

CHILE

FEED AND BIOFUEL

ANDRITZ SPROUT INTEGRATED FEED PRODUCTION LINE FOR SALMOFOOD S.A.

World-class production systems ensure top quality and food safety

The peaks of Cuernos Del Paine, Patagonia, Chile



**'THE TECHNOLOGY AND
GLOBAL EXPERIENCE OF ANDRITZ
HELPS US COMPETE.'**

JUAN CARLOS PETERSEN
General Manager, Salmofood S.A.

Salmon production continues to enjoy dynamic growth, especially in Chile, the world's leader in salmon production. Salmofood S.A. is the only fish feed producer owned by Chileans. It effectively doubled its production capacity this year with the addition of a new automated line from Andritz Sprout. Juan Carlos Petersen, General Manager of Salmofood, talks about how his company competes with the large multinationals.



SWIMMING WITH THE BIG FISH

Interview with **Juan Carlos Petersen**,
General Manager, Salmofood S.A.

Experience

I joined Salmofood seven years ago after a career in investment banking and finance. I hold an MBA and a degree in Economics and was eager to manage a dynamic, growing business.

Salmofood was started in the 1990s by four Chilean salmon producers – first to secure their own supply of high-quality feed, and then to sell feed to the national market. Over the years, the mix has changed to where 30% of the feed is used by related companies, today Invertec and Yadrán, and 70% is sold to market to more than 12 customers.

We are proud to be the only Chilean-owned feed producer, but to sell in this market, that is not enough. We have to be highly competitive to compete with the biggest companies in terms of cost, food safety and quality, and sustainability.

Challenges

Our most important concerns are safety, quality, and sustainability of supply. Fish farming is based on growing carnivorous fish – which means the feed we give them consists of other fish. There are clear signs that the available raw materials (fishmeal and fish oil) are insufficient to keep up with the demand. The industry is having to rely on other raw materials for feed production.

Feedstock alternatives, such as vegetable sources, combined with new technologies which improve the yield from raw materials and the overall efficiency of the production process, provide a significant increase in sustainability. Any technologies we employ have to adapt to where our quest for new raw materials takes us.

Expanding with a third line

Since this plant started up in 1995, Andritz Sprout has supplied production technology for it. The first two production lines have Andritz Sprout extruders and are each making 10 to 12 tons per hour of high quality feed. These lines produce about 120,000 tons per year.

In 2006, we made the decision to invest US\$ 15 million to renovate and expand our plant. Our target was to increase annual production capacity to 240,000 tons, which would allow us to grow our market share from the current 10% to 15%. One of our goals is to have the capacity to complete an order and have it arrive at the farm site at the right time.

We looked at several potential suppliers for the new production line. Andritz Sprout put forth the best proposal in terms of price/performance, energy efficiency, support, and commercial terms. We already knew them to have excellent technology and service, so the decision was an easy one.

Andritz Sprout supplied an integrated 22 t/h line consisting of its own intake and batching system, serial grinding, extrusion, conditioning, drying, and vacuum coating, in combination with downstream equipment such as the automated packing and palleting line from other suppliers. The line is highly automated so that we have consistent product quality and considerable flexibility in optimizing formulations or for sequencing production tasks. The new line started up in December 2007 and is running well.

Flexibility, quality, food safety, and traceability

We have to optimize the feed formulations every day based upon the needs of our customers and the relative prices of raw materials. The Andritz Sprout technology accommodates this with just a few inputs into the automation system. It is very flexible.

Our feed is formulated with prime quality raw materials manufactured under strict quality control conditions. Our basic raw materials are rigorously selected and fortified with well-suited nutrients that support the metabolic functions of the fish. Andritz Sprout's automation system efficiently controls the thermal processes, which is essential for the protection of sensitive feed nutrients.

Food safety is paramount. The documentation capabilities of the Andritz Sprout system provide a good audit trail if we ever need to go back and look at a production run.

We use natural raw materials. Water and oils are recovered and reused. Our entire production chain has very low environmental impact.

Andritz Sprout

Andritz Sprout has a world-class position. Their systems are very efficient in terms of yield and reducing waste. If you are efficient in production, there won't be much environmental impact.

We know and trust Andritz. It is a company with world-class technologies, not just in feed. This innovation flows to customers in all its markets. They have new technologies which we are eager to utilize and they offer very good support. ○

INTEGRATED ANDRITZ SPROUT LINE DOUBLES CAPACITY OF SALMOFOOD PLANT.

[1] A high-speed Andritz Sprout Multimill pulverizes the feed ingredients to fine powders prior to thermal treatment.

[2] Salmofood is the only fish feed producer owned by Chileans. It doubled production capacity this year with the addition of a new automated line from Andritz Sprout.

[3] The Hopper Scale weighs the feed ingredients in batches of 2,000 kg with an accuracy of +/- 0.1%.

[4] The computerized Andritz Sprout Extruder is the heart of the process line. The extruder cooks and shapes the feed to create very uniform pellets with a high nutritional value.



[1]



[2]



[3]



[4]