

Salmon Camanchaca implements measures to control sea lice levels

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In recent months there has been a sea lice increase in Chilean salmon farming sites, especially in the Aysén Region (XI), mainly as a result of the expected loss of effectiveness of the antiparasite azamethiphos, which has been used in the last six years.

The increase in sea lice levels is one of the main challenges of the salmon industry in the world, motivating the development of new, more efficient, pharmaceutical and non-pharmaceutical solutions, some of them already available.

To control and reduce the presence of this parasite, the National Fishery Service (Sernapesca) reported that it will incorporate new measures to the sea lice control program, which include incentives for the use of new therapeutic tools and the promotion of preventive harvest plans. There is a public/private workgroup, in which all salmon farming companies participate.

Salmones Camanchaca has 19 operational farming sites, distributed in the Los Lagos and Aysén regions. Currently, four of them are classified as high dissemination sites (HDS) and, although there has been an increase in sea lice levels, it has not been necessary for now to harvest earlier than expected, and the levels do not threaten the health of the fish, nor his ability to feed and grow. In fact, they show good feed conversion ratios.

Of the four sites with more than 3 adult sea lice females, the largest one is in full harvest stage according to what was originally planned. Two of them have programmed treatments that, for the estuarine zone in which they are found, are estimated to be successful in lowering the levels. Finally, a fourth site is in active treatments, which if not, could present a voluntary plan for partial harvests of fish, which we estimate at 3.5 kilos.

Currently, **Salmones Camanchaca** is implementing a plan that considers different sanitary measures, including:

1. All the fish stocked in zones with sea lice presence are treated with "Lufenuron", of the North American company Elanco, which protects them for a period of 5 to 6 months.
2. Soon, the new product "Alfaflux" will be incorporated, which has just been launched by the Norwegian company Pharmaq, which is used at sea for fish of less than one kilo and will give them protection for 4 to 5 additional months.
3. Beyond 10 months, the Company is importing two non-pharmacological treatment technologies that will be operative before the end of the year, plus a bath system with peroxide, and another that has friendly environmental conditions, and which allows multiple applications (Salmoclinic).
4. For non-pharmaceutical treatments, the latest technologies acquired are the "Optilizer", developed by the company Optimar, and the "FLS Delousing System", of Flatstestund Engineering, which through systems of temperature and pressure variations of water, respectively, allow the affected fish to detach from the sea lice.



If certain anticipated harvests are needed to control the sea lice in the industry, we estimate that it could generate larger volumes sold than expected in the next 6 to 9 months. If this is necessary, in the case of **Salmones Camanchaca**, it could generate positive margins for that period, although lower volumes by 2020 which, in a general industry situation, could positively impact prices. Likewise, the search and incorporation of new strategies to control this parasite, an increase in costs is possible during the first stage until the optimal combinations of strategies are achieved.

Salmones Camanchaca is actively monitoring the situation and informing the authorities and we are committed to the sustainable development of our activity.

Manuel Arriagada O.
CEO Salmones Camanchaca