

# SMALL FARM QUARTERLY

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



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## WINTER 2016

# Youth Loans help the Weeks Family Continue Farming

*USDA Farm Service Agency Youth Loan projects help the kids farm amidst tragedy*

by Devon Kenny

The Weeks farm is a typical upstate New York family run farm. There's mom Dawn riding herd over daughters Sarah (22) and Carrie (15) and sons Jeffrey (17) and Samuel (11). Then there's grandma and grandpa (Dawn's mom and dad) who live right on the farm in a separate house. Add a menagerie of different animals ranging from milk cows, beef, pigs, goats, sheep, chickens and rabbits and you have a busy place and a lot of responsibility.

Last year, tragedy struck when dad Jeff was diagnosed with multiple brain tumors. These were thought to have been a possible result of contaminated water where he served in the U.S. Marine Corps at Camp Lejeune in North Carolina during the 1980's. Jeff did not survive his battle with the brain cancer and died shortly after he was diagnosed. His death was a crushing blow not only to the family but to the farm itself. The family had to make hard decisions for the future to stay in business. The children who were always involved now had to step up and work even harder to take over where dad left off. Despite this tragedy, Jeffrey has signed up to join the U.S. Marine Corps and Samuel also has plans to join as soon as he's of age. This all American family not only personifies dedication and valor in the face of adversity but demonstrates that loyalty and hard work can overcome anything.

One may say that helping to run a farm is a lot of responsibility to place on children, but these are not your average kids. Not only do they all excel in school but the oldest three have all applied and received agricultural loans through the Farm Service Agency (FSA) Youth Loan Program. The FSA Youth Loan Program makes operating loans of up to \$5,000 to eligible youths ages 10 to 20 to finance income-producing, agriculture-related projects. The project must be of modest size, educational, and initiated, developed and carried



Weeks kids at their farm sign

Photo by Dawn Weeks

out by youths participating in 4-H Clubs, FFA, or a similar organization. The Weeks' received help in submitting business plans from their advisor Marion Jaqueway from the local 4-H chapter.

The FSA Youth Loan Program encourages young adults to get experience in business and financial-planning by allowing them to plan for and market their product. It also helps to build credit and give youth a better understanding of fiscal planning, market gains/losses and commodity management. Sarah was the first to receive a loan through the FSA Youth Loan Program. The application included preparing a business plan that showed what she was interested in purchasing, the budget she would need, and with plans of how she was going to pay off her loan. Sarah used her loan funds to purchase sheep and metal pens and gates for housing. She cared for and showed the sheep while making a profit from breeding and selling them to other farms. Sarah also sells the meat at the local year round farmers market in Ilion, NY, where the Weeks family markets their beef, pork, lamb, goat and eggs every weekend. Sarah has since paid off her loan and now has a flock of 35 registered shropshire sheep.

Jeff followed in his big sister's footsteps when he applied for a loan to buy pigs and farrowing crates. Jeff owns 10 sows

and raises feeder pigs up to finished hogs to sell. He has established himself as a well-known pig breeder and showman. In July, he shipped out to U.S. Marine Corps boot camp. He will be serving in the Reserves unit out of Syracuse and is planning on starting college at SUNY Cobleskill for agricultural engineering in January. His long-term plan is to take over the family farm. Younger siblings Samuel and Carrie will be caring for his stock while he is away.

Carrie has also obtained an FSA Youth Loan to purchase high tensile fencing and goats. She, like her older siblings, cares for and shows the animals herself. Carrie raises both meat and dairy goats. She also milks the family's dairy herd every day. Her brother Jeff complains that no matter what he does she always milks ten minutes faster than he does and manages to get more milk out of the cows.

Even Samuel plans to get into the industry. He now keeps rabbits, chickens and a few pigs at the farm and plans to apply for a youth loan to expand that operation. While they all seem to be natural born farmers there is a lot of work that goes into raising and marketing these animals. The Weeks family works through USDA certified Kelley's Meat Market in Taberg, NY to process the animals for market. Raising and caring for these animals from birth to market gives these youths a great appreciation for where their food comes from and how much work really goes into making a ham sandwich.

Farm Service Agency Youth Loans are an excellent resource for ambitious hard-working youths interested in agriculture to gain real world knowledge. Loan funds may be used to pay operating expenses for the project and buy live-stock, seed, equipment and supplies as well as buy, rent or repair needed tools and equipment. Applicants must submit completed plans and budgets signed by the project advisor and parent/guardian along with the FSA application for loan assistance. For more information on FSA Youth Loans please visit [www.fsa.usda.gov](http://www.fsa.usda.gov) or contact your local FSA office.

*Devon Kenny is a Program Technician at the USDA Farm Service Agency office in Marcy, NY.*



Carrie Weeks showing goats

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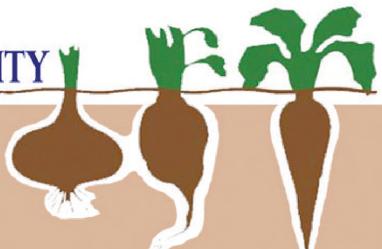


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# Cornell Small Farms Program Update

## Learn to farm online this winter

Since 2006, each winter we have offered high quality, collaborative learning environments online. All courses consist of weekly real-time webinars followed by homework, readings, and discussions on your own time in an online setting. If you aren't able to attend the live webinars, they are always recorded for later viewing. See the course description page for more on the course learning objectives, instructors, and outline. To learn more, visit: <http://www.nebeginningfarmers.org/online-courses/>

## Partnering with USDA to uncover "The Promise of Urban Agriculture."

Cornell Small Farms Program is working with USDA Agriculture Marketing Service to study the potential and needs of commercial urban agriculture. Urban agriculture has grown immensely in popularity and practice. The study, entitled "The Promise of Urban Agriculture," will focus on farms where food production is the primary activity of the farm,

though it may engage in other educational or socially-minded activities. This focus will help clarify strategies for USDA/AMS to support the growth and profitability of urban farms. SFP will continue to provide updates on this project through its completion in Fall 2016.

## Farmers Talk 'Wholesale Marketing'

This Fall, the Small Farms Program teamed up with Northeast SARE to continue the webinar series "Small Farms, New Markets". The series featured farmers that had successfully transitioned from direct marketing to selling product to one or more wholesale buyers. You can watch the presentations anytime by visiting <http://small-farms.cornell.edu/2015/03/30/small-farms-new-markets-webinar-series-opens-april-6th/>

## Apply for Advanced Beginning Farmer Profit Team Program

The Northeast Beginning Farmer Project and New York FarmNet are excited to announce the second round of successful

candidates to our Advanced Beginning Farmer Profit Team Program. This initiative seeks to improve the long-term success of these farms by providing customized, one-on-one guidance from farm professionals (financial, production, legal, marketing, etc.). This project is funded by the USDA's Beginning Farmer and Rancher Development Program. To see the participating farms or learn more, visit <http://www.nebeginningfarmers.org/projects/profit-teams/>

## Northeast veteran and beginning farmer service providers gather and share

## RESOURCE SPOTLIGHT

# Log-grown Mushrooms now an official crop in New York State

by Steve Gabriel

Twenty-one percent of all farmland (1,560,000 acres) is woodland in New York. In 2015, New York State officially designated "actively managed log-grown woodland mushrooms" within the meaning of the term "crops, livestock and livestock products," for purposes of provisions of law relating to agricultural districts. This designation means that mushrooms grown in the forest join maple syrup as the only woodland products that can be counted entirely toward the \$10,000 mark to qualify for agricultural exemption in New York. The bill was by Bill Magee in the Assembly and sponsored by Senator Patricia Ritchie in the Senate, was signed by Governor Cuomo in September.

Forest mushroom cultivation has recently been growing in popularity among farmers, due to the abundance of forest resources and the relative low-cost of startup operations. Cornell University has led an effort to develop both cultivation procedures, as well as look at the economics of production. A 2015 New York survey identified 46 growers who are commercially producing or plan to begin selling shiitake mushrooms in 2016. These growers cultivate 17,435 logs, which can yield an estimated 69,740 pounds of production over three years (Cornell research estimates yields of 4 lbs. per log over three years).

The Cornell Small Farms Program created the NE Beginning Farmer Learning Network (BFLN) to serve as a collaborative learning platform. This fall, October 26-27<sup>th</sup>, we hosted a 2-day BFLN meeting bringing together over 50 service providers from extension programs, non-profit organizations, and government agencies from across the NE. For a complete agenda and links to presentations, visit the Trainers Toolbox at the NE Beginning Farmers Project <http://www.nebeginningfarmers.org/projects/trainers/>. This project is funded in part from a USDA-BFRDP, NE SARE PDP and the Local Economies Project.

At an average price of \$12/lb, these 46 growers could earn an estimated \$836,880 in gross revenue. In 2015, 23 actually sold mushrooms for a combined gross income of \$180,110 or \$7,830 per grower. While still a fledgling industry, 60% of growers plan to expand production in 2016.

Woodland log-grown shiitake mushrooms are a relatively new, niche crop for New York as most mushrooms are grown indoors in other states. Data from past research indicates that, over four seasons, a 1,000 log operation would cost \$4,740 to establish and would yield 1,040 pounds of mushrooms and create \$12,480 of income. This rate can be perpetually sustained from year four onward and would qualify a producer for agricultural exemption. In addition to those wishing to cultivate mushrooms, woodlot owners could partner with a farmer to provide logs for cultivation. Like hay production, such a landowner could also then qualify for exemption, if they sign a five year lease with the farmer.

Those interested in mushroom cultivation can visit [www.CornellMushrooms.org](http://www.CornellMushrooms.org) for more information on "how-to" grow including factsheets, booklets, and video. Events are listed on the homepage including an online course in February and hands-on trainings in the spring and summer. Or contact Steve Gabriel, [sf53@cornell.edu](mailto:sf53@cornell.edu) or 607-342-2825.

## Message from the Editor

On our farm, winter brings a quiet peace to the landscape. Other than the animal chores each morning, we relish the few months off between the main growing season and the start of maple sugaring in February, when we can sleep a little later, catch up on receipts and invoices, and reflect and plan for the coming year.

While the physical labor may decrease (or not) for you during winter months, there is much in the way of mental work. Winter is a time to ask the question, "why?" as in, "why are we doing things this way?" or "why is this enterprise still part of the farm?"

If we can answer these questions with a solid answer, then we have good reason to continue forward. But we always find a few items that we realize are best to change, or scrap altogether. It is this willingness to take a hard look and make better decisions each year that makes us feel we can keep on farming.

This issue of the Quarterly is full of great articles to help you make better decisions for the coming year. Wishing you and yours a healthy, productive, and enjoyable 2016!

Steve Gabriel

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Shiitake mushrooms

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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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Cover: Tapping black walnut trees is a process similar to maple.

Photo by Mike Farrell

**FARM TECH****Conventional Tillage on the Small Farm**

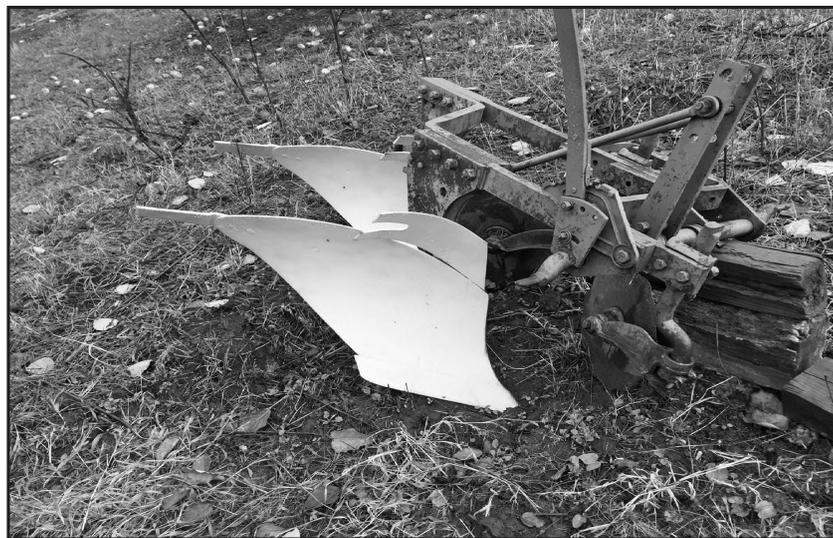
by Rich Taber

"The plow is the symbol of labor and tillage of the soil" is an often recited line from the opening ceremony of the FFA. Throughout mankind's history, people slowly transformed from hunting cultures, then to hunting-gathering, and then to farming. Since the dawn of the age of farming, the soil has been tilled to prepare it for the planting and harvesting of crops. Tillage mimics an ecological disturbance, such as a weather calamity, which makes the soil bare. In a quest for more consistent results, tillage and its various implements were invented. The plow is one of the most iconic images in the mind of the American public when it comes to agriculture. For thousands of years, the soil has been turned over in the springtime.

Nowadays there are several forms of tillage and cropping systems. In this article, I focus on what is known as "conventional tillage", or more simply, the type of tillage as it has been practiced for hundreds of years. Conventional tillage usually consists of primary tillage, or plowing, and secondary tillage, which is normally done by disking with harrows, and maybe a third step with spring tooth harrows. If seeding a forage or pasture crop, the soil can finally be firmed with a roller, or cultipacker. Conventional tillage has been used extensively by livestock as well as horticultural operations for years. I direct my comments to those farmers who have smaller tractors available with working three point hitches. Larger implements and tractors typically have hydraulic systems to raise and lower the implements as well. Additionally, horse drawn tillage implements are very similar to small tractor drawn implements and while smaller, accomplish much the same as their engine powered brethren.

Other forms of tillage have been developed in recent years, such as no-till, reduced till, and the partial replacement of moldboard plows with chisel plows. All forms of tillage have their appropriate times and places to be used. I would never suggest that conventional tillage should be practiced endlessly, year after year, on the same plot of land. Why is that?

I fully understand that conventional tillage has come under fire in recent years; it certainly has its issues. Conventional tillage can indeed harm the soil if it is done recklessly, or when conditions are too wet and/or the land is too steep. Tillage, done poorly, contributes to soil and water erosion, compacted soils, and certainly uses a lot of fossil fuel energy.



**One of the author's two bottom plows with coulters to slice through the soil.**

However, even with all of the potential ills of conventional tillage, it certainly has appropriate times and places that it can be used; just not mindlessly year after year in the same location. And, for the new and beginning farmer, it can be gotten into fairly inexpensively. One only has to attend one of the many innumerable farm equipment auctions which sprout up all over the landscape to find a plethora of small, inexpensive tillage implements for sale. You can purchase good used plows, disk harrows, spring tooth harrows, and cultipackers for only a few hundred dollars each. You also do not suffer as many risks buying such implements at an auction, compared to something that has an engine on it, as it is hard to camouflage major flaws in small tillage implements.



**A springtooth harrow, or "drag".**



**A cultipacker used to smooth the soil for firm seed-soil contact.**

I always need to mention farm safety. Hitching and unhitching three point hitch implements can be awkward, and possibly hazardous, especially with older tractors. Always have the correct hitch hardware for attachments and sway bars installed on the three-point hitch as well. This will keep implements from flopping and whipping back and forth. Be careful!!!

Now, I will to explain the different stages of tillage. Step one is primary tillage and is normally done with a moldboard plow. This step inverts

the soil and exposes it to the surface, kind of like hitting the reset button on that plot for the year. Moldboard plows have "bottoms", or moldboards. The typical small farm tractor can pull one, two, or three bottoms. In the wake of the soil being turned over is what is known as a "dead furrow", or the part of the soil several inches deeper. You have to learn how to plow so that you don't leave a dead furrow in the wrong places, or you can be haunted for years with teeth jarring small ditches in your field that you bounce over with your machinery.

The second step in tillage is "secondary tillage" and is done with small disk harrows. Typically you go over the field a couple of times to smooth out all of the mounds created by your moldboards from plowing. A further refinement is to use a spring tooth harrow, to even further smooth out your seedbed. The colloquial name for such a harrow is a "drag". Three-point-hitch ones operate much easier than ones that you simply hitch to your drawbar, but cannot lift into the air. A three-point hitch drag will allow you to lift the machine and clear it of debris, which you cannot do with just one hitched to the drawbar. This can be a real "drag"!

Finally, and especially if you are doing a pasture or hayfield seeding, you will need to smooth the soil surface with a cultipacker or some sort of roller. This may be done either before, or after the seeding, and sometimes both, depending on the conditions. Some planters, such as seeding drills and grain drills will have packers already attached to the machine. If not, then a pull behind cultipacker will help to firm the soil.

One other step in the tillage process is the dreaded "picking stones" phase, typically done after disking or dragging. I grew up in Eastern Connecticut, and I oftentimes joke that we didn't have rocky soils in Connecticut; we had "soily rocks".

Many towns in New York State were named after towns in Connecticut, as farmers moved west to find better, and I conjecture, less stony land. The removal of stones and rocks from the tillage process absolutely must be done, with most of the larger stones removed from the field so as not to interfere with machinery later on. Growing up, it seemed to me that those people who are the lowest on the farm's totem pole hierarchy got relegated to stone picking the most often.

To reiterate, conventional tillage is certainly not the end all, or only way of tilling the soil; but it does have its place. Happy tilling!

**The dreaded dead furrow that needs to be either disked away or place on the outer edges of the field.**



*Rich Taber is the Grazing, Forestry, and Ag Economic Development Specialist with Cornell Cooperative Extension of Chenango County. He also lives on a 165-acre farm in Madison County that he picks stones from, and that he runs with his wife Wendy, where they raise beef cattle, sheep, laying hens, heritage turkeys, and do rotational grazing. He can be reached at 607-334-5841 ext. 21 or email: rbt44@cornell.edu.*



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**HORTICULTURE****No Till, Permanent Beds for Organic Vegetables***Four Winds Farm mulches with compost to suppress weeds and improve their soil*

by Brian Caldwell &amp; Ryan Maher

Jay and Polly Armour bought a rundown farm in 1988 with the idea of growing organic vegetables for sale. Their first production garden was an old horse paddock, which had been trodden down for many years. After the ground dried out in summer, it became packed and oppressively hard to work. Cultivating by hand was a literal pain in the back. After a few years, something needed to change.

At a winter meeting on the topic of reducing tillage in vegetable production, their neighbor and expert horticulturalist Lee Reich said, "why till at all? Mulch the soil and let it suppress the weeds!" Lee figured that according to university research, an inch of compost would supply the necessary nitrogen for heavy-feeding vegetables. By happy coincidence, most weed seeds germinate only in the top inch of soil. Thus, the idea was that an inch layer of weed-free compost mulch would prevent most weeds from even emerging. It would be best to skip tillage altogether, since that just brought up more weed seeds. Lee had done this in his own garden. Though skeptical, Jay and Polly were willing to give it a try.

In 1995, their first no till/mulch season, there were indeed fewer weeds. Even better, the soil stayed soft and it was easy to hoe or pull the ones that grew. They were hooked. They had an abundant source of compost, free for the taking, and worked a manageable area, so the approach was feasible. They continued to add no-till mulched fields through the 1999 season, and now manage about 4 acres of no-till vegetables on their 24-acre certified organic farm located outside Gardiner, NY.

Here is how they do it:

The fields are laid out with permanent beds. There is no foot or tractor traffic on the planting beds and beds are maintained in place from year to year. Bed size is based on the tractor, used for hauling compost, which has a 55" wheel base. Beds are about 3' wide, with an 18-24" path between, and 100 feet long. There is no deep tillage and weed control impacts only the soil surface.

Managing weeds is a major reason for tillage on most organic farms. What Jay and Polly have found is that by removing weeds before they set viable seed and mulching with weed-free compost, weed pressure has gone way down. Weeds are managed with wheel- and stirrup- hoes during the season, and pulled by hand when necessary. The friable surface layer is easy to work, and it is easy to pull whole weeds up. They are removed from the fields and composted. Pathways between beds are kept clear of weeds using a wheel hoe. Dandelion has emerged as the biggest problem weed.

Quackgrass and other perennial weeds may encroach from the field borders. Jay has found a remarkable way to keep them out. Comfrey is established by planting roots around the borders of each field. They grow vigorously and keep the perennial weeds out. Jay simply stomps their leaves out toward the grass a few times a season, mulching the soil and



**Peppers at Four Winds Farm. Straw thickly covers permanent beds and pathways. Note barn with solar array.**  
Photo by Jay Armour

stimulating new growth. It is important to reduce any perennial weeds to a minimum before starting their system, and to repeatedly dig and remove any that come into the beds.

Compost mulch can be applied either in fall or spring but they find more time for this in the fall. Four Winds does it with a front-end loader, with employees shoveling and spreading it evenly over the beds. There are two full-time employees who help with the farm work. Transplanting is done by hand, often with close spacing. Crop residues are cut or pulled after harvest and removed to be composted. Many beds are double-cropped, for instance by following peas with carrots.

Access to enough weed-free compost is key. Their free source of compost dried up, so now they make their own. They have a small beef herd and use manure from it and a nearby horse farm as the base mix. Crop wastes and residues are added as well. It is critical to produce weed-free compost. Jay used to turn long piles with the front-end loader on his tractor, but in 2014 built a blower system which forces air under the pile and allows the manure to compost in a static system. The outside of the pile is covered with a layer of previously-made compost to help hold heat in, as high temperatures are critical to killing any weed seed. After heating and cooling down, piles are moved and covered with a tarp. A large amount of compost, a rate of about 70 tons per acre, is needed to mulch beds to a level of about an inch and a half each year.



**Jay Armour and onion seed crop.**

Photo by Brian Caldwell

In recent years, Four Winds has also hosted a local organization that collects materials such as food wastes and makes compost on their site. In exchange, they receive half of the finished compost.

Jay and Polly also share their expertise and land in another way. About a quarter of their vegetable land is managed by Second Wind Farm, a CSA run by Allison Patrick and Alison Fletcher who cooperate with Four Winds, using the same methods and facilities. Second Wind was started in 2009 and former manager Erin Enouen now has her own farm. Second Wind Farm provides a setting in which prospective new farmers can learn work and management skills that serve them well when they move to their own land. Its fields are rotated with the others, providing enough land for a sound rotation, which helps suppress pests and diseases. Four Winds specializes in tomatoes and potatoes, both of which need a three-year rest before returning to a given field.

Tomatoes are at the heart of the farm. If compost is running low, tomatoes get priority. They are trellised and also mulched with straw on top of the compost, to help reduce early blight. In spite of the cooling effects of the straw compared to more typical black plastic mulch, the fruit ripens with that of other neighboring farms. Jay prefers oat straw, as it is finer and easier to work with, and has found a good clean source. He takes pride in the quality and diversity of the tomatoes coming off the farm, and experiments with new



**Comfrey along edge of no till field.**

Photo by Brian Caldwell

varieties. All crop residues are pulled out for composting and straw gets raked out to help control pathway weeds for the next year's crop. Four Winds' tomatoes take center stage at three farmers markets in the Hudson Valley.

When preparing for small seeded crops, preceding crop residues are pulled out by hand and the bed is scuffle hoed ahead of planting. Because of the low weed pressure in this system, Jay and Polly successfully grow direct seeded onions and leeks. They plant in late March or April, and harvest mature onions in early August. Most organic growers use transplants to give onions a head start, partly because weed control is a major issue. This year, because of dry weather, onion stands were spotty, in spite of irrigation. Jay grows his own onion seed, finding that it performs much better than purchased seed. He also saves seed from some peppers and tomatoes.

Row covers are used extensively for pest management. Blueberries (netted) and raspberries are major crops as well. In 2010, they built a new barn for handling and packing. In its basement, two coolers set at different temperatures were dug into the ground. Solar panels provide all the farm's electricity, and a compost-heated greenhouse on the south side grows transplants and crops. Drip irrigation from a well is used on tomatoes and other transplanted and established direct seeded crops. Small sprinklers are used to establish small seeded crops in the compost-rich surface soil.

Jay is experimenting with cover crops, but so far they are not heavily used. Dealing with their heavy residues is a problem. Jay is also concerned about weed problems he has seen on other farms where roll-down rye was used as a mulch.

Questions remain about the sustainability of this growing method if it were widely adopted. The amount of compost (and thus manure) needed is high, especially when starting out. If manure were considered valuable instead of a waste product, the cost of compost mulch might be prohibitive. Also, more nutrients are contained in the compost than the crops remove, which can lead to nutrient build up in the soil over time. Recent Four Winds soil tests showed very high levels of phosphorus in their fields; but soil organic matter and some other nutrients were typical of well-managed fields. Sodium and soluble salt levels, indicators of over-application of manure, were very low.

Meanwhile, Jay is glad that at least by Four Winds' example, small-scale organic vegetable production can successfully support a family and provide delicious food to hundreds of customers. His advice to new farmers? "Give it a try. You can make a living farming!"

*Brian Caldwell and Ryan Maher are Research/Extension Support Specialists with Cornell University in Ithaca, NY. They can be reached at bac11@cornell.edu and rmm325@cornell.edu respectively. Jay Armour can be reached at Four Winds Farm, 158 Marabac Rd., Gardiner, NY 12525*

## FOREST AND WOODLOT

## Tapping Walnut Trees for a Novel and Delicious Syrup

by Michael Farrell

Most people are familiar with maple syrup production - it is a time-honored tradition throughout eastern North America and has seen a resurgence in popularity over the past decade. Though it is not well known, all species of walnut (*Juglans spp.*) also produce a sweet sap that can be boiled down into valuable syrup. There is a well-established resource of black walnut (*Juglans nigra*) trees throughout eastern North America that could be utilized for syrup production to complement existing sugaring operations.

Tapping walnut trees is a relatively new phenomenon and very little information exists on the optimum tapping time for these species, the expected yields from traditional bucket or more modern vacuum-enhanced tubing systems, and the overall economic outlook for producing walnut syrup. Although the number of tappable black walnuts is significantly less than the number of tappable maples, there are excellent opportunities for sugarmakers to utilize the trees they currently have while also planting these trees for long-term benefits. They grow extremely fast and are relatively easy to establish in open fields and along watercourses as riparian buffers. Most people currently plant walnut trees for their timber value and nut production, however syrup production could be one more attribute to add to the list.

Sap flow in walnut trees was first reported in North America in the 19<sup>th</sup> century as part of a comprehensive study of sap flow in plants. Research on butternut (*Juglans cineria*) in Michigan in the 1920s showed promising results in comparison with maples. Sap flow in English walnut (*Juglans regia*) has also been studied in France due to the worldwide importance of nut production in this species. Controlled research in an English walnut orchard and greenhouse demonstrated the capacity of autumn, winter, and spring sap flows through a combination of stem and root pressures. The researchers never investigated the potential to use this sap as a source of syrup production. Limited research on using the sap of black walnut trees for syrup production took place in Kansas nearly a decade ago. It was meant as a preliminary study and despite the promising results, no follow-up studies were conducted.

Todd Leuty from the Ontario Ministry of Agriculture recently conducted research on tapping Japanese walnuts (*Juglans ailanitifolia*) grafted onto black walnut rootstock in Ontario. His findings, as well as other practical experience, indicates that the sugar content of walnuts mirrors that of maples, yet the amount of sap flow is significantly less. Whether the amount of sap produced is so low that it limits the commercial potential of this species is not yet fully known. Furthermore, none of the previous studies were done with high-vacuum tubing and there isn't yet any reliable data on what one

can expect from tapping black walnuts. Since vacuum tubing can produce 2-3 times the amount of sap as gravity flow in maples, we need to know if there is a way of using vacuum to get more sap flow out of walnuts.

With a grant from the *Towards Sustainability Fund* at Cornell, The Cornell Maple Program conducted research on black walnut sugaring in 2014. In order to determine potential yields from black walnuts, we collected sap at four sites in New York, Pennsylvania, and Indiana during the winter of 2014. In New York, we tapped 58 trees using individual bags and 5/16 spouts on Cornell's campus in Ithaca and 96 trees using vacuum tubing at Lemoyne College in Syracuse. A sap puller diaphragm vacuum pump was utilized at this site with an average reading at the pump of 18" Hg. Jacob Noonan served as a research collaborator and tapped 35 trees on buckets with 5/16 spouts in Erie, PA. Rich Hines also tapped 10 trees with 7/16 spouts and buckets in Indiana. Whereas most of the trees were tapped in mid-February for all sites, Hines tapped his trees on Nov. 19 to explore the possibility of sap flow in autumn. At all locations, every time sap was collected (usually every 4-7 days), the total volume and sugar content of the sap was measured and recorded. At the end of the season, all of the data was analyzed and normalized to equate to ounces of syrup produced, following the "Rule of 87.1" commonly used in the maple industry.

The highest yielding site (Erie, PA) produced an equivalent of 11 oz. of syrup per tap whereas the lowest performer (Syracuse) yielded only 6 oz. of syrup per tap. For comparison purposes, maples usually yield between 32 and 64 oz. of syrup per tap. In a similar manner to maple sap flow, sap sugar content was very low in the Fall (less than 1%) and much higher in the spring (2-3.5%). The highest reading taken was 6.2% and there were many trees producing sap in the 4-5% sap sugar concentration range.

Although the sap yields observed in this study were extremely low when compared to traditional maple syrup production, it is important to realize that this study only covered one year. As with maple, the differences in yields are likely to be significant between years based on local weather conditions, so it would be premature to make assumptions based on one year of data. 2014 was also very cold throughout March and soils were deeply frozen due to a lack of snow cover, which could explain part of the reduced yields. However, this study suggests that it is unlikely that walnut trees will ever produce similar quantities of sap as maples, even in a good year. Though it was surprising that the vacuum tubing system produced the lowest quantities of sap, this was only a preliminary study without any replicated trials. Thus, future research should explore sap yields under vacuum at additional sites over the course of several years before any conclusions can be made regarding the effect of artificial vacuum on walnut sap flow.

Another aspect of walnut syrup production that requires further attention is the large quantities of pectin found naturally occurring in the sap. Pectin can make filtering the



A blend of maple and walnut syrups sold at Cornell's Uihlein Forest in Lake Placid. At \$5 each for a 40 ml. bottle, the retail price equates to approximately \$500 per-gallon.

Photo by Nancie Battaglia

sap and syrup extremely difficult and time consuming, clogging filters much more rapidly than the sugar sand often found in maple syrup. There seems to be tremendous variation in the amount of pectin produced between individual trees and sites as well as the time of the year that the sap was collected. We did some initial experimentation with using pectinase, an enzyme that is designed to break down the pectin. Our initial trials were not extensive enough to come to any conclusions on the efficacy of pectinase, but given the problems associated with filtering and the prevalence of pectinase in so many other food processing industries, this idea deserves further attention. It's also worth noting that if you want to make walnut jelly instead of syrup that would be much easier!

As a final note, if you are already producing maple syrup and have walnut trees, I would recommend doing some experimentation on blends of maple and walnut syrup. Maple-walnut is a popular ice cream flavor here in the northeast and most people have heard of it. Of course most maple-walnut varieties use English walnuts and imitation maple flavor, so a maple-walnut syrup made from the saps of these species is nothing like the ice cream flavor. However, because walnut syrup tastes surprising similar to maple syrup (with a bit of a nuttier flavor), blending the two syrups creates a value-added product that can stretch your small amount of walnut syrup further. We've done that with most of the walnut syrup we produced at Cornell and customer feedback has been tremendous.

If you are already producing walnut syrup or are considering doing it in the future, we would love to hear from you. Feel free to call Michael Farrell, Director of The Uihlein Forest at Cornell University, at 518-523-9337 or send a note to mlf36@cornell.edu with any questions or comments.

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**LIVESTOCK AND POULTRY****Sheep Pasture: Orchard Grass**

by Ulf Kintzel

I have been writing articles about sheep farming for a few years now and the feedback I receive often triggers new ideas for new articles. This article is such example. A frequently asked question is what kind of pasture mix I recommend. My standard answer is that I don't recommend any pasture mix. It seems that all pasture mixes I read about have grass and legume species in the mix that I would not recommend at all. So why pay money for grass and legumes you don't want? Creating your own pasture mix for sheep grazing is quite simple if you live in an area comparable to mine. I would exclude most grass species that are available like fescue (not liked by sheep), meadow fescue (not enough yield), timothy (not enough yield after the spring growth), and rye grass (too high input required). I wrote a comprehensive article about the "perfect" sheep pasture for "Farming Magazine" and it was reprinted in this publication quite some time ago. It can still be viewed on Small Farm Quarterly's website as well as on my website. I won't repeat my experience with various grass and legume species in this article but will focus on the one that has worked for me for so many years now: orchard grass.

Orchard grass is native to Europe, parts of Asia, and parts of Northern Africa. It has been for such a long time naturalized in North America that many people speak of "native" orchard grass when they distinguish between the orchard grass that volunteers (which is called native) and the seed of improved orchard grass varieties. "Native" orchard grass volunteers willingly and easily unless you have fairly wet soils. This story of an old farmer whose business was making and selling hay illustrates well what I am implying: He told me once about a large parcel that he had re-seeded with timothy (which heads out much later than orchard grass and therefore leaves a much bigger window for haying) and he complained about all the orchard grass that is now growing in that same field although he had never seeded any. What bothered him is a delight to me. When we purchased this farm nine years ago, I had many parcels which had been neglected for some years and many plants grew, including bushes, but not much valuable or high-yielding grass. Since my sheep liked to graze it anyway I decided to improve the existing sod with legumes, mainly white and red clover, by frost-seeding. Nine years later, I have a thick stand of orchard grass that established itself on its own. I am sure the sheep (which carry seeds in their wool and hair by the thousands) helped quite a bit. Nevertheless, I didn't have to move a finger, let alone spend money to get there.

Orchard grass in its vegetative state is well liked by sheep. They graze it readily and lots of it. However, it does not take continuous and close grazing. This is no problem at all in a rotational grazing program that includes leaving residual, followed by a rest period of several weeks. If you practice set-stock grazing this grass is not for you. It will disappear in



**Orchard grass is by far the most desirable grass species in my sheep pasture.**

your pasture real quick. In fact, I have not found it in pastures that are continuously and closely grazed.

Orchard grass is also relatively high in sugar, which means energy. While rye grass is higher in sugar content, orchard grass does not need the same high input and grows well on marginal soils like sandy or gravelly soils as long as they are well drained.

Another positive side to orchard grass is its high yield, often despite the fact that little fertilizer has been applied or that the soils are marginal. Yet another upside to orchard grass is its relative drought tolerance. Compared to fescue it is less drought tolerant but compared to all other cool-season grass species that come to my mind it is more drought tolerant.

Some of you may think of orchard grass as this tall and clumpy grass that gets unpalatable real quick when it grows seed heads. That too is orchard grass but it doesn't have to be that way. I graze my pasture early. And when I say early I mean the moment any green sheen is visible in my pasture. Some say this will reduce total yield of grass throughout the season. However, a field trial in Wisconsin with heifers showed that it does not reduce total annual yield just as long as the grass has enough rest time throughout the growing season in between grazing it. My experience confirms that. This early grazing has one wonderful side effect as far as the development of the seed stems is concerned: it reduces the number seed stems and it also inhibits the growth of them, all in favor of more leafy grass even during the period when seed stems have developed. Of course, there are some patches here and there where the seed stems do get too tall and no leafy grass is left. Bush-hogging right after grazing it takes care of that. After the seed stems are clipped the orchard grass immediately resumes vegeta-

tive growth for the rest of the year.

Orchard grass can also be purchased as seed. There are several varieties that head out later, meaning the seed stems are developing later in comparison to native orchard grass. The difference is quite significant. Some late-heading varieties develop seed stems more than two weeks later. This keeps the orchard grass far longer in a vegetative state. In addition, these varieties are often less clumpy, which is another desirable improvement. The two varieties that I have tried are Baraula, the latest heading variety from Barenbrug, and Athos, a late-heading variety developed in Europe. Both varieties have been perfect for my sheep pasture. In fact, when I dream up a newly seeded sheep pasture I think of a blend of the latest late-heading orchard grass varieties as the grass species in it.

So how does that all translate into an answer for the question for what pasture mix I recommend? Simple: Prepare your seed bed, seed your late-heading orchard grass, then spread your legume of choice on top and run your cultipacker over it for good soil contact. (You can also frost-seed your legume at a later time if it is clover.) This way you already have a much better pasture than from a pasture mix with species that will either disappear a few years later or are not liked by sheep or are not yielding much. If you wish to fill in some blank spots you might want to add some improved blue grass but bluegrass is likely to volunteer later on anyway. So, what legume do I recommend? Ah, I just thought of a topic for a new article. Stay tuned.

*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 U.S. since 1995. He farms in the Finger Lakes area in upstate New York. His website address is [www.whitecloversheepfarm.com](http://www.whitecloversheepfarm.com). He can be reached by e-mail at [ulf@whitecloversheepfarm.com](mailto:ulf@whitecloversheepfarm.com) or by phone at 585-554-3313.*



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**FOREST AND WOODLOT****Pigs 'n Trees**

*Use of pigs in Silvopasture deserves some words of caution; rooting is not the same as masting.*

by Joseph Orefice

The practice of silvopasture has gained interest in recent years in the Northeastern United States. This practice, which integrates the sustainable production of livestock, forage, and trees on the same unit of land, has the potential to increase farm productivity and soil quality when compared to conventional pasture systems. While silvopasture can function with many species of livestock, the use of pigs in wooded pastures deserves special attention.

In 2014 and 2015, I lead an investigation into silvopasture practices on farms in New York and New England. This research was conducted through the University of New Hampshire and funded through the Northeastern States Research Cooperative. A major conclusion of this work was that many misconceptions existed regarding what silvopasture is. Of these misconceptions, the most concerning was pigs being kept in wooded areas to the detriment of trees and forage and the practice being mislabeled as silvopasture. Specifically, pigs were either intentionally or unintentionally being allowed to root in forested pastures. No tree care was taking place in these paddocks, and no tree care means it's not silvopasture.

As a farmer, keeping pigs in forested areas does have its appeal. Pigs need shade during the summer and the diversity of insects, roots, nuts, and plants in wooded areas can



This image depicts the differences between continuous pasturing of pigs (left) and short rotational grazing of cattle (right). While neither system can be defined as a silvopasture due to lack of tree management, lessons regarding pasture management are evident in the forage layer or lack thereof.

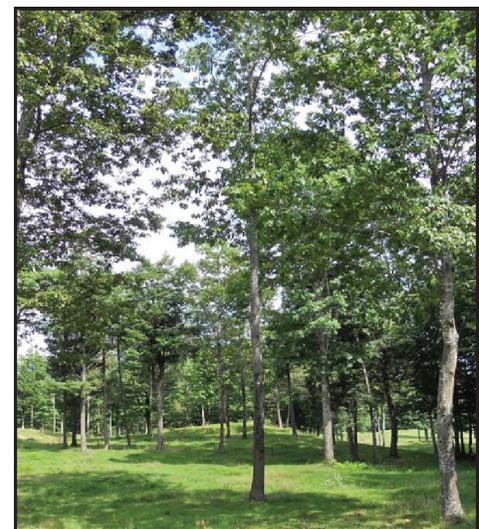
be very appealing. Pigs also require supplemental feed when pastured, a possible source of nutrients for the forest. However, the challenge is that when pigs are allowed to root they significantly damage soil structure leading to:

- Loss of surface forages (which are less resilient under a tree canopy).
- Loss of the soil humus layer (habitat to multitudes of organisms and where over 90% of trees' roots are located).
- Significant soil compaction.
- Significant loss of soil structure and nutrients.

- Increased surface runoff and soil erosion.
- Destruction to the soil biotic community of a forest.

Pigs have been incorporated into treed pastures in Europe for centuries. However, the use of pigs in these systems has been to glean fallen hard or soft mast. Pannage is a historic English term for keeping livestock in woodlands to consume mast; this practice was also known as acorning. In fact, the term "mast" is derived from the old English term "maest" which referred to food for swine. Mast on the forest floor is much more appealing to a pig than the roots of trees, thus soil destruction can be significantly reduced if pigs are only allowed into wooded pastures for short periods and only when there is ample mast available. The European practice of pannage is much different than the rooting of forests, which is occurring on Northeastern U.S. farms.

Perhaps it is their strong and long-lived stature that leads farmers to misinterpret trees as resilient to root damage. In reality, it is forages that are resistant to root damage because they are able to rapidly respond to disturbances through regeneration. When trees experience root damage, their strategy is to live off stored energy reserves. It often takes years before these reserves run out and the tree starts showing signs of decline or mortality. Therefore, it is critical to maintain the integrity of tree roots and soil in silvopastures because a few weeks of soil disturbance can end decades of tree growth. Even more concerning is that it can take 5-10 years before this decline in tree health is evident.



This image, from a Northeastern U.S. farm, depicts a silvopasture dominated by red oak. Notice the forage layer, sunlight reaching the forest floor, and lack of exposed tree roots. Livestock, cattle in this case, are rotated through for up to one week and not re-introduced for over one month.

not. This will ensure that the system can function and also save the farmer time moving pigs between paddocks later in the season. Development and maintenance of a sod layer in silvopastures will also help to buffer soil degradation and rooting from pigs. The development of a sod layer will usually require thinning of trees, allowing sunlight to reach the forest floor.

There is a desire among farmers to be doing the right thing for the land, but often they do not know what the right thing is. Poorly managed woodland pastures are a historic norm in our region, making up nearly 20% of total pastured acres (USDA National Agricultural Statistics Service). A possible solution for increasing the sustainability of woodland pastures is to convert them to silvopastures. However, silvopasturing is very new to our region and best management practices are sparse. The confusion of woodland pasture and silvopasture exacerbates the problem because political support and credibility for silvopasture is often held back because of poorly managed wooded pastures. Farmers must be the leaders in advancing the sustainability of wooded pastures. A first step is to consider this sound advice from two farmers in Rhode Island: "Pay attention . . . observe . . . and consider those three things: is it working for you, is it working for the animals, is it working for the land" and I'll add, is it working for the trees?

In short, if you are thinking about pasturing pigs in wooded areas, silvopasture or not, be sure to think twice and plan to spend some time moving animals and fence prior to any occurrence of soil disturbance. Proactive livestock management is always better for the pasture system than reactive livestock management.

Joseph Orefice, PhD, is an Assistant Professor of Forestry at Paul Smith's College and he also owns/operates North Branch Farm in Saranac, NY where he raises heirloom figs, tomatoes, and beef in silvopastures. More information and contact information can be found at [www.adkfigs.com](http://www.adkfigs.com).



Pigs being pastured in woodlands on a Northeastern U.S. farm. The farmer was calling this silvopasture, but it is much more appropriately classified as a pastured woodland due to month long livestock rotations, no management of trees, and the complete lack of a forage layer.

Timing is a major factor in sustainably managing pastures, especially silvopastures. Much work has been conducted to determine optimal rotation lengths for grazing animals such as sheep and cattle. Farmers have embraced the results of this work and many in our region are utilizing short rotations (less than 3 days) followed by long (at least 3 weeks) periods of rest for their grazing animals. It is logical that for our rooting animals, pigs, rotations must be even shorter than those of grazers (think 1 day or less for pigs in silvopastures). Unfortunately, little work has been done in relation to pastured pigs. A simple recommendation is for farmers to set up multiple paddocks prior to introducing pigs into pastures, wooded or

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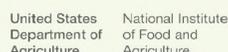
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**BUSINESS MANAGEMENT****\$15/Hour Minimum Wage: Disaster or Opportunity for Family-scale Farms?**

by Elizabeth Henderson

The growing momentum of the campaign to raise the minimum wage presents those of us who are farming with a serious challenge. How are we going to respond?

If the minimum wage had kept up with inflation, the \$1.60 of 1968 would be \$10.96 today, so workers' demands for raises are getting serious consideration. The fast food workers' fight for \$15 has pushed the NY Labor Board to back a plan to phase in this new minimum over the next 6 years.

To many organic farmers, \$15 an hour looks good as a wage for us farmers, though as employers it puts a lot of strain on our businesses. The question farmers need to ask is, how do we turn this into an opportunity? Can we inspire a campaign to raise prices for farm products so that we can act in solidarity with other food workers?

If we want to make real progress towards a more resilient and sustainable food system, we have to do a much better job of linking justice for farm workers and justice for farmers. It is difficult to make the finances work on a family scale farm. The number of farms in the U.S. has shrunk by over 4 million during my lifetime. When we talk about food justice, we are not just talking about something we need to do for others - for exploited farm workers or undocumented dishwashers. Farmers need food justice too. Would-be farmers need to understand that they will probably spend years as employees - working for other farmers, working as hired farmers or doing another job in an unrelated field.



**Rosalinda Guillen, farmworker organizer, will be one of the keynote speakers at the NOFA-NY Winter Conference, Jan. 22 - 24, 2016.**

We need a system that supports fair pricing - remember parity? Price supports? A minimum wage for farms? That ceased to exist in the 1950's. Farmers should know this history and join in the movement for justice as our own agents. Once you start to think this way, it is not too hard to see that farmers alone are not going to get very far. By cooperating and working in solidarity with other food system workers - 17% of the entire work force - there might be a chance to get somewhere.

Most organic farmers I know are painfully aware that the current cheap food system coupled with "Free" Trade makes it difficult to keep family-scale farms afloat. In the decades since World War II, family scale farms have been going out of business at a steady and alarming pace until very recently. In 1943, the year I was born, there were close to 7 million farms. There are only 2.2 million today. A major squeeze or speed up has been underway in farming that has been especially hard on dairy farms and farms that produce commodity crops. Rising costs, global warming (droughts, floods) and low prices due to concentration in markets that reduces the number of possible buyers have all contributed to tight budg-



**The 2015 farm crew at Peacework Organic Farm - Rachael Oyer, Abe Johnson, Eli Miles, and Eli Rubin.**

ets for farms. Prices of commodity crops, especially soybeans, corn, and wheat, have been under pressure because of expansion of large-scale export-oriented farming in countries such as Brazil, Argentina, Russia, and Ukraine. Contracts, even those given by organic processors, are poor. Most small farms are not profitable, and many are in debt. Legal protections that would allow farmers to form associations to negotiate contracts with buyers are weak.

The sustainable agriculture and local foods movements have reversed the downward trend in farm numbers - the number of very small farms is actually growing. Nevertheless, about 84% of existing farms are in debt. Prices do not cover farmers' costs of production. Many of the farms that do not hire labor do have a family member who works off the farm so that the farmer can have health insurance, send children to college, and save for retirement, or the farmer works a regular job and spends evenings and weekends doing farm work. While there are some outstanding examples of farms without much hired labor that are doing well financially, most of the family scale farms I know are struggling to make ends meet, or are run by people who have chosen to live "simply." Often, farmers are so discouraged about the money aspects of their farms that they do not even try to calculate costs accurately. They farm for the love of it, and either squeak out a living that would qualify as below the poverty line, or make money doing something else to support their farming habit. Family scale farms are fragile small businesses, a marginal population in the U.S. and all of North America.

As farm commodity prices fall again, more farms are likely to go under. At the end of August 2015, the Department of Agriculture predicted that farm incomes will drop to less than half the peak reached two years ago. The USDA projected that farm incomes this year will come in at less than \$59 billion, down 36 percent from last year and 53 percent from a record high of \$123.7 billion two years ago.

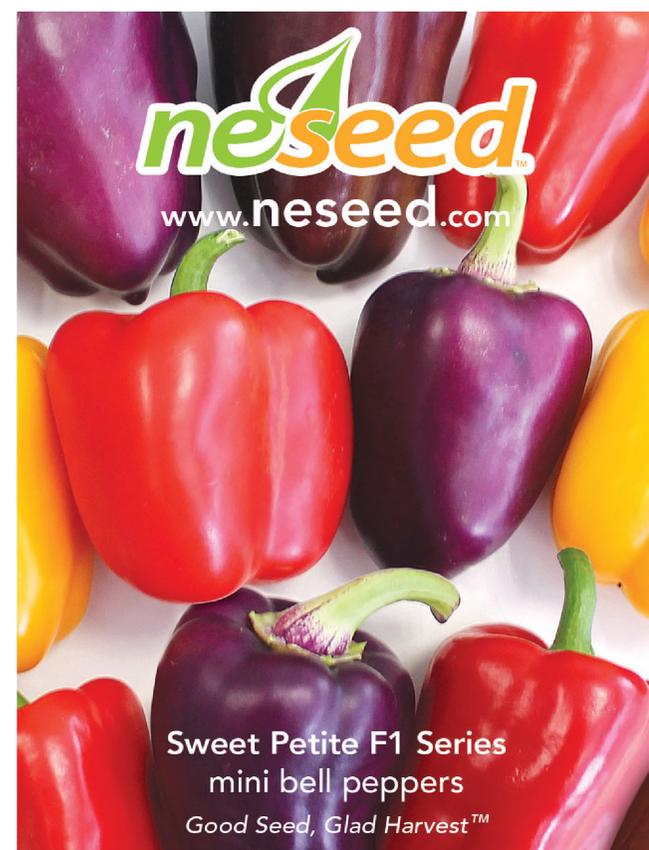
By contrast, the organic market is growing quickly, though that does not translate into profitable sales for U.S. organic farms. According to the USDA Census of Organic Farms, "63 percent of U.S. organic farms reported selling products to wholesale markets. These sales accounted for 78 percent of U.S. organic farm sales. Wholesale markets, such as buyers for supermarkets, processors, distributors, packers and cooperatives, were serving as the marketing channel of choice for U.S. organic farmers to get organic agriculture products to customers." The census shows that sales of organic crops and livestock at the farm-gate reached \$5.5 billion in 2014, up 72 percent from 2008, and according to the Organic Trade Association (OTA) overall organic sales in 2014 were \$39.1 billion, up more than 11 percent from the previous year. In analyzing the census results, Edward Maltby of the Northeast Organic Dairy Producers Association (NODPA) points out that the number of organic farms and acreage have been shrinking: "There were 14,093 organic

farms in the United States last year, accounting for 3.6 million acres, with another 122,175 acres in the process of becoming organic, according to the latest National Agriculture Statistics Survey. However, in 2008 there were 14,540 organic farms making up 4 million acres with another 128,476 acres going through transition." According to Maltby, there has been attrition even in organic dairy farms as they get caught in the squeeze as input costs rise faster than organic milk prices.

Processors are importing more organic ingredients. In part, this is to make up for the insufficient expansion in U.S. organic production. The lower prices of imported organic crops, however, may be more important than the U.S. shortage, and the availability of cheaper imports creates a downward spiral, discouraging U.S. conventional farmers from transitioning to organic. Klaas and Mary Howell Martens identify exchange



**Lazaro Alvarez, dairy farm worker from Mexico, tells audience why he became a farm worker in NY at the NESAWG conference, Nov. 13, 2015.**



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rates as an additional factor: “A big factor in organic imports right now is the currency exchange rates. One Canadian dollar equals about 75 cents U.S. making a \$20 per bushel grain in Canada convert to \$15 U.S. The sharply rising value of the American dollar causes commodities to fall equally sharply. That makes importing grains very profitable for brokers. Anybody living near the Canadian border right now can find lots of cheap grain being offered to them from up north. Eastern European and South American grains are equally cheap to import right now.”

Over the past three years, the Domestic Fair Trade subcommittee of the NOFA Interstate Council has done a survey of organic farms to learn what labor policies they use and what wages and benefits they are paying hired workers. (You can read Rebecca Berkey’s analysis here: <http://www.northeastern.edu/nejrc/>) The survey disclosed that most labor is done

by the farmers themselves and their families. Those who hire labor expressed the desire to pay good wages and benefits, but most were paying no more than \$9 or \$10 an hour. Many commented about the obstacles to living their values – low pricing, lack of markets.

I would hope that we farmers can agree on a long term vision that will solve our economic stresses together with the problem of who will be available to work on our farms in a holistic and humanitarian way that honors the Organic Principle of Fairness. At stake here is what in policy discussions of labor supply is being called the “future flow” – who will be allowed to enter the U.S. and under what conditions. For the past half century at least, industrial scale agriculture has depended on a steady supply of immigrants from other countries. And nowadays some of the small farms that employ labor also depend on immigrants. Most of those who have come to work on the

farms in the U.S. were people who had been driven from their own land by economic hardships and political upheavals. (See film, Harvest of Empire) The Free Trade Agreements, especially the NAFTA, have increased the numbers of desperate farming people coming to the U.S. from Mexico and Central America. Most of them would not come here if they could make a living on their own farms back home.

**So how do we get there?**

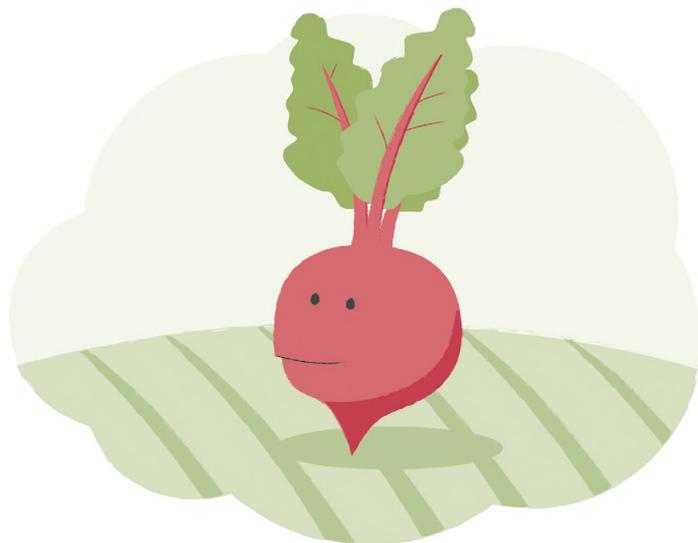
For our farming to be worth sustaining, farm work must become a dignified, respected career path, properly remunerated with a good benefits package. The farm becomes a center not only of production but of training and cooperation with the community.

With our eye on the long term, we must shift from an agriculture that depends on the constant influx of desperate, low paid workers to a domestic work force. We need to elevate farm work to the place of respect it deserves. That means pushing in every way we can imagine to remunerate farmworkers adequately, starting with the farmers ourselves. Everyone working on our farms deserves living wages with decent benefits, health care, retirement, funds for professional development. When new immigrants arrive, they should not be regarded as a source of continuing cheap, unskilled labor but, if they want to stay in the U.S., as additional recruits and reinforcements for our campaign for new farmers.

We need to provide access to the resources the new generation of would-be farmers requires so that they will be successful. That means higher farm gate prices, access to land and credit. There needs to be a diversity of farm-related jobs – not everyone wants to be a farm owner-manager. Farms operate better with a more cooperative structure whether several members of a family, a formal legal cooperative or a group of farmers working together.

Whatever merits capitalism may have in other sectors, the laws of corporate capitalism are totally inappropriate for food production, distribution and sale. The food system of a new economics will have to be fair, apportioning the food dollar up and down the food chain – or throughout the food web. What we need is domestic fair trade where buyers pay farmers enough to allow them to use sustainable farming practices, to earn a living wage for themselves and their families and to pay living wages for the people who work on their farms. Living wages include shelter, high quality, culturally appropriate food, health care, education, transportation, savings, retirement, self-improvement and recreation. The Agricultural Justice Project has assembled farmers, farm workers and other stakeholders to compose high bar standards for fair pricing, and decent working conditions for people who work

See Minimum Wage page 18



The beet looked up from his furrow.

“You planted me with such care,”

he said to the farmer,

“let me return the favor by preparing your taxes.”

- 12 -

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**LOCAL FOOD AND MARKETS****Stand Out in Your Field: Marketing for Farmers**

by Alice Varon

Farmers often feel that they are too busy running the farm to invest time developing a marketing plan. But, with all the compelling images and stories that come with life on a farm, they have enormous marketing assets right at their fingertips! In our culture of information overload and short attention spans, effective marketing deploys visual content and stories with emotional resonance.

Last fall Certified Naturally Grown (CNG) initiated a new project to enhance farmers' marketing by helping them tap this potential and use the images from their farm to tell stories and establish a brand for their farm. While we continue to recommend our certification programs for direct-market farmers and beekeepers using ecological practices, we also recognize that certification alone isn't a marketing plan. And we want to see farmers' businesses thrive.



Good pictures and narrative are important in modern farm marketing.

The project's website is called Stand Out In Your Field - Marketing for Farmers. As part of this project, Certified Naturally Grown is offering free marketing services: logo design for qualified applicants, and the development of a promotional video for selected producers. The first batch of logos and videos have been completed, and will be featured on the website. We will be accepting a second round of applications for these services through mid- to late January 2016. Applicants can get started at [StandOutInYourField.org](http://StandOutInYourField.org) and must be primarily direct-market producers using ecological methods in order to qualify for these services.

The project's website also includes a section for marketing lessons designed to help farmers tell their stories. These lessons include using Instagram, writing a press release, branding, and using video. Lessons are available for free on the website, with more detailed lessons available for download. A series of short blog posts features "Shining Examples" featuring farmers who excel at these techniques, like how Instagram is used by CNG member Origins Farm.

To support improved branding, Certified Naturally Grown is also offering affordable design services, including several design options for banners and business cards based on a farm's logo or the themes created for CNG producers. There are also options for farms without logos and without certification.

The media landscape has changed dramatically in recent years. Add to this the increasing sophistication – and confusion – of customers about their food choices. Direct-market farmers today face a pressing need to develop a marketing approach that resonates with customers and strengthens

their affiliation. Savvy farmers stand out with a story and a brand that is consistent across venues, and extends beyond the market to include an online presence with visual stories about the farm and the people who work there.

Effective farm marketing requires ongoing efforts to reach



The website offers mini-lessons on a variety of important marketing topics.

new customers through branding and storytelling. Farmers are fortunate to have a particularly interesting workplace that customers want to hear about. To get the latest from this project, register for updates at [www.StandOutInYourField.org](http://www.StandOutInYourField.org). The work of this project is funded through a grant from the Farmers' Market Promotion Program of the United States Department of Agriculture, AMS division.

Alice Varon is Executive Director of Certified Naturally Grown. She's currently working with experts to develop new certification programs for mushroom producers and aquaponic operations. Register for updates about these projects on the CNG website, [www.CNGfarming.org](http://www.CNGfarming.org), 845-687-2058, [alicevaron@naturallygrown.org](mailto:alicevaron@naturallygrown.org).

**It's not a pretty picture.**

**Whole Farm Revenue protection** is available for small and large diversified growers and can include livestock. The program is based on a farmers' Schedule F tax form and is an improved version of AGR/AGR-lite. Visit the USDA RMA website for educational materials at: [www.rma.usda.gov/policies/wfrp.html](http://www.rma.usda.gov/policies/wfrp.html). Contact a crop insurance agent to explore this new program. To locate an agent, ask a neighbor for a recommendation or go to: [www.rma.usda.gov/tools/agent.html](http://www.rma.usda.gov/tools/agent.html).

**Crop insurance** is available for organic corn, soybeans, winter wheat and feed-grade barley. In counties where crop insurance is offered for these commodity crops, contract prices may be used for organic insurance purposes. New farmers are eligible for significant program benefits.

Vegetable and fruit crop protection is available through the much improved **Non-insured Disaster Assistance Program (NAP)**. It can provide up to 65% protection for almost all crops when crop insurance is not available. NAP is available through your county Farm Service Agency (FSA). Contact your FSA office for more information or visit: [www.fsa.usda.gov/ny](http://www.fsa.usda.gov/ny). New farmers are eligible for significant program benefits. **NAP enrollment deadlines vary by crop.**

**February 1** for *beets, greens, herbs, leeks, lettuce, onions, radishes, scallions, shallots, turnips*

**March 15** for *most other spring-seeded crops*

To find an agent go to [www.rma.usda.gov/tools/agent.html](http://www.rma.usda.gov/tools/agent.html).

For more information go to [www.agriculture.ny.gov/AP/CropInsurance.html](http://www.agriculture.ny.gov/AP/CropInsurance.html) or call **800-554-4501**.

Contact your county Farm Service Agency or visit [www.fsa.usda.gov/ny](http://www.fsa.usda.gov/ny) for information about NAP.



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**URBAN AGRICULTURE****Growing Edible Forests as a Community****Free Harvest at Your Local Community Food Forest!**

by Catherine Bukowski

Communities across the United States are establishing food forests, also known as forest gardens, to ecologically grow perennial and annual foods, herbs and medicinals for free public harvesting.

Community food forests (CFFs) serve multiple educational roles, such as introducing people to alternative agriculture, forest ecology, food security issues, social justice, and food literacy. They are also a great way for people to take an active role in shaping their local landscape and expressing values about how food is grown and who has access to it.

In 1997, Asheville, NC, was the first city to give permission to a local non-profit organization to establish a community food forest on under-utilized Parks and Recreation property. The non-profit promoted public participation in shaping the project from the very start. Public meetings created a space for community members to give input on layout, design, and species selection for the food forest. Eighteen years later, the food forest now looks like a small urban park and is known as the Dr. George Washington Carver Edible Park. The trees and vegetation in the park provide much more than a shady, tranquil location to relax and recreate. There are apples, pears, jujubes, peaches, plums, figs, blackberries, blueberries, strawberries, hardy kiwis, and muscadine grapes among others. All of the plantings are available to the public to harvest for free. Surprisingly, this appealing notion for the use of urban space took more than ten years to start appearing in other cities around the U.S.

In 2008 and 2009, at least four different community food forests were started in the urban locations of San Francisco, CA; Pittsburgh, PA; Portland, OR; and Seattle, WA. Seattle's Beacon Hill Food Forest received the most publicity of all, due to its size and location on public land, whereas others are located on vacant lots. The media coverage of Beacon Hill spurred many other communities to

start taking action to establish their own food forests. As of 2015, there are over fifty community food forest initiatives throughout the country. Projects typically start at the grass-roots level and bring together a mix of stakeholders (community members, local government agencies, organizations, and universities) to form partnerships, create shared vision, acquire land, navigate policies, and establish and maintain the site. Food forests are an attractive model for food production in areas where people need multifunctional landscapes because green space is limited.

CFFs incorporate elements of both urban agriculture and urban forestry. Essentially, food forests are a form of urban agroforestry that combines fruit and nut trees with perennial and annual crops. Plants are grown together in close proximity to mimic the multiple vertical layers of vegetation found in a forest ecosystem including root, ground cover, grasses or herbs, bushes, vines, smaller trees and larger canopy trees. By mimicking plant communities, functional roles, and structural layout of a forest ecosystem, the level of maintenance and external input will decrease over time as the system becomes self-sufficient in a manner similar to forests. Combinations of plants are selected to produce



**A couple visiting Asheville, walks through and admires the edible fruit and nut trees that now form an edible park where there was once an empty field.**

Photo credit: Catherine Bukowski

food, fiber, forage, and other goods during different times of the year.



**A community member walks along a path in the Rahma Free Health Clinic Edible Snack Garden in Syracuse, NY that was established before the food forest.**

Projects experiment with a wide range of perennial species and varieties, seeking to find those that are best adapted to the local region, as well as combinations of plants that work well together (or not). They are testing grounds for plant material and some sites are using food forests as local seed banks to breed locally acclimated plants. Community members collaborate on finding innovative solutions to production and management issues. In Santa Barbara, CA where drought is a recurring issue, the community food forest has become the experimental grounds for alternative methods of water collection such as fog capture from the ocean. Many species considered specialty crops on farms, and often produced in agroforestry systems, are gaining popularity in food forests including elderberry, hazelnut, and pawpaws. Consequently, the communities engaged with food forests and interested in these food products are learning the difficulties associated with perennial fruit and nut production. I have visited twenty-four community food forests across the U.S. and have interviewed many who feel they have a deeper understanding of the trials and tribulations farmers go through on a yearly basis to produce crops sustainably, ethically, and ecologically, all while confronting changing and unpredictable climate conditions.

While community food forests, at their current scale, will not solve local food security problems, they are a great educational resource for reconnecting urban populations to alternative methods of growing food and to specialty crops not found in community gardens. They help create a better understanding of what it takes to grow ecologically sound crops and the importance of experimenting with varietal species for improved flavor, pest control, and yields. Additionally, they bring people together to build a community with shared values on the food system. I believe as these initiatives grow in popularity there is potential to connect with local farmers to collaborate on vegetative propagation material, provide genetic banks for species diversity, and share risk on experimenting with growing methods that can be scaled-up for the homestead or small farm level.

If you are interested in learning where community food forests are located throughout the United States and further reading information relevant to this topic, visit Catherine's website at [www.communityfoodforests.com](http://www.communityfoodforests.com)

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**HOME AND FAMILY****Agritourism: The Authentic Farm Experience*****A Vermont farm stay promotes economic viability at Liberty Hill Farm and agricultural literacy from the community to abroad***

by Rachel Carter

Tucked delightfully in the foothills of the Green Mountains along scenic Route 100 in Rochester, Vermont, sits Liberty Hill Farm — a working dairy farm defined by the 1890's red barn with cupola — one of the most photographed in all of Vermont. Beth and Bob Kennett milk approximately 270 Robeth Holsteins as members of the Cabot Creamery Cooperative and have been providing farm vacations since 1984.

The Kennett's bought the farm in 1979 and like many farmers, were seeking ways to diversify income to help the farm survive during dairy industry economic downturns. In February 1984, a nearby inn asked if Liberty Hill would be interested in hosting overflow guests and a few months later, a nearby summer camp inquired if Liberty Hill could be shared as an option for parents to stay during orientation and parent weekends. The Kennett's never looked back.

While many in Vermont view Liberty Hill Farm as one of the leading pioneers in farm stay experiences, it wasn't until recent years that the agricultural community began to recognize agritourism as both a viable educational and economic opportunity for Vermont farms.

"We were met with challenges proving to other farmers. I think they feared the 'Disneyfying' of farms and didn't see farm vacations as an opportunity to actually educate and share values on life and agriculture," Beth Kennett reflects while sipping tea, following a sumptuous supper of produce and meat from her and neighboring farms.

A farm stay at Liberty Hill includes comfortable accommodations in the rambling white farmhouse, family style dinner and breakfast, and a host of farm chores and activities. Guests can visit with Bob and the Kennett's son, David, as they milk the cows, and Kennett's daughter-in-law and granddaughter invite guests to feed the calves every morning after breakfast. Rubber boots are available if you forget yours at home.

Beth Kennett is tickled at how many people come to fill their bucket list — one item high on that list for folks is to play with the barn kitties. Kennett also notes grandcations (vacations with grandparents and grandchildren) are becoming increasingly popular and a working farm is a favorite destination. Grandparents can relax and engage in quality time in an educational environment with their grandchildren without carting them to and fro. Kids can run free, get dirty, and learn about where their food comes from.



**Asia, David, Bob, Ella, and Beth Kennett represent three generations of dairy farmers at Liberty Hill Farm in Rochester, Vermont — a popular agritourism destination.**

"Authenticity has to be hugely paramount," Kennett notes pointedly. "It is crucial to how we represent agritourism in Vermont and maintain the integrity of an agricultural and educational experience."

During the 1980's and 1990's, Beth Kennett enjoyed building relationships with guests, who became repeat customers, and then friends. Sharing with guests the experience of life on the farm and tasting the fruits of that labor was always something Kennett knew was of educational value. But it wasn't until a tourism trade association trip Kennett made with Vermont Senator Patrick Leahy in 1998 to Ireland that helped her start to understand the broader economic impact opportunities for agritourism.



**Grandcations are popular at Liberty Hill Farm in Vermont — Farmer Beth Kennett and her granddaughter Ella at Liberty Hill Farm in Vermont, also a popular "grandcation" destination.**

Kennett, Senator Leahy, and Vermont tourism counterparts gleaned multiple opportunities applicable to Vermont. More than just "beds and pancakes" as Kennett puts it, a cohesive suite of economic contributions were presenting themselves to benefit Vermont communities all centered around agriculture — from farm stays and meals to tours and product sales.

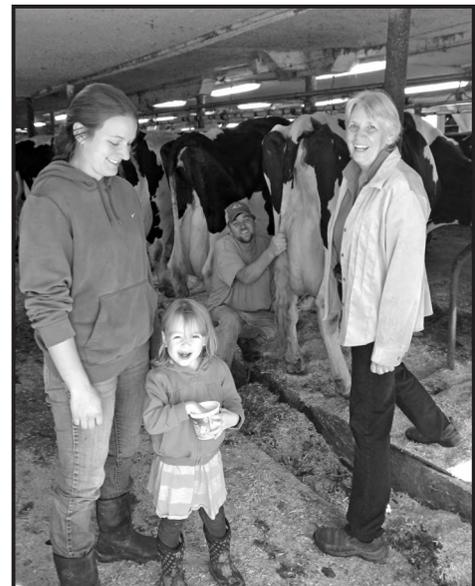
"Come visit Vermont and buy Vermont products" was a message Kennett brought back from Ireland. "I also came back to Liberty Hill with a real sense of value in providing in depth answers to my guests and not just as their host, but a face of Vermont agriculture and a dairy farmer."

With her newfound purpose representing farmer authenticity and helping to boost Vermont agritourism, Kennett helped start Vermont Farms! (thanks to a grant from then Representative Bernie Sanders)—an association for farms open to the public, including farm stays, motor coach destinations, and pick your own locations.

Agritourism has grown successfully in Vermont and remains true to the authenticity that surrounds the Vermont brand. The work of Vermont Farms! has morphed into various organizations and initiatives. Farm-based education is a core focus of Shelburne Farms with a statewide reach through farm to school programming. The Northeast Organic Farming Association in Vermont (NOFA VT) promotes several agricultural literacy events and programs connecting consumers to the source of their food. Businesses like Vermont Farm Tours partner with farms and food producers to offer genuine farm tour experiences, and web marketers like Localvore Today offer discounts for farm products and marketing exposure to farms. The DiginVT.com website provides a full inventory of farm experiences and food trails across the state. All of these organizations along with farms, food producers, and government including the Vermont Department of Tourism and Marketing, the Vermont Agency of Agriculture, Food & Markets all collaborate as a part of implementing Vermont's Farm to Plate food system plan to keep both the educational and economic impacts of agritourism prominent in Vermont's work to relocalize food production and distribution.

It may not have been until recent years — as the local food movement really began to show its prominence in economic development — that others in the agricultural community began to look at agritourism as a viable farm diversification operation. There is no question to Kennett now that farmers are starting to see the benefits — both for their bottom line and the future of agriculture.

The challenges of the dairy industry continue to be a struggle for Vermont farms, but the dairy industry is also the backbone to Vermont's farming heritage and a core economic driver in Vermont agriculture. "We have our farm family of three generations to share the farming way of life and connect people to the life and experiences on a dairy farm," Kennett states proudly. She then shares a favorite story of how guests



**David invites guests to visit with the cows and help with daily chores in the barn.**

Photos by Rachel Carter

increase their awareness of the work involved to produce food and how that leads to lifelong connections.

"Years ago, a group of Boy Scouts and police leaders from Staten Island came up for an educational field trip. We gave them the project of picking rocks off of a new field. The boys thought that rocks had never been taken off the field and they received a huge New England geology and farming history lesson. The officers said those boys would never eat an ice cream cone again without thinking about the rocks — and it was an invaluable lesson. One of the Scouts came back this summer and stayed with his wife, who still had the love note he mailed her after a day picking rocks on a farm in Vermont."

And with that, Kennett put down her teacup and before retiring for the evening, headed into the kitchen to make the final preparations for the next day's breakfast — hopefully pancakes.

*Rachel Carter is the communications director at the Vermont Sustainable Jobs Fund, a non-profit organization created by the State of Vermont to help develop Vermont's sustainable agriculture, renewable energy, and forest product businesses. She can be reached at 802-318-5527 or rachel@vsjf.org.*

**Sources for more Info:**

www.libertyhillfarm.com  
www.vtfarmtoplate.com  
www.diginvt.com  
www.vermontfarmtours.com  
www.localvoretoday.com  
www.shelburnefarms.org  
www.nofavt.org

**NEW AND BEGINNING FARMERS****Growing Pains and Profitability***Beginning farmer profit teams help farmers in New York State make critical decisions.*

by Matt Weiss

**Farms at a Crossroads**

Over the years, we've learned that farmers can experience serious growing pains during the "adolescence" of their farm careers. Many new farmers persevere through the first few years of business on little more than blood, sweat, and tears; only to realize after all that hard work they are still not turning a profit and can't go on pulling 80-hour work weeks forever. These farmers are at a crossroads, needing to scale up, improve efficiency, or make other major changes to achieve viability for their farm. Farmers at this stage in their careers are often faced with critical decisions that may determine the long-term success of the farm business. What farmers at this juncture need is decision-making support from experts and mentors who have been down the same path and come out with profitable, sustainable models for success. The Small Farms Program saw a need and, working with New York Farm Viability's Dairy Profit Team model, developed a pilot program for the Beginning Farmer Profit Team program.

According to Anu Rangarajan, Director of the Small Farm Program, "After farming for three to four years, we have found that most new farmers need to re-strategize their business to ensure growth and sustainabil-

ty. The changes needed could be in production, marketing, labor or even financing. Trying to prioritize among the many different choices can be challenging to the new farmer."

Schuyler Gail, from Climbing Tree Farm in New Lebanon, NY puts it in to perspective from the farmer's point of view, "Due to a bunch of factors converging just before we were given this grant, we thought we would have to stop farming. Our experts have helped to show us that we have options and have given us the confidence and know-how to continue farming." This is exactly the kind of scenario that the Beginning Farmer Profit Team program was created to address.

**Overview of the Program**

Any farm in New York State that has been in operation for 3-9 years and grossed at least \$10,000 in sales in the previous season is eligible to apply for the program. So far, two groups of 12 farms each have been accepted to the program through a competitive application process. Once accepted, the farms work with Small Farms Program and New York FarmNet staff to identify barriers to growth, overall goals, and potential advisors for their profit team. In some cases, the farms already know who they want to work with but if they don't, we can help them find

**Dani Baker and David Belding of Cross Island Farms on Wellesley Island, NY.**

the right people to achieve their goals. Each farm gets up to \$2,000 to hire the advisors on their profit team and pay them for their services. In order to ensure buy-in from the farms, they are required to make a 20% match, up to \$400, out of pocket.

The number of advisors that each farm works with and how often they meet is determined on a case-by-case basis based on the farms' needs, schedules, and learning preferences. Right now we have some farms working with 4 or 5 advisors, while others may only be working with one or two. Frequency and venue for meetings is self-determined by each farmer and their advisors but ultimately the funds must be used within an 18 month period. Profit team farms meet with their advisors in person, over the phone, or even via video conference. In some cases, the profit team farms have really thought outside the box to find the right person to help them. Devon Van Noble of Van Noble Farm looked all the way to Iowa for the right advisor to help with his herd of roughly 250 pigs that he raised on 40 acres of mixed-pasture in Enfield, NY. "When I met Dave Stender from Iowa State University Extension, I was blown away by his wealth of knowledge about the economics of pastured hog production. The Cornell Small Farm Program's 'Profit Team project' allowed me to work remotely with Dave over the past 4 months to benchmark the productivity and efficiency of my farm and to identify some ways to increase profitability. Additionally, I was able to bring Dave out for a whole-day farm visit to my farm to discuss our production scale and suggest improvements for our operations."

While improving farm profitability is one critical measure of the success of this project, other desired impacts include: improved management of farm natural and human resources; reduced stress of farm staff; and enhanced well-being of the farmer. We acknowledge that for many farmers, profit is only one benchmark of success and sometimes not even the most important one. Lifestyle, quality of life, and community

engagement can be just as important to a beginning farmer. This aspect has come through in the experience of Climbing Tree Farm. According to Schuyler Gail, "this project has required a fair amount of soul searching and we've discovered that there really isn't anything we would rather be doing than farming."

**Cultivating Leaders & Looking Ahead (one more round!)**

Farm viability is at the core of the profit team program, but we are also very interested in helping the farms improve their farm management skills and become more confident as leaders, so that they can become more engaged in their communities and as mentors to younger farms. In order to do this, 2-day training retreats are held annually to address select farm business issues (prioritized by the farms), as well as management training, facilitation, and mentoring skills. This retreat type setting helps to create connections between the profit team farms and encourages comradery and farmer-to-farmer learning. In turn, it is our hope that the farms who have received the support of the project through profit teams will pay it forward and become mentors to other beginning farmers in their communities.

This pilot project will test the effectiveness of Beginning Farm Profit Teams to improve decision making of young farms facing challenges to growth and viability. If it proves effective our hope is that the program will be expanded. According to Anu Rangarajan, "We believe that the profit team approach of using consultants to support site specific planning and decision making is key. We are hopeful that this model, if successful in strengthening new farms in New York, will be made more broadly available."

In the meantime, if you are a New York State farmer who has been in business for 3-9 years and has grossed at least \$10,000

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**See Growing Page 16**

**LIVESTOCK AND POULTRY****Heat Up Sales with the Freezer Trade***The Finger Lakes Meat Project expands the freezer trade to promote food affordability and farm viability.*

by Susannah Spero, Project Assistant

The Finger Lakes Meat Project works to expand livestock farms' meat sales through the freezer trade. We are a project of Cornell Cooperative Extension of Tompkins County, and we collaborate with farms, consumers, local businesses, and service providers to increase bulk meat sales in the Finger Lakes region. Our research has shown that selling meat in quarter, half, or whole animals is more profitable for the farmer and more affordable for the consumer. When farms sell meat in bulk, they save on labor and marketing costs. Expanding bulk meat sales preserves small farm viability while promoting food affordability. Our work is partially funded by the New York Farm Viability Institute.

Our project has several components. Consumer education initiatives promote awareness of the freezer trade and encourage consumers to switch from buying meat by the piece from grocery stores to buying whole, half, or quarter animals from local farms. We want folks to find their farmer and fill their freezer! Because many consumers are unfamiliar with buying in bulk, we offer How to Buy Local Meat Classes, provide information at public events, and reach out to consumers through social media. By removing consumer barriers to buying in bulk, we hope to increase sales for local farms. We often hear from farmers

that they wish they could sell all of their animals this way!

MeatSuite.com is our online directory of regional livestock farms. MeatSuite connects farms selling meat in bulk with interested consumers. Farms can post a free profile on the site. The profile includes photographs, descriptions of practices and philosophies, contact information, a product list, and prices. Thanks to funding from NYFVI, MeatSuite has recently expanded to over 20 counties in New York State. Joining MeatSuite is a no-cost, low-risk option for you to expand your marketing reach and articulate what makes your farm unique. Consumers tell us that MeatSuite is a useful resource and a great starting point for first-time local bulk buyers.

Our Meat Lockers also support the freezer trade in our region by giving consumers a place to store bulk meat, and by creating a new marketplace for bulk meat sales. The Downtown Ithaca Meat Locker opened in 2014 and the Corning Meat Locker opened in summer 2015. We have received great feedback on the Lockers from farms, consumers, and the general public. If you know potential customers who want to buy in bulk but are concerned about storage, the Meat Locker may be a useful resource. Several livestock farms in our region refer customers to the Meat Locker and drop off bulk meat deliveries at the Meat Locker. Since

opening, the Downtown Ithaca Meat Locker has stored meat purchased from over 20 farms.

Our next big initiative is creating a price calculator to help farms ensure profitability through accurate pricing. The tool allows producers to enter basic marketing and processing costs, then calculate the pricing necessary to reach the desired level of profitability. The tool allows the farm to adjust prices on each individual cut, to help balance demand and yields. Our price calculator will be an online, user-friendly resource for you to reassess your prices and move towards profitability. Look for it to come online in early 2016.

MeatSuite.com is a website designed to help consumers find locally produced, high quality meats in bulk.

*Susannah Spero is a Project Assistant with Cornell Cooperative Extension of Tompkins County. She can be reached at scu297@cornell.edu.*

We encourage local farms to get in touch with us to learn more about our programs. Please contact Matt LeRoux at mnl28@cornell.edu to learn more, and connect with us online on our Finger Lakes Meat Project Facebook page.



Matt Leroux and Susannah Spero of Cornell Cooperative Extension Tompkins County stand in the Ithaca Meat Locker.

**Growing from page 15**

in the last year, there will be one more round of applications accepted in February 2016. If you are interested in applying for this last round of the program, please contact the author by email at mw84@cornell.edu.

*The Beginning Farmer Profit Team Program*

*is made possible by the USDA's Beginning Farmer and Rancher Program and New York Farm Viability Institute.*

*Matt Weiss is the Beginning Farmer Project Coordinator for the Cornell Small Farm Program in Ithaca, NY. He can be reached at mw84@cornell.edu or 607-255-9911.*



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**LOCAL FOOD AND MARKETS**

**Local Foods Movement is “Good to Go” in Trumansburg**

by Carli Fraccarolli

*Good to Go is a small grocery store/deli/bakery located in the heart of Downtown Trumansburg, New York. The store is quaint, with a small but dynamic offering of goods. I had the chance to sit down with Nana Monaco, one of the owners, and speak with her about how Good to Go works with local producers to sell their products.*

The inspiration for Good to Go Grocery came not from Nana’s head, but from her stomach. Working for the Finger Lakes Grassroots Festival, she was sick of pizza every day and wanted someplace where she could get something quick and healthy. When a space opened up in downtown Trumansburg, Nana capitalized on the opportunity to build her vision. With a focus on healthy eating and familial connections to the local foods movement, it was easy for Nana to begin providing local goods. “[The local foods] movement is so vibrant in Trumansburg and we are fortunate to have so many local products available,” she says.

In order to start providing local goods, Nana first went to Regional Access, a food distributor in Ithaca, New York. Some producers do not or cannot distribute their products themselves, but Nana is able to order a wide variety of items through Regional Access. The nice thing about [working with] a distributor,” she says, “is being able to contact one

source for multiple items.” It is easier and less time consuming to work with one vendor rather than paying and ordering individually.

Nana does, however, work directly with local producers. The variety and quantity of local foods have increased at Good to Go because people have visited the store to say, “Hey, I make this. Do you want to try it?” Nana has rarely turned down an opportunity to feature something local. “My rule is that I always say yes if it is someone local,” she says, although she admits not all local products do equally well. For Nana, the advantage of working directly with farmers is that it is typically cheaper because there is no middleman. This helps allow her to price the local goods she stocks in ways that support the local businesses. Nana says she is willing to take cuts because she wants the local goods to be affordable for the customer and she wants the product to sell well for the producer.

When Nana agrees to work with a local producer, she does not implement formalities. “We don’t have a contract we use,” she says. “As small business owners I think we understand that we are not corporate and everyone has their different invoicing system, for example, or doesn’t have a system at all.” Every relationship is different depending on who is producing what. Nana might pay for something when it is delivered or 30 days later. Producers set up their own terms and she accommodates them.

I ask Nana what she does to preserve the identity of farms whose products she sells, and she leads me to a shelf holding Black Pearl Creamery Sheep’s Milk Yogurt. There I see the small plaque with a photo of the farm and a description of their farming practices.

When she can, Nana creates short farm profiles like these to put next to the product, and tries to mark products with a “Locally Produced” label. She also has special shelves that display local products. These shelves help tourists and other customers identify what was produced in the Finger Lakes Region.



**Nana Monaco stands in front of a shelf containing goods from the Finger Lakes area.**  
Photo by Carli Fraccarolli

For small or midsize farmers looking to expand into small independent groceries, Nana had some advice. “It’s all about packaging and labeling and the way products look,” she says. “It really helps customers want to buy a product when they see packaging that is attractive and that represents the producer as a legitimate establishment.”

Packaging is the first thing that customers see, so even if the product has a high quality taste, customers will judge the packaging before anything. From what Nana has experienced, customers want value-added products to be or taste homemade but don’t often like the products looking like they are homemade.

Nana also spoke about case sizes for small establishments. If a producer has smaller case sizes, it makes it more tangible for a small retailer to actually buy. “Here,” says Nana, “we might not sell through something like yogurt as fast and I can’t afford to lose products and more money.” Nana has had producers offer to replace the product if it is getting low, or take back any product she doesn’t sell. This makes it easier for Nana to shelve products with shorter shelf lives.

Nana is willing to consider product from the greater Finger Lakes region. If you’re a farmer or producer interested in selling to the Good to Go Market, contact Nana directly or visit <http://www.gtgtburg.com/>. The best way to connect with Nana would be to stop into the store. Email and phone are other options, but most often the best way for a local producer to sell product is to bring in a sample.

*Carli Fraccarolli is an undergraduate at Cornell University studying Environmental Science and Sustainability. She can be reached at [cvf22@cornell.edu](mailto:cvf22@cornell.edu).*



**Black Pearl Creamery Sheep's Milk Yogurt has a plaque dedicated to the description of the farm and a photo of the owners.**



**Local and organic bulk goods are housed in large plastic bins along the walls of the grocery.**

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**FARM BUSINESS****Winter Farm Insurance**

by Reuben Dourte

As temperatures plummet across the country, new challenges and opportunities arise for the agricultural industry. While crop farmers may be looking to lock in seed and fertilizer prices, dairymen are utilizing the high value feed they put away in the prior fall months. At the same time, farm mechanics may be working overtime to fulfill maintenance demands on equipment. Farming, like all business, is cyclic, and the changing seasons bring forth new considerations and the chance to reorganize and streamline operations. A few items for farmers to consider that can prove to keep their farm insurance policy current, up-to-date and claim-free are as follows:

**A Review with Your Agent**

As the cold sets in and a fair share of people across the country go into hibernation, many farmers are taking this season to make necessary adjustments for the coming growing season. One of those adjustments can, and should be, their Farm Owner's Insurance Policy. For most farmers, the months following fall harvest prove to be a perfect time to review coverages and discuss new risk exposures with their agent. When a farmer asks his agent to sit down for a coverage review, he is taking a proactive approach to ensuring the future of his operation. As equipment values change, farmers acquire new property (both real and personal) or add to, sell or discontinue a portion of their operations, both the premium and the insurance company best suited to provide coverage can also change. Having a detailed farm review with an agent over these winter months can possibly provide premium savings.

**Up Date Your Equipment Inventory**

Whether a farmer's equipment is insured on a scheduled or blanketed basis, it is not uncommon for that farmer to acquire new equipment during the year and forget to add it to their Farmowner's policy. Chances are there is some equipment maintenance to be done on farm implements over the winter months. This is a great time to reassess the actual cash value of these items, especially if they are an integral part of the farming operation. Some older tractors have a higher resale value today than when they were purchased 15 years ago. If coverage for that tractor is provided under scheduled farm property for the purchase price as of 15 years ago, that is the maximum value the insurance company will pay in the event of a loss; even if replacing the tractor with one of like kind and quality costs \$5,000 more than the policy limit. Other equipment or implements may depreciate more quickly and the cost to replace that particular item would be far less today than it was a few years ago when it was initially added to the policy. The insurance com-

pany will pay for lesser of the cost to purchase a similar year, make and model (in similar condition) or the policy limit. For example, if a used no-till planter was purchased for \$30,000 five years ago and could be purchased for \$20,000 today, the insurance company will provide the \$20,000 to make the farmer "whole" and put them back in the position they were in before the loss, even if the planter was insured for \$30,000. In this scenario, a farmer could be paying for more insurance limit than they will realistically be able to utilize, and a quick inventory value review, while conducting routine equipment maintenance, can save premium dollars. Likewise, inventory reviews can help a farmer catch items that have been underinsured or cases where the addition of an item was overlooked.

**Building Maintenance**

Like equipment inventory reviews, building maintenance is something that is beneficial from an operational standpoint and can also put premium dollars back into a farmer's pocket. If a farmer is considering a renovation project this winter, a quick call to their agent can be advantageous. Many building updates or renovation projects can ward against insurance claims and therefore can be used as justification for "superior structure" credits on your insurance policy. What credit is available, and how much, widely varies between insurance companies.

Snow load requirements for new construction vary regionally. Many older farm buildings were constructed before ordinance changes went into effect. Collapse due to weight of ice and snow is a huge cause of winter insurance claims. If replacing the roof of a farm building is on the docket this winter, farmers should into consideration the requirements of their area. Instead of simply replacing the shingles or sheet metal, it may be important for the farmer to have a conversation with their contractor about the trussing that currently exists on the building and whether or not it meets the necessary snow capacity requirements. Likewise, when a farmer is having a building rewired, superior structure credits may be available for electrical wiring installed within rigid conduit. Over the course of several years, this credit can help marginalize the additional cost of conduit, while the electrical conduit helps to reduce the chance of claims and make the farmer's facility a safer and more insurable risk if they ever decide to shop their insurance in the future. Beyond the larger building projects, fixing small items on buildings can help reduce claims as well. While storm damage can be unpredictable and unavoidable, higher frequencies of smaller claims due to lack of maintenance, or "management claims", are actually looked at more unfavorably by insurance companies than a large catastrophic weather related loss.

**Keep Premises Maintained**

Snow and ice creates hazards for people as well as buildings. Given a busy schedule, it is easy to overlook some of the premises maintenance challenges of winter. Icy farm lanes and front walks can create significant slip and fall dangers during these months. The Medical Payments portion of a Farmowner's Policy will pay for the medical costs of a person injured on the farm premises regardless of fault. This means that a visitor to the farm can collect payment for injuries from the farmer's policy even if the farmer is determined to have done nothing negligent. These claims can go against the farmer's loss ratio. Farmer's should keep in mind that a family friend who has to go to the emergency room for a twisted ankle may have no intention of submitting a Medical Payments claim against the farmer, but their health insurance company has the ability to subrogate (seek reimbursement) against the farmer's insurance policy. If a claim is bad enough, and the farmer is determined to be negligent, the Liability portion of the policy could pay for loss to a third party due to bodily injury or property damage. Keeping driveways and walkways cindered or salted is a good precaution, as is having a safe plan for snow removal from roofs for the safety of pedestrians entering or leaving the building, and to ward against aforementioned property claims due to collapse.

**Conclusion**

Winter is a time of severe weather, and with that comes severe underwriting losses for insurance companies. Insurers are constantly looking for ways to reduce claims, and addressing property concerns during the winter months can help a farmer achieve those objectives and reduce loss ratios. Across a broad spectrum, several years of favorable loss ratios for an insurance company can and does lead to rate reductions, from time to time. This becomes a benefit to all those insured as farm insurance premiums can be reduced or, at the least, increases can be avoided.

Additionally, inventory review and property maintenance initiatives help farmers to keep their individual policy costs in line as well as avoid debilitating, underinsured claims. As always, bringing a professional insurance agent into the conversation is advisable in order to make sure that all of your loss exposures are properly covered and accounted for and you are getting the most "bang for your buck" out of your farm owner's insurance policy.

*Reuben Dourte is an Account Executive at Ruhl Insurance specializing in Farm and Agribusiness Insurance. He can be reached through <https://www.iruhl.com>.*

**Minimum wage from page 11**

throughout the food system that is a useful guide for fair trade.

To fulfill the vision of feeding our population locally, we need many more farms and many more farm workers. This will require radical redistribution of land – either breaking up big holdings, or creating land trusts by county or state, holding the land in common and leasing it to people who work it – a return to usufruct. And the public will need to change their diet to rely to a greater extent on what we can grow in our region – a new mixture of annuals and perennials.

If we want our movement to have the strength to replace the industrial food system, we farmers need to work as allies with all the other food workers from seed to table. Despite owning significant amounts of land and equipment, the earnings of farmers like me and many of you are more like those of industrial workers than captains of industry. The profits in the food system go almost exclusively to the other sectors - "... the agricultural family unit is only a subcontractor caught in the vise between upstream agroindustry... and finance... and downstream... the traders, processors and commercial supermarkets." (p. xii, Food Movements Unite!) Family scale "sustainable" farmers will only break this vise by taking our place

alongside other working people in the food system in solidarity with their struggles, which are really our struggles as well.

If we at least take our stand with other food workers and begin demanding that farmers, farm workers and all food workers make living wages with full benefits from a 40 hour week, we may start moving towards an agriculture that will sustain us into a future worth living. Local organic agriculture should serve as a model value chain, changing relationships to bring alive the Principle of Fairness that is fundamental to organic agriculture all over the world. Let's take the opportunity that public attention to raising the minimum wage presents to us and raise our voices for justice for farmers and farmworkers together.

*Elizabeth Henderson farmed at Peacework Farm in New York, is on the Boards of NOFA-NY and the Agricultural Justice Project. She wrote *Sharing the Harvest: A Citizen's Guide to Community Supported Agriculture* (Chelsea Green, 2007), and *A Food Book for a Sustainable Harvest for Peacework Organic Community Supported Agriculture* (aka GVOCSA) in its 28th year in 2016.*



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**FOREST AND WOODLOT**

# Logs to Lumber – Wise Use of a Renewable Resource

by Peter Smallidge

A common feature of managed woods, and an aspect that has made them popular among farmers, woodlot owners, and maple producers, is the potential to harvest logs and produce boards. Managing your woods for lumber involves consideration of the logs for lumber, but also cultivating the woods to ensure future productivity and healthy trees. If the woods are mined rather than tended, future options and opportunities may be eliminated.

An Internet search for “lumber from local woodlots” will yield access to a free publication on the ForestConnect publications page that addresses types of trees and wood properties, measuring trees, harvesting plans, and matching lumber supply with building needs. In this article, I will share information on manipulating the woods, harvesting, and utilization. Additional resources are listed at the end of the article.

## Manipulating the woodlot – what you take and what you leave

The starting point for harvesting trees is to have a clear and full understanding of your ownership objectives. Obtaining lumber is one objective, but you may also be interested in maple sap and syrup, aesthetics, trails, wildlife habitat and more. A written management plan will help you obtain these varied objectives.

If a harvest removes trees that are large

enough to provide lumber, the owner will benefit from involving a forester. The forester can write a plan for the owner, and can also mark trees that will be removed in the harvest. The forester can identify trails the owner can use for skidding the logs, or the forester can administer a commercial sale if the logs are sold. If the harvest is commercial, it is in the owner’s interest to sell the standing trees in a lump sum sale. It is rarely advantageous for an owner to harvest trees and then sell the logs roadside. The owner might also designate specific trees to retain as logs for personal use, or buy back some logs from the logger. Discuss these options before signing a timber harvest contract.

The strategy for harvesting will fall into one of two broad categories. One category, called “intermediate treatments” is intended to improve and enhance the existing woods, or residual trees left behind. Intermediate treatments are analogous to weeding your garden. The other strategy is a “regeneration treatment” and is intended to grow the next forest. Based on the condition of your woods and the specifics of your objectives, your forester can develop a harvesting plan to suit your needs.

A harvest is a good opportunity to adjust the composition, or mixture of species, in your woods. For owners with a high percentage of white or green ash, harvesting will allow you to utilize some ash and concentrate growth on other desirable species.



Advance planning will allow arranging logs in a manner to more easily load the sawmill.

Harvesting should not attempt to eliminate ash, but the harvest may diminish its abundance. Ideally this process happens before the emerald ash borer (EAB) is close, and you can avoid crisis management as part of forest management. The ForestConnect site (see resources on next page) has a fact sheet on silviculture for invasive insects. Owners and their forester might plan for several sequential but small-scale harvests the owner conducts every few years to provide lumber at the timing and quantity you can manage while avoiding an abrupt change in

the forest. Except in special circumstances, such as damage created by the emerald ash borer or hemlock woolly adelgid, harvesting should generally maintain the mixture of species that already exist. Of course there will be changes as forest succession proceeds, but the species naturally established are likely (but not always) matched to the soils and will perform well.

See Logs page 20

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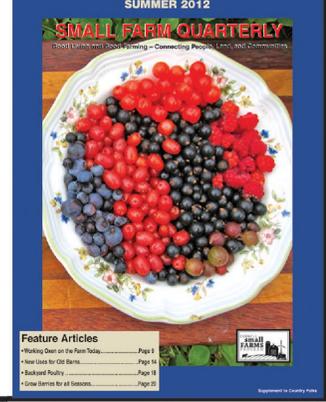
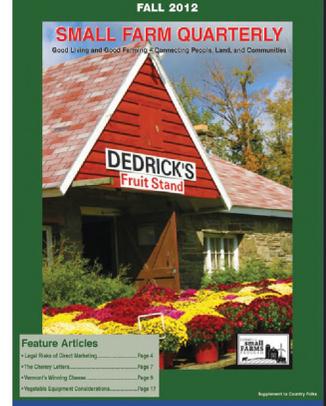
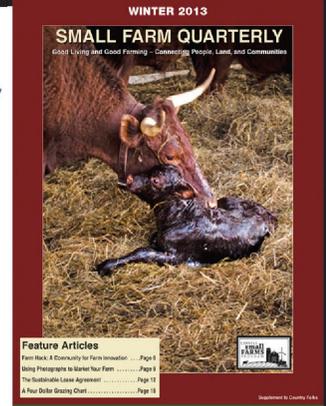
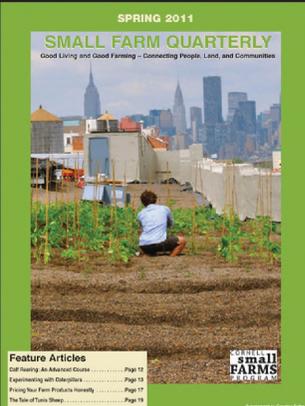
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## Logs from page 19

A temptation when harvesting trees for use as lumber is to cut the biggest and straightest trees and leave the rest. This harvesting strategy is effectively a diameter-limit cut and also known as a high-grade. The removal of only the biggest trees and those most easily turned into boards can result in a degraded woodlot with predominately trees of low value, poor form, undesired species, and slow growth. Owners who heat with wood, or sell firewood, have distinct advantages in being able to utilize the cull trees. The smaller trees are most often similarly aged "runts", and are not younger trees that need to be released. A forester can help you select trees that ensure you obtain the logs you need for lumber, cull the woods, and leave a residual forest (the trees that remain after harvesting) that will be healthy and productive.

### Harvesting and processing

Either the owner, or someone contracted by the owner, can harvest trees for use as logs. Harvesting trees, regardless of size, is potentially dangerous to the owner and can damage the residual trees.

The person felling the trees should have completed Game of Logging (GOL) training levels I and II, and hopefully level III. Game of Logging is an educational program that originated for loggers to increase productivity and safety. It has been adapted for and found great favor with woodlot owners. The GOL teaches owners how to use PPE (personal protective equipment) and also PPB (personal protective behavior). For someone with adequate training, felling a tree can be straightforward. However, trees under tension (AKA spring poles), root balls of windthrown trees that may tip back into their hole, and hung trees are relatively common and warrant special consideration to avoid personal injury or death.



Lumber should be stickered immediately after sawing, ideally as the boards come off the mill.

The equipment used to move logs is an important consideration. Professional loggers use skidders and forwarders to move logs; this equipment is designed specifically to work in forest settings. Most landowners use a tractor or an ATV to move logs. These machines can move logs, but they need special attachments and special attention. Logs moved by tractor or ATV need to ensure that the front end of the log is elevated off the ground. Without elevation, the log may catch on stumps or rocks with the potential for damage to the machine and injury to the operator. Further, the center of gravity on a tractor or ATV is usually higher than for skidders, so special care must be used to avoid operating on side-slopes where the machine might roll sideways. A variety of 3-point hitch skidding winches are available for tractors and arches are available for ATVs. Look for a training course and use considerable caution; every year there are tragic accidents that involve woodlot owners, maple producers and farmers.

A common source of damage to residual trees is when an owner or someone they contract uses equipment that isn't quite adequate to do the job. The wrong tool for the job seldom works well, and often results in increased risk of damage or injury.



In this picture, two oak stems are marked for harvest and concentrate growth on the better quality stems. Both marked trees could produce lumber.

The time of year trees are harvested can influence the need for additional actions. For ash, summer harvesting can result in significant lengthwise splitting of logs to the point they cannot be sawn into boards. The splitting of ash logs can be reduced or eliminated by cool weather logging from late fall through early spring (before the ground thaws). The added advantage of winter logging is that dragging logs on frozen and snow-covered ground will reduce dirt and rock in the bark that dulls chain saws and band saw blades. In the spring, roughly late March through mid to late June, the bark of trees is "loose" and more likely to peel away in large sections if bumped by a tractor or skidder. Also, soft and wet ground in the spring can result in significant rutting.

The grade of logs, an assessment of quality, may change depending on the duration and conditions of their storage before milling. Hardwood logs of light color (e.g., maple) cut during the summer will quickly start to lose grade because microorganisms will spread in the wood and change its color. In this case, the change in grade is based on wood color and not wood structure. For some owners, the change in color is desirable and adds aesthetic complexity to an otherwise ordinary board. The volume of each log may decline as they lose moisture and shrink. Logs may also check, split on the ends, which can reduce the usable length of the logs. Control of these concerns is accomplished by processing hardwood logs quickly, usually within a month, keeping the logs under a sprinkler system as done in many industrial log yards, or by coating the ends of the logs with an end-grain sealant.

Felled trees should be bucked into log lengths that optimize straightness and reduce taper. Skidding shorter logs typically causes less damage to residual trees than skidding long logs. Regarding taper, there might be a straight 16-foot log, but the log's diameter may change by 2 to 4 inches or more and cause a significant loss of lumber in slab wood. By convention, logs are usually cut 4 to 6 inches longer than the final product to allow for end trimming after the boards have dried. Logs can be sawn immediately. There is usually no advantage to wait, although some logs may sit for several

1. Numerous publications are available via

[www.ForestConnect.com](http://www.ForestConnect.com)

A social network is also accessible for owners at [www.CornellForestConnect.ning.com](http://www.CornellForestConnect.ning.com) and includes an events page, blogs, questions and answers, and a place to post pictures of what you are doing in your woods.

2. Some of the manufacturers of portable bandsaw mills maintain lists of sawyers. Look on the Internet for sawyers in your area from company webpages for Woodmizer, Baker, Timberking, or Norwood.

3. The discussion boards at [www.forestryforum.com](http://www.forestryforum.com) have numerous topics related to small scale harvesting, sawmill operation, lumber handling and timber framing.

weeks or months before being sawn. Logs should be stacked on a pair of sacrificial logs to allow for air circulation, reduce dirt in the logs and increase the ease of movement of the logs.

Adequate space for storage of logs after harvest is necessary. A commercial sale will require a landing that can be accessed by a log truck. If logs will be milled on-site, plan for the location of the portable sawmill, moving logs onto the mill, access with trucks or wagons to move lumber, and how slab wood and sawdust will be disposed.

### Storing and using lumber

Select a custom sawyer who has experience. An experienced sawyer can help you fully prepare for the sawing and storage of lumber. Use your local personal networks, or resources listed below to find a sawyer. Consult with the sawyer before harvesting to make sure any special needs are known, how the logs should be arranged, and to ensure the sawyer is available.

Sawn lumber needs to be stickered as soon as it is cut. Drying the lumber in a stable rack will reduce twist, cupping, and splitting of the boards. Stickering is the process of stacking the lumber in a pile with several small wooden strips, usually about 1 x 1 inch, between each layer of boards. Spacing between stickers is usually 18 to 24 inches. Stickers are an inexpensive investment in a potentially high quality product. Piles of stickered lumber should be elevated on a sturdy foundation of block about 12 to 16 inches above ground. Usually, boards of different thickness and length will be stacked in different piles. Position those stickers near the ends of the boards, as close to the end as possible, to reduce end checking. Cover the piles of lumber with old metal roofing or plywood. Plastic coverings tend to collect water and may not allow adequate airflow.



Although this tree would produce lumber, cutting the tree would include the double hazard of the stem under tension and the likely re-settling of the root ball. Some trees are better left uncut.

The utility of a species will depend on the project. In many utilitarian projects, the lumber that is available is the lumber that is used. One consideration is the strength of the wood especially for structural or load bearing uses. Internet resources are available to guide the type, quantity and dimension of lumber used for rafters and joists. Your local building code officer may also have resources. A second consideration is durability. If wood is kept dry, the board will resist decay. Other than rot resistant wood such as black locust, white cedar, white oak or larch, wood exposed to the elements will benefit from a preservative. Several preservative treatments are commercially available and owners should consult online reviews and with local vendors and builders for suggestions on brands.

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