

SMALL FARM QUARTERLY

Good Living and Good Farming – Connecting People, Land, and Communities



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FALL 2016

Supplement to Country Folks

LIVESTOCK AND POULTRY**Cleaning Out the Chicken Pen**

by Elaine J. Kennedy

"I won't! I won't! I won't clean out another chicken pen," I promised myself.

Desiring life on a small farm bored into our hearts and souls. As we considered retiring from life and work in Asia and knew that we would inherit a small farm of 50-acres, we researched small farms and read books until we concluded that we wanted a sustainable farm where we could raise healthy animals organically.

My husband bought beef cattle and installed fence; I wanted to have chickens. My husband didn't want chickens because he didn't want to have to chase them inside the pen every night. I told him, "When it's dark, the chickens will naturally go inside the pen." "No way!" he retorted. After it happened, he was pleasantly surprised.

A friend gave me my first chickens in 2013, a year after we retired. A week after the estate sale, Susan brought over 6 or 8 Ameraucana pullets and I didn't have their house ready, so we put them into a clean old hog pen and found some straw. I wasn't prepared... had no feeder and no water fountain, so I improvised with a short piece of gutter for a feeder. That worked!

Then we bought baby chicks (for meat chickens) and I had no brooder pen but we had an antique playpen that didn't sell at the estate sale. Perfect!

When the hens started laying eggs, I wanted more hens. After all, why spend time feeding only 6 hens when I could have more? I began purchasing mature pullets from various sources and built up a flock of a variety of breeds which I kept for two years. I sold white eggs, brown eggs, green eggs, blue eggs, pink eggs. People loved opening a carton of our eggs.

Our customer base for free range chicken eggs grew by word of mouth, and the workload was minor except for cleaning out the pens. The ex-hog pen was beside a creek and the chickens got their water from there, so we didn't need to haul water. We only moved feed, gathered the eggs, and opened and closed the chicken house doors.

Occasionally, predators came into the area and scared the wits out of us! We did not like that fox that wanted to live in our hay shed right next to the chicken pen. And we did not

like that cat-like wild creature with sharp teeth that curled himself up on an inside corner of the pen; that was one time when the chickens refused to go into the pen. Then there was that opossum that was sleeping in a nest, waiting for the next egg to be laid. We learned to carry a flashlight with us if we were caught closing the chicken house doors after dark. We were glad that we survived the predators without heart attacks.

At first, shoveling out the pen wasn't bad, especially since we kept lots of straw on the floor. But then there was the winter of 2014-15, when the snow was so deep all winter long that I had to wait until Spring to get in there and do house-cleaning. By then, I was working with a foot of litter and straw to remove from that old pen. All that good compost! I cleaned out half the pen and my husband helped me with the other half of that heavy stuff.

As I shoveled, my mind went back to my father's poultry farm of a thousand chickens, which was considered large in his time. He built a chicken house with the first 'wooden' slat floors and roll-out nests. While he ranged the pullets in shelters, after they started laying, he housed the hens in a large chicken house that had large separated pens inside. I always remembered his words, "Before I put chickens in cages, I will go out of business."

Perhaps my father's words impacted my desire to range our hens outdoors, and we wanted to range pullets and hens all year round. We began to dream and envision a movable pen with slat floors and roll-out nests — a pen for 60-80 hens. My poultry magazine showed slat floors that were being used on commercial farms, so I ordered panels of hard-plastic slats — not cheap, especially with freight shipping — but far better than my father's wooden slats that broke easily.

I feared that the open floors would make the pens too cold for our minus-20F degree winter weather in the Upstate 'Fingerlakes' Region of New York State, so we insulated the pens. My husband is a great rough-carpenter, so he built the pens.

I shared my flock of older chickens with a niece who wanted her own ranged chickens, and I bought my own first flock of baby chicks that grew into pullets and hens — 50 White Rock, 50 Black Australope, and 15 Ameraucana so that our carton of eggs could continue to surprise customers with green and blue eggs mixed in with brown ones.



Elaine cleaning out old chicken pen

For the winter, we brought the pens close to a shed with electricity so that we could give the hens their required 16-18 hours of light for them to lay all winter long. We had placed the roll-out nests inside the pens for protection from the bitter cold. The nest boxes from a hatchery in Ohio came with rubber mats, so we use no straw. The eggs are spotlessly clean.

In the spring, my husband hooked chains to the side bolts of the pens and with his tractor dragged them to a new area. He then used the loader on his tractor to scoop the manure into a lovely compost pile. That was easy! "I will! I will! I will clean out those chicken pens" — just by moving the pens!

See Chicken Pen *page 3*

Elaine with Great White Pyrenees Guard Dog



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Small Farm Program Update

Registration for Online Small Farm Courses Open

Our 2016-2017 season of Small Farm Online Courses offers over 20 different courses to build the technical and business skills of farmers. Expert farmers and extension educators guide students through the latest research-based information to help improve efficiency and increase profit on small farms.

Students connect with other farmers, work on farm plans, and gain practical tips without leaving their home. Course content can be accessed anywhere with a high-speed internet connection.

Most courses are six weeks long. Each week features an evening webinar and follow-up readings, videos, and activities. Students and their instructors connect through online forums and live chat. If you aren't able to attend the webinars in real-time, they are always recorded for later viewing.

See a list of all our courses and watch a video about them: <http://www.nebeginningfarmers.org/online-courses/>

Reduced Tuition to Online Courses for NY Veterans

We are pleased to offer partial scholarships for military veterans to take online courses as part of the Farm Ops initiative. The courses, normally \$250, will be offered to veterans for \$125. In order to be eligible a person must be a veteran or active duty military, a resident of New York State, and have plans to begin selling farm products (filing a Schedule F) in 2017 or 2018.

If you are eligible and would like to apply head over to our website: <http://www.nebeginningfarmers.org/2016/09/01/online-course-scholarships-for-veterans/>.

Registration is limited and will be offered first come, first served. Participants will be asked to complete a targeted survey at the end of the course as well as 6 months from completion, to determine the effect on their operation.

New Curriculum for Wholesale Marketing

Are you a farmer seeking wholesale markets? If you've been following the 'Baskets to Pallets' project, you've probably heard that we've just completed a new curriculum to prepare small and mid-scale farmers to enter food hubs, groceries, restaurants and cooperatives. We trained about 40 agricultural educators to teach the Curriculum in April, and now we're looking forward to bringing it on the road to farmers in New York State this fall and winter. If you'd like to learn more about the project, visit smallfarms.cornell.edu/projects/wholesale/.

Educator Network Meeting in November

The Northeast Beginning Farmer Learning Network is a loose network of professionals who serve beginning farmers in any capacity: providing trainings, consultations, loans, land access, and more. The theme of this year's annual meeting is "Raising the Bar on Beginning Farmer Trainings." It will be held Thurs. Nov. 10 from 9 a.m. to 5 p.m. at the Hilton Hotel in Hartford, CT. Our session is a pre-conference workshop, part of the larger "It Takes a Region" conference organized by the Northeast Sustainable Agriculture Working Group. To view details or register, please visit: <http://nesawg.org/our-work/conference>

Cornell Small Farms Program announces the launch of "FARM OPS"

Our efforts towards assisting military veterans transitioning into farming careers is being branded under the name: Farm OPS. The efforts has partnered with several local CCE offices, the Farmer Veterans Coalition, Heroic Foods, as well as a group of veteran-focused groups, to provide a clearer path from the military life, to life on the farm.

The 2014 Farm Bill included language specific towards supporting the increasing number of veterans leaving the military to help fill a need as more farmers retire, as the average age of U.S. farmers passes 57 years old. Our team held several training sessions with CCE partners targeted toward veterans across the state, including at Ft Drum. The team helped host the National Center of Appropriate Technology's second NYS Armed to Farm event. For a week in August, 25 veterans, and their partners, were able to

take focused training classes, farm tours, and network with fellow veteran farmers at the White Eagle Conference center in Hamilton, NY. The 2015 event was held in Western NY, and the 2017 event will be held somewhere to the East.

Farm OPS is also anticipating approval this fall of the first NYS Division of Veteran Affairs approved OJT training program on a farm. Similar to OJT programs for plumbers, electricians, and other trades, a farm-based OJT program has to be approved by the DVA for a veteran to use their GI bill funds while they learn to farm. The team has been working with two pilot farms to navigate the approval process and we'll be posting instructions on how other farms may participate in the OJT program soon. Watch the Farm OPS page for updates, and while you're there, if you are a veteran, sign up for the NYS Veterans in Agriculture Network Listserve for future announcements.

Reduced tillage field day brings together organic vegetable growers

How can reduced tillage (RT) practices help vegetable growers build soil health, use labor efficiently, and boost productivity? In mid-August, the Cornell SFP Reduced Tillage Team hosted over 50 farmers, educators, and others in a field day highlighting RT research in organic vegetables. The twilight tour led attendees through trials at the HC Thompson Vegetable Research Farm in Freeville, NY where research looks at different approaches to reduce tillage while integrating cover crops, managing fertility, and controlling weeds.

Research spoke to growers at multiple farm scales. The tour dug into RT practices for permanent beds and how to use strip-till to target tillage to the planting row. The event also brought in the expertise of Cornell Cooperative Extension partners. An in-field soil health demonstration showed how cover crops and mulches can improve water use and limit soil erosion. A focus on swede midge provided insights into how production practices may impact this emerging organic brassica pest. For more details on the RT project, visit <http://smallfarms.cornell.edu/projects/reduced-tillage/>.

From the Editor

After a long dry season, many farmers will relish the cooler and (hopefully) wetter weeks ahead. Even through we are still in a drought, I can't help but feel some relief seeing dew on the pasture grasses and fog rising from the fields each morning. It's a start.

The 2016 growing season tested the spirits, innovation, and will of the regions farmers. Stories of heartbreak and triumph abound. Farmers always talk about the weather – but this year it really affected us in a deep and profound way. The slower time of year invites us all to reassess and evaluate how we can be better prepared for an uncertain future.

We are pleased to announce a new column in the paper, called "Lessons from the Land." Each issue, we will publish stories from farmers, on a variety of topics, so that we may all learn from each other. Please read the wonderful pieces this issue, and consider sending in your own story.

— Steve Gabriel

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Chicken Pen from page 2

Other than moving the chickens to fresh grasses, one other benefit of moving the pens is the feed that goes through the floor is scratched at and eaten as a 'snack' after the pen is moved.

We've now used the pens through one hot summer and one cold winter; they are perfect for our climates. The insulation keeps them cool in summer and warm in winter. I don't know of anyone else that has a small flock of hens in pens with slat floors, but we totally recommend it.

I just bought 55 'Barred-Rock' pullet-chicks as replacements for older hens, which I will do annually, to rotate new chickens in and out for continued egg production. And just when I think I know what I'm doing, some hens decide to molt and lay fewer eggs.

Life as a farmer is always a challenge! But at least I don't have to clean out the pens anymore.



Slat floor inside pen

Elaine J. Kennedy is a retired small farmer who loves raising chickens the easy way and gathering eggs.

For more information on slat floors and/or roll-out nest boxes, or for a desire to view our pens, please contact Elaine Kennedy at ejkenned@gmail.com.

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SMALL FARM QUARTERLY

Good Farming and Good Living —
Connecting People, Land, and Communities

Small Farm Quarterly is for farmers and farm families — including spouses and children - who value the quality of life that smaller farms provide.

- OUR GOALS ARE TO:
- Celebrate the Northeast region’s smaller farms;
 - Inspire and inform farm families and their supporters;
 - Help farmers share expertise and opinions with each other;
 - Increase awareness of the benefits that small farms contribute to society and the environment;
 - Share important research, extension, and other resources.

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Anyone is welcome to submit articles for consideration. See our guidelines at smallfarms.cornell.edu/quarterly/writers/ and contact Steve Gabriel with inquiries. Articles should be 1,000 - 1,600 words in length with 2 - 3 high-resolution pictures.

Topics should be appropriate for a farmer audience, and not promote a single organization or business. We focus on articles with relevant information that helps to improve the practice of farming and agriculture in New York and the Northeast.

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LESSONS FROM THE LAND**Water Woes and Triumphs**

by Groundswell Center for Local Food & Farming

The 2016 growing season has been abnormally dry in the Northeast and farmers are feeling the heat. Contrastingly, June 2015 was one of the wettest on record. Here is a small selection of farmer stories dealing with too much or too little water, and the ways they've had to change their practices to adapt.

You can read all the submissions and write your own at: <http://smallfarms.cornell.edu/quarterly/>

Our homestead sits in a notch near the top of Virgil Mountain close to Greek Peak ski center. Two hillsides drain into our land and we are a water source for 2 distinct watersheds. Fifteen of our acres are quite wet and host 2 and 5 seasonal vernal ponds. Fifteen more acres are prone to springs and poor drainage. This is the first year that irrigation has been a constant struggle.

Once we realized that the drought looked to be long-term, we installed drip tape on all of our ground beds. Over time, we are moving more and more of our fruit trees into the fenced garden for deer protection and ease of irrigation. I should mention that we are in our late sixties. The raised beds and irrigation systems have proven to be very ergonomic for aging bodies.

We typically work outside 30-40 hours a week from May until November and spend countless hours on food preservation, firewood cutting, compost making, and many other chores. Although we have built the infrastructure for livestock, we don't currently have any. We are always looking for strategies to build a sustainable homestead that we will be able to maintain into our "golden" years.

We trust that we are leaving a legacy for future generations and we love to share ideas with like-minded people. Our advice to fellow gardeners; Site and build a pond first. Study the lay of the land and the effects of the seasons. Resiliency requires imagination, flexibility, and hard work.

Chris & Bob Applegate
Virgil, NY

In June of 2015, when, according to the weather reports from Binghamton, we received nine inches of rain, I was concerned that all that humidity would bring about another year of blight for tomatoes and potatoes.

In 2016, our warm, dry winter, and historically dry summer had provided us with the opposite worries. Would the well hold out? What if the pond dries up? Perhaps you were thankful that you bought first cutting hay, because there was no second cutting.

While I am not dependent on farming for my living, I was brought up in a household by parents who survived the depression, and a large garden was considered a necessity. My mother would can or freeze vegetables and fruits to see us through the winter. And, back in the day, if you wanted red raspberries, you planted them and waited for them to produce.

In the lovely, rainy year of 2015, I harvested the largest black raspberries I ever saw, and even the apple trees in the hedgerows had apples almost as big as 'store-bought'. Being self-sufficient is defines a large part of who I am. I enjoy good, wholesome food, and I love eating a meal where I raised or grew everything on my plate. I've raised pigs, butchered my own chickens, and have started a flock of Bourbon Red turkeys.

However, conversations about our severe drought this past summer were disheartening. When I mentioned the pathetic cornfields, or the fact that there would be no second-cutting hay, I was generally met with blank stares. In my own little social experiment, I have simply proven to myself that the general public is far removed from the land. They care more about social media than knowing basic facts about where the food they eat comes from. Most are fairly clueless about the fact that a severe drought means more than a brown lawn, or some local swimming holes dried up. Food, to them, is only from the grocery store. They fill the cart, swipe the card, and go home to microwave convenience food. One teenager actually said to me, "Well, why do we even need farms? You can get everything you need at the store."

Astounding point of view, isn't it?

Debbie Curtis, Palomino Hill Farm

This is probably the driest our farm has ever been! We have two different locations, and are running drip and overhead daily and we also have been using 5 gallon buckets and dumping water on crops with those. Dry!!!! The rain just keeps going around us and the forecast doesn't show any rain in the near future. This is the first year where I have to decide what crops we are going to lose and what crops we are going to try to save. Our main goal is to keep the CSA members sup-

plied and our head above water. (No pun intended)

Trevor
Ithaca Organics,
Ithaca and Dryden, NY

Ordinarily at this time of year I would be mowing lanes in the orchard and hauling my tripod ladder around to thin fruit in the pear trees. But after the stop and go hot and cold Spring this year there are hardly any pears to thin, so no reason to mow in the orchard, and this early and long summer drought we are now having will ensure that there will be just about no fruit to harvest.

The same weather patterns dehydrated the watercress I spent a few years getting started and has caused suffering to our laying hens. The excessive heat desiccated the bud sticks I gathered in February gathering and grafted in May grafting.

The erratic weather encourages me to plant more and more garlic. The climate doesn't kill it, the critters don't eat, it repels werewolves, prevents disease, improves everything but ice cream, makes life good, and sells for as much by weight as Asian Pears.

David S. Warren

My neighbor, and Biodynamic greens farmer, is "treading water" in these days of drought. That is, the two ponds he leases are providing enough irrigation water to germinate seeds and bring his crops to harvest just keeping his "head above water."

As documented in the 1899 by the diaries of Seymour Bates' who farmed here at that time. (in his own words with his own spelling):

"July 30, 1899 – Dry and in want of rain.
August 3 - Found the center of the land in Hector and begun digging a well in the A.M.
August 19 - Very warm and dusty.
Aug 20 - Very dusty and warm. Creek dry north of the house.
August 25 – Very dry and the leaves are fading and falling from the trees in the woods.

See Water Woes page 6



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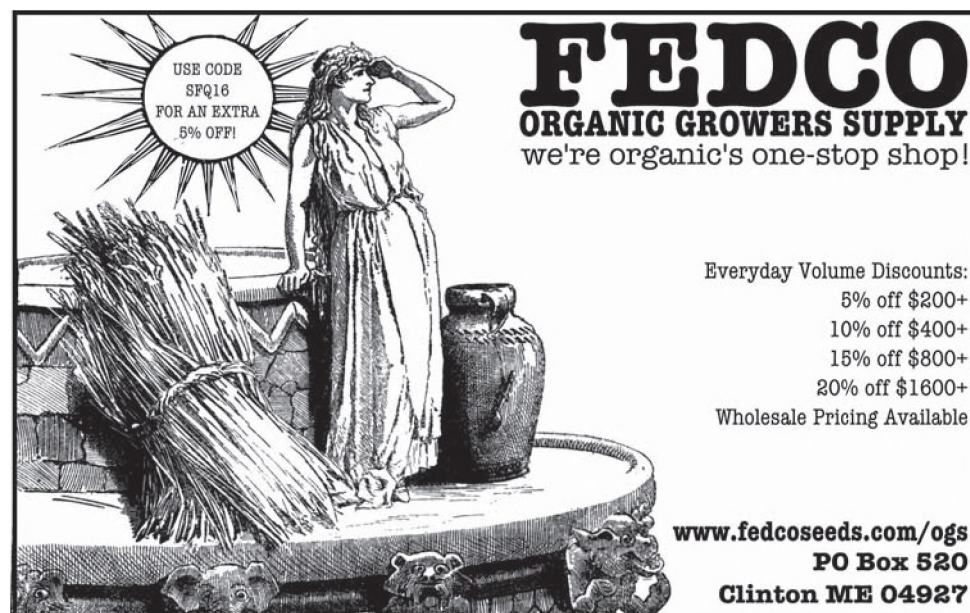
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FARM SAFETY**Take the Time to Operate Your Chainsaw Safely**

by Erika Scott (The New York Center for Agricultural Medicine & Health - NYCAMH)

Many of us use firewood to heat our home, and plenty of folks fell trees and split their own firewood. If you cut your own firewood for personal use or are a logger by trade, consider your routine – are you working in the safest way possible?

While the process of harvesting and processing wood is quite rewarding, it can also pose real

danger. It is well known that logging has one of the highest fatality rates of any industry, second only to commercial fishing. Serious injuries to homeowners are also well documented.

With the proper personal protective equipment, a well-maintained saw, and some knowledge, working in the woods can be made much safer. Do you wear chaps when you use the chainsaw? If the answer is no, ask yourself ‘why’? Trust me; the cost of chainsaw chaps is much less than a trip to the hospital!

If you are looking for a new pair, make sure they have a ‘UL’ (Underwriter’s Laboratories) certification label. Chaps come in many lengths and styles; the ideal fit will extend to the top of the foot (they should graze where the tie on a sneaker would be). Wrap chaps provide better protection than apron chaps, as they cover the back of the calf. Whatever style you have or decide on, make sure to wear them. Once they get damaged, they should be replaced, because they don’t offer the same protection the second time there is an ‘oops!’.



GOL Trainer Bill instructs a class in making a safe felling plan.

Protecting your head is also a top priority; the easiest way to do this is with a logging helmet, which combines hearing, eye and head protection. Being struck with even a small branch on an uncovered head will have you seeing stars, or far worse. Head protection should bear the ANSI Z89.1 stamp. A face shield or safety glasses will prevent wood chips from entering the eye, and ear muffs protect your hearing from the high decibel level (about 110 dB) of the chainsaw. Sturdy boots should be worn (ideally with steel toes), and gloves can help with protecting the hands.

Personal protective equipment is only one piece of the puzzle.

Training improves your personal safety, but it also enhances your productivity. Work smarter, not harder. NYCAMH offers access to two types of chainsaw safety trainings, classroom trainings offered by an experienced forester and NYCAMH consultant, and a limited number of reduced-cost, hands-on, Game of Logging (GOL) safety trainings. Even if you have been using a chainsaw for years, there is always something new to learn. Small tips and tricks make working in the woods safer and more efficient.

If you are interested in a classroom training session, contact NYCAMH at (800)-343-7527 and ask for the outreach department. In addition, thanks to the New York State Department of Health, a limited number of Game of Logging courses will be offered next year, and information on these courses will be forthcoming. These are offered at minimal cost (\$25) to farmers, rural employers and landowners.

For more information on NYCAMH visit www.nycamh.org, for GOL visit www.gameoflogging.com. A program of Bassett Healthcare, NYCAMH is enhancing agricultural and rural health by preventing and treating occupational injury and illness.



Logging helmet and safety glasses should be worn by anyone operating a saw.



Chaps are often not used but are a critical piece of safety gear.

Call NYCAMH at (800)-343-7527 to learn more about GOL, and to be added to the course waitlist. Be advised, GOL classes are limited to ten participants each, and while we try to accommodate everyone, you may not get your first choice of training if the demand is high.

Water Woes from page 5

August 26 – Dig in well in P.M.
September 6 – We have dug the well to the depth of nine feet at various times.
September 7 – Drawing stone for the well.
September 9 – The well was at 17 feet at noon. One charge of dynamite after dinner brought water in abundance.
September 17, 1899 - The drought continues. Its equal has not been since 1854.”

Neither we nor the neighbor farmer are being “drowned by the drought” at this time; but we certainly are limiting some water usages, and are once more looking over the farmland contours and noting prospective pond sites. The hourly cost of hiring a bulldozer is off-putting; but not as scary as a total crop failure brought on by not having water available at the right time in future crop production years.

John Wertis, Trumansburg NY

Our little house is cantilevered over the foundation of an early nineteenth century home on Pumpkin Hill, several hundred feet above Cayuga Lake. During the early twentieth century, the hand-dug house well was drilled down a hundred feet, so I cleaned it out and chipped a foot deeper into the shale with a digging bar.

We installed a fountainhead over a six-foot diameter basin excavated in the shale below it, and over a spillway below that, dug a somewhat larger pond with an outlet channel leading to another larger pond, and then another to larger one. Pumps in each pond

circulate water through the system. I stocked the larger pond with native aquatic weeds that thrived, then with Crayfish that ate all the pondweed, then with Largemouth Bass, which ate all the Crayfish. I introduced Fathead minnows, which also thrived and on which the Bass grew large, spawning and spreading through the flowing brook to the lower pond.

This worked well enough during the normal years, but unfortunately, erratic is the new normal. This year we just have enough water for a few frogs and we frequently run the well dry watering. We do not take a lot of showers. I mulch heavily with straw. Other than by increasing our water gathering and storage capacity, our most important adaptation to the dry conditions has been to concentrate on cultivating drought tolerant crops, especially volunteer pears. Though not native, pears are tolerant of weather extremes and of our thin, poorly drained, clay-laden soil. We have hundreds of naturalized Pear trees on our four acres, and I have grafted a dozen different varieties of cultivated Pears onto a hundred or more of them. I never water these trees.

Garlic is the most drought-resistant vegetable crop. We grow it in mounds on orchard wet spots. Without mounding, there isn’t much soil at all, and the mounding both holds moisture and drains off the excess. Maybe the Garlic diet protects us from dehydration, if not also from vampires.

David S. Warren

The land laid parched, corn’s “arms” pulled in tight to conserve moisture. Squash leaves droop by 10 a.m. to do the same. This morning’s thunderstorm finally brought us the blessing of a full inch of rain in about 30 minutes. All those leaves have spread wide, soaked directly in what moisture they could. All the plants around are setting about the business of using that water before the hot sun simply evaporates it. Grow crops Grow!

This dry season has me thinking of the strategies I’ve learned over the years, and regularly use to beat Mother Nature at her own game. She constantly throws farmers and gardeners curve balls that threaten our harvest. This year brought dry heat, last year it was cool, cloudy weather. The list of issues is endless.

One of my most successful defenses against all these threat is diversification. We grow many different vegetables, at least 3 varieties of each, and plant them in different

places. This year we have 4 varieties of summer squash growing in 3 different spots. The smallest bed was planted 3 weeks later than the others. The hail or bugs or soil dryness that ruins one might not hit the others so badly. On a hot year such as this the squash prosper in wetter spots where mildew does them in on a wetter one.

Another water related strategy is using all sorts of gray water to water our crops. Some folks go to the gym to lift weights, I haul 5 gallon buckets of water to the berry beds, herb gardens and vegetables. A bucket catches the warming water before a shower and about half of the shower water itself. The water eggs are washed in is hauled back out as well. The dishpan lives in the sink and gets emptied periodically into another pail as it fills. We find we use far less water this way too.

Carrie Kerr
Dry Brook Farm, Willseyville, NY

The Groundswell Center for Local Food & Farming and the Cornell Small Farms Program are teaming up to create a new column called Lessons from the Land, which captures and share the stories of and lessons learned from farmers, homesteaders and land workers around New York and the Northeast. We want to hear stories from growers of all types and sizes, on real topics, that matter!

Each issue has a theme (see below for upcoming topics). We will publish only nonfiction submissions. Feel free to submit your name, farm name, city and state or submit your piece as “anonymous” if it allows you to be more honest.

Upcoming Topics & Submission Deadlines:
Tools: Assets and Liabilities – November 11 (Winter Issue)
Being Prepared – February 10 (Spring Issue)

LIVESTOCK AND POULTRY**Sheep Pasture and Red Clover – Again**

by Ulf Kintzel

A while back I wrote an article for Farming Magazine "Red Clover in Sheep pasture?" in which I advocated grazing red clover even during breeding season. I wrote a similar article for Small Farm Quarterly's winter 2013 issue "Does Red Clover Cause Infertility in Sheep?" (<http://smallfarms.cornell.edu/2013/01/07/does-red-clover-cause-infertility-in-sheep/>) shortly thereafter. Let's recap the premise: It is said that red clover causes infertility in sheep when grazed during breeding season due to an estrogen-like substance called phyto-estrogen. However, I have not experienced such negative effect at all. Since red clover offers so many advantages, I just kept grazing it, including during breeding season. Yet, I always had in the back of my mind if it was a responsible thing to do, advocating grazing it while the sheep are being bred.



Red clover was the dominant grazing plant during my breeding season last fall.

In at least one of these studies examining the influence of red clover it was suggested that the effects of this estrogen-like substance are less when the clover is higher and is in bloom. This is when I graze it on my home pasture but I have always wondered if one would need to be more careful if the clover is younger and shorter and before bloom. It so happened that during my second breeding season of the year I was pasturing my sheep on the neighbor's field most of October and into November.

Guess what one of the incomes this farmer has from his farm. Growing medium red clover for seed production! Since I took lots of pictures during that time it is easy for me to check what the sheep ate at what dates and how the lambing percentage corresponds with that time. Leading up to the onset of breeding season I had already been grazing on his farm for 19 days. The fields I grazed were either small pieces of straight red clover or old hay fields that had been frost-seeded with this legume and then harvested. The regrowth of this legume was considerable. I would estimate

that during that time the intake of red clover was never less than 50 percent. From there I moved to several pieces that were not always full with red clover and had some orchard grass and alfalfa. However, since this farmer had been doing red clovers seed for many years and since this is upstate New York, there always is red clover EVERYWHERE. From these small pieces I moved to one large parcel with 80 to 90 percent of this legume, only interspersed with some weeds and some small wheat plants that had germinated after harvest. In addition to its abundance, the red clover was also quite short. (By the way, clovers tolerate close grazing after the onset of dormancy very well). Grazing this large clover field during breeding season happened to correspond with the height of my lambing season in March but more about that later.

I use a harness with differently colored crayons during breeding season. I do this in order to know what ewes were bred at what time by which ram. This is important to me for various reasons, one being my management of my lambing season and another being the fact that I need to be able to sell groups of ewe lambs with unrelated ram lambs for breeding purpose. In short, I can't just throw all my rams into the flock without knowing who is breeding whom and when. Once breeding season is concluded I let the flock go through the chute and mark the ewes with a dot on the wither with a spray paint designed for sheep. I use the same color spray as the crayon color. The crayon marking will disappear after some time while the spray paint will last the next five months until the sheep lamb. When I did this I noticed 16 ewes without any marking. That is eight percent of my breeding ewes and it was seemingly a worrisome sign. I did have the short red clover in the fields in the back of my mind when I ran the sheep through the chute that day and it kept being there all throughout winter.

Fast forward five months and we are in my spring lambing

season. (Half the flock had already lambed in February. The lambing percentage was almost 170 percent. While that is at the lower end of my expectation, it still is a respectable result that I can live with. These sheep had grazed mostly orchard grass and white clover while breeding.) Lambing season in March started slowly. Instead of the five ewes on average per day, I had three or sometimes four sheep lambing a day. I was wondering why that was. (I figured out later that the onset of the second breeding season must have been almost exactly two cycles later than the first one and therefore a smaller percentage of ewes was coming into season the first ten days, which was the length of the first breeding season). Then, ten days later, it hit. Nineteen sheep and goats were lambing and kidding the same day. It so happened that our kids had school spring break and were home for a week. They were a great help. Between lambing and

my regular chores, I was a bit overwhelmed. The next day I still had a large number of sheep lambing and then it tapered off a bit to the five on average I had anticipated. As it turned out, all ewes without markings from the breeding the previous fall were pregnant. The green-colored crayons I had used had not been working properly, were probably too dried out. The lambing percentage was overwhelming. As of this writing it stood at 185 percent.

However, if I select out the lambs from last year that I also let breed the same year they are born, the lambing percentage stood at 195 percent for all ewes two years and older. This does not include the still-born lambs, which would have to be added to evaluate conception rate and if and how the red clover influenced it negatively. In addition, as of this writing a single ewe seems to be empty and will not have lambs. All others were pregnant.

So I can now say with even more certainty that I have not experienced any negative effects with grazing red clover during breeding season, even when it is quite short and not blooming. In fact, the quality of the legume is quite possibly a big contributor for such tremendously good lambing percentage. I readily admit that I am still left to wonder if other breeds are perhaps easier affected. I also speculate at times if I had over the years inadvertently culled those sheep that were indeed sensitive to grazing red clover during breeding season when I culled the few sheep each year that didn't have any lambs. However, the numbers – in some years as low as one – are just too low to think that red clover may have been the culprit.

I found this story was worth sharing. I breathed a big sigh of relief that I could let my previous articles about grazing red clover with sheep during breeding season stand. Or was that sigh of relief more about the fact that my lambing season was not negatively impacted? Whichever it was, I will graze away that red clover. It is nutritious, highly digestible, and well-liked by sheep. I will keep ignoring the inevitable future articles in the leading sheep publications that will warn me once again about the danger of grazing it during breeding season.

Ulf owns and operates White Clover Sheep Farm and breeds and raises grass-fed White Dorper sheep and Kiko goats without any grain feeding and offers breeding stock suitable for grazing. He is a native of Germany and lives in the US since 1995. He farms in the Finger Lakes area in upstate New York. His website address is www.whitecloversheepfarm.com. He can be reached by e-mail at ulf@whitecloversheepfarm.com or by phone at 585-554-3313.

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FARM SAFETY

“Sharp” Students Improving Farm Safety

by Amy Weakley

The Veterinary Practices program, Occupational Health, and Safety SkillsUSA Team consisting of Seniors Morgan Hastwell, (Adirondack Central School), Kayla Weakley, (Adirondack Central School) and Destiny Mooney, (South Lewis Central School) are striving to improve farm safety. SkillsUSA is a partnership of students, teachers, and industry, working together to ensure America has a skilled workforce. This team collected information and evaluated the working environment on area farms through tours, interviews, and surveys of farmers. With these processes, they identified an area of concern for farmers that impacts many farms; sharps disposal. These young ladies are finding ways to help farmers protect themselves, their employees, sanitation workers, and the environment. Their instructor Blake Place says, “This project really gets me excited because my students are finding a solution to a problem that really exists. They are solving this problem through education and outreach and it is something that can be modeled and applied to other business sectors that may struggle with what to do with these bio safety hazards.”

Farming is included in the top 10 Most Dangerous Jobs in the U.S., in numerous studies. Sharps are just one of the risks involved in farming. What are sharps? They are devices with sharp points or edges that can puncture or cut skin such as needles, syringes, lancets, auto injectors (epinephrine and insulin pens), infusion connection needles/sets (tubing systems with a needle). Sharps may be used to manage the medical conditions and maintain good health of people or their pets/animals. There are approximately 9 million syringe users, totaling

approximately 3 billion injections per year taking place in the home, in the U.S. These instruments should never be disposed of by throwing them in trashcans, recycling bins or by flushing them down the toilet. Proper Sharps disposal isn't regulated for individual or personal residences or non-business environments.

According to OSHA statistics, approximately 600,000 healthcare personnel incur needle injuries annually: 40% happen after usage and before disposal of the instrument and 15% occur after disposal. This poses a risk to not only those people and facilities but also to waste management employees, animals, and the environment. When needles, syringes, scalpels, and other sharps are tossed into the normal trash, it introduces risks of infection due to needle sticks/cuts, exposure to diseases and/or drugs, and release of pollutants into the environment. These numbers not only impact the safety of personnel, they also translate into financial expenses for testing, treatment, and follow up care. The current drug epidemic our communities are facing is no small consideration in this process. Many users of illicit drugs are desperate when seeking access to needles and drugs. The environmental cost of improper sharps disposal is tremendous and the diseases and drugs that may be on those instruments go into our landfills, soil, and waterways. Animals such as flies, roaches, mice, and rats feed in landfills and are known to carry and spread diseases. Other scavenger animals are also at risk of contracting or spreading illness.

While individuals using sharps for health care related uses, such as diabetics, are advised on how to best dispose of their supplies; farms are given little guidance in this area. The advice widely given is to place the

sharps in a ridged plastic container, such as a laundry detergent container, and write “sharps” on the container. When it's full, tape the lid on and place it in the regular trash. This only helps to limit risk to our waste management folks, it certainly does not eliminate it. The SkillsUSA Team identified this discrepancy and have set their sights on helping to implement more safe collection and disposal processes for these tools.

This team has created informational brochures to help inform farmers about proper sharps disposal and educate their employees. They have purchased the first batch of sharps containers for distribution. In addition, they extended their efforts to make this collection and disposal process as convenient and easy for farmers as possible. The SkillsUSA Team worked diligently with various community businesses/organizations to ensure access to disposal facilities, allowing farms to do the right thing. They contacted and met with their local legislators to help clarify existing rules and break down barriers. The team has also been collaborating with area hospitals and transfer sites building bridges to assist in their efforts to help protect the health of people, animals and the environment. “This project has become bigger than I ever expected,” according to Kayla. “It's crazy to think how big of a change three young girls can make.”

This effort is completely voluntary on behalf of the farmers and costs nothing for them to participate. To help kick start the process, the group worked hard to raise money, by hosting can drives and grooming events, to purchase sharps containers. The containers will be distributed, for free, to the first 30 farms to contact them with interest in making this improvement. Along with the official Sharps container, the farmers will be given informa-

tion about proper handling of sharps and why it's important. They will also be given information regarding where they can drop off the container when it's full, to assure proper disposal. For more information and to see if your farm is eligible to be one of the first 30 farms please contact (315)-377-7345.

The feedback the team has received from the participating farms has been positive. They feel better knowing the sharps are being properly disposed of and the process is smooth and easy to do. This team is leading their community to improve processes and protect people, animals, and the environment for the future. They started this school year with a basic project, thinking it would be like any other school project they had done in the past; define the task, do the research and present the information. This group of young ladies, from Howard G. Sackett Technical Center, had no idea about the vast impact their project could have and the far-reaching consequences of this challenge.

Amy Weakley owns a small family farm, Barefoot Buffalo Farm in Taberg, NY. She can be reached at dave_amy_weakley@yahoo.com.

For more information and to see if your farm is eligible to be one of the first 30 farms please contact (315)-377-7345.

Other resources:

<https://www.health.ny.gov/publications/0909.pdf>

<http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/HomeHealthandConsumer/ConsumerProducts/Sharps/ucm20025647.htm>

RESOURCE SPOTLIGHT

A Book Review of “The Art and Science of Grazing”

“How Grass Farmers Can Create Sustainable Systems for Healthy Animals and Farm Ecosystems” ~ by Sarah Flack

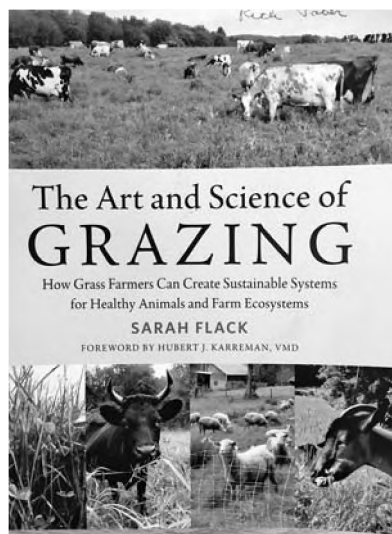
Review submitted by Rich Taber, CCE Chenango

I love to read, and will state that at the outset. I moreover love to read about one of my undying passions, which is sustainable agriculture in general, and grazing in particular. Sarah Flack's recently published book, *The Art and Science of Grazing* is an absolute “must read” for anyone interested in grazing and animal agriculture. This book is a comprehensive tome covering all facets of ruminant grazing and pasture management for farmers who have beef cattle, sheep, goats, and dairy cattle. It is published by Vermont's Chelsea Green Publishing, which has a history of producing excellent quality books on a variety of sustainable topics.

If one was in need of an excellent book to teach a course on grazing, then look no further than this book to instill new techniques and knowledge in your audiences. I heartily recommend this edition and rate it with five stars. Why do I rate it so high? Quite succinctly, Sarah Flack has provided a treasure trove of information and techniques based on sound ecological practices, which can support economically viable farming with animal agriculture.

This is a four-part book with fifteen chapters and several appendices. Part One “Laying the Groundwork” has two chapters; Benefits of Good Pasture Management, and Types of Grazing Systems. Part Two “Grazing from the Plant's Perspective” has four chapters; Grazing Adapted Plants, Pasture Soil Health, Managing Pasture Plants, and

Common Pasture Plants. Part Three “Grazing from the Animal's Perspective” has six chapters; The Unique Digestive Ability of Ruminants, Ruminant Nutrition from Pasture, Meeting Livestock Nutritional Needs, Grazing Behavior, 100 Percent Grassfed, and Health Concerns. Part Four “Designing and Managing a Grazing System” has three chapters; Pasture Math, Calculating Acreage, Grazing System Design and Infrastructure, and the final chapter, Putting it All Together. These chapters are followed by sev-



eral excellent appendices dealing with pasture problems, pasture planning worksheets, pasture monitoring, certification programs, and a list of further resources.

The book is printed on very high quality paper, and is loaded throughout with high quality color photos. Each chapter is filled with the latest knowledge available to support this wonderful and growing endeavor of grazing management. I also found it to be written with flawless grammar, spelling, and editing throughout, which is always a pleasure to see.

As our agricultural world slowly changes to include more humane livestock husbandry methods, and ecologically benign methods to support those concepts, this book provides knowledge and information for graziers to not only “talk the talk” but to “walk the walk”.

Rich Taber is Grazing, Forestry, and Ag Economic Development Specialist with Cornell Cooperative Extension of Chenango County, New York. He is also an active grazer and co-owner and operator of Great Northern Farm in Madison County New York, with his wife Wendy. They raise beef cattle, sheep, laying hens, meat chickens, heritage turkeys, and dogs on their 165-acre farm. He can be reached at 607-334-5841, ext. 21, or email: rbt44@cornell.edu.

The book is available from Chelsea Green Publishing at <http://www.chelseagreen.com/>

TREE CROPS AND FARM WOODLOT

Hazelnut Trees Are Easy!

Native hybrid hazelnuts provide a crop that is consistently in short supply, well known by consumers, and nearly grow themselves.

by Dawn and Jeff Zarnowski

Tasty and healthy hazelnuts are used in many food products desired by consumers and are chronically in short supply. Almost all hazelnuts consumed in North America are sourced from either Oregon or Turkey. Yet, hazelnut trees are native to the eastern half North America from Louisiana to Georgia in the south, to Manitoba and Quebec in the north. The native hazelnut trees (*Corylus americana*) are hardy, disease resistant, and are very tolerant of a wide range of growing conditions, and yet there is a shortage of nuts. The native nuts tend to be small and are not as tasty as the European hazelnuts (*Corylus avellana*) that have

been selected for quality for hundreds and thousands of years. This is where hybridization of the two hazelnut species for the past century has yielded new varieties that have the best qualities of both. Hazelnut organizations have formed to promote growing this native crop with improved qualities.

Another wonderful thing about hazelnut trees is you don't have to wait long before the tree will bear nuts for you to eat. Hazel trees start bearing in as little as 4 years and heavy yields in year six or seven. Also, you can choose to grow it as a bush or a single stem tree. A multi-stem bush will form if you don't mow or cut down the shoots that grow near the



Hybrid hazel trees with jumbo grade sized nuts are successfully grown without pesticides or fungicides in USDA zones 4b/5a, in the Finger Lakes region of New York.

base of the tree. In bush form it will grow 8 feet to 12 feet tall. In bush form, the hazelnut allows for easy hand picking of the nuts, and carefree environmental plantings for erosion control or as a hedge. If you choose to grow it as a single stem tree it will grow 14 feet to 16 feet tall and nearly as wide. Once the tree is big enough to shade the base, the shoots won't grow. The native hazelnut tree is adaptable and easy to grow; but, it took many generations of hybridizing to generate native trees with large tasty nuts.

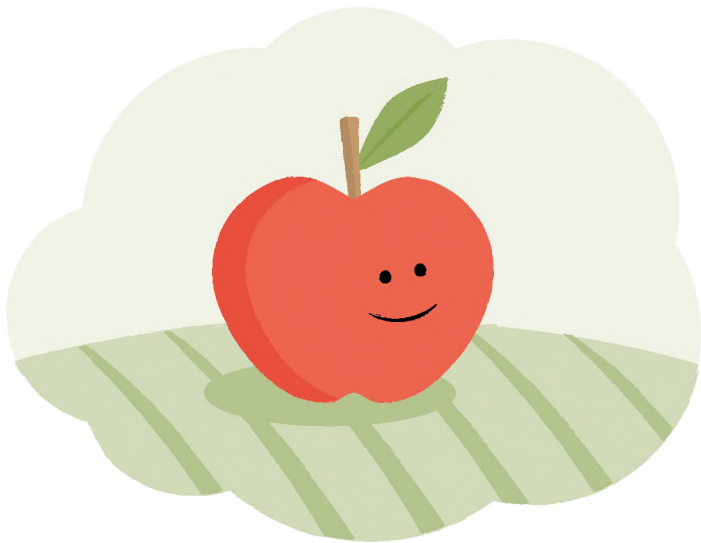
The reason the European hazelnuts (a.k.a. filberts) were grown on the west coast was to keep the tasty European trees far away from the native trees that harbor a blight known as Eastern Filbert Blight (EFB) caused by the fungus *Anisogramma anomala*. Also, the tender European varieties tend to be less cold tolerant and are better suited for USDA zones 7/8.

Hazel orchards in the Northwest are now slowly being decimated by EFB as the disease has spread throughout the region. Hybridization of native blight resistant hazel trees to the European hazel in North America has been documented since 1921 by Carl Weschcke. The Northern Nut Growers Association (NNGA) has been in existence for over 100 years. NNGA is a group of hobbyist and professionals that grow and breed nut trees. NNGA and similar associations such as Society of Ontario Nut Growers (SONG) have assisted with hazelnut improvement for over 94 years. In the past few years, more organizations have formed to promote hazelnut trees as a food crop throughout North America.

Hazelnut production is expanding with the Ontario Hazelnut Association that formed just a few years ago to promote hazel orchards just north and west of the New York border. Ferrero, the makers of Nutella, is a \$8.8 billion dollar company, that consumes 25 percent of the world's crop, has a massive factory, just over the New York border, in Brantford Ontario Canada. There is Upper Midwest Hazelnut Development Initiative (UMHDI) to develop hazelnut cultivars and orchards in Wisconsin, Michigan and surrounding area. The Hybrid Hazelnut Consortium was formed to research and promote hybrid hazelnuts utilizing Rutgers University, Oregon State University, University of Nebraska–Lincoln and the Arbor Day foundation. Support to grow hazelnut trees has expanded greatly in the last few years as new hybrid trees come to market.

From a financial standpoint, hazelnuts are an ideal specialty crop, as they are in continuous short supply and have high profit margins. Retail pricing for in-shell hazelnuts averages \$6.00 a pound and shelled raw bulk hazelnuts are currently selling for \$14.99 a pound in local grocery stores. The cost per pound of hazelnuts currently limits consumption. The future for increased hazelnut consumption is excellent, as Europeans consume up to eight times what an American consumes.

See Hazelnut page 11



The freshly picked apple
looked warmly at the farmer.

“You kept me free of pests and disease,” she said,
“now let me return the favor
by managing your tax liabilities.”

– 19 –

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STEWARDSHIP AND NATURE**Birds, Farms and Conservation**

by Bill Wilson

Mine was not a boyhood in deeply rural America. I was born and raised in the north-east corner of New Jersey, in Bergen County.

In what is now one of the most densely populated areas of the U.S., we boys and girls of the 1950s enjoyed a freedom and natural abundance in our patch that seems impossible today.

One of the best parts of that life was local farms and the wild things on them. We saw white-tailed deer and red and grey foxes—spooky, careful and not abundant—squirrel, rabbit, possum, raccoon, skunk, woodchuck and muskrat aplenty. Occasional mink and weasel. Snakes, toads, frogs, salamanders, box turtles, wood turtles, and in clear, cold brooklets that flowed down from the Palisades on one farm, impossibly beautiful tiny brook trout. And lots of birds. Before DDT really struck and suburban development exploded, our county was full of birds. Wood thrush song filled the woods throughout spring and early summer, bluebirds, American robins—then fully migratory—cardinals, brown thrashers, migrating and nesting warblers, flashes of scarlet tanager, swallows, and on and on. Peregrine falcons still nested on the Palisades. No wild turkey, but ring-necked pheasant year round, and woodcock in season were a constant. Bobwhite quail and ruffed grouse were not plentiful but there if you knew their spots.

The farms around us were all small and most raised vegetables and fruit for farm stand sale, export to the commercial markets in New York or, in the case of apples, for making cider. A few were not really farms but estates with horse pasture, some hay and small kitchen gardens. We did not look



Sunrise over the co-op farms of UCA San Juan del Rio Coco in the highlands of Northern Nicaragua

for exotic or rare birds, but it was on the farms that we most often saw the unusual—at least unusual for us. An exciting goshawk late one fall, a snowy owl sliding through a woodlot one January, waves of common nighthawks over ripened corn in late August evenings, ruby-crowned kinglets bobbing on spent raspberry thickets in November and, on one occasion, an eastern meadowlark classically posed on a rock in the middle of a lightly used pasture.

There were fewer farms each year. Now there are just two left in my old territory. As development and DDT took hold, much of the abundance we took as normal began to disap-

pear. By the late 60s, it was all but gone and so was I, an urban dweller for the next four decades, but lucky enough to visit rural and wild places regularly. As time passed and family farms disappeared at an alarming rate in America, my thoughts frequently went back to these wonderfully pleasant places of my youth. And my sad thought was that the small family farm is now all but gone.

So when, in 2009, we started a Bird Friendly® coffee business and I visited farms in Latin America where our coffee comes from, I was struck by the extraordinary bird life and natural abundance on these coffee farms. Different habitat, different flora and fauna, different history, culture, and languages, but somehow many of the same enchanting attributes of family farms in the 1950s back home. The connector, beside the commerce of coffee, was the presence in our winter of many of my boyhood birds. Inspecting a coffee plant nursery and coming face-to-face with a male rose-breasted grosbeak was almost as exciting as any birding experience can be. Mixed flocks of orioles and warblers, furtive wood thrushes without their spring song, hummingbirds galore, and western birds such as scissor-tailed flycatchers and western tanagers that, in my boyhood, existed only in books are as casually present as the bird bounty of my youth.

Underlying all is the honest environmental stewardship of the family farmers that tend the farms, some families growing coffee for over 150 years. While coffee is the cash crop, fruits, vegetables, chickens and a few cows and horses round out the scene. The exotic wild birds, orchids, shrubs, first growth trees, reptiles, amphibians, butterflies, and bees of the tropics mixed in with occasional jaguar, sloth, and howler monkey—existing in complete harmony

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with the farms—form a tapestry of sustainability that is exhilarating.

Contrasting with these organic farms carrying the Smithsonian Migratory Bird Center's certification, the "sun" coffee farms of big agricultural enterprise are bereft of almost all the plentiful and varied wildlife found on our coffee farms.

We sponsored scientific surveys on the coffee farms we buy from to "certify the certification" for ourselves. Confirmation: The surveys conducted on farms that supply Birds & Beans Coffee found more than 130 species of birds, including vireos, thrushes, flycatchers, tanagers, and orioles. The survey teams also found several warblers, including high numbers of Tennessee, chestnut-sided, black-throated green and Wilson's warblers, as well as golden-winged warblers—a candidate species for endangered listing in the U.S. More than 30 species of neotropical migrants and more than 100 indigenous species of birds share the farms we covered.

This led me to think about U.S. farms and bird conservation. My admiration for the family farmers in the more than 1,800-member Organic Valley co-op led to us sponsoring late spring surveys matching those we had done on the coffee farms in winter. Another set of great results.



Rustic shade coffee, farming the old fashioned way

Hazelnut from page 9

Hazelnuts provide a very profitable income well above what any annual grain crop can, after the necessary 6-year wait before the trees produce a significant amount of nuts. Assuming only 2000 pounds of nuts (up to 2800 lbs. should be attainable) at direct wholesale pricing of only \$2.50 per pound (we currently sell for \$3.50 per pound) amounts to \$5000.00 per acre. In contrast, the average corn crop yields 160 bushels per acre in New York and at a current price of under \$4.00 per bushel equals only \$640 per acre. Hazels require similar annual input costs as corn, and organic sustainability should be readily achievable as the hazel tree is native unlike most annual crops grown.

Hazel flowers are wind-pollinated, so no bees or butterflies are needed for pollination. Hazels have separate male flowers, called catkins, that form in late summer and shed pollen early in the spring before leaves emerge. Female flowers emerge from a bud and require pollen from a second tree, because its own pollen is self-incompatible. Therefore, two pollen compatible strains of hybrid trees are planted in an orchard.

The majority of the cost to establish an orchard is in the first two years. First the field must be cleared of rocks, with pH adjusted to range from 6.5 to 7.0 pH. Deer fencing for the orchard and individual tree protection is suggested. The animals find that the nut trees are tasty and the leaves, buds, and bark are readily consumed by deer, moles, voles, and mice. Protection is needed for the first three years until the tree is large enough to not be bothered by any animal. Young hazel trees need irrigation to ensure good survivability and growth, until the roots grow deep enough to not need irrigation thereafter.

Ideally, a commercial orchard will use clones of hazel trees

Many of the same migratory species from the Latin American bird surveys also showed up in on Organic Valley dairy farms in the Midwest and East that found more than 50 at-risk breeding bird species. Specific species found in the Organic Valley surveys included indigo bunting, American redstart, and 12 Baltimore orioles on a farm in Minnesota; breeding tanagers, orioles, and buntings on a farm in Ohio; four species of neotropical migrants that winter in coffee farms—black-and-white, Blackburnian, chestnut-sided, and black-throated green warblers—on a farm in Vermont; and an unexpected treasure trove of 22 indigo buntings, along with tanagers, orioles, and wood thrush in North Carolina. Importantly, these farms are also all virtual sanctuaries for grassland birds of great conservation concern, including grasshopper sparrows, eastern meadowlark and bobolink.

What makes the Organic Valley farms so attractive to birds is that they are unlike the eco-deserts of big agriculture's mono-crop farms. The buffers strips, hedge rows, ponds and wood lots on these farms provide the bio-diversity that birds need to survive and thrive. Indeed, these conditions are central to the health of the Earth we all share.

The Bird Friendly coffee and organic dairy farms surveyed and those with similar certifications provide extremely valuable habitat for neotropical migratory songbirds at both ends of their range. Some of our most vibrant and beautiful birds are getting a conservation boost at times of the year when they most need it. Sustainable farming is good for birds, farmers, workers, and the environment we all cohabit. If North American consumer trends of increasing consumption of organic food and beverage continue, we may truly be headed back to better days of family farms that support the natural world as well as the marketplace.

There is no official certification for coffee labeled as shade-grown; indeed, some coffee with shade-grown on the packaging is grown under banana trees to which artificial fertilizers and pesticides are heavily applied. The official Bird Friendly® certification from the Smithsonian Migratory Bird Center combines USDA Organic standards with require-

ments for forest shade cover, multilayered canopy, and the presence of mosses and orchids growing on the trees. While still a small factor in the coffee market, Bird Friendly coffee is showing very strong year on year volume growth.

Significant growth in U.S. organic dairy acreage is also a hopeful sign of the future. As overall organic farm acreage in the United States has doubled since 2003, a significant portion of that growth has been driven by the popularity of Organic Valley dairy products. In 2014, Organic Valley dairy farms constituted about half of all organic farm acreage in Ohio, Vermont, and Wisconsin, and about a quarter of all organic farming acreage in Minnesota, New York, North Carolina, and Pennsylvania. In Indiana, Organic Valley dairy farms account for more than three-quarters of total organic farming acreage.

These farms and the other farms and ranches providing organic food in a truly sustainable manner may form the basis of a new food system. Change driven by farmers dedicated to true sustainability, by the CSA and farm to table movements and by consumer demand for better food that is safer for families. Sustainable 'Bird Friendly' farming turns out to be good for us all and for the Earth we all share.

Trees are available all year long and can be sourced from the following list and several other nurseries:

1. Badgersett Research Corporation for seedling trees at <http://www.badgersett.com/>
2. Grimo Nut Nursery layered and seedling trees at <http://www.grimonut.com/>
3. Oikos Tree Crops seedling trees at <https://oikostreecrops.com/>
4. Z's Nutty Ridge layered and seedling trees at <http://znutty.com/>

Hazelnuts offer a great opportunity for and any agricultural system from a backyard to a large farm. Different agricultural systems incorporating hazelnuts include: silvopasture, permaculture, agroforestry and woody agriculture. These



Jaus Family Farm buffer strips, Gibbon MN, a wildlife and pollinator sanctuary



How controlled pollination is done at a breeding orchard in Cortland, NY. New hybrids of trees are generated by controlled pollination. Pollen is first blocked from receptive flowers by Tyvek bags. Once the pollen shed is done the flowers are then hand pollinated from another quality tree.

systems utilize trees as an integral part of a sustainable agricultural practice. We believe this trend will continue to grow and lead both environmentally and economically over annual grain crops.

Dawn and Jeff have been growing and breeding hazelnut trees for over 23 years at Z's Nutty Ridge LLC and can be reached at Find us at: Dawnz@znutty.com

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SOIL HEALTH**Small Scale No-till Vegetables at Seeds of Solidarity Farm***Mulches and tarps combine to build active soils and suppress weeds*

by Brian Caldwell and Ryan Maher

In 1996, Ricky Baruc and Deb Habib moved to 30 acres of forested land in Orange, MA. Roughly 5 acres of woods over uneven, rocky soil were logged and cleared in preparation for a house, farm and teaching center. The couple had met about 10 years previously at the New Alchemy Institute on Cape Cod, which was a cutting edge sustainability research organization. The Institute explored ways for people to produce food and energy in their living spaces, notably growing Tilapia fish and vegetables in greenhouses integrated into homes. After NAI, Ricky farmed commercial organic vegetables in central New York for several years, but was disenchanted with the mechanization, pace, and scale. He went on a peace pilgrimage with Deb in 1994, and the two formed a vision of a teaching center that combined positive actions with promoting a deep understanding of peace as a way of life.

Seeds of Solidarity Farm includes both a working farm and a teaching center. Local young people attend the SOL (Seeds of Leadership) garden program on the farm in summer, building awareness and confidence while growing and donating food. The creation of dozens of school gardens and recently a program to teach food production to prison inmates are also parts of the education side.

The farm embodies this passion for right livelihood and positive practice. It uses energy from renewable sources whenever possible, including biodiesel vehicles and solar irrigation and refrigeration. The focus here, for the purposes of this article, is its unique no-till crop production system.

Over the past 20 years, Ricky and Deb have created a no-till method of growing commercial vegetable crops that relies on using locally available materials to feed worms and build soil. They have transformed their acidic cleared forest soil, which now has a thick layer of nutrient-rich topsoil. Importantly, their methods can be used by small farmers and gardeners in both urban and rural situations. It does not scale up easily, but it scales down readily. Seeds of Solidarity's motto is, "Grow food everywhere!"

In the most basic form, their soil-building steps to establish vegetable beds are:

1. Cover the planting area with cardboard pieces, overlapped along the edges. By sourcing through local furniture supply stores, they get large sheets. This is preferably done in fall. Cardboard can be placed over tilled soil or sod.
2. Add a layer of weed-free mulch hay on top of the cardboard to hold it in place and add organic matter.
3. In spring, make holes in the cardboard-mulch to accept transplants. Remove about a quart of soil and add a quart of mature compost.
4. Transplant into the compost.

By the following spring, the cardboard and hay have mostly broken down into the soil. Soil is shoveled out of the pathways and thrown onto the planting beds about every other year, adding to the rich soil there. Raking it smooth results in raised beds, for better crops when rain-fall is excessive, a frequent situation in recent years. Ricky uses 3.5-4 foot wide beds, with 1-foot pathways. Cardboard and hay are applied on top of the beds for several years, with cardboard edges coming down into the pathways to help suppress weeds. Rain tends to form the cardboard to the shape of the raised beds.

Right - Kale at Seeds of Solidarity Farm
Image from NESARE report

See Solidarity page 13



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Hoophouse salad green production

Photo by Baruc

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Solidarity from page 12

Organic inputs into this system are high. A 12" layer of hay mulch equates to about 10 tons per acre. One quart of chicken manure compost per plant is 7 cubic yards per acre at a 3' by 3' plant spacing, or 28 cubic yards at 18" by 18". The cardboard itself also provides organic matter and nutrients to the soil. By avoiding tillage and investing in practices that add organic matter, the system creates ideal conditions for earthworms and a healthy soil biology.

Soil temperatures are moderated with these mulching conditions and moisture is conserved. The need for weed control is almost zero in the cardboard + compost + hay mulch system and productivity is high. Since Ricky does most of the crop production work himself, reduction of weeding time is important. This system has shown to work well for transplanted crops, like their brassicas, tomatoes, cucurbits and hot peppers.



Taking off the tarps

Photo by Baruc

Other main crops include salad greens (grown mostly in hoophouses) and garlic and more recently corn and wheat staple crops. Seeds of Solidarity Farm includes five hoop-houses in addition to the vegetable fields. Their land was so uneven that they brought in sand to level areas for the hoop-houses, and built new soil right over it. The hoop-houses extend the harvest season and allow for intensive production of salad greens, Asian greens, spinach, tomatoes, and peppers. All crops are sold at a farm stand on site.

Ricky and Deb wanted to document and share results from their mulching practices, so they submitted a NESARE Farmer/Rancher grant proposal along with Rachel Scherer (Heritage Fields Farm) and Christopher Picone (Fitchburg State College). It was funded, and they ran a replicated study on their farm in 2011-12. The project was implemented on an area that had been cleared but had not yet been farmed.

It included four treatments, each replicated three times. They were 1) undisturbed, unmulched, no crop control; 2) 12" of mulch hay; 3) 12" of mulch hay over 1" of newsprint; and 4) 12" of mulch hay over 1/4" of corrugated cardboard. Each treatment covered a 3' x 50' bed. Transplanted brassica, cucurbit, and tomato crops were grown over 2 seasons in treatments 2-4. For each transplant, a shovelful of soil was removed and replaced with mature chicken litter compost.

At the end of the study, many measures of soil fertility had increased dramatically in the cardboard + hay mulch treatment, relative to the unmulched, no crop control (Table 1).

Sample	pH	Organic matter	Cation exchange capacity	Phosphorus	Calcium
Cardboard + hay soil	6.9	12.5	27.9	231	3043
Control soil	5.7	10.8	17.6	4	325
Compost	7.0	14.4	37.2	622	3339

Table 1. Fall 2011 soil and compost analysis

The mulch hay alone and mulch hay + newspaper treatments produced intermediate soil test numbers. Results showed very large increases in pH, organic matter and cation exchange capacity for only a two-year period. They reflect heavy inputs of organic materials, lack of tillage, and the metabolic and mixing functions of earthworms and other organisms. Control soil (cleared forest) organic matter levels were very high to start with. Note that the cardboard plus hay values are intermediate between the control soil and compost. This is likely the result of placing compost into the crop planting holes. It is likely that after two years of the cardboard + hay treatment, crop yields are maximized and would respond little to further increases in soil nutrients and organic matter.

A question that arises from the high soil test numbers under this program is, could the inputs be dialed back after a few seasons? Could compost and hay mulch be reduced or eliminated once the soil biology is revved up, with no detrimental effect on yields or weeds? In fact, Ricky has switched to covering cardboard with a light dressing of horse manure compost, just enough to hold it down. He feels that once his soil is built up, this is sufficient for good production. Researchers at Cornell and other universities are also looking at this question.

More recently, Ricky has been implementing another novel no-till practice, the use of tarps made of tough, durable silage plastic. Tarps are placed over fields during periods of about 6 weeks when they have no cash crop, then removed intact before the next planting. The function of the tarps is to kill weeds and create an environment, which allows earthworms and other soil organisms to eat crop residues while suppressing any weed growth, essentially prepping the soil for the following crop. The tarps also warm the soil in spring. This practice once again uses no tillage. The heavy plastic can be reused for years before being recycled. An additional feature of tarped areas is that no water infiltrates them and none evaporates from the soil. Thus, leaching of nutrients is minimized.

There is some "parking lot effect" in which rainwater accumulates just off the tarp edges, so tarps cannot be too large. Typically they are 25 or 40 feet wide and 100 feet long. The tarps greatly reduce the labor needed to prepare beds for planting. There is no need to remove residues or hoe out any weeds—Ricky removes the tarp after the proper period, adds compost if needed, and plants into the mulch. Tarps also increase flexibility for planting cover crops and small seeded crops (mulch may need to be

raked off for these), which are difficult to grow in cardboard-mulched beds. "They give you so much freedom!" says Ricky.

The tarps have been especially useful to control weeds in the farm's hoop-houses used to grow salad mix. The residues and weeds there are killed and controlled in only half the outdoor time, 2-3 weeks, due to warmer conditions. Ricky uses 4'x 96' strips of tarp to manage individual beds in the hoop-houses.

In outdoor fields, a typical sequence might proceed as follows: Cardboard, which is in limited supply, is put down in fall or early spring and covered with a thin layer of horse manure compost (inexpensive, not so nutrient rich as chicken manure compost). The following May or early June, this is planted to squash, brassicas, or heirloom corn. Residues and weeds from these beds are then scythed down after harvest, and covered with tarps. Over 6 or more weeks, weeds die and residues decompose. If the timing is right, tarps can be removed in October or November, and garlic planted.



In the fall of 2015, tarps had just been removed from these beds to plant garlic. No mechanized bed-forming here, just soil built up with cardboard and mulch!
Photo by Caldwell

Temperature and moisture management are important elements of these no-till approaches. In spring, when tarps are removed from the raised beds, the soil is warm for good early growth of salad mix, spinach, etc. In summer, however, the even temperatures under the cardboard and hay mulch are beneficial for most crops. Similarly, the impervious tarps moderate planting bed moisture in spring, reducing waterlogging in wet seasons and holding in moisture when it is dry. Lack of tillage and a thick layer of mulch conserve moisture for summer crops. These factors plus the use of hoop-house structures will likely play important roles in a future with greater weather extremes.

Ricky says that cardboard mulching and tarping are keys to success with no-till organic vegetable production. These two tools unlock powerful soil allies—earthworms—to help the farmer reduce labor and build soil, with remarkable results. Seeds of Solidarity Farm has added a few more pieces towards solving the long term puzzle of sustainable living in the Northeast.

Reduced tillage takes many forms. This story is the 5th in a series featuring organic vegetable growers that have transitioned to reduced tillage systems toward greater farm sustainability. Experienced growers at diverse scales are developing strategies for tackling weeds, managing rotations, and integrating cover crops while minimizing soil disturbance. Look for past and future SFQ issues to learn the practices that are helping these growers build better soils. Visit <http://smallfarms.cornell.edu/projects/reduced-tillage/> or contact Ryan Maher of the Cornell SFP for more information on this project, ryan.maher@cornell.edu

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LIVESTOCK AND POULTRY**Harvest NY Beef Seminar Cuts to the Chase**

by R.J. Anderson

Raising 20 to 30 pigs and four beef cattle a year, Jefferson County's Mike Hubbard has become a trusted beef and pork source for his hyper-local clientele. Looking to one day grow his operation and possibly add a meat-cutting component, this spring Hubbard traveled to Cobleskill, New York to attend the Beef Cutting Seminar co-hosted by SUNY Cobleskill and the Harvest New York regional agriculture program.

Organized by Harvest New York, a Cornell Cooperative Extension (CCE) team targeting economic development and sustainability that recently expanded into the northern part of the state, the sold-out one-day seminar attracted 15 beef producers from seven counties interested in learning about cuts of meat, consumer preferences, pricing strategies, and marketing tactics.

Arriving with more questions than experience, Hubbard appreciated the opportunity to tap into the research and expertise of Cornell University, SUNY and beef industry experts. "That seminar was the first of its kind that I had seen offered," says Hubbard. "It was perfect for a small producer like myself because it went over so many facets from cutting to pricing to marketing. I have a better plan for how I want to grow and can feel I can speak more effectively to my existing customers about the various cuts of beef."

Prompted by growing consumer interest in the production and availability of locally sourced meat and meat products, Harvest New York Livestock Processing & Marketing Specialist MacKenzie Waro says the beef cutting seminar was the first step in a partnership that will host classes for other meat producers, including lamb, pork, goat and charcuterie.

"The collaboration between Harvest NY and SUNY Cobleskill is a natural fit," says Waro. "SUNY Cobleskill has the facilities to help Harvest NY meet its educational goals for meat processing education, while Harvest NY has the ability to grow the meat industry in the state. We are looking forward to a mutually beneficial long-term relationship."

Kicking off the inaugural seminar, the attendees began their morning with a meat marketing class led by Waro, followed by a primer on the New York beef industry conducted by Carol Gillis, executive director of the New York Beef Council. The morning session wrapped with a section on meat safety, which included a cuts tutorial, taught by SUNY Cobleskill Meat Lab manager Betsy Jensen.



MacKenzie Waro, a livestock processing & marketing specialist with Cornell Cooperative Extension's Harvest NY economic development program, is helping to coordinate a series of meat processing and marketing sessions.

The afternoon portion began with a meat-pricing lecture taught by Matt LeRoux, marketing specialist with CCE of Tompkins County. Ending the day was a hands-on meat cutting session at Cobleskill's state-of-the-art facility hosted by SUNY Cobleskill visiting instructor Michael Lapi.

"The people that presented all really knew what they were talking about," says Hubbard. "How they present information about the cuts and seeing the meat lab in action was impressive. And it was eye-opening to learn about the various marketing tactics and steps I would have to take if I wanted to put my name on my packaging."

In addition, Hubbard said what he learned from LeRoux helped reshape his marketing focus as he looks to expand. "I'm not usually a huge fan of classroom sessions, so I appreciated that he got right down to the nuts and bolts about the returns from different markets," says Hubbard. "For example, I learned that with my type of operation and my busy schedule, I probably don't have time for farmer's markets and that in my case it's probably a better idea to let my customers come to me."

"Really, all of the presentations were great," Hubbard continues. "I recommend the seminar highly. I got a ton out of it."

Following up on the success of the beef-cutting workshop, Harvest New York and SUNY Cobleskill invited pork producers to hone their skills in a one-day Pork Cutting Seminar on Wednesday, Aug. 24. Designed for producers selling to markets, looking to cut their own meats and those interested in learning details about specific cuts of pork, the course covered which cuts are most profitable, quality of meat, what products consumers want, and marketing strategies.

Next up will be a one-day seminar focused on poultry cutting and marketing, held Oct. 11, at SUNY

Cobleskill. That will be followed by a lamb cutting workshop at the same facility on Jan. 18 of next year and expanded beef and pork seminars from March 20 -24.

R.J. Anderson is a staff writer/communications specialist for Cornell Cooperative Extension.

To learn more about Harvest NY meat processing opportunities for small producers, contact MacKenzie Waro at mlw55@cornell.edu. To view a lineup of upcoming Harvest NY seminars at events, go to harvestny.cce.cornell.edu.



Meat processing seminars co-hosted by SUNY Cobleskill and Harvest NY feature expert demonstrations and hands-on cutting opportunities.

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EXTENSION NEWS**Northern Exposure: New CCE Ag Team Aids North Country Farmers**

by R.J. Anderson

Home to rich soil, a large dairy presence, and determined crop producers, New York's North Country also has more square miles than the entire state of Vermont and faces unique agribusiness challenges. Helping farmers navigate those issues are a pair of new regional agriculture teams fueled by Cornell University research and resources.

Now at full strength following its 2015 launch, the Northern New York (NNY) Regional Agriculture Team joins Harvest New York's northern chapter as Cornell Cooperative Extension's (CCE) latest additions to its network of regional agriculture programs.

NNY's eight specialists collaborate with county-based extension educators, Cornell faculty and members of other CCE regional teams to solve agribusiness issues in Lewis, Jefferson, Franklin, St. Lawrence, Essex, and Clinton Counties. Utilizing resources from outreach programs such as Cornell College of Agriculture & Life Sciences' PRO-DAIRY and CCE's Harvest New York economic development program, the team provides group-based educational programming, one-on-one technical assistance and conduct on-site research projects in the region.

"The farmers I've talked to are excited about our program because they haven't always had access to all of the resources we provide," says Dr. Kim Morrill, one of the team's two regional dairy specialists along with Lindsay Ferlito. "And while our region's producers are hungry for new information, they aren't always able to travel to meetings in Syracuse or Ithaca. Plus, specialists from downstate don't come to Northern New York very often."

"On top of that, not every CCE association in the North Country had a dedicated dairy, field crops or ag business specialist for their county," Morrill adds. "With the makeup of our team, every farmer in our six-county area has



Members of the team (from L to R): Lindsay Ferlito, Kim Morrill, Mike Hunter, Tatum Langworthy, Kitty O'Neil, Betsy Hodge, Kelsey O'Shea, Anika Zuber and Lindsey Pashow.

access to current, up to date research results and technology as well as experts on the cutting edge of new techniques."

Morrill says that for many producers in the region, one of the greatest needs is farm business management expertise—a role now filled by NNY's Kelsey O'Shea, who started May 1. "Prior to Kelsey joining us, many farmers did not have access to this resource unless they paid a consultant who worked for a bank or lending agency," says Morrill. "For many of our small farmers this was not financially feasible. Plus, they preferred a non-biased approach to farm business management. Kelsey gives them that."

Leading the team is Dr. Kitty O'Neil, a field crop and soil specialist in St. Lawrence County, who, along with Watertown-based Field Crop Specialist Mike Hunter, can often be found on farms providing research-based field crop production recommendations and resources.

"We are here to help farmers implement changes that will enhance farm prosperity and resilience through sustainable growth," says O'Neil. "At the same time, we show them ways they can minimize environmental impact and maintain long-term soil health."

Rounding out the team are regional dairy and livestock specialists Betsy Hodge and Ron Kuck. Providing administrative and communications support is Tatum Langworthy.

Collaborating—and often working side-by-side—with the NNY team are three members Harvest New York. Launched in western New York in 2012, Harvest New

York's recent expansion into Northern New York represents CCE's commitment to workforce development as well as expanding and increasing the profitability of the region's agribusinesses.

As a dairy processing specialist, Anika Zuber works with regulatory agencies, suppliers, workforce development agencies, manufacturers, and the Food Science Team at Cornell to develop and improve dairy manufacturing operations in the North Country. Meanwhile, Livestock Processing and Marketing Specialist MacKenzie Waro partners with processors, producers and consumers to develop marketing opportunities and foster communication between industry stakeholders. The third member, recently-hired Lindsey Pashow, has hit the ground running in her role as the team's agriculture business development and marketing specialist.

"The Harvest New York specialists bring a different angle to our work of promoting and sustaining agriculture in northern New York," says O'Neil. "Anika, MacKenzie and Lindsey are focused more on post-harvest needs and concerns of ag businesses while the traditional focus of similar extension teams has been exclusively on the production side of agriculture."

"Those three have dug right in and are beginning to help address new regulations and sanitation training within dairy processing plants, identifying bottlenecks and the potential of northern New York meat processing systems and connecting local food promotional efforts with broader 'cuisine trail' projects across the region," O'Neil continues. "Each of these efforts will have an impact on success and viability of North Country producers and marketers of raw and processed foods. Blending Harvest New York expertise with our crops, dairy and business management experience gives CCE the ability to assist farmers in nearly every aspect of the food production system."

With the combined forces of NNY and Harvest New York, along with support from Cornell's College of Agriculture and Life Sciences, North Country now have access to the resources that can help them with a variety of issues.

"We are really proud of our versatility," says O'Neil. "We can help with everything from making a recommendation on a feeding method to promote calf health to assisting with intergenerational transfer of business ownership within a family or communicating new developments in control of a certain soybean pest," O'Neil says. "If we can help individual businesses weather the adversity that comes with challenges like low milk prices, climate change, new regulatory requirements and whatever else comes along, the industry as a whole will be stronger. And so will our region."

R.J. Anderson is a staff writer/communications specialist for Cornell Cooperative Extension.



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FARM BUSINESS

Viability of Farmers Markets for Direct Marketing Farmers

by Diane Eggert, Farmers Market Federation of NY and Laura Biasillo, Cornell Cooperative Extension, Broome County

Farmers all across the country often find that farmers markets are a profitable outlet for their farm products. Markets provide farmers retail level pricing, which adds significantly to their bottom line, as compared with many other venues. But farmers who are not involved in farmers markets often dismiss them as a cost effective strategy for their farm. In this article, we use survey data to show that farmers markets are indeed a profitable and worthy venue for many types of farm businesses across New York State.

For starters, looking at the experience levels of farmers participating in farmers markets as reported in the survey, we can assume that farmers support the opportunity to direct market to consumers through farmers markets. New and inexperienced farmers using farmers markets are staying on. The benefits they get, the income they earn and the direct interaction with their customers fits their farm goals as well as their personal goals.

Level of Experience: years participating in markets	Percent of reporting farmers
New this year	7%
1 – 5 years	32%
6 – 15 years	32%
16 – 25 years	12%
26 – 50 years	15%
51+ years	1%

Income Potential of Farmers Markets

A recent survey of NYS farmers participating in farmers markets provided information on the average

daily income for sales at farmers markets for various product lines. These figures are a cross-cut average of the entire state. Regional differences in average daily income would reflect the number of markets in the region, along with customer demographics, and the urban vs rural vs suburban nature of the region.

In the survey, farmers reported attending an average of 2.5 markets per week. This further increases the amount of product farmers are selling at farmers markets, the number of customers they are reaching, and the profits they are adding to their farms.

Increasing consumer reach gives farmers the opportunity to increase their sales, not only by the numbers alone, but by building relationships with their customers to increase loyalty. While we determined the average sale per consumer transaction, we know that the size of an average sale will increase when coming from a consumer that has developed an affinity for the farmer, feels a “part of” the farm, and prefers shopping with their favorite farm. So, the more farmers can increase their consumer loyalty, the greater the level of each transaction, and ultimately, the greater the average daily sales.

Costs of farmers market participation

Now let’s look at the costs of farmers markets. Marketing is critical in reaching consumers and driving traffic to buy from participating farms at the market. The fees that farmers pay to participate in markets are often used by the market management to cover the cost of advertising and promotion. In this way, marketing costs are shared among the members of the market, and are not borne by each individual as they would be with other forms of direct marketing.

While most farmers will and should self-promote their farm and their participation in the market, it is often done with no or low cost methods. Social media is a means of choice to reach consumers, tell the farm’s story and build a strong, loyal customer base. Other methods of self-promotion include posting pictures of the farm at the market booth, using signage

Product	\$
Fresh cut and dried flowers	225
Meat, poultry	308
Meat, exotics	350
Honey products	350
Wine/beer	425
Meat, beef & pork	438
Meat, lamb & goat	490
Eggs	510
Maple products	550
Dairy products	805
Bedding plants	831
Vegetables	905
Fruit	1113
Baked goods	1467

Average Daily Sales by Product Line

with the farm name and location, and putting farm brochures and business cards on the table for customers to pick up.

Other market costs include liability insurance for market participation. The coverage includes slip and fall coverage, as well as product liability. Most markets will require the coverage to be \$1 million per occurrence. Typically farmers use a rider from their farm policy to cover them at farmers markets. The riders can be very affordable – some policies offer the riders at no cost, others can be as low as \$35 per rider. In a survey of direct marketing farmers, the average cost of insurance for farmers markets is \$149, encompassing riders, as well as full policies covering farmers market participation.

Vendor fees are another seasonal expense paid to markets by farmers. Fees for space vary by market based on the size of the market, the average income farmers will make at the market, the length of the market season and the various expenses incurred by the market management. Vendor fees in New York State are typically very affordable when compared to many other states. In NY, markets typically charge farmers a flat fee, while many other states charge a percentage of sales, typically between 6-8%. In a survey of NYS farmers market vendors, we found that the

average fee in NY is only 2.3% of the farmers’ daily sales. This fee covers a multitude of expenses in running the market, including marketing, market insurance, vending and street permits, DPW assistance with street closures, benches, garbage, and manager salaries. These expenses are shared among the participating farmers in paying vendor fees.

Labor is another cost of farmers market participation: help with setup, tear down, and customer sales. Farmers should look at the level of sales to help them determine the correct number of employees to bring to market. With produce farmers, the average level of sales per employee is \$370. So a farmer earning sales of \$1200 should bring no more than 3 people to the market. One salesperson should be the farmer himself, as statistics show a higher earning when the farmer is on hand. Customers appreciate the opportunity to build a relationship with the farmer and employees are much more attentive to business when supervised. Further study shows that the rate of return on employees involved in market sales is \$127 earned for every dollar spent on the employees.

The materials a farmer must bring to market are an additional cost. Tables and tents are required to keep product off the ground and protected from the elements. These are typically one-time costs and are reused year after year. Other costs are seasonal, such as bags, signage, display materials, etc. In a survey of participating farmers, the average seasonal expense is \$138.

One expense that would be unique to farmers markets is the time that farmers spend away from the farm. This isn’t necessarily a monetary expense, but is a serious consideration. Most markets average a 3-4 hour market day. Assuming an hour for set up and another hour for tear down, that is about 6 hours per market day away from the farm. Farmers are travelling on average of 17 miles to market, so that adds another hour away from the farm. In addition, farmers attend, on average, 2.5 markets per week. That means farmers are away from the farm for an average

of 17–18 hours a week. This is time where farm work either stands still, or the farmer must have trustworthy employees that carry on in their absence.

Overall, a comparison of income potential versus expenses shows a rate of return on par with, and in many cases, exceeding other direct marketing venues.

Product	Average sale per transaction
Vegetables	\$11
Fruit	\$11
Maple products	\$11
Honey products	\$16
Bedding plants	\$9
Fresh cut and dried flowers	\$20
Dairy	\$12
Meat: beef, pork	\$12
Meat: poultry	\$9.5
Meat: lamb, goat	\$7
Meat: exotics	\$15.50
Eggs	\$8
Baked goods	\$13

Average Sale per Transaction by Product Line

Non-Monetary Benefits of Farmers Markets

There are many benefits to farmers markets beyond the income potential. Farmers were asked what types of benefits they reaped with their farmers market participation. The list was extensive.

Approximately half of the farmers surveyed responded that they use the farmers market to test new products. These could be new vegetable varieties or value-added foods made with their farm ingredients; such as salsa made with the farm’s own tomatoes and jalapeno peppers. By testing consumer reaction to new products, farmers can get instant feedback from consumers.

This is a cost effective means of product testing, allowing the farmer to trial small batches rather than incurring the full costs of production on a product that may ultimately not meet customer needs.

Learning about customer

needs, wants and expectations was a strong motivation for farmer participation in farmers markets. Three quarters of the farmers participating in the survey indicated that this was a benefit of participating in farmers markets that was very important to them. Even when also participating in other marketing channels, including wholesale, the direct connection with customers benefitted their farm plan as a whole. They were able to discern food trends, learn more about ethnic food needs, and respond accordingly, both at the farmers market and in their other marketing efforts. This helped them to be more sought after by buyers, as well as the consumers in their markets and helps add to their farm profitability.

Sixty percent of the farmers surveyed indicated that they find farmers markets to be ideal places to promote their other farm enterprises. At the market they have a captive audience of people who value local food, appreciate local agriculture and would be a strong customer base for other farm enterprises, such as farm events, pick-your-own operations, agritourism, etc. Promotions can be as simple as signage or brochures on the market table and direct conversations between farmer and consumer.

Approximately half of the farmers surveyed felt that participating in farmers markets helped them become better marketers and producers. There is a camaraderie among farmers participating in farmers markets, resulting in a lot of networking and sharing. Inexperienced farmers benefit from the networking by getting much needed advice on production issues, such as soil health, disease and pest management, and many other issues. Ultimately, the inexperienced farmers find their skills improving, their harvest expanding, and their profits increasing.

The same is true for marketing skills. Whether by asking questions, or observing others in the market, farmers learn much-needed marketing skills, from display techniques to customer service skills. The result is a more

RESOURCE SPOTLIGHT**Do You Want to Make Your Hoppy Hobby Your New Job?**

by Lindsey Pashow (CCE Harvest NY) and Jesse Strzok (ENYCHP)

Are you ready to turn your brewing passion into a business? With New York's different alcohol licenses, it is more affordable than ever to get started.

The farm brewing law, passed in 2012, has hard rules for production, serving, selling, and sampling of product. Some of those rules include: production of up to 75,000 barrels of New York State labeled beer and/or cider annually; beer sold by the glass, at up to five branch locations; and selling of other New York State label beer, cider, wine, and spirits.

These different laws are designed to increase demand for the inputs of production coming from New York. The farm brewery law currently requires 20% hops and 20% other ingredients must be grown in New York State until the end of 2018. The requirements change in 2019, with an increase to at least 60% hops and 60% other ingredients grown in New York State through to the end of 2023. Starting in 2024, 90% hops and 90% all other ingredients must be grown in New York State. It's important to note that in meeting these criteria, water is not classified as a locally-sourced ingredient.

Starting a new business can be daunting. Key things to consider before pursuing a brewery venture include: a strong business plan, an easily accessible location for the

public, funding and capital access including grants and loans, and a quality product.

It is also important to understand that both brewing in your basement and brewing in large batches to the public requires strict quality control. However, there are some major differences. For example, it may hurt a little to dump a 5-gallon batch of home brew when something goes awry, but it's a whole different story if you have to scrap 100 gallons—the economic loss can be crippling.

As with any start-up, it's important to be realistic. After all, only 50% of businesses survive the first five years. The craft beverage industry is growing daily and is becoming more and more competitive. Finding the right niche for your farm brewery will be vital.

Some resources to help you consider getting into farm brewing include:

NYS Wine, Beer, Spirits & Cider – One Stop Shop: <http://esd.ny.gov/nysbeveragebiz.html>

New York State Brewery Supply Chain Analysis: http://harvestny.cce.cornell.edu/pdf/submission/pdf21_pdf.pdf

Wholesale Application Instructions: <http://www.sla.ny.gov/system/files/Wholesale-Application-Instructions-061713.pdf>

Wholesale Application: <http://www.sla.ny.gov/system/files/Wholesale-Application-06012016.pdf>

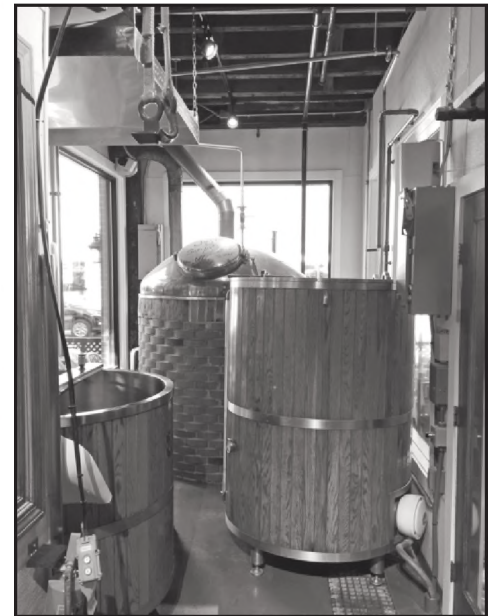
Wholesale Fee Chart: <http://www.sla.ny.gov/system/files/Wholesale-Fee-Chart-03112016.pdf>

Alcohol Label Information NYS: http://www.sla.ny.gov/system/files/Advisory_2014-7_-_Brand_Label_Registration.pdf

U.S. Department of the Treasury – Alcohol and Tobacco Tax and Trade Bureau: <https://www.ttb.gov/beer/index.shtml>

Remember, you will need to contact New York State Agriculture and Markets (1-800-554-4501) for when the time comes to arrange an inspection of your brewery.

Farm breweries are quickly gaining in popularity in New York.

**Viability from page 16**

successful marketer and a growing, loyal customer base that adds sales and profits to the farm.

Many farmers choose to participate in farmers markets because they need a larger share of the consumer dollar to support their farm and family. Two-thirds of the farmers surveyed indicated this was one of the benefits of farmers markets that is important to them. Many smaller farmers find that selling direct to consumers is the only way they can reap a large enough profit to support their farm. They have neither the land nor the labor to produce large enough quantities to support other marketing channels, such as wholesale to stores, restaurants or shipping through brokers. The profit level is not enough on small quantities to sustain the farm and family. The low cost of participating in farmers markets versus other direct marketing venues is very attractive to small-scale growers.

Many farmers felt that farmers markets are the "face of agriculture." In many cases, a farmers market is the customer's only direct access to agriculture. They are able to meet farmers, face-to-face at farmers markets and learn more about agriculture and local food. They hear the individual stories of the farmers, they learn more about the value of

agriculture, and more importantly, the value of supporting local agriculture. Over two thirds of the farmers surveyed felt that this was a major benefit of farmers markets and one they felt was important for them in taking an active role in the education of consumers.

Finally, we see that farmers markets are an excellent opportunity for new, start-up farmers. They are able to access an established customer base at the market, learn from other producers in the market, and feel their way to their own farm niche by their interactions with customers and the other farmers in the market. In addition, farmers markets are low cost entry. As we saw in the sample earlier, the costs of getting into a market, including vendor fees, insurance and equipment are much lower compared to direct marketing through on-farm means. Markets also do not require large amounts of acreage, nor large-scale equipment. There are many farmers being very successful at farmers markets and operating on 5 or less acres. But the profits they earn through direct marketing at farmers markets allows them the opportunity to expand – land, labor, and income.

With Funding by the NYS Farm Viability Institute



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EXTENSION NEWS**Profit Teams Help Farmers Improve Practices and Bottom Line**

by Claire Cekander

As beginning farmers developing their businesses beyond the first three years, each begins to evolve a slightly different method of farming. Whether the difference lies in the animals raised, vegetables grown, or interactions with the community, every farmer has a unique approach to earning a living from the land. Farmers at this stage arrive at successful practices through trial and error and by learning from already established farmers. Yet, this experimental stage of developing a farm business can be vulnerable, as farmers struggle to assess changes needed in production, marketing, and business practices to achieve the highest profitability.

To try and help farmers at this stage in their venture, the Cornell Small Farms Program developed the Beginning Farmer Profit Team Program. The Profit Team program aims to support small farms in New York State by providing financial assistance for farmers in their 3rd-9th year of business to meet with experienced consultants. Farmers can work with a consultant in any field, with the main goal being to increase profitability. Much like their farming practices, farmers have used the Profit Team Program in unique ways, but all with the goal of making their farm more successful.

Allan Gandelman of Main Street Farms has spent the past five years watching his farm expand. Once a high school social studies teacher, he became unsatisfied with the quality of food served in the school cafeteria. He decided to leave the school and start a farm with goals to continue to educate children, this time about healthy local food. To help start his farm, Allan applied to the Profit Team Program seeking aid to shadow successful farmers. Allan chose to increase his profitability by learning methods of farming through observing a variety of techniques. The Profit Team Program allowed him to visit established farms and learn by interviewing farmers and documenting successful methods. After one year in the Profit Team Program, Allan started expanding Main Street Farms. Just last year, the farm operated on 10 acres and now Main Street Farm is producing on 30 acres. As Main Street Farm continues towards their plan of converting 180 acres into usable farmland, Allan's main goals are to stay connected to the community. His parting advice to aspiring farmers is to remember that "teaching people what to do with vegetables is just as important as growing them".

On the west side of Seneca Lake, Shannon Ratcliff and Walter Adam of Shannon Brook Farm, a NOFA-NY Certified Organic farm, are raising free-range chickens, Pekin ducks, chicken eggs, grass-fed lamb, and pastured pork. After living and working in New York City, Shannon and Walter bought land and retired to their farm. As they started to raise animals, Shannon Brook Farm started moving toward a silvopasture (animals mixed with trees) method of grazing.

**Goats out for pasture at Laughing Goat Fiber Farm**

They use a multi-species, rotational grazing system as a way to protect the animals, and plan to fully integrate silvopasturing into their farming method and use it to reclaim overgrown, underutilized land.

Pigs till and fertilize the land and take down buckthorn, multiflora rose and other invasive species, which enables pasture to grow for the sheep and cattle to graze. While the pigs and Scottish Highland cattle have removed much of the brush that used to cover their pastureland, the back acres of the property remain wooded and shady. Shannon and Walter wanted to utilize this part of their property to be more profitable, so they applied to the Profit Team Program. The Profit Team Program is helping Shannon Brook Farm survey 65 acres of wooded land by consulting with an agroforestry specialist on how they can incorporate their unused acres into their silvopasture design. Even with the extra labor of operating a livestock farm using a silvopasture method, Walter advises those interested in farming to "Do it, jump in, and don't look back". As Shannon Brook Farm continues to farm sustainably while using the Profit Team Program to maximize their usable land, the profitability of the farm is set to increase.

Lisa Ferguson of Laughing Goat Fiber Farm has been farming in Ithaca for 16 years because of her passion for her animals. Laughing Goat Fiber Farm is the home of goats and alpacas that are raised for their fiber. Lisa's enthusiasm for her farm is apparent in how she connects to her animals. "I love goats," she says, "because they're independent animals, they're fun, and have unique personalities." While Lisa has more than enough energy to care for her animals, the Profit Team Program helped her out on the business side of farming. In order to make her fiber business more profitable, Lisa consulted with a lawyer to obtain an LLC for her farm. With a more efficient business structure, Lisa can focus on growing her business. She recently purchased four commercial mills to knit her Mohair, Cashmere, and Alpaca fiber right on the farm. As Laughing Goat Fiber Farm becomes more profitable and productive, hopefully Lisa will be able to spend more time in the barn, or what she calls, "heaven".

If you've eaten pork from The Piggery in Ithaca, NY, chances are your food was raised by Devon Van Noble, of Van Noble Farm. Devon currently splits his time between managing Groundswell's Incubator Farm and raising about 150 pigs. Unlike other farmers, Devon has an established market contract with a local buyer, The Piggery. Without the need to worry about marketing, Devon can focus on maximizing his profits by raising his pigs more efficiently. To do this, he used the Profit Team Program to connect Van Noble Farm to an extension agent from Iowa State who specializes in swine production. The agent helped implement inventory tools to track the number of pigs at different life stages. Using these tools, Devon was able to figure out the life stage he was losing most pigs, and ways to reduce this loss. After being a Profit Team Farm, Devon has more experience focusing on maximizing profitability and has begun the process of restarting his business on new farm. With all he has learned on his first farm, Devon advises new farmers to "not let the status quo of the system limit your imagination of a farm you can have."

As each farmer approaches agriculture in a unique way, all farmers are faced with the necessity of earning profit. The Profit Team Program has been able to help thirty-seven beginning farmers make the transition to a more efficient business. As these farms continue to do business, the Cornell Small Farms Program hopes that they use the help from the consultants to improve their farm as well as the community around them.

Claire Cekander is a student intern with the Cornell Small Farms Program. She can be reached at cec298@cornell.edu

To learn more about the Profit Team Program and see profiles of all 37 farms, see <http://www.nebeginningfarmers.org/projects/profit-teams/>

**Devon Van Noble interacts with one of his boars****Overlooking greenhouses at Main Street Farm**

FARM LABOR**Farmers Sign on to the Agricultural Justice Project**

by Elizabeth Henderson

"As my workers and I learned together about AJP's social justice standards, I became even surer that I had made the right decision for my farm and the people who work alongside me and my family here," said Farmer Jordan Brown. "We're taking a big step together, being the first farm in the south-east U.S. to participate in this program," said Brown. "I've learned a lot from the process and am excited to see the program grow."

Farmer Jordan Brown owns and operates The Family Garden in Gainesville, FL. Jordan is focused on efficiently growing affordable veggies for the Gainesville community. As he puts it, I want "to pump out the produce and keep it affordable for working people."

In the Northeast, the Agricultural Justice Project (AJP) has been providing technical assistance for farmers and food businesses, including workshops on creating a fair work place and certification for

the Food Justice label. The Northeast Organic Farming Association (NOFA) is a founding partner of AJP, a collaborative, non-profit initiative to create fairness and equity in the food system through social justice standards for organic and sustainable agriculture. NOFA's partners in AJP are Rural Advancement Foundation International (RAFI - USA), Comité de Apoyo a los Trabajadores Agrícolas/Farmworker Support Committee (CATA), and Florida Organic Growers/ Quality Certification Services (FOG/QCS).

The AJP mission statement reads: "The AJP works to transform the existing agricultural system into one based on empowerment, justice, and fairness for all who labor from farm to retail. Central to the AJP mission are the principles that all humans deserve respect, the freedom to live with dignity and nurture community, and share responsibility for preserving the earth's resources for future generations. ...By focusing on the need for fair-trading in farm products



and fair treatment of food workers, AJP contributes to shifting the dominant system towards greater equity and justice."

A passionate commitment to social justice is one of the core values that inspired Ben Shute of Hearty Roots Farm in Hudson, NY, to become a farmer ten years ago. As Hearty Roots has grown, Ben found himself an employer, so he turned to AJP for technical assistance in creating employee policies for the farm. At the advice of AJP, Ben created a written set of labor policies for the farm, set up a file on each worker and instituted regular check-ins that are now monthly.

At these check-ins, he or his farm manager review the goals that the employee has set for learning and for improving performance, and ask what further support they need to meet their goals. This process gives the managers the chance to provide regular feedback to the workers and for the workers to give the managers feedback on their management style. The check-in also allows some time to talk about the bigger picture of what is happening with the farm.

AJP standards also require that every farm has a conflict resolution process that every worker understands and knows how to use it. Ben reports that one result of these regular conversations is that they have not had to use their conflict resolution process. They are able to address emerging problems before things get out of hand. Food Justice Certification is on Ben's to-do list. This year, he certified the farm organic, and thinks that FJC may provide a way for the farm to differentiate its high bar labor practices in the marketplace

from farm aggregators with CSA-like services. Ben writes, "We hope to train a new generation of farmers who gain experience by working with us; and we pay our workers a fair wage and maintain worker-friendly employment policies."

The Piggery, a farm and retail butcher shop in Ithaca, NY, has been Food Justice Certified for two years. Heather Sandford, one of the owners, explained why they decided to invest time and energy in FJC: "There is so much media attention to land and water, to organic and how seeds are grown, but not enough about the people who do the work."

When asked why she puts such a strong emphasis on workers, she answered, "Because I am one. Technically, I own the business, but I do not think of myself as a boss. I work with the employees as a team. It is important that the public understands that things will not get done without us. Food

See Farmers page 20

RESOURCE SPOTLIGHT**The 2017 Northeast Organic Seed Conference: Owning Our Seed**

by Heron Breen (Fedco Seeds) & Petra Page-Mann (Fruition Seeds)

We are thrilled to announce the Northeast Organic Seed Conference! It will be held Friday through Sunday, January 20-22, 2017 in Saratoga Springs, in tandem with the NOFA-NY Winter Conference. The theme "Owning Our Seed" expresses our passion to become better stewards of our seed, both in the field and in our policies. There has never been a better time to strengthen the rich network of seed savers, breeders, growers, and distributors here in the Northeast U.S. and Canada.

"This regional seed conference grew out of the incredible success of Organic Seed Alliance's Organic Seed Growers Conference," observed Ken Greene of the Hudson Valley Seed Library. "Their national conference has become the foundation of our community: a place where we can come together and share, learn, and advance the organic seed movement. The 2017 Northeast Seed Conference is a chance for us to strengthen our local seed community, address our specific climatic, economic, and cultural challenges together, and find our voice in the national movement."

Over 20 sessions will explore diverse subjects related to seed in the Northeast. From "Hand Pollination: Variety Improvement and Development" to "Northeast Native American Seeds: Respectful Stewardship," and from "Biennials in the Northeast" to "Owning Our Seed: Perspectives on Intellectual Property," there is much to learn and share. Dozens of presenters include seed pioneers (Rob Johnston, CR Lawn, Will Bonsall, Rowen White, John Navazio, Klaas Martens, Brent Loy, Tom

Stearns) as well as the up-and-coming faces (Michael Mazourek, Ken Greene, Dan Brisbois, Adrienne Shelton, Lisa Bloodnick, Petra Page-Mann) of organic seed in the Northeast.

Unique and unforgettable events are being planned for the conference, as well. Friday evening, Chef Dan Barber (Blue Hill at Stone Barns) and Dr. Michael Mazourek (Organic Plant Breeder, Cornell University), will share their passion for seeds, plant breeding, collaboration and the food inspired by the process. Saturday's dinner will include a Three-Sisters showcase & tasting, celebrating the significance (and deliciousness) of corn, beans and squash in the Northeast. Saturday evening's seed swap will be an apt expression of the diversity, abundance and generosity that is perhaps the heart of Owning Our Seed, in the best and broadest sense. "It has been a joy to



Flowers: From introductory to advanced seed saving, there is much to learn at this conference.



Corn: Delicious diversity! Saturday's supper will highlight combinations of the Indigenous 'Three Sisters' of corn, beans & squash.

be part of the movement that has rebuilt this capacity in our region," says Michael Mazourek. "This meeting is long overdue to bring us all together toward an even brighter seed future."

There will be abundant time for learning as well as connection at this conference. Though our focus is on the Northeast, we welcome anyone interested in seed to join us. We are especially excited to reach beyond our borders and learn with our fellow seed-lovers in eastern Canada. Cross-pollination is important for plants to adapt; it is also important for human communities to grow increasingly resilient. "In colorful patterns and shapes, seeds whisper to us and remind us that their life is our life, and our mutually beneficial relationship extends in our bloodlines thousands of years," Rowen White

of Sierra Seeds writes. "I am so honored to gather this winter with a diversity of seed stewards who remember reciprocal relationship with seeds that extends past beyond living memory, and continue to cultivate vibrant new seed culture that is rooted in integrity and care." Rowen's extensive knowledge and network of indigenous Northeast seedkeeping will add great richness to this conference.

CR Lawn (Founder of Fedco) will be delivering the keynote speech that addresses all attendees of both conferences simultaneously. Indeed, an organic farming conference held in tandem with an organic seed conference overlap and interrelate in many ways. Excluding only very recent history, seed and crop improvement have always been the realm of the gardener and farmer. As seed has moved from commons to commodity, 'farmer' and 'seed saver' are no longer synonymous. Re-integrating and re-imagining these relationships is at the heart of this conference. CR's address will speak directly to creating an ethical, sustainable seed system here in the Northeast, sharing strategies for overcoming obstacles along the way.

"Ever since our Northeast SARE-funded Restoring our Seed project attracted hundreds of eager participants a decade ago, I've been aware of the huge interest in the seed arts in our region," said CR. "A lot has happened as we've developed and refined our skills in the last decade. It has been a long wait to come together to share old and new knowledge, contacts, to renew our energy and our inspiration. Don't miss it!"

For more details, go to <https://www.nofany.org/events-news/events/winter-conference>. Hope to see you there!

Farmers from page 19

Justice Certification is helpful in opening up conversations with our customers about job security and wages. The FJC logo on the doors of the shop helps reinforce why customers shop with us." The biggest plus of FJC, according to Heather is that it "makes our workers feel honored. They realize that we are trying to make an effort to give them a good work environment."

Alyssa Bauer, who works at Old Friends Farm, a 28-acre certified organic farm in Amherst, Massachusetts, heard about AJP two years ago from farmer friends who initiated the Agrarian Action Network, a group of young farmers and farm workers who want to improve working conditions on area farms. Alyssa had never heard of domestic fair trade and was excited to learn that there was a national movement to improve farm prices, and labor policies and practices. She read the Food Justice standards and realized that Old Friends Farm was already compliant with most of them.

The standards include:

- Fair pricing for farmers' products
- Workers' and farmers' rights to freedom of association and collective bargaining;
- Fair wages and benefits for workers;
- Fair and equitable contracts for farmers and buyers;
- Clear conflict resolution policies for farmers or food business owners/managers and workers;
- Workplace health and safety;
- If on-farm housing is provided for workers, it must be clean and safe;
- Learning contracts for interns and apprentices;
- No full-time child labor, but rather carefully supervised participation of children on farms.

The AJP website offers the full standards, policy manual, and a tool-kit with resources to help farms comply with the standards, all available at www.agriculturaljusticeproject.org.

Alyssa sat down with farm owner Missy Bahret and fellow



Old Friends Farm is owned and operated by Missy Bahret and Casey Steinberg, and is located in Amherst, Massachusetts. Cut flowers are one of their cash crops.

worker Ona Magee and reviewed the FJC checklist. Whatever was missing, they added to the employee handbook for the farm, and Alyssa highlighted these with the other workers at their spring orientation. Since they did not have to change much, the process was easy. Old Friends is interested in certification and is hopeful it will be part of a broader campaign for labor rights in the area.

Like Ben Shute, Jordan Brown has found the materials in the AJP "tool-kit" helpful as his farm has grown: "The growth of our farm, from being a real small operation to where we are now, is closely tied to Food Justice Certification; it helped me get more organized because FJC standards required me to start running payroll, get Workers Comp, file taxes, and start keeping better records. It took some time to get everything in order and get organized because we do have to meet a lot of guidelines, but at the same time, I think that organizational component has greatly benefitted the farm. There are lots of farms that are already very organized

and keep records the way we do, but they wouldn't meet the FJC standards because of their on-farm practices."

Although fairness has been a basic principle in organic agriculture throughout the years (see the International Federation of Organic Agriculture Movements Principles of Organic Agriculture), organic standards in the US have focused on production practices for farming and processing. The Food Justice label brings attention to the importance of fair pricing for farm products that fully covers the cost of production and the need for respect and living wages for all jobs in the organic supply chain.

Farmers who pay as much attention to the quality of life of their workers as they do to the quality of their soils are finding ways to pay living wages, though at some sacrifice to the farmers own income. As Jordan Brown notes, "Pricing is the biggest obstacle to providing more benefits to workers. Right now, in my experience as a family-sized farm in the South, there is no retailer who is willing to pay more for produce for this certification. At least in the wholesale market, there's no buyer who is willing to pay extra for produce that is grown without mistreating people." Brown concludes, "Success for us comes from the folks who come to our stand or sign-up for our CSA because they know we're a FAIR farm and want to support good work."

Brown sums up the hope of movement for domestic fair trade that as the public becomes more aware of farm worker realities, more people will be willing to pay the few extra pennies a pound and dollars a year that add up to a significant improvement in farmer and farm worker wages.

The AJP process has earned positive evaluations from the Domestic Fair Trade Association (DFTA, <http://fairfacts.thedfta.org/full-comparative-analysis>), and from Consumer Reports (www.greenerchoices.org/eco-labels/label.cfm?LabelID=323). If you think your farm is ready or if you want more information to get you started, contact the author of this piece.



Tiara F1 Cabbage

Very early, tender and crisp. Nice salad cabbage.

Roxanne F1 Radish

Round, great texture, for spring and summer markets. **An All-America Selections 2015 National Award winner!**

Konan F1 Kohlrabi

Early, productive, clean bulbs, superb flavor and texture. **An All-America Selections 2016 National Award winner!**

Mountain Merit F1 Tomato

Late Blight resistant, nice slicing tomato. **An All-America Selections 2015 Regional Award winner!**

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Resistant to Downy Mildew, main season maturity, long storage.

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