Background on Farmed Salmon in British Columbia

In 2011, a highly contagious European strain of marine influenza virus linked to open net-cage aquaculture, Infectious Salmon Anemia virus (ISAv), was detected in four species of wild salmon in British Columbia. ISAv has infected and devastated aquacultured salmon in Norway, Scotland, eastern Canada and Chile. Once it strikes, a feedlot's entire stock must usually be destroyed, since the virus has never been successfully eliminated from infected populations.

If an exotic form of ISAv spreads through wild salmon populations, the consequences could be devastating to wild salmon runs throughout the Pacific. A 2011 Canadian government inquiry revealed that symptoms of ISAv were detected in feedlot fish by a British Columbia government lab more than 1,000 times since 2006 but never reported to the public or the Canadian Food Inspection Agency. Government fisheries scientists detected ISAv in 2002-2003 in 117 wild salmon from the Bering Sea in Alaska to Vancouver Island, but the government neither fully investigated nor allowed a research paper on the findings to be published.

Fisheries and Oceans Canada and the province of British Columbia have permitted more than 100 commercial salmon feedlots, each containing up to 1 million confined salmon in open-net floating pens, to operate along primary wild salmon migration routes, exposing wild fish to amplified levels of viral and bacterial diseases, parasites such as sea lice, toxic chemicals and concentrated waste.

Concern over low wild salmon returns in British Columbia in the early 1990s led to a moratorium on new salmon feedlot licenses in 1995. After a flawed and controversial review of salmon aquaculture impacts, Canada lifted the moratorium in 2002, and the aquaculture industry, dominated by several Norwegian companies, began building new salmon feedlots. In 2002, a highly anomalous collapse of pink salmon runs in rivers in the Broughton Archipelago occurred amongst good coast-wide salmon returns. Infested with salmon lice as they passed the salmon feedlots on their out-migration, the pink salmon run collapsed, with only 147,000 fish of a forecasted 3.6 million returning to spawn. In 2003, the feedlots were ordered fallowed by the British Columbia government to reduce sea lice - and that generation of pink salmon had the best survival rates ever recorded. This management action was never reported, nor repeated.

Inappropriate siting of salmon feedlots on fish migration routes exposes young salmon, herring and other fish moving from spawning areas to the sea to parasitic infestation when they are most vulnerable. Sea lice are naturally occurring parasites that attach to and feed on fish, with benign effects on adult salmon but harmful to smaller young salmon. Under natural conditions salmon do not encounter sea lice until they arrive in the ocean and are large enough to tolerate parasites. Scientific research links increased sea lice infestation from salmon feedlots with wild salmon declines. In British Columbia sea lice infection rates near feedlots are up to 70 times greater than natural levels.

The Fraser River sockeye salmon run is one of Canada's most valuable fisheries, accounting for nearly half of British Columbia's wild salmon income. When salmon feedlots were placed on the Fraser salmon migration route in 1992, productivity of sockeye runs went into immediate steep decline, which continued even after closures of the commercial fishery. The Harrison sockeye run, which out-migrates via a route that avoids fish feedlots, is the only Fraser population with above-average returns the past two decades. The 2009 Fraser sockeye run collapsed, with only 10 percent of an expected 10.6 million fish returning. This prompted a federal inquiry by the Cohen Commission, which found evidence the lost salmon generation out-migrated past fish feedlots in 2007, when the wild fish shared a mystery virus with feedlot chinook salmon. The much-heralded "recovery" of Fraser sockeye in 2010 coincided with the salmon farming industry pulling all chinook salmon from feedlots along the Fraser salmon migration corridor in 2008 (the juvenile out-migration year for returning 2010 adult fish).

Litigation has been brought by Canadian scientists, conservation groups, indigenous First Nations and the ecotourism and commercial fishing industries to force the Canadian government to better manage the 92-percent Norwegian-owned salmon aquaculture industry. Many U.S. retailers and chefs are boycotting "farmed" salmon and promoting wild salmon, which is healthier and more ecologically and economically sustainable. Since 1989, numerous Canadian government reviews of salmon aquaculture have recommended moving salmon aquaculture to closed containment on land or reducing contact between feedlot and wild salmon, but have been ignored. The Cohen Commission findings will be released in June 2012.

For more information:
Center for Biological Diversity fish farm web page
Dr. Alexandra Morton's blog on fish farms
Adopt-A-Fry