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Overview of trout farming in Chile

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Country leads global production, further growth possible



Rainbow trout reared in marine cages in Chile provide the size and appearance valued in Japan and other international markets.

Chile has exceptional natural conditions – including numerous fjords with appropriate temperatures in its southern region – for the culture of rainbow trout (*Oncorhynchus mykiss*), especially in floating cages. These conditions and position itself prominently in international markets. Production in 2007 reached around 175,000 metric tons (MT), representing 29 percent of global production (Table 1), and globally Chile has become the top producer of rainbow trout (Table 2).

Other factors that contributed to the industry's growth include the relative ease of culture of trout compared to other salmonids produced in Chile, excellent local supplies of quality seed and qualified labor, and the availability of fishmeal, an important component in salmonid feeds. Ongoing improvements in management practices can effectively satisfy specific export markets.

Industry improvements, markets

In 2008, Chile's trout industry required around 164 million eyed eggs, of which 74 percent were produced locally. Among other benefits, many of these locally produced eggs are resulting in increased fish yields, higher survival and growth rates, and monosex (all female) and sterile populations. This last achievement is the result of the implementation of various improvement programs by egg- and salmon-producing companies that began several years ago.

Colihueque, Chilean production and global production, table 1

	2000	2001	2002	2003	2004	2005	2006	2007
Chile production	79,666	109,985	111,681	109,578	122,252	118,279	151,119	175,139
Global production	447,384	511,506	509,237	505,017	509,299	500,488	542,727	604,695
Portion of global production	17.8%	21.5%	21.9%	21.7%	24%	23.6%	27.8%	29%

Table 1. Chilean production and global production of rainbow trout (mt).

Colihueque, Main rainbow trout- producing countries, Table 2

Country	2007 Production (mt)
Chile	175,139
Norway	77,578
Iran	58,761
Italy	37,800
France	32,288
Denmark	27,657
Spain	25,195
United States	23,682
Germany	23,174
Poland	16,650
Other	106,771

Table 2. Main rainbow trout-producing countries in the world.

Another important achievement is improved management in both the fresh- and seawater production phases. Market-size fish that deliver excellent yields in the processing plants are ready to harvest after 11 to 13 months in the Seawater phase.

Total trout exports in 2008 reached 124,000 MT, which represented 23.4 percent of Chile's total salmonid exports (Fig. 1) and revenues of \$594 million. Japan and the United States are the most important export markets for Chilean rainbow trout.

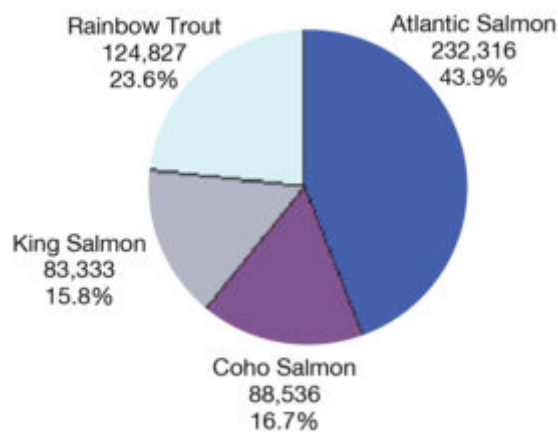


Fig. 1: Chilean exports of salmon and trout in 2008 (metric tons) (Source: SalmonChile)

In the Japanese market, trout are mostly marketed

whole. Therefore, a silvery appearance similar to that of coho salmon, with clear belly and skin with few dark spots, is highly valued in Japan. In contrast, in the U.S. and other markets, Chilean trout are sold in various presentations, including fresh and frozen fillets, smoked, pan-size fish and others.

Chilean trout farmers have developed production strategies to specifically satisfy these markets. For example, for the Japanese market, Chilean farmers target 2.8- to 3-kg fish similar in size to the coho salmon with which Japanese consumers are familiar.

Potential for expansion

In recent years, global demand for rainbow trout has increased. This demand, together with the stability in trout production costs, good market prices and increasing profitability from value-added products, has supported the interest of Chilean producers to remain in the trout-farming industry.

The Chilean industry is expected to continue consolidating in the coming years. In addition, many local producers believe their products will maintain local market share based on the estimated 40 percent 2009 reduction in Atlantic salmon production due to the current outbreak of viral Infectious salmon anemia (ISA).

The devastating consequences of this crisis have favored trout farmers because rainbow trout do not develop ISA's clinical signs, although they can be vectors for its transmission. In fact, some believe that rainbow trout could replace Atlantic salmon exports to some markets like the United States, while others caution that over-production of trout could negatively affect prices and create problems for export markets like Japan. Nevertheless, it must be kept in mind that Atlantic salmon generate higher profits than rainbow trout to Chilean producers, and their production levels will come back once the current crisis is resolved.

Perspectives

Trout farming in Chile still has room to grow, especially considering that its production efficiency in seawater is below that of other salmon-culturing countries like Norway. Trout farming can become a key component for improved sustainability of the overall salmonid industry in Chile, especially once additional biosecurity measures are fully implemented. These include the new sanitary management areas that came into effect in June 2009 in response to the ISA virus outbreak.

In addition, once the current global financial crisis passes, Chile's trout farming will likely see additional expansion due to increased demand for established and new products in traditional markets like the U.S., Japan and Europe, as well as new markets in Asia, particularly in China.

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