



**Mexican avocado subproducts destined for Canada**

Thesis

Francisco Javier Doddoli Valencia

Haaga-Helia University of Applied Sciences

International Business

2022

## Abstract

<b>Author(s)</b> Francisco Javier Doddoli Valencia
<b>Degree</b> Bachelor of International Business
<b>Report/Thesis Title</b> Write the main title of your report/thesis here
<b>Number of pages and appendix pages</b> 48 + 2
<p>The author of this thesis had doubts as to why most of the avocado hass and its subproducts business was monopolized by the United States. When talking to experts, he wondered why they did not choose to export to the Canadian market. That is why he focused on finding out the feasibility of exporting to Canada and discovered that they were exporting to this country, but not in a minimum percentage due to the people's lack of knowledge on how to get these products to the northern country. As a conclusion, the author tries to provide the knowledge of the requirements for exporters to expand their business.</p> <p>Based on the research conducted in the theoretical framework and surveys to experts in the field, analyze and obtain the necessary information to know the requirements for the logistics of Mexican avocado subproducts. These requirements will help businessmen in the logistics, export, and customs compliance that they must consider. The objective is to conduct research that can help entrepreneurs dedicated to the sale of avocado guacamole subproducts locally or nationally who wish to expand their horizons to a potential Canadian market.</p> <p>The information obtained is put in a conclusion, explaining in question requirements such as phytosanitary certificates, transportation, documentation for crossing customs to reach their destination, and more issues to consider for those entrepreneurs who do not know the requirements or steps to be fulfilled to start exporting avocado subproducts.</p>
<b>Key words</b> International business, Avocado Hass, Exportation and Custom Compliance.

## Table of Content

<i>1 Introduction</i> .....	- 1 -
1.1 Background .....	- 1 -
1.2 Research Question: .....	- 2 -
1.3 Demarcation .....	- 3 -
1.4 International Aspects .....	- 3 -
1.5 Benefits .....	- 3 -
1.6 Risk Analysis .....	- 5 -
1.7 Key concepts: .....	- 6 -
<i>2 Avocado Sub-products industry.</i> .....	- 9 -
2.1 Avocado .....	- 9 -
2.1.1 Type of Subproducts. ....	- 10 -
2.1.2 Guacamole and chunks.....	- 11 -
2.2 Custom Compliance. ....	- 13 -
2.2.1 Documentation for Mexico .....	- 14 -
2.2.2 Documentation for Canada.....	- 16 -
2.3 Exportation .....	- 17 -
2.3.1 Exports from Mexico. ....	- 18 -
2.3.2 Relation Mexico – Canada.....	- 19 -
2.3.3 Incoterms. ....	- 20 -
2.4 Logistics .....	- 22 -
2.4.1 Transportation Modes.....	- 22 -
2.4.2 Mexican Customs. ....	- 23 -
2.4.3 Canadian Customs. ....	- 24 -
<i>3 Research Methods</i> .....	- 26 -
<i>4 Results.</i> .....	- 29 -
4.1 Survey for avocado experts. ....	- 29 -
4.2 Survey for guacamole processors.....	- 34 -
<i>5 Conclusions.</i> .....	- 41 -
<i>Sources</i> .....	- 45 -
<i>Appendix</i> .....	- 50 -

## **1 Introduction**

In this research, you will find the logistical requirements of how to export avocado Sub-products to Canada. Starting with what avocado represents as a raw material in exports.. For Mexico, these 2 topics are very important because the export of fruits and vegetables has a direct impact on the percentage of the country's (Mexico) GDP. Mexico is the main supplier of the international market with a contribution of 45.95% of the value of world exports. The Michoacán avocado represents a great contribution to the country's economy being in 2nd place in 2021 in Mexico's exports. (Gobierno de Mexico,2022). The subject of avocado as a raw material is already well known, so we will focus more on Michoacan avocado sub-products.

For the distribution of these products, we will find the logistical requirements in the supply chain to Canada. Canada is a very abandoned territory for Michoacan avocado traders since it is focused on markets such as the USA and the EU, without considering that Canada is more convenient geographically for our country having advantages in the logistics of sub-products, transportation, transit, and competencies. In this investigation, they will obtain knowledge of the logistics and the optimal requirements for these subproducts to be exported to the Canadian market.(Persistence Market Research,2022).

### **1.1 Background**

The export of Michoacan avocado, the export of this product is something very interesting to consider before going into this thesis. This raw material is one of the most privileged of our country, Mexico, since for years it has been a boost for the economy of our country. Focusing more on the place we are going to talk about which is Michoacán, this state of the country is the largest producer and exporter of avocados worldwide reaching in 2017 to export more than 771 million kilograms of "hass" avocados to the world, which helped the avocado surpass the banana as the imported fruit with the highest value in the United States. However, the real miracle of the Mexican avocado trade is the type of avocado that is handled, the "Hass" type, which is the type of avocado that is exported around the world. One of the advantages of the Mexican avocado is that it is always in season, meaning that it is harvested throughout the year. And the market for Michoacan avocados never stops. Now that we understand the importance of Michoacan avocados, the main

buyer of Michoacan avocados is the United States, it is said that out of every 10 tons that are sent to the United States, 6 are from Michoacan. (SEMARNAT,2018). This is a business that has been operating traditionally for several decades, only most of the raw material is exported, but the reality is that many other avocado products can be derived. It has been a product that contains all the important properties and nutrients for human beings for years, and it can be used daily in diets or as a food supplement. Today there are already many avocado derivatives that are making innovations for the market of this product, being used in many other products such as makeup and vitamins.

## **1.2 Research Question:**

The main objective of the thesis is to define the logistical requirements for those entrepreneurs looking to expand or undertake in Michoacan avocado by-products for export to the largest country in North America (Canada), which can help them understand what is needed for the export of sub-products. Answering key questions to understand what it takes to export to Canada.

### **RQ:**

**What are the logistic requirements to export avocado sub-products (guacamole) from Mexico to Canada?**

### **IQs:**

- 1- How many subproducts are they and Which are they?
- 2- What is the custom compliance to reach a successful exportation from Mexico to Canada?
- 3- What is the optimal transportation for exporting avocado subproducts to Canada?
- 4- What are the risks that could affect the sub-products (likelihood and severity)?

### **1.3 Demarcation**

In this thesis you can find answers to very specific issues, this information is about the options in the supply chain for the export of avocado subproducts from Michoacan to Canada. The author seeks to provide information in this thesis, talking specifically about Michoacan avocado Sub-products as the objective of this research. Topics include what types of by-products there are and what they are, what the market is like for these by-products in the destination country, the specifications in customs compliance for the by-products, and the risks you would face in exporting for these by-products to Canada. The Sub-product issue focuses more on products requiring refrigeration such as guacamole and avocado chunks.

On the other hand, we have issues that are limited to touch on in this thesis. Being specific in the topics covered in this thesis, the topics that will not be found in detail in the thesis are the background of the by-products, the processes that the raw material goes through to obtain these products, the presentations of these products, and their properties, as well as the cost of production and sale. The Sub-products not discussed due to process deviation issues are avocado oil, flour, cosmetics, and supplements (tablets, fats, and oils).

### **1.4 International Aspects**

As an international aspect required for this thesis on the export management of subproducts, the author will conduct research, to give a perspective to companies and entrepreneurs who want to export from Mexico to Canada. Analyzing the requirements in the supply chain between both countries, such as customs documentation, and export specifications. Talking about the treaties between both countries, export laws, and requirements of companies to be able to complete this export successfully. Giving the perspective between both countries Mexico and Canada can facilitate the reader if it is the action you want to perform.

### **1.5 Benefits**

The benefits for new entrepreneurs and organizations that can get with this thesis, are if there are business expansion plans, if you are planning to open new markets for the company, or even if you are planning to implement these sub-products in the company,

this thesis could help directly with the logistics of this new product if it is the case. Directly solving the distribution of the product is of great utility so that they can acquire the knowledge already investigated, where they can obtain or solve the most specific doubts of how the logistic process of exportation to Canada is.

For the author will be able to acquire more knowledge about avocado and its export, as well as the techniques to be able to make a product research and distribution that he could use in the future in various job opportunities, as well as discover new markets to apply logistical requirements for export to Canada in the future of his professional career. For the university this thesis can be of great help since it is the knowledge of one of the largest sectors in Mexico, which is agriculture, being able to find that knowledge of the supply chain of these by-products can be beneficial for future students.

Table 1. Overlay Matrix.

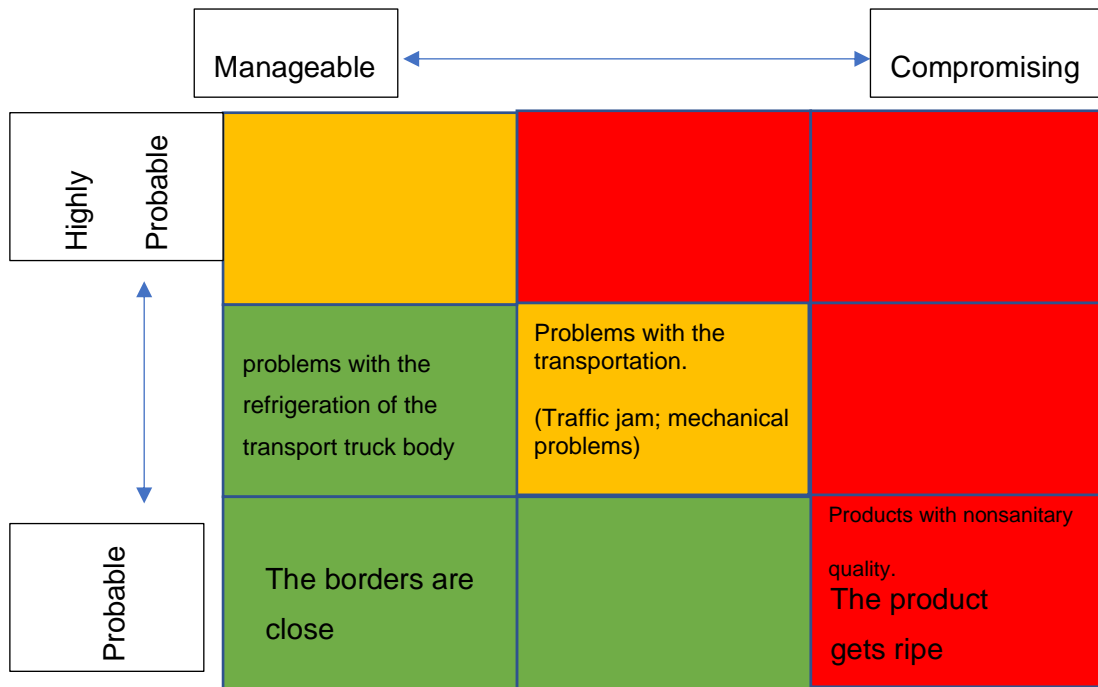
<b>Investigative Questions (IQs)</b>	<b>Theoretical Framework</b> <sup>1</sup>	<b>Methods</b>	<b>Data Analysis/ Results</b>
<p><b>IQ 1.</b> How many subproducts are there, and Which are them?</p>	<p>The Michoacan avocado has a very high trend in the products consumed around the world. From this product derives a variety of sub-products that have also become a trend for their level of nutrition and benefits.</p>	<p>Investigation desk on websites with relevance about the information we need.</p>	<p>2.1, 4</p>
<p><b>IQ 2.</b> 2- What is the custom compliance to reach a successful exportation</p>	<p>In the theoretical framework the aspects that will be seen are all the customs</p>	<p>A qualitative interview from Businessmen in the business and</p>	<p>2.2, 2.3, 4</p>

from Mexico to Canada?	requirements that will be requested in order to be able to export both to Mexico and import from Canada.	an investigation desk.	
IQ 3. What is the optimal transportation for exporting avocado subproducts to Canada?	While the most common mode of transportation used to travel to Canada, and the most common routes used to get to Canada.	A qualitative interview from businessmen in the business and an investigation desk.	2.4, 4
IQ 4. What are the risks that could affect the sub products (likelihood and severity).	These are the risks that these avocado sub-products face in the logistics to reach Canada.	A qualitative interview from businessmen in the business, investigation desk and look the risk analysis.	1.6, 4

## 1.6 Risk Analysis

Based on the research progress of this thesis, the author will investigate the existing possible risks in the export of these by-products, such as transportation, customs documentation, or even less frequent problems such as direct damage to the product, which will serve as a guide to the situations that may present those businessmen and entrepreneurs who are interested in making this export of Michoacan avocado by-products to Canada.

The table below (2) shows the most common risks in this operation, as well as how often and how much impact they have on the export process.



2 Table of risk analysis (by the author 2023).

### 1.7 Key concepts:

The key concepts are the definitions of important words that the author will use as support for the development of the research and that are related to the topics that will be discussed in this thesis. These key concepts are the main topics of this research with which the author seeks to facilitate the reader's understanding of the information to be read in this research, starting with the introduction of the definitions of these keywords. Once these key concepts have been read and understood, the author will continue with the development of this research.

**International business:** International trade is the exchange of goods and services across borders. It includes all types of cross-border exchanges of products, services, or resources between two or more countries. In international business, manufacturing and trade occur outside the country of origin.

It also includes all commercial transactions involving two or more nations, including sales, investment, logistics, etc. Resources, such as people and intellectual property (such as patents, copyrights, trademarks, and data), are also part of these exchanges. In addition, they include contractual assets or liabilities (such as the right to use a foreign asset, provide future service to a foreign customer, or execute complex financial instruments). (Wallstreetmojo Team in 2020)

**Avocado Hass:** The "Hass" avocado is a variation or mutation of an American avocado variety. It was created from a seed of an avocado race originating in Guatemala in 1926 in an orchard in California and another in Mexico in 1935. Among its main characteristics and advantages, it is worth mentioning that it has a long harvest, which has increased its worldwide consumption. In addition, these avocados contain an oil concentration of up to 12% and 70% of water, while they also have a high vitamin B and E content. (Marketing RG 2021)

**Exportation:** An export is any legitimate good and/or service that the producing or issuing country (the exporter) sends as merchandise to a third party (importer) for purchase or use. (economipedia 2020). Exports are all products that are sold outside their place of origin. The receiving country or place is the importer of these products.

**Custom compliance:** In foreign trade, compliance is the supervision of compliance with all rules, whether external or internal, including verification of tariff classification, license management, knowledge of all jurisdictions related to export and import, and compilation of legal documents, among others. To fulfill the customer's standards means to apply the customer's standard in a factory or unit, which can be a social compliance standard or a quality standard. (Reference Book of Commerce, Commerce to the World. 2019)



## **2 Avocado Sub-products industry.**

The theoretical framework is based on the concepts that the author is exploring in this thesis, to be able to ground and support his ideas when working on export research, logistical requirements, and subproducts to be treated. This chapter is about the theory and important information of the topics to be discussed in the thesis, which will be covering the theoretical points of the avocado subproducts, the export of these subproducts, the legal aspects of what is needed to export to Canada, and ending with the part of the logistics and its infrastructure to be able to perform this export in a successful way.

### **2.1 Avocado**

With more than 10 thousand years of history and with a strong presence in several culinary recipes, the avocado is today one of the most appreciated fruits on tables all over the world, since it is used to prepare sauces, soups, and salads, and even as a key ingredient in beauty treatments, cosmetics, shampoos, among others. As mentioned, avocado is a fruit that nowadays has a lot of presence around the world for its multiple uses in the kitchen, as well as being an ingredient for the elaboration of other products, since it is full of nutrients and benefits for human consumption. Speaking of the benefits that the avocado brings to the country being a fruit with high demand directly impacts the GDP of Mexico (4.9% in 2020), with its sale and export around the world. Avocado is one of the most exported agricultural products of this country. Mexico contributes 45.95% of the value of world exports, making it the leading exporter in the world market. (According to the avocados from Mexico website, in the United States it is advertised and eaten at international events such as the Super Bowl, where 100,000 tons were consumed on game day, especially to make guacamole as an appetizer). (Persistence market research, 2020).

The avocado industry is expected to continue growing year by year according to the official website of the Mexican government, so the author selected this topic that will support this research to learn more about the export of this product to the target country which is Canada. This is a country that despite being close to Mexico does not circulate a large percentage of the country's exports. (Aztecavo, 2021).

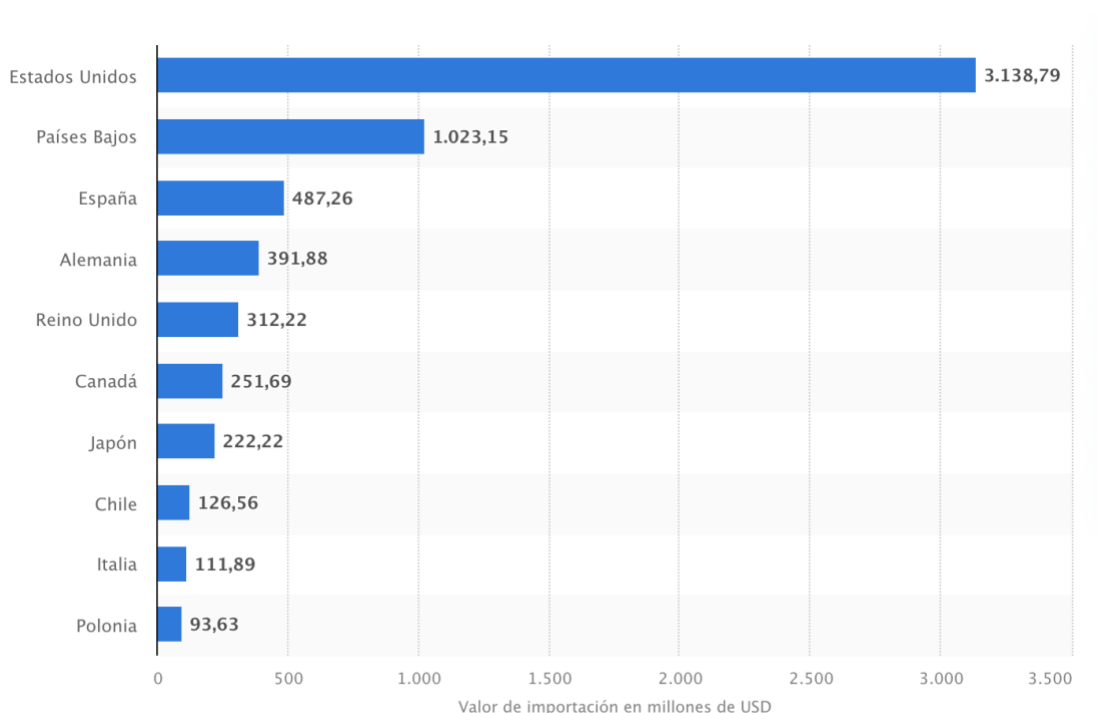


Figure 1. Mexican avocado importers in relation to millions of dollars. (By Statista.com 2021)

### 2.1.1 Type of Subproducts.

Avocado-based products are gaining popularity around the world and are used in most foods and beverages. Avocado is considered a superfood that contains numerous nutritional and health benefits, which has helped to create a suitable market for avocado-based products. Some avocado-based products are avocado puree and avocado oil, and others are becoming increasingly favorable among food and beverage manufacturers. Avocado-based products are used in baby foods, snacks, dairy products, and others. (Persistence market research, 2020)

In this part the author will divide the subproducts into two sections since, as shown in the demarcation, he will focus specifically on those that are exported cold, so it will be divided into a cold chain and non-cold chain.

The cold chain is composed of:

- The guacamole or pulp.
- Avocado chunks (these are also mixed in the guacamole or separately).

The non-cold chain is composed of:

- Avocado oil.
- Avocado flour.
- Plastic products based on the avocado pit.
- Vitamins.



Figure 2. Avocado Subproducts (By Terravocado 2021).

### 2.1.2 Guacamole and chunks.

A classic Mexican salsa prepared with avocado and other ingredients called guacamole. Its history begins in pre-Hispanic Mexico, where the native Aztecs and Toltecs already ate avocados.

The word guacamole, which means "avocado sauce", comes from the Nahuatl language of indigenous Mexico. The first records of guacamole date back more than 500 years, when the Mexican Indians already included it in their diet. With the arrival of the Spanish in America in the 16th century, new ingredients began to be added to Mexican dishes, such as tomato and onion, which were added to guacamole to increase its flavor and variety.

Today, guacamole is one of the best-known dishes in Mexican cuisine and has become popular all over the world. It goes well with tortillas, nachos, meats, and other typical Mexican dishes. Chili, cilantro, lime, and garlic are some of the components used in numerous variations of the recipe. (Msc, 2021).

One product that has gained popularity worldwide and has experienced an increase in exports in

recent years is guacamole. Most of the avocados produced in Mexico, the world's leading producer and exporter, are used to make guacamole.

As the world's largest guacamole-consuming nation, the United States is Mexico's main export market. Canada, Japan, China, and Europe are also important guacamole export destinations for Mexico. Since guacamole has a high value-added and high demand in the world market, its export has produced significant economic benefits for Mexico. In addition, guacamole consumption has increased worldwide due to the increased popularity of Mexican cuisine and the inclusion of guacamole in other countries. (Terraavocado, N.D.).



Table 3. Avocado sub-products exportation (by the author 2022).

## **2.2 Custom Compliance.**

Customs compliance is all the obligations that must be performed by a company or person who is dedicated to trading goods outside the country, these obligations are crucial to successfully complete the importations or exports, so it is important to know these rules to make the correct way their regulations and updates not to have a problem when the goods are in customs to cross to their destination. More if to reach their destination must cross another country. Some of these obligations are the tariff classification, the product's value in customs, and the clearance or release of these goods. These 3 points will be explained so that the reader can understand a little of what the author is referring to with this investigation.

- Tariff classification.

This process is when you check the code number of the product you want to export or import, this code number is used to check if the product must pay any tax. These codes are assigned by the World Customs Organization considering the type of product, what it is made of, and its intended use.

- The value of the product in customs.

To carry out a correct valuation of the product, it is necessary to have the total value of the product to be imported or exported and to make with it the corresponding taxes such as the Value Added Tax (VAT) and the General Import Tax (GIT) if the product is going to be imported, so we know these percentages in the tariff classification of the merchandise.

- Customs clearance.

The clearance of goods is known by the procedures and formalities that must be carried out to perform both exports and imports. This action is carried out by the customs entities, (customs broker, customs clearance), following the regulations dictated by the customs law on the clearance of goods. These indicate the way in which the goods must enter or leave designated places, as well as whether they are sent temporarily or definitively. The entity in charge of the clearance of goods must make the recognition and verification of the products, also checks the part of the taxes that must be paid to release the goods of importers and exporters, and thus finalizes the clearance. (Estrategia aduanera, 2019)

### 2.2.1 Documentation for Mexico

The documentation required by Mexico to be able to export may vary depending on the destination of the products, but there are basic documents that must be completed to be able to export. These documents were decreed by the Secretary of Economy of Mexico. These documents will be requested at the border or the entity that will help you cross or dispatch your merchandise, they are necessary because it is what describes the person who is going to export and what the package, box, or container that will be sent contains. (Mundi, 2022). The documents that the Secretary of Economy asks for are:

- RFC (Registro Federal de Contribuyentes):

The RFC is an indispensable key for exports in Mexico, granted by the SAT. It indicates whether you are an individual or a legal entity, serving to perform any legal economic activity for which taxes must be paid. It is important to mention that this is the first step to being able to perform any economic activity, without it you cannot export.

- Sectoral exporters register:

Only if you want to export goods such as alcohol, beer, tequila, fermented alcohol (wine), distilled alcohol (spirits), cigars, tobacco, energy drinks, iron ores and their concentrates such as gold, silver and copper, plastics, rubber, wood, glass, iron and steel, aluminum, you need to comply with this export requirement in Mexico. In this case, as this research focuses on avocado by-products, it is not as necessary.

- Conferred Order:

This document is imposed by the customs law in Mexico to be able to export since it is the document that indicates to the SAT, that the customs agent or customs office can carry out the clearance of the merchandise of a company on your behalf.

- Letter of Instructions from the customs broker:

This document as its name indicates is a letter given to the customs broker with instructions to perform the clearance of your goods.

### Commercial Invoice:

The commercial invoice is a document of great importance for the export since it is where the information of the product and the company is broken down, such as:

Value and quantities of the product

Means of transportation

Invoice number

Date of shipment or shipment date

Complete list of products contained

Delivery and payment terms.

### Packing list:

The Packing List will help us to know the details of the goods, this is to facilitate the identification of the goods and their information to be exported. The data that must be included are the following:

Exporter's information.

Importer's information.

Brand or brands of the product.

Number of units.

Place and date of issue.

Packaging method.

Description of merchandise.

Total net weight.

Type of packing.

Signature and seal of the exporter.

#### Certificate of origin:

This certificate shows that your product is of Mexican origin and where it comes from. The data that must be included can be checked by the Secretary of Economy of Mexico, being that the data of these certificates can vary according to the destination of your product, in this case, Mexico to Canada must include data such as Exporter data, Producer data, Importer data, Description of goods, Tariff classification, Product, Net cost, Country of origin, Declaration that you are telling the truth, Name of the company, Date, Telephone number and Signature of authorization.

#### Transport document:

This document is indispensable in the logistics of the export process since it indicates aspects such as the means of transportation (air, sea, land), freight, and packaging of the products, from when the merchandise is loaded until it arrives at its destination. The document can be made by the exporting companies, or they can always ask for it from the logistics company they hired. You must also check the requirements of the country where your merchandise will arrive so that no information is missing, and the export can be completed successfully. (Mundi,2022)

These documents can be obtained or supported by the Mexican governmental export agencies: the Secretaría de Hacienda y Crédito Público (SHCP), the Servicio de Administración Tributaria (SAT), and the Secretaría de Economía (SE). As mentioned above, all your export permits can be issued by the Secretaría de Economía. It is necessary to have all the necessary documents to start exporting.

### **2.2.2 Documentation for Canada**

To import products into Canada, businesses must apply for an international import certificate. The Canadian government formally declares that it has no objections to the planned importation of several commodities in this letter of assurance. (CBSA,2022). In addition to the paperwork needed to export from Mexico, there are additional procedures for all imports into Canada that are intended to be made:

- Cargo Control Document (CCD), also known as Form A8A or Approved Arrival Note.

This document is to clear the goods and transfer them to any customs office or bonded warehouse for inspection. This document must include the product's valuation, classification, tariff treatment, and origin. The form used is the A8A.

- The accepted customs form is the B-3.

This form includes, among other data, the following information: name of the importer, account number, description of the goods, date of shipment, tariff position and treatment, country of origin, tax rate and total tax payable.

- A certificate of authenticity. Health or other certificates, licenses, and permits (may be needed depending on the situation) With very few exceptions, import licenses are not necessary for most items entering Canada. Most products imported into Canada do not require an import license, except for some textiles and clothing, which is not the case because the author seeks to export avocado subproducts.

These certificates are normally issued and inspected in Canada by the competent authorities of the exporting country through the Canadian Food Inspection Agency (COS). (CBSA,2022).

### **2.3 Exportation**

Exporting is the legal procedure in which a company sells a good to another nation. As part of this transaction, the company must consider how it will deliver the goods to the destination country and, more importantly, what legal requirements will be necessary for the product to clear customs successfully. Anyone undertaking an export should review a list of all regulations and logistics. Exporting is producing a good or service in your home country and selling it to customers or other companies in another country. Exports are very important nowadays, as they connect us with other countries. Especially it has an indirect relationship with the world economy, so it is also vital for the economies of several countries. Export and import activities are very old, even older than the author, so this kind of business that comes from many decades ago makes us want to keep expanding the

way we distribute goods and services, as well as products and sub products.

(Economipedia, 2021).

There are two types of exports: the first is called definitive export and occurs when a company sends products to another country and then sends them back; the second is called temporary export because the products can only remain in the importing country for a finite period.

### **2.3.1 Exports from Mexico.**

Exports have been an important part of the country's economy in Mexico for many years. Mexico was the eleventh largest exporter in the world in 2020, according to data from the World Trade Organization (WTO). The country's most exported products were automobiles, crude oil, agriculture, machinery, electronics, medical equipment, chemicals, and processed foods, directly impacting Mexico's economy. Mexico's main export markets are the United States, Canada, China, Japan, and Germany. (Government of Mexico, 2022)

Due to the repercussions of the COVID-19 pandemic on the world economy, Mexico exported raw materials for around 347.5 billion dollars in 2020, which represents a 9.5% decrease compared to the previous year. There are currently 12 Free Trade Agreements between our country and 46 other nations, which opens a market of 1,479 million potential clients. This represents an opportunity to promote the search for new markets and more favorable conditions for selling agricultural, livestock, or fishing goods. With a potential market of 1,479 million people and a network of 12 free trade agreements with 46 nations, one of the most important is the United States, Canada, and Mexico Agreement (USCMA), formerly known as T-MEC or USCMA, is the most significant treaty for Mexico as it improves its economy and generates more jobs annually since it is the most exported. Currently, our country could boost the search for new opportunities and better conditions for selling agricultural, livestock, and related products. (Government of Mexico, 2022.)

Beer, avocados, and tomatoes were the three primary products shipped in 2019. In this context, craft beer from Mexico was the most popular beer exported in 2019. We never

lose sight of the reality that alcoholic beverages play a significant role in our nation's international trade; just last year, tequila and mezcal exports totaled 1.964 billion dollars. (Since 25,377 of the 26,980 farmers registered in the Export Plan operate orchards of less than 10 hectares, the production of avocados in Michoacán is supported by micro and small producers). (Government of México 2019).

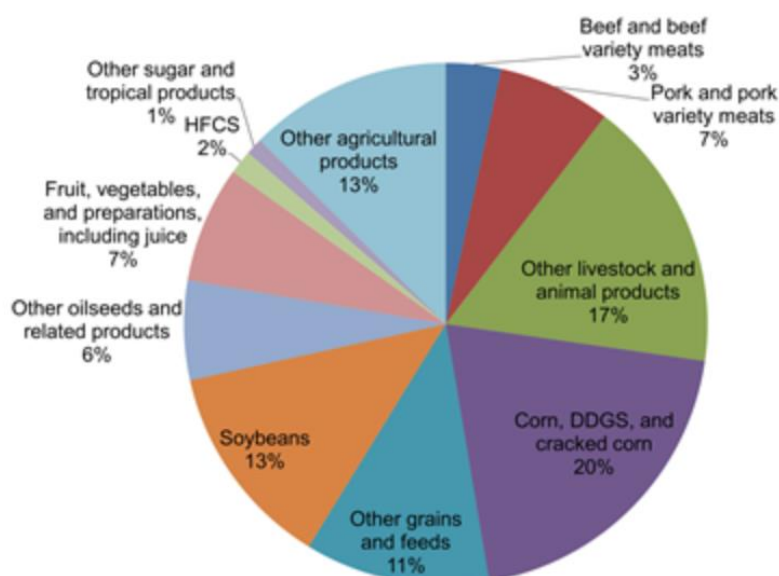


Figure 3. Mexico Exports (By USDA, 2022)

### 2.3.2 Relation Mexico – Canada

Since the North American Free Trade Agreement (NAFTA) and the Canada-United States-Mexico Agreement (CETA), our trade and investment connection has grown stronger. By 2021, bilateral merchandise trade between Canada and Mexico will exceed C\$41.7 billion. After China and the United States, Mexico is Canada's third largest trading partner in terms of goods. In 2021, Mexico was Canada's sixth-largest trading partner in terms of goods. Mexico received \$25 billion of Canadian dollars in direct investment in 2021, ranking as Canada's ninth-largest direct investment destination. Mexico is desirable for Canadian exports and investment due to its stability, expanding middle class, and labor market competitiveness (Canadian government 2023).

As such, Mexico is one of Canada's main economic partners in Latin America, and both countries enjoy an essential trade connection. Mexico exported about \$16.4 billion to Canada in 2020, while it imported about \$11.7 billion from Canada. Motor vehicles, components, machinery, electrical equipment, chemicals, and food are among Mexico's

top exports to Canada. On the other hand, machinery, electrical equipment, plastics, chemicals, automobiles, and auto parts are among Mexico's top imports from Canada. (Canadian government, 2023).

The agricultural and food industries are among the most important industries in the T-MEC; Mexican agricultural exports will continue to enjoy preferential access and are exempt from tariffs (except for poultry, dairy, and sugar products traded with Canada). To promote greater openness and collaboration, an agricultural committee was also created. (Estrategia aduenera, 2022).

### **2.3.3 Incoterms.**

Transport incoterms (international terms of trade) are standard terms used in company contracts for buying and selling importers/exporters to define the responsibility for the shipment of goods, this responsibility indicates where the goods are delivered, payment specification, and how far the selling company takes over and where the buying company starts. In other words, this stage of the process is when the supplier will guarantee the shipment of the goods and at what point the buyer will be responsible for the rest of the shipping process. (freightos, 2022).

What the incoterms are looking for is to establish in the contract:

- The place where the goods will be delivered to the buyer.
- The party that will oversee paying for the transport and loading and unloading.
- The documents that must process each part of the sale and its cost.
- The person in charge of paying the insurance.
- The agreed price of the goods and their scope.

-Incoterms are classified into four categories: Group E, Group F, Group C, and Group D. Each group has its own set of terms that dictate who is responsible for various transaction points, such as delivery, insurance, and customs clearance.

- Group E: is where the seller delivers the goods to his premises and the buyer is responsible for the rest.
- Group F: the seller must deliver the goods at a place agreed upon by both parties, but the buyer is responsible for the costs related to the transportation of the goods.

- Group C: in this group, the seller must deliver the goods at a certain place, but the buyer is also responsible for paying the main transport costs.
- Group D: This is when the seller must take care of all shipments of the goods until they are delivered.

As you can see, it is essential to understand the Incoterms, as they are there to help both parties to make the business more efficient, and what options they can agree on for each transaction. (velotrade, 2023).

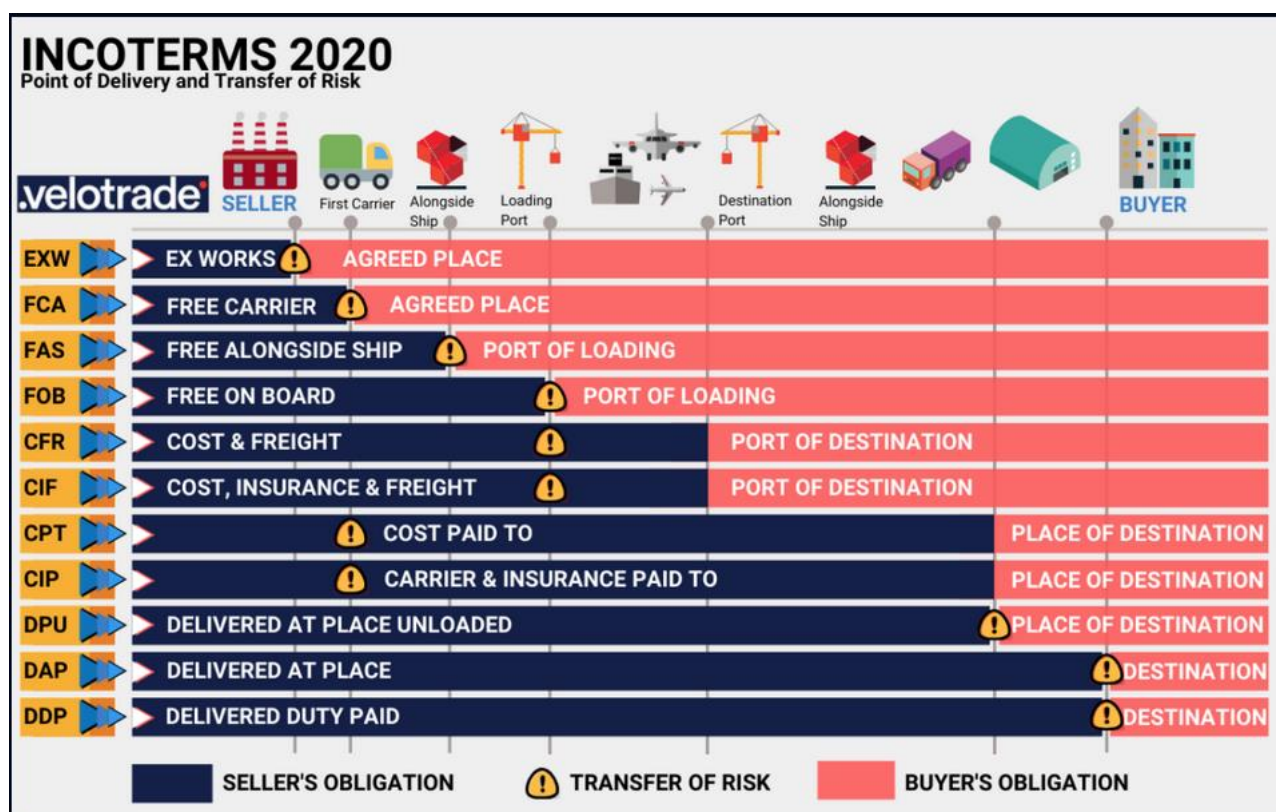


Figure 4. Incoterms (By Velotrade,2023).

For the export of avocado and avocado by-products to Canada the most viable option is by land since it is the fastest and most efficient option to cross borders and customs. In terms of incoterms, those related to sea transportation are discarded, which are FAS, FOB, CFR, and CIF, for this operation, since being a refrigerated product would take more time and would not be viable for the product. In the author's research and knowledge on the subject,

he believes that the most viable incoterms for the export of these by-products are EXW, DAP, and DDP since it is easier for both parties.

## **2.4 Logistics**

The process of planning and executing the efficient transportation and storage of goods from the point of origin to the point of consumption is known as logistics, which aims to meet customer needs in a timely and cost-effective manner. Logistics also refers to the organization of the movement of goods and services, from production to destination, including the planning, coordinating, and optimizing the processes involved in the supply chain. It involves the activities of transportation, warehousing, distribution, and inventory management, to ensure that products and services arrive at the right place at their destination, which is monitored and analyzed to determine the right time and in the right quantities, with the best level of service to the customer. In other words, logistics is concerned with accomplishing everything necessary for a product or service to get from its origin to its destination in an efficient and effective manner (By Elementfleet, 2022).

In the logistics of these avocado subproducts, it is seen from the moment the raw material arrives at the processing plant, looking for it to arrive in optimal conditions, following the line of the first storage, then going through the due process to elaborate the final product (which in this case is the guacamole and the avocado pieces), after this first stage it goes to the second storage where it takes a cold process and is packed to continue with the supply chain which is the transportation to the destination which is Canada. Once it is on its way, once it has passed through the corresponding customs, it will arrive at the destination which is the client's warehouse, where the last storage will be done so that the final client can finish this logistic process with the distribution of the product. This is how logistics seeks to help with this supply chain process, making it beneficial to both parts of this chain, helping to find the most optimal and efficient way to achieve the task. (Avoking Logist department,2023).

### **2.4.1 Transportation Modes.**

The means of transport in a logistics process are essential since they allow us to move goods and services in the supply chain, from the initial point, which is the suppliers, to the final customers. The modes of transport are a key part of the logistics strategy of a

company that seeks efficiency in costs and in the level of service, it offers. The selection and organization of the means of transportation are also very important because it is the basis of the strategy that the company will use to provide the best service. Nowadays, with the help of technology, logistics has been transformed, providing greater visibility and control of the process, helping to optimize and automate the management of the modes of transportation. (Universidad Cesuma, 2022).

There are different types of transportation modes, such as land, air, sea, and rail. Each of them has its advantages and disadvantages, so it is very important that the company selects the right one according to the needs of the product to be exported. For example, the air can be faster in terms of delivery time but is more expensive, while the land can take longer but is cheaper when you want to transport volume. However, it is important to consider when choosing the means of transportation as it will depend on several factors, such as the destination, the distance, the type of product, the customer's requirements, and the volume of product to be transported. (Civil Click, 2020).

The most common means of transportation for the export of avocados and their Subproducts from Mexico is by land. The reason is that avocados and their subproducts (guacamole) are perishable products that require a controlled refrigerated environment since they need specific temperatures to maintain their quality and freshness throughout their transportation.

#### **2.4.2 Mexican Customs.**

Mexico currently has 49 customs offices, divided into 4 types of customs, maritime, land (border), air, and inland in the country.

The 49 customs are located as 17 maritime customs, 11 inland customs in the country, 19 on the northern border, and 2 on the southern border of the country. As we can see most of the customs are in the northern part of the country with a direct connection with the United States of America since 80% of Mexico's trade is directed to the USA, the busiest and most important customs are Nuevo Laredo and Tijuana since they are considered key points for Mexico's international trade. Customs are very important for foreign trade and the country's supply chain, as they function as an agency that operates through declarations and records of goods entering and leaving Mexico with this information, the

author will investigate which of these customs is the most suitable for the export of avocado subproducts to Canada, since as mentioned above, the best mode of transportation for this export is by land. In this research, the author seeks to optimize the customs routes through which these products must pass to reach their final destination, which is Canada. (Comercio y aduanas, 2022).

With the experience and knowledge that the author has, this part is essential because of knowing which are the best customs for these avocado subproducts to reach Canada, clearly, they must pass first through the United States to reach the destination. Nuevo Laredo and Reynosa are the best to cross to the United States, although this clearly depends on which part of Canada these products are going to, that is where it is determined if it will be through Nuevo Laredo or Reynosa.



Figure 5. Mexican customs (By estrategia aduanera, 2022).

### 2.4.3 Canadian Customs.

Over the years, the relationship between Mexico and Canada has been strengthening to facilitate business and increase exports and imports between the two countries. The modernization of the North American Free Trade Agreement (NAFTA) that helps the new stage of regional integrations, and the T-MEC that came into force on July 1, 2020, as it

reinforces the commitment to eliminate subsidies and tariffs on exports, establishing a procedure for expediting the clearance of goods, control of the supply chain, as well as certifications that make more accessible the access of products from Mexico to the United States and Canada.( Secretaria de economia de Mexico, 2020).

### The Emerson-Pembina Custom:

The Emerson-Pembina customs, located on the border between Manitoba (Canada) and North Dakota (USA), are one of the most important in the relationship between the United States and Canada, so Mexican companies use it to export to Canada, especially in agricultural and food products. This is the busiest border crossing in North Dakota and is one of the few in service 24 hours a day. (By ezbordercrossing, N.D.). According to the Canada Border Services Agency website, the Pembina/Emerson Customs Union has the highest land traffic count in the country, making it the busiest commercial trucking destination in Canada. In 2019, this customs office will process more than 1.8 million commercial commerce and more than 4.5 million visitors to the country. (CBSA,2022).

As an important factor, this dune has modern, state-of-the-art facilities that allow for better management of the security and flow of commercial trucks and private vehicles. The services offered by this dune include the inspection of goods, customs control, detention of contraband, and issuance of export and import permits. (Canada Border Services Agency, 2022). The table below shows the custom average flow time (hours of the day), making it one of the fastest flow rates North Dakota handles with Canada.

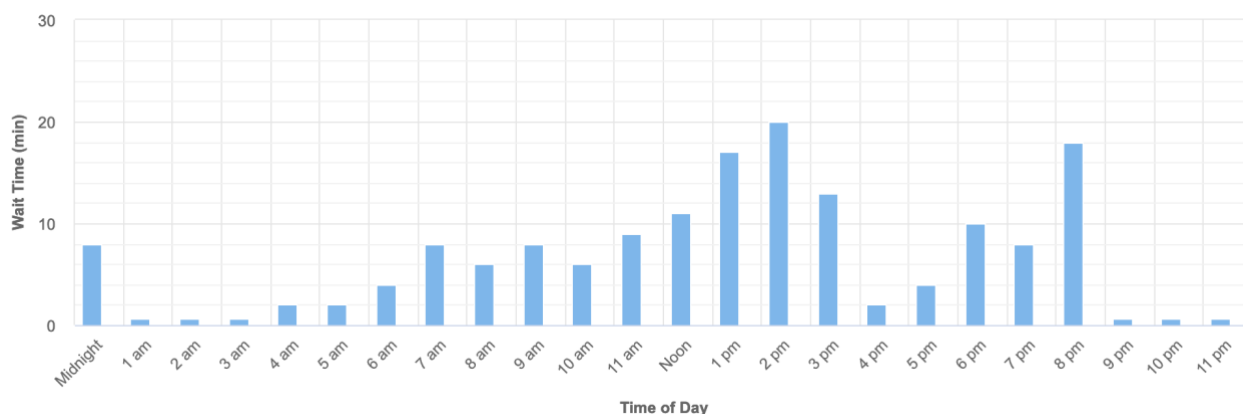


Figure 6. Average flow time in Emerson-Pembina customs, (By U.S Customs and Border Protection, 2023).

### **3 Research Methods**

The aim of this chapter is to allow the author to ground the methodology of how the information to be used in this thesis was acquired by dividing the types of information and using the appropriate tools to achieve the objective of this thesis. The approach of this thesis will be both qualitative and quantitative, it will be a mixed information research.

On the part of qualitative research, it is part of the methodology where surveys and interviews will be used, so that the author can acquire information based on people with years of experience in the export of avocados worldwide, also supported by the company, Avoking S.A. de C.V., Where the collected information will be analyzed by the author to reach the best conclusion with the answers to be able to answer the questions of the research question. On the other hand, the quantitative information is the research that will be obtained more theoretically where the author, before conducting the surveys and interviews, must do this research to obtain the relevant data and specific situations that should be asked in the surveys, thus following this mixed research the author will be able to answer the research question and the investigation questions.

The information will be obtained in the following order:

1. The first phase of research that the author will carry out is theoretical, doing research in articles, publications, and relevant pages about the export of Mexican avocado subproducts, also looking for the requirements of customs compliance, and the logistics to be considered that goes from Mexico to Canada. The author will also rely on the company Avoking S.A. de C.V. for the theoretical part, a company that already has a collection of data on exports to Canada. Once the author already has this theoretical research with which he can start with this theoretical research he can start to back up with information to answer the 4 investigative questions about the requirements for the export of these subproducts to Canada.

2. The second phase of this methodology is when the author already has an idea of all the theoretical research that he carried out in the first phase, so he will start with the development of the questions that will be asked in the interviews and surveys that will be carried out with experts in avocado and by-products and directly to different avocado processors that already have experience exporting guacamole to the United States and

Canada. The author's intention with this phase is to back up with more information and data so that not only theoretical research can achieve the objective of helping people who want to start impacting the Canadian market with Mexican avocado by-products. This is how the author will obtain the qualitative information that will support the quantitative information to answer the 4 IQs of this mixed research.

3. The last phase, in this phase is when the author must have all the qualitative and quantitative information compiled and organized to be able to begin to carry out the results of the surveys to be able to answer the research questions with the conclusions that he has reached after analyzing all the information of this research, then he will carry out the conclusions where the results of the research question will already be, saying each research question with its answer separately. Once he has finished this he will give his conclusion of all the research done for this thesis and recommendations for those who will benefit from this thesis, that is when the author's work will be finished.

The table below indicates how the author will be able to answer the research questions of the main problem, guiding the author to collect the information necessary to achieve the final objective of the thesis.

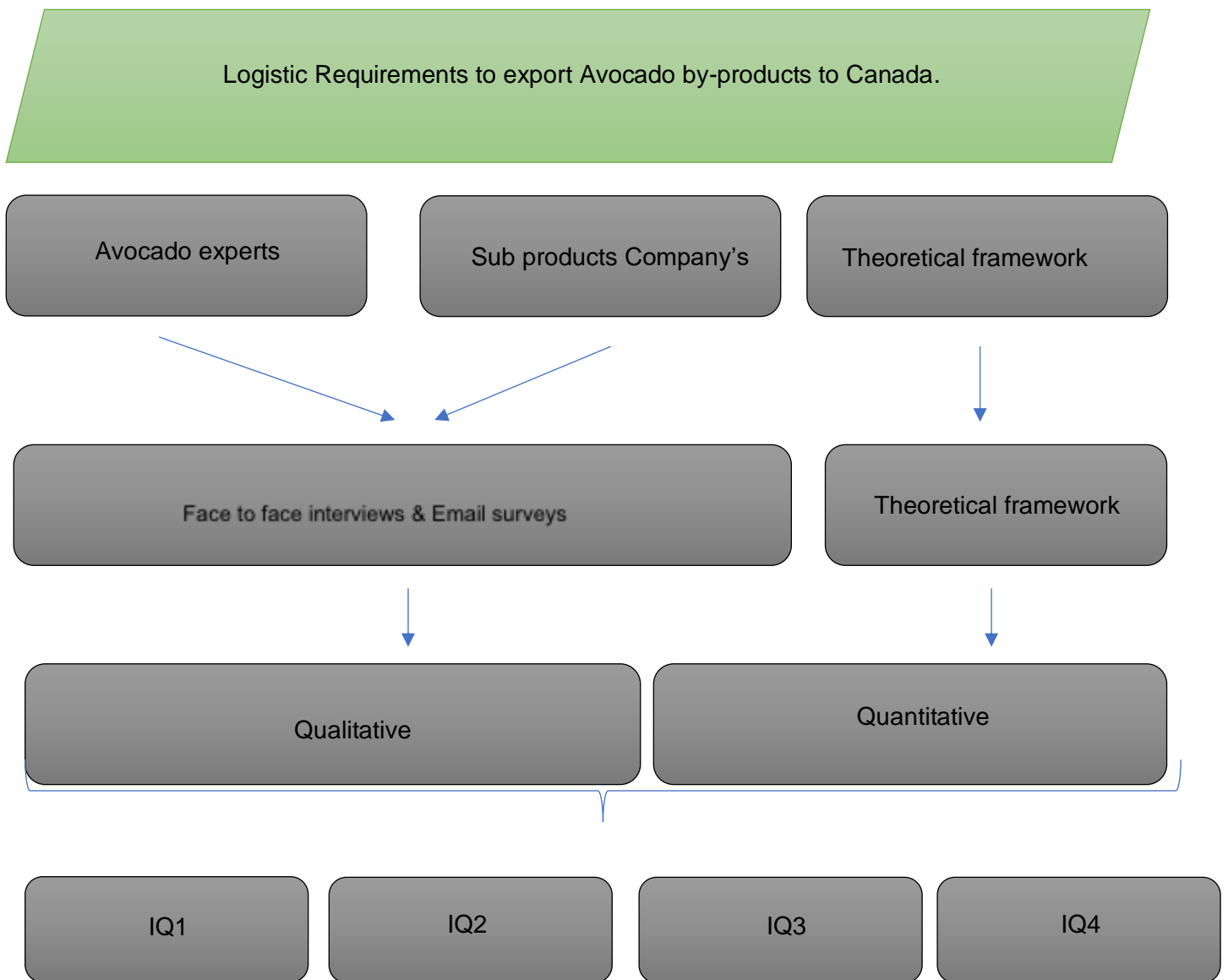


Figure 7. Represents the following steps of research methodology. By the author (2022).

## 4 Results.

This chapter is about the results the author obtained from the surveys carried out with the experts and companies of the Mexican avocado by-products. The answers to the questions in these two surveys are shown in graphs and analyses so that the reader can get an idea based on the answers given by the people with experience in the subject. After a few weeks, the author had to wait to get the answers of 15 experts for each of the surveys, he makes an analysis of these results to solve the investigative questions. Another objective of the author in this chapter 4 is to obtain information tools for those who want to expand or enter the Canadian market, using them to understand the market and the points to be considered to make it easier for them to export successfully.

### 4.1 Survey for avocado experts.

Once the author obtained the results on Mexican avocado exports, all the responses came from people in the state of Michoacán, which has the most avocado activity in the country. The idea of showing these results is so that the readers can see in graphs and analysis of answers, the situation that they can face or steps to follow in this export. This survey was a little more general since they surveyed in general to people dedicated to the export of avocado as a product since they share several requirements with the by-products they want to export in this thesis. This survey was answered by 12 experts.



Figure 8. Avocado experts, Question 1 (Author, 2023).

This question 1 comes to identify how the Canadian market for the avocado market in general terms is, since the survey was made for experts for the export of avocados, this question as we can see in the general scope more than 60% of respondents mentioned that they do not work for the Canadian market, here referring to the avocado as a product.

Question 2: In this survey for the avocado export experts, do you need a specific license to export to Canada, do you have it? All respondents answered yes, they gave us some examples of the licenses that are needed to export to Canada, which are, the phytosanitary license processed by the exporter, the Contamination Risk Reduction System (SENASICA) among others already mentioned in the theoretical part as, RFC registration, certificate of quality standards, and notice of compliance with standard (NOM-066). These are the answers that they put the respondents, since some only answered, yes, I have it.

Question 3: In this question, they were asked, what problems could exist at the time of exporting to Canada. This question is key to this research because it is related to one of the research questions. Here the respondents answered very similar things since the export of avocado and some of its by-products need a refrigerated container because it must maintain a specific temperature. Some of their answers were more related to logistics, such as delays in freight due to traffic or crashes, and problems with temperature due to a box with a faulty refrigeration system.

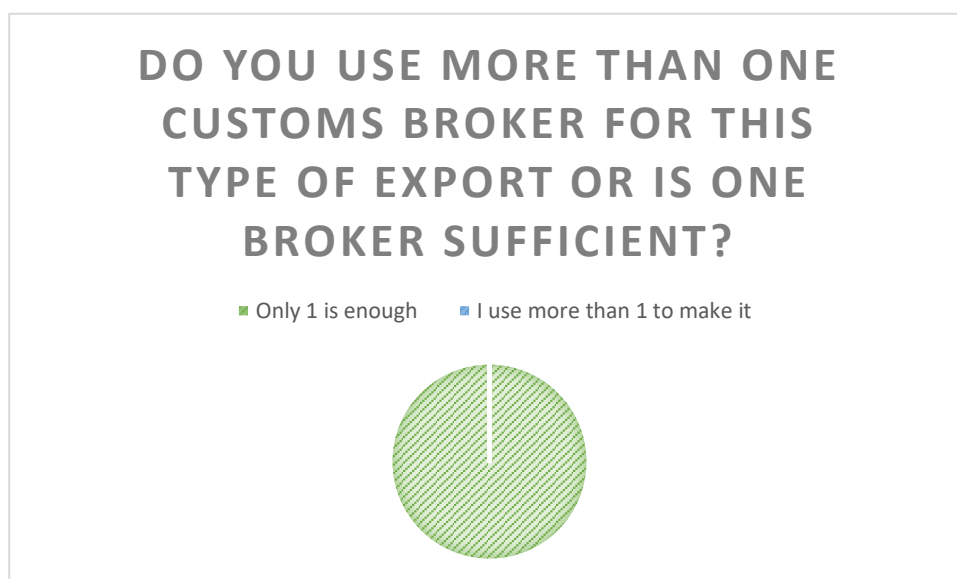


Figure 9. Avocado experts, Question 4 (Author, 2023).

Question 4, this question arises because when talking about wanting to get to Canada, one of the questions that the author asked is if more than 1 customs broker was needed to export to Canada because it has to go through the United States and then to Canada. Here the respondents answer that only one customs broker is required to cross your goods to the target country.

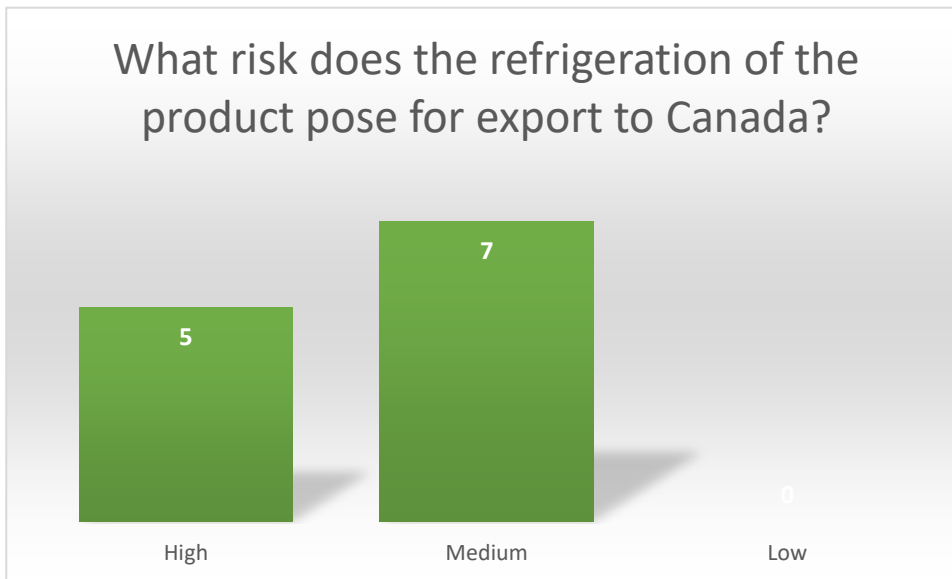


Figure 10. Avocado experts, Question 5 (Author, 2023).

Question 5, the purpose of this question is to confirm the risk that refrigeration represents in the export of the subproducts that need it, to support one of the investigative questions. Here the author confirms that the risk of refrigeration in the box where the product is stored represents a medium risk since the information collected and the transport time would allow the product to arrive.

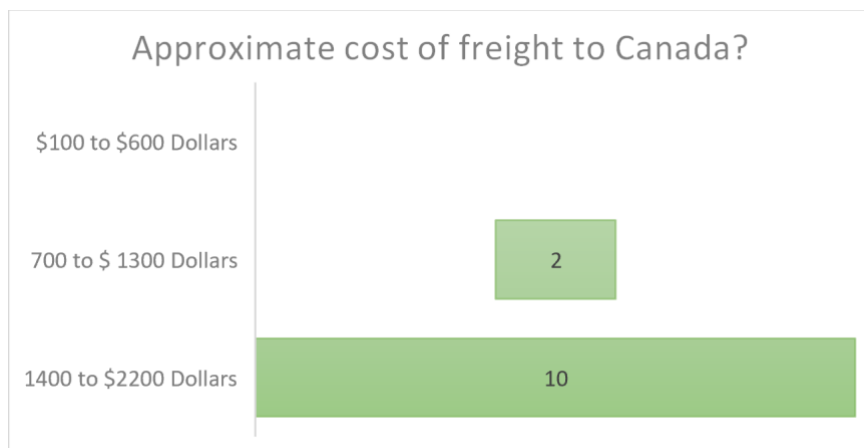


Figure 11. Avocado experts, Question 6 (Author, 2023).

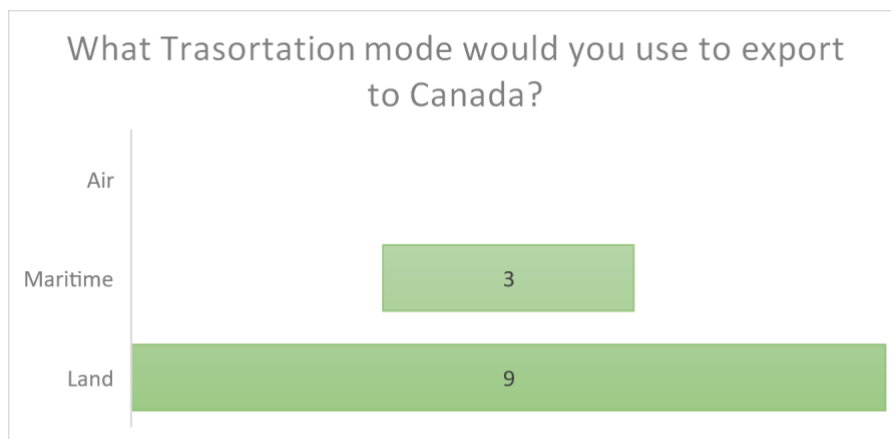


Figure 12. Avocado experts, Question 7 (Author, 2023).

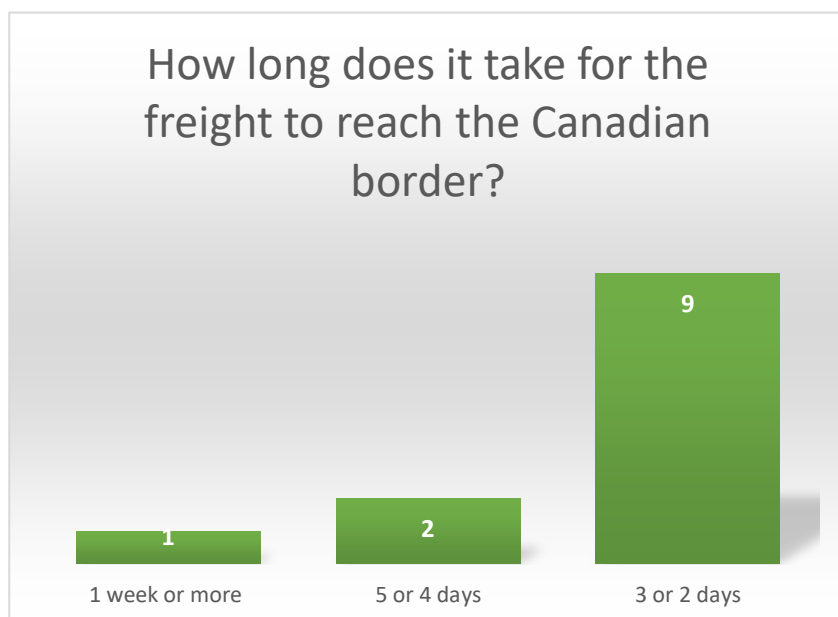


Figure 13. Avocado experts, Question 8 (Author, 2023).

These 3 questions are based on the transportation of the product as we can see, they are questions that talk about the means of transportation, the time it takes to arrive, and the cost of transportation. These questions are essential to help businessmen know what they must do to get the product to Canada. In question 6, the price is discussed, in which most of the experts comment that the freight to Canada is around 1400 to 2200 dollars per trip. In question 7, the most recommended mode of transportation is asked, which is the most used. And finally, in question 8, the time it takes to cross the Canadian border, the answer is 2 to 3 days.

Question 9:

In this penultimate question, the avocado experts were asked, "What is your opinion of the avocado market in Canada? They gave us their point of view on this question because it relates to their experience in the Canadian market. Some of the answers were that, over the years the avocado market in Canada has been growing exponentially, and that it is a very good destination if you want to start exporting because it is not as regulated as the United States. On the other hand, we were told that in terms of profitability depends a lot on the frequency of orders you have to this destination, as well as many prefer to focus on the domestic market because it is much simpler, but if you have the necessary orders can become a very profitable option. This question is very important for the author because it is where he can land ideas in the conclusion since these opinions are very important for companies considering expanding to the Canadian market.

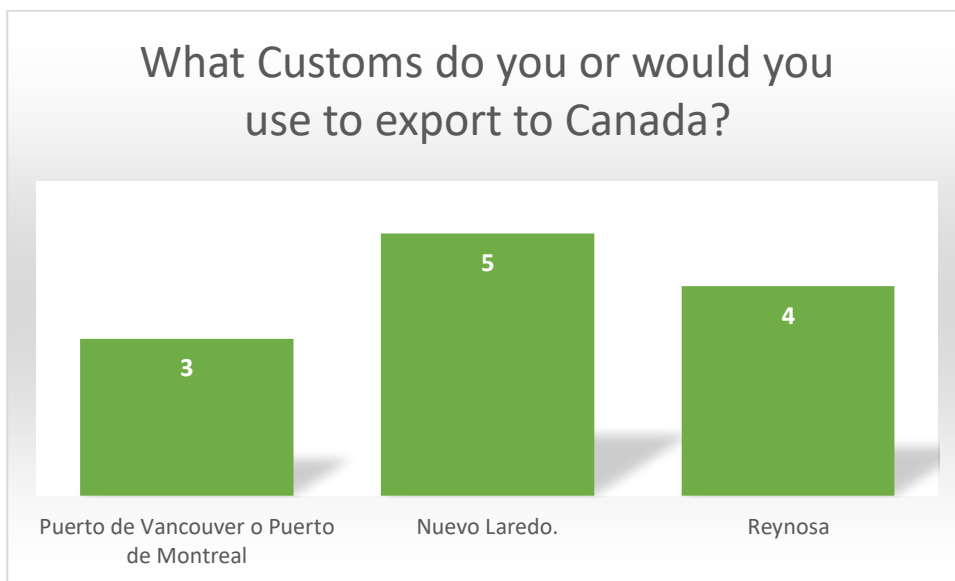


Figure 14. Avocado experts, Question 10 (Author, 2023).

This survey for avocado export experts was designed so that the author could understand more about the situation of the Canadian market today in relation to the Mexican avocado because although this survey was not directed directly to those who process avocados to export guacamole, it is very similar to the logistical process in these products.

These answers help the author begin to land his ideas and points to consider, such as the licenses that must be requested and the risks that may arise in the logistics to export these products since they are cold chain, prices, transportation times, and some border crossings. This information is very important because it relates to the previous theoretical research.

#### **4.2 Survey for guacamole processors.**

This survey was addressed directly to experts about this thesis which is the export of guacamole as a subproduct of Mexican avocado which is the main topic of this thesis. In this survey, the author seeks to find more specific answers to clarify their ideas of how the Canadian market is present in the subproducts, what advantages it has, logistical requirements, transportation, and extra taxes. The reason for these questions, as well as the previous survey, helps the author to support his theoretical research with the knowledge of experts who already have experience in these exports. In this survey, the author was able to collect responses from 16 respondents who are directors, business managers, and logo managers of avocado processors for the manufacture of guacamole.

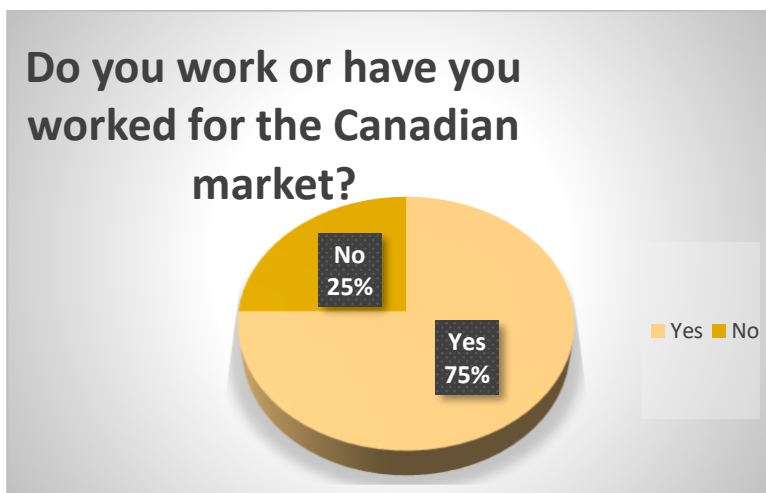


Figure 15. Subproduct processors, Question 1 (Author, 2023).



Figure 16. Subproduct processors, Question 2 (Author, 2023).

Questions 1 and 2, are related because this question was asked to experts in the export of guacamole, in these questions what the car is looking for is to know from established companies how the market for this is subproduct for the Canadian market today. In question 1, we asked if they have worked for this market and more than 70% answered yes if they have worked for the Canadian market. In question 2, we asked about the importance of this market for the product, where the answer was 50% that it was not so important for the product.

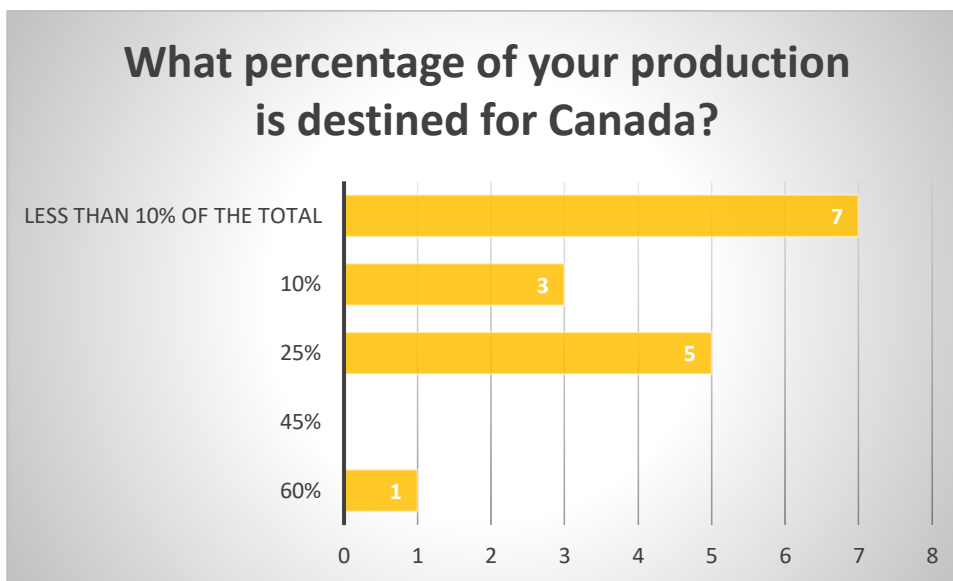


Figure 17. Subproduct processors, Question 3 (Author, 2023).

In question 3, the author wants to know what part of the companies' production is destined for Canada. There was a variation in the answers to this question, but as the author suspected, the Canadian market is not in the sights of many, since as we can see in the graph most of the answers the production that goes to Canada is less than 10%.

Question 4: In this question 4 of the survey the question was asked: In terms of profit, which option is more viable: exporting to Canada or Europe (write the option and give the reason why). Surprisingly almost 75% of the respondents put Canada as the most viable market in terms of profitability for exporting. In summary of the answers of this 75%, it stands out that this country is more viable because it is closer to Mexico compared to Europe, being cheaper and faster to get this subproduct to Canada, another of the most common answers was that the price of the transfer of goods is much cheaper than if we would export to Europe, and not only the cheapness, 4 people answered that Canada has less phytosanitary regulations than Europe without counting that Canada has the T-MEC treaty with Mexico, to eliminate customs duties.



Figure 18. Subproduct processors, Question 5 (Author, 2023).

What the author is looking for in this question is to be able to know if not only the subproducts go to the USA or Canada. This is useful to the author so that if he receives an answer that is not directed to the Canadian market, he can see that it is also exported to other countries outside of North America. In this question, 70% answered no, so most of the subproducts stay in the USA and Canada.

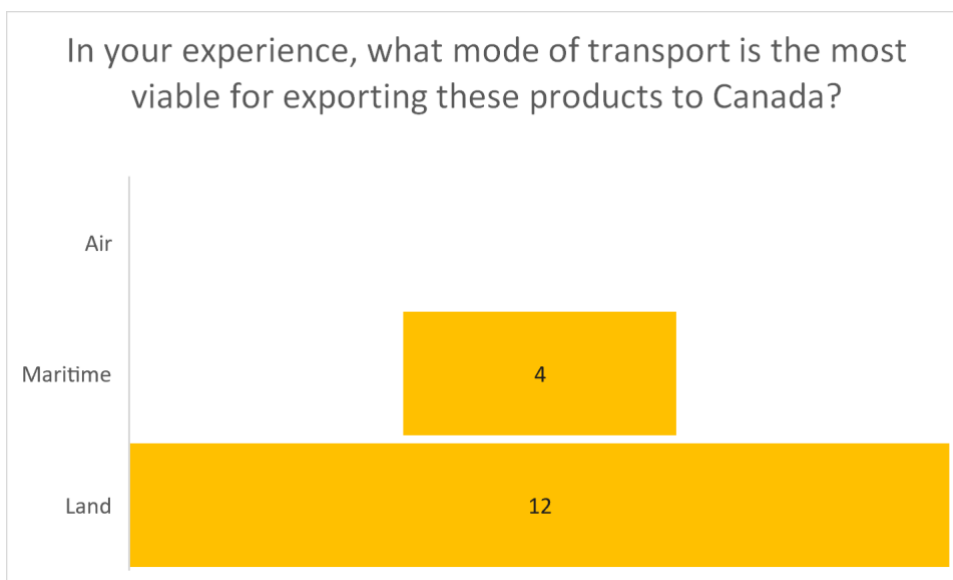


Figure 19. Subproduct processors, Question 6 (Author, 2023).

Question 6 is asked directly about what mode of transportation is used to export this subproduct to Canada. As in the previous survey, the most recommended mode of

transport for the export of guacamole to Canada is by land, some responses also used the maritime one, trying to assume that we are not talking only about guacamole but also about the other subproducts that exist.

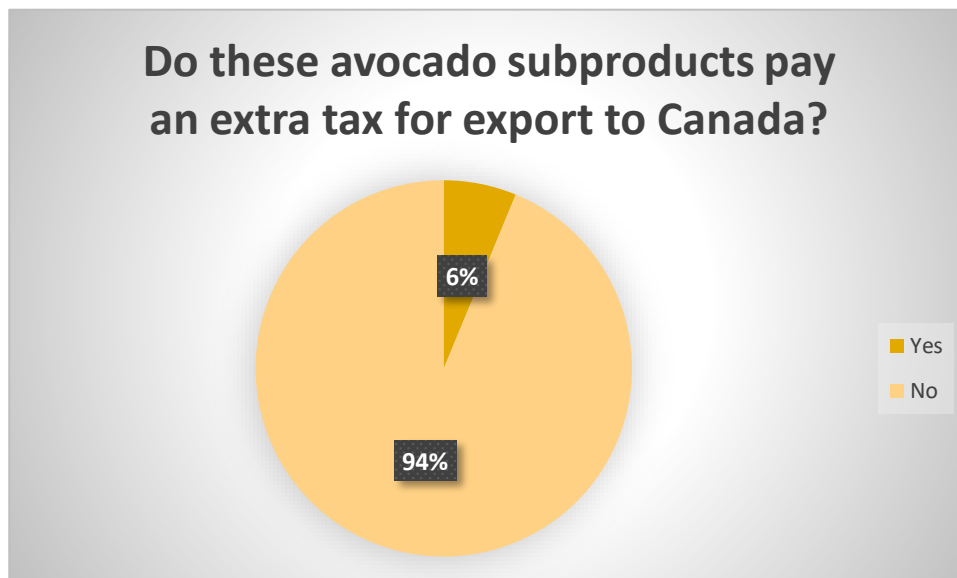


Figure 20. Subproduct processors, Question 7 (Author, 2023).

Question 7 is about obtaining information from the exporters if they pay any extra taxes on the export of subproducts to Canada. The most common answer is 90%, no extra taxes are paid. This is also related to Mexico's treaty with its northern neighbors, which is the T-MEC.

Question 8.

In this question, respondents are asked what logistical requirements are required for the subproducts to be exported to Canada. This question is especially important for the author because it is the research question of this thesis. After all, the author asked the question to understand the whole research of this thesis. Here the respondents answered very briefly with only words, what was needed logistically speaking to be able to carry out these exports.

Some of the answers were:

Certifications, labeling, packaging, customs documentation, Certificate of national mobilization or international phytosanitary certificate, Pediment, Invoice, Bill of Lading, Letter of instructions, and means of transport, among others. At this point, the author

brings together several ideas and information that he had already read in the research theory that he had previously carried out.

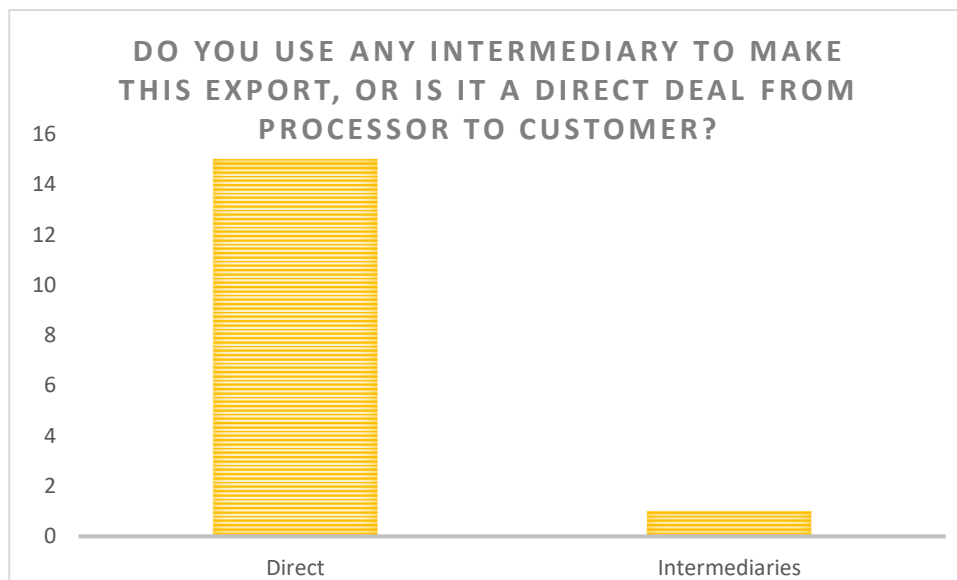


Figure 21. Subproduct processors, Question 9 (Author, 2023).

For question 9, it is a question of acquiring information to know if the sale of the subproducts is stopped by a third party for sale to marketers of these. The experts answer that it is a direct deal between the processing company and the final customer who will sell it to the public.

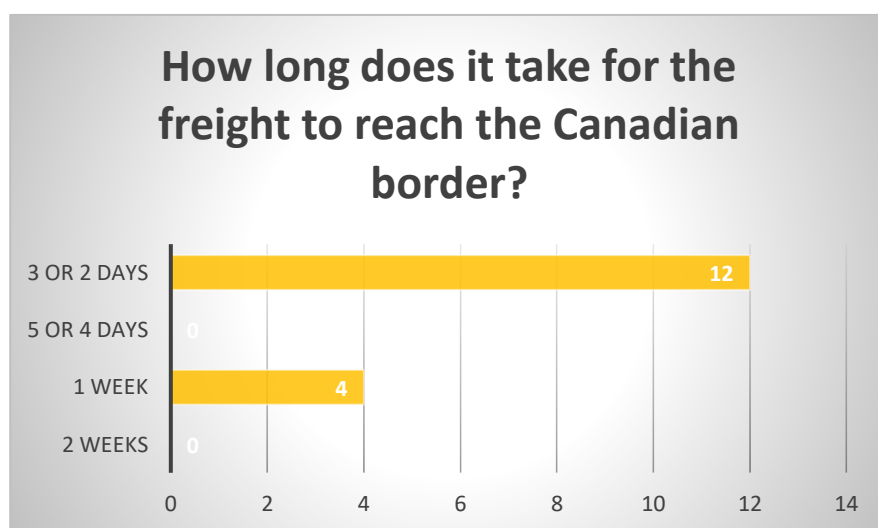


Figure 22. Subproduct processors, Question 10 (Author, 2023).

In this question, the author repeats the question for processors to restate the time it takes for freight to cross the Canadian border. Again, the experts answer that the estimated time for inland freight to reach Canada is 2 to 3 days. Here there were more answers in 1 week, which is author tries to deduce that they are referring to sea freight by the previous answers.

At the end of the analysis of this survey by the experts in the export of these subproducts, the author realizes how big is the market for these subproducts since 75% of the respondents work exporting to Canada, and that although it is common to export guacamole to Canada, the results show that it is not a large amount of the production of the companies that these experts work with. Deducing that it is still a new market for this subproduct of the Mexican avocado. The theory is also supported by the modes of transportation specified in the research, that the most used mode of transportation for these exports is by land and that the deal is direct from the buyer to the client and does not go through any intermediary, according to the experts' answers. Finally, in question 8, the research question of this thesis was asked, which served as a tool for the author to verify that the theoretical research is related to how these subproducts are being exported today.

With the results of these two surveys, the author can make an analysis joining the two research methods carried out in this thesis, which were qualitative and quantitative information. The objective of being able to answer the problems of this thesis and its research questions is to give the best conclusion and reference to the readers interested in starting to export these subproducts.

## 5 Conclusions.

After a long and exciting investigation of the logistics of Mexican avocado subproducts we are reaching the beginning of the end of this process of results to a research question, which began with a doubt of the author, which arose from a conversation he had with an expert in the avocado business, where the author was asking why the United States takes all the percentage of guacamole exports, in that conversation the author began to think that other markets could be potential for these subproducts in the future. At that moment the author began to ask the expert what the difference was between the Canadian market and the European market when he answered that the Canadian market is a little market exploited by the exporters of avocado and its subproducts since it is geographically convenient for Mexico. It was then that the author took advantage of the moment of this thesis to do the research and help companies or individuals who want to expand their business to a potential market, in this case, Canada. After mentioning how the idea came to the author, this part of the thesis is where he will land all the ideas that come to him, and back them up with the research of the theoretical framework and the surveys made by him to the experts in this field of Mexican avocado export.

Beginning this conclusion, the author has already mentioned the origin and the methodology he used to answer the most crucial question of the thesis, what are the logistical requirements for exporting Mexican avocado subproducts to Canada?

### 1. How many subproducts are they and Which are they?

The first investigative question helps us to understand what product we are talking about, it is not possible to know precisely how many avocado by-products exist, but from this matter derive several by which they will be divided into 2 aspects are the products of cold chain or perishable and the non-perishable ones.

The cold chain or perishable products are guacamole and avocado chunks, these subproducts are the most used as appetizers or complements for a meal. They need to maintain a specific temperature to maintain their quality and duration when exporting.

Non-perishable products are those that do not have a limited shelf life. These subproducts include avocado oil, flour, plastic products made from avocado pits, and vitamins for their nutrients.

The objective of this thesis is related to cold chain products such as guacamole and avocado slices, which are the products on which this research was developed, to help entrepreneurs engage in the process of guacamole and avocado chunks.

## 2. What is the custom compliance to reach a successful exportation from Mexico to Canada?

To answer this question based on the theoretical framework developed by the author, this aspect in the logistics of the subproducts because they are all legal procedures, documentation, certifications, and permits that must be to export from Mexico and import from Canada. Based on the theoretical research done by the author, he found that for customs compliance you need to have first of all, RFC, which is the registration that indicates that you can legally trade within Mexico. These are the documents required by the Ministry of Economy to be able to export from Mexico:

A commercial invoice.

Certificate of origin.

Packing list.

Transportation document.

A pediment.

Conferred order.

To have a customs broker or an entity to clear your merchandise from customs.

The Canadian government requires extra documents for these subproducts to enter the country without any problem.

- Cargo Control Document (CCD), also known as Form A8A or Approved Arrival Note.
- The accepted customs are in B-3 format.
- A certificate of authenticity.

## 3. What is the optimal transportation for exporting avocado subproducts to Canada?

To know the best way to transport here, it was not only enough with the theoretical research that the author sought the opinion of experts to be able to answer more straightforwardly for all those who are reading it can be helpful, without having to do more in-depth research.

The most viable method for the export of subproducts to Canada is by land mode. As explained above and as can be seen in the surveys, this mode of transportation is faster than sea and less expensive than air, so the truck will be the most optimal way for the export of these avocado subproducts. The specifications of these trucks for guacamole, the most important is that the transport box must be refrigerated to keep the products and not expire their expiration date. The routes that are most used for this export to Canada are the following:

Michoacan, MX - Nuevo Laredo, MX - Texas, USA - North Dakota, USA - Ontario, CA.  
Michoacan, MX - Reynosa, MX - Texas, USA - North Dakota, USA - Ontario, CA.

The latter is not widely used but is also considered a feasible route:

Michoacan, MX - Nogales, MX - Arizona, USA - Washington, USA - British Columbia, CA.

With these routes and clarifying that the best way of transportation is by land this question is solved, of course, the logistics or routes can vary according to the client or logistic company but according to the theoretical research as well as in the surveys, these are the most used routes for the export of these subproducts of the Mexican avocado.

#### 4. What are the risks that could affect the sub-products (likelihood and severity)?

This is the last question of this investigative question to answer the research question. Once the research and the idea that the author had with his experience in the subject of the Mexican avocado, it was solved with the surveys of the experts since I can confirm that his table of analysis of risks that can affect the subproducts at the time of export was correct. This is how the risks that can affect these logistics are:

Failures in the refrigeration of the box. They have a medium probability of happening, but it is manageable.

Another common risk in this logistics is the traffic that may be on the way or that the border may be closed, this is a low probability risk even if it happens it is still manageable.

A risk that compromises the export is when the product arrives at its destination already expired or does not arrive with the necessary quality, this is a risk that does not happen,

but if it were to happen it would compromise the export because it would depend on the deal that is reached with the customer regarding those subproducts that are not going to be able to be sold.

In summary, this study has shown that to think about expanding into the Canadian market, one has to think about all the logistics involved in getting the subproducts to the northern country. The research will greatly help those entrepreneurs who plan to expand their business by guiding them to the logistics requirements so that they can think about whether it is the right time to target the northern market.

The author trying to give in a summarized way thinks that taking into account these requirements is essential because it is the most important thing to be able to export the subproducts, that if these requirements are not fulfilled the whole operation will be at risk since the idea of the author with this research is to inform people who do not know about what is needed to export to Canada and not be affected in economic aspect for not having enough knowledge of what the whole logistical requirement entails.

## Sources

The New York times (2018). como se convietio en la fruta del comercio exterior URL: <https://www.nytimes.com/es/2018/04/02/espanol/aguacate-comercio-tlcan.html>. Accessed on 4/10/22.

Gobierno de Mexico (2022). productores de Michoacán exportaron más de 135 mil toneladas de aguacate a Estados Unidos. URL: <https://www.gob.mx/agricultura/prensa/notifica-estados-unidos-a-mexico-suspension-temporal-de-envios-de-aguacate-de-michoacan-294561>.

Accessed on 10/11/22.

International Business (2022). What is international business?.

URL: <https://courses.lumenlearning.com/suny-internationalbusiness/chapter/reading-what-is-international-business/>. Accessed on 29/10/22.

The economic times (2022).

Exportations. URL: <https://economictimes.indiatimes.com/definition/export> Accessed on 12/11/22.

Cambridge dictionary(2022). Subproduct.

URL: <https://dictionary.cambridge.org/dictionary/english/by-product>. Accessed on 15/11/22.

Persistence Market Research(2022). Avocado-Based products market.

URL: [www.persistencemarketresearch.com/market-research/avocado-based-products-market.asp](http://www.persistencemarketresearch.com/market-research/avocado-based-products-market.asp). Accessed on 20/11/22.

Líder empresarial (2022). 7 Benefits to export. URL: <https://www.liderempresarial.com/los-7-beneficios-de-exportar/>. Accessed on 20/11/22.

Reyes, G. (N.D.). El Aguacate Hass. URL: <https://www.reyesgutierrez.com/el-aguacate-hass/>. Accessed on 03/01/2023.

Economipedia (N.D). Exportación.

URL: <https://economipedia.com/definiciones/exportacion.html> Accessed on 05/01/2023.

Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT)(2018). Aguacate: un delicioso fruto con más de 10 mil años de historia. URL:

<https://www.gob.mx/semarnat/es/articulos/aguacate-un-delicioso-fruto-con-mas-de-10-mil-anos-de-historia?idiom=es>. Accessed on 06/01/2023.

Persistence Market Research. (2022). Avocado-Based Products Market: Global Industry Analysis 2017-2025.URL:

<https://www.persistencemarketresearch.com/market-research/avocado-based-products-market.asp>. Accessed on 06/01/2023.

MSC Mediterranean Shipping Company (N.D). Avocados.URL: [https://www-msc-com.translate.goog/en/industries/fruits/avocados? x\\_tr\\_sl=en& x\\_tr\\_tl=es& x\\_tr\\_hl=es-419& x\\_tr\\_pto=sc](https://www-msc-com.translate.goog/en/industries/fruits/avocados? x_tr_sl=en& x_tr_tl=es& x_tr_hl=es-419& x_tr_pto=sc). Accessed on 06/01/2023.

La Vanguardia (2021). Así nació el guacamole, la salsa mexicana saludable.URL: <https://www.lavanguardia.com/comer/tendencias/20210916/7709179/asi-nacio-guacamole-salsa-mexicana-saludable.html> Accessed on 15/01/2023.

Terra Avocado. (N.D). Derivados de aguacate. URL: <https://sites.google.com/a/terravocado.com/www/nuestra-oferta/derivados-de-aguacate> Accessed on 15/01/2023.

Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT). (2018). Aguacate: un delicioso fruto con más de 10 mil años de historia. URL: <https://www.gob.mx/semarnat/es/articulos/aguacate-un-delicioso-fruto-con-mas-de-10-mil-anos-de-historia?idiom=es>. Accessed on 10/02/2023.

United States Department of Agriculture Economic Research Service. (N.D). Mexico-Trade and FDI. URL: <https://www.ers.usda.gov/topics/international-markets-u-s-trade/countries-regions/usmca-canada-mexico/mexico-trade-fdi/> Accessed on 10/02/2023.

Gobierno de Canadá. (N.D). Relaciones entre Canadá y México.URL: <https://www.international.gc.ca/country-pays/mexico-mexique/relations.aspx?lang=spa>. Accessed on 15/02/2023.

Estrategia Aduanera. (N.D). ¿Qué documentos se requieren para importar a Canadá? Estrategia Aduanera. URL: <https://www.estrategiaaduanera.mx/que-documentos-se-requieren-para-importar-a-canada/> Accessed on 15/02/2023.

Freightos (2021). Incoterms 2021: Significado, gráfico y lista de Incoterms Freightos. URL: <https://www.freightos.com/es/freight-resources/incoterms-2021-significado-grafico-y-lista-de-incoterms/>. Accessed on 22/02/2023.

Simpliroute (N.D). Incoterms: Qué son y para qué sirven. Simpliroute. URL: <https://simpliroute.com/es/blog/incoterms>. Accessed on 22/02/2023

Velotrade.(N.D).What is Incoterms 2020?  
Velotrade.URL:<https://www.velotrade.com/blog/what-is-incoterms-2020/>. Accessed on 22/02/2023.

Prezi. (N.D). Exportación de aguacate a Canadá. Prezi. URL: <https://prezi.com/jksum2demtxc/exportacion-de-aguacate-a-canada/>. Accessed on 22/02/2023.

Cesuma.(N.D). ¿Qué es la logística del transporte? Cesuma.URL: <https://www.cesuma.mx/blog/que-es-la-logistica-del-transporte.html>. Accessed on 03/03/2023.

Comercio y Aduanas. (N.D.). Aduanas en México. Comercio y Aduanas. URL: <https://www.comercioyaduanas.com.mx/aduanas/aduanasmexico/aduanas-en-mexico/>. Accessed on 03/03/2023.

Estrategia Aduanera. (N.D.). Aduanas en México. Estrategia Aduanera.URL: <https://www.estrategiaaduanera.mx/aduanas-en-mexico/>. Accessed on 03/03/2023.

U.S. Customs and Border Protection. (N.D.). Pembina Area Port. CBP. URL: <https://www.cbp.gov/contact/ports/pembina-area-port> Accessed on 03/03/2023

Canada Border Services Agency. (N.D.). Contact Information - Emerson. CBSA. URL:<https://www.cbsa-asfc.gc.ca/do-rb/offices-bureaux/579-eng.html>. Accessed on 12/03/2023.

EZ Border Crossing. (N.D.). Pembina-Emerson Border Crossing. EZ Border Crossing. URL: <https://www.ezbordercrossing.com/list-of-border-crossings/north-dakota/pembina-emerson/>. Accessed on 12/03/2023.

U.S. Customs and Border Protection. (N.D.). COV. CBP. URL:  
<https://bwt.cbp.gov/details/02340101/COV>. Accessed on 12/03/2023.

Estrategia Aduanera. (n.d.). Procesos esenciales para el cumplimiento aduanero. URL:  
<https://www.estrategiaaduanera.mx/procesos-esenciales-para-el-cumplimiento-aduanero-2/>.  
Accessed on 12/03/2023.

Diario del Exportador. (2018). ¿Qué documentos se requieren para importar y exportar en México?. URL: <https://www.diariodelexportador.com/2018/05/que-documentos-se-requieren-para.html>. Accessed on 12/03/2023.

Canada Border Services Agency. (n.d.). Account-based collection of duty and taxes. URL:  
<https://www.cbsa-asfc.gc.ca/import/acc-resp-eng.html>. Accessed on 25/03/2023.

Mundi.io. (n.d.). Documentos necesarios para exportar. URL:  
<https://mundi.io/exportacion/documentos-necesarios-para-exportar/>. Accessed on 25/03/2023.

Agencia Aduanal. (n.d.). Selección de un agente aduanal. URL:  
<https://www.agenciaaduanal.net/seleccion-de-un-agente-aduanal-2/>. Accessed on 25/03/2023.

Manitoba Infrastructure and Transportation. (n.d.). The importance of transportation to Manitoba's economy. URL: [https://www.gov.mb.ca/mit/transpolicy/pdf/executive\\_summary.pdf](https://www.gov.mb.ca/mit/transpolicy/pdf/executive_summary.pdf).  
Accessed on 25/03/2023.

Element Fleet Management. (n.d.). La importancia de la logística empresarial: Qué es, objetivos y tipos. URL: <https://www.elementfleet.com.mx/recursos/blog/importancia-de-la-logistica-empresarial-que-es-objetivos-y-tipos>. Accessed on 25/03/2023.

USDA Economic Research Service. (n.d.). Mexico-Trade and FDI. URL:  
<https://www.ers.usda.gov/topics/international-markets-u-s-trade/countries-regions/usmca-canada-mexico/mexico-trade-fdi/>. Accessed on 25/03/2023.

Gobierno de México. (n.d.). T-MEC. URL: <https://www.gob.mx/t-mec>. Accessed on 25/03/2023.

Gobierno de México. (n.d.). México y sus exportaciones. URL:  
<https://www.gob.mx/agricultura/articulos/mexico-y-sus-exportaciones?idiom=es>. Accessed on 25/03/2023.

Gobierno de México. (n.d.). Potencial aguacate. URL: <https://www.gob.mx/cms/uploads/attachment/file/257067/Potencial-Aguacate.pdf>. Accessed on 25/03/2023.

US Customs and Border Protection. (n.d.). Pembina area port. URL: <https://bwt.cbp.gov/details/02340101/COV>. Accessed on 01/04/2023.

EZbordercrossing.com. (n.d.). Pembina-Emerson border crossing. URL: <https://www.ezbordercrossing.com/list-of-border-crossings/north-dakota/pembina-emerson/>. Accessed on 01/04/2023.

Clear Customs. (n.d.). Canadá. URL: <https://www.clearcust.com/es/aduanas/CA/canada>. Accessed on 01/04/2023.

Global Affairs Canada. (n.d.). Canadá y México. URL: <https://www.international.gc.ca/country-pays/mexico-mexique/relations.aspx?lang=spa>. Accessed on 01/04/2023.

Government report: Secretaría de Agricultura y Desarrollo Rural. (2019). Potencial de Aguacate. URL: <https://www.gob.mx/cms/uploads/attachment/file/257067/Potencial-Aguacate.pdf>. Accessed on 01/04/2023.

Government document: Secretaría de Economía. (2021). México Exporta a Canadá. URL: [https://www.economia.gob.mx/files/gobmx/canada/tmec\\_mexico\\_exporta\\_a\\_canada.pdf](https://www.economia.gob.mx/files/gobmx/canada/tmec_mexico_exporta_a_canada.pdf). Accessed on 01/04/2023.

## Appendix

### Survey for Avocado Subproducts Producers.



Este cuestionario es diseñado para un proyecto de tesis sobre la exportación de los Subproductos del Aguacate Mexicano a Canadá. En la cual se esta recolectando información por este medio hacia las procesadoras de estos Subproductos. Así se tendrá un mejor resultado sobre los requerimientos para estas exportaciones a Canadá.

1. ¿Trabajas o has trabajado para el mercado Canadiense?

- Si
- No

\_\_\_\_\_ + Add question + Add free text/media Add page break \_\_\_\_\_

2. ¿Canadá es un destino importante para tu producto?

- Si
- No

\_\_\_\_\_ + Add question + Add free text/media Add page break \_\_\_\_\_

3. ¿Que porcentaje de la producción va destinada a Canada?

- 60%
- 45%
- 25%
- 10%
- Menos del 10%

4. En términos de ganancia, ¿qué opción es más viable? ¿Exportar a Canadá o Europa? (escribir la opción y poner el por que)

\_\_\_\_\_ + Add question + Add free text/media Add page break \_\_\_\_\_

5. ¿Aparte del mercado de Estados Unidos y Canadá, exportas a otros países tus Productos?

- Si
- No

\_\_\_\_\_ + Add question + Add free text/media Add page break \_\_\_\_\_

6. ¿En tu experiencia que Medio de trasporte es mas viable para la exportación de estos productos a Canadá?

- Aereo
- Maritimo
- Terrestre

\_\_\_\_\_ + Add question + Add free text/media Add page break \_\_\_\_\_

7. ¿Estos productos del aguacate pagan un impuesto extra para su exportación a Canadá?

- Si
- No

8. ¿Que requerimientos logísticos se solicitan para que los productos puedan exportarse a Canadá?

\_\_\_\_\_ + Add question + Add free text/media Add page break \_\_\_\_\_

9. Utilizas algún intermediario para realizar esta exportación, o es trato directo Procesadora a Cliente.

- Directo
- Intermediarios

\_\_\_\_\_ + Add question + Add free text/media Add page break \_\_\_\_\_

10. ¿En que tiempo llega el flete a frontera canadiense?

- 2 Semanas
- 1 Semanas
- 5 o 4 Dias
- 3 o 2 Dias

## Survey for Avocado export experts.



Este cuestionario es diseñado para un proyecto de tesis sobre la exportación de los SubProductos del Aguacate Mexicano a Canadá. En la cual se esta recolectando información por este medio hacia los expertos de exportación de aguacate. Así se tendrá un mejor resultado sobre los requerimientos para estas exportaciones a Canadá.

1. ¿Has trabajado en exportaciones a Canadá?

- Si
- No

+ Add question + Add free text/media Add page break

2. ¿Se necesita una licencia específica para exportar a Canadá? ¿Cuentas con ella?

+ Add question + Add free text/media Add page break

3. ¿Qué problemas podrían existir al momento de la exportación a Canadá?

4. ¿Utilizas mas de un agente aduanal para este tipo de exportación o con uno solo basta?

- Solo 1 es suficiente
- Utilizo mas de 1 para realizarla

+ Add question + Add free text/media Add page break

5. ¿La refrigeración del producto que riesgo representa para la exportación a Canadá?

- Alta
- Media
- Baja

+ Add question + Add free text/media Add page break

6. ¿Costo aproximado del flete a Canadá?

- \$100 a \$600 Dolares
- \$700 a \$ 1300 Dolares
- \$1400 a \$2200 Dolares

+ Add question + Add free text/media Add page break

7. ¿Qué medio de transporte utilizarías para exportar a Canadá?

- Aereo
- Maritimo
- Terrestre

8. ¿Cuanto demora el flete para llegar a Canadá?

- 1 Semana
- 5 o 4 Dias
- 3 o 2 Dias

+ Add question + Add free text/media Add page break

9. ¿Cuál es tu opinión del mercado del aguacate en Canadá?

+ Add question + Add free text/media Add page break

10. ¿Qué Aduanas utilizas o utilizarías para exportar a Canadá?