

Love of the land joins passion for pigs on this Minnesota farm.

ayne and Laura Dahl eagerly await the return of an old friend they call Tony each spring. Tony arrives when the weather warms up and the stream that meanders through the Dahl's farmstead flows full, teeming with all kinds of aquatic life.

Tony is a great blue heron, given that name by Laura, who not only feeds and shelters a number of birds on this Dawson, MN, farmstead, but also gets to know many of them on a first-name basis.

"It's because of Tony and other wildlife that we have grass buffers on both sides of this ditch," she explains. "The enjoyment we gain by watching and interacting with wildlife and nature, and now sharing that with our grandchildren, is a big part of the payback for the investment we've made in conservation measures."

Everything around this farm, from the buffers to the birdhouses, from the neatly kept farmstead to the yard full of flowers, is done with a good measure of the future in mind. "Stewardship is a commitment that comes along with farming," Wayne observes. "The public at large holds us accountable to be good stewards. And previous generations take for granted that you will care for things and leave the land in as good or better shape than when you received it.

"We see stewardship as a privilege, with that comes responsibility," he continues. "We don't want to be just another name on that abstract. We want to leave a legacy."

Building up

The Dahls bought the 240-acre farm in Lac Qui Parle County in 1976. Wayne grew up with traditional pork production, but their current operation specializes in the nursery through finishing phases.

Just north of the farm's well-established grove of windbreak trees is a 4,400-head nursery and four finishing barns that house 1,100 head each. The Dahls built three, 1,100-head finishing barns with curtain ventilation in 2003, then built the nursery and a fourth fin-

ishing barn in 2007. Pigs are grown on contract for Mill Farm, which is owned principally by pork producers Greg and Paula Boerboom from Marshall, MN.

It's truly a family operation. Wayne and his brother, David, team up to grow 1,800 acres of crops in a cornsoybean rotation. The Dahl's 24-year-old son, Jordan, is an integral farming partner who will eventually take over the farm business. Some of the nursery pigs are finished at a site owned by Wayne's nephew, Brent Dahl. The Dahls also employ Tanner Winge to help manage the swine enterprise.

The Dahls receive six groups of 21-day-old nursery pigs a year from Mill Farm. Laura, who received training as a medical lab technician and as a physical therapy aide, specializes in getting the pigs off to a good start. She sorts and groups them by size, observes the pigs to make sure they find the nipple waterers, and feeds them on a mat three times a day for the first week. Weaker piglets are moved to a hospital pen where they receive additional attention. "I make sure that I look at every pig, from snout to tail, every day," she says.

At 40 to 60 lb., pigs move to finishing barns, where they stay until they reach approximately 280 lb.



Tree and windbreak plantings, areas of native grass and generous grass buffer strips along drainage ditches illustrate the emphasis that the Dahl family places on environmental stewardship.

Conservation first

The Dahls have all their acreage enrolled into the Conservation Stewardship Program (CSP) through the U.S. Department of Agriculture, administered by the Natural Resources Conservation Service. As CSP participants, they agree to follow specific practices to protect soil, air and water quality, and work to enhance wildlife habitat.

Under the CSP, the family incorporated new tree and windbreak plantings on the north and west sides. A couple of acres of native grass are established around the swine buildings.

The Dahls also have 16 acres enrolled in the Conservation Reserve Program (CRP), grass buffer strips along drainage ditches and setbacks established around drainage intakes.

Efforts to boost wildlife habitat start just outside the front door of their farmhouse. Laura has been building a birder's paradise since the first day she and Wayne took over the farm. "Our grandchildren can already recognize some birds by appearance and sound," she says.

Of course, the grandchildren also like to visit Laura's two alpacas, goats, chickens, geese, ducks and rabbits that make up her private petting zoo.

"I fell in love with this farm the

minute I drove up the driveway 36 years ago, when we were first married," Laura says. "My dream has always been to create a wildlife sanctuary. I love all my birds, my birdhouses, squirrel feeders, butterfly house, birdbaths and ponds, feeding the pheasants and planting flower gardens to attract butterflies."

Manure management

As the Dahls began the permit process for the nursery and fourth finishing barn, they hired Anez Consulting Inc., Willmar, MN, to assist with nutrient management and crop scouting, as well as helping to implement conservation practices on the farm.

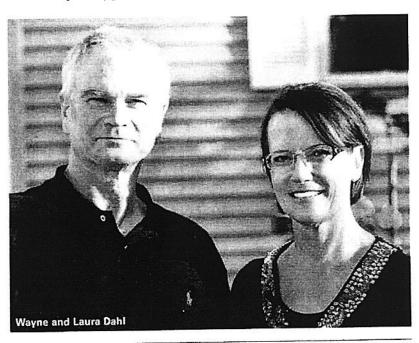
Fields are fairly flat, with medium to heavy soils, and tiled to allow timely spring planting. Manure is stored in 8-ft.-deep concrete pits and applied when soil temperatures fall below 50°F, helping to minimize nitrogen loss into the atmosphere. Manure is tested during pit agitation and manure application rates calibrated to meet the fertilizer needs for the next year's crop. Manure is applied using a 10,000-gal. tanker equipped with a flow meter and GPS to precisely place the manure nutrients.

As part of the Dahls' CSP plan, Anez Consulting takes 12-in.-deep soil samples when plants are about 6 in. tall to determine if supplemental nitrogen applications are necessary. Later in the growing season, they test nitrate levels in the stalks to fine-tune future nitrogen management strategies.

Manure is injected, and covering disks overlay the injection slot with soil. The Dahls recently have used a manure additive to help stabilize the nitrogen in the fall-applied manure. They also use the feed additive, phytase, to reduce the amount of phosphorus in the manure. By reducing phosphorus, application rates can be boosted by up to 20% without building up the amount of phosphorus in the soil.

The Dahls no-till soybeans into corn stubble on one farm with lighter soils. Other fields are minimum-tilled to maintain crop residue on the soil surface, which helps prevent soil erosion while helping retain soil moisture. In spring, they prepare and warm the soil bed with a single pass using shallow tillage.

Dahls also practice integrated pest



management by having Anez Consulting scout fields for weed and insect problems. Economic thresholds determine whether a treatment is needed.

Clean air

"We've come a long way in pork production in my lifetime," Wayne says. "Technology continues to improve, and we are always looking for new technologies that might help us do a better job."

One technology that the Dahls use is called electrostatic particulate ionization (EPI). Designed by Baumgartner Environics, Olivia, MN, the EPI Air System sprays over a thousand trillion negatively charged ions into the air space every second. The company says these negative ions and particles in the air are attracted to one another. When concentrations of negative ions are in the air, the ions collide with floating particles in large numbers, polarizing them and giving them a positive and negative side. This causes the particles to act like magnets and stick to each other and whatever surface they touch first.

The Dahls say the system does seem to lower dust levels, which is appreciated by the pigs and the workers in the buildings. "It also means fewer odor-carrying dust particles are leaving the barn in the ventilation air," Wayne points out.



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A hydrogen peroxide product, Oxy Blast, treats water in the nursery. The Dahls say this can help reduce manure pit odors because the oxygenated water that drips from the nipple waterers when pigs drink goes into the pit and promotes an aerobic environment.

They say the product also raises the pigs' blood-oxygen levels, resulting in fewer incidents of scours, respiratory infection and other illness that can slow nursery pig growth. The hydrogen peroxide cleans and prevents mineral buildup in water lines and nipple drinkers.

Another water-quality tool in the

nursery is "structured water." An inline device "adds energy to the water," Wayne says. "There seems to be a synergy between the hydrogen peroxide and the structured water that really boosts pig health and hydration."

For the future

It's not all high-tech that drives the Dahls' environmental stewardship. Much of the credit for that goes to simple things, such as keeping the farmstead neat and clean, keeping crushed granite around the barns and generally doing the right things every day.

"On our farm, the key questions we ask are whether our actions are the right thing to do? Is it the right thing for the long-term interest of our farm? What kind of legacy do we want to leave?" Wayne explains.

The legacy that is growing here is one of a modern, efficient farm that is both economically and environmentally sustainable. "For us, it is a blessing and a privilege to have a farm like this," Wayne adds. "We take our stewardship responsibilities seriously."

Laura adds that legacy takes on new meaning now that four grandchildren have come along. "We are proud to have raised five great kids here, and we hope to have many future generations that will enjoy memories on this farm," she says. "It is because of them that land stewardship means so much to us. It will be their generation and the ones that follow who will enjoy the rewards of good stewardship and the beauty and entertainment that only nature can provide."



Intricate gardens and whimsical characters add color to the Dahl farmstead.