

Cooperative Offers Rural Rebirth

Mill Provides Resources for Sustainable Businesses

by SHAWNDR A MILLER

The din of machinery greets a visitor to the historic Tweedy Lumber Mill in Carthage, Indiana, some 30 miles east of Indianapolis. The roar originates from a different task than the planing of lumber: The newly christened Carthage Mill houses a microcrusher capable of swiftly processing large volumes of grain, beans and seeds.

Located a few blocks off the town's deserted Main Street, Carthage Mill encompasses two yellow barnlike buildings that at one time held the lumber company. The exterior's peeling paint gives little indication of the transformation taking place within.

Here in rural Rush County, where most of the land is devoted to commercial agriculture and confinement hog operations, Carthage Mill is forging a new path to community development. Farmer Anna Welch founded this cooperative as a "launching pad" for local agricultural businesses, intending to model the infrastructure that most of rural America lacks.

The mill boasts 5,000 square feet of space, now repurposed as a site for milling, packaging, brewing and food preparation. The entire facility is certified organic, including a newly remodeled commercial kitchen.

Anna started the endeavor after realizing that such a collective would benefit many area farmers. With her husband Keith Welch and business partner Judy Avery, she grows organic grains, beans and seeds. Together the trio co-own the cooperative venture called Fields of Agape. After two out of three years resulted in crop failures, Fields of Agape was struggling to survive. Something had to change.

The need to diversify had already prompted a move into value-added markets. Keith and Anna had begun grinding popcorn – prized for its



PHOTOS COURTESY OF ANNA WELCH

Anna Welch, founder of Carthage Mill Cooperative in Rush County, Indiana, grinds oats.

versatility – into grits and cornmeal on an 8-inch grinding stone housed at the mill.

Anna's family purchased the defunct complex some years back, intending it as an art gallery and farm market. For a few years, a tourism train brought 15,000 visitors a year, and it looked like sales of flowers, produce, art, collectibles and heirloom seeds might keep the place afloat. But then the economy tanked, the train stopped running, and the tour-

ists no longer came. The buildings mostly stood empty, except for Fields of Agape's milling equipment. That small stone mill and a handcrafted sifting system were their main tools for making cornmeal. Anna spent long hours alone in the unheated facility, processing popcorn.

The bustle around her today tells a new story.

"This whole thing grew out of our failures," she says, pulling up a chair in front of a new corn pellet stove in



Flax is planted in March and blooms begin to appear in late May. When the blooms drop, pods form with eight seeds in each pod.

the mill's common room. The infrastructure that the Welch found missing when they ventured into staple crops is being built around her. With an open house a week away, two contracted construction workers – each of whom owns his own business in the struggling county – are putting the finishing touches on the interior.

Meanwhile Dale “Brillo” Gardner, whom Anna has known since childhood, arranges antiques and collectibles in an inner room just off the kitchen. By the open house, three round tables will await guests, and the shelves will be lined with items salvaged from various sources.

The self-described “picker” is clearing space in the neighboring barn for more collectibles in hopes of piquing the interest of farm families and community members – and perhaps, one day, out-of-towners.

Without the partnerships formed through the mill, Anna explains in the midst of this hubbub, life would be very different. For starters, she likely would have stopped making Fields of Agape's signature products – like cornmeal, prized by local tamale maker Juan Vasquez, and grits, served at Feast Bakery in nearby Bloomington, Indiana.

SEED MONEY

With help from nonprofit Hoosier Organic Marketing Education (HOME), Anna established the Carthage Mill, LLC as a separate business entity from Fields of Agape. Long-time organic advocate Cissy Bowman, HOME's founder, helped develop

a business plan and facilitate “pass-through contributions” – the non-profit receives donations on Carthage Mill's behalf and forwards the money. With that system in place, a few family members gave seed money, which in turn drew the Rush County Economic and Community Development Corporation board's investment.

A loan from that organization paid for the corn furnace, kitchen remodel and electrical upgrades.

Carthage councilman Shannon Spence serves on the board and is one of many who would like to see the town revitalized. “This used to be a real robust town,” he said, “and it's just like a ghost town now.” He grew up in Carthage at a time when it was teeming with industry, boasting several grocery stores. Now the only game in town is a gas station/convenience store.

“We had the second largest parade in the state in the mid-1970s. It was an awesome place to live. You couldn't get a house here – people would fight to live here. Now we've got to fight to get people to settle here.”

This year Carthage's elementary school will close, a deep blow to the depressed town. A paper mill shut down in 2007; later that year the town council announced a 126 percent increase in water rates. Most of the town's denizens are renters with small children – so officials like Spence fear a mass exodus on the heels of the school closing.

But the collective forming at this historic site offers a ray of hope. Spence and his cohorts on the Economic

and Community Development board see sustainable agriculture as a way to renew the dying town.

A PILOT FOR RURAL AMERICA

Though certified organic, the facility is not limited to organic growers and producers. After processing conventional products, equipment must be disassembled and properly cleaned, but Anna says the extra effort is worth it if it attracts more growers.

The three-year transitional phase from conventional to organic can be tough to navigate. She hopes to demonstrate that farmers can still be profitable while making the shift.

Organic certification is often too expensive for smaller companies to maintain individually, she notes. The Carthage Mill, LLC is a certified organic processor/handler for value-added products, a certification that carries an annual fee of \$850.

This facility-wide designation represents substantial savings to farmers who process all their organic specialty crops for wholesale markets onsite. They can submit their private labels within Carthage Mill's processor/handler organic plan.

The centralized locale means additional cost savings, as members of the collective must transport their harvest a mere 10 to 20 miles for drying, cleaning, milling and packaging. “You don't have to set up at 20 farmers' markets,” Anna explains. “You can set up distribution to stores. You don't have to have a storefront. You don't have to have all that overhead.”

Fields of Agape is one of a handful of agribusinesses so far renting space in the facility, but Anna expects several regional farmers and producers to come on board for milling/packaging services for their value-added products. She knows of a half dozen organic or transitional farms within a 20-mile radius. An Indianapolis-based small business that specializes in gluten-free granola has inquired about milling locally grown rolled oats.

A new startup, Unique 2 Eat Farm, already leases space at the mill. This organic artisan feed company uses several stockpiled Fields of Agape

products, held because they didn't meet USDA standards for the food market. For example, black bean halves, though perfectly edible, are not allowed to be sold as food. Yet their amino acid profile makes them effective in poultry feed.

Golden flax, stockpiled because of difficulties cleaning to 99.9 percent as required for the food market, will be put to use in Unique 2 Eat's products. The same fate awaits yellow corn contaminated with weed seeds (because "crown of thorns" weed seeds are the same size as corn kernels, many aren't blown out in the cleaning process).

"I'm now able to sell 100 percent of what we (yield)," Anna says, "instead of me having this excess that I put in totes and store in a dry place – and occasionally sell to those who wander into Carthage."

It's much cheaper to mill feed than it is to grind the same product into food; chickens don't mind a little dirt or weed seed in their dinner. So the process is faster and easier, but the margins are also smaller than for food. Keith and Anna were always too swamped with farm demands to take on a feed project, but partnering

with Unique 2 Eat has opened up this market.

Unique 2 Eat's feed enterprise wouldn't even exist without the mill. Proprietor Becca Selkirk has raised rabbits and poultry for the meat market for years at her Wayne County farm. She just branched into organic feed because of the availability of Fields of Agape products – and with these inputs stored right in the same complex with the milling, her overhead is low.

Anna planned her 2014 grow list with Unique 2 Eat's needs in mind, in hopes of subsidizing some of the artisan food products she's committed to offering.

Selkirk is also one of the partners of Sterling Formulations, another business leasing space. The Shelbyville, Indiana, company specializes in soil-friendly amendments. The principals hope to one day start an organic microbrewing initiative at the mill, but for now they use the space as a central drop for area farmers' orders.

Sterling Formulations' participation is especially valuable because the company has inroads with conventional agriculture. According to president Vince Plowman, the business got its start with industrial cleaners, biolubricants and rust repellents, and then began marketing soil-friendly amendments to conventional farmers. The partners brought organic into the mix after conversations with Anna. They've found that conventional growers are as receptive as organic growers are eager for these solutions.

One such conventional farmer is Dave Norris, a top Pioneer seed salesman who grew 1 acre of organic flax with Fields of Agape in 2008. The sixth-generation farmer is deeply respected in Rush County. He has partnered with Fields of Agape since 2013, and he's transitioning a small amount of his own acreage to Sterling Formulations recommendations.

As Anna sees it, these kinds of collaborations will save agriculture – and rural America.

She speaks often of the need to incentivize organics for a new generation of farmers. She hopes Carthage



Anna Welch hopes to foster fledgling initiatives through the commercial kitchen.

Mill can show the way to new markets, not just locally, but as a pilot for other areas. "Lots of conventional farmers are locked into a huge industrial mill operation. They wouldn't know what to do with 40 acres of transitional soybeans."

Someone like Norris will be key to the transition, she believes: "When you start getting farmers like that ... we can gradually move away from this terrible course of destruction."

FIELD TESTING

In the mill room sits a contraption made of stainless steel, plexiglass, clamps, control panels and hoses, with a funnel at the top. A four-layer cylinder below sifts the grinds, sending outputs through four separate chutes. The equipment was designed by John Bihn of Teamwork Manufacturing, a Dayton, Ohio, business, and built by Moore Precision Machining in Connorsville, Indiana.

Bihn believes the microcrusher's design is unique, claiming the wheels don't destroy the grains' cells the way other mills do. This leaves more of the nutritional value intact while retaining shelf-stability. Bihn has begun confirming these findings with independent laboratory testing.

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From a usability standpoint, Anna considers the design a prototype, because hers is the first commercial site to use it. She and her cohorts at the mill are field testing the model and relaying suggested improvements to the engineers, with a goal of improving its marketability.

The microcrusher can efficiently process grains like spelt and barley. Grains with hard hulls no longer require an extra step to remove the hard outer shell: the unit sifts the hulls out, saving money and time.

What excites Anna even more is the fact that the stainless steel microcrusher and attached sifting system both come apart for thorough cleaning between lots. This teardown capability is a must for any commercial food operation, but especially one that needs to track inputs for gluten-free and certified organic products. A few tweaks to the microcrusher's design are in the works to allow for easier disassembly.

For feed, the microcrusher works like a dream – Anna and an employee can run a ton of feed in one day, with one person handling bags and operating a grain cleaner, and the other sending the cleaned grain through the mill.

But food grade has presented some problems. Anna would like to see smaller grinding wheels for greater control over output size. The machine automatically makes four sizes of product, separating them into four chutes where plastic bags attach. For example, in grinding popcorn – one of Fields of Agape's main crops – the outputs are corn flour, cornmeal, grits and flakes about the size of rolled oats.

With the size of wheels currently in the machine, the coarser grinds are disproportionately produced, but Anna's markets are in the smaller grinds. To make a useable product, the popcorn flakes must be ground further using the 8-inch stone.

Even with the added step, the process takes 125 pounds of bulk popcorn into value-added products in just four hours – a vast improvement from Anna's earlier efforts. But even



Dale "Brillo" Gardner, a self-described "picker," arranges antiques and collectibles.

better would be to eliminate the need to send the flakes through a second milling.

She's sanguine about these issues, believing the value of the mill is greater than just its immediate usability. "It's just part of the journey."

A room above the microcrusher could be converted to grain storage and drying, and an automated system would send batches up from a dock below.

REFORMING A BROKEN SYSTEM

As of now Anna is the only Carthage Mill "owner," but she hopes to transition the governance to a board made up of businesses sharing space in the facility. As decisions need to be made on capital improvements, it will be vital to get everyone's buy-in. As a Fields of Agape partner, Anna can't be the sole driver of Carthage Mill's fate.

"I don't like having that responsibility," she says while mixing up a batch of corn-maple muffins in the kitchen. "But everybody trusts me and knows that I will make that separate." So for now, the new LLC is on the Welches' tax return, with Anna overseen by a CPA.

Only one paid employee currently helps Anna run the machine. But Anna sees the potential for many more employment opportunities.

She hopes to foster fledgling initiatives through the commercial kitchen, envisioning bakers and food producers renting it by the hour. Equipment that was previously Fields of Agape's will be shared cooperatively. "If somebody wanted to make organic noodles, they can rent the stone and sifting system by the hour," she explains.

The space could host business seminars, art classes, festivals and age-related educational events, activities that might support an event planner.

For his part, Councilman Spence would like to see the Carthage Mill develop into a café and gathering space. "We've lost our restaurants," he says. "There's no place to eat here except the Pit Stop and that's a bar." Anna intends to offer lattes and baked goods three days a week for now, with free Wi-Fi to sweeten the deal.

Beyond creating local jobs, the mill can start to bridge the food security gap. After 2012's record heat waves and droughts, the UN reported that U.S. maize reserves were at an all-time low. Relocalizing food production will be critical in years to come.

Grains and beans are versatile and shelf-stable, and whether ground into flour or cooked into stews, they offer the kind of caloric density that satisfies hunger. Meanwhile, the burgeoning interest in gluten-free products has created a growing market for products like black bean flour and corn flour. Anna hopes that small packages of alternative flours will wean people away from purchasing readymade goods from elsewhere – especially if a recipe is part of the packaging.

So while Councilman Spence awaits word on a grant for new streetlights and sidewalk repair on Carthage's Main Street, Anna's ultimate goal is nothing less than reform of the broken food system.

Relocalizing staple crops like grains, beans and seeds would have a transformative effect on the region. The fact that acres and acres of Rush County's farmland are dedicated to GMO crops pains her.

She gives the example of organic soybeans as a multifaceted revenue stream. Working with Dave Norris "on the halves" (dividing expenses and income equally between partners), she projects a total shared yield of over 2,000 bushels. Norris has two semis that each hold 1,200 bushels, so one semi would be filled with organic soybeans for a southern Indiana poultry producer interested in recruiting organic farmers. Unique 2 Eat would purchase a large portion of the rest, and Fields of Agape would retain the remainder for soy milk, soy flour and other value-added products.

In her fondest dreams, Anna imagines the mill facilitating a creative resurgence. She sees Carthage Mill rooting people firmly in community – whether through the arts, through the history embodied in Gardner's collectibles, or through a renewed connection to the land.

NEED MORE INFORMATION?

For more on Fields of Agape, LLC visit *fields ofagape.com*.

She trusts that the partnerships will continue to coalesce, expressing a deep desire for the kind of creativity and renewal that Carthage Mill might foster. Already there's discussion with the PTO of the elementary school, which won a grant for a gardening initiative. Though the school will close, the grant money is still on the table, and the children's garden may find a home on Carthage Mill grounds.

"They can grow wheat in one of the gardens," Anna says, beaming, "and we can grind wheat and bake it into goodies to eat."

With the scent of corn-maple muffins suffusing the building, it's not hard to envision the convergence of children, artists, growers and community members that Anna has prayed for.