

UBC Centre for Sustainable Food Systems – BC Salmon Industry

BC Salmon Farmers Association Response

November 27, 2014

How long has your organization been involved with the BC Salmon industry?

The BC Salmon Farmers Association has recently celebrated its 30th year, having been established in 1984. Based in Campbell River, the Association is a forum for communication and cooperation within the salmon farming sector, and the focal point for liaison between the industry and government. We also provide information to the public and stakeholders about salmon farming, and coordinate industry-wide activities, research, and community events. Our members include both farmed salmon producers, and many of the companies who provide services and supplies to them.

What policies and regulations have most significantly impacted your work within the BC salmon industry?

BC Salmon farmers are regulated under a number of provincial and federal regulations.

The federal Pacific Aquaculture Regulations, under the Fisheries Act, is the main regulatory framework in place for the regulation of BC salmon farms. (See: <http://laws-lois.justice.gc.ca/PDF/SOR-2010-270.pdf>). It is administered by the Department of Fisheries and Oceans Canada (DFO). The Regulations establish a licensing regime, consistent with the regime for other fisheries managed by the DFO but tailor-made to address the uniqueness of the aquaculture sector in British Columbia. Through the conditions of licence, a number of requirements are established pertaining to a wide array topics – including but not limited to the number of fish on farms, fish transport, containment, health and sea lice monitoring, and protection of fish habitat. See <http://www.pac.dfo-mpo.gc.ca/aquaculture/licence-permis/docs/licence-cond-permis-mar-eng.pdf>. There also an number of associated policies providing guidance on the conditions of licence.

A number of other federal departments and agencies regulate other aspects of BC's salmon farming industry, pertaining to marine transport (Transport Canada), and processing and fish and human health (Health Canada and the Canadian Food Inspections Agency) for example.

The BC provincial Ministry of Agriculture and Lands also has several regulations that touch on aspects of the salmon farming industry – the main one being licensing farmsite tenures. They also regulate hatchery production water use and crown lands tenuring, and safety in the workplace through Occupational Health and Safety Regulations.

How has your role evolved in the Vancouver Food System?

Vancouver is an important market for BC salmon farmers who distribute extensively through both the wholesale and retail chains. More and more people are recognizing the benefits of heart-healthy salmon. The role of salmon farmers has evolved through its growing presence in representing a sustainably and economically important agricultural sector for British Columbians. Although BC's salmon farms are mostly located in the coastal waters of Vancouver Island and along the Sunshine Coast to some extent, the industry contributes directly to the

Vancouver food system by providing fresh salmon products to restaurants and local markets, and extends into service providers within the seafood sector throughout the province, such as processors, shipping companies, net and equipment manufacturers, and other contracting services related to the marine environment.

What significant changes over the past 40 years have impacted your business most significantly?

BC's salmon farming sector is quite young in comparison to other agricultural sectors in BC, and globally. Having started to develop in the early 1980's, the industry has experienced a number of growing pains and has continued to evolve, for the better, in every aspect of production. There have been significant changes over the past 40 years which have impacted business.

- **Market Demand & Seafood Consumption** – the consumer demand and global consumption of seafood is on the rise. Farmed seafood now accounts for more than half of all seafood consumed each year. The market demand for farmed salmon increased by 14 percent over the past five years, in the United States alone and shows no signs of slowing down (Global Salmon Initiative - <http://www.globalsalmoninitiative.org/news/farmed-salmon-industry-puts-sustainability-before-competition-to-meet-record-consumer-demand/>).
- **Market Exports** - globalization – Farmed Atlantic salmon is by far B.C.'s biggest food export, netting around CAD\$ 300 million in each of the past three years, almost double what is earned from blueberries and around 12 times more than wild sockeye salmon (BC Ministry of Agriculture and Lands – Exports report: <http://www.agf.gov.bc.ca/stats/Export/2013BCAgrifoodsExportHighlights.pdf>)
- **Feed Innovations** - Salmon feed innovation can be characterised by three distinct trends over the past three decades: a huge reduction in Feed Conversion Ratio (FCR) – a ratio to indicate the amount of feed required to produce 1 kg of salmon; a reducing trend in dependence on marine ingredients; and more recently, the development of functional feeds to support fish health and productivity (EWOS - http://www.salmonfarmers.org/sites/default/files/ewos_marine_ingredients.pdf).
- **Production Technology and 3rd Party Certifications** – Salmon farming has evolved steadily in all aspects of production, from feed delivery systems, to fish transport and harvesting systems, to fish health and environmental monitoring systems. This quick evolution has seen a rapid change in the sustainability of salmon farming in BC over the past three decades. Similarly, 3rd party certifications have been important in meeting independent standards for food safety, animal health and welfare, environment, and aspects related to social responsibility and economic viability.

What do you see as the biggest challenge to the sustainability of our current food system?

The biggest challenge to the sustainability of our current food system is in meeting the demands of a growing global population, in a sustainable manner, with an unchanging amount of space – which means using the resources that we have sustainably. One key in doing this is in having the ability to provide foods to meet that demand, through sustainable technologies –

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with minimal impact on the environment. BC's vast coastlines present significant potential for increasing the production of farmed salmon, to meet the demand, with a fresh, healthy product. Current technologies and innovations will allow the industry to realize its potential.

Tell me about your *association*. Is there any aspect of your work that you feel touches on issues of sustainability? Tell us about these.

The BC salmon farming sector's operation is intertwined with concepts of sustainability along the entire production cycle. Sustainability of the industry is dependent upon the sustainability of the environment in which it operates, and the resources upon which it draws, and so it is always top of mind in everything our farmers do. Farm-raised seafood is also key to the sustainability of the oceans. The consumption pressures of a growing global population on wild-sourced seafood is not sustainable.

How does the salmon industry affect food security/sustainability in BC?

Farmed salmon is an important alternative in the seafood market to wild salmon and other wild species. The increasing demand upon salmon as a seafood option globally needs to be filled by farmed salmon. Placing this demand on wild salmon stocks would be unsustainable. For this reason, it is important, to the benefit of the people of BC, that the industry grow in a sustainable manner to meet that demand, while realizing its potential.

What are the greatest factors/ influences surrounding sustainability issues within the BC Salmon industry?

The greatest factors or influences surrounding sustainability issues within the BC Salmon industry are:

- Sourcing sustainable feed ingredients – See: http://www.salmonfarmers.org/sites/default/files/ewos_marine_ingredients.pdf
- Managing environmental/habitat impacts in a sustainable manner through research and development initiatives and collaborative efforts – e.g. <https://www.youtube.com/watch?v=xKCs-dkpwB4>; <http://www.dfo-mpo.gc.ca/science/enviro/aquaculture/rd2013/index-eng.html>; <http://www.salmonfarmers.org/cohen-commission-final-report>
- Innovations in production to increase efficiencies – See: <http://www.salmonfarmers.org/innovative-practices>.

Are there any misunderstandings about the BC Salmon industry that members of the public may have that you want to clarify?

The misunderstandings regarding the BC salmon farming industry, particularly with respect to chemical and drug application, environmental impacts, impacts upon wild salmon stocks, and feed ingredients and usage, are a result of misinformation having been circulated about the industry since its inception. Like all agricultural and resource driven industries, salmon farming does have a footprint upon the environment in which it operates, and upon the resources it uses to obtain production levels. The industry has no doubt evolved through practices that

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notably had an impact on both the environment and resources over the past three decades. However, the industry, academia and governments have put a great deal of effort into studying and addressing these issues, and have worked to increase the standard of industry's sustainability seen today. This has resulted in BC's salmon farming industry being a global leader in sustainability, and 3rd party certifications.

What do you think the biggest milestones have been over the last four decades in the BC Salmon industry?

See the question on "changes" above. The biggest milestones of the BC salmon industry in the past four decades have been in using innovation to increase sustainability, both environmentally and economically. Salmon farming in BC, being quite a young industry, has been experiencing continuous improvements in production techniques, and has evolved significantly to increase efficiencies and decrease impacts, in every aspect of the production cycle. This includes technological advancements in areas such as predator management, feed ingredients and distribution techniques, environmental monitoring and footprint management, siting, and fish health management.

Achievements/ failures in the past 4 decades and why do you think it works/does not work?

See above. There is no one set of achievements or failures that have shaped the salmon farming industry in BC as it currently exists. The industry has evolved rapidly and met many challenges since its inception. Technology and innovation have allowed the industry to become what it is today.

Do you guys have difficulties in marketing, advertising or promoting the salmon industry to the public?

Farmed salmon presents an affordable, fresh, healthy seafood option and is in high demand in the marketplace both locally and globally. Farm-raised salmon is B.C.'s highest-valued agricultural export with almost \$300-million in value exported each year.

Challenges with respect to public perception and sustainability have come about through misinformation about the industry. It is important for the industry to continue to be as open and transparent as possible regarding its operations, to help better inform perceptions.

Where do you see your industry in the future?

With the increasing global demand for protein, which will follow the growth of the world's population, farming is the most sustainable means of providing those necessary sources of protein. Our global population cannot rely on wild sources of seafood for sustenance, much as it cannot rely on wild sources of terrestrial animals. The salmon farming industry in BC will continue to meet challenges head on by applying leading edge technologies and innovations, being global leaders in sustainability, and working collaboratively to exceed the environmental and social standards set for the industry.