

Become a Member!

Thank you for helping to promote green jobs & healthy local food!

The Recirculating Farms Coalition is a collaborative group of farmers, educators, non-profit organizations and many others committed to building local sources of healthy, affordable food. Through research, education and advocacy, we work together to support the development of energy efficient farms that use clean recycled water to grow food. We believe that these recirculating farms can create stable green jobs and supply sustainably-grown plants, fruits, vegetables, and humanely-raised seafood in diverse communities nationwide, and someday, worldwide.

To become a member, please complete the form below and mail to: Membership RFC at 5208 Magazine St., #191, New Orleans, LA 70115. Or visit www.recirculatingfarms.org/become-a-member to complete your membership online.

Name

Mailing address

Phone number

E-mail address

Are you a farmer or hope to become one? If so, please tell us about you and your farm!

Would you like to be added to our e-mail list to periodically receive updates and actions you can take to support the Coalition?

Yes ☐ No ☐

Would you like your name to appear on our website when we do a members list update? Yes ☐ No ☐

If so, please enter your name here as you would like it to appear on the website:

Please check enclosed membership contribution:

\$10 ☐ \$25 ☐ \$50 ☐ \$100 ☐ Other

What is a Recirculating Farm?

A recirculating farm uses clean recycled water rather than soil as a basis to grow food. These farms can grow plants (hydroponics), fish (aquaculture) or a combination of both plants and fish (aquaponics). The farms may be indoors, like in a greenhouse or other structure, or outside, depending on the climate. Their main feature is that the water used to grow food is continuously filtered and recycled, then circulated throughout the farm.

Recirculating farms are mostly closed-loop, on-land operations that constantly re-use the water in the system, and they can recycle waste too. These farms can eliminate use of antibiotics, and other drugs, fertilizers and chemicals to grow fish and plants. They can also run largely on renewable energy, like solar, wind and geothermal power, or recycled energy like methane gas and previously used vegetable oil to run the farm.

Recirculating farms grow fish and vegetables, flowers, fruits, herbs and more. They do not need to be connected to natural water sources for drainage, and can therefore grow a wide range of products without the threat of releasing them into the wild. Growing fish in recirculating farms can reduce reliance on imported seafood and supplement wild caught domestic fish to meet demand for healthy seafood, without competing with fishermen who make their living selling popular local fish. These farms are scalable too — they can be as compact as a desktop, for personal use, or large enough for commercial operation. Being self-contained and cleaner allows these farms to be located within the communities that will use the products. This cuts down on use of fuel for transport and gives consumers fresher food.



This greenhouse aquaponics system is in the backyard of a private house. Photo courtesy of Sylvia Bernstein, Boulder, Colorado.



This is an example of a small commercial-scale aquaponics system at the University of the Virgin Islands in St. Croix. Photo courtesy of Dr. James Rakocy at the University of the Virgin Islands in St. Croix.

Recirculating Water

Recirculating farms can be completely contained systems that re-use most of the water in the farms. There are a number of filtration methods to remove waste; the filtered water is then recycled back throughout the farm. Ideally, farms only replace very small percentages of the total water volume, due to some loss during waste removal and/or evaporation.¹ Many farms already recycle up to 99 percent of their water!



This is water from fish tanks being circulated to plant beds at GrowHaus in Denver, Colorado. Photo courtesy of Tawnya Sawyer, from Colorado Aquaponics.

Aquaponics

The water in these farms can be cleaned using various methods to make it re-usable. Some farms practice aquaponics — growing herbs and vegetables in water along with fish. Plants need 13 elements to grow, and the water from the fish tanks naturally provides 10 of these.² The plants thrive in the nutrient-rich farm water, and they actually help clean it for reuse — the plants absorb the nutrients and the “cleaned” water is recycled back to the fish tanks!

Waste Recycling

Researchers and industry experts are developing a variety of resourceful ways to deal with farm by-products, such as creating feed ingredients for other fish or shellfish (which would naturally consume such products in the wild). Some farms re-purpose waste into fertilizer for plants. Still others convert waste into methane gas, which can be used in generators to help power the farm.



(Top) Swiss chard growing in a personal aquaponic system in Boulder, Colorado. Photo courtesy of Sylvia Bernstein. (Left) Fish waste being distributed by a spreader. Photo from Summerfelt, S.T. and B.J. Vinci. “Better Management Practices for Recirculating Systems.” Environmental Best Management Practices for Aquaculture. Ed. C.S. Tucker and J.A. Hargreaves. Blackwell Publishing: Ames, Iowa, 2008. (Right) Methane flame generated from waste collected from a recirculating farm. Photo courtesy of Dr. Yonathan Zohar at UMBI Center Of Marine Biotechnology.

Space Efficiency

Recirculating farms often can produce more in less space than other forms of agriculture or aquaculture. Recirculating farms can grow fish to market-size in just nine months, compared to the 15–18 months it often takes for fish raised in other systems to grow to market size.³ It takes 198 acres of open ponds to produce the same amount of shrimp that a recirculating aquaculture farm can raise on just 6 acres.⁴

Recirculating Farms: An Eco-friendly Choice for Local Food and Green Jobs

New recirculating farms are popping up all around the United States. They are continuously working to increase environmental sustainability. In addition to being energy, water and space efficient, these farms are exploring new ways to feed their fish. Decreasing the amount of wild fish as an ingredient in fish feed, without harming the farmed fish, is one of the biggest hurdles to sustainable aquaculture. Smaller wild fish are a critical source of food for marine wildlife and many coastal people worldwide. Taking these small wild fish to use in feed for farmed fish and other animals disrupts ecological balance and steals food from people and wildlife that need it. Many recirculating farms are now using natural alternative foods for their fish; some are even repurposing waste products to create healthy feed, like what many fish eat in the wild.

Recirculating farms can grow food year-round, nearly anywhere. This means abandoned or seemingly unusable land and buildings can become a recirculating farm, even in an urban area. Locating farms in the communities that use the products provides people with regular easy access to fresh, healthy and local food. Also, community farms create green jobs and cut down on costs of shipping and use of fuel to transport food from where it is grown to the people that eat it. Recirculating farms support healthy people and a healthy environment.

1. Torsten, E.I. Wik, et al. “Integrated dynamic aquaculture and wastewater treatment modeling for recirculating aquaculture systems.” *Aquaculture*. 287. 2009 at 361-370.

2. Rakocy, James. “The UVI Aquaponic System.” *Clean, Green, Sustainable Recirculating Aquaculture Summit*. Washington D.C.: hosted by Food & Water Watch. January 2009.

3. Zohar, Yonathan. “Environmentally compatible, recirculated marine aquaculture: addressing the critical issues.” *Clean, Green, Sustainable Recirculating Aquaculture Summit*. Washington D.C.: hosted by Food & Water Watch. January 2009.

4. Moss, Shawn. “An integrated approach to sustainable shrimp aquaculture in the U.S.” *Clean, Green, Sustainable Recirculating Aquaculture Summit*. Washington D.C.: hosted by Food & Water Watch. January 2009. Samocha, Tzachi. “Overview of some sustainable, super-intensive microbial biofloc-rich shrimp production systems used by Gulf Coast Research Lab, Waddell Mariculture Center and AgriLife Research Mariculture Lab.” *Clean, Green, Sustainable Recirculating Aquaculture Summit*. Washington D.C.: hosted by Food & Water Watch. January 2009.

(Opposite, clockwise from top) Tilapia. Photo courtesy of iStockphoto; Hydroponic towers. Photo courtesy of Chef John Mooney of Bell, Book and Candle, New York, NY; Hydroponic peppers. Photo by Marianne Cufone, Recirculating Farms Coalition; Aquaponic farm at Grow Haus, Denver Colorado. Photo courtesy of Tawnya Sawyer of Colorado Aquaponics; Commercial-sized aquaponic farm at University of the Virgin Islands, St Croix. Photo courtesy of Dr. James Rakocy, University of the Virgin Islands aquaponics program.



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