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Food & Agriculture 12/29/2016 @ 9:00AM 1,170 views

The Future Of Food Is Wet And Salty



Catfish farming in Kentucky, 2003 (Credit: AP Photo/Stephen Lance Dennee)

Aquaculture is an umbrella term that describes seafood farming in all its iterations, including growing saltwater fish and shellfish in the ocean, and freshwater fish in recirculating systems on land.

Aquaculture isn't new—some methods, like traditional Hawaiian fishponds and oyster farming as practiced in Ancient Rome, are age-old practices. But much of the rapidly expanding aquaculture industry today is thriving on new technologies and techniques.

And this industry—especially the ocean-based iterations of it—represents the future of food.

A Booming Global Industry

Aquaculture is gathering speed throughout the world, especially in Asia. The industry produces upwards of [50 percent of the seafood](#) consumed around the globe, with 88% of that coming from Asia.

According to The National Oceanic and Atmospheric Administration (NOAA), world aquaculture production of fish and plants like seaweed and kelp was more than 100 million tons (live weight) in 2014. That year, [16 countries](#) ranked above the U.S. in their investment in aquaculture production, including many Asian countries, as well as Norway, Chile, Egypt, and Brazil.

Aquaculture is an efficient and—if done right—sustainable source of protein that can play a dominant role in keeping the world’s expanding population full and healthy.

The fact is, you’re probably eating it already, will almost surely eat it more in the future, and can count on it to be a major source of nourishment for your billions of neighbors on this planet.

Aquaculture in the U.S.

In the U.S., aquaculture has been an under-appreciated sector of the food landscape (or, rather, seascape). The U.S. seafood industry has been much more concentrated on ensuring the health and sustainability of wild-catch fisheries instead of innovating in seafood farming.

We import much more of our seafood instead of growing it here. While the U.S. produces less than 1% of farmed seafood, it gets close to half of its seafood from aquaculture.

There are many reasons for this, among them the industry’s poor reputation for environmental damage, which has stuck with it since its infancy despite an overhaul of best practices. It is now practiced much more sustainably around the world but still suffers from negative stereotypes among U.S. shoppers.

Falling as it does in a middle-ground between open-ocean fishing and land-based agriculture, aquaculture hasn’t found a comfortable home in any one government agency that could have advocated for and invested in the development of the field. NOAA has traditionally focused more on wild fisheries, and the U.S. Department of Agriculture (USDA) has had an eye out for farming on land. While aquaculture takes place both in the ocean and on land, it hasn’t neatly fit into the purview of either institution.

That being said, NOAA states that “a compelling case can be made for growing more seafood in the United States.” And the agency serves as a conduit for the federal government’s recognition of aquaculture’s growing role in providing healthy and sustainable seafood options. The agency offers grants and undertakes projects with industry and academic partners to spur innovation in aquaculture practices.

Some nonprofit organizations also have interest in aquaculture, though those that look out for the sustainability of seafood and rural landscapes have tended to put a heavier emphasis on wild-catch fisheries and large-scale agriculture. This is most likely because their staffs are heavy on marine and landscape scientists with an interest in the health of terrestrial and marine ecosystems. While aquaculture has the potential to impact land- and seascapes when done at scale, wild-catch fisheries and industrial agriculture already do in the U.S., and so the management and reform of the latter have taken most of the focus.

The lack of positive attention toward and slow growth of the U.S. aquaculture industry are poised to change, however. There is growing interest and investment in the field in the U.S., with experts feeling optimistic and citing the advance of promising technology.

Aquaculture is going full steam ahead around the world. The only question that remains is whether the U.S. will fully jump on board.