

# Aquaculture & Aquaponics

**A**quaculture is the cultivation of fish, aquatic animals, and plants. Aquaponics is a bio-integrated system that links recirculating aquaculture with hydroponic vegetable, flower, and/or herb production. In aquaponics, nutrient-rich effluent from fish tanks is used to fertigate hydroponic production beds. SARE has supported advances by producers, researchers, and educators that are helping to advance aquaculture and aquaponics into working models of sustainable production.

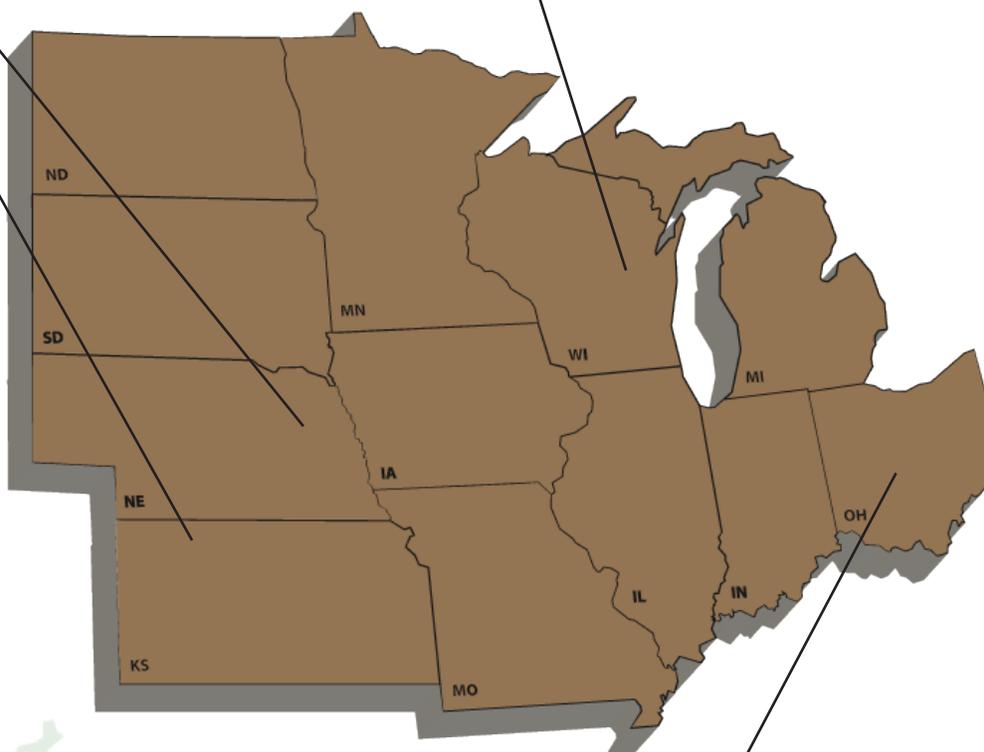
## NCR-SARE Project Sampler

To view SARE's entire aquaculture and aquaponics portfolios, or just the North Central region's, visit <https://projects.sare.org> and search using the terms "aquaculture" or "aquaponics." For selected North Central region aquaponics grants, see the reverse side.

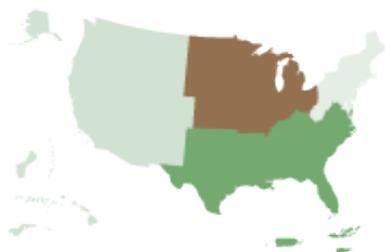
Through a collaborative, comprehensive, urban farming initiative, Whispering Roots worked on a healthy food project involving aquaponics. Students who worked on the aquaponics system received multiple awards for their efforts. See <https://projects.sare.org> and search for project number FNC13-911.

A producer explored using unused manure pits as a resource for aquaculture production. He hopes to provide former dairy farmers with a good use for their unused manure pits. See <https://projects.sare.org> and search for project number FNC17-1105.

A producer studied the feasibility of using on-farm inputs for fish food such as red wigglers, meal worms, black soldier fly larva, and tank raised duckweed (as opposed to commercially processed fish pellets) in order to reduce operation expenditures. See <https://projects.sare.org> and search for project number FNC12-863.



Students and staff constructed a large vertical tower aquaponics system with twelve ZipGrow® towers, a 100-gallon stock tank, an external biofilter, plumbing to connect the various components, and woodwork for framing and structural support. See <https://projects.sare.org> and search project number YENC13-067.



*SARE's four regional programs and outreach office work to advance – to the whole of American agriculture – innovations that improve profitability, stewardship and quality of life by investing in ground-breaking research and education.*

# NCR-SARE's Aquaculture & Aquaponics Portfolio

Selected Grants

## FARMER AND RANCHER GRANTS

Developing a “Cold Banking” System For Perch which Would Provide an Available Supply of Fish for Indoor Grow-Out Facilities Throughout the Winter

Brad LaFave, Black Dog Fish Farm, Wisconsin, FNC18-1132, \$22,404

Increasing Farm Income and Diversification By Converting Abandoned Manure Pits Into Aquaculture Production Facilities

William West, Blue Iris Fish Farm, Wisconsin, FNC17-1105, \$20,406

Remodel Operating Cold Water Trout Farm into Combination Cold Water/Cool Water Fish Farm, While Diversifying Production and Maintaining a Reduced Ecological and Energy Footprint

Michael Foster, Wilderness Springs, Wisconsin, FNC16-1034, \$15,000

Growing Mealworms as a Fish Feed for Sustainable Aquaponics

Barry Adler, RainFresh Harvests, Ohio, FNC16-1024, \$3,467

Developing a Self-Funded Aquaculture Program for High Schools

William West, Blue Iris Fish Farm, Wisconsin, FNC16-1064, \$20,315

In-Pond Substrate to Increase Yield and Size of Freshwater Prawns

Don Maloney, Don's Prawns & More, Ohio, FNC15-1003, \$7,477

Rushing Waters Aquaponics Feasibility Study

Jeremiah Robinson, Frosty Fish, Wisconsin, FNC15-992, \$15,000

Increase Sustainability on Fish Farms with the Development of Value Added Products from Fish and Fish Waste

Roy Landskron, Bluegill Heaven, Wisconsin, FNC14-955, \$13,746

The Viability of Small Scale Aquaponics in Urban and Rural Underserved Communities

Gregory Fripp, Whispering Roots, Nebraska, FNC13-911, \$2,915

Economic Evaluation of Aquaponics

Jeff Hafner, Iowa, FNC12-861, \$7,475

## YOUTH EDUCATOR GRANTS

Sustainable Agriculture: Instruction, Application, and Community Outreach Utilizing Recirculating Aquaponics Systems

Kevin Savage, Cincinnati Hills Christian Academy, Ohio, YENC13-067, \$2,000

Rethinking Urban Agriculture: An Aquaponics Approach

Michael Dittrich, Maplewood Richmond Heights School District, Missouri, YENC12-039, \$2,000

Learn More...

For more information on aquaculture, review the National Sustainable Agriculture Information Service publication, *Aquaculture Enterprises: Considerations and Strategies*, at <https://attra.ncat.org/attra-pub/summaries/summary.php?pub=257>.

For more information on aquaponics, review the National Sustainable Agriculture Information Service publication, *Aquaponics—Integration of Hydroponics with Aquaculture*, at <https://attra.ncat.org/attra-pub/summaries/summary.php?pub=56>.

Updated 2019

For information on many more SARE-funded aquaculture and aquaponics projects, search the SARE project database: <https://projects.sare.org>.



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