



Atlantic Sapphire – Fresh Salmon from FLORIDA?

Yes, you heard me correctly — south Florida to be exact — Homestead, Florida. Coming soon from the land known for alligators and palm trees, a Norwegian salmon company (Atlantic Sapphire) is making a \$200 MILLION bet (\$600 million total by phase three) that you — entrepreneurs, chefs, and other salmon buyers across America — will want to enthusiastically jump on board this organic salmon train that is about to leave the station in Homestead. Currently, we grow salmon at the poles of the earth (far north and far south), and we spend incredible amounts of energy transporting it around the world. The technology being used in Florida will allow salmon to be grown in the U.S., close to the market where it is cooked and eaten, with ZERO pollution to the environment, ZERO effect on wild fish stocks, AND without the use of hormones, antibiotics, or pesticides.

Why grow salmon?

Using closed recirculating aquaculture systems (RAS), we can actually hope to someday feed the world. The reason farmed salmon work well as a mass protein source is their “conversion factor.” It takes about seven to 10 pounds of feed to produce one pound of beef, while it only takes 1.1 pounds of feed to produce one pound of salmon. With the world's population doubling to nine BILLION in the next 30 years (2050), growing more beef is not the answer.

RAS Technology – the absolute future of fish farming

RAS? Basically, think of it as growing fish in a swimming pool. A very large swimming pool — 36 tanks that are 65 feet wide and 22



Construction is underway in Homestead, FL for largest land-based salmon farm in the world

Credit: Atlantic Sapphire

feet deep, holding 454,000 gallons of recirculating saltwater each!! The water is recycled through a “biofloc” filtration tank and sent directly back to the salmon tanks. Biofloc systems, colonies of bacteria that convert ammonia to nitrate, remove the metabolic waste the salmon produce daily. Water recovery rates are over 95 percent!

Why Florida?

Aquifers — saltwater and freshwater aquifers. It just so happens that Homestead, Florida sits atop two very important aquifers. 3,300 feet down is the saltwater Florida aquifer, in which the salmon will be grown. It cost \$13 MILLION just to dig that one well!! The saltwater coming from that well flows 900 gallons per minute WITHOUT A PUMP. That means you can conceivably grow hundreds of thousands or even millions of pounds of salmon on land without using a pump? Sounds crazy, doesn't it? The Biscayne Aquifer is the farm's source of fresh water. It is a mere 1,000 feet down.

How big is this project?

Big! It will be the largest land-based salmon farm in the world. Right now, it looks like a gigantic construction site (because it is). 60 MILES OF PIPES are being laid right now. Phase 1 starts this November with the first smolts (baby salmon) going in the water. The first harvest of four- to five-kilo salmon will occur in 2020. It takes only 22 MONTHS to grow a salmon from egg to 10 pounds. This endeavor will scale up fairly quickly.

Phases two and three are scheduled to be completed by 2027 (less than a decade), and the production figures are staggering. Ninety thousand (90,000) metric tons sounds like a lot, but when you convert that to pounds, your jaw will drop. In 2027, Atlantic Sapphire will produce 200 MILLION pounds of farmed Atlantic Salmon per year, or about 10 percent of U.S. consumption. And this will all take place on ONLY 80 acres! Think about that figure for second. That is 2.5 million pounds PER ACRE of a sustainable, pollution-free, healthy, made-in-America seafood protein.

The best irrigated corn in the best farmland anywhere in the United States might yield 300 bushels per acre or about 12,000 pounds per acre. This RAS technology is how we will feed the world in the future.

What does this mean to you, the consumer?

Well, I guess the short answer right now is not much. However, it is clear to me and should be to you that RAS-grown fish are much better for our environment than traditional open ocean-cage aquaculture fish, and RAS fish require no antibiotics or hormones. So, my advice would be for you to learn as much as you can about RAS fish and support those projects when that opportunity arises. We represent Vero Blue Farms in Iowa, of all places, which successfully uses this technology to grow Barramundi in a converted hog barn, with seven acres under roof.

You, the consumer, will ultimately determine the success or failure of these projects. We are at a pivotal juncture in the worldwide aquaculture industry, and your menu choices will help determine which path we choose. Do we continue to grow fish in the ocean with its ever-increasing list of environmental problems? Or do we choose to grow fish close to where they are consumed in a more sustainable, environmentally friendly manner? For a hungry world, the choice is getting clearer by the day.

TIM SUGHRUE is executive vice president and founding member of Congressional Seafood Company. He holds a BS from North Carolina State University in Wildlife Biology and Fishery Science. He is a former research biologist for the Maryland DNR, has worked as a full-time commercial waterman, and has sold almost a billion dollars worth of seafood in his career.