



## **Canadian Aquaculture Industry Alliance Response - The Farmed and Dangerous Campaign**

**October 31, 2002**

The Canadian Aquaculture Industry Alliance (CAIA) is proud of the healthy, safe products its members provide to consumers. It is for this reason that the Alliance wishes to address claims being made by the Coastal Alliance For Aquaculture Reform in their October 29, 2002 action called Farmed and Dangerous. Our farmed salmon is subject to one of the most rigorous food safety systems in the world and we have complete confidence in the safety and wholesomeness of our products. Further, we believe that eating salmon, whether farmed or wild, is good for the health and note that nutritionists recommend eating fatty fish like salmon on a regular basis.

CAIA takes very seriously the concerns of the Coastal Alliance for Aquaculture Reform and calls for open and transparent dialogue on these food safety issues.

There are some factual errors in the information in the press release found on the Coastal Alliance for Aquaculture Reform's web site and we would like to correct the claims made.

### **F&D Claim**

*“Farmed salmon is produced using pesticides, antibiotics, and chemical additives to alter the colour of the fish”*

### **Response:**

#### **Drug Use**

- Farm salmon is recognized by government institutions and independent health experts around the world as a safe and nutritious food product.
- Canada's aquaculture industry takes full responsibility for the health and safety of its products, and is committed to working openly with government agencies to ensure that consumers have the information they need to make healthy and nutritious food choices.
- The Canadian aquaculture industry has been a strong advocate for a National Aquatic Animal health Program that would protect both wild and farmed species. We are hopeful that the Canadian government will implement this important initiative.

- The aquaculture industry has established an elaborate community of professionals and researchers with expertise on aquatic animal health and we are ready, willing and able to work with governments, fish professionals, environmental groups and wild fish interests to make sure a comprehensive aquatic animal health program is developed and implemented.
- Antibiotics and other therapeutants are used far less intensively in aquaculture than in terrestrial meat producing industries.
- Antibiotics and pesticides play an essential role in the integrated management of fish health in aquaculture; however, the extent of usage in the industry is declining. There are currently only nine therapeutants approved for use in food fish by Health Canada and they are used only under veterinary prescription for disease control.
- Antibiotics and other therapeutants are used only for disease control and not to promote growth.
- The trend towards reduced use of antibiotics is attributable to
  - i) better husbandry practices,
  - ii) the use of more effective, targeted antibiotics that require less drug per treatment; and,
  - iii) the development and increased availability of fish vaccines.
- All farmed salmon is subject to a rigorous Quality Management Program that includes a regulatory-based HACCP food safety requirement.

### **F&D Claim**

“Farmed salmon are treated with chemical additives to give them the color that consumers desire.”

### **Response:**

#### **Salmonid Pigmentation**

- Both wild and farmed salmonids get their pigmentation from carotenoids. Carotenoids are vital nutrients for many species including humans. Some carotenoids protect against damaging reactions in the body and some serve as a source of vitamin A.
- Carotenoids are almost everywhere: in bacteria, plankton, fungi, fish, reptiles, insects, birds, mammals, flowers, leaves and fruits. More than 600 different carotenoids have been identified. The most familiar is beta-carotene, the orange-red pigment in carrots that was discovered almost 200 years ago and which gave the name to the whole class

of these compounds.

Carotenoids, together with the green pigment chlorophyll, are the basis of all life on earth. They play a key role in photosynthesis, which enables some organisms to convert carbon dioxide and water into organic material using energy from light. Carotenoids are also needed to protect the organic molecules produced from being destroyed by oxidation. Since animals, including humans, cannot make carotenoids from simpler molecules, they are totally dependent on the amounts supplied in their food. In this respect, carotenoids are like vitamins; if intakes are inadequate, health and survival may be compromised.

In humans, a large body of evidence has consistently shown an association between dietary intake and / or high serum levels of the carotenoid, beta-carotene, with a reduced risk of cardiovascular disease and certain types of cancer. Carotenoids have also attracted attention in recent years because of observational studies that have associated higher intakes of certain carotenoids with a reduced risk of certain age-related diseases, such as prostate cancer, age-related macular degeneration and cataracts.

Salmon and trout need carotenoids for healthy growth, metabolism and reproduction, but cannot produce them in the body. In the wild, this need is fulfilled for salmon by including small algae-eating crustaceans, such as shrimp, in their diet. Farm raised fish depend on the feed provided by the producer. To be sure that amounts are adequate, it has become common practice in the fish farming industry to add carotenoids to the feed.

Astaxanthin and canthaxanthin are the two carotenoids found in salmonids. Wild salmon accumulate both of these carotenoids through their natural diet of crustaceans and small fish. Carotenoids are also included in starter feeds for smolts for wild salmon enhancement. Wild salmon start out their lives in salmon hatcheries where they are fed feed supplemented with vitamins, minerals and carotenoids. Without this assist many of the salmon smolts released into the wild would not survive and the salmon fisheries could be in danger of severe decline.

Carotenoids are responsible for the characteristic reddish colour of salmonid flesh. In the wild, the skin and flesh of salmonids are pigmented by the carotenoids contained in their diet. Wild salmon have free access to hunt and eat small crustaceans that are high in carotenoid content. As a result, the supply of carotenoids for wild salmon is usually sufficient to produce the required colour in the skin, flesh and eggs as well as to help maintain the health of the fish.

Due to a number of reasons, farmed salmon do not have access to their natural source of carotenoids. Carotenoids along with other key nutritional components, such as vitamins and minerals, must be added to the diet of the fish to insure good health and normal reproduction as well as proper skin and flesh colour.

It has therefore become common practice in the fish farming industry to add carotenoids to the feed and so ensure an adequate supply. By carefully choosing the right combination of carotenoids, vitamins and minerals feed producers can optimize intakes for the best results with regards to animal health and product colour. Addition of carotenoids to the diet of farmed salmon has been practiced now for more than 15 years. The safety of these carotenoids is confirmed not only by numerous food regulatory bodies but also by the thousands of tons of farmed salmon consumed over this period.

### **F&D Claim**

*“people often don't know that the salmon they're buying is manufactured and not a wild fish”*

### **Response:**

- Farmed Atlantic salmon are from the same genetic pool and undergo similar biological processes as their wild cousins. The fact is that the growing process is strictly controlled and salmon farmers have elaborate systems of tracking and traceability. What this means is that, unlike wild fish, there is a complete record of the life and activity of the fish from conception to consumption. This mirrors other sophisticated animal management regimes and provides an additional level of safety, nutrition and quality.

### **F&D Claim**

*“We are asking retailers and consumers to do an easy thing: to make a public commitment to stop buying and selling farmed salmon until its safe for us and safe for the oceans”*

### **Response:**

- Aside from providing a safe, wholesome product that has been shown to be good for the health of consumers, salmon farming as practiced in Canada is an environmentally sound and sustainable industry, whose impacts on wild fish stocks and the marine environment are well understood and effectively managed through existing regulation.

### **F&D Claim**

*“Farmed salmon are grown in net cages that float in the ocean, which pollutes the marine environment with drug-laced excess food and waste”*

### **Response:**

- Farmed salmon spend part of their life in floating net cages. Before receiving a permit

for the establishment of a floating net cage the farmer must submit to an elaborate and costly environmental review under the Canadian Environmental Assessment Act and undergo an additional assessment to ensure that it does not create a hazardous alteration, disruption or destruction of fish habitat.

- Less than 3% of the overall feed provided to farmed salmon is medicated and all medications are prescribed by a veterinarian and are regulated by the strict Canadian Food Inspection Agency's Feeds Regulations. In addition animals are tested routinely prior to leaving the processing facility to ensure on farm food safety practices are effective.

### **F&D Claim**

*"These floating feedlots also allow disease and parasites to flow out through the nets, threatening wild salmon and the ocean habitat"*

### **Response:**

- Before entering sea net cages our animals are disease free and are carefully monitored during the growing cycle. The Canadian Aquaculture Industry Alliance has been calling for strong government public policy that would require comprehensive surveillance, mandatory disease reporting and destruction of animals infected with specified diseases. The salmon farming industry has developed and is implementing comprehensive Fish Health Surveillance Programs, based on sound agricultural principles, which include mandatory veterinary involvement on every farm.

### **F&D Claim**

*"Government and industry have not been forthright in providing the necessary information to allow the consumer to make an informed decision about farmed salmon"*

### **Response:**

- We have a policy of openness and transparency and are willing to work with government, scientists, NGOs and concerned citizens on issues of food safety and the health benefits of our products. Consumers deserve the best products and good information. The Canadian Aquaculture Industry Alliance is committed to ensuring that Canadian farmed salmon remains one of the healthiest, safest sources of protein available to consumers in today's marketplace.