Chile: Aquaculture

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Summary

Aquaculture is fairly new to Chile, but extremely successful, as it represents the fourth largest export industry sector. The industry's main products are salmon and trout, produced mainly for exporting. Chile has exceptional natural conditions for aquaculture, and is currently the second largest producer of salmon in the world, representing 38% of the global market with a 614,000 ton production worth $ 1.72 billion, second only to Norway's 632,000 tons, equivalent to 39.1% of total world production. This industry is important to Chilean economy as it industry generates employment for 45,000 persons (directly and indirectly) is an excellent example of a well organized and administered "cluster",

Other aquaculture products include mussels, scallops, abalone, oysters, other fish and algae species. The development of salmon farming is impressive, given the fact that salmon is not native to Chile. The "salmon cluster", has been crucial in the development of the industry, and has reached its goals and objectives by sharing information to face new challenges and obstacles with a united front. Such challenges include dumping accusations, overproduction, and economic crisis, etc. Mainly, salmon, trout, and other aquaculture products are exported to the U.S. and Japan, followed by exports to the European Union, China, Latin American countries, and others (Thailand, China, and Canada). This industry presents a great opportunity for foreign direct investment, as well as export opportunities to suppliers of equipment, machinery and services related to aquaculture.

Market Demand

The Chilean aquaculture market demand continues to grow since it is directly related to world consumption, which increases constantly. The contribution of aquaculture to global fish and shellfish supply continues to grow according to the latest report published by FAO, or Food & Agriculture Organization. The organization recognizes that the participation of aquaculture in terms of the world's total food production by weight has greatly increased: from 3.9% in 1970, to 29.9% in 2002. According to figures published by the FAO in 2004, the world capture of marine species in 2002 was 84.5 million tons, a 2.6% reduction from 2000. Preliminary estimates indicate that the world capture of marine fish dropped by 3 million tons in 2003 when compared to 2002. Among the ten largest wild capture fishing countries, production levels have not changed since 1992.

The aquaculture industry in Chile reached consolidation between 1974 and 1990:

- 1874: rainbow trout farming was initiated
- 1976: Importation of 500,000 Coho salmon eggs
- 1978: Subsecretaria de Pesca (Undersecretariat of Fisheries), and Servicio Nacional de Pesca (National Fisheries Service) were created
- 1978-1980: The private industry developed through several new companies in the business
- 1985: 36 production centers produced 1,200 tons of salmon & trout
- 1986: Production grows dramatically, reaching 2,100 tons
- 1986: The Chilean Association of Salmon Exporters was created, establishing standards and good practices
- 1990: Local egg production starts; the industry is further professionalized (new feed introduced)
- 1998: Industry crisis due to: 1) Asian economic crisis -- low prices in the Japanese market; 2) World overproduction; and 3) dumping accusations. Despite the challenges, the local industry players (Chilean government, private sector, and the industry's association), reacted promptly with appropriate measures, and worked together with their major competitors – Norway – to successfully overcome the difficulties.

In the ten-year period between 1995 and 2005, local production of salmon and trout increased from 128,000 tons, to 614,000 a 380% growth. A breakdown of world of salmon & trout production for 2005 follows:

Country	TONS (Thousands)	%
Norway	632	39.1
Chile	614	38.0
U.K.	130	8.0
Canada	124	7.7
Faroe Islands	18	1.1
Australia	18	1.1
Finland	16	1.0
Ireland	14	0.9
Japan	12	0/7
U.S.A.	10	0.6
New Zealand	9	0.6
Iceland	7	0.4

During the period between January and June of 2006, aquaculture production has reached 387,000 tons, which compared with the same period of 2005 represents a 16.7% increase.

CHILEAN FISHING/AQUACULTURE EXPORTS -- $ MILLION -- FOB

Product	1995	2000	2005
Fishmeal	633	235	487
Salmon/Trout	489	973	1.721
Other Products	660	667	869

Any and all machinery, equipment, technology and services related to aquaculture production are in demand locally. Even though most investment and imports are related to Norway and Denmark firms, the same opportunities are open to the U.S., especially given the fact that the exchange rate for the US$ is much more favorable than the Euro's.

Current demand is high for scientific innovation, industry-related services and supplies for the production of value added products to be exported. Industry players, and in general, food related producers and exporters have realized that it is more efficient and profitable to produce and export value-added products, instead of continuing with exports of commodities/raw material. More and more, the industry's trend, as well as the country's exports, is to produce and export value-added products,

Despite the fact that the most important aquaculture products are salmon and trout, production of less "traditional" aquaculture products such as mussels, scallops, abalone and oysters, is growing significantly. Seashell production has grown 2,740% during the period between 1990 and 2005 with total production of 109,217 tons. During the first quarter of 2006, mussel growers have exported $ 30.2 million, an increase of 45.7%, while scallop exports reached $ 12.6 million, representing a 73.3% increase. Companies that have historically been involved in extractive commercial fishing, are entering the aquaculture business, particularly in salmon farming, and the more non-traditional aquaculture products, having invested around $ 30 million to establish production centers and processing plants.

Logistic related services are extremely important to the aquaculture industry, given the challenges of geography and infrastructure that the industry faces to transport raw material, smolt, supplies, and the final products. Chile is a long and narrow country (averaging 100 miles wide, with a 5,000 kms. long coast), and lacks adequate infrastructure, which presents challenges to aquaculture companies. Most aquaculture activity takes place throughout Regions VIII – XII, especially salmon and trout, mussels, algae, etc. (southern Chile). Scallops and oysters farming mainly take place in Regions III-IV (northern Chile).

Market Data

As stated in the above summary, salmon is not a native species. It was introduced during the first half of the 20th century (1921), mainly for sport fishing. However, the consolidation of salmon and trout farming occurred between 1974 and 1990. The industry began an expansion in 1976 when 500,000 Coho salmon eggs were imported. In 1978, the Subsecretaria de Pesca (highest rank Chilean Government entity which regulates commercial fishing and aquaculture) and Servicio Nacional de Pesca (enforcement agency), were created, becoming important industry players.

COUNTRY	1995	2000	2005	%
Japan	295.2	476.9	638.4	37.1
U.S.A.	135.9	357.8	605.7	35.2
Germany	16.5	15.4	120.7	7.0
Brazil	10.6	27.4	47.7	2.8
France	7.1	17.6	44.1	2.6
Thailand	1.5	2.5	37.9	2.2
Denmark	5.2	0.6	24.7	1.4
Mexico	0.8	9.7	19.1	1.1
China	-	1.1	18.4	1.1
Russia	-	-	17.3	1.0
Canada	0.2	7.5	15.8	0.9
Israel	-	1.6	13.4	0.8
Taiwan	1.1	5.6	13.1	0.8
Others	14.9	49.7	66.8	6.0

Best Prospects

Between 1990 and 2005, production grew from 70.7 thousand tons, to 716.3 thousand tons, representing an increase of 913.6%. What's more, income for this sector grew 982.4% between 1991 and 2005, with exports totaling $1.7 billion during last year. Sales during the Jan.-May, 2006 period reached $ 955 million with 220,146 tons produced, representing a 27% increase over the same period in 2005 when 217,321 tons were produced. According to private sector and Chilean government projections, whole industry sales will double by 2010, reaching over $ 2.2 billion. It is worth mentioning that

According to Intesal, Instituto Tecnologico del Salmon (Salmon Institute of Technology), the following figures show the participation of the industry suppliers' sales and percentage of final production, considering total exports of approximately $ 1.5 billion:

Phases, sub-sectors, and Components	Millions of US$	Percentage of Final Value
Farming and smolt production	50	3.3
Farming and fattening process	830	55.3
- Fish food	500	33.3
- Labor	120	8.0
- Pigments/paint	120	8.0
- Health/Sanitary	40	2.7
- Nets and cages	20	1.3
- Diving services	15	1.0
- Other supplies & services	15	1.0
Plant Processing	290	19.3
- Labor	180	12.0
- Packaging	60	4.0
- Other	50	3.3
Local Transportation	80	5.3
- Maritime transportation	40	2.6
- Surface transportation	40	2.6
Administration and sales expenses	70	4.7
Financing expenses	180	12.0

Another good opportunity for the industry is environment-related science/technology that will by minimize the negative impact that this industry has on the environment. Especially now that the industry is expanding to Region XII, it must make sure that it complies with the new Chilean environmental regulations. However, the most important environment-related challenge is to assure traceability and good practices to their final export destinations, both countries' governments and private sector importers.

Key Suppliers

There are numerous key suppliers to this industry. The Chilean Salmon Industry Association and SalmonChile, include industry suppliers from different sectors and subsectors, as well as aquaculture growers. A complete list is included in SalmonChile's website. Please go to: http://www.salmonchile.cl/files/File/Asociados_LibroAzul.xls

Prospective Buyers

All aquaculture producers are prospective buyers. For a complete listing of the main firms, which are associated to the Chilean Salmon Industry Association, please go to:
http://www.salmonchile.cl/files/File/Asociados_LibroAzul.xls

Market Entry

Chile holds free trade agreements with several countries and coalitions such as the U.S., Canada, Mexico, the EU, Mercosur, and several others. The Chile/U.S. FTA was signed in June of 2003, becoming effective in January of 2004. By August, 2006, over 92% of U.S. products entering Chile are duty free, including all machinery and equipment related to aquaculture and food processing.
However, certain products such as genetic material, fish eggs, etc., are still subject to strict requirements and authorization by the Chilean authorities. Information on specific products can be supplied on a case-by-case basis.

Market Issues

The Chilean aquaculture industry faces environmental challenges due to the nature of farming and production processes. SalmonChile continues to work with the industry to improve the industry's conditions and minimize the negative impact it has on the environment.

Chilean aquaculture has also been accused of dumping and health hazard by several countries. SalmonChile and the affected growers demonstrated in most cases that there was no basis for dumping accusations. Nevertheless, the industry continues to work on health hazard issues to assure foreign buyers that the products are safe and recommended for human consumption. Local and international marketing campaigns to expand the market are also organized by SalmonChile and its associated firms.

Obstacles

The main barrier to entry for U.S. machinery, equipment and supplies into the Chilean aquaculture industry is the fact that the industry has established ties to Norway and other European countries. Given the large direct investment, and the historical imports for this sector, it is difficult to foresee a change in the trend, except for innovative products, veterinary products, and science/technology.

Trade Events

AquaSur 2008 (bi-annual event)
Date: March, 2008
Place: Puerto Montt, Chile
Largest aquaculture trade fair in the southern hemisphere. Spin off from AquaNor, held in Norway every other year, alternating with AquaSur.

PescaSur 2007
Date: March 21-24, 2007
Place: Talcahuano, Chile
Largest Chilean commercial fishing trade show. Since many supplies are common for aquaculture and commercial fishing, it can be a good show for U.S. companies to exhibit. For 2007, the participation of 550 companies and more than 7,000 visitors is anticipated.

Resources & Key Contacts

SalmonChile (Association of Salmon related industry)
Felix de Amesti 124, Piso 6
Santiago, Chile
Tel.: (56-2); Fax: (56-2)
Website: www.salmonchile.cl

Subsecretaria de Pesca (Chilean Undersecretariat of Fisheries)
Bellavista 168, Piso 16
Valparaíso, Chile
Tel.: (56-32) 221-2187 ; Fax: (56-32) 223-4316
Website: www.subpesca.cl

Servicio Nacional de Pesca, Sernapesca (Chilean Fisheries National Service)
Amunátegui 72, Piso 2
Santiago, Chile
Tel.: (56-2) 696-0784 ; Fax (56-2) 698-0543
Website: www.sernapesca.cl

Chilean/American Chamber of Commerce, Amcham
Avda. Kennedy 5735, Of. 201, Torre Poniente
Santiago, Chile
Tel.: (56-2) 229-9700; Fax: (56-2) 212-0515
Website: www.amchamchile.cl

Camara de Comercio de Santiago
Monjitas 392, Piso 18
Santiago, Chile
Tel.: (56-2) 360-7047; Fax: (56-2) 632-9897
Website: www.ccs.cl

Camara Nacional de Comercio
Merced 230
Santiago, Chile
Tel.: (56-2) 365-4000 ; Fax: (56-2) 365-4001
Website: www.cnc.cl

Comite de Inversiones Extranjeras (Foreign Investment Committee)
Teatinos 120, Piso 10
Santiago, Chile
Tel.: (56-2) 698-4254; Fax: (56-2) 698-9476
Website: www.cinver.cl

Fundacion Chile
Av. Parque Antonio Rabat Sur 6165, Vitacura
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Website: www.fundacionchile.com

Technopress
Matilde Salamanca 736, Of. 501, Providencia
Santiago, Chile
Tel.: (56-2) 756-5400; Fax: (56-2) 269-0482
Website: www.aqua.cl
This company publishes Aqua Noticias magazine (Aqua News), as well as the annual Directorio de Acuicultura y Pesca de Chile (Chilean Directory of Aquaculture and Fisheries). They also organize AquaSur (aquaculture trade show) and Pesca Sur (commercial fishing trade show).

For More Information

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