

# Research on the self-sufficiency of food supply in Chile, with a specific focus on strawberry cultivation.



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**Research Justification**



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# I. Introduction



As part of the graduation phase of Adriaan den Herder Junior student of International Business Administration at HZ University of Applied Sciences, this Research Justification is written after a detailed Plan of Approach has been presented. During the period of September 5<sup>th</sup>, 2022, till January 9<sup>th</sup>, 2023, the trainee is employed within the Project Development department at BusinessHub Consultants S.A. (2022)<sup>1</sup> – hereafter referred to as BusinessHub-, based in Santiago, Chile.

The trainee Adriaan Junior is supervised by the in-company supervisor and CEO/founder of BusinessHub Mrs. V. Medina who has over 25 years of experience in international business development. Additionally, Mr. E. Veldhuis is supervising the trainee as tutor of HZ University of Applied Sciences.

As stated previously, the trainee is employed at the project development department. He deals with both national and international clients that seek to either expand their business activities abroad or equally companies from abroad that want to trade with Latin America. The daily activities consist of in-depth research and gaining a deep understanding of industries in which our clients work in, writing market analysis reports, recommending business opportunities, direct approach of (potential) businesses partners in national and foreign markets, conducting meetings, and networking.

For optimum results and partly due to HZ University of Applied Science (2022)<sup>2</sup> requirements, the report outset with the company analysis including its market and services followed up by the Business Hub's business model. A brief insight in the financial performance and development will follow. A problem analysis based on the 5W + 2H questions is formulated, the research questions and objective of the research project are reported followed by the research approach about how the Research Justification will be investigated. Based on the executive summary of the problem statement results are reported whereby a conclusion is drawn. Conclusively, a recommendation addressed to BusinessHub Consultants and investors is formulated.

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<sup>1</sup> [BusinessHub Consultants S.A.](#)

<sup>2</sup> [HZ University of Applied Sciences](#)



## II. Preliminary research



## 2.1 Company/product analysis & development

### 2.1.1 Description of the company profile

BusinessHub is a Chilean business development consultancy, founded in 2014, that assists both private organizations and public institutions including governments from the United States of America, and Asian and European countries to help them integrate into the South American market.

With a headquarter in Santiago, Chile, BusinessHub focuses on the integration of trade with Latin American companies, particularly in the Chilean, Argentine, Uruguayan, Colombian, Peruvian, and Ecuadorian markets. An additional rather small sized office is established in Lima, Peru where an additional Country Manager is based. This adds value to the company as it permits for a multinational reach and therefore establishment of business relations across different markets within Latin America. Aside from this a great advantage is having a multinational and multilingual team consisting of Chileans, Peruvians, Brazilians, and Britons. BusinessHubs clients are from all over the world meaning that both Spanish and English are spoken.

### 2.1.2 Market position

BusinessHub holds a rather strong market position as despite it being a relatively small organization, they have still established global activity due to its flexible and rapid way of working. The nature of BusinessHub's business culture enables this consultancy to compete against global active large bureaucratic government institutions (and rigid traditional consultancy groups) such as Chambers of Commerce. Where many get lost in regulations and legislation when seeking to expand their market activities abroad, BusinessHub has offered +1000 firms thorough, fast tailor-made service whether that is distributor research, due diligence, legal support, accounting services or assistance in mergers & acquisitions. Furthermore, their activities are totally borderless and can be globally providable. Additionally, their services work hand in hand with government entities, whereby 14 partnerships have been closed with government institutions and they have succeeded in 93 trade missions thus far. Their high-quality expertise in multiple parts of the world, whether that is in Asia, the United States of America, Europe, Peru, Chile, Colombia, Argentina, Uruguay, Paraguay, or Ecuador empowers each one with the desire to push boundaries and flourish.

### 2.1.3 Product & services

As a consultancy, the only services provided is assistance to private businesses and governments to capitalize on their market opportunities. Having drafted over 314 reports regarding market research, BusinessHub masters in drawing industry focused market reports, conducting market distributor research in Chile and beyond or finding external distributors or partnerships if preferred abroad<sup>3</sup>. Besides that, specific product/service market analysis can be provided. Additionally, BusinessHub works with a broad international network including investment banks such as 1<sup>st</sup> West. BusinessHub supports these expansions plans by supporting investment opportunity and identifying potential leads to bring them success.

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<sup>3</sup> [BusinessHub Consultants S.A.](#)



Furthermore, one of the services is the organization of trade missions in the therefore wished area, country or online. After companies have been set in contact with each other, often a first site-visit follows meaning both companies meet at the factory, plant side, office etc. to get introduced to the product/service before trading agreements will be confirmed. BusinessHub normally does not take part in the trade missions itself unless desired by the client.

Uncertainty about foreign market approach and new markets is a frequent phenomenon that is acknowledged amongst companies that look for expansion of their business activities. BusinessHub is excellent in providing due diligence to make sure the client is on the right track, pointing in the right direction taking away doubts. What is more, navigating market regulations and legal and accounting services in which one can drown.

#### **2.1.4 Business model**

The business model embraces three major models it works upon. Firstly, supporting companies doing trade with Latin America aiming for economic growth, market development subsequently improved living standards in the region by increasing movement of capital, sales and creating jobs in both the target country and in the region itself.

Secondly, the business consultancy has several collaboration agreements with overseas governmental institutions such as New York State (2022)<sup>4</sup> and ITPC (2022)<sup>5</sup> endorsing international trade between Latin America and representation of governments. One example is Invest Hong Kong (2022)<sup>6</sup>, a government department for foreign direct investment which BusinessHub has a contract with to help South American companies establish an office in Hong Kong.

Lastly, BusinessHub's third model contains identification of profitable organizations where there is potential for mergers and or acquisitions. In collaboration with investment bank 1<sup>st</sup> West Bank (2022)<sup>7</sup>, BusinessHub aim is to identify strategic investors for Chilean and Peruvian companies that are looking to sell themselves or raise working capital.

#### **2.1.5 Financial insights**

BusinessHub is a privately owned company owned by Veronica Medina. Due to confidential reasons, financial numbers cannot be published in this report. However, the company performance will be expressed in percentages. BusinessHub has private and public customers spread over several continents. From August 2021 to August 2022, the USA market has grown by 0,3% to 58,02% in 2022. The Asian market decreased. E.g., Hong Kong decreased from 18,57% to 11,88% and Indonesia decreased with 1% to 19,61% in 2022. Additional markets such as Ireland, Trinidad y Tobago, Canada and Belize have increased from 1,91% in 2021 to 5,71% market share in 2022 so far.

In contrast with 2021, the company has perceived an increase of 46,88% of projects and an increase of its turnover of 56,92% during the first half year of 2022, reported by G. Suez –

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<sup>4</sup> [New York State](#)

<sup>5</sup> [Indonesian Trade Promotion Center](#)

<sup>6</sup> [Invest Hong Kong](#)

<sup>7</sup> [1st West Bank](#)



Project Development and Financial Manager at BusinessHub “Financial report BusinessHub 2021’.

### 2.1.6 Development

In the past 6 months, BusinessHub has continued developing. The Asian market is estimated to recover as large projects are awaiting and moreover, it became representative for the Pennsylvania state which means that the company has the authority to connect and put into effect trade agreements with external governments and companies.

In comparison with the period between 2018-2021, projects with regards to Invest Hong Kong have an upward trend. Additionally, the European market will be investigated and approached even though several actions have been campaigned in Germany which didn't lead to success due to strong competition from the local Chamber of Commerce.

## 2.2 Problem analysis

Chile must develop a self-sufficient food supply, as agriculture currently produces less than half of domestic needs. In compliance with International Trade Administration (2022)<sup>8</sup> reasons to import products instead of producing it themselves:

- if the products are not available domestically through local production.
- if it is cheaper to import rather than buy domestically; or
- if imported products offer a higher quality than those available in the domestic market.

With an area size of 756,700 km<sup>2</sup>, a population of 19,1 million, and 1,303,210 ha of annual and permanent crops only, producing less than half of the country's domestic agriculture' needs is inefficient and unsustainable in terms of the therefore required import volume.

It is observed in Chile amongst the agriculture sector and its added value to the economic performance of the country.

The agricultural sector has a major impact on both Chilean society, economy, and environment.

- A high percentage of their GDP is spent on the import of agricultural products.
- The agriculture sector is missing growth opportunities and the number of labourers is not optimum.
- Goods need to be imported which is harming the environment unless goods are not grown locally.

The problem was first observed in 2019 by the Ministry of Agriculture of Chile (OECD, 2020)<sup>9</sup> after creating a national plan to promote agricultural and forestry farmer associations to create, formalize or strengthen farmer associations.

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<sup>8</sup> [International Trade Administration](#)

<sup>9</sup> [OECD](#)



It is observed through quantitative research after comparing the Chilean agriculture performance with other countries' agricultural performance (Santander Trade, 2022)<sup>10</sup>.

The problem has been observed annually since 1973. The use of fixed capital, working capital, labour, and land were not affected by changes in the aggregate technology used in Chile. This outcome suggests that there is a weak link between the Chilean agricultural sector and the evolution of technology. Therefore, to stimulate technological innovation in agricultural production it is necessary to improve productivity in the Chilean agricultural sector.

In fact, innovation surveys taken by the Ministry of Economy of Chile (2012)<sup>11</sup> show that the agricultural sector showed the lowest degree of innovation between 2007-2011. The agricultural sector of developing countries is labour abundant (relative to land), with land being the main agricultural output. One can observe that labour took importance (relative to land) from 1973 to 2000. Nevertheless, this ratio declined in the last decade of analysis, i.e., 2001-2010.

### 2.3 Research questions

Entrenched upon the problem analysis, the following main question is concluded: **Research on the well-sufficiency of food supply, specifically strawberries of Chile.** The ensuing sub questions must contribute to the main question.

1. Sub-question: During the period of 2019-2021, what were the export and import volumes of Chilean strawberries and what stands out about that?
2. Sub-question: During the period of 2019-2021, what was Chile 's domestic production volume of strawberries?
3. Sub-question: What is Chile's main reason for its insufficient self-supply of domestic needs of strawberries?
4. Sub-question: What technology innovation is needed from abroad to improve the domestic growth of this fruit in Chile?
5. Sub-question: To which extent can BusinessHub - in terms of providing organizations of both countries' business opportunities – differ in contrast to its competitors such as Chambers of Commerce?

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<sup>10</sup> [Santander Trade Markets](#)

<sup>11</sup> [Ministry of Economy of Chile](#)

## 2.4 Project aim

The aim of this research is to investigate market opportunities for the project development department at BusinessHub by linking the Chilean and Dutch agriculture sector kicked off in September 2022. Initial, thorough research has created insight in a specific fruit or vegetable kind that Chile grows but does not meet the current domestic demand. Both Dutch and Chilean specialist have been approached and will be connected after the research has been conducted with the aim to share innovation and techniques with focus on improving the performance of the specified fruit or vegetable with BusinessHub acting as mediator and will benefit from it as they will be able to expand their market range to the Netherlands and other countries where there are companies that contribute to optimising Chilean cultivation.

The professional product can be seen as a 'Start Report' which is useful for both countries' organisations that are interested in continuing with this process of transfer of knowledge at first and machinery, technic, and crops in the future. The professional product consists of; market insights, trends, product data, import/export volumes, as well as organisations that can be part of the development process due to their product/service. Therefore, both desk and field research e.g., WUR (2022)<sup>12</sup> were required by the means of market analysis, conducting interviews, attending trade shows e.g., Expo Chile Agrícola (2022)<sup>13</sup>, FruitTrade (2022)<sup>14</sup>. Approaching leads by providing them business opportunities is the next aim once the research has been delivered. According to the SWOT-analysis, market insights are drafted.

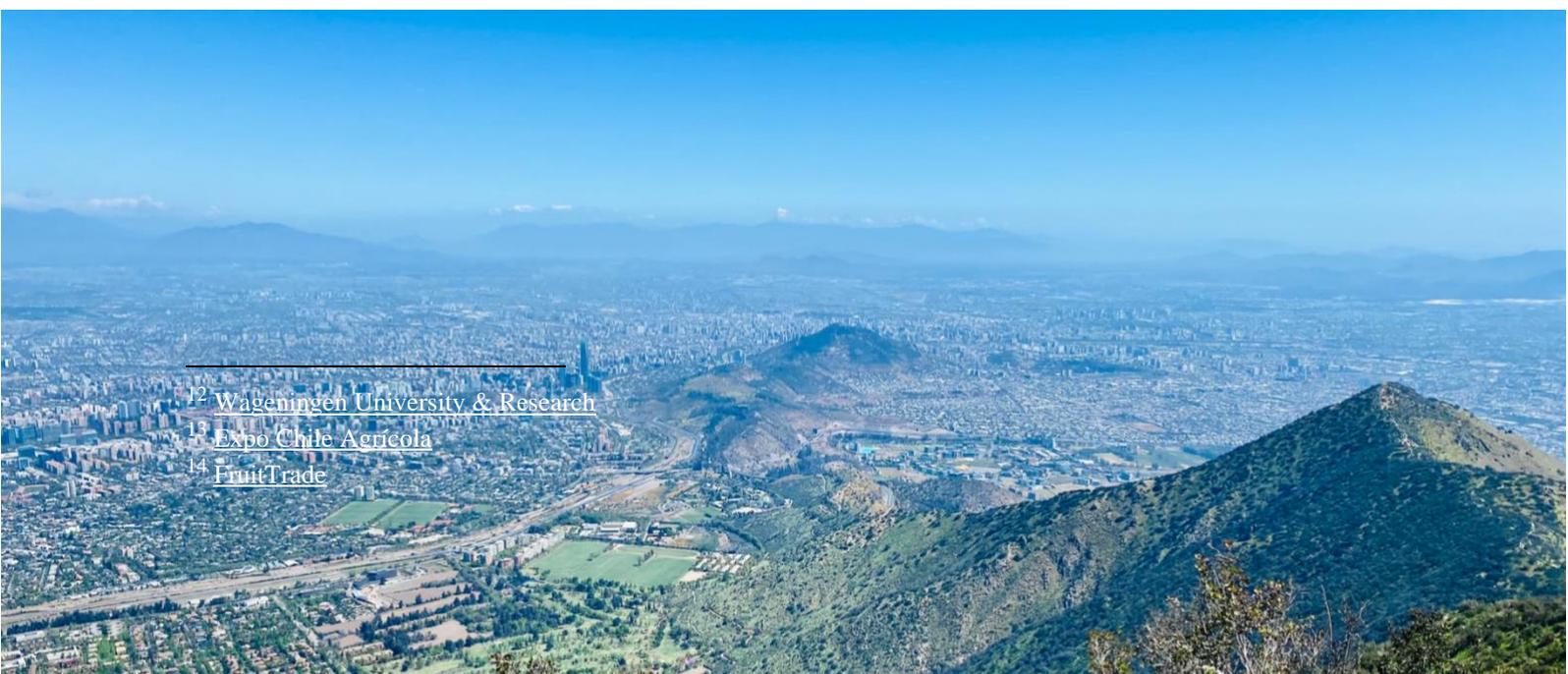
In December 2022 the research has come to an end and useful thorough findings have led to a final market industry report of Chilean strawberry cultivation including the identification of agricultural institutions, innovation organizations specialized in technology, water systems and machinery that must be invested in and support in this business opportunity. Albeit that the connecting process and aimed collaboration between the parties mentioned will take months and potentially up to years and be continued through not only information exchange but international trade of equipment and a subsequent trade of strawberries due to the desired production increase.

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<sup>12</sup> [Wageningen University & Research](#)

<sup>13</sup> [Expo Chile Agrícola](#)

<sup>14</sup> [FruitTrade](#)





# III. Research approach



**3.1** Sub-question: During the period of 2019-2021, what were the export and import volumes of Chilean strawberries and what stands out about that?

Through the means of databases e.g., Veritrade (2022)<sup>15</sup>, Santander Trade (2022)<sup>16</sup> and again agriculture institutions e.g., Servicio Agrícola y Ganadero (2022)<sup>17</sup> and Copeval (2020)<sup>18</sup> useful data must be collected and analysed on national level and international level regarding import of products to find out what specific fruit or vegetable is affected and where the research justification will focus on.

**3.2** Sub-question: During the period of 2019-2021, what was Chile 's domestic production volume of strawberries?

Domestic data will continue being collected through desk and field research to support the researched of fruit/vegetable, to investigate the gap of import, domestic supply, and demand. Quantitative analysis is key here which will be collected through e.g., Veritrade.

**3.3** What is Chile's main reason for its insufficient self-supply of domestic needs of strawberries?

To write an accurate research justification that will follow up on this Plan of Approach, it is essential to conduct a detailed desk research that provides insight about how the problem arose. Chile is a major importing country, and it is essential to find out whether increasing production to match domestic demand won't harm its economic and commercial model. Next to desk research through e.g., OECD (2022)<sup>19</sup> and scientific reports of e.g., Universidad de Chile (Sustainable Agriculture and Healthy Food in Chile)<sup>20</sup>, local Chilean agriculture institutions will be approached to hold interviews with such as Sección de Emergencias y Gestión de Riesgos Agroclimáticos of Ministry of Agriculture Chile (2022)<sup>21</sup>, Gerbrand Jung, Agricultural Advisor at the Embassy of the kingdom Netherlands<sup>22</sup> in Chile and private companies such as Fruits from Chile (2022)<sup>23</sup>.

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<sup>15</sup> [Veritrade](#)

<sup>16</sup> [Santander Trade](#)

<sup>17</sup> [SAG](#)

<sup>18</sup> [Copeval](#)

<sup>19</sup> [OECD](#)

<sup>20</sup> [Universidad de Chile](#)

<sup>21</sup> [Ministerio de Agricultura](#)

<sup>22</sup> [Embassy of the kingdom of the Netherlands](#)

<sup>23</sup> [Fruits from Chile](#)

### 3.4 What technology innovation is needed from abroad to improve the domestic growth of this fruit in Chile?

Here country sectors will be investigated therefore resulting in information on differences of applied technology and innovation to conclude what specific support Chilean agriculture needs and to what degree foreign institutions e.g., Ministry of Agriculture (2022)<sup>24</sup> can support them in that manner. Next to desk research, interviews will be conducted with e.g., CODESSER (2022)<sup>25</sup> and Sociedad Nacional de Agricultura (2022)<sup>26</sup> followed up by arranging meetings to discuss business opportunities resulting in growth. Here, BusinessHub will benefit as a mediator between different nations. Organization will be attracted as business opportunities are being brought up in this research which is crucial for one 's continuity in a competing industry. Collecting qualitative analysis is essential as well as in sub-question 3.5.

### 3.5 To what extent can BusinessHub - in terms of providing organizations of both countries' business opportunities – differ in contrast to its competitors such as Chambers of Commerce?

As a result of the research analysis, BusinessHub's (potential) position in the Dutch market will be analysed based upon the services it offers and the experience of Dutch institutions with BusinessHub throughout this project and not to forget, the accomplishment of this research. Field research will be conducted to collect evidence and useful data about the process of investigating the markets and connecting the industries of both countries will follow once the research has been delivered.

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<sup>24</sup> Ministry of Agriculture

<sup>25</sup> Codesser

<sup>26</sup> SNA



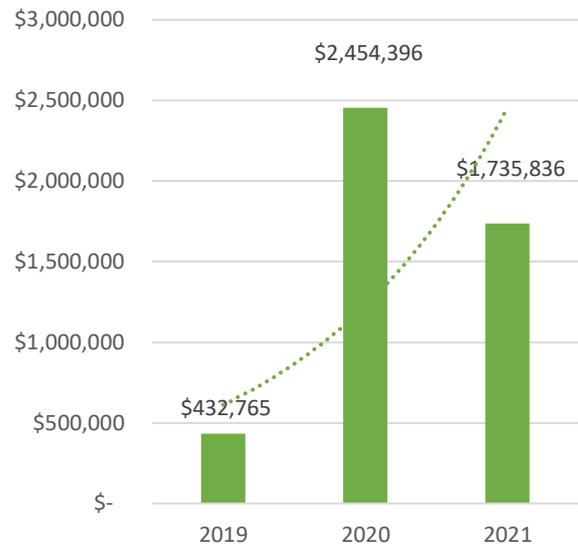


**Figure 1.** Chilean strawberry exports in \$USD



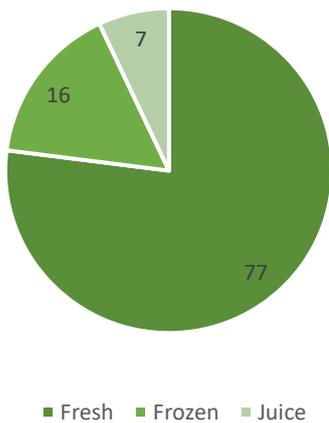
Source: Santander Trade (2022)<sup>27</sup>

**Figure 2.** Chilean strawberry imports in \$USD



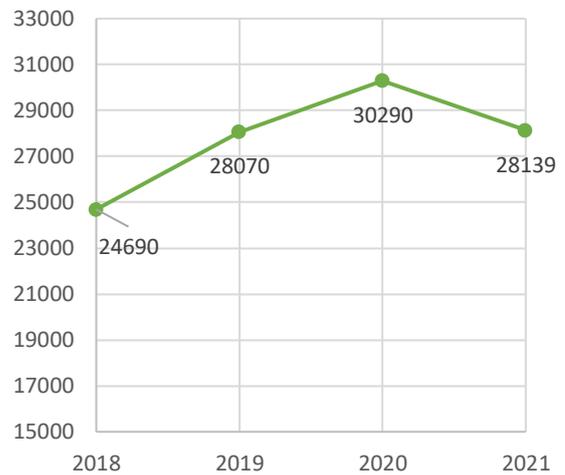
Source: Santander Trade (2022)<sup>28</sup>

**Figure 3.** Exported Strawberries per Category by Chile in 2021 (%)



Source: International Society for Horticultural Science (2021)<sup>30</sup>

**Figure 4.** Volume of Domestic Strawberry production in tons



Source: Tridge (2022)<sup>29</sup>

<sup>27</sup> [Santander Trade](#)

<sup>28</sup> [Santander Trade](#)

<sup>29</sup> [Tridge](#)

<sup>30</sup> [ISHS](#)



# IV. Results



## 4.1 Executive summary of the problem statement

Chile's current strawberry cultivation is inefficient relative to the market opportunities and global demand for this agricultural product. Strawberry exports are increasing but there has been a firm decrease in import and domestic production has been conspicuous since 2021. The decrease is due to several influencing factors that will be explained later in this section. In consonance with Crop Trust (2022)<sup>31</sup> 86-94% of Chile's food consumption comes from non-domestic crops. Therefore, the country is highly dependent on the import of goods. According to International Trade Administration (2022)<sup>32</sup> (ITA) there are several reasons why a country imports goods which, in the case of Chile, is due to insufficiency in the domestic food supply chain. Also, limited access to fresh fruits and vegetables forces Chile to improve its food production for local demand, thus International Society for Horticultural Science (2021)<sup>33</sup>.

To understand the reason why productivity is this low, it is essential to identify several factors that have a negative influence on the strawberry cultivation performance of the country.

### 4.1.1. Water systems and irrigation infrastructure

Water allocation of water facilities from water facilities is the first influencing factor to look at. The Instituto Sistemas Complejos de Ingeniería (ISCI) (2019)<sup>34</sup> claims that the southern part of Chile has a lot of natural water reservoirs due to the mountains, whereas northern Chile is known for its desert and drought. These dramatic geographical contrasts and therefore need of water supply in each region emphasize the necessity of optimization of water supplies. Therefore, technology investment is necessary to optimize the distribution of water supplies. What is more, the quantity of water that is collected in reservoirs is decreasing over the years. Additionally, "the agriculture sector has enough water availability from the snow-capped mountains to grow its crops but the distribution of water to the crop sites is still a major issue" Echenique Lay, M. – General Manager at CODESSER (2022, November 8) Personal Interview (*Min. 11:06*), (P. Kok, Managing director at Vrugteboom International B.V., Online Interview, November 7, 2022) (*Min. 28:14*), and (J. Pinto Ruiz, Technical Manager at ASOEX Phone Interview October 28, 2022). See Appendix C. *Interview Transcripts*.

**“Over 50% of fruit growers in Chile are having serious shortage of manual labour.”**

### 4.1.2. Manual labour

International Journal of Agriculture and Natural Resources (2021)<sup>35</sup> emphasizes the second problem Chile is facing by saying "the continuation of the already existing trends of a

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<sup>31</sup> [Crop Trust](#)

<sup>32</sup> [International Trade Administration](#)

<sup>33</sup> [ISHS](#)

<sup>34</sup> [ISCI](#)

<sup>35</sup> [IJANR](#)

decreasing supply of labour and an increasing demand for agricultural labour, mostly driven by the substitution of crops into labour-intensive but higher-value export crops". Also, the research indicates the rapidly increasing costs of labour in this sector. Especially the "higher value but more labour-intensive crops are inevitably taking their toll in the form of an increasingly 'tight' agricultural labour market. In consonance with Fresh Fruit Portal (2021)<sup>36</sup>, over 50% of fruit growers in Chile are having serious shortage of manual labour of whom 50% indicated that they had 50-70% fewer workers needed for harvesting and packing activities. In 2017, only 7% of businesses had a shortage of manual labour, according to the International Labour Organization (2019)<sup>37</sup>. M. Echenique (*Min. 14:54*) confirms this by saying that "small cultivators cannot increase their scale of growth as they lack manual workers and lack financial investment to grow their business. Strawberries are a complicated product that requires high manual labour that basically isn't available".

Confirming Javiera Pefaur Lepe, Fruit, and Potato Sectoralist at Oficina de Estudios y Políticas Agrarias (ODEPA) (personal communication, November 14<sup>th</sup>, 2022) graphs 4. & 5. show the correlation of decreasing Chilean fruit cultivation as an effect of the decreasing manual labour availability. (H. Bouman, Business Manager Latin America at Rijk Zwaan, Online Interview, October 26, 2022) (*Min. 22:48*) states that "Chile is capable to deliver constant quality which offers a competitive advantage. A disadvantage is that neighbour countries can produce cheaper." "The Chilean strawberry cultivation has a good quality but a limited production due to few manual labour" reports M. Echenique Lay (*Min. 16:35*). Furthermore, she says (*Min. 18:47*) "Immigrants that are used for seasonal picking activities during harvest season is a tendency in Chile but only a limited percentage of foreign workers is permitted."

#### 4.1.3. Financing and logistics

M. Echenique Lay (*Min. 29:00*), and J. Pinto Ruiz experienced the "difficulty of collecting financial funds needed for investment to increase the volume of strawberry cultivation and the required investment in technological capacity as the Chilean agriculture industry is very heterogenic. Some still use a spade". Additionally, "Chile is facing major challenges with its exportation logistic service. High prices are applied to get harbour access due to a high supply of goods that need shipment and as the port size is limited" says M. Echenique Lay (*Min. 12:59*).



As enumeration to the previous factor, J. Pinto Ruiz asserts that "the delay of port extension by Chile is causing the international trade to be holding back. Chile is relatively isolated from other parts of the world and therefore goods are mainly transported by sea transportation.

<sup>36</sup> [Fresh Fruit Portal](#)

<sup>37</sup> [ILO](#)

Reason for having postponed the extension of major ports is the shortage of financing as the government has not enough funding left due to high COVID-19 expenses of previous years.” This is reaffirmed by ISCI (2019)<sup>38</sup> concluding that in terms of port access, Chile has lack of financing to extend its current ports and will not be ready for berthing before 2030. Furthermore, it reports that logistics in Chile face a major challenge in the transfer of products. Fresh products have a limited time in which they need to be transferred and consumed. Chile being in the far southern hemisphere, further away from other parts of the world, gives it a competitive disadvantage in contrast to other neighbouring countries e.g., Peru and Argentina. The participant M. Echenique Lay (*Min. 33:22*) says that “there are several barriers to enter foreign markets such as transportation, taxes, trade agreements and certification that is required for export. “The far distance distribution to foreign markets such as Europe is impossible for products with a low shelf-life” concludes J. Pinto Ruiz.

To sum up, Germination (2022)<sup>39</sup> reports that the permanent need of the fruit sector for water resources seems to be its main challenge, particularly the semi-arid valleys form a major challenge. Producers are increasingly looking for earlier maturing climatic zones to reach better prices so they will be able to reach the major markets of the northern countries. As a result, strong investments in technology and infrastructure to meet its challenges are still required. Similarly, this growth in the sector also generates needs and demands for communication infrastructure and access to the country’s ports, according to Invest in Chile (2019)<sup>40</sup>.



## 4.2 Business Opportunities

After identifying the factors that have a negative influence on the Chilean strawberry cultivation, several motives are given next why investing in this industry offers business opportunities and how this should be addressed. There are numerous reasons why investing in Chilean strawberry cultivation is a good lucrative financial opportunity.

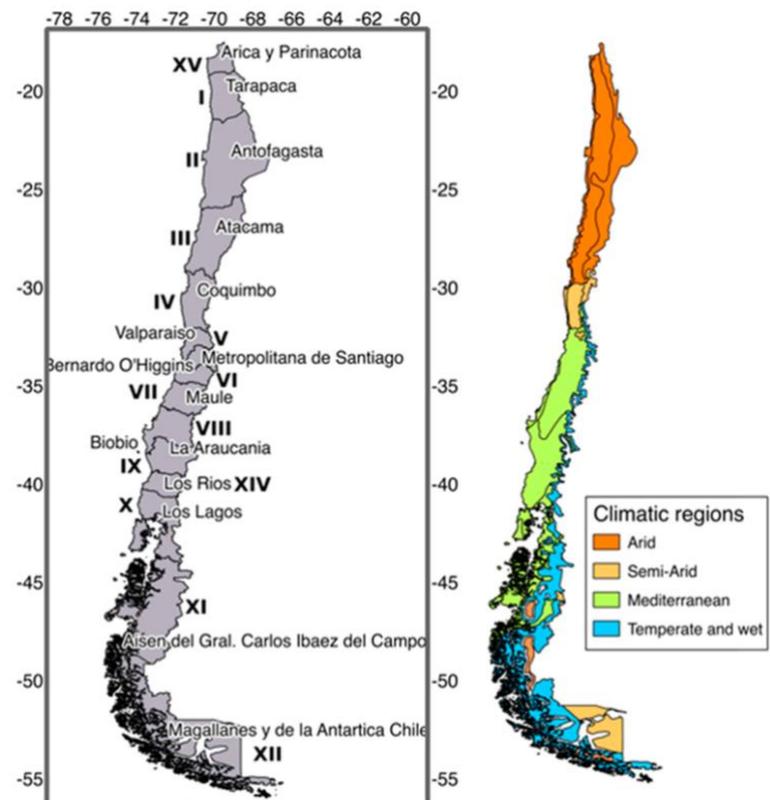
<sup>38</sup> [ISCI](#)

<sup>39</sup> [Germination](#)

<sup>40</sup> [Invest in Chile](#)

#### 4.2.1. Location and climate

The 5000–6000-meter Andes Mountain range is an excellent natural protection barrier making it difficult for diseases, cases of fungi and bacteria to access the crops fields, says P. Kok (*Min. 16:20, 30:12*). Geographic isolation by ocean, mountains, and the driest desert on earth decreases pest incidence, thus M. A. Sánchez in a GM Crops & Food report (2020)<sup>41</sup>. Reported by ITA (2022)<sup>42</sup> Chile has favourable geographic and climate conditions for food production and because of the country's location in the southern hemisphere, agricultural production is counter-season for the main consumer markets in the northern hemisphere. Good climatic conditions and abundant water resources favour Chile's agriculture. In consonance with Crop Trust (2022)<sup>43</sup> stable and varied climatic conditions benefit the cultivation of a wide range of crops. Chile has a temperate climate in the Atacama Desert in the north, a Mediterranean climate in the central and fertile central valley region, cool and damp climate in in the southern low coastal mountains and rugged Andes in the East.



M. Echenique Lay (*Min. 23:19*) states "Thanks to its climate variety, different crops can be cultivated throughout the country". P. Kok (*Min. 21:48*) favours strawberry cultivation in Chile by saying "strawberry is an interesting product as Chile has many sun-hours along with a cool climate". Invest in Chile (2022)<sup>44</sup> highlights it again through the following "We have diverse climates and can count on highly fertile land. We are one of five macro zones in the world that has Mediterranean-like climate." Invest Chile concludes that geographic barriers and strict border controls strengthen the zoo sanitary and phytosanitary safety of the country.

#### 4.2.2. Logistics

Furthermore, reliable logistics is an indicator highly appreciated by those that trade with Chilean companies. H. Bouman (*Min. 23:45*) says "Chile is a reliable country to do business with along with excellent logistics." This however does not take away the increasing shipment prices and need for harbour extension mentioned in 4.1.3.

<sup>41</sup> [GM Crops & Food](#)

<sup>42</sup> [International Trade Administration](#)

<sup>43</sup> [Crop Trust](#)

<sup>44</sup> [Invest in Chile](#)



#### 4.2.3. Politics and International Trade Agreements

The adequate export facilities thanks to FTA 's with all major markets, and political and legal stability, ensuring security for the activities, programs, and contracts are characteristics that set Chile apart from surrounding Latin American countries, claims GM Crops & Food.

Finally, robust, and stringent, science-based regulation that fits both public and private cultivators' needs, and seed industry operations is an additional strength in which Chile succeeds.

The extensive network of trade agreements allows preferential access of Chilean products to approximately 88 percent of global GDP. Chile has adopted a commercial policy to open and diversify markets for its agricultural and food products. Chile has 31 international trade agreements that cover 65 markets, thus ITA (2022)<sup>45</sup>.

#### 4.2.4. Quality

In contrast to other Latin American countries GM Crops & Food (2020)<sup>46</sup> says, Chile offers high quality products due to implementation and cutting-edge. Chile remains as a country that is known as a leader in seed production, which is based on its geographic, climatic, political, and economic advantages, which have led the private sector to focus on this country for conducting research and multiplying high-value seeds. In addition, GM Crops & Food (2020)<sup>47</sup> states that Chile has a strong and well-established National Seed Trade Association, ANPROS, which represents over 98% of the industry and includes both Chilean and local subsidiaries of major international companies. It encompasses 73 associated companies. This guild works closely with regulatory bodies to achieve excellence in seed production and promote sustainability for the industry. The Dutch company Rijk Zwaan specializes in the development, production, and sales of vegetable seeds at their plant in Chile. "From there both seeds of tomatoes, cucumbers, peppers, lettuce, spinach, auberges, greens and celery are shipped to the Netherlands from where they are being resold across the globe. "Chile is an excellent location to produce seed strains due to its climate and infrastructure" according to H. Bouman (*Min 14:44*).

#### 4.2.5. International tension

Additionally, although the Russia Ukraine war poses a major international threat it poses opportunities<sup>48</sup> for Chile's agricultural sector. The war between the Russian Federation, Ukraine and the United States of America which has dramatical effects on Europe in terms of its decreasing energy availability forcing prices to increase drastically. Across northern and western Europe, vegetable producers are contemplating halting their activities because of the financial hit from Europe's energy crisis and the exorbitant production cost, further threatening food supplies.

Surging gas prices are the biggest cost that vegetable farmers cultivating inside greenhouses face, Reuters (2022)<sup>48</sup> said. Luxtoday (2022)<sup>49</sup> says " Wittenberg Gemuese – a producer of tomatoes, strawberries, and peppers – was left without heating and hot water for greenhouses." European farmers warn that the situation could further threaten food

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<sup>45</sup> [International Trade Administration](#)

<sup>46</sup> [GM Crops & Food](#)

<sup>47</sup> [GM Crops & Food](#)

<sup>48</sup> [Reuters](#)

<sup>49</sup> [Luxtoday](#)

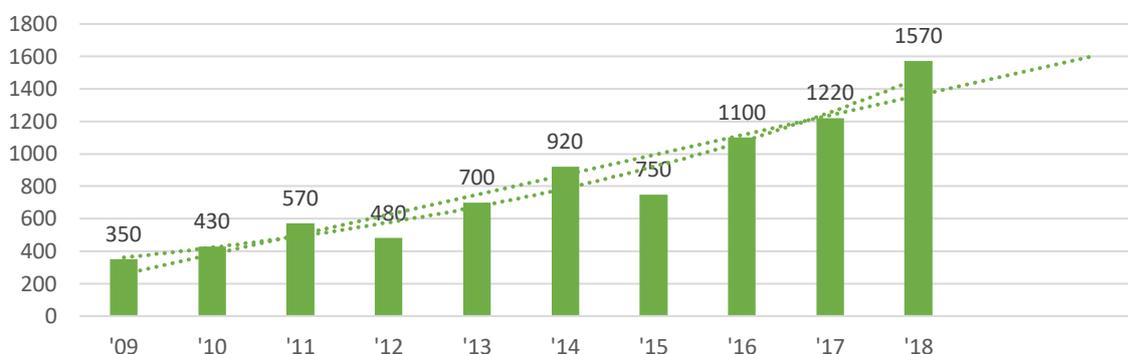
supplies, as growing production in greenhouses could become unsustainable. Greenhouse industry group Glastuinbouw Nederland (2022)<sup>50</sup> says up to 40% of its 3.000 members are in financial distress. Fresh Fruit Portal (2022)<sup>51</sup> reports that the cost of fertilizer, packaging and transport are all on the rise and jeopardizing margins. Even in warmer countries like Spain, fruit and vegetable farmers are grappling with a 25% increase in fertilizer costs. The demand for strawberry production from other parts of the world will therefore increase.

Nonetheless, whilst the European market might have a high potential for the Chilean strawberry industry, one should bear in mind the shipping distance of this premium fruit type along with the durability and sustainability aspect. For some reason, trading within the Americas offers ample possibilities too on which the industry must focus first.



**European fruit and vegetable farmers are grappling with a 25% increase in fertilizer costs.**

**Table 5.** Fruit Export Peru 2009-2018 (000 tons)



Source: *Gateway to South America* (2019)<sup>52</sup>

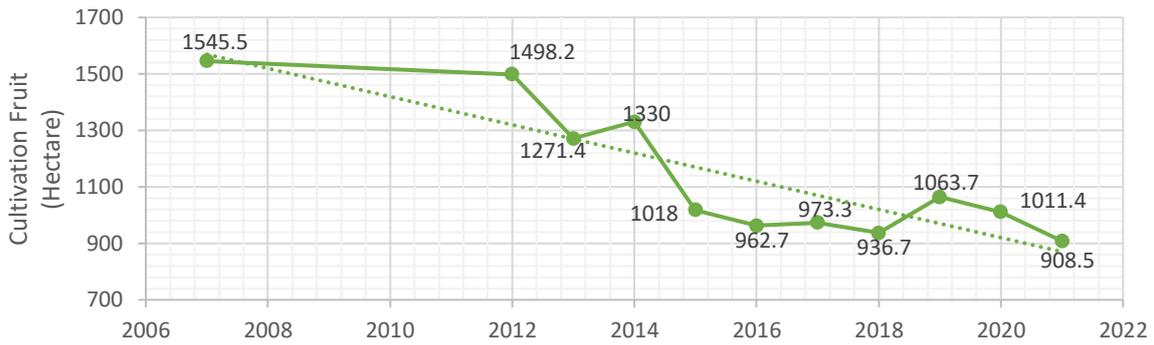
<sup>50</sup> [The National News](#)

<sup>51</sup> [Fresh Fruit Portal](#)

<sup>52</sup> [Gateway to South America](#)

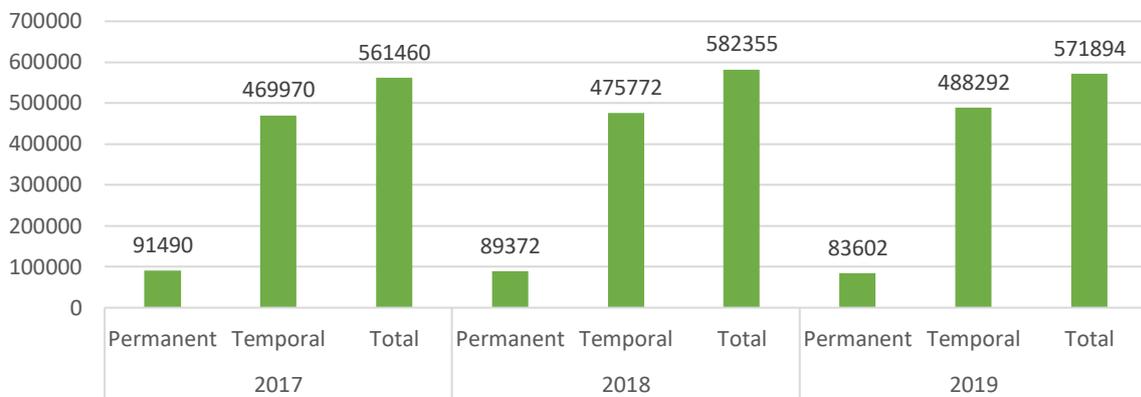


**Table 6.** Chile Fruit Cultivation in Ha m<sup>3</sup>



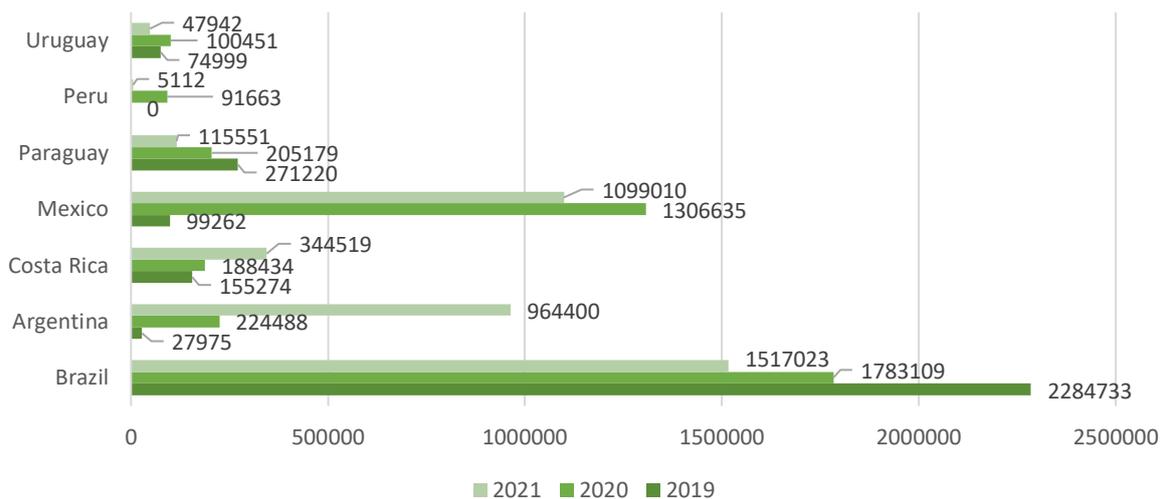
Source: ODEPA (2022)<sup>53</sup>

**Table 7.** Chile Manual Labour Fruit Industry



Source: ODEPA (2022)<sup>54</sup>

**Table 8.** Strawberry Export Chile per Destination Country in Central- and Latin America in \$USD



Source: Santander Trade (2022)<sup>55</sup>

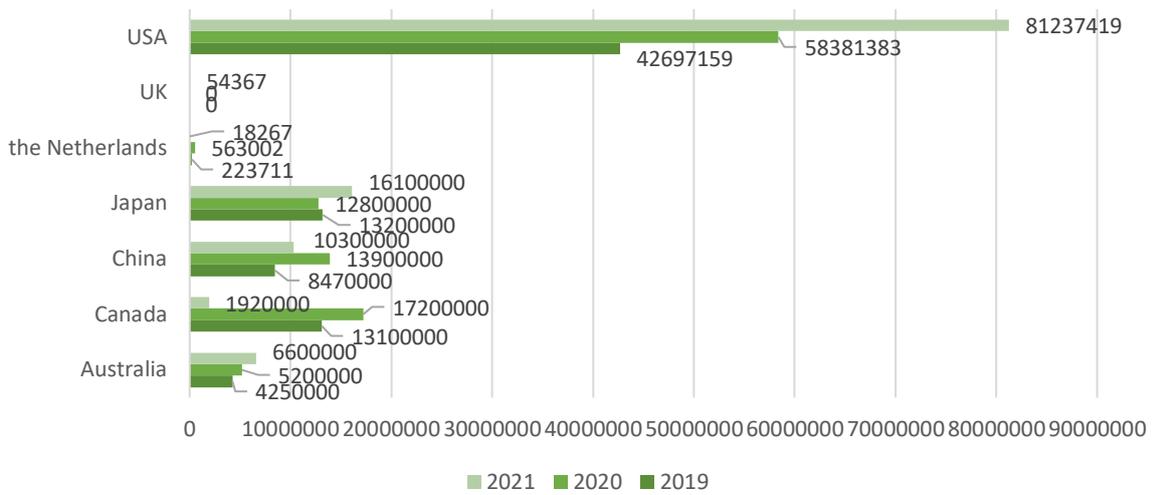
<sup>53</sup> [ODEPA](#)

<sup>54</sup> [ODEPA](#)

<sup>55</sup> [Santander Trade](#)

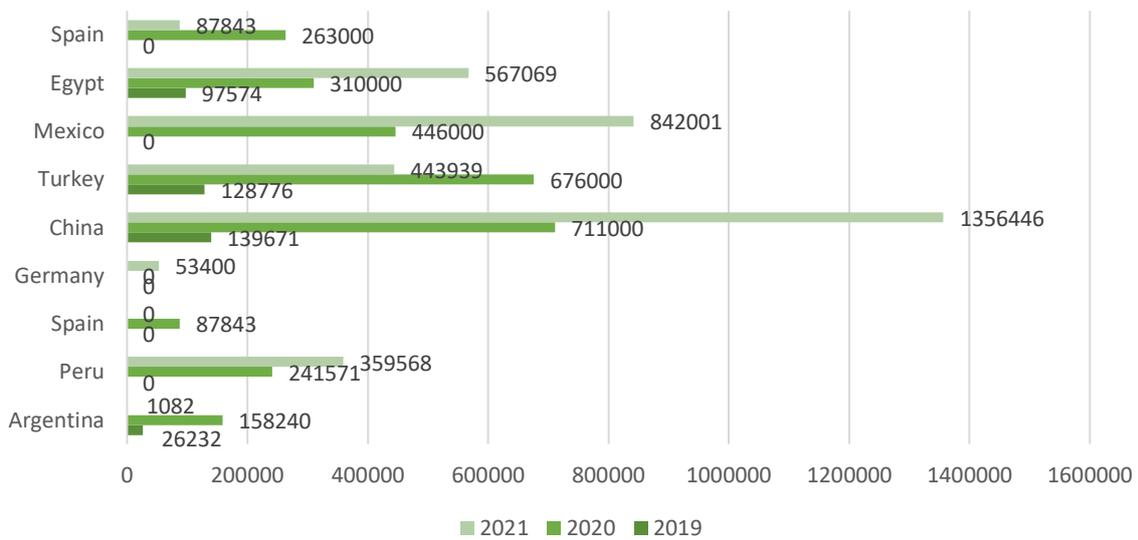


**Table 9.** Strawberry Export Chile per Destination Country outside Central- and Latin America in \$USD



Source: Santander Trade (2022)<sup>56</sup> and Veritrade (2022)<sup>57</sup>

**Table 10.** Strawberry Import Chile per Country of Origin in \$USD



Source: Santander Trade (2022)<sup>58</sup>, OEC (2022)<sup>59</sup> and Veritrade (2022)<sup>60</sup>

<sup>56</sup> [Santander Trade](#)

<sup>57</sup> [Veritrade](#)

<sup>58</sup> [Santander Trade](#)

<sup>59</sup> [OEC](#)

<sup>60</sup> [Veritrade](#)



# V. Conclusion

## 5.1 Export analysis

During the period of 2019-2021, Chilean strawberry exports accounted for \$USD 352,075,774. After a rapid increase of Chilean domestic strawberry cultivation - which lasted for a short period of time only - a decrease in production per ton is noticeable. As shown in Table 4. Cultivation went down from 30,290 tons in 2020 to 28,139 tons in 2021.

As visible in tables 8 & 9, Chile exported most of its strawberries to the USA, Japan, China, Australia, Canada, Brazil, Mexico, Argentina, the UK, and the Netherlands with USD \$81.2m, \$16.1m, \$10.3m, \$6.6m, \$1.9m, \$1.5m, \$1m., \$96k, \$54k, and \$18K respectively in 2021. Exports to Argentina, Costa Rica, Mexico, the USA, Japan, Australia, and the UK increased in the last year whereas exports to China, Canada, Brazil, Paraguay, Peru, Uruguay, and the Netherlands decreased. For example, market prices in the UK are much higher than in Latin-America. According to Italian Berry (2022)<sup>61</sup> "over the past five turnover years, strawberry retail has increased by 159 million pounds with steady growth only partly generated by price increases."

As part of the analysis as to why exports decreased, the FTA 's have been taken into account. However, according to SICE (2022)<sup>62</sup> all cooperating states of the countries included in the export and import graphs above have signed FTA 's with by the council assigned corporation of Chile.

It is noticeable that, aside from Mexico and Argentina, exports to Latin American countries decreased enormously. ISHS (2022)<sup>63</sup> reported that the decrease of Chilean strawberries export to Brazil, Paraguay and Peru can be best explained as an effect of their comparative advantage since the national strawberry production of these countries increased. Another factor that has an enormous negative effect on the Chilean export performance are climate problems, thus Blueberries Consulting (2022)<sup>64</sup>.

Furthermore, exports from Chile to Uruguay decreased. ISHS (2017)<sup>65</sup> states that production is lower in Uruguay respectively due to technical issues and therefore, the country was importing strawberries from Argentina mainly till 2020, thus Santander Trade (2022)<sup>66</sup>. Since 2020, most strawberries are imported from Spain and a small proportion from the USA.

The decrease of exports to the Netherlands is due to the involvement of Dutch supermarkets which percentage wise have a strong influence on the level of sustainability and demand for local production, thus Consumentenbond (2018)<sup>67</sup>.

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<sup>61</sup> [Italian Berry](#)

<sup>62</sup> [SICE](#)

<sup>63</sup> [ISHS](#)

<sup>64</sup> [Blueberries Consulting](#)

<sup>65</sup> [ISHS](#)

<sup>66</sup> [Santander Trade](#)

<sup>67</sup> [Consumentenbond](#)



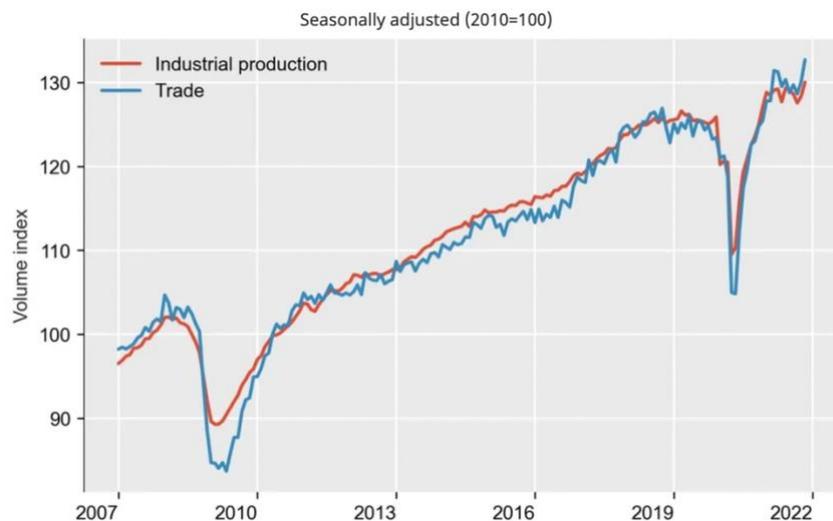


Mr. Zhong Jie of Anhui Sishui Fruit Co., Ltd. (2020)<sup>68</sup> said: “Over the past few months, the Chinese market has seen an increasing supply of strawberries.” This explains why imports from Chile are decreasing since 2021 as production increased and less foreign supply was demanded.

According to Congreso Frutos Rojos (2019)<sup>69</sup>, Canada imports most of its strawberries from the USA and Mexico, meaning lower transportation costs and therefore a lower shelf-selling price than the Chilean strawberry.

Additionally, COVID-19 had an enormous impact on international trade globally. In consonance with OECD (2022)<sup>70</sup>, the year 2020 was marked by some of the largest reductions in trade and output volumes since World War II. The declines in both world industrial production and goods trade in the first half of 2020 were of similar depth to those at the trough of the Global Financial Crisis (GFC).

**Table 11.** Volume of world trade and industrial production



Source: OECD calculations based on CPB World Trade Monitor<sup>71</sup>

## 5.2 Import analysis

Between 2019 and 2021, strawberry imports by Chile held a value of \$USD 4,622,997. In 2020 production increased, and exports decreased, imports increased rapidly. The Chilean trade balance remained positive accounting for USD \$11.4m in 2022. Both import and export increased by 219% and 54.5% respectively from 2021 to 2022.

As visible in table 10, the volume of strawberries imported by Chile from Argentina has decreased 95.9% between 2019 and 2021. Strawberries imported from Egypt, China, Mexico, and Peru increased expeditiously after 2019. Import from Peru increased 48.8% in the same period.

As export is increasing but a firm decrease in import and domestic production is conspicuous since 2021, the Chilean industry of this particular fruit will soon face difficulties regarding sufficient production for both domestic and foreign demand.

<sup>68</sup> [Fresh Plaza](#)

<sup>69</sup> [Congreso Frutos Rojos](#)

<sup>70</sup> [OECD](#)

<sup>71</sup> [OECD](#)



### 5.3 Domestic production

Table 4 demonstrates the domestic cultivation from 2019-2021. There is a noticeable decrease in volumes per ton that went down from 30,290 tons in 2020 to 28,139 tons in 2021.

### 5.4 Reasons for insufficient cultivation

As described in 4.1 Executive summary of the problem statement, Chile 's main reason for its insufficient self-supply of domestic needs of strawberries are as following:

- **Lack of water systems and distribution to increase productivity per hectare.**
- **Lack of harvesting, processing, and packaging machinery to ease manual labour.**
- **Lack of financial funding necessary for investment in the crucial factors mentioned in 4.1 & 4.2.**

### 5.5 Required technology

Foreign technology innovation and know-how is essential to improve the domestic growth performance. As Mrs. Echenique Lay stated in the interview (*Min. 30:28*) "What Chile needs is major support in the accompaniment of agriculture to improve technology". One must collaborate with the Israelis who are well-known for their high-tech water systems and smart technology such as production data collection and monitoring of production conditions. Participant CODESSER (*Min. 27:48-29:00*) reports that collaboration currently Chile learns a lot from the University of California and closely work together with the Embassy of Israel. Additionally, Dutch organisations that are specialized in the innovation and production of machinery for the agriculture industry will be of great support. More on this in 6.1, 6.4, and 6.5.

### 5.6 Ways of doing business

Having identified the industry 's needs based on a problem statement, threats, strengths, and opportunities, with years of international business expertise in supporting private and public organisations and governments in doing business with Latin America, BusinessHub Consultants located in Santiago of Chile is an excellent consultancy firm that will serve as intermediary in the subsequent steps to be taken. This process consists of at first research into relevant organisations supporting water systems, harvesting and production machinery, smart-technology, and institutions regarding legal aspects. Followed by the out-reach and organising meetings between the business parties mentioned above and agriculture institutions, and more specifically organisations within the strawberry growing industry that seek innovation & development.

An obvious approach for investors is to start investigating the Chilean strawberry industry with back-up support from the local Chamber of Commerce. Chambers of Commerce



(2022)<sup>72</sup> are non-profit organisations set up as a network point for companies already established in that foreign country, or for companies wishing to seek advice and support from other countries that operate in the foreign market. They promote trade between the host country and the foreign country, but they do not advise on expansion services unlike BusinessHub. Consisting of a global network, BusinessHub (2022)<sup>73</sup> consults and calculates the potential risks and advantages to enter a foreign market, whereas Chambers of Commerce do not provide these services.

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<sup>72</sup> [KvK](#)

<sup>73</sup> [BusinessHub Consultants S.A.](#)





# VI. Recommendations



In the conclusion above, determined are the main findings of this research justification such as export, import, domestic demand, what forms insufficient production, the therefore essential techniques, and to what extent the concerning company BusinessHub can be part of achieving the project aim. Now come the recommendations applicable to external investors, local Chilean strawberry growers, and exporters for them to know how to act and with whom to connect with whom BusinessHub acts as mediator.

## 6.1 Increase cultivation efficiency

Starting with increasing the growth efficiency. P. Kok (*Min. 08:06*) says “the Netherlands cultivates as intensively as possible to make everything as efficient as possible and keep picking costs to a minimum, where in Chile this is not as important”. However, as picking costs have increased due to high manual labour intensity of strawberry cultivation but low employee availability, the application of harvesting machinery is a long-term efficient investment to be made. The growth volume can be increased and harvesting including processing will be more rapid. “Making use of harvest machinery to replace picking labour that is limited along with training employees how to use the machinery would be a smart move” stated M. Echenique Lay (*Min. 17:34 and 31:45*), and J. Pinto Ruiz. In conjunction with M. Echenique Lay (*Min. 20:21*), and J. Pinto Ruiz, (J. van Burg, Corporate Manager at Burg Machinery, Phone Interview, October 27, 2022) stated “Chile has few pre-portioning lines and spending on manual labour is high. Automatization would increase the efficiency level of this sector.” In consonance with International Trade Administration (2022)<sup>74</sup> mechanization of agriculture processes including fresh fruit harvesting equipment and other machinery to replace labour is highly demanded whereunder:

- Post harvesting processing equipment: washing, selecting, packaging.
- Energy efficient machinery and equipment (decrease energy consumption).
- Environmentally friendly machinery and equipment (reduce impact on environment and provide higher sustainability).
- Processing equipment with low water consumption requirement.

## 6.2 Merge export

Both Chilean strawberry farmers and exporters must put a larger focus on export by generating a distinctive market than its competitors due to a positive strawberry cultivation development of neighbour countries such as Peru. Chilean strawberry export has made a major swift in recent years. According to Gateway to South America (2019)<sup>75</sup> due to investment and development, the Peruvian fruit sector has increased its fruit export over the years. As visible in table 5 and 6, the rise of exports is correlated to the decrease of Chilean strawberry export volumes to Peru. For that reason, Peru has become a major competitor. P. Kok (*Min. 17:23*) mentioned “As a cool, moderate climate with a lot of sun is needed, strawberry cultivation is feasible in Chile”. He continues saying “exporting them to Latin America and the USA, which has a large strawberry demand offers ample opportunity”.

<sup>74</sup> [International Trade Administration](#)

<sup>75</sup> [Gateway to South America](#)



Other Latin American countries hold a low production quality as they cannot produce strawberries due to their warm climate.

Furthermore, both Chile and Peru have also enjoyed low levels of market access to the UK which is visible in the export volumes. The decision for the UK to leave the European Union could have meant that difficult trade discussions were needed to re-negotiate new access arrangements to the UK. In fact, both countries have been very proactive in securing access to the UK at the same level as in the past and therefore probably avoided any marked disruption to trade. This is an area where the expertise of both countries in developing FTAs has come to the fore. As well, strong industry leadership and direction from umbrella organisations, such as ASOEX in Chile and AGAP in Peru. This is backed up by effective support from government agencies such as PROCHILE in Santiago and from the Peruvian Trade Office in Lima. In the cases of ASOEX and AGAP, these organisations are well funded, well-staffed and well connected politically and have a clear sense of where they want the industry to be moving to. Looking at the basic statistics, it is clear to see why. UK imports of strawberries have increased from 46,000 tons to over 53,000 tons over the last few years and are dominated by supplies from the likes of Spain, Belgium and the Netherlands. In collaboration with these agencies that know the industry trends, Chile must create a distinctive export market for its strawberries.

### 6.3 Competitive position

What is more, competitive pricing is required. To compete with e.g., Brazil where strawberries enter the market with lower quality and lower prices due to cheaper manual labour, Chilean growers and exporters must communicate the price difference clearly and positively as the gross costs of strawberries lay higher due to expensive manual labour costs and increased transportation costs but most importantly “the consistent quality Chile delivers as they are a development edge nation” says H. Bouman (*Min. 22:38*).

### 6.4 Water systems

Water distribution issues is an essential topic that requires attention too. International Trade Administration (2022)<sup>76</sup> reports that irrigation infrastructure is required to maximize efficiency of water usage. Highly efficient and cost competitive irrigation systems, efficient water management systems and data processing such as water saving devices/systems, water flow sensors, and control systems and equipment. Also, water storage systems/equipment, water transportation systems and supplies such as canal linings, tunnels, and underground reservoirs must support a fair distribution of mainly melted snow from the mountains to the cultivation grounds. Replacing water reservoirs through:

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<sup>76</sup> [International Trade Administration](#)



## Systems for water transportation and storage



## Large portable water storage systems



## Rain-collecting systems



## Storage technologies, data collection and processing

### 6.5 Smart technology

Finally, various types of technology are required. The concerned parties such as growers, and investors are advised to devote themselves to machinery and modern equipment which makes the industry less dependent on manual labour and therefore more efficient in strawberry cultivation. The participant Burg Machinery (2022)<sup>77</sup> is specialized in the manufacturing of production and packaging lines for the agriculture industry with market presence in Europe, Scandinavia, Oceania, South-Africa, Israel, Canada, and the United States and with large potential to enter the Latin American market in 2023. Moreover, with regards to the importance of data and the digitisation of processes, the Chilean organisation BLASS (2022)<sup>78</sup> can commit to the development of technological projects that allow digitalization of processes, monitoring data in real time and analysis of relevant indicators with the aim of optimising resources and reducing their environmental impact.



Smart agriculture equipment: General agriculture machinery that replaces labor; technology and equipment for agriculture processes such as planting, watering, fertilizing; data collection and processing systems/software.



Precision agriculture equipment and accessories to utilize minimum resources, achieve optimum performance with minimum environmental impact.



Agriculture production data collection, sensors, processing/analyzing and transmission equipment.



Technology, equipment, and supplies for crop traceability.



Equipment/drones to monitor production conditions, propose improvement processes, and increase crop yield; drones to act on detected challenges (for example, apply pesticide when detecting specific pest/disease)

Source: International Trade Administration (2022)<sup>79</sup>

<sup>77</sup> [Burg Machinery](#)

<sup>78</sup> [BLASS](#)

<sup>79</sup> [International Trade Administration](#)

When it comes to AI, irrigation technology, and controlling systems, Israel is far beyond the market leader in this industry. Known for its extreme landscapes and various climates, this technique can be well applied in Chile. The originally Israeli organisation NETAFIM (2022)<sup>80</sup> is specialized in cultivation with low water availability and under extreme conditions through combining precision irrigation, agronomic knowledge, and constant innovation to help farmers produce any crop, in any climate, with fewer resources. They are present in the Chilean market where there are many opportunities regarding strawberry production.

Furthermore, FruitSpec (2022)<sup>81</sup> provide customers with the ability to manage their yield. Using accurate yield estimation, FruitSpec can provide customers - at the beginning of the season- with the amount of carton per size they will be able to pick. Growers can use this data for picking and packing management and direct sales efforts to the inventory yield. By scanning the orchard using a vehicle mounted with hyperspectral cameras, and analysing the images, FruitSpec provides the customer a yield estimation report with decisive figures such as fruit count, size, and weight distribution, and useful heatmaps. This enables growers to measure and optimize fruit size accurately. Unlimited scans with a plug & play innovative sensor provide continuous growth analysis throughout the season.

Summit-Agro (2022)<sup>82</sup> delivers a variety of technological solutions to its customers through advanced technological products and services that increase productivity and reduce environmental impact. In this way, Summit-Agro has initiated strategic alliances to promote the sustainable development of the agricultural sector.

As made clear, the research results show a negative estimation of domestic performance of the Chilean strawberry cultivation based on desk and field research. Various national and international factors have been identified that seek improvement and



financial support. In the conclusion, major findings that answer the sub-questions of the research have been addressed. Ultimately, investors, growers and exporters are recommended how to act upon the research outcome by investing in machinery, create new export opportunities, maximize water distribution, and apply the newest sort of technology in both the cultivation and processing activities.

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<sup>80</sup> [NETAFIM](#)

<sup>81</sup> [FruitSpec](#)

<sup>82</sup> [SummitAgro](#)



# VII. Appendixes



## Appendix A. Planning

Week	Date	Tasks / Activities
1	<b>05-sep</b>	Start graduation internship
1	<b>06-sep</b>	Discuss thesis topic + start PoA
3	<b>22-sep</b>	Feedback + adjust PoA in-company supervisor
3	<b>23-sep</b>	Start working on P1
3	<b>24-sep</b>	<b>Submit PoA</b>
4	<b>Week 39</b>	Receive + adjust feedback PoA HZ-supervisor + final submission
5	<b>03-okt</b>	RJ desk research SQ1
6	<b>10-okt</b>	RJ desk research SQ2
7	<b>17-okt</b>	RJ field research + interviews SQ1+2
8	<b>23-okt</b>	RJ field + desk research SQ3
9	<b>30-okt</b>	RJ desk research SQ4
10	<b>07-nov</b>	RJ field research + interviews SQ4
11	<b>14-nov</b>	RJ field research + meetings SQ4
11	<b>16-nov</b>	<b>Submit P1</b>
12	<b>21-nov</b>	RJ internal desk research SQ5
13	<b>28-nov</b>	RJ field research + interviews SQ5
14	<b>05-dec</b>	Implementing of PP incl. MQ
15	<b>12-dec</b>	<b>Finalizing of PP</b>
16	<b>19-dec</b>	<b>Deadline Portfolio</b>
17	<b>26-jan</b>	Implementing PP + Finalizing RJ
18	<b>02-jan</b>	Evaluating PP + Finalizing RJ
19	<b>09-jan</b>	Final workday Internship
19	<b>10-jan</b>	<b>Deadline RJ + PP</b>
20	<b>16-jan</b>	<b>Deadline Showcase</b>
21	<b>23-jan</b>	<b>defence*</b>
22	<b>31-jan</b>	Exam Int. Economics + Grades*

<b>PoA</b>	Plan of Approach
<b>RJ</b>	Research Justification
<b>SQ</b>	Sub-question
<b>MQ</b>	Main-question
<b>PP</b>	Professional Product
<b>P1</b>	Portfolio 1
<b>defence*</b>	Depending on whether it is possible to do online
<b>Exam Int. Economics + Grades*</b>	Depending on whether exam must be done prior to the defence.



## Appendix B. Interview questionnaire

### Dutch Organisations

1. Which **fruit is demanded** the most by Chile for domestic demand?
2. Which **vegetable is demanded** the most by Chile for domestic demand?
3. Which **fruit is imported** the most by Chile from the Netherlands?
4. Which **vegetable is imported** the most by Chile from the Netherlands?
5. What is Chile's/foreign countries largest problem in the growth process of fruit/vegetables?  
(Drought, soil, locations, climate)
6. In your point of view, what is the largest threat for the Chilean/foreign agriculture sector?
7. In your point of view, what opportunities does the Chilean/do foreign agriculture sectors have?
8. To what extent is the Chilean/Latin American agriculture unique in contrast to other countries? (Advantage(s))
9. What are the Dutch agriculture strengths and key/uniqueness to their annual high crop growth performance compared to other countries?
10. Which Dutch technique/innovation is often applied abroad / requested by Latin American / foreign countries?
11. Who currently exchanges information regarding techniques and innovation with Chilean/foreign agricultural institution/organisations?

*\*At first, interview questions were not focused yet on strawberry cultivation. After the first interviews had taken place, it became clearer to focus on strawberries.*



## **Appendix B. Interview questionnaire**

### **Chilean Organisations**

1. How much strawberries are cultivated by Chile?
2. What is the domestic consumption volume of strawberries by Chile?
3. What is the export volume/value of strawberries by Chile?
4. What countries are the major importers of Chilean strawberries?
5. What is the import volume/value of strawberries by Chile?
6. From what countries does Chile mainly import strawberries?
7. What is Chile's largest problem in the growth process of fruit/strawberries?  
(Drought, soil, locations, climate)
8. How could the Chilean strawberry cultivation be improved in order to produce more and therefore export more? What do we need? (Production lines machinery/knowledge, innovation, financing.)
9. In your point of view, what is the largest threat for the Chilean agriculture sector?
10. In your point of view, what opportunities does the Chilean agriculture sector have?
11. To what extent is the Chilean agriculture unique in contrast to other countries?  
(Advantage(s))
12. Do you / does Chile acquire specific innovation/technique from foreign countries for the agriculture technique? What kind and from whom?
13. What could be barriers to enter foreign markets more actively?



## Appendix C. Interview Transcripts

*To obtain access to the MP3. Interview Recordings files, click on [this link](#) and request the password by sending an [email](#) to the author of this Research Report.*