



## CHILE GOVT ADMITS TO SEA LICE 'OUTBREAK'

By Benjamin Witte



Chilean salmon farmers face a growing sea lice problem. Photo by Max Alarcon

The Chilean government has acknowledged for the first time that sea lice - parasitic crustaceans that affect both wild and farmed fish - are causing serious problems for the country's lucrative farmed salmon industry.

Also known as Caligus, sea lice attach themselves to the bodies of fish, causing infection-prone lesions that leave the host fish vulnerable to a host of potentially fatal illnesses. Though they also affect wild fish, sea lice are particularly attracted to fish farms, which house huge numbers of captive and concentrated host fish.

In a July 5 letter addressed to the Washington, D.C.-based organization Pure Salmon Campaign, Ines Montalva Rodriguez, director of Chile's

National Fishing Service (SERNAPESCA), admitted that Chile has experienced an "outbreak" of the parasites. She also outlined a series of actions authorities are taking to contain the problem.

The measures include monitoring the transport of fish from Caligus-infested zones to Caligus-free zones, dousing salmon pens with hydrogen peroxide, and conducting workshops and roundtables to educate salmon farmers about the problem.

On June 8, the letter went on to explain, SERNAPESCA formally launched its so-called Surveillance and Control Program for Caligus. "The Surveillance Program looks to decrease the impacts of Caligus on salmon aquaculture and considers - as a first step - collecting, recording and analysing data about the disease. (The Program) will also define all necessary actions in order to control this parasite problem," wrote Montalva.

According to Pure Salmon Campaign, an organization that lobbies worldwide for healthy and environmentally-responsible salmon production practices, Montalva's letter marks the first time a Chilean government official has officially recognized the extent of the outbreak.

This is not, however, the first time the sea lice problem has attracted public attention. In fact, for several months now information about a possible Caligus "plague" had been bubbling to the surface through media reports and vague

references by some salmon companies themselves.

In early April the daily La Nación published an alarming exposé entitled "The Plague of Salmon," warning that Region X - where some 84 percent of the nation's US\$2.2 billion salmon industry is concentrated - is on its way to becoming "more lice-infested than a homeless shelter."

Sea lice, the article explained, leave fish with ugly lesions that lessen the salmon's market value, stunt their growth and leave the host fish prone to a variety of sometimes fatal illnesses. As Dr. Felipe Cabello of the New York Medical College wrote in an e-mail to the Patagonia Times, "Sea lice infestation may increase fish susceptibility to bacterial infections by at least two mechanisms; fish stress and by allowing bacteria to penetrate the fish skin through ulcerations."

Rising average water temperatures, the La Nación article went on to say, have increased the life cycle of the sea lice. At the same time, the small crustaceans are likely developing immunities to the anti-parasite chemicals salmon farmers use in abundance.

Even before the La Nación article hit newsstands, other evidence of a growing problem had begun filtering to the public bit by bit. Earlier in the year, Canadian health authorities issued three import alerts after detecting unallowable amounts of the sea lice chemicals Emamectin/Ivermectin in Chilean-grown fish.

Clues of an expanding sea lice outbreak also came from some salmon companies themselves. In its 2006 fourth quarter report (released this past February) the company Cermaq (Mainstream) wrote, "there have been further negative impacts from sea lice and other fish health issues. We expect these challenges to fish husbandry to have an adverse affect on production in Chile in 2007." Marine Harvest, in its final 2006 report (released in March), made a similar reference, noting vaguely that "the biological situation in Chile is currently a challenge."

The question now, especially with SERNAPESCA having finally acknowledged the Caligus outbreak, is what to do about it.

So far the industry appears to have relied on two basic strategies: dump, as in apply more anti-parasite and antibiotic chemicals; and dash, as in collect fish in affected zones

and move them south to cleaner, cooler waters. Both responses, say critics, are problematic. Moving the fish simply spreads the plague further south, while dumping more chemicals on the problem is not only a temporary solution, but a potentially dangerous one as well, they argue.

"Others and myself have tried to determine the amounts of antibiotics used and assess the potential risks of this use for human and animal health," according to Dr. Cabello, a specialist in microbiology and immunology. "This type of research has been carried out extensively for many years in countries such as Norway, Denmark, the U.K. and Canada. This research has showed repeatedly that the use of antibiotics in aquaculture, and in animal husbandry in general, has risks for humans and animal health."

SERNAPESCA's suggestions - for example, monitoring fish before

transporting them - certainly represent a next step. But according to Pure Salmon Campaign, the government measures do not go far enough toward ensuring a healthy future for both the industry and Chile's environment.

"The government of Chile needs to take a long view," Kavanagh explained in a recent press release. "The sea lice problem in Chile has been exacerbated by mismanagement and overuse of chemicals leading to resistance in sea lice. Dumping more chemicals into Chile's beautiful fjords would only be a recipe for further degradation."

"If the Chilean government is serious about combating the problem of sea lice outbreaks," she went on to say, "ultimately it needs to move to closed systems that separate the farmed fish from the natural environment."