

Can a Sustainable Salmon be Farmed?

Is Sobeys' lice-infested product an anomaly, or par for the course?

BY MARIAM ELSHAFIE



Not very appetizing - sea louse-infested salmon from Sobeys.

Halifax, NS – The rise of consumption in today's world is due to the rapid growth of the world's population, yet even more so with the rise of the philosophy of the “more is better” consumption culture. This fast, inhumane, pace of consumption is exhausting Canada's natural resources as well as the environment as a whole.

While wild fish stocks have largely collapsed, aquaculture development has recently been proven to be a revitalizing social and economic force, albeit potentially non-sustainably. Today, the growth in aquaculture production in Nova Scotia has far outpaced local human population growth. This has created a crisis between Nova Scotia communities and large-scale industries which have recently received support by the government.

In the past few months alone we have witnessed a great uprising of more than 100 communities and groups against the expansion of open-net pens in Nova Scotia. And as an indicator of the questionable quality of the product being produced, last month, on Oct. 18, one of Canada's national grocery retailers, Sobeys Inc., removed their Atlantic farmed salmon supply from most of its Maritimes stores. The farmed salmon supply was found to contain a great amount of sea lice. So far, the company has refused to give out any information regarding the suppliers and has promised customers to take greater inspection measures in the future to ensure the supply of better quality salmon.

Yet the questions remain: Is it actually possible for Sobeys and other Canadian grocery stores to supply a better quality of farmed salmon? Is it possible today to have open-net pen sustainable salmon farming? And why has salmon-farming become such a political issue, both in Nova Scotia and elsewhere?

“Sustainable aquaculture is possible, however not in open-net pens,” says Marike Finlay, president of Preservation of Eastern Shores. “Salmon-farming in open-net pens is outrageous to the community in Nova Scotia. It is located in shallow waters, where water current is not enough [to ensure environmental sustainability].”

The technology of open-net pens has been shown to contribute to the destruction of coastal habitat and ecosystems. It also contributes to disease as well as parasite transmission to wild populations. But for big, profit-driven, corporations, having the net pens close to shore has its “benefits”. These include; ease of access from shore bases; proximity to staff accommodation; reduction in costs of transport of feed and stock; and ability to keep sites under regular surveillance.

Because these nets are open in the water, all chemicals and pesticides that are dumped in the nets to treat any diseases will eventually be carried away to other species living on the ocean grounds, which includes Nova Scotia's last sustainable wild fishery; lobster.

“The application of chemicals to kill sea lice is destroying the lobster industry,” says Finlay. The lobster industry, which has largely rallied behind the call for a provincial moratorium on open-net pen salmon farming, agrees.

According to Andrew Black, member of the board of governors and executive committee of the Diocese of Nova Scotia and Prince Edward Island, “If the conditions are so bad that lobster won't live near salmon farms, it is clear that the regulations aren't protecting habitats.”

But the issues that open-net pen salmon farms are having on the lobster fishery appear to be falling on deaf ears in the halls of government.

“Almost every application for salmon-farming has been approved in the last year,” Black says.

A proper definition of sustainable salmon-farming would be one where future generations are able use the same resources, all the while not using up the shared resources upon which other initiatives, such as lobster fishing, depend. However, to be able to sustain salmon farming, there is a crucial need for manufactured feeding, medications to prevent the spread of disease and viruses; all of which results in mass pollution and waste.

“The waste generated by salmon-farming does not get flushed out to sea, it gets washed up to seashores,” says Marike Finlay.

If aquaculture activities consume a greater volume of fish in feed than they produce in the final product, then they cannot be considered sustainable. Indeed, this is the case of salmon-farming. As salmon is a carnivorous fish, it requires more net volume of fish to feed a salmon, in order to produce a salmon. Furthermore, sustainability requires the industry to insure the ability of future generations to use the same resources. This cannot be achieved through the open-net pens, where we see a trend towards open-net pens needing to constantly relocate, as they pollute and soil their surrounding environs.

Raymond Plourde a wilderness coordinator at the Ecology Action Centre and a long-time wild salmon and trout conservationist strongly believes that the application of closed-containment technology would turn a greatly destructive industry into a more environmentally friendly one.

“I think that closed-containment would eliminate a lot of the worst problems of salmon and trout open net aquaculture. Pollution from chemical input, waste, biological interaction with wild fish and more would be eliminated,” says Plourde. “Salmon farming is not sustainable, but it can be made environmentally friendly.”

Another major problem aside from the local environmental damages caused is the escape of the farmed fish from the nets as well as the passing of wild fish near such nets. The escaped farmed salmon compete with the wild salmon for food, habitats and spawning grounds; they spread parasites and diseases and change the genetics of the wild populations.

“It has been shown that where ever open-net aquaculture has been done, wild fish populations of trout and salmon have declined precipitantly. That is a great concern that closed-containment would address largely,” says Plourde.

Wild salmon will rarely experience any massive disease spread, mainly because the slow and sick fish will become easy prey, thus will be eliminated. Another factor is that wild salmon do not live densely together but on the contrary are always on the move in fresh circulating water.

“If the government were to move their interest from open-net aquaculture to land-based, closed-containment farming and pay more attention to their environment, we would be the first to shake their hands and congratulate them,” says Carl Purcell, past president and director of the Nova Scotia Salmon Association.

Closed system aquaculture (CSA) is any system of fish production that creates a controlled interface between the culture and the natural environment. Unlike the open-net pen, the CSA creates a barrier between the water and the fish. The non-existence of lice and renewal or water flow will allow for an anti-biotic, somewhat chemical-free, environment. Furthermore, CSA eliminates the escape of farmed fish and thus removes the risk of disease transfer to the wild fish.

All this raises the question; Why is the provincial government so set on open net pen salmon farming?

“Their main interest is that they are farm believers. The present method that they are using is believed to be a job provider. When Cooke Aquaculture (the largest industrial aquaculture business in the Maritimes) first started, the government were promised 400 jobs. But no one asked the government what kind of jobs they were. Part time jobs? High earning jobs?” says Purcell.

When asked about why salmon-farming is, and should be, a political issue, Purcell stated: “When disease outbreaks happen, taxpayers like you and me pay for the compensation, even though the fish does not go on the market.”

“Here in Nova Scotia it is a political issue because the leases are in the hands of the government. The government makes the decision on whether the space is to be give to the tourism industry, lobster industry or salmon-farming,” says Silver Donald Cameron, the Canadian journalist behind the salmon aquaculture documentary *Salmon Wars*. “When this great deal of money goes into assisting the salmon-farming, the issue becomes inherently political.”

Despite the clear public opposition to open-net pen salmon farming, the provincial NDP government, who, when in opposition sided with opponents of salmon farming, seem determined to go ahead with the potentially perilous industry,

“The government is determined to move it forward. Our concern is about the impact of any industry on the wild atlantic salmon population and we have seen quiet a couple of scientific data that address the negative impacts of the open-net pens” says Lewis Hinks, Nova Scotia Director of the Atlantic Salmon Federation. “We are not against aquaculture, we just think there are better ways to do it,” he says.