



## Steve Backman: After almost 25 years, fish health pioneer still relishes the discoveries

Steve Backman is quite a few years away from being a grandfather, but his nickname is still “Grampy.”

That’s because the St. Stephen resident is often jokingly called the “grandfather” of fish health veterinary medicine in Atlantic Canada.

When he moved to New Brunswick in 1988, he was the first and only private sector veterinarian in Atlantic Canada who had specialized training in fish health medicine.

“Absolutely everything was new. I loved it,” says Backman.

Fast forward 24 years and Atlantic Canada now boasts about two dozen fish health veterinarians as well as the Atlantic Veterinary College and its Centre for Aquatic Health Sciences which attracts students from across Canada plus fish health experts and researchers from around the world.

“That’s all because of aquaculture in New Brunswick, which began right here in Charlotte County. If it wasn’t for this industry, you wouldn’t have these professionals living here,” he says.

Backman was drawn to aquaculture as a young boy after watching famed conservationist Jacques Cousteau on television. Cousteau believed farming the ocean could protect the wild stocks in the sea as well as vastly supplement the world’s food supply.

“My mom’s family were dairy farmers from Sussex, and my dad’s were fishermen from Nova Scotia and I ended up in fish farming,” he says, laughing.

After studying fish health at the Ontario Veterinary College, Skretting North America (then known as Moore Clark) hired Backman to work as a fish vet in Charlotte County. At the time, salmon farming was just getting established, and farmers had access only to a large animal veterinarian and two provincial biology assistants to answer any fish health questions.

Skretting, which provides feed products and services to salmon, trout and other marine finfish farmers, wanted to be able to provide farmers with a much-needed fish health resource.

“It was fascinating. For the first time, we were able to study fish that were alive and swimming and healthy. You could learn a lot about the fish and their environment. Even diagnostic testing was relatively new. Every time you looked at a fish you saw something new that nobody had ever seen before.”

Once more fish veterinarians moved east, Skretting pulled back on providing fish health services to focus on feed. Nowadays,

Backman has several roles at Skretting, including helping farmers at freshwater hatcheries choose the most appropriate diet for their fish.

“Dietary requirements change throughout the lifecycle of the animal so you have to adjust what farmers feed them. Ensuring salmon have the right feed at the right stage also decreases waste,” says Backman.

He also works with Skretting’s international team to help develop new kinds of feed.

Backman says fish feed has come a long way since the industry began when farmers used moist feed consisting of about 80 per cent wild fish ingredients. These days, wild fish ingredients have dropped considerably, he says, adding the industry actually creates more fish protein (farmed fish) than it uses making feed.

Farmers use nutrient dense pellets made from animal, plant and fish proteins as well as essential vitamins and nutrients. No dyes, chemicals or growth hormones are used in salmon feed.

“We are constantly dropping down the fish component in our feed and finding other protein and energy sources that match the fish’s requirements so we can feed a lot less fish to fish,” says Backman.

He says salmon are incredibly efficient feeders compared to animals raised on land. Warm-blooded animals like cows need more energy just to keep warm.

“Fish are cold-blooded. A much higher percentage of their diet goes to growth as opposed to keeping the body warm.”

For every kilogram of feed a farmed salmon eats, it gains almost one kilogram of weight. A cow needs to eat eight kilograms of feed to put on one kilogram of weight.

Backman says another part of his job is ensuring Skretting’s feeds meet all the requirements of the Canadian Food Inspection Agency.

“The same ingredients used in aquaculture are used in agriculture. It’s the same pool of ingredients,” he says.

After 24 years with Skretting, Backman says he loves that he is still able to help break new ground in the aquaculture industry.

He’s part of international teams researching an all-natural diet that would help prevent sea lice from attaching to fish as well as studying how to adjust the diet of fish to help them adapt to higher water temperatures caused by global warming.

“The best part of my job is seeing something new,” he says. “Aquaculture is really about learning from nature how to produce food sustainably. The more you look at the holistic environment, the more you can learn to do that. That learning curve is really exciting.”