Getting kids hooked on fish farming

By JENNA MERTZ

Sharon Moen, food-fish outreach coordinator, Wisconsin Sea Grant.

Emma Hauser, aquaculture outreach and education specialist, Wisconsin Sea Grant.

Dong-Fang Deng, aquaculture outreach and extension specialist, Wisconsin Sea Grant.

Top right: Middle school students Ava and Liam with the guppy tank in Dan Widiker's classroom.

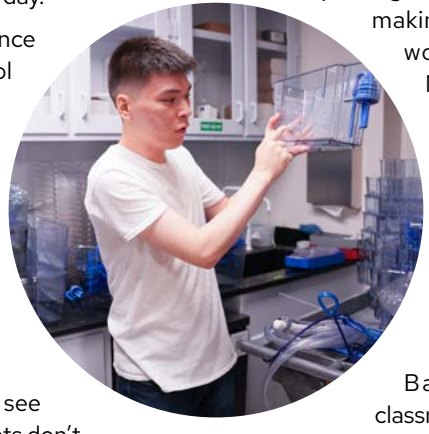
Center: Aquaculture intern and UW–Madison student Raatbek Baizakov explains how he takes care of zebrafish used for research at the Morgridge Institute for Research.

Ask a kid what they want to be when they grow up, and chances are they'll rattle off a list of the usual suspects: doctor, firefighter, artist, astronaut. Sharon Moen, Wisconsin Sea Grant's food-fish outreach coordinator, hopes to add "fish farmer" to that list.

Moen and Wisconsin Sea Grant aquaculture outreach specialists Emma Hauser and Dong-Fang Deng are partnering on a project to build awareness of fish farming and boost training opportunities for young people. The project, funded by the Freshwater Collaborative of Wisconsin, is a step towards developing an aquaculture workforce in the state.

"When I speak with our farmers producing rainbow trout, Atlantic salmon, tilapia and other fish for food, one of the biggest hurdles they report is that there are not enough workers. They need help. Meanwhile, many students don't know working on a fish farm is a real job they can have," Moen said.

One way to build awareness is to get more fish in front of more kids. As part of the project, the Wisconsin Sea Grant team invited educators to apply for $500 grants to set up, reboot, or improve systems that allow students to grow fish as part of their school day.



Dan Widiker, an eighth grade science teacher at Superior Middle School in Superior, Wisconsin, received one the seven grants distributed so far. This spring he set up a fish tank and mounted a PVC-pipe system to circulate water and grow buttercrunch lettuce. The sprouting seeds provide not only proof of concept but also serve as effective learning tools.

"With eighth graders, if they can't see it and touch it, the abstract concepts don't always land," said Widiker. "[Now] they have something a little bit more concrete. And if they can interact with it and see value with it, then it's a lot more meaningful."

Widiker and his fellow science teachers recently revamped their curriculum to be more place-based – that is, to focus on the local environment rather than far-flung locales across the globe. He hopes the fish-and-plant aquaponic system will encourage students to think

about the ways humans intersect with the environment, particularly when it comes to food, which is often shipped across the country and world.

That's especially true when it comes to seafood. The National Oceanic and Atmospheric Administration estimates that 70% to 85% of seafood consumed in the United States is imported from abroad, and more than half of those imports are produced via aquaculture. What if, instead of transporting food thousands of miles across the globe, it could be raised locally?

For that vision to become a reality, the industry needs to cultivate a workforce. To that end, in addition to putting fish in schools, the project team is making it possible for eight interns to work in aquaculture facilities near Milwaukee, Madison, and Bayfield this summer. Some of the interns are producing fish in laboratories while others are learning the nuances of raising yellow perch alongside commercial fish farmers. All are pursuing outreach opportunities to share information about locally produced fish.

Back in Widiker's eighth grade classroom, students Ava and Liam await the introduction of fish into the tank. Both are fans of their teacher's dynamic approach to science.

"I personally think it's going to be great because it's hands-on and more like you can see it. You can see the effects," Ava said. "It's cooler to see, and it makes me pay attention more."

Added Liam, "There's always something we don't know that we learn each day." ■

Educators interested in setting up an aquaculture system in their classroom can email Sharon Moen at **smoen@aqua.wisc.edu**.

Top: Interns and Morgridge Institute for Research and Wisconsin Sea Grant staff gather in June. From left: Hallie Schroeter, Digby Meister, Linda Hang, Wyatt Slack, Erin Ross, Rachel Virnig, Jack Patterson, Peter Shep, Kyle Freimuth, Emma Hauser, Jenna Mertz, and Mackenzie Klemek. Bottom row: Titus Seilheimer, Sharon Moen, and Raatbek Baizakov.

Bottom left: Wyatt Slack is assisting staff in various research projects on aquaculture species including lake trout (shown) at UW-Stevens Point Northern Aquaculture Demonstration Facility.

Bottom right: Aquaculture intern Rachel Virnig moves yellow perch from a tank at Coolwater Farms in Deerfield, Wis.

Spreading Aquaculture Education Around Wisconsin

Thanks to the Freshwater Collaborative of Wisconsin, Sea Grant was able to distribute $3,500 to seven schools to support aquaculture studies.

SUPERIOR MIDDLE SCHOOL
Set up and maintain two aquaponic systems to pursue research questions.

WASHBURN SCHOOL DISTRICT
Conduct biocontrol of a thrips infestation destroying the plants in an aquaponic system.

PULASKI COMMUNITY SCHOOL DISTRICT
Improve the filtration system in a 400-gallon aquarium used for raising about 200 rainbow trout for the "Trout in the Classroom" program.

GREEN BAY PUBLIC SCHOOLS
Build and maintain a mini-aquaponic system as a model for students wanting to create a home-based system.

FARNSWORTH MIDDLE SCHOOL
Improve the filtration system in an aquarium used for raising about 40 rainbow trout for the "Trout in the Classroom" program.

POYNETTE MIDDLE SCHOOL
Set up a 55-gallon aquarium in order to participate in the "Trout in the Classroom" program.

EDGERTON MIDDLE SCHOOL
Set up, maintain, and monitor a 29-gallon aquaponic system.

Locations of schools receiving an aquaculture mini grant

Locations of the 2025 aquaculture intern cohort