

Outdoor Fishponds Add Nutrients To Hydroponic System

Barry Thoele attributes the sweetness of his cherry tomatoes and the quality of all his produce to controlled monitoring of nutrients, which includes water from the fishponds in his unique hydroponic system.

Thoele started with fish, first as a fishing guide who needed minnows. He recognized the demand for and profitability of raising bait fish, so he built a paddle wheel and raceway to create an area of moving water necessary for retail chubs to spawn and where hatched fry live for up to eight weeks.

He also understood the importance of utilizing fish nutrients so excess nitrates wouldn't become an environmental problem. He solved that by using nutrients to grow produce in 13,000 sq. ft. of high tunnels and feeding aquatic plants around some of the ponds he uses for seeds and plants in his wetland restoration business.

Water from the ponds is pumped into tanks in the high tunnels. Nutrient levels are tested before he adds additional powdered nutrients specific to each crop grown in the different

high tunnels.

"We can limit disease issues because it's indoors, and there's no soil. We manage nutrients for better flavor and identify any deficiencies easily and correct them within days," Thoele says, regarding the benefits of hydroponic growing. He adds that water is recirculated, and plants only need about 10 percent of the water and 2 percent of the nutrients compared to plants grown in soil.

Labor is significantly reduced because no weeding or bending is required, so he and his daughter, Katy, can run the operation independently, from growing to packaging.

"Cucumbers grow overhead and are highly productive. With 30 plants, we harvest 800 lbs./week," Thoele says. Romaine lettuce is picked as a living plant by leaving the roots wrapped around the base to increase shelf life.

The 1,500 strawberry plants grow sweet, disease-free fruit without chemicals, using 200 gal. of recirculating water daily.

While growing food is less profitable than

growing plants or cutting flowers, Thoele and his daughter take pride in growing quality food that they sell to consumers and wholesale to hospitals, schools, food hubs, resorts and a CSA.

"I grow food because I want to, and the area needs decent food," Thoele says, adding he is a conservationist at heart.

To help others get started in hydroponics, he teaches courses and is involved with new research on raising golden shiners, which have declining populations in Minnesota lakes. He's willing to share information with FARM SHOW readers.

As for the cherries implied in the business name, Thoele received enough requests to plant 10 sweet cherry trees. In about three years, he hopes to harvest about 500 lbs. of Barry's cherries annually.

Contact: FARM SHOW Followup, Barry's Cherries Hydroponic Produce, 48301 Co. 21, Staples, Minn. 56479 (ph 218-894-3638; baryscherries@gmail.com).



Labor is significantly reduced because no weeding or bending is required, so he and his daughter, Katy, can run the operation independently, from growing to packaging.

She's Bringing Back Broomcorn Brooms

A Kentucky broom-maker aims to renew interest in traditional handicrafts involving broomcorn, a once-thriving crop across America.

In 2012, Cynthia Main left her job in Chicago. "I was looking for ways to get back to the South and find more traditional ways of work," she says. The solution was a yearlong internship at a traditional rural skills school. There, she focused on woodcraft and broom-making. "I wanted to craft simple products and have them embraced by the growing number of people seeking sustainable alternatives for their homes."

Main noticed a gap in the market for homemade brooms and began making her own. "I worked with a program sponsored by the city of Berea, Ky., the Artisan Accelerator program," she says. "It's designed to find craftspeople to replace the hole left by the older people retiring. The program gave me a small stipend so I could focus on the business full-time. In exchange, I maintained an open studio."

Her storefront, Sunhouse Craft, officially opened in 2022. It focuses on sustainability while supporting local farmers, artists and other creatives. "I'm a big believer in craft," she says. "I get joy from connecting folks to the land, and I'm honored to have a shop on main street to carry forward the craft legacy of my region."

Beyond the appeal of supporting human craftsmanship, Main believes homemade brooms have advantages over store-bought. "Homemade brooms can include the 'split ends' or fines of the top of the crop (called the hurl)," she says. "It makes them better at grabbing dirt than factory brooms. They're also more ergonomic because of it; the broom hits the ground softer."

Her material of choice is broomcorn, a type of sorghum with a coarse, fibrous head. It's been a favorite for broom-making since the late 18th century and was once a significant part of U.S. agriculture. However, cultivation plummeted after the 1960s due to production moving to Mexico, the introduction of plastic brooms, and the widespread adoption of carpet in American homes.

It takes roughly 50 plants to make one full-sized broom. Consequently, Main partnered with a local organic farmer to grow three acres of broomcorn. "If you have a long enough season to grow corn, you should be able to grow your own supply," she says. "We host a harvest party for local folks to learn how we grow it."



"Homemade brooms can include the 'split ends' or fines of the top of the crop (called the hurl)," Main says. "It makes them better at grabbing dirt than factory brooms."

Despite common perception, she's convinced broom-making is easier than people realize. "You need very little to start: a strong stick for a handle, a good knife, some strong twine, a stick to wrap it around to go under your feet, and some broomcorn. That's everything. Even as a professional, I only use a few extra bells and whistles." Still, the time commitment can vary by complexity, with floor brooms taking anywhere from half an hour to several days. "Folks seem excited about our local broom brooms," says Main. "We mill all the handles from locally fallen wood; they work great and make lovely home décor."

When Main started her business, 10 people under 40 in the United States publicly made brooms. Now, the craft is beginning to come back. "I'm excited to see us thriving as part of a positive, handmade future." She's eager to spread her love of sustainable handicrafts to more people. "My adult life has been farming and fabrication, and I've worked over a decade to build this business. I've been chasing some version of this dream my whole life, even though I didn't put the pieces together until I was almost 40. I want to share with others that sometimes things take time, but it's completely possible to make a business directly from the land and work on your own terms."

Contact: FARM SHOW Followup, Cynthia Main, Sunhouse Craft, 414 Chestnut St., Berea, Ky. 40403 (ph 919-452-4071; hello@sunhousecraft.com; www.sunhousecraft.com).



Owners can either send their fiber to a mill for processing or sell it "as is" for \$70 per ounce.

American Cashmere Goats Catching On

Harley Farm, located in Middletown, Md., sells American Cashmere goats at prices starting at \$300. A recognized line of goats since the 1980s, American Cashmeres are known for being easy-going and sturdy and for producing an undercoat of luxurious cashmere fiber each year.

The Murray family fell into farm life inadvertently. "After 9/11, our family moved 60 miles west of our suburban D.C. home," says founder Elaine Murray. We bought a small farm in Middletown, Md., just west of Frederick."

The next step was determining how to put their property to use. "When I did research for our 40 acres of organic pasture and woods, I settled on Crabbet Arabian horses and American Cashmere Goats," she says. "We liked that the goats would eat the weeds in our pastures and produce cashmere fiber."

As a relatively new type, the goats proved hard to find. "We were lucky to meet the Bells, a local family who had some white cashmere stock," she says. "They'd started to breed for white and badger-colored goats with good fiber coverage. Both produced cream-colored cashmere that's easy to dye."

The family initially drove to Ohio to pick up the first of their herd. "Now, 20 years later, we have 45 goats and sell about 15 per year," says Murray. "My favorite thing is to sell 'mamma-baby combos' that keep does and their kids together. Their family bonds are strong, even over multiple generations, and it makes them much happier."

Murray finds the goats' best features to be their intelligence and friendly temperament, as they get along with horses and don't butt people. "We also like their utility as weed wackers and fiber producers," she says. "Our fields and woods were infested with wild

rose, honeysuckle, poison ivy and brambles, all of which are now gone." She also notes that the goats are exceptionally sturdy and good parents. "That's important because some fiber animals are highly inbred and not particularly hardy," she says.

Harley Farm uses woven wire fencing that's safe for horses and goats, ensuring it doesn't ensnare their hooves and horns. "We have 2 1/2 miles of fencing, but it's starting to get tired. My goats are excellent at escaping when they see something tasty on the other side," she says. "But they don't go far and generally put themselves back in or stand at the barn door waiting for us to open it. That's why good fencing and not having pasture near busy roads works best."

Murray has a suggestion for those unsure what to do with the fiber. "The organization Clean Cashmere will purchase raw combed fiber, so goat owners don't need to produce roving or yarn to sell their cashmere. So, the owners can either send their fiber to a mill for processing or sell it "as is" for \$70 per ounce."

She recommends that interested goat owners start small so the management process doesn't get overwhelming. "I'd start with eight goats at most, so there aren't as many hooves to trim," she says. "And find a local vet before you need one. Please make sure they're knowledgeable about goats. A good animal husbandry book will help you out, as will learning what plants are toxic."

Those interested in learning more or purchasing cashmere goats can contact Harley Farm.

Contact: FARM SHOW Followup, Harley Farm, Middleton, Md. (ph 240-367-4932; Ezfarmwriter@gmail.com; www.harleyfarm.com).