

FACTS ABOUT OUR FOOD ~FARMED FISH~

Farmed fish live completely unnatural lives. They are kept crowded together in pens with thousands of other fish.

□ OVERVIEW

The practice of fish farming is totally at odds with the natural behaviour exhibited by fish in the wild. The most farmed species in Canada is salmon. Other species such as trout and steelhead, as well as shellfish, are also farmed. Wild salmon migrate up to hundreds of kilometres and end their lives leaping upstream to spawn in the rivers where they were born. Contrast this to a life in which a salmon has the equivalent of a bathtub or two of water to call its own. It is not surprising that these animals are stressed.

In Canada, British Columbia and New Brunswick have the most fish farms. By the end of 2003, there were **125 salmon farms** in British Columbia, and approximately **86,000 tonnes** of fish were produced. At the end of 2003, there were **95 salmon farms** in New Brunswick, producing **39,000 tonnes** of fish.

□ LIFE SENTENCE ON THE FISH FARM

Each fish farm is a system of cages. Each cage can contain as many as **20,000 fish**, and in BC, there is no legislation governing maximum stocking density. Overcrowding results in injuries and diseases that must be controlled with chemicals and antibiotics. After a year, the salmon are slaughtered, but not before they are starved for up to two weeks.

Many people do not think fish feel pain or stress. But fish are vertebrates with a brain and central nervous system. Scientific research has proven that they suffer just like other animals.

➤ GENETIC SELECTION

The fish farm species of choice in Canada is the Atlantic salmon, which is a non-native species on the West Coast. Eggs are imported or collected from wild stock or farm broodstock. Limited genetic selection has become a problem for all animals bred for food – these animals are specifically bred for production with little concern for their physical well-being or for genetic diversity.

➤ PHYSICAL AILMENTS

The **unnatural crowding** of intensive confinement causes fish to suffer from several problems, including: bullying from bigger fish; abrasions on fins, gills, skin and tails from rubbing against each other and the nets; abnormal behaviour (similar to zoo animals pacing or circling); infestations of sea lice; diseases; oxygen starvation due to hot weather and/or waste build-up; and deformities.



*Escaped farmed fish.
Photo courtesy of CKNW Radio*

Caged fish must sometimes be handled to redistribute for size grading, medical treatments and salmon lice removal. This handling causes enormous stress and can result in death.

➤ SLAUGHTER

Before slaughter, fish may be **starved** for between one and three weeks. This is intended to empty their stomachs to make them easier to clean. However, their stomachs take only a maximum of 72 hours to empty and these fish are used to being fed at regular intervals several times a day. This extended period of starvation causes unnecessary suffering.

The most common methods used for killing farmed fish include:

- Removing them from water and putting them on ice - which may take up to 15 minutes before death occurs.
- Stunning with carbon dioxide, followed by slitting the gills to achieve blood loss - a slow (4 to 9 minutes) and painful method for the fish. The fish thrash for several minutes trying to escape the poisonous CO₂, and are immobilized *before* losing consciousness, so they may endure the blood loss while still conscious.
- A severe blow to the head (“percussive stunning”) - which has the potential for improper stunning and injury rather than a quick, painless death.
- Electrocution in a large tank.

Of these methods, only electrocution and percussive stunning could be considered humane - and only if the electric current or stun is of sufficient force to render the fish immediately unconscious (or dead) and free from further suffering.

❑ ENVIRONMENTAL EFFECTS

There are many negative effects on the environment related to fish farming. **Diseases** in farmed stocks could be transmitted to wildlife. Extensive use of antibiotics in farmed fish could lead to new diseases that neither wild nor farmed salmon could tolerate. Introduced fish species escaping could threaten native wild fish. Underwater noise intended to frighten predators could be damaging to the hearing of marine mammals. Sewage from farms could pollute the surrounding waters. The unregulated killing of wildlife to protect farm stocks could reduce native wildlife populations.

In February 2002, 1.6 million diseased fish had to be killed at a fish farm northeast of Campbell River. The only barrier separating farmed fish from wild fish is a thin net. Transmission of diseases and pests is inevitable.

In 1989 Alaska prohibited salmon farming due to fears about **environmental degradation** and threats to indigenous salmon – already Atlantic salmon have been seen in Alaskan waters. Nets frequently foul with living organisms, such as mussels and barnacles, so in peak fouling periods, it is necessary to change nets every one or two months. This not only increases the chances of fish escaping, but can also cause extra stress.



*Fish Farm near Port Hardy, BC
Photo Courtesy of CKNW Radio*

The world's oceans are suffering from the effects of worldwide fish farming. They are becoming polluted from chemicals and organic waste accidentally or purposely dumped by intensive farms. In addition, fish-eating wildlife are threatened with depleted stocks. This has resulted in the widespread reduction of marine mammals such as seals and fish-eating birds such as herons.

❑ HEALTH EFFECTS

In January 2004, the respected U.S. journal *Science* released the findings of a report that found **toxin** levels in farmed salmon are approximately 10 times higher than that of their wild counterparts. The study suggests that concentrations of toxins are higher in farmed fish because they are fed pellets made of ground fish. The result is that consumers are not only eating toxins found in wild fish, but toxins found in the ground fish pellets as well. The toxins found, such as pesticides and PCBs, can cause cancer, neurological problems, depressed immune functions and other serious disorders.

❑ LEGISLATION

Legislation pertaining to fish farms is under the domain of provincial governments. In 1995, BC's Environmental Assessment Office undertook a comprehensive review of the industry, producing its final report (the "Salmon Aquaculture Review") in 1997. Regulations were passed in October 2000 dealing with escape prevention, but do not contain specific provisions regarding stocking densities, pre-slaughter starvation or methods of slaughter. The BC Salmon Farmers Association has developed a recommended "Code of Practice" that is intended to "protect the safety and well being of our employees, the natural environment, and our salmon stocks." Yet it does not deal specifically with stocking density or methods of slaughter. Furthermore, it has been estimated that Atlantic salmon have **invaded** 77 streams in BC and yet not a single fish farm has been charged with violating the Fisheries Act.

In New Brunswick, legislation pertaining to fish farming falls under the Aquaculture Act. This act focuses mainly on licensing and the environment, but not on the welfare of the fish. In addition to this act, New Brunswick has a Fish Health Surveillance Program. Under this program, all fish farms must have a veterinarian, and must uphold regular health monitoring schedules. Like BC, New Brunswick has a Code of Practice.

❑ WHAT YOU CAN DO

- Go to (www.farmedanddangerous.org) to learn more about salmon farming and tell your friends and family.
- Ask grocers and restaurants if they are selling wild or farmed salmon.
- Share your views with the government about the regulations pertaining to the welfare of fish on fish farms. Send a copy of your letter to the Department of Fisheries and Oceans Canada. Contact information can be obtained by calling: 1-800-O-Canada.

For more information, please contact us.

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