



MEAL TIME!

BY MARTIN SILVERSTONE

FINALLY, SALMON CONSERVATIONISTS CAN ENJOY GUILT-FREE FISH.

DRIVING FROM THE SMALL VILLAGE OF BROOKLYN IN HANTS COUNTY, NOVA Scotia to the even smaller village of Centre Burlington, the countryside is so pretty it almost hurts. Farmhouses and wooden barns nestle among grassy fields, dotted with purple clover, orange hawkweed and yellow buttercups. Horses and cows nibble at lush grass.

Cross over the Kennetcook River at low tide and its muddy red banks glisten in the morning sun. Later, on my way home, the tides pouring in from the Bay of Fundy will fill the waterway like a bathtub and it will sparkle, looking more like the thriving salmon river it once was.

As I am here because of salmon, the bucolic beauty would normally not come as a surprise. Atlantic salmon rivers as a rule are beautiful wild places, but I'm not here to visit a river, my destination is a salmon farm.

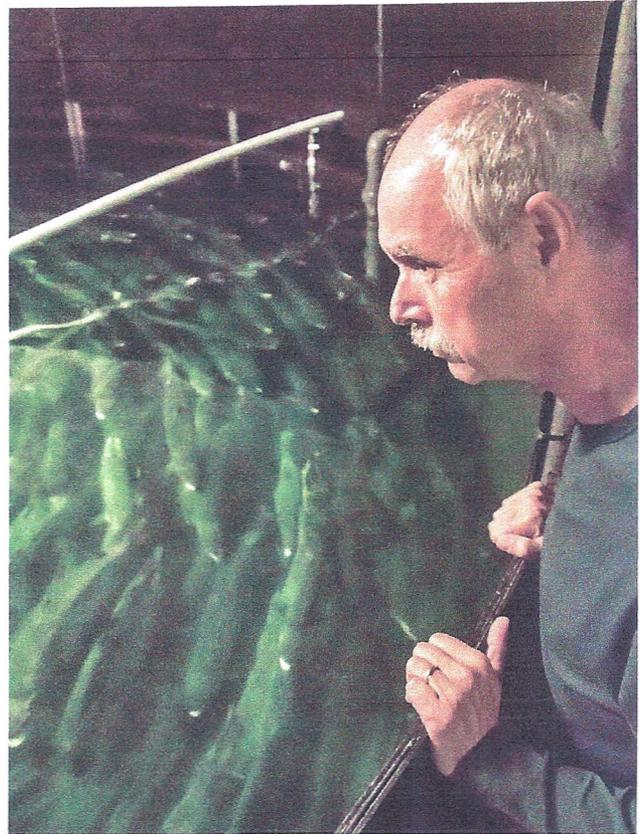
Not to say "traditional" or open net pen salmon farms, like those that dot the coastlines of Eastern Canada, Scotland and Norway, are ugly on the surface, but they are increasingly seen as a blight because of what happens beneath the sea. They have been shown to pollute, cause disease and disrupt marine life, not only in their immediate vicinity, but also up rivers where salmon farm escapees can dilute the genetic integrity of wild fish (see Fundy Feedlots, *ASJ*, Spring 2011).

In Centre Burlington, I reach a fork in the route, and as Yogi Berra advised, I take it. It puts me on Red Bank Road, appropriately named because when I pull into Sustainable Blue, the latest development in land-based aquaculture salmon, I can see the red mud of the exposed shoreline of the Bay of Fundy at low tide in the distance.



COURTESY OF SUSTAINABLE BLUE (3)

Guests at the launch party for Sustainable Blue (overleaf) enjoyed farmed, closed containment salmon pan-fried (main shot above), smoked (top), baked (above) as well as à la tartare (not shown).



MARTIN SILVERSTONE (3)

Rapid Growth: Lewis Hinks (above) examines Sustainable Blue fish that only 9 months ago were the size of fry (left). Concrete slabs for new tanks rise like Stonehenge at the Sustainable Blue site in Centre Burlington, Nova Scotia (above, left).

The ocean is a good kilometer or two away, which is the main reason land-based aquaculture is considered to be 100% sustainable . . . there is zero chance of any fish escaping. There are other reasons too. It's clear from my first impression that the environmental footprint of this 55-acre property is very, very small. Visually the office and Quonset huts barely make a ripple among the small farms of Hants County. There is no fishy smell, no waste piles, nothing to hint at the fact that 500 metric tonnes of water are being filtered every hour in order to keep 165 tonnes of Atlantic salmon growing and healthy. This is the launch of their first "crop" ready for consumption (eventually the facility will produce 500 tonnes) and a crowd of restaurant owners, chefs, investors and salmon conservationists have gathered to tour the facility and, at a reception later in Halifax's Courtyard Marriott, taste the product.

"Don't show me how much you know, show me how much you care," is a mantra I've heard on almost every job I have applied for. The men and women involved with Sustainable Blue care a lot. Everyone involved, from construction workers, to pipe layers, to chemists, is on hand and excited to greet the guests. My tour group is led by Kirk Havercroft, the company CEO, another by Jeremy Lee, the scientist behind the new recirculating aquaculture system (RAS) and president of Sustainable Blue. In the first building, which houses five giant filtration systems, Havercroft explains how the initial water the fish live in was piped in from the Avon River estuary, but he is quick to point out that the technology would allow a fish farm like this to be built anywhere, even in a desert. If the site

was not near a water source, after trucking in the initial supply, the filtration system that recycles the water ensures almost 100% of the water is reused. This leads Lewis Hinks, ASF's program director for Nova Scotia to whisper in my ear, "Like Salmon Fishing in the Yemen," referring to the fictitious movie and book where salmon are introduced into a dried up wadi in the desert.

I stifle a laugh in time to hear Havercroft explain how production begins with a Norwegian strain of Atlantic salmon eggs flown in from Iceland. Right away this is a big change from sea cages where fish imported from out of country cannot be used due to the potential for foreign fish escapes.

After hatching, the alevin are placed in fresh water tanks. Using a subtle combination of light and temperature changes, the growing parr are convinced it's time to smolt. After growing to the late parr stage, they are happily swimming against the current in the tanks. Then with a controlled, gradual rise in temperature and increasing daylight the fish feel the natural urge to head downstream and begin swimming with the current. "Eternal optimists," Havercroft says, not without admiration.

Soon after smolting, the fish are swimming in large saltwater tanks and it is here that the secret of Sustainable Blue's success lies. And it is very secret. Suffice to say that Dr. Jeremy Lee, through years of research, has perfected a technique of filtering large amounts of salt water without the use of chemicals.

Lee was already well known in the field of marine aquarium construction. For more than 20 years, his

version of a recirculation aquaculture system (RAS) was the design of choice for some of the world's biggest public aquariums. At some point he realized he'd rather be feeding people than entertaining them. Originally from England, as is Havercroft, he decided to situate in Canada, and eventually Nova Scotia, because of the abundance of available and affordable land.

His RAS for salt water might be a proprietary system and a well-kept secret, but I can vouch for its efficiency and the flavor of the final product. That evening, Sustainable Blue hosts what amounts to a tasting of the first salmon to become commercially available (rainbow trout are already being distributed from a facility in Truro). We sample salmon à la tartare, as well as smoked, poached and panfried salmon. It was all cooked courtesy of Chris Velden from the Flying Apron Cookery (motto: "We do local") and it was all delicious. The fish came from the last tank I observed at Sustainable Blue. These salmon went into the saltwater tanks on December 9, 2014, almost nine months ago, to grow from smolt into 8-lb fish.

A few weeks later, I spoke with a woman I met at the Sustainable Blue launch, Hana Nelson, the owner of Afashionado Fishmongers, a restaurant and fish store in downtown Halifax's north end. She was effusive in her

praise for the land-based salmon. Her customers loved it, and the buzz from its arrival was helping her business. "It's a beautiful product," she told me.

Back at the farm in Centre Burlington, where those fish were produced, I remember chatting with President Jeremy Lee that same morning as our tours crossed in front of the Quonset hut that housed the saltwater tanks. He told me about the early days of construction and production. Local chefs, like Veldon at the Flying Apron Cookery, just down the road in Summerville, were immediately interested in his product. I asked if he realized how excited salmon anglers and conservationists were about his work, and this fact was made even more poignant because we were surrounded by rivers, which were now empty of wild salmon. To illustrate, I pointed to the large number of salmon conservationists (me included), who had come out to the launch. The fact they could now purchase a fish that is so closely linked to Nova Scotia's culture and history, without endangering the work being done to bring back a wild population of *Salmo salar* was cause for celebration.

"It's nice to be part of the solution," was all the humble scientist could say, smiling before turning back to continue conducting his tour. 🐟

Proud of their product (l-r): Sustainable Blue CEO Kirk Havercroft, President Jeremy Lee, and production manager David Roberts.

To purchase Atlantic salmon raised in a land-based aquaculture operation, quickly and easily, simply visit www.sustainableblue.com.



COURTESY OF SUSTAINABLE BLUE