

Farming in profitable, productive ways that also protect water quality requires management decisions and conservation practices that work together in the field, at the edge of field, and beyond the field.

Women are critical to the future of agriculture. Currently, 43 percent of U.S. farmland—about 388 million acres—is farmed or co-farmed by women. In this edition of *Farmer Stories*, we feature five women farmers from across Ohio and the Western Lake Erie Basin who share their conservation experiences and decisions in the field with soil health and water management.

Soil health practices refer to management decisions that include planting cover crops, changing crop rotations, and using minimal tillage or no-tillage to create a healthy soil ecosystem that supports a sustainable and thriving crop.

We are grateful to the farmers who dedicated their time to share their stories for this publication. The Nature Conservancy appreciates all farmers making choices to be good stewards of our soil, air, and water for current and future generations.



The Joyce Foundation

For more than 45 years, the Joyce Foundation has supported the protection and restoration of the Great Lakes. The Joyce Foundation plays a critical role in helping to bring diverse partners together to promote sustainable agriculture and a healthy Lake Erie.

The Nature Conservancy

The mission of The Nature Conservancy (TNC) is to conserve the lands and waters on which all life depends. Founded in 1951, TNC is a leading private, non-profit conservation organization working around the world to protect ecologically important lands for nature and people. We work in all 50 states and more than 76 countries and territories.

TNC's Ohio Chapter began working with the agriculture community in the Western Lake Erie Basin more than 20 years ago. We take a collaborative, on-the-ground approach to conservation that includes best management practices and planning for a productive and sustainable whole farm system in the field, at the edge of the field, and beyond the field that work together to provide food and clean water. We have built strong and lasting relationships with agribusiness and farming industry leaders, increasing the reach and scope of nutrient reduction and climate-smart solutions across the state of Ohio.

Allison Grimm



Allison Grimm, aka the Ransom Chicken Lady, takes pride in the relationships she makes with her customers, and she likes to teach them about food and nutrition. "There's still people that don't understand where their food comes from," she says. "They just go to the grocery store ... and don't think about the process and what it takes to get it there."

Allison started out with 25 chickens seven years ago, and is now up to 300 laying hens, 600-800 meat chickens and dozens of ducks and turkeys. Last year, she bought her own

20-acre farm in Hillsdale County, Michigan, and she is now beginning to grow row crops in a standard rotation—corn, wheat, and beans—as well as cover crops. She grows only non-GMO crops.

She didn't grow up on a farm, but she grew up in the country and her first job was on a small family farm. She worked the fields, drove the tractor and baled straw and hay. Later she worked on family dairy farms, which helped pay her way through college.



Allison also works full-time for the Hillsdale County Soil and Water Conservation District and advises other farmers about nutrient management practices. Through Michigan's STRAND grant program, she hired a 4R-certified retailer, Nutrien Ag Solutions, to test her soil and make recommendations for variable rate application of fertilizer.

She prefers to use synthetic fertilizer sparingly. "It's extremely expensive, and it keeps getting more expensive. Why do I want to spend all that money to have it wash down the drain, not benefit me or be profitable but cause issues in the water down the river?"

She composts the manure from the poultry coops along with the bedding and dead chickens and spreads the excess on her fields, but it isn't enough to supply all of her nutrient needs.

Next year, Allison plans to be 100 percent no-till, after she lays down tile. With her soil type, "no-till is definitely the answer," she says. Otherwise, "it gets very soupy when it rains, and you can sink into your ankles in the mud." She plants cover crops in part to graze her animals, using a mix from Byron Seeds that includes clover, *Phacelia*, peas, sunflowers, buckwheat, cabbages and kales.

On her new farm, she planted soy in the spring, followed by wheat in the fall. She'll next follow the wheat with a cover crop mix that will overwinter. Her farm was heavily infested with weeds when she bought it, and in just one year she's seen a big benefit of weed suppression from the cover crops.

Even though Allison's operation is "super small", she enjoys having the power to direct market her birds, selling primarily to the local farmers market. "I set the price. I get them directly to the consumer. There's nobody in the middle telling me how much I'm going to sell my product for."

Ann Brandt



"Women bring passion to farming," says Ann Brandt, who brings her own in spades to her family's 1,100-acre operation in Fairfield County, Ohio. Ann farms with her husband Jay, father-in-law David, and sons Chris and Isaac. They grow corn, soybeans and small grains like buckwheat, sunflowers and red fife for their seed business. Walnut Creek.

"We've never been locked into corn and soybean," says Ann. "We're always looking for diversification, and we would like to get more into quality food production for human consumption."



Ann married into farming and started learning the business when she quit her job to raise her boys and took on managing the farm's books. Today, she's business manager for Walnut Creek, which sells 50 varieties of cover crop seeds, non-GMO and organic corn and soybeans, and cover crop rollers.

The family started Walnut Creek to pay for the kids' college. Today it provides them with a vehicle for educating other farmers about conservation-oriented practices.

The Brandts' farm has been no-till since 1971. "David did 'just dandy' with no-till for several years until he started running into soil compaction, erosion and runoff," says Ann. "That's when he turned to cover crops, and he's never looked back."

The Brandts keep a living cover on all their acreage, both rented and owned, year-round. They grow rye rape, rye radish, and grasses on land that goes into soybeans, and they grow cereal rye, crimson clover, hairy vetch, and winter peas on land going to corn.

They prefer to plant "naked seeds" with no fungicide or insecticide treatments and avoid GMOs because they've found that GMO crops do poorly in their "high residue" and no-till system.

Their nutrient management centers on the philosophy "the fewer inputs, the better," says Ann, and that requires healthy soils. The Brandts plant 10 to 25 different varieties of corn to determine which varieties will thrive in their system. Fertilizer is applied in drops or by foliar sprays. For corn, they use starter fertilizer in-furrow. They typically don't fertilize the soybeans.

"Other than nitrogen and occasionally some micronutrients, there's just not a lot that we're putting on," says Ann.

The Brandts have seen huge cost savings from using few inputs and moving away from GMO corn, without sacrificing yields. David estimates he's cut fertilizer costs by 70 percent and herbicide costs by 25 percent, though he never used much herbicide to begin with. They measure their profit per acre, rather than the standard bushel per acre, and with their fixed costs at about \$110 per acre, they need a yield of just 56 corn bushels per acre to break even.

"Our profit is fine," says Ann. "We're going to be very resilient, and we are not as dependent on fertilizer prices and on input costs."

"In drought conditions...that's where we always stand out," she adds. Cold, wet springs are more challenging, however, because their fields can take longer to dry. But they have a lot of beneficial insects, so they don't get slug or cutworm problems.

The biggest challenge that Ann sees is dependency on the weather. "You have to be willing to move [with it]. It's much less certain than conventional farming because you're letting nature do the work, and you've got to be ready to help it along."

Ann advises other women farmers to "bring your passion but learn enough about what you want to get into with farming" to realize your dreams. And, she adds, "If everybody could raise their own bar, we would make a substantial impact on food quality, and on the quality of our land and water."



Lesley and Logan Riker



Lesley Riker and her 30-year-old daughter, Logan, farm together on 750 acres in Bowling Green, Ohio, about 25 miles outside of Toledo. Recently, their farm was featured in the *Toledo Blade* for its eye-catching use of cover crops. As Lesley tells it, a reporter stopped by last fall and asked her, "What is in that cornfield?!"

"It was lush," chuckles Logan, noting they'd planted a mix of radishes, buckwheat, sunflowers, and oats.

The Rikers have long dabbled with growing cover crops, along with the wheat, soybeans, and corn they grow for the seed business that has been in Lesley's husband's family since 1947. In recent years, they've expanded their cover crop operation with financial support from the state's new comprehensive water quality management program, H2Ohio.

"We benefit from the ground. We really can't expect good crops if we don't take care of [the soil]," says Lesley, who grew up in a



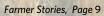
farming family and assumed greater farm responsibility for her husband's farm, along with farm manager Dan Henry, when her husband became ill.

Besides cover crops, the Rikers practice conservation tillage, tilling only when essential. "We really don't want to go across the ground, making it compacted any more than we have to," says Lesley. Logan notes that the cover crop benefits are "huge." The radishes are particularly amazing, with the roots forming enormous holes as they decay, providing nutrients and improving water circulation. They plant radishes in areas where standing water has been a problem because they really help with drainage. The cover crops also help reduce soil erosion in the winter, and provide soybeans planted in the spring "a nice little start," including shelter from cold or frost.

For other women who want to become farm leaders, Logan advises: "put yourself in situations outside of your comfort zone," join some agricultural boards, and create a network of people you can go to. "No farmer is protective over what has been successful for them."

While Lesley grew up in a family that didn't give girls much to do other than hoe beans and detassel corn, Logan was raised with the freedom to choose what she wanted in life. And when she moved east to go to college, she didn't know whether she'd return home. But, she said, "Leaving home made me realize that what I've got back home is a pretty good thing."

"Farming is definitely all about family, generational pride and legacy."



Traci Bultemeier



Traci Bultemeier is proud of the 250-acre farm she built from scratch with her husband, Jamie, in northeast Indiana. They bought the land just nine years ago and have already taken significant steps to improve soil compaction, erosion and runoff on the highly erodible land.

"The legacy that we're going to leave for our kids is that we have made a difference on this piece of ground. We're going to leave this ground better than when we got it," she says.



Both Traci and her husband are agronomists who hold full-time jobs, in addition to farming corn, soybeans, wheat, alfalfa pasture, and grass hay. They also raise 10,000 ready-to-lay hens, and 50 to 80 sheep a year, selling their eggs, hens and lamb to local and wholesale markets and to a restaurant, the Cellar Wine and Bistro in Lafayette, Indiana.

They are equal business partners. "We're both very stubborn and hard-headed," laughs Traci. She takes the lead on the poultry and livestock, while Jamie leads on the row crops. A territory manager and certified crop advisor in her day job at Pioneer, Traci is happy to focus on the animal operations on her farm. Still, she says, "We run everything past each other—all the major purchases, all the management decisions. We are very much a team."

As a team, they've chosen to farm differently than the way they each grew up. "Both of our families were moldboard and chisel plow," says Traci. "Ground pounding was all we knew." They chose no-till, instead, and it's been "fantastic."

Traci says they've seen amazing changes in their soils and crops. "We certainly see better root growth and development." The biggest benefit, however, is the reduction in soil compaction.

Soil erosion and runoff are major concerns on the farm. An adjacent county ditch with tremendous water flow eroded their farmland so badly when they first bought the land that they couldn't drive equipment near the ditch. They lost crops to flooding. Working with the Natural Resources Conservation Service, The Nature Conservancy, Army Corps of Engineers and others, they installed a two-stage ditch, which added vegetated benches to the drainage ditch to serve as floodplains in the channel. It helped solve their challenges, while improving water quality.

The Bultemeiers also follow the 4Rs of nutrient management, using the right nutrient at the right place, time, and rate. They conduct grid soil sampling and apply nutrients based on the soil results. They apply nitrogen to cornfields at planting and as a side dress.

"We know which parts of the field need what,

applications... and that in turn leads to improved yields," says Traci.

Manure management is included in their nutrient management plan. They sample their manure to get its precise nutrient content before applying it to their summer wheat fields, which are high in residue and help hold the manure on the field.

They are also experimenting with cover crops and developed a forest management plan for 30 acres of their land.

Traci credits her mom for making her into the leader she is today. "My mom was a very strong role model because of the work that she did on our farm," she says. "Mom was cool before it was cool." pasturing livestock, raising free-range chickens, canning everything out of the garden. Her mother tasked her with raising 400 hens, and it became part of her Future Famers of America project in high school. There's a difference between being a laborer and a decision-maker on a family farm, she adds—and Traci was nurtured to be the latter.



