

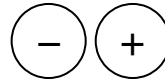
## The Anti-Salmon: A Fish We Can Finally Farm Without Guilt

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HEALTH

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### Australis Aquaculture

Our prehistoric ancestors in Southeast Asia had good reason to domesticate the area's wild sheep instead of tigers. Sheep were docile creatures that preferred to live together in flocks and could convert grass and weeds that humans couldn't digest into valuable protein. Tigers were solitary and wide-ranging and needed to be fed many times their weight in perfectly edible animal protein. Early man realized the sheer folly of feeding several sheep to a tiger in order for it to produce a sheep's weight of meat.

In the 1970s, when modern aquaculturists began casting about for fish to tame,

they ignored this 10,000-year-old wisdom. Species were chosen on the basis of their value in the marketplace. If not, what logical reason would anyone have for domesticating Atlantic salmon, a carnivorous fish that cruises the open oceans and needs to eat many times its own weight in smaller fish and marine animals? A tiger of the seas.

**For a white-fleshed fish, the barramundi packs a mighty load of healthful omega-3s—about the same amount as a coho salmon.**

Joshua Goldman, working in the unlikely setting of a collection of warehouse-like buildings in an industrial park near an airport in Turners Falls, a village in western Massachusetts's Pioneer Valley, is attempting to undo fish farming's fundamental wrong turn. After raising striped bass in the 1990s, Goldman, who is the chief executive officer of [Australis Aquaculture](#), began a three-year quest for a better fish. After looking at more than 50 candidates, he chose the barramundi, a native of Southeast Asia and northern Australia that in some ways resembles members of the bass family.

In terms of biological needs, barramundi are the anti-salmon. They are born in the sea and migrate to fresh waters as adults, the reverse of a salmon's lifecycle. The sluggish rivers they call home are subject to frequent droughts, forcing barramundi to form tight schools in tiny pools left in otherwise dry riverbeds. Huge gills enable them to live in oxygen-deficient water. And best of all, they have the rare ability to transform vegetarian feed into sought-after omega-3 fatty acids. Salmon require as much as three pounds of fish-based feed to put on a pound of meat. Goldman's barramundi need only a half pound, the bulk of which is made from scraps from a herring processing plant.

There is another important way that Australis is charting a course for sustainable aquaculture. Farmed salmon live in net pens placed in the open ocean. Feces, excess food, and other waste flow directly into the surrounding waters or fall to the

bottom, where they create oxygen-poor dead zones. Net pens not only pollute, but spread diseases and parasites to passing wild fish. Land-locked Australis uses what is called a recirculating system. Water is drawn into the facility from wells fed by the nearby Connecticut River. It flows through the fish tanks and then is cleaned in a treatment plant and sent back to the fish. Every gallon Australis uses is recycled 300 times. Solid waste is separated out and goes to local farms as fertilizer.



#### Australis Aquaculture

Goldman thinks that Australis, with 50 employees, operates the largest recirculating aquaculture operation in the world. It consists of a series of tanks that are about as big as above-ground backyard swimming pools. The tanks are housed in cavernous buildings that could do double duty as hangars for the nearby airplanes. Goldman and I sloshed through inch-deep trays of disinfectant. Inside, the air was heavy with an aroma not unlike that of the expensive dry cat food my spoiled cat enjoys.

The smaller tanks contained minnows that were not much bigger than a grain of rice and were born from giant, 40-pound breeding fish kept at the facility. As the young barramundi grow, they graduate through a series of larger tanks until, at the age of one year, they weigh about one and a half pounds and are ready for market. The Turners Falls operation sells about 3,500 fish a day, most of which are trucked away alive for sale in Asian markets throughout North America. A smaller number are frozen whole. The company owns a similar-sized farm in Vietnam that processes fish and packages them as breaded, seasoned filets.

In texture and appearance the flesh of a farmed barramundi is similar to firm white-fleshed fish like snapper, grouper, striped bass, or sole. But for a white-fleshed fish,

it packs a mighty load of healthful omega-3s—about the same amount as a coho salmon. I have only tasted barramundi once, and to be honest it wasn't a fair test. The event was a 250-person banquet—a perilous venue for any cooked aquatic creature—and the chef leaned a little heavily on the seasoning, overpowering the fish. My friend Rick Moonen, the author of *Fish Without a Doubt* (which was edited by the woman I live with) and owner of the acclaimed Las Vegas temple of sustainably procured fish, [rm seafood](#), endorses it without hesitation. "It's always sweet and buttery with a delicate texture," he writes.

Which is a lot more than I can say for the last piece of environmentally destructive farmed salmon I encountered.

#### ABOUT THE AUTHOR

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