



Fish Farmers of Ohio Association's Tom Machamer nets yellow perch. A century of research on livestock and crops has paid off, he says. Now, aquaculture is ripe for similar improvement.

Growing Ohio's fish farms

Getting more fresh, local seafood takes research

Tom Machamer recently broke ground on a new 4,000-square-foot, 40,000-gallon, zero-discharge fish-farming facility. As owner of Wooster's Cedar Lane Farms, where he raises bass, perch and bluegill, Machamer sees a bright future for Ohio aquaculture, is willing to invest in it, and counts on the Ohio Agricultural Research and Development Center to help keep the industry growing.

Today, that industry generates nearly \$50 million a year for Ohio's economy, and OARDC's Ohio Center for Aquaculture Research and Development works to further advance it. The center's studies improve the genetics, nutrition and production of Ohio's farmed fish — and the profitability and success of the state's 140-plus fish farms.

"The research that will have the biggest impact on any aquaculture species will revolve around genetics and nutrition," said OARDC aquaculturist Laura Tiu. "Improving the genetics and nutritional efficiency of any cultured species is the key to lowering production costs, and that, in turn, will increase demand for the product."

More: southcenters.osu.edu/aqua/

"Aquaculture, relatively, is still in its infancy. There's quite a market that Ohio can tap into. But we need research support from OARDC to do it. Without it, we could be wandering for years."

— Tom Machamer,
president, Fish Farmers
of Ohio Association

Essentials

- Experimental yellow perch bred by OARDC scientists grow 30 percent faster than unimproved perch. They reach market size in 12–13 months instead of 18, need less feed, and could boost a farm's output and profits.
- OARDC scientists are studying Ohio soybean meal as a sustainable alternative to ocean fish meal for yellow perch food. Fish meal costs nearly four times more than soybean meal, and its cost has gone up nearly 75 percent in the past decade due to falling ocean fish stocks.
- Feed costs make up half to three-quarters of a fish farm's total production costs. Less-expensive, soybean-based perch feed would increase profits.
- The U.S. imports 91 percent of its seafood, creating a \$10-billion-a-year seafood deficit. Ramped up Ohio seafood production would help cut this deficit.



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AGBIOSCIENCE: OARDC
BRINGING KNOWLEDGE to LIFE

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Ohio Agricultural Research and Development Center

As the research arm of The Ohio State University's College of Food, Agricultural, and Environmental Sciences (CFAES), the Ohio Agricultural Research and Development Center (OARDC) employs nearly 650 scientists and staff members throughout the state.

Its Wooster campus is the largest agbioscience research facility in the United States, and OARDC scientists work closely with researchers in Ohio State's Colleges of Education and Human Ecology, Medicine, Public Health, Veterinary Medicine, Biological Sciences and Engineering.

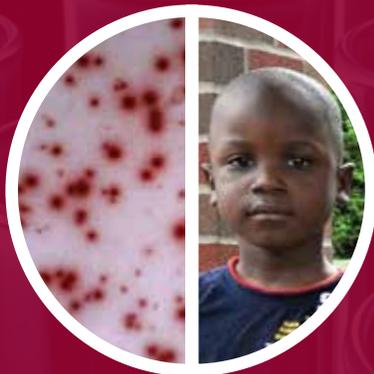
At any given time, OARDC researchers are engaged in more than 400 research projects. Primary focus is in three signature areas:

- Advanced Bioenergy and Biobased Products
- Environmental Quality and Sustainability
- Food Security, Production and Human Health

The Ohio General Assembly established OARDC as the Ohio Agricultural Experiment Station in 1882. It is supported by a line-item appropriation from the Ohio General Assembly, competitive grants, gifts, contracts, federal grants and other sources. OARDC uses these funds to provide direct research support and economic development for Ohio's annual \$100+ billion agbioscience industry. OARDC is not funded by student tuition or any other general funds of The Ohio State University.

OARDC: A Leader in Agbioscience

ag·bi·o·sci·ence (ăg'bī'ō-sī'ens) *n.* the integration of scientific disciplines to address critical needs of food security, safety and health; environmental sustainability; and biobased energy, fuel and products



Food Security, Production,
and Human Health



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