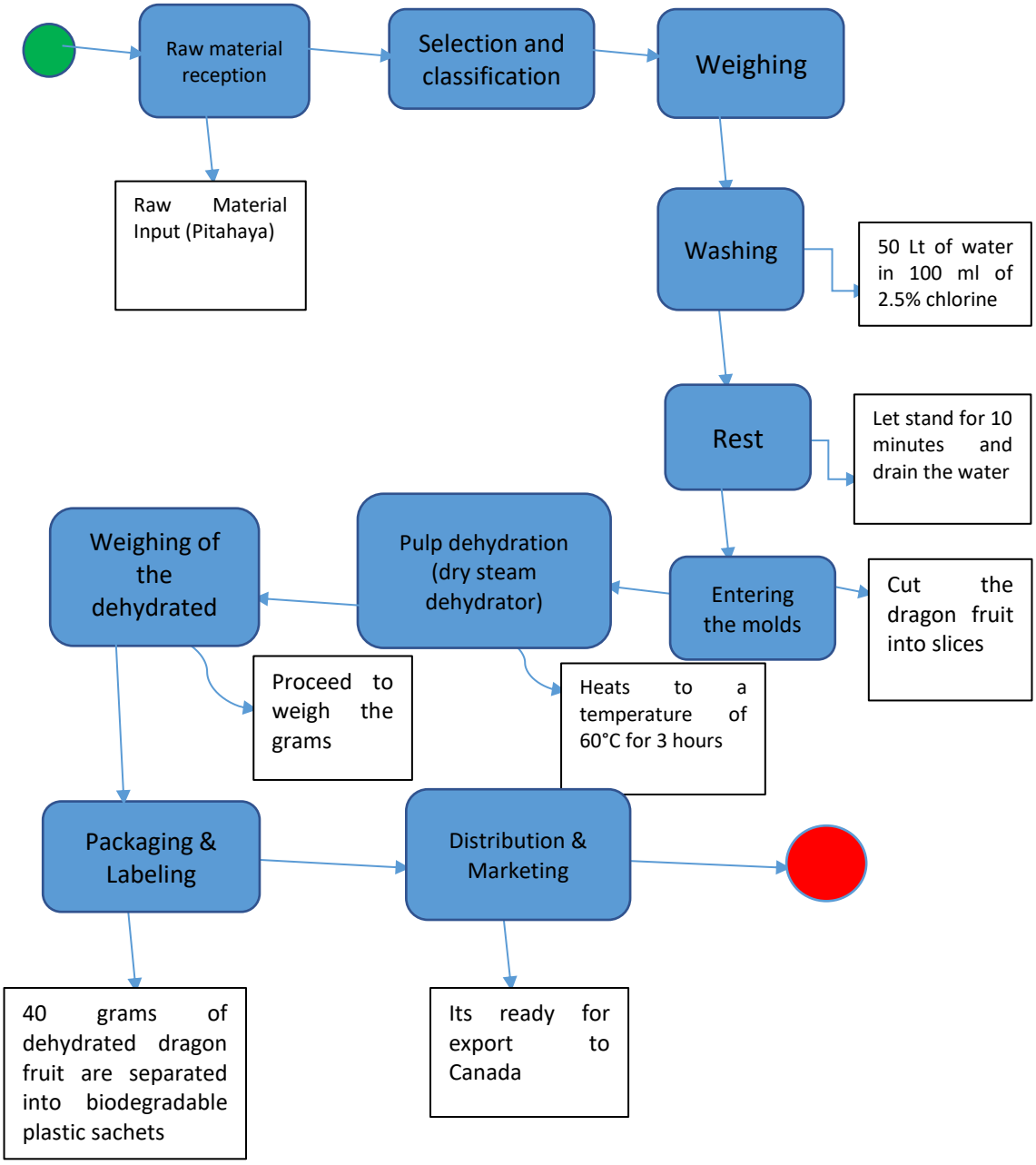
To carry out the internationalization of dehydrated pitahaya from Ecuador to Canada, our plan is divided into several key stages. First, we will proceed with the incorporation of the company, which will ensure that all legal and administrative aspects are in order to operate both in Ecuador and in the international market. Once established, we will work to ensure solid relationships with reliable suppliers of dehydrated pitahaya.

Subsequently, we will acquire a bank loan that will allow us to make the necessary investments in both infrastructure and labor. We will then be in a position to receive the

machines and equipment required for the packaging and distribution of dehydrated pitahaya, as well as to set up our facilities properly.

We will agree with the importing partner on the frequency of shipment of the products in which a period of 3 months is established in the scenario to guarantee an efficient inventory management and to keep us active in the market, and once a year in the first scenario.

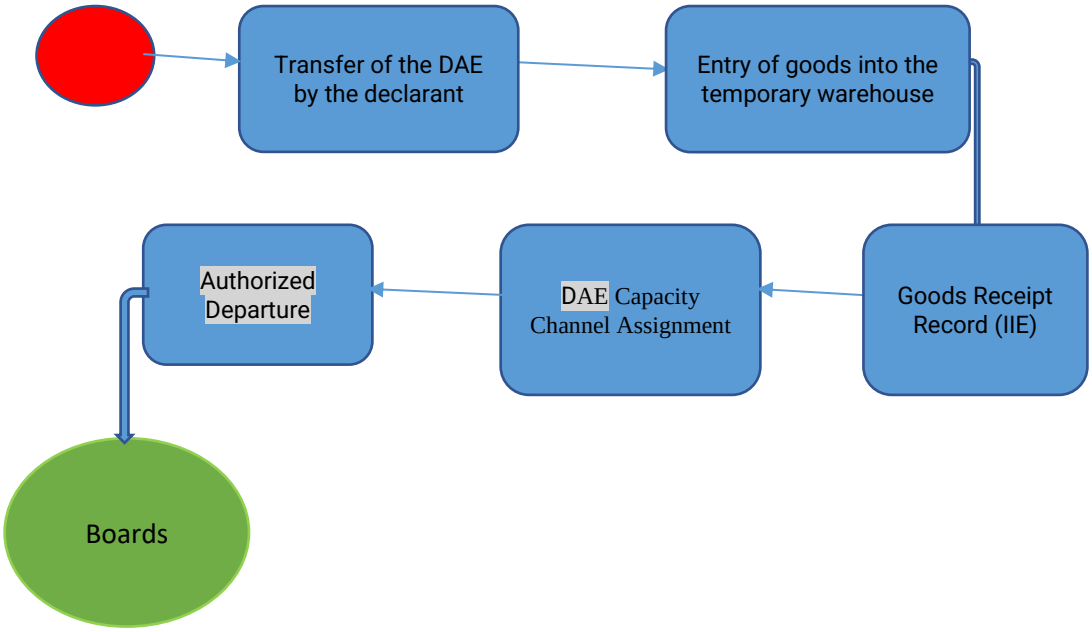
3.2 Manufacturing Flow Table



3.2.1 Operation Flow Table Analysis

The steps to follow for the operation of our product consist of receiving the product from our suppliers, carrying out a general review which covers the condition of the product, its presentation and weight are adequate, otherwise the product is returned and a new one is requested. If the product meets all the specifications, we proceed to make the payment and receive the corresponding invoices to move the merchandise to our warehouse and carry out the necessary results. Once they are weighed, we measure quantities of 40 grams to pour them into the packages that will reach the final consumer. These packages are transferred to the sealing area (with an estimated time of 30 seconds per package from taking the nut to its sealing) and a final inspection is carried out before placing them in the boxes that will go on the pallets. The pallets are packed and moved to the port of departure where the export process mentioned in the following flow table will begin.

3.3 Export flow table



3.3.1 Export flow table analysis

The activities that must be carried out to follow a due process of export in FOB from Ecuador begin with the transmission of the DAE that goes on behalf of the declarant through the Ecuapass system after the entry of goods into the temporary warehouse also called a primary zone, the next step to follow is the (IIE) that goes on account of the temporary

warehouse. We follow the DAE capacity process that is carried out through the Ecuapass system which can be: Physical, Documentary and Automatic Capacity. The penultimate step to follow is the authorized departure, in which the merchandise has the authorization for shipment and finally the shipment and transmission of transport documents. All these processes count as Inland costs and Terminal Handling Charges (THC) which cover cargo handling, crane, and documents necessary for shipment and clearance. (Cámara Oficial Española de Comercio del Ecuador, 2024)

3.4 Steps Required for a Successful Export

According to Servicio Nacional de Aduana del Ecuador (2024), an export consists of the shipment of merchandise for commercial purposes outside our national territory to another international territory, the steps prior to export according to SENAE are:

Figure 5

Steps required for an exportation

(Servicio Nacional de Aduana del Ecuador, 2024)

All the necessary requirements must be taken into account, in this case the general requirements are:

1. Have a Single Taxpayer Registry (RUC).
2. Acquire digital certificate for electronic signature and token.
3. Have the ECUAPASS system.

4. Register as an OCE (Foreign Trade Operator).
5. Obtaining the DJO (Affidavit of Origin). Electronic transmission of the DAE (Export Customs Declaration).
6. Obtaining the definitive AED.

In addition, we need specific requirements given the nature of our product to be exported, such as the phytosanitary certificate granted by Agrocalidad and the product must be inspected by the Agricultural and Livestock Service and organic certifications such as Global Gap. (Tiba, 2023)

3.5 Tagging in Canada

According to the Government of Canada, (2024) the entity in charge of governing labeling rules in Canada is the Canadian Food Inspection Agency (CFIA) which is described in the Food and Drug Regulation (FDR) which ensures that consumers have accurate and clear information about the product and do not fall victim to deceptive products. For manufactured foods, such as snacks, the necessary information includes:

- Common name.
- Storage and date marking instructions.
- Name of the distributor and place of business.
- The list of ingredients and allergens.
- Net amount.
- Nutrition Facts Table.

Figure 6
Nutrition facts table

Nutrition Facts
Valeur nutritive
Per (50 g)
pour (50 g)

Calories 170	% Daily Value* / % valeur quotidienne*
Fat / Lipides 0.2 g	1 %
Saturated / saturés 0 g + Trans / trans 0 g	0 %
Carbohydrate / Glucides 31 g	
Fibre / Fibres 3 g	11 %
Sugars / Sucres 15 g	15 %
Protein / Protéines 1 g	
Cholesterol / Cholestérol 0 mg	
Sodium 10 mg	1 %
Potassium 250 mg	5 %
Calcium 10 mg	1 %
Iron / Fer 0.75 mg	4 %

*5% or less is a **little**, 15% or more is a lot
*5% ou moins c'est **peu**, 15% ou plus c'est **beaucoup**

(David Roberts, 2024)

3.6 Investment, cost and financing analysis of the two scenarios

Cost assessment is the cornerstone of any project's success. By meticulously detailing all anticipated expenses during the product's internationalization stage, this process provides a clear picture of the financial resources required. This crucial information empowers informed decisions regarding the project's viability and potential for success in the international market.

3.6.1 Scenario 1. Investment budget

The initial investment budget includes a vacuum packing machine for plastic bags with a sealing speed of 200 meters per minute, a 20 kg digital scale that can calculate the weight/price of the material weighed at a speed of 2 packages per minute since it is done manually, a plastic box for food storage with a capacity of 18 liters, a metal shelf for storing the boxes, a portable HP computer that will allow the necessary paperwork, contact with partners, and product inventory, a stainless steel work table, a comfortable work chair for the packaging employee, a work desk, and a chair for the manager.

There will be a heavy investment in a 50-square-meter production plant, with sufficient space for the projected operation of 25,000 packages of dehydrated pitahaya. 84 dehydrated pitahaya packages of 40 grams per year, also within the investment is taken into account the necessary certificate to carry out the internationalization of the product, such as the certificate of digital signature and token for all customs procedures. Additionally, the investment includes the production costs of the first year, within this are the operating, administrative and export costs, totaling a total of $ 41,953.04 dollars in initial investment.

Table 11

Project investment

Investment		
Total	**Data**	**Cost**
1	Sleeve sealer	$850,00
1	Digital scale	$100,00
1	Work table	$100,00
1	Work chair	$33,00

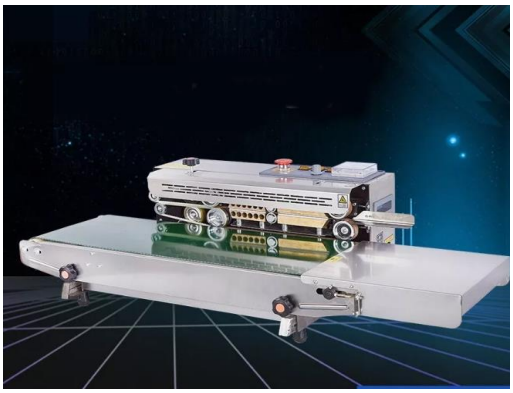
	Production plant	$40.000,00
1	Computer	$489,00
1	Digital signature certificate and TOKEN	$49,00
1	Desk	$160,00
1	Desk chair	$32,62
1	Plastic food box 18 L	$40,42
1	Metal shelf	$99,00
	Total	**$41.953,04**

Prepared by the authors

The initial investment will include a Zx continuous case sealing machine, with a sealing speed of 200 m/min, and a power of 1000 W, with only one worker in charge of sealing the cases. It is estimated that this will take a time of 2 cases per minute, with a capacity of 120 cases sealed in one hour, so that the estimated production times of 84 packages of dehydrated pitahaya per day necessary to reach 25,000 cases in the first year of operation can be met.

Figure 7

Bag sealing machine



(Mercado Libre, 2024)

In addition, a digital scale of 20 kg weight/price/total with warranty, with a maximum supported weight of 20 kg, with a rechargeable battery of 200 hours and a display of weight, price, total. With this scale, we have an estimated time of 80 grams per minute representing our bottleneck. However, it is sufficient for the number of packages to produce in this scenario. To this, we add a table and a chair for the employee who will be in charge of sealing the sleeves.

Figure 8
Scale

(Mercado Libre, 2024)

A laptop computer will be purchased to carry out the necessary procedures, make contact with partners and keep the product inventory.

Figure 9
Computer

(Artefacta, 2024)

The certificates required are the digital signature certificate and TOKEN. This can be acquired through the Central Bank or Security Data, at a cost of a fee of $30.24, and $20.16 for the token device (Registro Civil, 2024).

3.6.2 Operating cost budgets scenario 1

Within the operating costs, we have the dehydrated pitahaya. This will be purchased from the company Alibú, at a cost of $ 20 per kilo, also will need biodegradable plastic packages, in which the product is packaged, which will already have the design and label needed to export to Canada. This will be purchased at a cost of $ 0.11 per package, This will be acquired at a cost of $0.11 per package, quoted by the company Florempaque,. To this is added the cost of boxes to put the final product and take it to export, which will measure 45x33x26.5 cm, with a cost of $ 4.75 per unit, each can store 26 packages of 40 grams and can be purchased in Juan Marcet. Finally, a pallet per shipment will be needed with a capacity of up to 250 kg and a cost of $5 per unit.

In addition, it will be necessary to have a worker who will be in charge of receiving the product, inventory, packaging and other necessary procedures in the project. The salary of this worker will be that of an average basic salary. The costs of electricity, water and internet necessary to carry out the project are added.

Table 12

Operating cost budget

Operating cost budget					
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Dehydrated pitahaya	$20.000,00	$21.885,78	$23.417,78	$25.056,15	$26.794,74
Plastic cover (x Unit)	$2.750,00	$2.942,50	$3.220,23	$3.445,22	$3.684,28
Pallet	$20,00	$25,57	$26,15	$26,74	$27,35
Packaging boxes	$4.567,30	$4.997,95	$5.348,28	$5.721,96	$6.118,99
Salary	$2.644,28	$2.939,43	$3.006,16	$3.074,40	$3.144,19
Electricity	$120,00	$122,72	$125,50	$128,36	$131,27

Water	$120,00	$122,72	$125,50	$128,36	$131,27
Internet	$240,00	$245,44	$251,02	$256,72	$262,55
Total costs	**$30.461,58**	**$33.282,11**	**$35.520,62**	**$37.837,91**	**$40.294,64**

Prepared by the authors

3.6.3 Budget of administrative costs scenario 1

Among the administration costs is the cost of an external accountant who will help with the accounting of the company. This will cost $100 per year, in addition to the annual salary of an administrator, who will earn a basic average salary, and will help with the organization of the project, sales and contact with partners. And finally, the annual operating permit of the fire department, which costs $15 per year, and will have to be renewed every year.

Table 13

Administration costs budget

Budget administration costs					
Concept	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
External counter	$100,00	$102,27	$104,59	$107,00	$109,39
Administrator	$2.644,28	$2.939,43	$3.006,15	$3.074,40	$3.144,19
Fire Department Operating Permit	$15,00	$15,34	$15,69	$16,04	$16,40
Total	**$2.759,28**	**$3.057,04**	**$3.126,43**	**$3.197,44**	**$3.269,98**

Prepared by the authors

3.6.4 Export cost budget scenario 1

The sales budget includes the transportation of the final product to the port of Guayaquil, by Star Logistics, at a cost of $160 per shipment, in addition to the cost of the customs agent, who charges $200 per shipment, handling per container, which costs $138 per shipment, and the certificate of origin, which costs $10 per shipment, according to the Ministry of Production, Foreign Trade, Investment and Fishing, and a sanitary certificate for food exports per shipment, at a cost of $58.34. In the case of the sanitary certificate, the

requirements to obtain it according to the National Agency of Regulation, Control and Sanitary Surveillance (2024):

The trade name or trademark of the product; Forms of presentation or commercial presentation; Material of the primary and secondary packaging; Net contents; Corporate name of the manufacturer and of the holder of the product, in case it is not the same holder of the product; City and address of the applicant/exporter; E-mail and address of the holder of the product/exporter; Address of the manufacturing processing plant; Unique Taxpayer Registration Number (RUC) of the product holder and of the manufacturer, if different from the product holder; Operating permit number; Exporter's invoice number; Port of exit; Name or company name of consignee; Address of consignee; Name of the country to export the processed food; Number(s) of the country to which the processed food is to be exported; Name of the country to which the processed food is to be exported; Name of the country to which the processed food is to be exported; Name of the country to which the processed food is to be exported; Name of the country to which the processed food is to be exported

Table 14

Budget export costs

Export costs					
Concept	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Transportation inland	$160,00	$163,63	$167,35	$171,15	$175,03
Food export sanitary certificate	$58,34	$59,66	$61,02	$62,40	$63,82
Certificate of origin	$10,00	$10,23	$10,46	$10,70	$10,94
Customs broker	$200,00	$204,54	$209,18	$213,93	$218,79
Handling x container	$138,00	$141,13	$144,34	$147,61	$150,96
Total	**$566,34**	**$579,20**	**$592,34**	**$605,79**	**$619,54**

Prepared by the authors

3.6.5 Financial costs of scenario 1

For the financial costs of scenario 1, of the $41,953.04 dollars required for the initial investment of the project, it is intended to request a loan in the JEP cooperative, but in this

case for $33,562.43 dollars, which means 80% of this initial investment, since it is considered that the remaining 20% ($8,390.61) will come from the contribution of the members. This loan has an annual interest rate of 15.9%, resulting from the sum of all direct and indirect costs and expenses related to the initial investment of the project. $8,390.61 will come from the members' contribution.

The loan has an annual interest rate of 15.9%. This rate reflects the sum of all direct and indirect costs associated with the loan, which total 16.91%. The maximum ECB reference rate for the loan is 28.23%.

In terms of repayment, the annual payment is $10,467.87, with a total interest amount of $17,659.04. This brings the total loan payment to $52,339.27.

Table 15
Financial costs

Financial costs					
quota number	**Capital Credit**	**Interest**	**Credit Loss Insurance**	**Quota**	**Balance**
1	$4.793,64	$5.336,43	$337,80	$10.467,87	$33.562,43
2	$5.604,07	$4.574,24	$289,56	$10.467,87	$28.768,79
3	$6.551,52	$3.683,19	$233,16	$10.467,87	$23.164,72
4	$7.659,21	$2.641,50	$167,16	$10.467,87	$16.613,20
5	$8.953,99	$1.423,68	$90,12	$10.467,79	$8.953,99
Total		**17.659,04**		**52.339,27**	

Note: Adapted from JEP Credit Union, Credit Simulator, 2024., https://www.jep.coop/productos-servicios/creditos/simulador-de-credito

3.6.6 Scenario 2. Investment Budget

The initial investment budget includes a packing, dosing and sealing machine, a portable HP computer that will allow you to carry out the necessary procedures, contact partners and keep an inventory of the product, two stainless steel work tables, two comfortable work chairs, two metal shelves, a desk for the administrator, a comfortable chair, three plastic food boxes with a capacity of 18 liters, a production plant with a total

area of 334 square meters located in the center of Guayaquil to make products with growth prospects. In addition to the investment, the necessary certificates and permits are taken into account to be able to carry out the internationalization of the product, within these is included the digital signature certificate and token that is necessary to carry out customs procedures. In addition, the costs for any unforeseen event that may arise are considered. Finally the cost of the initial investment will have a value of $104,615.88.

Table 16

Project investment

Investment			
Quantity	**Data**	**Unit price**	**Cost**
1	Packing, Dosing & Sealing Machine	$1.800,00	$1.800,00
2	Artboard	$100,00	$200,00
2	Task Chair	$33,00	$66,00
1	Desk	$160,00	$160,00
1	Desk chair	$32,62	$32,62
3	Plastic Food Box 18 L	$40,42	$121,26
1	Digital Signature Certificate & TOKEN	$49,00	$49,00
1	Computer	$489,00	$489,00
2	Metal shelves	$99,00	$198,00
	Incidentals	-	$1.500,00
1	Production Plant	-	$100.000,00
Total			**$104.615,88**

Made by authors.

Unlike what is considered in scenario 1, there is a 3-in-1 machine, baler, dosing, and sealer model N-200, measuring 42 cm long, 50 cm wide, and 145 cm high, with a capacity of 20 packages per minute and weighing capacity from 5 grams to 100 grams at a value of $1,800.00. Taking into account that, for example, in the first year of the project, 313

packages per day need to be packed, it is understood that this machine has enough capacity to carry out the project, so its performance could even serve us to carry out local production and national scale.

Figure 10
Packing, Dosing & Sealing Machine

(La Cobacha, 2024)

A work desk intended for the administrator with the following measurements, length: 133 cm, height 76 cm, work base 50cm x 110 cm, with a value of $160, with a comfortable desk chair of 7.63 kg with a value of $32.62.

Figure 11
Desk

(Mercado Libre, 2024)

Polyethylene storage boxes with a capacity of 18 liters to store material such as sleeves before packaging with a value of $40.42 each.

Figure 12
Storage boxes

(Irvix S.A, 2024)

Industrial metal shelves that will be used to store the closed boxes with the packages inside before their transfer to the port, with the following dimensions: Height x width x length; 2m x 50cm x 1m, at a value of $99 per unit.

Figure 13
Metal shelves

(Mercado Libre, 2023)

3.6.7 Scenario II Operating Cost Budgeting

Scenario II outlines operating costs associated with packaging and shipping the dehydrated dragon fruit. Our supplier, Alibu, provides the fruit at $20 per kilogram.

Biodegradable packaging (40g) from Florempaque costs $0.11 per unit. Wooden pallets ($5 each, 3 per shipment) and cardboard boxes ($4.75 each, holding 26 packages) facilitate transportation. A single employee will manage receiving, weighing, packaging, sealing, organizing, and dispatching the product, earning a base salary and working 8 hours daily. This employee can handle the projected daily volume of 313 packages for year 1.

Table 17
Operating costs budgets

Operating costs budgets						
	Quarterly	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Dehydrated dragon fruit	$15.000,00	$60.000,00	$65.657,34	$70.259,49	$75.168,45	$80.425,13
Plastic sleeve	$2.062,50	$8.250,00	$9.027,88	$9.660,68	$10.335,66	$11.058,46
Pallet	$15,00	$60,00	$65,00	$70,00	$75,00	$80,00
Packaging boxes	$3.425,48	$13.701,92	$15.056,90	$16.045,40	$17.167,55	$18.366,31
Utensils	$50,00	$200,00	$204,54	$209,18	$213,93	$218,79
Salary	$661,07	$2.644,28	$2.939,43	$3.006,16	$3.074,40	$3.144,19
Light	$45,00	$180,00	$184,09	$188,26	$192,54	$196,91
Water	$60,00	$240,00	$245,45	$251,02	$256,72	$262,54
Internet	$90,00	$360,00	$368,17	$376,53	$385,08	$393,82
Total operating costs	**$21.409,05**	**$87.580,14**	**$95.876,90**	**$102.338,23**	**$109.295,27**	**$116.737,26**

Made by authors

3.6.8 Budgeting for Administration Costs Scenario II

Among the administration costs is the payment of an external accountant who will help with the accounting of the company, which will cost $200 per year, the salary of the administrator who will be in charge of keeping the company on a correct course and the due operating permit granted by the firefighters, Taking into account the country's inflation, these values will increase 2.27% annually.

Table 18
Budget administration costs

Budget administration costs						
Concept	**Quarterly**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
External counter	$50,00	$200,00	$204,54	$209,18	$213,93	$218,79
Administrator salary	$1.427,51	$5.250,22	$5.839,66	$5.972,21	$6.107,79	$6.246,43
Fire brigade operating permit	$3,75	$15,00	$15,34	$15,69	$16,04	$16,41
Total	**$1.481,26**	**$5.465,22**	**$6.059,54**	**$6.197,08**	**$6.337,76**	**$6.481,63**

Made by authors

3.6.9 Budgeting for Export Costs Scenario II

In the export budget, ~~the~~ transportation of the final product to the port of Guayaquil is accounted for, by the company Star Logistics, for $120.00 per shipment, in addition to the cost of the customs agent, who charges $200 per procedure and the certificate of origin that per shipment must be paid $10 according to the Ministry of Production, Foreign Trade, Investment and Fisheries, and finally container handling by the company Farletza for 138.00 dollars.

Table 19
Budgeting for Export Costs Scenario II

Budgeting for Export Costs Scenario II						
Concept	**Quarterly**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Inland transport	$120,00	$480,00	$490,90	$502,04	$513,44	$525,09
Food export health certificate	$58,34	$233,36	$238,66	$244,07	$249,62	$255,28
Certificate of origin	$10,00	$40,00	$40,90	$41,84	$42,79	$43,76
Customs broker	$200,00	$800,00	$818,16	$836,73	$855,73	$875,15
Container handling	$138,00	$552,00	$564,53	$577,35	$590,45	$603,85

Total	**$388,34**	**$2.105,36**	**$2.153,15**	**$2.202,03**	**$2.252,03**	**$2.303,13**

Made by authors

3.6.10 Financial Costs

For the financial costs of scenario 2, of the $104,615.88 that are required for the initial investment of the project, it is intended to request a loan, but in this case for 83,692.70 dollars, which means 80% of this initial investment, since it is considered that the remaining 20% ($20,923.18) will come from the contribution of the members, this loan made in the JEP cooperative. It has an annual interest rate of 15.9%, a rate resulting from the sum of all direct and indirect costs and expenses related to the loan to be received of 16.91%, and a maximum reference rate of the ECB of 28.23%, with an annual payment of $26,103.12 and a total interest sum of $44,035.38, resulting in a total loan payment of $130,515.68.

Table 20

Financial costs

Financial costs					
Installment	**Payment**	**Tax**	**Insurance**	**Fee**	**Balance**
1	$11.953,58	$13.307,14	$842,40	$26.103,12	$83.692,70
2	$13.974,56	$11.406,52	$722,04	$26.103,12	$71.739,12
3	$16.337,15	$9.184,57	$581,40	$26.103,12	$57.764,56
4	$19.099,16	$6.586,96	$417,00	$26.103,12	$41.427,41
5	$22.328,25	$3.550,19	$224,76	$26.103,20	22,328.25
Total		**$44.035,38**		**$130.515,68**	

Note. Adapted from Cooperativa JEP, Credit simulator, 2024, https://www.jep.coop/productos-servicios/creditos/simulador-de-credito

CHAPTER 4

4. Financial profitability analysis of the project

Introduction

A detailed analysis of the income statement and net cash flow will be carried out, followed by the projection of five-year financial statements. According to Baca Urbina (2013, p. 170), the economic analysis carried out in Excel allows us to follow the origin of the figures presented in Chapter 3, establish connections between the data to understand their impact, perform sensitivity analysis to changes in variables and calculate profitability indicators such as the IRR (Internal Rate of Return).

4.1 Financial analysis

Scenarios I and II show contrasting results due to varying sales volumes. To determine the optimal financial scenario, net cash flows were calculated, factoring in investments, projected costs (Chapter 3), and taxes. We also analyzed pre-tax and net profits over the five-year projection period, machinery depreciation, and the project's Internal Rate of Return (IRR). This comprehensive analysis will guide the selection of the best scenario for the dehydrated dragon fruit internationalization project.

4.1.1 Net Cash Flow Scenario I

According to Baca Urbina (2013, p. 182), the objective of the analysis of the income statement or profit and loss statement is to calculate the net profit and net cash flows of the project. These represent the real benefit of the project's operation and are obtained by subtracting all costs incurred and taxes to be paid from revenues.

Table 21
Net cash flow for scenario 1

NET CASH FLOW						
	YEAR 0	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
		TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
INCOME						
SALES	$0,00	$50.000,00	$54.714,45	$59.878,65	$65.516,53	$71.652,99
PROJECTED QUANTITY OF SALES IN PACKAGES (40g)	$0,00	25.000	26.750,00	28.625,00	30.625,00	32.750,00
UNIT VALUE	$0,00	$2,00	$2,05	$2,09	$2,14	$2,19
MEMBER CONTRIBUTIONS	$8.390,61	$0,00	$0,00	$0,00	$0,00	$0,00
LOANS	$33.562,43	$0,00	$0,00	$0,00	$0,00	$0,00
TOTAL INCOME	$41.953,04	$50.000,00	$54.714,45	$59.878,65	$65.516,53	$71.652,99
EGRESS						
INVESTMENTS						
Sleeve sealer	$850,00	$0,00	$0,00	$0,00	$0,00	$0,00
Balance weight price	$100,00	$0,00	$0,00	$0,00	$0,00	$0,00
Work table	$100,00	$0,00	$0,00	$0,00	$0,00	$0,00
Work chair	$33,00	$0,00	$0,00	$0,00	$0,00	$0,00
Digital signature certificate and TOKEN	$49,00	$0,00	$0,00	$0,00	$0,00	$0,00

Computer	$489,00	$0,00	$0,00	$0,00	$0,00	$0,00
Production plant	$40.000,00	$0,00	$0,00	$0,00	$0,00	$0,00
EXPENSES						
Operating costs	$0,00	$30.461,58	$33.282,11	$35.520,62	$37.837,91	$40.294,64
Administration costs	$0,00	$2.759,28	$3.057,04	$3.126,43	$3.197,44	$3.269,98
Export costs	$0,00	$566,34	$579,20	$592,34	$605,79	$619,54
Financial costs	$0,00	10.467,87	10.467,87	10.467,87	10.467,87	10.467,79
TOTAL EXPENSES	$41.621,00	$44.255,07	$47.386,22	$49.707,26	$52.109,01	$54.651,95
BALANCE INCOME/EXPENSE	$332,04	$5.744,93	$7.328,23	$10.171,39	$13.407,52	$17.001,04
Depreciation cost	$0,00	$2.294,13	$2.294,13	$2.294,13	$2.147,43	$2.147,43
Results before workers' participation	$0,00	$3.450,80	$5.034,10	$7.877,26	$11.260,09	$14.853,61
15% employee participation	$0,00	$517,62	$755,11	$1.181,59	$1.689,01	$2.228,04
Income before taxes	$0,00	$2.933,18	$4.278,98	$6.695,67	$9.571,07	$12.625,57
Income tax 25%.	$0,00	$0	$0	$0	$0	$3.156,39
Interests	$0,00	$0	$0	$0	$0	$1.423,68
Net income	$0,00	$2.933,18	$4.278,98	$6.695,67	$9.571,07	$10.892,86

One of the factors to take into account when analyzing the profitability of scenario 1 is that the total sales of the project are very low in relation to the costs necessary to carry out the internationalization project, which makes the project financially unfeasible.

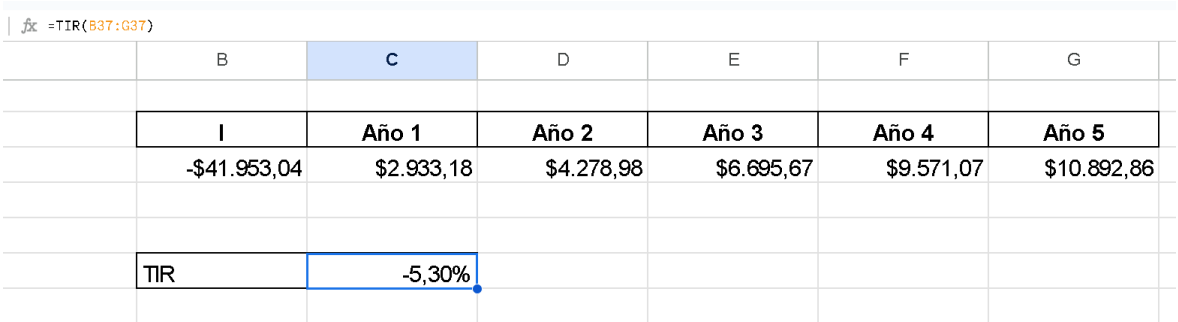
In this case, no income tax is paid during the first 4 years of the project since, according to the Internal Revenue Service (2023), companies that record profits of less than $11,722 do not have to pay this tax, and therefore the interest on the bank loan cannot be tax deductible until year 5 of the project.

4.1.2 Financial evaluation scenario I

According to Baca Urbina (2013, p. 209) the internal rate of return (IRR) is the point at which the Net Present Value (NPV) is zero, being the rate that balances the sum of the discounted flows with the initial investment. This indicator indicates the minimum interest rate that the initial investment must obtain in order to recover, thus providing a measure of its economic profitability and helping to estimate its payback period (Baca Urbina, 2013).

In this case, the formula used to calculate the project's internal rate of return was the Excel formula, which takes into account a range of cells containing the cash flows and the initial investment:

Figure 14
Formula TIR Excel



IRR formula in Excel

Table 22
IRR analysis using the data collected

I	Year 1	Year 2	Year 3	Year 4	Year 5
-$41.953,04	$2.993,18	$4.278,98	$6.695,67	$9.571,07	$10.892,86

IRR	**-5,30%**

In this scenario, the IRR is negative, which indicates that the project is not financially viable, since the expected profits from the project are not sufficient to recover the initial investment.

4.2 Net Cash Flow Scenario II

In this analysis of the income statement, obtaining a loan to cover 80% of the initial investment is also considered. This loan implies additional costs that must be subtracted from the income, in addition to the payment of 15% of the profit to the workers, ensuring their participation in the benefits of the project.

Table 23
Net cash flow scenario II

NET CASH FLOW						
	YEAR 0	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
		TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
REVENUE						
SALES	$0,00	$150.000,00	$164.512,50	$179.478,75	$196.612,50	$215.277,00
NUMBER OF PROJECTED SALE IN PACKAGES	0	75.000,00	80.250,00	85.875,00	91.875,00	98.300,00
UNITARY VALUE $	$0,00	$2,00	$2,05	$2,09	$2,14	$2,19
LOANS	$83.692,70	$0,00	$0,00	$0,00	$0,00	$0,00
PARTNER CONTRIBUTION	$20.923,18	$0,00	$0,00	$0,00	$0,00	$0,00
TOTAL REVENUE	$104.615,88	$150.000,00	$164.512,50	$179.478,75	$196.612,50	$215.277,00
EXPENSES						
INVESTMENTS						

Packing, dosing and sealing machine	$1.800,00	$0,00	$0,00	$0,00	$0,00	$0,00
Desk	$200,00	$0,00	$0,00	$0,00	$0,00	$0,00
Chair	$66,00	$0,00	$0,00	$0,00	$0,00	$0,00
Digital signature	$49,00	$0,00	$0,00	$0,00	$0,00	$0,00
Computer	$489,00	$0,00	$0,00	$0,00	$0,00	$0,00
Incidentals	$1.500,00	$0,00	$0,00	$0,00	$0,00	$0,00
Desk	$160,00	$0,00	$0,00	$0,00	$0,00	$0,00
Chair	$32,62	$0,00	$0,00	$0,00	$0,00	$0,00
Plastic food box	$121,26	$0,00	$0,00	$0,00	$0,00	$0,00
Metal shelves	$198,00	$0,00	$0,00	$0,00	$0,00	$0,00
Production plant	$100.000,00	$0,00	$0,00	$0,00	$0,00	$0,00
Production costs						
Operating costs	$0,00	$87.580,14	$95.876,90	$102.338,23	$109.295,27	$116.737,26
Administration costs	$0,00	$5.465,22	$6.059,54	$6.197,08	$6.337,76	$6.481,63
Export costs	$0,00	$2.105,36	$2.153,15	$2.202,03	$2.252,03	$2.303,13
Financial costs	$0,00	$26.103,12	$26.103,12	$26.103,12	$26.103,12	$26.103,20
TOTAL EXPENDITURES	$104.615,88	$121.253,84	$130.192,71	$136.840,46	$143.988,18	$151.625,22
INCOME/EXPENDITURE BALANCE	$0,00	$28.746,16	$34.319,79	$42.638,29	$52.624,32	$63.651,78
Depreciation costs	$0,00	$5.338,89	$5.338,89	$5.338,89	$5.192,19	$5.192,19

Total before employee participation	$0,00	$23.407,27	$28.980,90	$37.299,40	$47.432,13	$58.459,59
15% Employee participation	$0,00	$3.511,09	$4.347,13	$5.594,91	$7.114,82	$8.768,94
Profit before tax	$0,00	$19.896,18	$24.633,76	$31.704,49	$40.317,31	$49.690,65
Income tax 25%	$0,00	$4.974,04	$6.158,44	$7.926,12	$10.079,33	$12.422,66
Interest	$0,00	$4.974,04	$6.158,44	$7.926,12	$6.586,96	$3.550,19
Net income	$0,00	$19.896,17	$24.633,76	$31.704,49	$36.824,94	$40.818,18

Scenario II's net cash flow analysis paints a promising picture for the company. Positive profits are projected over the first five years of sales. This success stems from two key factors: an FOB price of $2 per unit, ensuring business profitability, and significant sales growth compared to scenario I. The analysis considers a conservative estimate, capturing just 0.07% of Canada's nut import market. This realistic approach reveals the company's substantial growth potential in a competitive yet promising market.

In the net cash flow, the 15% participation of the workers was taken into account, this percentage comes out of the total balance of income minus expenses. Profit before taxes is subtracted from 25% of income tax since according to the Institute for the Promotion of Creativity and Innovation (2021) it is specified that the 25% income tax rate is for companies incorporated in Ecuador, as well as for branches of foreign companies domiciled in the country. To this is added the interest of the loan requested to pay 80% of the initial investment, since this interest on the loan is tax deductible.

4.2.1 Financial assessment scenario II

Table 24

Analysis of the IRR using the data collected

I	Year 1	Year 2	Year 3	Year 4	Year 5
-$104.615,88	$19.896,17	$24.633,76	$31.704,49	$36.824,94	$40.818,18

IRR	**12,65%**

Made by authors

The internal rate of return (IRR) of scenario 2 stands at 12.65%, this indicates the minimum interest rate that the initial investment must reach to recover over time, the IRR resulting from this analysis reflects a project with good profitability potential and a solid economic base for its future success.

RESULTS

In 2022, Ecuador was positioned as the sixth largest exporter of pitahaya in the world. However, in the same year, it did not record exports of nuts, and had a very low record of only 300 kilograms in 2017, 100 kilograms in 2018, 1,300 kilograms in 2020 and 100 kilograms in 2021. On the other hand, this dried fruit market is experiencing continued growth in global demand, especially in Canada, as in 2022 the North American country stood out as the sixth largest importer of dried fruits worldwide and the tenth largest importer of fresh pitahaya.

Exports of dried fruits from Ecuador to Canada have been very low in the last 10 years, since for example in 2022 and 2023 there were no exports of this product to the North American country, which is why the sales projection of the project in scenario 1 has very low quantities, with sales of only US$50,000.00 in year 1 of the project.

The cost analysis of scenario 1 shows that it is not feasible because the export quantities of this scenario are very low, due to the fact that it is a very new export product from the Ecuadorian market, and the first scenario, which is the realistic one, does not have sufficient quantities to cover the operating costs of the project to make it financially viable.

The financial analysis reveals that scenario 1 shows minimal profits during the 5 years projected, which indicates serious financial difficulties for the project, since the income generated is not enough to recover the initial investment and keep the project afloat. In addition, the result of the negative internal rate of return percentage of -5.30% reinforces the need to reevaluate the business model.

When considering a scenario 2 with positive quantities, the analysis focuses on the Canadian target market. This country recorded an import of 3,957 tons of dried fruits in 2022. The project plans to capture only 0.07% of this market, exporting 3 tons of dried pitahaya in the first year of the project, which would generate revenues of US$150,000. This calculation is based on a unit selling price of $2 per 40-gram package ($50 per kilo), a realistic and competitive price given that the national average selling price (ASP) is approximately $2.50 per 40-gram package.

As the project grows in terms of sales, it becomes necessary to improve the infrastructure and machinery used for operations. This includes the acquisition of a larger

work floor than in scenario 1, with an area of 334 square meters, with sufficient space to carry out the project and have a work base with the expectation that the project will increase its sales each year, as well as a packaging, dosing and sealing machine, which will help increase production capacity. Although costs increase in scenario 2, so do revenues, resulting in a net income of $40,818.18 in the fifth year of the project, with increasing profits each year. In this scenario, the net cash flow considers a 15% workers' participation calculated on the balance of revenues and expenses, as well as income tax, which is deducted from the pre-tax profit. Since this positive scenario projects profits from the first year to the last year of the analysis.

The financial analysis of scenario 2 shows a positive IRR of 12.65% with an NPV of zero, suggesting that the project is not only viable, but also profitable. This reinforces the financial viability of the project and demonstrates that, with sales growth, the project provides an attractive return compared to the first scenario.

CONCLUSIONS

In conclusion, the project demonstrates that it is feasible to develop an internationalization plan for dehydrated dragon fruit from Ecuador to the Canadian market. This is due to several factors, such as the growing acceptance and popularity of superfoods in the global market, especially in markets such as Canada, where people care about their well-being and lifestyle. In addition, Ecuador has favorable climatic conditions for the planting of this fruit, which is gaining global recognition.

The model used demonstrated that it is possible to make an effective sales forecast using the data present in the project. This allowed two scenarios to be developed: a pessimistic one based on existing data from various sources of export and import information, such as the Central Bank, and an optimistic one, using the values reflected in the sale of the product at the national level and the growth of imports by Canada. Given that the production and export of dried fruits are not very common in Ecuador, there was a shortage of certain data, such as exports of dried fruits to Canada. For this reason, a comparison was made with the total exports and imports of both fresh dragon fruit and dried fruits.

This project may be useful for producers of dehydrated dragon fruit in Ecuador, entrepreneurs interested in exporting new and innovative products, and producers of fresh dragon fruit who wish to diversify their offer and enter the growing market of superfoods in dehydrated presentations or as snacks. Demand in countries such as Canada is continuously growing and has excellent acceptance.

Thanks to the studies carried out and the analysis of the chapters, it is concluded that it is possible to internationalize the dehydrated dragon fruit from Ecuador to Canada following the steps of scenario II, which proved to be optimal for this purpose.

RECOMENDATIONS

For future research on the internationalization of dried pitahaya from Ecuador to Canada, it is recommended to consider that there is currently no significant data on dried fruit exports between these two countries under the subheading 0813400090. Therefore, it will be more effective to use data on dried fruit imports from the Canadian market as a reference.

One of the main limitations of this research was the lack of companies exporting dried pitahaya from Ecuador to Canada. For this reason, it is recommended to explore markets where there is a greater amount of data on exports of this type of product, which will allow for more precise and substantiated analyses.

It is advisable to include pitahaya dehydration within the production process. This step not only reduces production costs, but also improves economic benefits by offering a product with an extended shelf life. In addition, having control over the dehydration process will guarantee the quality of the final product.

Finally, to improve the financial analysis of the project, it is essential to conduct a detailed investigation of the project's risk rate. This will allow the calculation of a more accurate Minimum Acceptable Rate of Return (MARR), making the financial analysis more complete and reliable.

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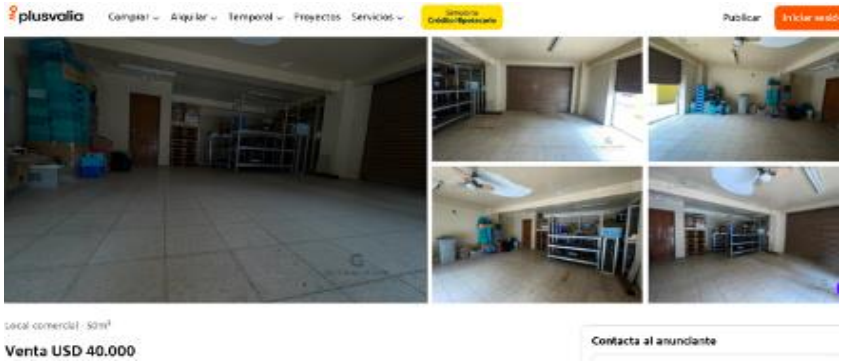
Appendix

Appendix 1
Work plant scenario 1



(Plusvalia, 2024)

Appendix 2
Work plant scenario 2

(Properati, 2024)

Appendix 3
Scale scenario 1

(Mercado Libre, 2024)

Appendix 4

Sleeve sealing machine

(Mercado Libre, 2024)

Appendix 5

Computer HP

(Artefacta, 2024)

Appendix 6

Chair

(Mercado Libre, 2024)

Appendix 7
Table

(Mercado Libre, 2024)

Appendix 8
Desk

(Mercado Libre, 2024)

Appendix 9
Chair

(IDC Mayrista en Computación, 2024)

Appendix 10
Packing, Dosing & Sealing Machine

(La Cobacha, n.d.)

Appendix 11
Container handling

FARLETZA
LOGÍSTICA INTERNACIONAL DE CARGA

Guayaquil, 15 de mayo de 2024

Estimada
Daniel Bailón

De mis consideraciones:

Por medio de la presente sírvase a encontrar adjunta nuestra tarifa para sus próximos embarques:

Aerolínea:	DHL
AOL:	Guayaquil, Ecuador
AOD:	Vancouver, Canadá
T/CARGA:	Carga no peligrosa
FRECUENCIA:	D6
RUTA:	GYE-PTY-MIA-CVG-YVR
TT:	+5
Tarifa +100K:	$2.50 p/kg + $0.10 p/kg AFS + $0.08 p/kg CHA + $20.00 MCC + $2.00 FWB + $2.00 FHL (x c/HAWB) + $65.00 MTC

Gastos Locales:

- Handling x cntr $120.00 + IVA
- Proceso Electrónico $ 60.00 + IVA

Elaborado por Farletza

Appendix 12
Dehydrated Dragon fruit supplier

(Alibú, 2024)

Appendix 13
Port Freight Forwarding Company

(Star Logistics, n.d.)

Appendix 14
Plastic Sleeves Supplier

(Florempaque, 2024)

Appendix 15
Boxes

(Juan Marcet, 2024)