



# Food Industry in Chile

# **Projection & Opportunities**

**MARCH 2021** 



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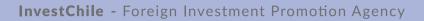
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Data collection & analysis developed by BNAmericas for InvestChile.





# InvestChile

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# **01. Introduction**

### Overview

Chile has consolidated its reputation as a leading player in the global food industry in recent years. Food sales in total -considering the chilean domestic sector and exports- exceeded US\$47 billion in 2019 and the industry is the second most important after mining in terms of contribution to national GDP and exports. The domestic food market has grown by over US\$10 billion since 2012 and internal demand was worth US\$29 billion in 2019. Overall, the food industry represents approximately 18% of GDP, 25% of exports, 20% of internal sales, 23% of employment and 31% of companies.

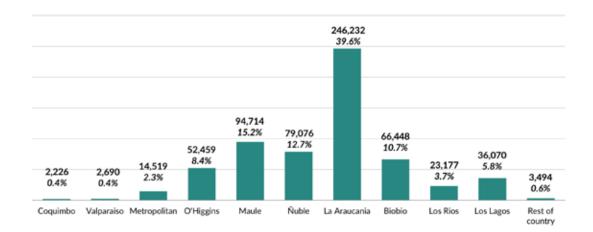
## Cultivated land area

Total land area used for agriculture, livestock and forestry plantations is 18.4 million hectares, or 24.3% of the total 75.6 million hectares that constitute continental Chile. Of this, overall cultivated land area used for crop-based agriculture in the 2018/2019 season was 621,105 hectares. This figure has declined in recent years, being changing climatic conditions a leading contributory factor.

The vast majority of cultivated land is located in the central-south of the country. Fig. 1 shows that the La Araucania Region constitutes two-fifths of all cultivated land, while Chile's central zone in general accounts for over three-quarters.







Source: Encuestas Intercensales 2018-2019, Instituto Nacional de Estadísticas (National Institute of Statistics)

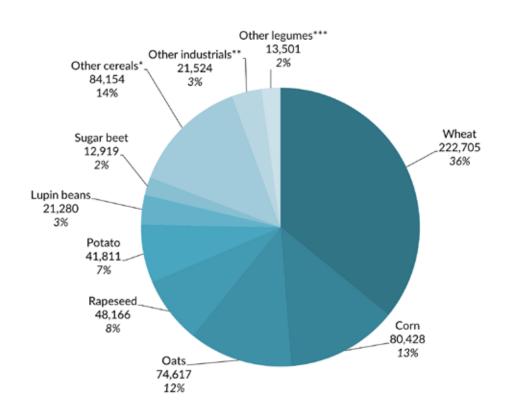
## Agricultural product sector

This sector has experienced accelerated growth over recent years, achieving double digit growth since 2015 and its largest value increase during 2018, when it grew by 18.7% to reach a total value of US\$11.8 billion. Compound Annual Growth Rate (CAGR) was 13.7% between 2014 and 2018 and, to 2023, the market is forecast to grow by 91.5% compared to 2018 levels, to US\$22.6 billion.

In terms of overall volume, the agricultural product market grew by 2.1% in 2018 to reach 16.1 million tonnes, with CAGR of 0.9% between 2014 and 2018. Increased growth is expected moving forward, with a forecasted CAGR of 2.8% to 2023 and a total market volume of 18.5 million tonnes.

In terms of crop cultivation, the most widely cultivated species is wheat, which represents almost two-fifths of the aforementioned 621,105 hectares. In conjunction with the second most prevalent crop, corn, these two species constitute almost 50% of all cultivation (see Fig.2).



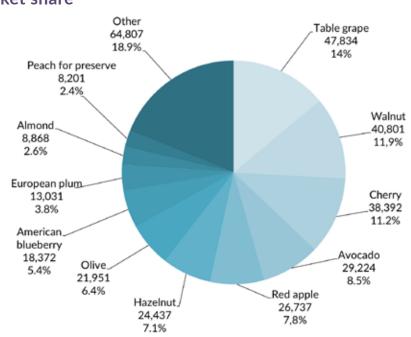


# Fig. 2 Distribution of crop types cultivated in 2018/2019, by hectares and market share

Source: Instituto Nacional de Estadísticas

Regarding fruit production, in 2019 there were 342,654 hectares of plantations across 14 of the 16 regions. The top five species in terms of total plantation area in 2019 were grapes, walnuts, cherries, avocados and red apples. As Fig. 3 shows, the top 11 species accounted for over 80% of all planted hectares. The central zone concentrates the majority of activities, with the O'Higgins, Maule, Metropolitan and Valparaiso Regions accounting for 77% of all plantations by area.





# Fig. 3 Fruit species cultivated in 2019, by hectares and market share

Statistics from the Office of Agricultural Studies and Policies (ODEPA) show that plantations of certain species have grown significantly between the two decades from 1999 to 2019, with cherry plantations growing at an average annual rate of 13.2%, walnuts by 9.3%, hazelnuts by 39.8%, olives by 11.4% and blueberries by 23.8%. This growth largely reflects increasing demand from major export markets, particularly in North America, Asia and Europe.

Accordingly, export rates have also increased between 1999 and 2019. The average annual growth rate in terms of value (billions of US\$ FOB) during this 20-year period was 7.5% for all types of fruit exports. Fresh fruit leads the way, with US\$5.3 billion FOB of exports in 2019, followed by nuts with US\$595 million FOB, and frozen fruit with US\$384 million FOB.

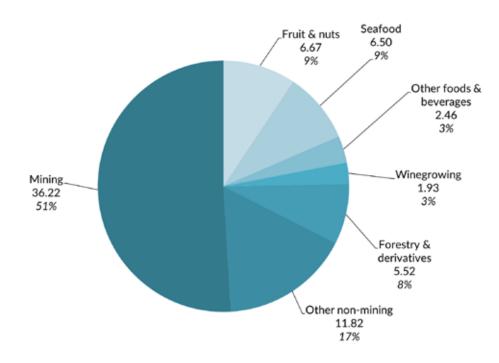
Overall, fruit is the largest segment of the agricultural product market, accounting for around 75% of its total value in 2018, with total revenues of US\$8.9 billion. In contrast, the vegetables segment contributed revenues of US\$900 million in 2018, equating to 7.4% of aggregate market value, while cereals accounted for US\$800 million (6.4%) and roots and tubers US\$600 million (5.4%).

Source: Oficina de Estudios y Políticas Agrarias



### **Food exports**

Total export value, i.e., that of all Chilean goods from across all industries, was approximately US\$71.12 billion FOB in 2019. Food industry exports account for approximately US\$17.56 billion FOB. Fig. 4 provides a breakdown of national exports in 2019 by industry, highlighting the role played by the most significant food industry segments.



# Fig. 4 National exports by industry in 2019, US\$ in billions FOB and share

Source: In-house research based on data from Aduanas de Chile

As Fig. 4 shows, non-mining products accounted for 51% of national exports in 2019, with the food industry representing around 25%. Of the main segments that constitute the food industry, the fruit and nuts segment is the largest with a share of 38%, followed by seafood products, which includes aquaculture and fishing products (37%), other foods, which includes meat, dairy, vegetables, grains, edible crop production and non-alcoholic beverages, among others (14%) and winegrowing, which includes wine, wine must and sparkling wine (11%).



In terms of individual product items, food industry exports are led by fresh fruit and farmed salmon. Regarding the former, the Chilean fruit production industry is recognized worldwide and the country is the main producer and exporter of fruit in the southern hemisphere. It is a global leader in the export of cherries, grapes, blueberries and walnuts in the fresh fruit and nut sectors, as well as in the processing and export of dehydrated apples, grapes and plums.

Fresh fruit exports were US\$5.3 billion FOB in 2019, which is 30% of all food industry-based exports. As of 2020, Chile grows 62 varieties of fresh fruit and nuts and exports more than 50 different species. The top five types of fruit and nuts exported in 2019 were cherries (US\$1.47 billion FOB), grapes (US\$1.41 billion FOB), blueberries (US\$693 million FOB), apples (US\$649 million FOB), and walnuts (US\$426 million FOB). In terms of the evolution of exports over the last 20 years, while in 1999 Chilean fruit was primarily exported to the US (accounting for 43% of the total national value) and the Netherlands (6%), in 2019 the largest market was China (26%), with the US in second place (25%).

Salmon and trout exports were US\$5.1 billion FOB in 2019 and represent 29% of all food industry-based exports. Salmon alone accounted for over US\$4.7 billion FOB of exports, or approximately 27% of all food exports, and is the most valuable single food export item.

Table 1 provides a breakdown of export products by the main subsectors of the food industry. As can be seen, the US and China dominate Chilean food exports: of the 18 major items listed, the US or China is the largest export market for 14. Table 1 also shows that the export of certain key items is heavily dependent on one client, for example 90.3% of cherries and 72.1% of beef are sent to China, and 98% of sea urchins and 62.3% of all sparkling wine are sent to Japan.



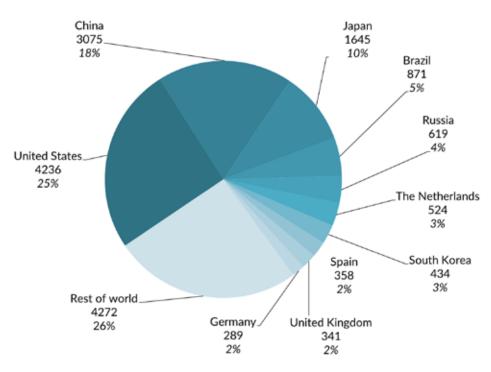
Sector	Product	Total export value (US\$ in millions FOB)	Largest market	Share of single largest market (%)
Fruit & nuts	Cherries	1,477.4	China	90.3
	Grapes	1,409.8	US	43.0
	Blueberries	693.1	US	47.6
	Apples	649.9	US	15.4
	Walnuts	426.5	Germany	14.0
	Other	1,976.1		
	Total	6,632.8		
Aquaculture	Salmon & trout	5,129.8	US	36.2
	Preserves/processed seafood	354.6	US	25.5
	Fishmeal	294.5	China	33.2
	Molluscs	101.8	Spain	23.5
	Sea urchins	86.6	Japan	98.0
	Other	531.5		
	Total	6,498.80		
Other foods	Pork	583.2	China	42.2
	Poultry	396.8	China	26.7
	Milk & dairy	124.4	US	24.5
	Vegetables & tubers	107.3	US	18.1
	Beef	86.3	China	72.1
	Other	1163.5		
	Total	2,461.40		
Winegrowing	Wine	1,570.7	China	16.0
	Grape must	344.6	US	23.2
	Sparkling wine	18.6	Japan	62.3
	Total	1,933.8		

### Table 1. Breakdown of leading food export products, 2019

Source: In-house research based on data from Aduanas de Chile https://bit.ly/3gOKORQ



Regarding destinations, the main export markets for Chilean food products are North America, Asia and Europe. Fig. 5 shows that the largest market for Chilean food exports is the US, followed by China, with the two markets constituting approximately 43% of all food exports. Collectively, the smaller individual European markets represent a significant share of food exports and, taken as a whole, the EU represents the third largest export market for Chilean food products.



# Fig. 5 Top ten food export markets in 2019, US\$ in millions FOB and market share

Source: In-house research based on data from Banco Central de Chile

Table 2 lists the three leading products exported to each of the top ten export markets outlined in Fig. 5. It shows that the item list is dominated by salmon and trout, fruit and wine, while pork is also a notable inclusion among the products exported to Japan, Russia and South Korea.



Market	Main export products	Value, US\$ FOB
US	Salmon & trout	
05		1,859,333,896
	Grapes Blueberries	606,679,392
China	Cherries	330,019,206
China	Salmon & trout	1,335,524,378
	Salmon & trout Wine	270,930,887
		252,571,711
Japan	Salmon & trout	1,104,712,972
	Wine	131,335,817
	Pork	128,064,281
Brazil	Salmon & trout	602,267,711
	Wine	148,696,967
	Olive oil	27,517,348
Russia	Salmon & trout	375,781,244
	Pork	43,376,402
	Wine	31,930,591
The Netherlands	Avocados	140,423,369
	Wine	84,215,253
	Blueberries	80,441,891
South Korea	Pork	109,887,746
	Grapes	89,823,967
	Wine	46,305,400
Spain	Preserved/processed seafood	50,302,682
	Walnuts	29,029,657
	Molluscs	24,058,925
UK	Wine	133,065,549
	Blueberries	66,645,024
	Grapes	59,590,030
Germany	Walnuts	60,190,644
	Salmon & trout	44,643,881
	Wine	33,792,808

### Table 2. Main food products exported to Top Ten export markets, 2019

Source: In-house research based on data from Aduanas de Chile https://bit.ly/3b4cj8A



In general terms, the aforementioned Chilean agricultural products form a stable and important part of the diet of the majority of people around the world. As such, investors can be confident that consumer demand will remain strong in the years ahead.

# Export of healthy food and ingredients

According to research compiled for this report by Transforma Alimentos, -a strategic program of the Chilean Economic development Agency (CORFO)- exports of 35 leading healthy food products, including fresh and semi-processed fruit and nuts, fresh, chilled and frozen seafood products, functional ingredients and healthy processed products totalled US\$7.17 billion in 2018, with CAGR of 26.1% between 2013 and 2018.

At the global level, CAGR of a similar list of products over the same fiveyear period is significantly lower, at 14.2%, with global trade in the selected products reaching US\$120.65 billion in 2018.

Interestingly, data from Transforma Alimentos also shows that CAGR of the Chilean food industry as a whole was 3% from 2013 to 2018, compared to just 0.8% for the global food industry over the same timeframe.

Consequently, such figures demonstrate the strong investment and growth potential in certain key product areas in the Chilean food industry, particularly fresh fruit and nuts, aquaculture and the emerging functional ingredients and healthy processed foods sectors.

# Points of entry and exit of goods

Chile has a well-developed network of entry and exit points across the country with 17 airports, 9 of which are international, 56 sea ports and 36 land border crossing complexes which are all equipped to deal with product exports.

In terms of the food industry, Table 3 shows that 97% of all seafood products were exported from the central and southern regions in 2019, primarily concentrated in the Biobio Region. In terms of fruit and nuts, 87.1% of produce, in conjunction with 99.9% of wine-related products,



exited the country through the Valparaiso Region in the central zone. It should be noted that the O'Higgins, Ñuble and Maule Regions are not included since they either lack import/export facilities or did not register exports during 2019.

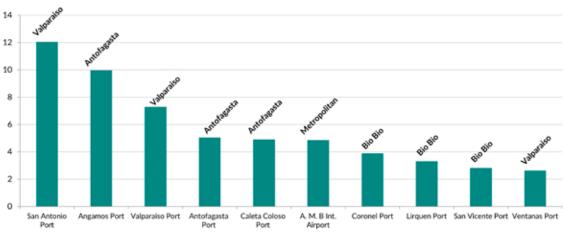
Region	Fruit & nuts	Seafood	Other food	Winegrowing
Arica & Parinacota	37.1	26.2	22.1	0.1
Tarapaca	0.1	73.7	0	0
Antofagasta	0	22.1	0	0
Atacama	53.1	0	0	0
Coquimbo	64.4	0	0	0
Valparaiso	5,779.4	600.5	1,907.8	1,931.1
Metropolitan	173.6	1,427.4	10.9	2.3
Biobio	523.7	3,479.3	516.2	0.3
La Araucania	0	491.1	3	0
Los Rios	0	0	0	0
Los Lagos	0.4	53.9	0.4	0
Aysen	0.5	174.7	0	0
Magallanes	0	150	0.9	0
Total	6,632.80	6,498.8	2,461.4	1,933.8
Overall share	9.3%	9.1%	3.5%	2.7%

#### Table 3. Food exports by region of exit, 2019 (US\$ in millions FOB)

Source: Anuario Estadístico, Aduanas de Chile https://bit.ly/3b9SAEA

In turn, Fig. 6 shows that Chile is well positioned to export its food products. As can be seen, seven of the top ten points of exit are strategically located in the central and southern regions, precisely where the majority of national fruit and aquaculture items are produced. The efficient design and management of the logistics chain thus reduces both transport costs and carbon emissions.





# Fig. 6 Top ten points of exit for exports in 2019, by value (billions US\$ FOB) and Region

In terms of volumes, Chile exported approximately 7.56 million tons of food in 2019. Of this, 57% exited the country from the regions of Biobio (21%), Valparaiso (18.4%) and Tarapaca (17.6%), principally via the ports of Coronel, San Antonio, Lirquen and Caleta Coloso.

Overall, shipping remains the most common means of transport used for export, representing 96.5% of all exports by tonnage in 2019, followed by road (2.0%) and air (1.4%).

# Trade agreements and associated benefits

Chile has signed 29 economic and free trade agreements (FTAs) that grant it low-tariff or tariff-free access to 65 countries or trade blocks around the world. Such agreements have favored the Chilean export sector with significant tariff reductions and elimination of trade barriers, including in high-demand markets in terms of food products, such as the US, China, the EU and Canada. This is particularly the case for Chilean products certified via certificates of origin, which are issued by State agencies such as Agricultural and Livestock Service (SAG), Undersecretariat of International Economic Relations (SUBREI), National Fisheries and Aquaculture Service (SERNAPESCA) and the National Chamber of Commerce (CNC).

Source: In-house research based on data from Aduanas de Chile



Furthermore, trade agreements not only promote trade and improve the competitive position of Chilean exports, but also reduce transaction costs through streamlined customs procedures, greater business mobility and the promotion of investment.

In addition to existing instruments, Chile is re-negotiating a number of trade agreements. This includes the modernization of its FTAs with the European Free Trade Association (EFTA) and Hong Kong, as well as the EU-Chile Association Agreement, the expansion of the Pacific Alliance to include new candidate countries, entrenching the Chile-South Korea FTA, and broadening the Chile-India Partial Scope Agreement. Chile has also signed several new trade agreements which are awaiting entry into force, including with the UK, Brazil and Ecuador, in addition to the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) between 10 other nations and the Digital Economy Partnership Agreement (DEPA) with New Zealand and Singapore.

Furthermore, Chile is a member of numerous multi-lateral trade agreements. Its membership of APEC has helped the country to secure favorable conditions for some of the primary foreign investors who are members, including the US, Canada, Australia and Japan, while overseeing an average annual 8% growth of exports to APEC countries since becoming a signatory in 1994. Overall, around 69% of Chilean exports are sent to APEC members.

As a signatory to the Pacific Alliance, Chile has successfully grown its local exporting SME base via intra-Alliance exports. In total, 38% of Chilean exporters registered shipments to Pacific Alliance countries in 2017 and this group has registered strong growth in the export of salmon and trout and fresh and preserved fruit products in recent years.

Chile has provisionally signed the CPTPP, whose member countries would represent 17% of national exports and 25% of FDI in Chile, and would provide the country with free trade access to over 500 million consumers. Its signing into force would also provide opportunities for 3,000 local export items, with significant growth possibilities identified for agricultural products in Japan, Vietnam and Canada. Indeed, industry players predict that national food industry exports alone could rise to US\$32 billion by 2025 if the CPPTP is ratified.

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Due to its membership of the World Trade Organization (WTO) [and GATT], Chile is able to simply and clearly trade with its commercial partners according to clear international standards. It has also contributed to the growth of Chilean agriculture and the export of related products thanks to WTO agreement on the elimination of export subsidies on agricultural products.

Chile is also a signatory to the Latin American Integration Association (ALADI), which has contributed to the growth of Chilean exports to major local trade partners such as Brazil and Argentina in recent decades.

As a member of the OECD, Chile enjoys access to its country surveys and comparable statistical and economic data, providing the Chilean State with important tools with which to analyze and monitor its economic, social and environmental policies and, thus, enhance its public institutions.

As the most economically efficient country in the region, with the most robust institutions and transparent business environment, Chile is the safest landing ground in Latin America for investors. In addition, with strong diversity, high levels of competence and inter-connected networks, the Chilean food industry is a Latin American hub for investors seeking their next investment opportunity.

### Tariffs

Due to trade agreements with its main export partners, multiple products have a 0% tariff while others are very low. Regarding market access, the aforementioned trade agreements have allowed the majority of Chilean products, including food exports, to enter countries with which it has an agreement in force tariff free. Table 4 provides an in-depth look at the main import and export duties which apply to Chile's major trading partners with regard to products from the agricultural and non-agriculture sectors.



# Table 4. Tariffs on imports and exports of agricultural and non-agricultural productsfrom and to major trading partners, 2018-2019

Part A.1				Duties a	nd imports l	by totals and	tariff ranges			
Total			Total	AG	Non-AG	Member of	f WTO since			1995
Final consolidated, simple average		-	25.2	26.1	25.0	Consolidat	ion coverage	2	Total	100
Applied MFN, simple average		2019	6.0	6.0	6.0				Non- AG	100
Trade-weighted average		2018	6.0	6.0	6.0	AG: Tariff c	quotas (in %)			0.1
Imports in billions of US\$		2018	68.8	7.0	61.8	AG: Specia	l safeguards	(in %)		0
Frequency distribution		Duty free	0 <= 5	5 <= 10	10 <= 15	15 <= 25	25 <= 50	50 <= 100	> 100	Non-Ad-V
				Tariff lines v	vith imports	(in %)				(in %)
Agricultural products										
Final consolidated		0	0	0	0	89.8	9.5	0.7	0	0
Applied MFN	2019	0	0	98.9	0	0	0	0	0	1.1
Imports	2018	0	0	100	0	0	0	0	0	0
Non-agricultural products										
Final consolidated		0.0	0.0	0	0.0	100	0	0	0	0
Applied MFN	2019	0.3	0	99.7	0	0	0	0	0	0
Imports	2018	0.2	0	99.8	0	0	0	0	0	0
Part A.2					Duties and	imports by pr	oduct group	s		
			Final consoli	idated duties	-	Δnn	lied MFN du	ities	In	ports

		Final consoli	idated duti	es	Applied MFN duties Imp			nports	
Product groups	Average	Duty free	Max. Co	onsolidation	Average	Duty free	Max.	Sector	Duty free
	(in	%)	(i	n %)		(in %)		(in %)	(in %)
Animal products	25.0	0	25	100	6.0	0	6	2.3	0
Dairy products	29.0	0	32	100	6.0	0	6	0.5	0
Fruits, vegetables, plants	25.0	0	25	100	6.0	0	6	1.0	0
Coffee, tea	25.0	0	25	100	6.0	0	6	0.5	0
Cereals and preparations	25.2	0	32	100	6.0	0	6	2.2	0
Oil seeds, fats and oils	29.3	0	32	100	6.0	0	6	1.5	0
Sugars and confectionery	46.5	0	98	100	6.0	0	6	0.4	0
Beverages and tobacco	25.0	0	25	100	6.0	0	6	0.7	0
Cotton	25.0	0	25	100	6.0	0	6	0.0	0
Other agricultural products	25.0	0	25	100	6.0	0	6	1.1	0
Fish and fish products	25.0	0	25	100	6.0	0	6	0.6	0



Minerals and metals	25.0	0.1	25	100	6.0	0.1	6	13.2	0.0
Petroleum	25.0	0	25	100	6.0	0	6	12.9	0
Chemicals	25.0	0	25	100	6.0	0	6	12.2	0
Wood, paper, etc.	25.0	0	25	100	6.0	0.5	6	3.0	1.0
Textiles	25.0	0	25	100	6.0	0	6	2.1	0
Clothing	25.0	0	25	100	6.0	0	6	3.8	0
Leather, footwear, etc.	25.0	0	25	100	6.0	0	6	3.1	0
Non-electrical machinery	25.0	0	25	100	6.0	0.2	6	12.2	0.0
Electrical machinery	25.0	0	25	100	6.0	0.2	6	9.2	0
Transport equipment	24.9	0	25	100	5.5	8.3	6	13.6	1.1
Manufactures n.e.s.	25.0	0	25	100	6.0	0.3	6	4.0	0.0
Part B			Exports	to major pa	rtners and re	lated tariffs			
Main markets	Bilateral	imports	Diversifi 95% of ex no.	ports in	MFN ave traded ta		Preference margin	Duty fr	ee imports
	-	in US\$ millions	Chapters	Sub- items	Simple	Weighted	Weighted	Lines (in %)	Value (in %)
Agricultural products									
1. United States	2018	3,079	15	50	4.9	2.2	2.1	99.7	98.0
2. European Union	2018	2,970	16	66	13.7	8.8	6.7	70.6	86.1
3. China	2018	2,444	7	19	17.0	12.8	12.5	97.3	99.1
4. Hong Kong, China	0010	1,159	2	8	0.0	0.0	0.0	100	100
	2018	1,159	<b>Z</b>						
5. Japan	2018 2018	619	11	33	11.2	13.7	7.8	69.8	43.8
5. Japan Non-agricultural products		,		33	11.2	13.7	7.8	69.8	43.8
•		,		33	11.2 8.4	13.7 1.1	7.8	69.8 95.0	43.8 99.6
Non-agricultural products	2018	619	11						
Non-agricultural products 1. China	2018 2018	619 24,286	11 7	11	8.4	1.1	1.1	95.0	99.6
Non-agricultural products 1. China 2. United States	2018 2018 2018	619 24,286 8,153	11 7 33	11 86	8.4 3.1	1.1 1.2	1.1 1.2	95.0 100	99.6 100

Source: World Trade Organization, via Undersecretariat of International Economic Relations (SUBREI)



### Sector agreements

As part of ongoing efforts to facilitate trade in organic products and to contribute to the development of the local organic sector, Chile has signed several equivalency agreements on certified organic food products with major trading partners in recent years. These include:

#### **European Union**

The Chile-EU agreement entered into force in January 2018 to promote the trade of organic products between Chile and the EU and is the first of its kind to be signed between the European bloc and a Latin American nation. It is also the first 'new generation' agreement signed by the EU in relation to the trade of organic products.

It stipulates that Chile and the EU mutually recognize the equivalence of their organic production rules and control systems, whereby all organic products produced and controlled according to EU rules can be directly placed on the Chilean market, and vice-versa. The organic logos used by the EU and Chile for their products are also protected under the deal. Furthermore, it provides for a system of updates of products covered by the respective organic rules, as well as agreement on cooperation, exchange of information and a dispute settlement system for organic trade.

Crucially for Chile, the agreement enables national producers to use the European organic labelling logo, which not only facilitates the identification of their products for consumers in the EU, but also ensures their global recognition as reliable producers and suppliers of organic products.

#### Switzerland

The Chile-Switzerland agreement entered into force in August 2019. Similar to the Chile-EU deal which entered into force in 2018, it facilitates bilateral trade in organic products by ensuring the mutual recognition of equivalence of organic production requirements and control systems in both markets. As such, it enables the organic food products produced in Switzerland to be sold in Chile without being subject to new controls, and vice versa.

It applies to organic products produced or manufactured, processed or packaged in Switzerland or Chile and excludes the export of organic animal products, except for beekeeping products, such as honey.



#### Brazil

The Chile-Brazil agreement entered into force in May 2019 to promote initiatives and actions to facilitate trade in organic products between the two nations on the basis of non-discrimination and reciprocity. It helps to ensure the necessary application of certification and control systems in either nation with regard to organic products.

It is the first such agreement in the world in which both parties recognize, without restriction, the organic product certifications issued in the country of origin, thus facilitating a more time- and cost-effective export of goods between the two, particularly important for local companies operating in the market. It also enables Chilean companies to access Brazilian raw materials at lower prices; raw materials that were not previously imported due to a lack of certified recognition in Chile.

The products authorized under the scope of this agreement include all organically produced plant-based and processed products that carry the corresponding Chilean or Brazilian organic certification and logo.

## International rankings of Chile

#### Competitiveness – 1<sup>st</sup> in region

The 2019 Global Competitive Index from the World Economic Forum is the leading index measuring the drivers of total factor productivity across 141 economies. It is the product of an aggregation of 103 individual indicators which are organized into 12 'pillars', including: institutions; infrastructure; ICT adoption; macroeconomic stability; health; skills; product market; labor market; financial system; market size; business dynamism; and innovation capability. The latest edition ranks Chile as 1<sup>st</sup> in Latin America and the Caribbean and 33<sup>rd</sup> globally, due to a stable macroeconomic context, low inflation and low public debt, competitive and open markets and a strong financial system.

#### Ease of doing business - 1<sup>st</sup> in region

Chile ranks 1<sup>st</sup> in Latin America and 59<sup>th</sup> globally in the Ease of Doing Business 2020 ranking compiled by the World Bank; testament to the ease with which to start and grow a business and export or re-export to international markets.



According to the World Bank, executives of leading international food companies who have invested in Chile note the conducive nature of the business culture in terms of doing business, including strength in logistics, traceability, the cold chain, food safety, and certification, among others.

#### Food security – 1<sup>st</sup> in region

The Global Food Security Index from the Economist Intelligence Unit examines food security across the core issues of affordability, availability, and quality. The 2019 Index ranks Chile as 1<sup>st</sup> in Central and South America and 25<sup>th</sup> globally. Fig. 7 outlines the Chilean score on each key dimension and emphasizes important strengths and ongoing challenges. It can be seen that the country scores particularly highly in affordability.

#### Indicators Main strengths Affordability Overall score & rankings Challenges • Presence, quality • Score: 80.5 of food safety net • Global:/regional: · Public expenditure programs 32<sup>nd</sup> / 1<sup>st</sup> Access to financing on agricultural R&D Score\*:75.5 for farmers Availability Gross domestic Global: 25 th product per capita Nutritional • Score: 71.1 Regional 1<sup>st</sup> standards (US\$PPP) •Global/regional: Volatility of 19<sup>th</sup> / 1<sup>st</sup> agricultural Safety & quality production • Score: 74.7 Agricultural import Global/regional: tariffs 33rd / 4th

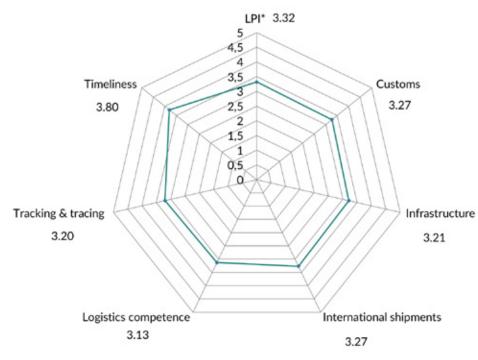
### Fig. 7 Performance on 2019 Global Food Security Index

\*Scores out of 100 Source: Economist Intelligence Unit, 2019 Global Food Security

#### Logistics – 1<sup>st</sup> in region

The World Bank's International Logistics Performance Index (LPI) ranks countries on six dimensions of trade. In the latest edition, it ranks Chile as 1<sup>st</sup> in Latin America and the Caribbean overall and 34<sup>th</sup> globally. Fig. 8 provides more in-depth details of the Chilean scorecard, showing, for example, that its highest score comes in the Timeliness category, which relates to the timeliness of shipments in reaching their destination within the scheduled or expected delivery time.





#### Fig. 8 Performance on 2018 International Logistics Performance Index

\*Scores out of Source: World Bank 2018 International Logistics Performance Index

## Governance and institutions

The Ministry of Agriculture oversees all State matters related to the development of the agrifood industry and is complemented by a comprehensive network of public agencies (see Table 5).

One important agency that should be noted is the Agricultural and Livestock Service (SAG), as the body responsible for supporting the development of the agriculture, forestry and livestock sectors. Part of its role is to conduct phytosanitary border controls at all points of entry to safeguard against the introduction of diseases or pests from abroad that may affect animal or plant life and seriously damage agriculture. Regarding exports, SAG participates in the sanitary certification of animal and vegetable products. This certification process is internationally recognized for having been prepared in line with the strictest international standards that regulate world trade and in partnership with importing countries.



### Table 5. Main public bodies governing the food industry

Institution	Role	Website
Ministry of Agriculture	MINAGRI is the State institution responsible for promoting, guiding and coordinating national agriculture and forestry activities, including the agrifood sector.	<u>www.minagri.gob.cl</u>
Agricultural and Livestock Service (SAG)	SAG protects and strengthens animal and plant health and participates in internationally recognized sanitary certifications for the export of animal or vegetable products.	www.sag.gob.cl
National Institute of Agricultural Development (INDAP)	INDAP promotes the economic, social and technological development of small agricultural producers and farmers.	www.indap.gob.cl
National Irrigation Commission (CNR)	CNR works to improve and expand irrigation and boost agricultural development by promoting and evaluating private investment in irrigation works.	<u>www.cnr.gob.cl</u>
Foundation for Agricultural Innovation (FIA)	FIA promotes and facilitates sustainable innovation processes in the agricultural and forestry sector and across the agrifood chain.	<u>www.fia.cl</u>



Agricultural Research Institute (INIA)	INIA is a nonprofit corporation linked to MINAGRI that generates and transfers knowledge and sustainable technology for innovation in the agrifood sector.	<u>www.inia.cl</u>
Chilean Export Promotion Bureau- Prochile	A Ministry of Foreign Affairs agency, ProChile promotes the export of Chilean goods and services, the internationalization of national companies, FDI and tourism.	www.prochile.gob.cl
Undersecretariat of Fisheries and Aquaculture (SUBPESCA)	SUBPESCA operates under the Ministry of Economy, Development and Tourism to regulate and manage the fishing and aquaculture industries.	<u>www.subpesca.cl</u>
National Fisheries and Aquaculture Service	SERNAPESCA is a Ministry of Economy, Development and Tourism agency which works to ensure the protection and sustainability of hydro-biological resources.	<u>www.sernapesca.cl</u>
Chilean Economic Development Agency (CORFO)	CORFO supports entrepreneurship, innovation and competitiveness. It provides national and international companies and investors with a range of investment incentives.	<u>www.corfo.cl</u>

Source: In-house research



# Regulations

The food industry is regulated by distinct laws and decrees that are governed by a broad range of public institutions. Relevant examples are outlined in Table 6, with further information available via hyperlinks located in columillion 3.

# Table 6. Main areas subject to regulation in the food industry and corresponding wregulations

Area regulated	Regulation	Description
Food safety standards	Food Safety Regulation, 1996	Decree 997/96 establishes the health and safety conditions for the production, import, processing, packaging, storage, distribution and sale of food for human consumption.
Composition, labeling and advertising of food	Food Act, 2016	Law 20.606, the Nutritional Composition of Foods and its Advertising Act, or Food Act, forms part of the aforementioned Food Safety Regulations and defines limits on the nutritional composition and advertising of processed foods. Article 120 of the Act regulates the need for processed food products to label their energy content, total fat, saturated fat, trans fat, cholesterol, sugar(s), sodium, vitamin, mineral, protein, docosahexaenoic acid (DHA), eicosapentaenoic acid (EPA), other nutrient and dietary fibre level(s), as relevant, by means of the use of 'High in' front-of-package warnings.
Waste prevention and recovery	Extended Producer Responsibility and Promotion of Recycling Act, 2016	Law 20.920, the REP Act, establishes obligations for manufacturers of six priority products to organize and finance the recovery of a percentage of these according to increasing annual targets established for each material. Targets will be phased in gradually from 2022 and run to 2034.



Real estate contracts in international border areas	Legal Decree, 1979	Legal Decree 83 mandates the National Directorate of State Borders and Frontiers (DIFROL) to authorize all sales, leases, concessions and other contracts entered into involving State-owned property located in border areas.
Fishing industry quotas	General Fisheries and Aquaculture Act, 2013	Law 20.657 regulates small-scale and industrial fishing and establishes fishing quotas or tradable fishing licenses (LTPs). It establishes 20-year tenders for industrial fishing that are renewable on grounds of expiration, and divisible and transferable.
Aquaculture	General Fisheries and Aquaculture Act, 2013	Law 20.657 regulates aquaculture and industry-related matters, including the import of hydrobiological resources, access to aquaculture areas and concessions.
Water resources	Water Code, 1981	The Water Code establishes guidelines for the use and exploitation of water resources.

Source: In-house research

# National food guidelines

In addition, the regulations mentioned in Table 6, the Chilean State has devised the Guías Alimentarias para la Población Chilena (Food Guidelines for the Chilean Population), a set of educational messages directed at health authorities, educators, social organizations and the broader general public. The guidelines constitute a fundamental resource for the promotion and education of healthy eating and physical exercise in order to foster the prevention and reduction of chronic non-communicable diseases, especially obesity and diabetes. Moreover, they represent one of the multiple actions taken by authorities to enhance public access to information on how to lead a healthy lifestyle.



# Sectors with high growth and investment potential

As Chile looks to consolidate its standing as global food industry player, developments in ingredients and additives, processed products, technology applications, packaging, and aquaculture in the country offer multiple investment opportunities. The following section highlights five sectors with significant growth potential.

# **Functional ingredients and natural additives**

# Global industry

Evolving consumer trends are driving an increasing interest in foods made with functional ingredients and natural additives (FINA) around the world. The global FINA market is young and highly disparate, therefore accurately quantifying its size is a challenge. It was estimated at approximately US\$30 billion in 2017 while revenue generated by the broader functional foods segment was estimated at almost US\$70 billion in 2018.

In terms of growth, data compiled by Transforma Alimentos for this report shows that global CAGR from 2013 to 2018 of 112 leading functional foods and ingredients most relevant to the Chilean food industry, in terms of existing or potential exports, was 14.2%. These 112 products accounted for over US\$120 billion in global trade over the same period.

Functional ingredients represent a fragmented but highly attractive market to investors, primarily due to their high levels of penetration in end-use industries and rising global demand for premium products made with FINA.



# Chilean industry

The US Department of Agriculture describes Chile a mature market for the production and marketing of food and functional ingredients, which generated sales of US\$62 billion in 2019. In particular, rising demand for food that contains FINA continues to grow and the most recently available data shows that sales in functional/fortified food products reached US\$1.48 billion in 2016, up 91.8% from 2011.

Recent forecasts were for the segment to have achieved overall growth of 36% in the decade to 2021. Regarding Chilean exports, data from Transforma Alimentos shows that CAGR of 14 functional ingredients exported from the country was 26.1% between 2013 and 2018, with raw materials such as cereal grains as well as vegetable saps and extracts performing particularly strongly.

The national ingredients industry is divided into two major groups: those that import and market ingredients internally and those that develop and sell new ingredients to specific internal and external markets. As of 2017, there were 96 companies involved in the production and/or export of FINA and exports were US\$274 million. The majority of these companies trade just one functional ingredient, with only 7% marketing more than one category. This low percentage presents opportunities for possible market entrants in this segment.

There are a number of international players that include Danisco, DSM, Diana Food and FMC Biopolymer, among others operating in Chile. Companies that exploit the growing market of endemic natural resources for value-added applications include Maqui New Life, Gelymar, Golden Omega, and Givaudan, via Naturex/Chile Botanics.

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### Research & development centers

Applied research into and development of functional ingredients is a critical aspect in the creation of new healthy food products. Two entities that conduct this increasingly significant work in the FINA segment are described below.

#### CeTA

The Centro Tecnológico para la Innovación Alimentaria (CeTA -Technological Center for Food Innovation) is a public-private, non-profit corporation which seeks to diversify the product base which supplies the domestic food industry. It was created in 2015 as part of the strategic CORFO's program, Transforma Alimentos.

Statement from CeTA Executive Director, Jean Paul Veas:

CeTA provides a variety of services related to prototype development, product reformulation, piloting, commercial scaling and small-scale production via strategic alliances with the scientific, public and private sector. It aims to add value to local raw materials and enhance the diversification of Chilean exports.

As a non-profit corporation, CeTA strives to transform Chile into a sophisticated and sustainable food powerhouse. At present, it runs an Innovation Center in Temuco and is planning to launch two more centers in the strategic locations of Coquimbo and Santiago, while also consolidating a National Pilot Network.

CeTA has assisted in the scaling up of several initiatives to date. Collaboration with Capi Foods, a company which promotes small-scale family farming in the Hualañe and Licanten districts of the centralsouth, has led to the production of legume-based, vegan and clean-label breakfast cereals. Similarly, in Chol-Chol the Center is contributing to the development of snacks produced from dehydrated strawberries grown by local farmers, while its support is facilitating the success of the Sopas Saludables Solidarias (Healthy Solidarity Soups) initiative. These latter two projects are important because they add value to fruit and vegetables from the wholesale market that have lost their commercial value but not their nutritional value, in addition to both incorporating concepts of a circular economy.



#### CEAP

The Centro de Estudios en Alimentos Procesados (CEAP) is located Talca in the Maule Region and seeks to add value to Chilean raw materials via R&D and innovation in order to foster the growth of the agro-industrial sector. Its work emphasizes how the development of a FINA industry is generating added value to raw materials.

Statement from the CEAP Executive Director, Giovanna Muñoz:

The trend towards the consumption of healthy food for health reasons, as well as the growing production of increasingly natural processed foods, is a global reality. The food industry is facing significant challenges as a result.

CEAP works by tackling these challenges head-on by consolidating its lines of research: new product development and waste recovery. In this way, it is able to directly strengthen the development of companies through sophisticated, diverse, sustainable and high-impact innovations.

The Maule Region is an inexhaustible source of diverse, high-quality raw materials with value-added compounds. As such, CEAP strives to leverage these favorable conditions for the benefit of the regional agro-industry. For example, it manages a portfolio of extracts and/or ingredients with high levels of purity and concentration and, in certain cases, proven health-related benefits. This includes by-products obtained from boldo (boldine) as well as those of species commonly available in the local area, such as hydroxytyrosol, derived from the olive industry, and tomasa, from the industrial tomato industry.

CEAP accepts the task is not easy but its ambition is to become an R&D+i reference point for the broader food industry. Its conviction is that the challenge goes hand-in-hand with strengthening functional ingredients and transforming agro-industrial by-products into value-added items.



### Other centers

Other leading R&D centers operating in the FINA segment include:

Centro Regional de Estudios en Alimentos Saludables [CREAS]

Located in Valparaiso, CREAS is a food innovation center that specializes in the R&D of products and solutions in food processing.

#### **HUB** Alimentos

Located in Talca in the Maule Region, HUB Alimentos specializes in the development of new products, ingredients and additives, as well as packaging solutions.

Collaborative, cross-sectoral initiatives are increasingly common in the FINA industry and actors are aware of the need to jointly tackle the

### Public-private programs

technology and innovation challenges facing the sector. Public-private initiatives such as IFAN and public agencies such as FIA are relevant in this regard.

#### IFAN

Consorcio IFAN (FINA Consortium) is a strategic technology-based alliance between the food industry, academia and the public sector that seeks to obtain FINA that are marketable nationally and internationally. It is headquartered in the Metropolitan Region.

Part of Transforma Alimentos, IFAN is working on 19 projects based principally on 3 locally produced raw materials: algae, dairy and cereals. Successful projects to date include the encapsulation of ingredients and additives, in conjunction with ChileBotanics/Naturex, and the development of flour from sweet potatoes and cloned cassava.

#### FIA

A Ministry of Agriculture agency, FIA works to boost innovation rates across the agrifood sector and provides industry players with a range of related financial, information and innovation-based services. This includes direct financing of projects with seed capital for young entrepreneurs as well as advisory services, training opportunities and research studies related to innovation.



Its focus is to encourage public-private partnerships at a local, regional and national level. Through its Polos Territoriales de Desarrollo Estratégico (Regional Strategic Development Zones), FIA has laid the foundations for the development of the FINA sector. Each Zone brings together stakeholders to leverage local raw material-based opportunities. As a result of crosssectoral cooperation in the Polo Legumbre (Legume Zone), a pilot plant has been implemented to develop FINA prototypes based on legumes and grains and eight new ingredients have been produced to date.

# FDI case study

## BENEO 🐼

BENEO specializes in processing chicory roots into the prebiotic fibres inulin and oligofructose. As intestinal health becomes increasingly important to global consumers, these natural fibres are in growing demand. By looking ahead, the company decided more than 15 years ago to cultivate chicory root on both sides of the equator.

To complement its processing plant in Belgium, in 2004 it launched operations in Pemuco, Chile. Investment in the country provided the company with the strategic advantage of being able to harvest and process chicory twice a year, in both hemispheres, thereby affording it greater flexibility to respond to changing customer requirements in a fast-moving market. In addition, high intensity sunlight and on-site photosynthetic capacity in Pemuco benefit both harvest quality and yield.

BENEO serves a global market and ease of trade is fundamental. Therefore, its Pemuco location is critical as it facilitates transportation to customers in Southeast Asia and the Western US, helping to reduce costs, distances and carbon emissions. Moreover, Chile offers easy and varied access to leading global markets thanks to its multiple free trade agreements.

BENEO continues to set new standards in technology and sustainability, with approximately 80% of its energy requirements met by renewable sources. To ensure continued growth, the company is investing EUR50 million in expanding its Chilean site and, thus, increasing production capacity by 20% worldwide by 2022. The company is being supported by InvestChile in every step of the investment process.

# InvestChile

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## Healthy processed food

## Global industry

The global processed food industry is projected to exceed US\$8 trillion in 2020, with growth based on rising demand for health-promoting foods and moves by the food industry to find natural replacements for traditional ingredients and additives.

The global processed food market in the health and wellness category is a multi-faceted industry and, as such, is difficult to accurately quantify. ProChile, the government agency which promotes the export of Chilean goods and services, reported global sales of healthy foods as US\$743 billion in 2018, with an expected grow rate of 2.7% in 2019, while Euromonitor International estimated the market to have surpassed US\$1 trillion in recent years.

In terms of specific segment growth, health food products have experienced CAGR of around 4.5% in recent years, and clean label foods have achieved CAGR of 8%. Euromonitor International reports that the most dynamic segment in the health and wellness market has been the free from segment, valued at US\$33 billion as of 2016.

This strong expansion is generating new opportunities for specialized businesses and investors in the healthy processed food industry around the world, and Chile is no different.

## Chilean industry

The food processing sector in Chile is modern and developed, with annual sales of US\$34 billion, and approximately 25% of all food exports relate to processed products. More broadly, the Chilean food and grocery retail market, which includes retail sales of all packaged and unpackaged food products as well as beverages, tobacco, and household products, was valued at US\$39.9 billion in 2018, with CAGR of 5.6% between 2014 and 2018. To 2023, it is forecast to grow by 22.6% to reach US\$48.9 billion, with predicted CAGR of 4.2%. Crucially, food is the largest segment of this market, accounting for US\$26.2 billion or 65.5% of aggregate market



value. The beverages segment contributes to US\$9.6 billion (23.9%), while tobacco and household products account for US\$2.4 billion (6.1%) and US\$1.7 billion (4.4%), respectively.

More specifically, the healthy processed food and beverage market has achieved strong growth over the past decade to reach approximately US\$3 billion. Significant growth has been achieved in the functional and reduced in food segments which, as of 2017, accounted for 42% and 33% of total sales in this market, respectively.

Data from Euromonitor International shows that food and beverage products from the health and wellness segment account for approximately 20% of packaged food sales worldwide, evincing the growth potential of the category. In Chile, growth in health and wellness packaged foods is expected to reach 5.5% CAGR on average in the five years to 2022, with US\$524 billion of sales during this period. Similarly, health and wellness beverages are anticipated to achieve 6.8% CAGR and US\$608 billion in sales over the same timeframe.

Regarding specific market segments, projected global growth for functional/fortified products over the aforementioned five-year period is 4.5% CAGR, with significant opportunities of between 8% and 10% CAGR in distinct salty snack categories in Latin America. This presents interesting opportunities for investors in Chile and provides an insight into potential market entry strategies.

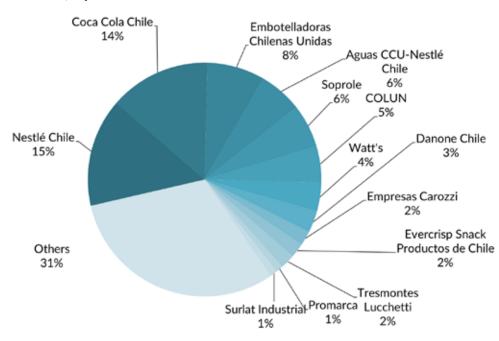
Qualitative findings from Euromonitor International and Innova Market Insights support the strong standing of functional and reduced in products described above, with growth in these segments largely the result of evolving consumer preferences, whereby individuals are increasingly interested in seeking benefits from the products they consume. Consumers in Chile and beyond, particularly from younger generations, are avoiding traditional processed foods in favor of simpler, less processed, fresher, clean label concept, more personalized and natural offerings. In response, new and emerging brands are appearing and occupying growing market shares.



## Main domestic players

The market is dominated by large multinational companies which are established retailers (see Fig. 9) who benefit significantly from economies of scale. In recent years, many of these players have increasingly altered existing formulas or designed new offerings to meet rising and changing consumer demand in the food industry.

While market share data is updated, the breakdown provided by Fig. 9 shows how the local industry has been dominated by large players in recent years, such as Nestlé and Coca Cola. It also demonstrates the importance of small players, marked as 'Others', who represent almost one third of total market share.



## Fig. 9 Main healthy processed food & beverage companies in 2016, by market share

Source: US Department of Agriculture, via Euromonitor International

On a smaller scale, numerous actors including farmers, distributors, manufacturers, stores and restaurants, and app-based offerings have emerged in the domestic market in recent years. However, official figures do not yet exist to quantify this segment.



### Local consumer trends

A 2019 global research study by Innova Market Insights found that 76% of consumers worldwide aged between 26 and 55 agreed that healthy aging starts with what they eat and drink, while 56% said that they had increased their consumption of functional foods/beverages since 2018.

In Chile, findings from Euromonitor International and MarketLine show consumers are following the global trend and increasingly seeking healthy, premium and differentiated foods. Qualitative evidence shows that due to growing numbers of Chileans leading busy lives and rising female participation in the workforce, there is increasing demand for healthy processed and ready-made food products, in addition to a shift from locally produced goods to more expensive and higher quality branded products. Examples of this include strong sales growth in recent years in segments including organic baby food, healthy frozen processed meat, seafood, fruit and vegetable products, and ready-made meals positioned as homecooked foods. Moreover, this market evolution is facilitating growth in the food and grocery market more broadly as retailers are able to sell higher valued products and generate stronger revenues.

Additional segments of the market with inviting growth potential include organic products; free from/reduced/low in products; healthy beverages, including bottled water; and energy-boosting foods, particularly energy bars. Many of these segments are showing improved growth potential compared to the market as a whole, thus generating attractive avenues for new entrants seeking to move into niche areas that offer inbuilt protection from pricing pressures and mainstream marketing. In addition, since they are sheltered from direct competition from current players, the emergence of these kinds of thriving health niches in the food industry offers attractive investment prospects.

## Animal protein alternatives

The move away from animal-based proteins towards plant-based alternatives is another growing trend, with almost a third of US and UK consumers now consuming meat alternatives, such as meat-free burgers, once a week or more. The global alternative-protein industry is nascent and offers significant room for further growth, with Deloitte reporting that the global meat substitute market will reach EUR6.5 billion by 2025.



Globally, numerous opportunities are emerging in the plant-based protein segment. For example, new bakery products made using ancient grains have achieved CAGR of 12% between 2014 and 2018 and there is strong potential to follow suit in Chile due to the availability of ancient grain species including quinoa, amaranth and chia seeds. Opportunities are also present for other plant-based protein alternatives, particularly legumes such as chickpeas and lentils, piñon nuts from endemic monkey-puzzle trees, and algae such as spirulina.

Furthermore, there is strong future potential in an anticipated 'third wave' of alternative proteins, such as microproteins and insect-based proteins. In addition to positive health impacts, they have significant potential to enhance production efficiencies.

## Consumer profile

Innova Market Insights reports that healthy aging claims are increasingly prevalent on food products and beverages as younger generations prefer healthier and more functional food and beverages to more traditional supplement formats.

This generation-based consumption is the main driver of consumption in the healthy processed food sector, with rising numbers of Millennial and Generation Z consumers with higher disposable incomes leading the way. Results of the 2017 Census in Chile show that there are approximately 3.5 million Millennials and 2.3 million Generation Z consumers in the country (20% and 13% of the population, respectively), i.e., one third of national consumers. Consumption by these groups is important as their numbers are set to remain steady for decades, since Chileans are living longer.

Projections from the Institute of National Statistics (INE) based on the 2017 Census show that by 2050, the largest single age group will be 50 to 60 year olds, i.e., those from Generation Z. Furthermore, as consumption of healthy processed food becomes more ubiquitous, demographic trends are positive for the sector. While the number of people over the age of 64 in 2017 was 12%, it is projected to double to reach 25% by 2050, by which time it will consist of Millennial and Generation Z consumers.



In addition, qualitative data shows that Millennial and Generation Z consumers tend to buy in smaller volumes but seek high-value added products with sustainable attributes and show preferences for higher quality or premium products, such as bread. Investment opportunities exist here as healthier, more natural products are set to grow beyond their traditional niche status.

## New product development and launch

An important emerging trend in new product development (NPD) and new product launch (NPL) that should be noted relates to the rise of free-from processed food products, whether free from gluten, lactose, sugar, allergens or other free-from claims with regards to clean, ethically produced, and environmentally sensitive products.

Research from Innova Market Insights reports that although allergen free statements on new products are rare, appearing on merely 1.9% of new product launches tracked across the world, they show strong global growth of 32.9% CAGR to the third quarter of 2020. Among these, egg free warnings have grown at 18.5% CAGR, while both soy free and dairy free are also growing robustly.

This presents opportunities in Chile, which has a well-developed ecosystem for NPD and NPL, and the speed and ease of both in the healthy food sector is expected to accelerate further with the establishment of new technology and innovation centers across the country, such as CeTA.

FIA conducted research into global market categories with the greatest potential for NPL for processed food products made with natural ingredients and FINA in 2017, the main findings of which can be seen in Table 7. This research provides potential manufacturers of and investors in this segment with valuable information related to sectors with significant growth opportunities in the functional ingredients segment.



## Table 7. Top Ten global market categories of foods made withNatural and functional ingredients with potential for NPL

Sector	Global NPL ranking
Bakery and baked goods	1
Confectionary	2
Sauces, dressings and condiments	3
Snacks	4
Dairy	5
Ready-made meals	6
Non-alcoholic beverages	7
Meat, eggs & fish	8
Supplements	9
Fruit & vegetables	10

Source: Fundación para la Innovación Agraria https://bit.ly/2YnJPCd

## FDI case study

#### Grupo Bimbo 🤣

The Mexico-based Grupo Bimbo is the largest baked goods company in the world and has operated in Chile since 1995, following its acquisition of IDEAL. It has since incorporated numerous related brands into its portfolio and is among the most prominent actors in the local food market.

In 2018, Grupo Bimbo consolidated its position as market leader in cakes, cookies and baked snacks with the acquisition of Nutrabien, in one of the largest deals to take place in the Chilean food industry in recent years. Indeed, the company views Chile as providing unrivalled conditions in which to invest due to its amenable business culture, strong institutions and ease of doing business. Moreover, its consistent national focus on ensuring a healthy population and clean environment are qualities that Grupo Bimbo shares.



In 2019, the company installed an independent solar energy system atop one of its Santiago warehouses, the largest of its kind in South America, in line with a global commitment to ensuring 100% of its energy stems from renewable sources by 2025. Moving forward, Grupo Bimbo is committed to expanding operations in the south of the country and securing sustainable and responsible growth, while continuing to contribute to the broader development of Chile. InvestChile -as the government agency responsible for facilitating investment opportunities- is permanently supporting the company in its expansion process.

## Sustainable packaging

## **Global industry**

The global packaging industry is worth approximately US\$868 billion, having grown 8.5% from 2015. The food industry is the largest end-user for packaging globally and its recent demand for packaging material has grown at 2.6% a year.

Recent worldwide consumer preferences for plastic-free societies have created a virtuous circle where businesses can and are gaining by improving sustainability. Research published by Amcor in April 2020 found that the main consideration in terms of packaging for 65% of consumers in France, the UK, Germany, the Netherlands and Sweden was sustainability, while the most important feature sought by online shoppers was recyclable packaging. In response to these kinds of evolving trends, several large multinationals, including Amcor as well as Nestlé, have committed to making 100% of their packaging recyclable or reusable by 2025.

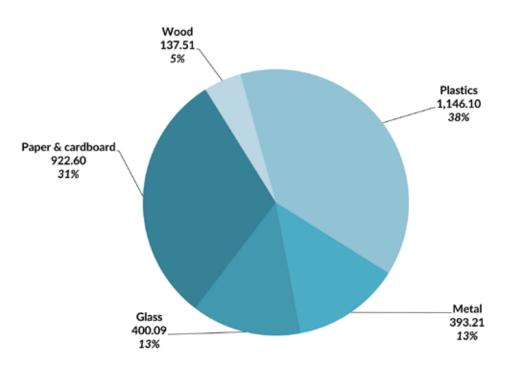
## Chilean industry

In 2018, the physical production value of the domestic packaging industry was US\$2.96 billion, up 13.7% from the previous year. Although this represents significant annual growth, it is in part due to a rise in the prices of the main raw materials used to manufacture packaging products.

In general terms, over 60% of all packaging corresponds to the food industry and packaging growth is directly indexed to food consumption and food industry growth.



As Fig. 10 shows, plastic packaging remains the most valuable segment, worth US\$1.146 billion in 2018, up 2.71% from 2017, and accounting for 38% of the total packaging sector value. The second most valuable type of packaging is paper and cardboard, the value of which rose 27.25% between 2017 and 2018 to reach US\$922 million, accounting for 31% of the total sector value.

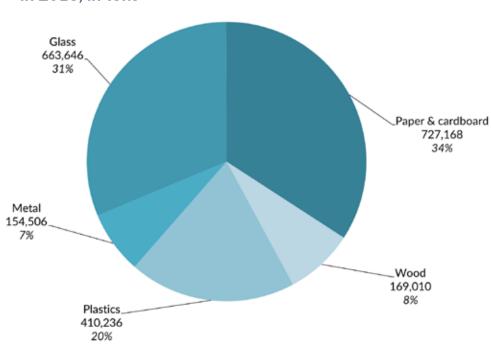


## Fig. 10 Physical production value of types of packaging manufactured in 2018, millions of US\$

Source: Centro de Envases y Embalajes de Chile (CENEM)

In 2018, total physical production of packaging was 2,124,566 tons, a 5.8% increase from 2017. Fig. 11 provides a breakdown of this production total. It shows how production in the paper and cardboard and glass segments represents almost two-thirds of all production weight, accounting for 65% of all tonnage manufactured. Plastics, the most valuable segment in terms of monetary worth, constitute 20% of all physical production by volume.





## Fig. 11 Physical production of types of packaging manufactured in 2018, in tons

Source: Centro de Envases y Embalajes de Chile (CENEM)

As Table 8 shows, the industry exported almost US\$279 million worth of packaging in 2018, 4.29% up from 2017. This was despite the overall volume of exported packaging falling by 7.18% to 131,316 tons over the same period, a phenomenon which is in line with recent annual trends dating back to at least 2014.

The largest packaging export market for Chile in 2018 was Argentina, accounting for US\$43.1 million FOB and 15.7% of all such exports, followed closely by Peru (US\$42.4 million FOB and 15.3%) and Brazil (\$31.7 million FOB and 11.5%). The profile of the packaging export market is dominated by countries from South, Central and North America, with only Italy (in 14th place), New Zealand (17th) and Indonesia (20th) ranked among the top 21 largest destinations from beyond the region.



Туре	Value (millions of US\$ FOB)	Variation from 2017 (%)	Volume (tons)	Variation from 2017 (%)
Wood	17.101	6.99	10,927	7.4
Plastics	71.294	-3.79	18,821	-15.82
Metal	124.773	11.93	40,306	-2.2
Glass	29.496	-4.73	41,039	-4.18
Paper & cardboard	36.294	3.83	20,223	-7.52
TOTALS	278.958	4.29	131,316	-7.18

#### Table 8. Packaging industry exports in 2018

Source: Centro de Envases y Embalajes de Chile (CENEM)

The Chilean packaging market consists of numerous raw material and packaging manufacturers, importers, exporters and distributors. Latest available data, which is due to be updated by the end of 2020, shows that there are 78 manufacturers and direct distributors for paper and cardboard, 37 for glass, 35 for aluminum, 100 for tinplate and 301 for plastics.

The supermarket and retail industries represent the most important client bases for packaging firms. Table 9 provides a list of key clients which operate in the food and/or agriculture sectors. The inclusion of companies is based on their recent active engagement in the promotion of sustainable packaging and related industry-wide initiatives.

#### Table 9. Prominent retailers in the sustainable food packaging market

Agrosuper	Capel	Carozzi	CCU	Cencosud	Cervecerías Chile
Coca-Cola	Colmenares San Cristóbal	Concha y Toro	Falabella	Gourmet	Grupo Disal
lansa	ICB	Nestlé Chile	Procter & Gamble	Sodexo Chile	SMU
Tottus	Tresmontes Lucchetti	Tucapel	Unilever Chile	Walmart Chile	Watt's

Source: In-house research



### Demand

In 2018, packaging-related imports were US\$550 million CIF, 17.5% up from 2017, and 154,555 tons, up 6.2% from the previous year. The internal market accounts for approximately 50% of all packaging production and demand is directly related to national economic growth, reflected in variations in store and supermarket sales. Significantly, while less than 10% of packaging production corresponds to direct exports, sector-wide indirect exports exceed 40% of total production.

## Public-private programs

There are a number of public-private initiatives actively researching new, more sustainable and innovative packaging, thereby facilitating connections between solution providers and food producers.

<u>CENEM-Transforma Alimentos partnership</u>: Statement by Francisco Rossier, Director of Innovation, Transforma Alimentos

The Centro de Envases y Embalajes de Chile (Chilean Packaging Center), or CENEM, is a strategic partner for Transforma Alimentos. In recent years, members of its board have been active participants on the Transforma Alimentos Advisory Board and this partnership has led to the implementation of several projects, including the Packaging Working Group.

One of the main collaborative achievements to date is LinkePack. A digital market-place that connects companies of all sizes, it emphasizes forging links between SMEs operating on the demand side of the packaging space with suppliers. While the platform emerged as a Transforma Alimentos initiative that was executed in conjunction with CENEM, it now operates independently.

Transforma Alimentos and CENEM are currently designing various targeted schemes to help SMEs from sectors with a high potential to add value to their products through packaging.

#### Co-Inventa

Co-Inventa is an open innovation packaging platform supported by CORFO to strengthen ties between academia, innovation centers and the private



sector. It uses technology-brokering to connect the market with academia in the R&D and distribution of state-of-the-art materials and active and intelligent packaging. Recently completed projects include the application of nanotechnology for the reinforcement of recycled PET containers and the development of biodegradable materials for food packaging.

#### CeTA

As described in section 1. Functional ingredients and natural additives, the Southern Innovation Center of CeTA in Temuco is operational, having come online in 2019. The Center is a 400-square-meter complex housing state-of-the-art food processing and packaging systems, including a specialist packaging unit. It provides services including the design and development of innovative sustainable and smart packaging for SMEs and entrepreneurs.

#### APTA

Andes Pacific Technology Access (APTA) is a corporation that facilitates the transfer of high-impact technology to distinct industries, including packaging, by facilitating connections with its network of university and research centers to facilitate R&D. APTA also runs a start-up financing scheme, APTA Builder, in collaboration with CORFO to create and scale up technology- and innovation-focused SMEs.

## Public-private programs

In the context of the need for more sustainable packaging and waste management practices, in 2016 Chile enacted the <u>REP Act</u> (see Table 6 for more details), also known as the Recycling Act. Its application is expected to lead to a reduction in overall packaging production volumes and optimization of packaging design to increase recovery rates. In terms of investment, this presents significant opportunities on the optimization side.

The REP Act establishes numerous ambitious targets for the recovery and recycling of packaging products, in relation to both household and industrial waste. The aim of the Ministry of the Environment is for the targets to enable to country to achieve an overall recycling rate of 60% to 70% via new and improved local-level infrastructure and an enhanced management collection system.



Table 10 outlines the rolling annual targets per packaging material, which will be phased in gradually from 2023 and run to 2034, for household waste, and 2031 for industrial waste. The level of ambition can be seen by comparing and contrasting the initial targets set for Year 1 and those of the final year, for both the household and industrial waste categories.

Total household waste recovered and recycled, by packaging type						
		Beverage cartons (%)	Metal (%)	Paper & cardboard (%)	Plastic (	%) Glass (%)
	1st	5	6	5	3	11
	2nd	8	9	9	6	15
	3rd	11	12	14	8	19
	4th	15	15	18	11	22
	5th	19	17	23	14	26
	6th	23	21	28	17	31
Year	7th	27	25	34	20	37
	8th	31	29	39	23	42
	9th	36	32	45	27	47
	10th	40	36	50	30	52
	11th	50	45	60	37	58
	From 12th year onwards	60	55	70	45	65
		Industrial wast	e by packag	ing type		
		Metal	(%)	Paper & cardbo	ard (%)	Plastic (%)
	1st	23		48		13
	2nd	32		54		19
	3rd	42		60		25
	4th	51		65		32
Year	5th	61		71		38
icai	6th	64		74		42
	7th	66		78		46
	8th	68		81		51
	From 9th year onwards	70		85		55

#### Table 10. Ley REP targets for recovery and recycling of packaging waste

Source: Ministry of the Environment https://bit.ly/3gZs5mA



The regulatory framework provided by the REP Act has been a catalyst for the entire waste management ecosystem to act and cement a move towards a circular economy, in which different types of waste remain in circulation by means of innovation, reuse and recycling.

This move is exemplified by recent legislation, including Law 21.000 to phase-out plastic bags in all retail by 2020, as well as several multisector initiatives called Clean Production Agreements (APLs) that commit signatories to sustainable practices in this area, including the Zero Waste APL and Eco-labeling APLs. Furthermore, the 2019 signing of the Chilean Plastics Pact, an initiative overseen by the Ellen MacArthur Foundation and led locally by Fundación Chile and the Ministry of the Environment, is testament to the new direction in which the country is heading on sustainability, in the food and packaging industries and beyond.

### FDI case study

#### BASE 🐼

The German chemical company prioritizes innovation and 60% of its investments are designated to R&D&i and the development of sustainability-driven products and solutions, including packaging. Consequently, it has become a pioneer in compostable and bio-based plastic resins such as ecovio®.

BASF has operated in Chile for over 100 years and views it as a highly attractive market in which to build a sustainable and innovative future. As part of the global campaign to mark its 150th anniversary, in 2017 the company launched the Futuro Compostable (Compostable Future) Project in the country to contribute to the reduction of organic household waste, which represents over 40% of all household waste produced nationwide.

The project was executed in 204 homes across the Santiago districts of Providencia and La Reina in 2014 and encompassed all stages of the process cycle. Overall, Futuro Compostable successfully demonstrated the benefits of BASF packaging technology and the general sophistication of the Chilean market in sustainable waste management.

An ongoing commitment to international sustainability goals in conjunction with a domestic regulatory framework conducive to a circular economy are key factors in BASF's ongoing presence in Chile.



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## Agrifood tech

## **Global industry**

The disruptive technology transforming the food supply chain is being propelled by the relatively new agrifood tech segment, which incorporates agricultural technology (agtech) and food technology (foodtech) companies and applications.

In terms of agtech, the sector presents multiple opportunities across a broad scope of vertical markets, including agribusiness marketplaces, biomaterials, farm and soil management software, farm robotics and mechanization, e-Grocery, innovative food, traceability tech, agrobiotechnology, and novel farming systems, among others. The foodtech sector likewise affords a range of opportunities across industry verticals, such as innovative food production, restaurant technology, food ordering and delivery apps, food waste recyclers, meal kits and recipe boxes, cooking and chef communities, online grocery retail and robotics in commercial kitchens, among others.

The industry, particularly on the agtech side, has been largely built on venture capital (VC) and agrifood tech start-ups raised US\$19.8 billion in global VC funding in 2019 across 1,858 deals. Investment in the industry has grown by 250% over the past five years and, as of 2018, the global agtech industry alone had a farm gate value of US\$3 trillion.

In 2019, Latin American agrifood tech start-ups raised US\$1.4 billion in VC funding and experienced a 40% year-over-year growth in the number of deals closed. This is testament to growing activity in the region and the opportunities for investors and innovators both upstream and downstream.

## Chilean industry

The Chilean agrifood tech industry is nascent and quantifying its size and growth at this early stage is a challenge. However, increasing interest and investment in the market provides evidence of the upward trajectory of the industry and evinces the potential of the market.

As a dynamic and large player regionally, the Chilean agrifood tech space, in conjunction with those from Brazil and Argentina, accounted for over half of all deal flows in 2019. In the innovative food segment of food tech, regional growth was led by the Chilean The Not Company (NotCo), an alternative



protein start-up that aims to replace distinct animal-based products and ingredients with plants, without sacrificing taste, convenience or texture. NotCo closed a US\$30 million round of funding in 2019 after its eggless mayonnaise became the third-best selling mayonnaise in Chile. It has subsequently launched in the US market. In addition, the online shopping and delivery space, the Chilean platform Cornershop was acquired by Uber in 2020 for approximately US\$450 million. These kinds of growth stories highlight the potential of successful and innovative start-ups from Chile.

With ongoing investment and growth across the sector in Chile, a number of local and international companies operate in the local market across the value chain. A description of some of the most innovative companies is provided in Table 11.

Agtech	Foodtech
Agro Urbana: The first vertical agriculture company in Latin America, it produces vegetables by applying advanced technology and socially and environmentally responsible processes.	Benexia: Manufactures and sells chia seed products made using a natural and chemical-free sterilization process.
<u>Ciencia Pura</u> : Supplies a company-own plant growth acceleration system for in vitro and nursery propagation via precision lighting.	Bifidice: Started in Russia in the 1990s, the company makes ice cream with probiotics which it claims can help to counter allergies, chronic diseases and digestive problems.
Food For the Future: Produces and sells animal feed made from insects harvested by the company.	<u>Cornershop</u> : On-demand shopping and delivery app, ac- quired by Uber in 2019.
Kilimo: The Argentina-based start-up provides a platform to enhance precision irrigation using big data and satellite technology.	Done Properly: Uses microorganisms to transform raw materials and develop natural and sustainable bioprocessed ingredients through advanced fermentation technology.
PolyNatural: An ag-bio tech company that manufactures Shel-Life, a 100% natural emulsion to protect fruit and extend its shelf life during export.	Protera: Via its in-house technology, Natural Intelligence <sup>™</sup> , which is based on predictive algorithms and Deep Learning, the company develops protein-based ingredients in a fast affordable manner.
VACuCh: Creates and sells antibacterial products made from copper to combat livestock diseases such as mastitis.	The Not Company: Uses AI to create and sell food products made from vegetables and plants.

#### Table 11. Innovative agrifood tech companies operating in Chile\*

\*Unless otherwise stated, companies are Chilean

Source: In-house research



## Food companies investing in agrifood tech

A number of large food companies are increasingly investing in this segment. Through initial outlay investment, these firms are leveraging the strategic long-term benefits expected to be provided by agrifood tech companies, in a win-win situation.

An example of this is Agrosuper, a leading processed meat company. In 2020, the company launched an open innovation program, Catalyst, in conjunction with business accelerator Imagine Lab, to finance agrifood tech start-ups working on digitization, automation and data analytics, and food quality and safety. Successful applicants will become Agrosuper clients or partners.

Another example is Hortifrut, the largest Chilean producer of fresh berries. The company runs an innovation fund, Hortifrut Innova, which finances early-stage agtech start-ups, particularly those working on digital initiatives, software, robotics, the Internet-of-Things, blockchain and AI.

### Local investment funds

There are a number of locally based investment funds that focus on the national agrifood sector. Table 12 outlines three investing in the local agrifood tech industry.

Private investment fund	Description
ALAYA Venture Capital	VC investment fund which invests in high-impact technology start-ups, including from the agrifood tech sector.
Austral Capital	Focuses on investing in technology-based B2B initiatives across numerous sectors, including foodtech.
CLIN Fondo de Inversión Privado	A US\$20-million investment fund and part of Chile Global Ventures, it invests in B2B start-ups, including agtech companies.

### Table 12. Chilean-based investment funds with a focus on agrifood tech

Source: In-house research



## International investment funds

In recent years, international investment funds have mobilized to finance the agrifood tech space. Table 13 outlines nine major players investing in this sector in Latin America.

### Table 13. Major investors of agrifood tech in Latin America

Investment fund/company	Description
AgFunder	Online agrifood tech VC funding platform, based in the US.
Angel Ventures	Multi-sector, VC investor with offices in Mexico, Peru and Colombia.
BGF Nutrition Fund	A global BlackRock fund that invests in companies across the agrifood value chain.
International Finance Corporation (ICF)	Part of the World Bank Group, the IFC finances global agribusiness companies via equity and debt investment.
Joyvio Group	China-based investment vehicle of Legend Holdings with a focus on food companies and technology.
Kamay Ventures	Multi-sector, open VC fund based in Argentina.
Kascek Ventures	Multi-sector VC fund with offices in Argentina and Brazil.
The Craftory	Multi-sector investment 'house' based in the UK.
The Yield Lab	A US-based agrifood investment company that invests in agtech through its LATAM fund, based in Argentina.

Source: In-house research

## FDI case study

#### Kilimo Agtech

Kilimo is a big data and machine-learning tool for irrigation management in agriculture. Via a highly sophisticated and easy-to-use system, which includes climate and satellite information analysis, it provides users with recommendations on when and how much to irrigate.



The company arrived in Chile in 2018 following investment by ALAYA Capital. Chile represented a key strategic market for Kilimo due to its status as a global leader in fruit exports. Furthermore, as one of the most stable markets in the region, the company established operations in the country as a means to grow and launch into neighboring markets, following the example of other leading companies in the agricultural sector. Since its arrival, Kilimo has developed a network of over 50 clients nationwide and a market potential of US\$28 million, thus enabling it to open an office in Peru that is managed from Santiago.

As Chile continues to face challenges related to sustainable water management, the tools provided by Kilimo are increasingly important for the agro-food industry moving forward.

The Chilean agtech market is highly competitive and presents significant opportunity, with producers increasingly open to new technological applications that allow them to use resources more efficiently and increase production yields. The company is being supported by InvestChile in every step of the investment process.

## Aquaculture

## Global industry

Fish and fish products are among the healthiest foods in the world and since 2016 aquaculture has been the main source of fish available for human consumption.

Total production figures for 2018 represent an all-time record high of 114.5 million tons in live weight and a total farm gate sales value of US\$263.6 billion. Aquaculture continues to outpace other major food production sectors, with an average annual growth rate of 5.8% from 2001 to 2016. Both production volumes and prices are expected to rise to 2030.

Aquaculture is a modern multibillion dollar industry in Chile and the country ranks second only to Norway in global production.



## Chilean industry

Chilean success in this sector is due to a combination of factors: the necessary climatic and oceanographic conditions required to farm salmon and trout; a robust legal framework; an open economy attractive to investment; and the adoption of state-of-the-art fish harvesting and processing technology.

Total aquatic animal production in 2019 was 1.3 million tons, 5.7% up from 2018, while total fish production was 953,300 tons, up 13.1%. Atlantic salmon accounted for 73.2% of all production, followed by Pacific salmon at 18.5% and rainbow trout at 8.3%. Production of these three species rose by 10.1%, 28.4% and 10.3%, respectively, compared to 2018.

Aquaculture-related exports were US\$6.2 billion FOB in 2019, slightly down on the previous year. Salmon export value exceeded US\$4.7 billion FOB, making it Chile's second most valuable export item after copper. Atlantic salmon is the top export product in terms of value and weight, followed by Pacific salmon, rainbow trout and mussels (see Table 14).

	Product	Total export value, US\$ FOB	% share of export value	Total export weight, tons	% share of total export weight
1.	Atlantic salmon	3.86 billion	69%	457,895	56%
2.	Pacific salmon	874 million	15.6%	130,931	16%
3.	Rainbow trout	428 million	7.7%	45,187	5.5%
4.	Mussels	212 million	3.7%	81,140	9.9%

#### Table 14. Top four exported species in 2018

Source: Undersecretariat of Fisheries and Aquaculture https://bit.ly/2MU6AH4

## Market players

There are several large companies in the Chilean aquaculture sector, most of which operate in the salmon industry. Table 15 provides a breakdown of the largest market players in terms of salmon and trout exports. It shows that the largest producer and exporter in 2019 was AquaChile in terms of both export value and weight in tons, followed by Cermaq Group.



Company	US\$	Net tons	% share US\$	% share Net tons
Empresas AquaChile SA	734,930,000	103,102	14.3	15.9
Cermaq Group	477,344,000	70,103	9.3	10.8
Multiexport Group	458,940,000	54,716	8.9	8.4
Mowi ASA	374,223,000	48,597	7.3	7.5
Australis Mar SA	364,367,000	47,237	7.1	7.3

#### Table 15. Top five salmon and trout exporters in 2019

Source: AquaChile https://bit.ly/2UZmDlr

## Industry challenges

Despite the growth of the global aquaculture industry and its importance to the Chilean economy, the sector faces a number of challenges, the majority of which relate to sustainability.

Climate change is threatening entire aquatic ecosystems and it is increasingly important that the industry, in conjunction with authorities, mitigates the environmental impacts of aquaculture production.

Likewise, more sustainable and resource-efficient approaches are required to combat fish stock disease, including reducing the use of antibiotics. Maintaining low levels of parasitic sea lice is a top priority for many large companies and industry players are increasingly developing integrated and non-medicinal approaches to treatment.

Challenges also relate to bridging an innovation gap in the local and global industries, for example in seeking alternative forms of producing fish meal that mitigates depletion of global fish stocks, as well as aspects that pertain to breeding and genetics as well as primary processing.

Continuing to attract investment is one way the industry can tackle these challenges and moving forward.

### Presence of multinational companies

As a mature market, the Chilean aquaculture sector is host to several significant multinational companies. There is a strong presence of specialists in the production and/or export of marine and fresh water



products, as well as companies that operate in pisciculture and egg production. These firms are supported by a sophisticated supply chain, with notable multinational suppliers working in the fields of laboratories and genetics, pharmaceuticals, logistics and equipment services, food production plants, and packaging, among others.

An insight into the most prominent multinational players that operate in the local industry can be found in Table 16.

Table 16. Prominent multinationals	in the Chilean	aquaculture industry
------------------------------------	----------------	----------------------

Subsector	Company	Headquarters
	Australis Seafoods	Subsidiary of Joyvio/Legend Holdings, China
	Cermaq Group	Norwegian subsidiary of Mitsubishi Corporation, Japan
Producers and/or exporters	Cooke Aquaculture Chile	Subsidiary of Cooke, Canada
	MOWI	Norway
	Ventisqueros	Subsidiary of Schörghuber Corporate Group, Germany
	AquaGen	Norway
Pisciculture and egg producers	Hendrix Genetics	The Netherlands
P	StofnFiskur	Icelandic subsidiary of Benchmark Holdings, UK
	AKVA Group	Norway
	Benchmark Genetics	Norwegian subsidiary of Benchmark Holdings, UK
	BioMar	Denmark
	Cargill	US
	Gareware	India
Suppliers	GripShip	Subsidiary of AquaShip, Norway
	Skretting	Norwegian subsidiary of Nutreco, The Netherlands
	Solvay	Belgium
	STIM	[formerly Europharma] Norway
	Virbac	France

Source: In-house research



## **Sector incentives**

Companies operating or looking to operate in Chile can access a range of incentives and support networks related to investment, setup, research, innovation and human talent. The most significant incentives are granted by public institutions such as: the Chilean Economic

Development Agency (CORFO), the National Training and Employment Service (SENCE), amongothers.

InvestChile as the government agency responsible for promoting and facilitating investment opportunities is permanently supporting international companies with individually-focused assistance and free-ofcharge specialized services for landing and expansion.

### Pre-investment and technology projects

Several incentives for international companies seeking to implement investment projects are available from CORFO, including:

- <u>The Integrated Promotion Initiatives (IFI)</u>, which are grants geared towards co-financing the implementation or expansion of technology investment projects.
- <u>The Crea y Valida (Create and Validate) program</u>, which provides grants and co-financing to companies to support the development of innovative new or improved technology-based products, processes and/or services from early-stage prototypes, to their validation at industrial and/or commercial scale. Applicant companies must be registered in Chile.
- In a VAT exemption scheme, projects that involve an investment of at least US\$5 million may apply for a tax credit with respect to the import of capital goods.

#### Research & Development Law

Investors in R&D from across all sectors are eligible for a tax benefit in the form of a credit against First Category Tax of up to 35% of the amount devoted to R&D activities. These activities can be undertaken directly by the company, via a third party, or hired out to a specialized center registered with CORFO. Applicant companies must be registered in Chile.



#### Remote areas law

Benefits are also available for investors who locate projects in specific 'Remote Areas' (regions of the far north and south). They include tax credits

for specific investments, subsidies for labor costs, and subsidies for investment by SMEs.

#### Agricultural Innovation Foundation

Part of the Ministry of Agriculture, FIA provides four programs to strengthen agrifood innovation:

- Financial incentives: Seed capital to finance the implementation of innovation initiatives in the agriculture sector and the associated agrifood chain, in addition to distinct innovation-oriented projects, consultancy, tours, events and studies.
- Information resources: Facilitation of resources to foster the development of decision-making in innovation processes in the food sector, by means of a digital library, national databases and an innovation observatory.
- Innovation training: Training opportunities are provided to school children, young adults and adults to strengthen knowledge, skills and attitudes around innovation and entrepreneurship related to the agriculture sector and associated agrifood chain.
- Innovation networks: FIA users are offered opportunities to connect with distinct actors in the entrepreneurship and innovation ecosystem of the agrifood sector, including face-to-face networking events nationwide.

#### National Irrigation Commission

The CNR administers Law 18.450 which encourages private construction and reparations of irrigation and drainage works and the development of local producers in the affected areas. As such, it offers subsidies of up to 90% of the total cost of the project to companies that meet certain prerequisites and successfully apply for the right to construct irrigation and/or drainage projects



## Strategic programs

The government through CORFO has developed a series of Strategic Regional Programs (PERs) to bridge gaps and strengthen public-private coordination in distinct national sectors and geographical areas with significant potential for growth and added value. A number of these programs relate directly to the food industry.

#### Transforma Alimentos

#### Statement by Francisco Rossier, Director of Innovation

Transforma Alimentos is a strategic program supported by CORFO and the Ministry of Agriculture, created to promote innovation and growth in the national food industry and drive the diversification of products and services for export.

It assists companies in identifying market opportunities and strengthening their innovation capabilities by facilitating connections with researchers, suppliers and potential clients, thus accelerating the market launch of their projects and business ideas. It also facilitates coordination between public sector agencies to reinforce industry-wide competitiveness through collaboration.

Accordingly, Transforma Alimentos identifies existing needs and gaps in the sector and creates targeted programs in response. Its work contributes to the scaling up of different initiatives via the provision of equipment and piloting services. This approach enables companies to overcome technical challenges by identifying solutions for new ingredients, packaging or varieties, in order to produce healthier, higher quality and environmentally friendly food.

Further initiatives help to prepare companies for internationalization by enhancing their export-related and e-commerce skills.

#### MásMar Transforma, Coquimbo Region

MásMar Transforma supports the development of a competitive marinebased bioproduct sector in the region by improving processes, technology and resources available to local fishing and seafood sectors.



#### Fruticultura Sustentable, Valparaiso Region

Fruticultura Sustentable strengthens the regional fruit sector by accelerating innovation via the placement of local products in demanding and higher-paying markets to create a virtuous circle that impacts the entire production chain.

#### HortiCrece, O'Higgins Region

HortiCrece positions the region as a leader in the development and production of niche vegetables by providing growers with the technical knowledge, market intelligence and marketing channels to position their products in new and more demanding markets.

#### Maule Alimenta al Mundo, Maule Region

Maule Alimenta al Mundo promotes collaborative networks among local agribusinesses to identify production gaps and business opportunities in order to facilitate their development of new, healthy, convenient and sustainable processed food.

#### Mejillón de Chile, Los Lagos Region

Mejillón de Chile boosts the competitiveness of the regional mussel growing industry and expedites its positioning in international markets by diversifying market segments, broadening product range and applying technological expertise across the value chain.

#### Salmón Sustentable, from Los Lagos to Magallanes Regions

Salmón Sustentable works to transform the national salmon industry into a global leader based on sustainability and competitiveness by enhancing product diversification and sophistication and increasing scientific and technological know-how.



## InvestChile

Foreign Investment Promotion Agency

InvestChile is the public organization that promotes Chile internationally as a destination for foreign direct investment, serving as a bridge between investor's interests and the business opportunities the country offers.

We provide tailor-made and individually-focused assistance, working closely with private organizations, public institutions and ministries to plan and offer attractive sectorial projects to promote investment.

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- Meeting agenda/e-meetings with public & private players
- Investor delegations & B2B meetings
- Investment roadshows, conferences & workshops
- Detailed information on installation/sector-specific costs
- Investment incentives & special programs (i.e., R+D+i, visas, tax deductions/credits)

#### Guidance & Access

- Dedicated expert-sector managers speaking several languages (i.e., spanish,
- chinese, english, german, french, afrikaans)
- Sector-specific and legal advice on starting up
- Contact with key players within the business ecosystem & site visits
- Assistance in applying for financial incentives & government programs
- Public-private portfolios & public tenders
- Incorporation into the Regional Support Network for projects outside the Santiago Metropolitan Region

#### Permanent Support

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- Policy advocacy
- #InvestChileE-Consuting with immediate -free of charge- assistance to resolve your concerns
- VisaTech Program for fast-tracking work permits for technology sector human capital
- Management of contacts and difficulties with public sector institutions to speed up your investment (i.e., permits, R&D+i, human capital)
- Media management to highlight your company's contribution to the country
- Special advisory on value-added & sustainable development initiatives
- Contact with public and private partners to foster synergies and cooperation

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## REPORT

# Food Industry in Chile

**Projection & Opportunities** 



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