



Depending on the Wilds to Pollinate

Organic Orchard Grower Makes Conservation Impact

Above: Deirdre Birmingham next to crates she uses for gathering apples. Flowering orchard trees are in the background.

After a hard day's work out in the orchard, there's nothing like enjoying a glass of cider from the apple trees you hand grafted yourself. Deirdre Birmingham can do just this; she operates an organic hard cider orchard full time and is also an avid educator. She's always been concerned and interested in the environment since she was a teenager. "I really liked biology and took two years of it in high school, so farming organically fits with that," explained Deirdre. She spent much of her career in international agriculture and developing countries to help address poverty. Deirdre has academic training and experience in third world agriculture, but never had a farm of her own. She and her husband, John Biondi, decided to live their dream and bought 166 acres of farmland in 2002. Nothing was left on the land except crumbling foundations of the 1880's original buildings and the skeleton of an old farm house.

Over the years, the land was used for cropping, livestock grazing, and dairying. "There's something for everyone here; it's a diverse landscape," said Deirdre. When they bought the property, 58 acres of cropland was rented to neighboring farmers, there were pastured areas, 60 acres of timberland, and natural springs that feed into a trout stream. The land had its challenges, including invasive woodland species, invasive multi-flora rose, over-cropped farmland, highly erodible land, a need for pollinator conservation, and a need for buffers from neighboring farm chemical drift.

Deirdre and John loved the Mineral Point, Wis. landscape and wanted to run a farm based business. They didn't know what they wanted to do at first, but purchased the land they loved.

"Before we decided what we wanted to grow, we knew whatever we grew, we wanted to grow it organically" said Deirdre. In 2003, they decided on growing true cider apples organically for the purpose of making cider. "We believe organic farming not only benefits the land, water, and wildlife, it also enhances the exquisite taste of our cider," said Deirdre.

Deirdre and John liked cider and decided they needed to have just the right apple varieties. English and French apples were chosen, specifically developed in those countries for cider production. Eight tannic varieties currently grow on the property: Tremlett's Bitter, Ellis Bitter, Chisel Jersey, Dabinett, Kingston Black, Somerset Redstreak, Major and Mettais. These varieties have high tannin levels, which Deirdre explains give mouth feel and complexity to their cider. "We found out the bitter sweets and bitter sharp varieties were not sold commercially in the United States so we needed to learn to make our own trees and started by learning how to graft," said Deirdre. Deirdre and her husband took a grafting class and used scion wood from the graft teacher's orchard, to hand graft their own trees. They started 5 acres of orchard on an unused hillside. They now have 10 acres of trees and a seasonal high tunnel full of healthy seedlings. They press their own apples on-site and take the juice to a winery in Illinois, who makes the cider, then, it comes out under their label, *The Cider Farm*. "We are now ramping up apple planting; in 2017, we will plant 3,000 to 4,000 trees, then in 2018, we will plant 5,000 more trees," said Deirdre.

Deirdre enrolled in the NRCS Conservation Stewardship Program for orchard practices. They chip the prunings instead

Helping people help the land



Left: A bee pollinates Deirdre's apple trees. Right: Deirdre discusses tree seedlings inside her hoop house built with NRCS financial and technical assistance.

of burning them, then spread as mulch in the orchard. "We're trying to build up soil health, adding wood chips to add organic matter; we're also interseeding white dutch clover; tolerant and pollinator friendly, we use it as a living mulch, a cover crop that stays covering soil; any time we have bare soil I like to seed it in the orchard," said Deirdre. She also installed windbreaks including bushes of nine bark. "The windbreaks help with the wind, as well as act as a buffer. It's very windy here," explained Deirdre.

"Without good soil and good pollinators we don't have a crop; we're dependent on them as a natural resource. Healthy soils feed healthy plants and animals, which feed healthy people; it all makes sense." ~ Deirdre Birmingham

Birmingham has also used the Environmental Quality Incentives Program (EQIP) for invasive species control, forestry practices, cover crops in support of organic transition, the addition of pollinator friendly field borders around the orchard, and installation of a seasonal high tunnel for tree seedlings. "The high tunnel is a phenomenal program; for us, it's extending the season and also ramping it up, early growth in April versus the colder field conditions," said Deirdre. They also converted around 30 acres of rented cropland to prairie using NRCS assistance.

Deirdre wanted to choose plantings beneficial to wild bees and other pollinators, which keep their orchard thriving. "NRCS and their partner, the Xerces Society, came out to assess the orchard and recommended white spruce and nine bark, because pollinators like it and it blooms late, adding more diverse timing of blooming plants in the orchard," said Deirdre. The University of Wisconsin—Madison researched pollinators at the orchard and found 14 different wild

pollinator species at work on just one visit alone! "We rely on the wilds out here and work to make life good for them so something's blooming all the time," said Deirdre. They also practice alternate row mowing so grass and herbal species are higher and flowing for pollinators and beneficial insects. Some of the minor pests are taken care of by beneficial insects. "We're trying to work with biology, trying to get the biology working for us as much as we can," explains Deirdre.

Deirdre is also an educator, working with an NRCS partner, the Michael Fields Agricultural Institute. She has an opportunity to talk with producers often about NRCS as an advocate. "I recently received a mailing about conservation planning from my District Conservationist (DC). That's what I've been sharing. The first step is to meet with NRCS and ask about having a conservation plan done on your farm. Then, you go from there and can identify the natural resource concerns, what programs and practices might address those concerns," explains Deirdre. "Someone recently contacted me about help with organic garlic production. I asked him if he knew about NRCS and the Transitioning to Organic Program; the next week, the County DC was out there and the man is getting signed up." "It's farmers, like Deirdre, that are priceless advocates, working to get conservation on the ground on her own farm, and also educating others to help the environment in the long run," said Andy Walsh, Iowa County NRCS District Conservationist.

"I love working outside, and am constantly using biology and learning more; when you are managing in an integrated way, you are working with the biology of the tree, insects, pests, diseases, everything from the orchard floor up," said Deirdre. Deirdre is doing it right. She understands the importance of good conservation practices to build soil health and keep her trees healthy; her actions take care of the land and will for generations. "Without good soil and good pollinators we don't have a crop; we're dependent on them as a natural resource. Healthy soils feed healthy plants and animals, which feed healthy people; it all makes sense," explained Deirdre.

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