

SPRING 2011

SMALL FARM QUARTERLY

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



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SMALL FARM QUARTERLY - SPRING 2011

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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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Cornell Small Farms Program Update

Message from the Managing Editor

Happy Spring! May this issue find you enjoying a warmer sun and the greening of the land. Spring is a time of congregation and re-acquaintance with each other, and as I was editing the articles featured in this Spring 2011 issue, I was struck by how many focus on farming as a movement to build community. Daisy Bow describes two of New York City's newest farmers who are growing food on rooftop and concrete as a way to reconnect urban residents and earn a living at the same time. LuAnne Hughes reports on the progress of "Seeds for Success" an 8 year old program that has been training New Jersey youth in new job skills, bringing business to farmers, and increasing community access to healthy food. Elizabeth Henderson brings us an article of the strong cooperative models that are strengthening Community Supported Agriculture systems across the country. And Annie Bass tells us the story of a farm-to-cafeteria project in Canandaigua, NY, which is bringing the families and farmers together through local food. All of these stories remind us that farming not only provides us with vital nourishment, but the means to build community and connect with each other. As always, we welcome your comments and feedback. Drop us a line at smallfarm-program@cornell.edu any-time. I hope you enjoy this issue and wish you a fruitful year of farming and gardening!



Violet Stone

-Violet Stone,
Managing Editor

New Beginning Farmer Website Unveiled!

After a year of development, the Northeast Beginning Farmer Project is pleased to unveil a colorful new website with expanded tools and a wealth of new resources. Point your browser to <http://nebeginningfarmers.org> to find the enhanced site, which will extend high quality support to aspiring, new and diversifying farmers across the entire Northeast.

Do you wonder how other farmers breed pigs, process chickens and transplant seedlings? The new site features a growing selection of video footage capturing experienced farmers and their successful production techniques in action. You'll also find our popular library of video interviews with farmers sharing advice on profitability, choosing an enterprise, evaluating land, and much more.

Looking for upcoming classes, events and trainings? You can browse our events calendar, subscribe to our monthly e-news, follow our blog, or visit us on Facebook and Twitter, all from the homepage of the new site: <http://nebeginningfarmers.org>.

Enter the 'New Farmer Hub' to start drafting your business plan with the help of tutorials and interactive worksheets. Find answers to common questions, browse the Guide to Farming, and check out the latest beginning farmer online courses which can help you turn your dreams into action right from your home computer.

Need some face-to-face guidance in your neck of the woods? Visit the 'Who Can Help Me?' map to locate organizations that serve new farmers near you.

The Northeast Beginning Farmer Project is part of the Cornell Small Farms Program and is funded by a Beginning Farmers and Ranchers Development Grant from the National Institute of Food and Agriculture. With the help of our team of partners, we are:

To learn more about the Northeast Beginning Farmer Project, visit <http://nebeginningfarmers.org>

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FARM TECHNOLOGY

Do-it-Yourself Farm Fixes

By Michelle Podolec

Springtime is just around the corner, with the hustle-bustle of warm weather activity and a chance to hop-to on your long list of outdoor tasks. These last few weeks of winter have us all peeking anxiously out windows, looking for the first break in the weather, and tapping our toes with impatience. However, it can be a great time to get to those long delayed improvements dreamed of during the busy days of last summer. A quick project done in the long winter days can cut minutes out of a tedious summer chore. But sometimes you need a bit of a kick start to get the creative juices flowing - especially when a peek out at the snow-covered yard

stunts the ability to think about that troubling broken item or intended improvement. Where can you go to research how to fix that broken old gate, or string up a new greener lighting system in the barn, or whip up a quick re-use on that pile of old paint buckets left over from last summer's barn painting?

There are a wide variety of free and low cost resources to help inspire, instruct and educate on do-it-yourself adaptations for farm, home, shop, and equipment. The local library has piles of back issue magazines and stacks of manuals on plumbing, wiring, and carpentry. The internet provides a world-wide library of inventions, how-to manuals, inspirational photos, time-saving



Complete plans for this Do-it-Yourself Chicken Treadle Feeder can be found at <http://www.youngfarmers.org/practical/farm-hack/>

tips, and even step-by-step video instructions. And your own neighborhood (or family) may host a quick-witted tinkerer who always has a great idea or two stored up. So open up your junk drawer, grab your tools, and check out these fun fixin' up, making do, quick fix, tinkering, and inventor centered resources before spring sets us all in motion!

Farm Hack: Do you have an invention you want to show off? Want to fix up your farm with a mechanical hack? Farm Hack offers a sociable new forum for farmers to share inventions, innovations, quick fixes and inspiration. Hosted by the National Young Farmers Coalition at <http://www.farmhack.net>

Mother Earth News: Available at a feed store near you or online, Mother Earth has a massive library of creative fixes for inside the house and out on the land. Look up do-it-yourself articles on everything from sharpening tools to an extensive collection of shed plans. <http://www.motherearthnews.com/Do-It-Yourself.aspx>

Make Magazine: Upcyclers (people who recycle 'up' by taking trash and making it over to a new use) love this eclectic modern magazine, available at bookstores or online. Check out the Projects articles to find out how to make a beehive, restore old tools, or create an automatic pet feeder using parts from an old VCR. Many strange and fun inventions to inspire your creativity! <http://makeprojects.com/>

Backwoods Home Magazine: A magazine meant for the homesteader, and filled with tons of practical ideas and how-to articles. Available at feed stores or for free through back issues available online - including a great article on how to make a light-weight metal chicken tractor in the January/February 2011 issue <http://www.backwoodshome.com/previssue.htm>



Late winter is the time to make those repairs and upgrades to your equipment to-do list.

Photo by Rob Ludlow

Adafruit Industries The website of a very creative young woman who develops and sells project kits for a wide variety of useful and strange gadgets to pique your inner tinkerer. Contains many easy kits and online video tutorials suitable for beginning electronic tinkers. <http://adafruit.com/>

Ohio State University Extension Bulletin: Each state has an extension service dedicated to helping spread innovation and education. Back bulletins and publications are a great source for farm and home improvement techniques and tips. <http://ohioline.osu.edu/lines/ebull.html>

YouTube: This internet video site is a never-ending source of funny, interesting, and educational videos. Try searching for homemade farm inventions - I found videos on how to make an automatic chicken door, small scale grain thresher, road grader, and a whole bunch of very funny how-NOT-tos. <http://www.youtube.com>

Have a favorite inspirational internet site, book, or magazine you'd like to share? Send us a note or email.

Michelle Podolec is the co-coordinator of the Northeast Beginning Farmer Project, a project of the Cornell Small Farms Program in Ithaca, NY. She may be reached at 607-255-9911 or mils266@cornell.edu.

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COMMUNITY AND WORLD**People, Not Tractors: Agricultural Volunteerism Around the Globe**

By Rachel Firak

When you've got an unconventional idea about farming, rural people (born and raised) are guaranteed to put it through the wringer. These are the shrewdest judges you'll ever meet, so before you start running your mouth in front of them, you'd best be prepared. It was only after six months of experience that I brought up Ithaca Crop Mob—the farm work-party group I co-organize—to a certain rural acquaintance, a young mechanic known for his love of trucks and fishing. I launched into my spiel: we volunteer on a different farm each month, educating ourselves, building community, and helping small farmers. Interested? "Huh," he said. "What happened to tractors?"

I tried to appear unfazed, but the question left a mark. What had happened to tractors? Perhaps a better question is, what happened when tractors—those powerful, petroleum-fueled substitutes for human labor, and consequently, community—came along? Surely the iconic image of a lone farmer driving his tractor into the fields at dawn had emerged out of a much more complex and collaborative history. I knew crop mobs weren't the first of their kind; I had heard tales of 19th century barn raisings, mythical demonstrations of fellowship and camaraderie, where an entire community would come together to aid one of their own. I wanted to know: How widespread are such customs around the globe? And why, in some cases, have they disappeared?

As it turns out, many, if not most, agrarian societies have a tradition of voluntary farm labor. In some cultures, it's a daily reality. Powhatan women spent nearly every second in each other's company, collectively harvesting, foraging, and gathering firewood. Kerry farmers in Ireland formed bands of workmen called meitheal that rotated work on one other's farms during the peak of the season. The Indonesian principle of gotong royong (mutual assistance and cooperation) is actualized in a labor exchange system where hoeing, plowing, planting, and harvesting are all carried out by reciprocal effort.

In other places, volunteerism happens on rare, but necessary, occasion. Finnish farmers recruited help for large seasonal tasks by talkoot, providing food, drink, and celebration (music, singing, dancing, and sauna) in exchange for the unpaid work of their guests. For the Bissa people of Ghana, a tradition known as ia dale requires a young woman's suitor to bring his friends to work on her parents' peanut fields in exchange for her hand in marriage. In South African Mpondoland, isitshongo work parties are organized around hoeing, weeding, and cutting thatching grass. Hosts provide Sorghum beer and kola nuts in the fields.

All of these cooperative traditions have common motivational threads. One is the jovial atmosphere; volunteers enjoy the shared work experience and the celebration that often follows. Additionally, a degree of social pressure is present. While everyone works for free, boy-

cotting the common project or underperforming as a worker/host can lead to censure within the community. These traditions also function as disaster insurance for those who have fallen on hard times. Members of the Cherokee gadugi (men of each household who assembled regularly to labor together on each other's plots) were required to donate part of their harvest to a communal store to guard against famine. When Hurricane David destroyed Dominican farms in 1979, farmers formed the Convite Campesinos in a joint effort to clear the land and rebuild. Reciprocal altruism, rather than charity, is the key. "Unity—that's all there is to it," explains one Convite member. "When you're not alone, you know that anything can happen, and it will be okay."

The most important motivator of all is necessity. In many societies, working alone is not an option. On the 19th century American frontier, people lived on isolated farms very far from villages; thus, hiring wage workers to raise a barn was difficult, if not impossible. Tough climate conditions—long winters, short summers—further pressured farming communities to work together. Similarly, for farmers along the Volta river in western Africa, severe thunderstorms punctuate the June-September weeding period. Many hands and quick work are required to make the most of the short breaks in between.

This picture of collaborative farming began to change as the industrializing and specializing forces of modernization took hold. After WWII, Finnish talkoot consolidated into financial institutions that supported the mechanization of farms. Mass urbanization and industrialization followed; now talkoot is only a nostalgic pastime. Irish meitheal began to disappear in the 1970s as farms turned to specialized dairying, destroying old egalitarian social networks. All around the world, wage payment—a sign and symptom of hierarchy—replaced mutual relationships. Private insurance supplanted community interdependence. Tractors made shared human labor obsolete.

Now we find ourselves facing the monsters of modernization. Our dollar, and the entire wage-based economy, teeters on the brink of collapse. Climate change and rampant pollution betray the tough agro-ecological conditions ahead. Peak oil threatens to take away the machinery that has made this way of life possible. At the same time, there is hope. Small farms are on the rise, and interest in ecological agriculture is growing. Now may be the perfect time to resurrect these traditions of voluntary labor—to use community renewable energy to farm once more.

Need Info?

Visit the Cornell Small Farms Program online at www.smallfarms.cornell.edu.



Sometimes volunteers and tractors can coexist peacefully, as shown in this picture, taken last November during the carrot harvest crop mob at Stick and Stone Farm in Ithaca, NY

Photo by Rachel Firak

As members of an individualistic, competitive society, this may seem quite foreign to us. We have been raised with the tropes of the selfish gene and the tragedy of the commons; we may wonder why people cooperate. The reason? They have to—but they also enjoy it. By working together and relying on each other, we can revive agriculture, strengthen our communities, and have fun doing it. And perhaps

someday, after a long day of work with our friends and neighbors, we'll wonder as an afterthought: What happened to tractors?

Rachel Firak is a co-organizer of the Ithaca Crop Mob and also serves as Program Assistant for the Groundswell Center for Local Food & Farming in Ithaca, NY. She can be reached at rfirak@gmail.com.

Agriculture volunteer programs are cropping up all across the world. WWOOF (Worldwide Opportunities on Organic Farms) and GrowFood send volunteers across the country and abroad to learn and work on farms in exchange for room and board; visit www.woof.org and www.growfood.org to get involved. The Peace Corps sponsors an Agriculture Volunteer program that promotes environmental conservation practices in farming overseas; peacecorps.org has more information. For a shorter term commitment close to home, join a crop mob! Go to cropmob.org and click "Get involved" for a map of crop mob groups around the country. Farms often welcome help from interested community members. Talk to your favorite farmer about getting your hands dirty as a volunteer.

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FIELD, FOREST & WOODLOT**Wise Gas Leasing Practices for Landowners**

By Brett Chedzoy

The outlook for widespread natural gas development in New York is still unclear as policy makers and other stakeholders continue to debate the risks and benefits. But what is certain is that much of upstate New York contains rich natural gas reserves beneath the ground that could be developed someday. Therefore, it is likely that energy companies will continue to seek leases with rural landowners for drilling and related activities such as pipelines, compressor stations, water storage and access roads.

At the same time, many landowners have come to realize that natural gas development affects more than just their individual properties. Experiences from Pennsylvania and other major gas development regions have shed light on both the positive and negative impacts that extend throughout communities. Nonetheless, many landowners will be attracted by leasing incentives and therefore must evaluate the choices in the context of their own situations. Covering all the issues that one needs to consider before leasing would be impossible, but the following are some key points to protecting your interests and those of neighbors.

Join (or form) a local landowner coalition. If no group exists in your area, consider starting one with your neighbors. The reason is simple: strength in numbers. Few landowners control sufficient acreage to be of strategic importance to a particular energy developer. But multiple landowners become a "force to be reckoned with" and can negotiate terms that most individuals cannot. Coalitions serve multiple purposes such as promoting common

interests, collective marketing, the sharing of resources and expenses, and the leverage to bring partner companies to the table - both before and after agreements are signed. Most importantly, coalitions provide a forum for education and the collective sharing of experiences.

Don't sign a lease that you are uncomfortable with. Even if you are contemplating signing a lease developed by your coalition (which would presumably be more considerate of

your interests than a lease developed by a natural gas company), have it reviewed by your own attorney to see if it sufficiently addresses your unique situation. Considerations like mortgages, conservation easements, ownership goals, and future plans for the property may require customized lease terms. Proposed modifications to the coalition's lease - such as limiting surface rights - may result in a counter-offer or even a withdrawal of the bid. In that case, negotiation in good faith combined with patience will usually



Drilling operations are one of the more notable activities during the "Development Phase".

Photos by Brett Chedzoy



Pipeline construction can also have a significant impact on farms, both in the short and long-terms. These impacts can be minimized with sound leasing practices.

term compensation for infrastructure and deed restrictions (easements) that affect property value and use. In the case of gas wells, landowners are compensated through royalties over the productive life of the well. But in the case of non-royalty bearing projects like utility rights-of-ways, landowners should either negotiate periodic "rental" payments for the use of their property, or include an expiration date for the agreement. All too often, landowners have felt compelled to grant permanent easements for a minimal one-time payment that does not adequately compensate them for the long-term impacts to their property value and conflicts with desired use.

Make sure that old leases have expired. Under the New York General Obligations Law (Chapter 24-A, Title 3, Article 15-304), the leaseholder is required to send a Letter of Surrender to the landowner within 30 days of the expiration date stated in the lease. Due to complex legal issues surrounding "force majeure" (Acts of God) clauses found in most leases, a landowner should not assume that their lease has expired until they receive this acknowledgement. Detailed steps for requesting a "surrender" can be found at www.tioga-gaslease.org

For additional information related to gas leasing, visit:
<http://naturalgas.cce.cornell.edu>

Brett Chedzoy is a Sr. Resource Educator in Natural Resources at Cornell Cooperative Extension of Schuyler County. He may be reached at bjc226@cornell.edu.



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resolve initial differences between you and the bidder. Don't be discouraged if the initial response to a request is "no", and decide ahead of time what you are willing to compromise on.

Retain your own consultant to supervise work done on your property. A lease is only as good as its execution. Consequently, leases should contain language that authorizes oversight and enforcement by the landowner's qualified agent (such as a forester or other qualified professional). This is a common practice in timber sales where consulting foresters supervise logging activities and act as a liaison between the seller, buyer and buyer's contractors (loggers) to mutually resolve issues and encourage a quality job.

Two additional standard practices with professionally supervised timber harvests are to require the operator to post a performance bond and evidence of insurance prior to commencement of work. These are prudent and recommendable terms that can also be included in gas leases and easements.

In some cases, public agencies like NYS Department of Ag and Markets, NYS DEC, and county Soil and Water Conservation Districts may inspect and oversee specific construction activities on your property. But hiring your own expert with a small portion of your leasing revenues will help fill in the gaps and ensure compliance with contractual agreements that are not regulated by others.

Clearly define time frames, deadlines and compensations by written agreements. Before granting permission for any activity on your property, negotiate how long the company can take to complete the various phases, as well as compensations for non-compliance. This will create incentives for the operator to complete the project in a timely fashion, but also compensate the landowner when things don't go as planned. Another important, but frequently overlooked consideration is long-

LOCAL FOODS AND MARKETING

Steps to a Solidarity Economy: Farmer-Farmer and Farmer-Consumer Cooperatives in Community Supported Agriculture

By Elizabeth Henderson

While a few energetic and competent farmers manage to run CSAs by themselves or with only their families and employees, they are missing the opportunities for broader participation and support that CSA offers. Building solidarity has practical advantages and at the same time contributes to deep social transformation. To build a future for ourselves and our communities that is grounded in ecological realities, we need to learn how to live and work together. The Mondragon cooperatives offer us the practice of "equilibrio," the constant balancing between individual freedom and the needs of the broader community. Whether we take our clues from Rudolf Steiner, Mahatma Gandhi, E.F. Schumacher or Karl Marx, the complexities of moving from the present industrialized, corporate-dominated food system to an "ecological civilization" require the concerted effort of all of our brains, hearts and experiences.

To earn its name, a CSA should involve shared risk between farmer and customer, and practical sharing of the important work of producing food. Subscription-style box schemes provide service with customized orders and even home deliveries, but it is really stretching the definition of CSA to include them. While members enjoy full service, farmer initiated CSA projects that do not ask more than payments from members are often structurally weak. Knowing how busy people are and fearing competition, farmers are reluctant to ask too much. All of the work of production, communication and service falls on the farmers placing them at risk for burn out. Next thing you hear is they have taken a job that pays better. Most of the CSAs that are thriving after five years or more rely on active member participation. What is impressive is that no two do this exactly the same way.

Among the network of successful CSAs, there are many examples from which farmers or organizers can learn, ranging from farms that recruit members to provide drop-off points to full scale farmer-consumer cooperatives where everybody works. Besides CSAs with member involvement, there are also multi-farm CSAs in which two or more farms cooperate. A few of these are legally established as farmer cooperatives, following the model of Rolling Prairie in Lawrence, Kansas.

At one end of the farmer-member cooperation scale are the CSAs that require a work contribution from everyone involved. The Genesee Valley Organic Community Supported Agriculture (GVOCSA), that I helped initiate and Fair Share Farm in Kearney, Missouri, are in essence, member-farmer cooperatives, hybrid enterprises blending worker control and customer control. Members either contribute to administrative tasks by serving on the core group or they do shifts in harvesting and distribution. We started the GVOCSA this way in 1988-89 and we have elaborated upon our system for over 22 years and expansion to 300 households. It is deeply satisfying to me that this structure is surviving my retirement as one of the Peacework farmers. Ammie Chickering and Greg Palmer have made some changes in the details of the farming, but they are sticking with the participatory nature of the CSA with enthusiastic support from members. (You can read the details on the website - www.gvocsa.org.) Taking a slightly different approach to required member participation, Quail Hill Farm in Amagansett, LI, invites all the members to harvest their own shares themselves. Many other CSAs recruit members for specific tasks, to be part of the harvest crew as working shares or to organize and run distribution at the farm or some other site. For more examples, please see *Sharing the Harvest: A Citizen's Guide to Community Supported Agriculture*, Part 3 "Getting Organized," especially the chapters "Nurturing a Solid Core Group," "Labor," and "Member on the Farm." (Chelsea Green, 2007)

Just Food in New York City has facilitated the establishment of over 100 CSAs, linking groups of city dwellers with farms within 2 or 3 hours drive. The staff does outreach to community organizations which provide social services and also helps groups of consumers who want to organize core groups. With the support of Just Food, the city core groups establish a relationship with a farm, recruit members, arrange and staff distribution, and often find ways to provide subsidized shares for low-income members. On the CSA section of the Just Food website - www.justfood.org - there are excellent tip sheets on setting up a CSA and you can purchase their comprehensive Tool-kit which covers every imaginable detail a group would need to consider.

Multi-farm CSAs tend to rely on sharing tasks among the cooperating farmers, asking less of members. The complexities of organizing themselves to work together seem to



A meeting of the core group at Fair Share Farm in Kearney, Missouri. Photos by Elizabeth Henderson



GVOCSA members help wash vegetables for shares at Peacework Farm. Members who purchase full shares work three 4-hour shifts at the farm and two 2 1/2 hour shifts helping with distribution, or they serve on the core group.

exhaust farmers' cooperative energies. However, joining a group CSA is an excellent way for a new farmer to learn the ropes and then either branch out on her own or stay with the group. Rolling Prairie Farmers Alliance has been operating a multi-farm CSA in Kansas since 1994. The seven farms in Rolling Prairie adopted the legal structure of a farmer-owned cooperative. They got help from the USDA Agricultural Cooperative Service which provides support for groups of farmers who want to form coops, including templates for by-laws and other legal documents. Rolling Prairie CSA has four drop off points serving over 300 households. The coop pays farmer members to perform such tasks as bookkeeping, quality control and overseeing distribution sites. In some years, they offer farm visits and work days, but member labor is not central to this CSA.

Local Harvest CSA in Concord, New Hampshire, is modeled after Rolling Prairie. The eight New Hampshire farms spent a year of monthly meetings in 2002 carefully negotiating all the ins and outs of their cooperation. Jill Perry and Scott Franzblau have documented this experience in a detailed guide entitled *Local Harvest: A Multi-farm CSA Handbook* that is available as a free download from Northeast SARE (www.nesare.org). Local Harvest covers organization, quality control, crop allocation, and internal and external pricing.

Resource Spotlight

* David Welty, *Book of Procedures for Meetings, Boards, Committees and Officers*.

* New Society Publishers www.newsociety.com - books on group process and decision making, such as *Resource Manual for a Living Revolution*, and *Democracy in Small Groups*.

* The New Economics Institute (formerly the E.F. Schumacher Society) in Great Barrington, MA has an entire library devoted to decentism.

* Center for Economic Democracy in Olympia, WA has a collection of basic coop documents.

* The National Cooperative Business Association (1401 New York Ave., NW, #510, Washington, DC 20006) provides advice and legal support for cooperatives.

* The USDA Agricultural Cooperative Service (USDA-ACS, P.O. Box 96576, Washington, D.C. 2009) provides support services to beginning and existing agricultural cooperatives and publishes a monthly magazine, *Farmer Cooperatives*, which is free to qualifying organizations.

Not all multi-farm CSAs are farmer-owned coops - many associations are less formal. For the Full Plate Collective CSA near Ithaca, NY, two produce farms teamed up to provide the vegetable shares and associated with a livestock farm for meat shares, a bakery for bread, and a youth training program. The Good Food Collective CSA, on the opposite end of the scale from the farmer-consumer coops, is a project of Headwater Foods in Rochester, filling vegetable and fruit shares from eight farms that sell at the South Wedge Farmers Market, supplemented by purchases from other area farms, a bakery and a coffee roaster. They deliver shares to three work places, the farmers market and a yoga school.

CSA organizers, both farmers and non-farmers, can tap into the rich tradition of cooperatives for resources and inspiration. The roots go back to the founding of the Rochdale Cooperative in England in 1844. Rochdale intended to offer members groceries, housing clothing, manufacturing, jobs and "a self-supporting home colony of united interests." Coops in the Rochdale tradition adhere to seven cooperative principles

1. Open and voluntary membership.
2. Democratic control; one member, one vote.
3. Return of surplus to members.
4. Limited rate of return on investment.
5. Continuous education to members and public.
6. Cooperation among co-ops.
7. Concern for community.

To these seven principles of cooperation, the Mondragon cooperatives in the Basque region of Spain, added the crucial concept of equilibrio:

"The basic idea is that life in a cooperative should not be carried on as if it were a zero-sum game in which some win and some lose. There must be a balancing of interests and needs; we hear it said that technological imperatives must be balanced with social objectives and that the financial needs of the firm must be balanced with the economic needs of the members."

Another valuable tool for CSAs from the coop world is the Co-op Scorecard, developed by the staff of the Seward Co-op in Minneapolis (a city that is remarkable for supporting 13 food coops, several of which have more than one store!) The Scorecard lists a series of values that sum up the basic goals of the store: "Seward Co-op will sustain a healthy community that has equitable economic relationships; positive environmental impacts; and inclusive, socially responsible practices:

We measure our success by how well we live up to these commitments:

We cultivate a diverse, respectful and caring workplace.

We operate with intentional respect for the environment.

We commit to financial goals that allow us to maximize our profits in the support of our mission, our values and our community.

We improve the quality of life in the communities we serve."

Each year, board members, staff and management, measure progress as compared with the base year, 2007, as a way of guiding the on-going development of the store. The basic measurement for the first value is an economic goal: "Seward

Steps 7

HOME AND FAMILY

Summer Vacations to the Farm

By Ron Mac Lean

During the late 1940's and early 1950's my family, like many others, spent vacation time visiting relatives in the summer. The nation had just endured a war and money was scarce so family visits were a good match.

My mother's cousin, her husband and three daughters were part of a three-family owned dairy farm in Fremont, New Hampshire. Mistwold Farm, according to my cousin means "misty woods" because fog always clung to the fields in the early mornings. This large dairy farm had been a family institution for many years and included a milk processing & bottling plant to support a milk delivery business.

Going to the farm absolutely thrilled me, even though it was a long, always hot car trip especially for a youngster between 8 and 12 years old. A large farm was such a contrast to living in a small Upstate New York State village.

This Mistwold Farm complex consisted of a circular driveway with a house on each side and a huge white clapboard-sided, black-trimmed barn at the apex of the curve. Facing the driveway was a large double hung barn door that allowed hay wagons access to the second floor hay mow. The cows were housed below. The milk plant stood to the left of the barn, with several various sized out-buildings scattered behind it. On one side of the pasture a classical New England fieldstone wall paralleled the road as it had for decades.

I can remember many games of hide-and-seek in the barn, hours spent on the swings in the yard and walks in the pastures. What I really liked was to help with the farm chores. Sometimes I could ride on the tractor when they were haying or help feed the cows and clean the stalls or walk to the pasture where the cows roamed and help my cousins herd them in for the night. I could watch the milking operation as well as the milk bottle filling process, an automated system that moved along with great speed. On one occasion I witnessed the veterinarian give a cow a rectal exam with his whole arm. What an impression that made!

Steps from 6



Dad with milk truck

One of my fond memories was the day I rode along delivering milk to customers. We woke before dawn and after an oatmeal breakfast, went directly to the milk plant to load the truck for what would turn out to be an all day venture. The milk bottles were placed in wooden crates with metal dividers after the filling process. Later these crates were taken from the cooler and loaded on the back of a pickup truck, after which chunks of ice were strategically located on the tops of the filled milk crates. The final task was to stretch a heavy tarp across the top of the crates to keep the milk cool. We spent the entire day driving from customer to customer to deliver the bottles of freshly produced milk, from farm directly to home.

Every man who worked on the farm wore a blue and white striped hat like train engineers wore. Once washed, these hats were pliable and looked tailor-made for each person that wore it. I HAD to have one. My parents looked all over for one but apparently not in the right places. They found a navy and white baseball hat but it wouldn't do. I wanted to look like all of the others who worked on the



Mistwold Farms lane by the barn



Jersey Cow

farm. Not too many years ago, I finally found one and bought it immediately in case I ever wanted to work on a farm on my vacation.

When our children were in their early teens we took our fold-down camper to Maine for a week long vacation. On the way home, I proposed going through New Hampshire to see if I could find the farm where I had so many fond memories. I did find it and found myself driving up and down the now paved road several times in order to view it from every angle. The two homes were still there but the barn complex had been destroyed by fire years earlier. Yes, the field stone wall still bordered the pasture.

Isn't it interesting what a positive impression a week's vacation on a farm made to a youngster whose family probably only had enough money to visit relatives. An appreciation for the hard work, passion and dedication of farmers to bring food to our dinner table lasts a lifetime. Sixty years later I find it heartening to hear that young folks and even families are being encouraged to volunteer to help others, including taking vacations to help on farms. I hope they make their own fond memories.

Ron Mac Lean grew up in a small village surrounded by farms in Central New York. He is now retired and lives in the Fingerlakes Region of the state.

Need Info?
 Visit the Cornell Small Farms Program online at www.smallfarms.cornell.edu.

Co-op has a responsibility to its workers. We're concerned with making the co-op a feasible place to work and earn a livable wage. As of the end of fiscal year 2007, 84 percent of full-time staff members, who have been employed at least one year, were earning a living wage. In years to come, as we expand and our staff grows, we will continue to evaluate our pay scale and try to ensure that the maximum number of employees earns a livable wage."

For a CSA, taking the time to clarify value-goals like these will help guide management decisions in a healthy direction. In assessing

progress toward CSA principles over the decade between 1993 and 2003 among CSAs in New England, Kathy Ross summarized these essential elements which could serve as the scorecard for CSAs:

- *food quality
- *soil health/environmental well-being
- *farm improvement/development
- *grower income
- *consumer connection to farm, grower, farm land
- *understanding of scheme of nature and our human place among all living things

On each of our farms and together as a movement, we need to keep our complex and interrelated goals ever before us. We need

not be afraid to look at what we are doing to measure our progress towards our goals, and to compare our day to day behavior with our most cherished values. By cooperating with one another as farmers and by asking a lot of CSA members, we can contribute to creating a solidarity economy based local food systems that are clean, organic and fair, and provide the quality of life we all want for our families, friends and neighbors.

Elizabeth Henderson has retired from full time farming at Peacework Farm in Arcadia, New York, but continues to serve on the Genesee Valley Organic CSA core group. She can be reached at elizabethhenderson13@gmail.com, 585-764-8471.



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GRAZING

Using Goats for Vegetation Management in the Northeast

By Brett Chedzoy

The climate of the Northeast is favorable for growing lush vegetation, but sometimes too many of the wrong plants grow in the wrong place. Ignoring the situation will often lead to greater costs and problems further down the road. Goats are an increasingly popular option for managing vegetation in other regions of the United States, but to date have not been widely used in the Northeast for this purpose. However, the strong demand for goat meat, the increased demand for organic control methods, and the cumulative experiences of managing goats in the northeast are just a few factors that suggest new opportunities for this application.

Goats are intelligent, docile animals with a knack for eating weeds, brush and just about anything with a green leaf. They can be used in places that are inoperable with equipment or off-limits to herbicides, while at the same time generate income and other benefits. Nonetheless, achieving the desired results with goats requires skilled management and a well-designed system. Although there is no one right way to utilize goats on the landscape for targeted control of unwanted plants, the following highlights some of the most important considerations for success.

Develop a Plan

Goats can be a viable alternative to other control methods, but good planning is essential for good results. The first step is to identify the objectives and determine if goats will be able to accomplish them. If so, are goats the most practical option? Who will care for the goats and how much of an investment is needed both to get started and operate over time? What is a reasonable level of vegetation control and how will you adapt the project if targets are not being met? Will the goats be used for temporary clearing, or for long-term maintenance and management? Where will you find the goats, and how will you keep them healthy and dispose of excess animals? Is the plan flexible enough to adapt over time as vegetation and other conditions change? These are just a few of the points to address in a written plan prior to implementation.

Know the Foe

Different plants respond in different ways to browsing and defoliation. Vegetation can be categorized into one of four groups: grass-like plants (monocots); broad-leaf herbaceous plants ("weeds"); woody shrub-like plants ("brush"); and, trees. Each group, and even species within a group, has a different tolerance level for disturbance and defoliation, as well as a different ability to recover, persist and reproduce. Every plant also has a different level of attractiveness to goats, which tend to preferentially browse the "tastiest" plants first. Some plants may be very unpalatable, or even toxic to goats. Generally speaking, there is a decreased tolerance to browsing moving from grass-like plants to trees, and also decreased accessibility to the edible portions of the plant. In other words, goats can usually reach more of the edible portions of herbaceous plants - but these same plants are usually more resilient to the browsing action of goats. Two other points to consider are, what will take the place of the vegetation that is being controlled, and how might excessive damage to desirable plants be mitigated?

Winning the Battle

Undesirable vegetation can be controlled with goats through a combination of impacts, which include: repeated defoliation which weakens or kills targeted plants; girdling; trampling; and,

increased ground light levels (through defoliation of over-topping vegetation) which encourages the establishment of more desirable and stable plant communities. In some cases, it may be practical to add additional livestock, such as cattle or pigs, to trample and root-up more difficult plants. Initial mechanical treatments may also be needed to make targeted plants more accessible. One example of this combination is mowing to reduce vegetation to a more manageable level, followed by goats to control re-growth and sprouting.

Workforce Management

A band of goats will literally work for food, but they need special



Goats have a knack for eating weeds, brush and just about anything green. Photos by Brett Chedzoy

forms of instruction and encouragement to perform their jobs well. One key to effective vegetation management with any livestock is the ability to reliably keep the animals in the desired location for the desired period of time. Vegetation management usually requires extensive and repeated impact to the targeted plants, which is contrary to goat behavior. Goats will normally lightly browse plants, gleaning the most palatable portions before moving on to other plants. But to significantly weaken or kill these plants, goats must be forced to defoliate and damage the plants more extensively. This requires secure fencing and an experienced eye to know how much the goats can tolerate. Water, shelter and supplements such as salt - or even the tethering of a lead animal or guard animal that the group is bonded to - are possible tactics for guiding and limiting the movement of goats. But some kind of fencing will probably be necessary as well to concentrate their activities. Although panels and woven wire may work in some situations, a well-electrified fence is probably the most effective - and cost-effective over time. Portable and temporary options like polytwine and electro-net



Goats will normally lightly browse plants, gleaning the most palatable portions before moving on to other plants.

work well if adequately charged and if cleared paths exist for installation. Electrified high-tensile wire, or the combination of woven with high-tensile wire are the best options when goats will be used on the same area over a period of years. Secure fences can also help to crowd animals enough to create competition for food and enhance aggressive browsing behavior. A good fence also protects goats from predator threats and increases their sense of security, which makes them easier to contain.

Learning More

The use of goats to control vegetation requires solid knowledge of both goats and plants. Developing the skill to effectively use this knowledge requires experience. Starting out small will soften the learning curve and allow the flexibility to experiment. Some resources for learning more about goats and their management in wooded environments are:

- * www.ansci.cornell.edu/goats (Cornell goat program)
- * www.forestconnect.info ("Goats in the Woods", "Guide to Silvopasturing in the Northeast")
- * www.nyis.info (NY invasive species clearinghouse)

Brett Chedzoy is Agriculture and Natural Resources Senior Resource Educator for Cornell Cooperative Extension's South Central NY Ag Team. His office is in Schuylar County and can be reached at 607-535-7161 or bjc226@cornell.edu.

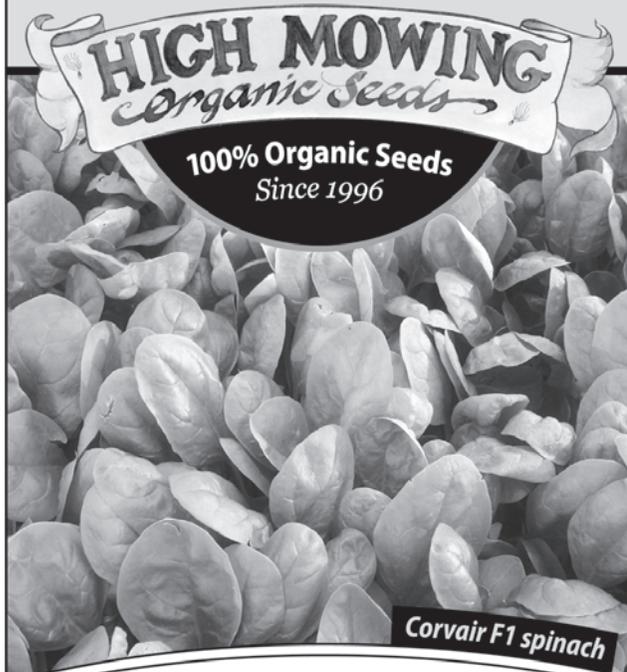
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How to Make Kids Love Their Spinach

Finger Lakes Farm-to-Cafeteria, Canandaigua, NY

By Annie Bass

The Farmers Market Line

In 2002, Todd Fowler noticed that the kids in his cafeteria deli line were asking for salads. First they wanted vegetables instead of meat, and then they wanted to drop the bread altogether. Todd decided that the time had come to bring local fruits and vegetables to Bloomfield Central, an idea he'd been honing for a while. That year, the lunchroom Farmers Market Line was born.

Bloomfield, a school district of 1100, had Farm to School programs, which featured vegetables of the month for one meal each. An annual strawberry cream day enjoyed great success with both schools and farmers. But Todd thought it was time to take the next step, and give kids access to fresh fruits and vegetables every day. The Farmers Market line featured raw vegetables and two kinds of salad greens, bought directly from local farmers. After a successful year in the 6-12 cafeteria, the program spread to the elementary school.

Finger Lakes Farm-to-Cafeteria

Todd, now the Food Service Director at Bloomfield Central School, is all about next steps. With Bloomfield Central under his belt, he teamed up with Seeking Common Ground, an educational non-profit dedicated to promoting "conscious and restorative ways of life," to increase fruit and vegetable consumption in four schools. With the help of a SARE

Sustainable Community grant, they installed similar programs eight schools and one hospital, and developed a robust network of participating farmers. The next step? Another Sustainable Community SARE grant, which funded the facilitation of similar programs in more districts.

The next step? One hundred pounds of broccoli.

The SARE Project

Unlike other Farm to School programs, Todd and Seeking Common Ground's scope includes not just schools but hospitals, elder care facilities, and corporate food providers. With a third SARE Sustainable Community grant, they are training cafeteria workers in how to process and preserve local foods so they can serve them through the winter. In a pilot, Todd tried out different methods of preserving broccoli-in very large quantities. They all worked, and Bloomfield students had broccoli through March. Additionally, he deduced the most effective techniques, and is now spreading them to cafeterias that already use local foods in the fall and spring, to help them expand their seasons.

The SARE grant itself covers trainings in preparation for food service providers in the area: kitchen rental, staff salaries, food, and Todd's salary, as the project coordinator. In the first of a series of five sessions, Todd led an over-capacity workshop in what to do with the

spring harvest. 27 food service people cooked mustard greens with kale and two different asparagus recipes, before attending a panel discussion with farmers, food service directors, and a Farm to School consultant. The New York Wine and Culinary Center hosted the event in their teaching kitchen. "They have a chef instructor," says Deborah Denome, executive director of Seeking Common Ground, "and he and Todd worked together. It was really fun for it to bounce back and forth between them."

The workshops each use produce that will be in season a month and a half later, Deb says. This gives the providers time to get the recipes on their menus. The first session was mostly school food service providers, and everyone expressed interest in attending a second workshop. But because of the school calendar, the July session is mostly non-academic providers. August, at the beginning of the school year again, attracts a mix of new and returning participants. In this way, the trainings attract a diverse and dedicated group, both widely and deeply influencing the regional industry.

The Results

"Basically," Todd says, "what this takes is a lot of handholding." He makes business plans with each participating farmer, and often that involves walking through the logistics. Many farmers don't have time to deliver their produce to school districts. With Todd, they work out a stop en route to their farmers market booth, or a central location where they can make one drop for more than one school district. On the institutional end, school food services don't know how to work around the lack of purchasing infrastructure. As chair of the New York School Nutrition Association, Todd helped to change state laws to allow schools local preference in produce. The next step is to include minimally processed goods in the clause, so cafeterias can buy the same apple, both before and after it's been sliced.

Initiating the programs is hard, but once connections are made, they stick. It's beyond the scope of a food service provider's job to find a farmer, get in touch, and work out a contract-so Seeking Common Ground does this for them. In their first SARE grant, they offered a breakfast with farmers for food service directors and distributors. In the follow-up survey, twenty seven participants, both farmers and service directors, expressed interest in implementing a Farm-to-Caf program. Seeking Common Ground administered Cornell's Farm-to-School in the Northeast toolkit to assess the opportunities and challenges for each institution and farm, and identified very local matches for eight schools and one hospital. The first year of operation yielded \$10,000 in new sales for the participating farmers. Now, new sales are impossible to differentiate in the cumulative build of lasting farmer / service director relationships; Seeking Common Ground's third SARE project involves 16 farms, 6 care facilities, 5 colleges, 3 distributors, and 10 school districts, each with multiple schools.



Students at Bloomfield Central School enjoy local fruits and vegetable in their salad bar.



Todd Fowler insists that kids eat with their eyes.

The results of the toolkit led to Seeking Common Ground's next set of grants, addressing problems of local food access and food preparation. In their second SARE project, they organized local harvest days in cafeterias, and developed a guide to "How We Started a Farm-To-Cafeteria Program and How You Can Start One, Too." Todd and Deb regularly send copies of the guide to food service directors around the country who contact them for help. On a regional level, they sit down with neighboring counties and go over questions. "Todd knows all the food service directors," Deb says, "so that helps." Several of the surrounding counties have started successful programs as a result.

The Next Step

In addition to the farmers and the institutions, a third, and often neglected, party must buy in for local foods programs to work: the eaters. For Todd, it starts and ends with the kids. "Raw fruits and vegetables are inherently attractive," he says, "kids eat with their eyes."

Kids also eat what they know. In Bloomfield, second graders take a class with a school nutritionist, and every year, Todd conducts a cooking visit. One afternoon after such a visit, he received a call from a mother. She was in Wegmans with her second grader, who wanted her to buy butternut squash. "Honey, I don't know how to cook it," the call went. But her son said, "Mr. Fowler showed me, you just cut it in half, take the seeds out, and bake it." Todd chuckled. "I said, that's pretty much right."

This article discusses SARE grant CNE10-069. To view the final report, available in 2011, visit <http://sare.org/MySare/ProjectReport.aspx?do=viewProj&pn=CNE10-069>. For more information, contact info@seekingcommonground.org.

Annie Bass was a summer intern with the Cornell Small Farms Program in 2010. She may be reached at arb258@cornell.edu.

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Small Farm Quarterly Youth Pages

The youth pages are written by and for young people. Many thanks to the 4-H'ers from Yates County who contributed to this issue. We believe there's a bright future for young farmers in the Northeast. Whether you live on a farm or only wish you did, we'd love to hear from you.

More information about the Cornell Cooperative Extension 4-H Youth Development program can be found at: <http://nys4h.cce.cornell.edu>

My Experience as a "Shepherdess"

By Lydia Sacheli, Age 8.
Onion Patch Kids 4-H Club

My name is Lydia Sacheli and I am 8 years-old. I live on an onion farm and I am in 4-H. This is my 1st year as a 4-H'er and I was a Cloverbud for 3 years. I have been a shepherdess for 3 years. I have 5 sheep right now that are grown up. I hope my 2 ewe (girl) sheep have babies this spring. I also have a bottle lamb. Our friend Mr. Reifsteck asked me to take care of him until he is weaned. That means until he doesn't need milk anymore. His name is Ozzie and he is my 6th bottle lamb to raise. I raise him for free because Mr. Reifsteck gives me a deal on shearing my grown up sheep. Raising a bottle lamb is fun because he can run around the house. He wears size 4T diapers so he doesn't make a mess. You can't house train a sheep. Raising

sheep teaches you how to be a parent (just of a different species).

I can make money from my 4-H sheep projects because I can sell wool at our farm market booth for projects like spinning or needle felting. Needle felting is one of the oldest fiber crafts. I am doing a public presentation for 4-H on how to needle felt. 4-H is good because you learn how to do fun things and then you get to practice teaching others. I learned how to do a power point to help my presentation. 4-H is really fun because you hang out with your friends and do fun things at the same time. I want to be in 4-H for life!!!

For more information about the sheep project, please visit: <http://www.ansci.cornell.edu/4H/sheep/>



The princess, Lydia Sacheli, with a lamb



Lydia Sacheli with Ozzie, her 6th bottle lamb who she is raising on a barter with her neighbor for shearing services.

Master of the Crow

By Lucca Sacheli, Age 7.
Onion Patch Kids 4-H Club

My name is Lucca and I am 7 years-old. I have had a rooster for 3 years. His name is Phineas. I showed him at the fair. He won 2nd place in the crowing contest. The crowing contest is my favorite contest at the fair except for the barn yard Olympics. You put your rooster in a cage and cover his cage to make it dark for 1 hour. The judge tells you to uncover the cage and you count how many times your rooster crows. You can tell him to crow, ask him to crow and beg him to crow but you can't scare him or hurt him to make him crow. 4-H teaches you how to take care of animals. I like playing with my friends at 4-H.

For more information about the 4-H poultry project, please visit: <http://www.ansci.cornell.edu/4H/birds>



Lucca Sacheli (right) with his prize winning rooster in and crowing contest certificate (and with his brother and sister!)

Reaching Out to Touch the Hearts of Others with Miniature Horses

By Jessica Gulvin, Age 16. 4-H Teen Council and Teen Ambassadors

I've always wanted to find a way to help others who love animals, but can't get out to see them. About three years ago, I thought of a community service project that I could do for 4-H. "There are therapy dogs that visit those less able, why can't I have a miniature horse of therapy and do the same." I knew I had the perfect horse for the project.

Through a high school drama production, my miniature horse Chloe became a people friendly, extremely calm, safe and loveable horse. Through this production, she received training as students danced in circles around her with lots of sounds, flashes, screams, and bombs. For this production, we found sneakers built for mini horses that protect their hooves and the floors.

We then began taking her to The Homestead Nursing Home and public events. The residents fell in love with Chloe and kept asking for her to come back. As word spread about Chloe, more and more places began requesting for her to visit with the residents. We have also visited a Nursing Home in Waterloo, the VA in Canandaigua, and Rainbow Junction Daycare. What was once a community service project for 4-H, is now my mission that I hope to continue into my adulthood.



Jessica Gulvin brings her Miniature Horse, Chloe, to the Homestead Nursing Home in Penn Yan as a creative pet therapy animal.

Recently, Chloe and I have been attending public activities such as Starshine in Penn Yan and the Marcus Whitman Middle and High Schools. Chloe's love and ability to make someone smile has deeply touched me. When I introduce someone to Chloe their face lights up with joy. To watch them talk with her as her ears move to the voice tones, is just heart touching and is truly what keeps me bringing Chloe back.

"Reaching out to touch the hearts of others with miniature horses" has been the focus for my community service projects



Homestead Nursing Home resident reminiscences about having horses when she was growing up. The staff at the nursing home said she hadn't smiled in weeks until Chloe came to visit. Now her room is a regular stop for Chloe!

for the past few years, and is a service that I plan to continue doing for the public.

For more information about the 4-H horse project please visit: <http://www.ansci.cornell.edu/4H/horses/>

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Skinks Don't Stink!

By Lucian Sachel, Age 9.
Onion Patch Kids 4-H Club

My name is Lucian and I am 9 years old. I am in the 4th grade at Marcus Whitman's Valley Elementary School. This is my 4th year in 4-H. I am interested in many things. I am currently studying taxidermy. My room looks like a natural history museum because I have a taxidermed tail collection that I taxidermed myself for 4-H. I have a collection of eggs from different species of birds. I have a peacock and have a bouquet of peacock feathers that I have collected. I have a bunch of natural projects I made. I have a bug collection. My favorite bug in my collection is the scorpion-I got interested in bugs because I found a dead scorpion at the Yates County Fair at the petting zoo that had come from Texas in a load of hay. I also have a fossil collection.

I do many animal science projects (raising chickens, peacocks, guinea hens, and my lizard) but my Lizard project is my favorite. His name is Remy and I have had him for 3 years. He is an adult Blue-Tongued Skink. He is about 18 inches long. Skinks are interesting because they have a blue tongue. They are omnivores, which means they eat both meat and plants. They are one of the only reptiles who have live born young. They also have a neat defense mechanism because they have the ability to drop their tail when a predator grabs it. The nerves make the tail keep twitching for the next 2 minutes to give a chance to get away while the predator keeps holding on to it. Their tail grows back in about 3 years.

I love being in 4-H because I can see my best friend Justice and study science, which I love. I want to be a 4-H'er for life.

For more information about natural science projects:
<http://nys4h.cce.cornell.edu/about%20us/Pages/SETToolkit.aspx>



Lucian Sachel with his Blue-Tongued Skink, Remy, just one of his many non-traditional 4-H projects.

4-H & K-9's

By Kylie Hill, Age 16. Creative Country Crew 4-H Club

Many opportunities arise for a 4-H'er that never would have been available to them otherwise. As an 8th year 4-H'er, I have experienced many fun and interesting things and gained a lot of knowledge to use throughout my adult life. It's all about the enjoyment you get through your experiences and projects. I love my animal science projects the best. I currently have ongoing horse, goat, dog, geese, chicken, duck and pigeon projects. I even raised sheep and pigs in the past.

I have done the canine project for 8 years. I started with our family dog, Sammy, for my first year in 4-H. I was nine years

old at the time and always had a love for animals. It was only natural to expand my knowledge in this area. I started out learning basic commands, obedience, grooming and handling. I showed my first year in our county fair and did quite well. I used the money I earned in 4-H to buy my own dog, an Australian Shepherd, named Kiki. I continued my 4-H project with my new puppy. I trained her well and took more obedience classes through our 4-H program. I started to show her at our county fairs, other 4-H shows and even some open shows. I learned dog anatomy, health, nutrition, breeds, origins and tons of other information. Kiki and I grew together and became inseparable.

As a Teen Leader, I have shared my skills by helping younger kids in the 4-H program get started in their canine projects and assisting in obedience classes within our 4-H families. My mom, a 4-H leader, and I even brought agility to our own Yates County Fair a few years back.



Kylie Hill with her dog, Kiki, at the 2010 New York State Fair

Kiki and I have won numerous ribbons at our county fair, but we even made it to the State Fair for the last few years too. The first year was definitely an eye opener for us as we watched, learned and asked questions. In addition to showing my dog, I had other opportunities to expand on my canine project like

attending the "Dog Expo." This gives me the chance to sit and listen to others' knowledge on different canine subjects and ask any questions I may have. I also use my experience with dogs and help out at our local shelter, The Shelter of Hope.

My history with 4-H and the knowledge I've learned from my animal science projects even helped me receive a job with the Eastview Veterinary Clinic. 4-H is a fantastic program and can help any child or teen grow and learn through hands on experiences. I have met many people that have turned into mentors or friends for life.

For more information about raising dogs visit:
<http://www.ansci.cornell.edu/4H/dogs/>

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COWS AND CROPS

Calf Rearing: An Advanced Course

By Phyllis A. Van Amburgh

A New Trend in Dairying

More and more dairy farmers are raising heifers for a variety of reasons—a trend we at Dharma Lea Farm are glad to see. As an effective method of improving shipped milk quality, many farmers use cows with high somatic cell counts (SCC) as nurse cows. The recent quota placed on many organic dairy farmers spurred a smart decision to keep more replacements; and, to keep those replacements on cows, either mothers or nurse cows, to stay under quota without selling cows or dumping milk. When we began commercial dairying, we knew that we would not make any real progress (and therefore money) until we raised our replacements on their mothers. Since we have been doing this, the benefits have reached all aspects of our operation. Raising our replacements on their mothers is by far our best investment with the biggest payback.

We tried many methods of calf rearing: bottle feeding, bucket feeding, grain, buckets with nipples, and nurse cows . . . We never lost a calf, and by general standards our calves always grew extremely well and looked extremely healthy. Having raised calves on cows in earlier years, however, we always knew there was something better. The overall health of our replacements was truly at the back of our minds, pushing us to make the switch back. But it was the need for less work that actually got us to go back to raising our replacements on their mothers in our commercial dairy.

We never liked feeding the calves. It was a pain in the neck, and it added so much time to daily chores that we almost dreaded it. We could never find reliable help so that we could pass the job off. No one else cared enough to be sure the milk was the right temperature, and the bottle was at the right height, etc. We knew that only one "individual" could raise our replacements and could actually do it far better than we could: their own mothers. They even wanted the job, to boot.

Our current program for raising replacements consists of using our best cows, each raises her own calf, and only her own calf, for a full ten months.

Cost Benefits

Once we began the switch to raising replacements on their mothers the payback grew exponentially. When we have an entire herd of cows that were raised on their mothers, we will have an entire herd of strong, healthy problem-free, bred cows. Cows raised by their mothers demonstrate impeccable health, performance, and longevity. They grow to have very strong, very predictable heats, and they breed on the first service over and over again. They live a long, healthy life. They are not the cows teetering on the brink of poor health and body condition that we have all become accustomed to and been fooled into believing are "dairy type," a.k.a. starved from birth, animals. The health and nutrition our cows get in the first ten months set the stage for a lifetime of the same. The benefit of such a strong baseline of health buys a lot of latitude for the rest of their lives and for the rest of the operation: less need for large quantities of top-quality feed, a greater tolerance for temperature extremes, fewer mineral supplement requirements, longevity, steadier milk production, greater reproductive efficiency, and greater feed efficiency.

We have reached a cull rate of 10% annually and need only a few replacements each year. In the first years, making the jump to take the best cows out of our rotation was difficult. We sacrifice one lactation from our best cows for each replacement they give us. We consider the improved health of that replacement will bring many more lactations in her own lifetime, therefore repaying tenfold the loss of her mother's lactation. When that heifer matures, her predictable, strong heats mean she will never be open and her calving dates will be predictable and accurate.

We place the mother and her calf in a dry cow or bred heifer group. The entire out-of-pocket cost of raising that pair for the year (the heifer will then be about six months from breeding age) is little more than the cost to feed the cow for a year. We wean that heifer as close to pasture time as we can manage, and our out-of-pocket cost continues at zero through the grazing season. Our mothers even pay some of the way by making some extra milk for us to ship—as much as 30 pounds per day in our grainless herd—during the first eight to ten weeks post freshening.

Removing a cow from our production line does not cost any more than feeding that cow. The cost of feeding that calf is zero, nada—we buy nothing. The value of the milk we would have shipped is minimal when offset by the cost of feed we would have to buy (or bulk tank milk we would have to use) for the calf. To put it another way, we figure that each cow in our dairy herd nets about \$250 annually. With the money we are paid for her milk minus feed and overhead costs, and since those costs remain whether she is giving us milk to ship or a replacement heifer, one could say our cost of the yearling replacement is \$250. Even as the profitability of our cows increases—as it does each year, especially as we add our more efficient, lower maintenance cows raised on their mothers, and we reach a net profit of even \$800 or \$1,000 year—it is still a great price for that heifer.

Factoring in that we never lose or have to treat a calf for illness and will have years of health benefits, the system is a bargain.

Optimum Health and Growth

The rate of gain our replacements obtain in their mothers' care has astounded us. High-butterfat cows produce the fastest growing, healthiest calves. We have had people tell us that it must be a "breed thing," because they have seen relatively small and malnourished calves that are of comparable age to ours, and ours truly do almost look like a different animal. It is not a "breed thing"; the breeds we have raised are typical dairy breeds and crosses (Holstein, Friesian/Holstein, Jersey, Ayrshire, along with Dutch Belt, Milk Devon, Lineback, and others). Most breeds will reach 600 pounds before weaning age in their mother's care. The results are not the same with nurse cows, not even with a one-to-one cow-calf ratio. The special relationship between the mother and her calf does not translate to even the most enthusiastic nurse cow. A calf will be healthiest on her own mother's milk. The milk from a cow matches specifically to her own calf, changing as the calf matures. There is no danger of losing calves to illness; scours and respiratory infection (colds or runny noses) resolve without incident or the need for any intervention.

The colleges tell farmers that the best way to raise replacements is to wean at six or eight (some I have heard even say four) weeks and get the calves on a super-high-protein diet—as high as 44%, complete with grain—and that heifers raised on their mothers will develop fat in their udders that will decrease



The VanAmburghs, along with their five children, operate a 90 cow certified organic dairy and 20 cow Devon beef herd.

milk supply later on. However, no one will ever convince us that this is the best way to raise calves now that we have seen the results for ourselves. There is no better food for any young mammal than its own mother's milk. We do not see "meaty udders" or a decrease in milk supply. Heifers raised on their mothers will get nice fat maiden udders, and we believe that this fat contributes to healthy mammary gland function, which supports milk production, resists mastitis, and very likely improves the quality and nutrition of the milk once she begins producing. As for rumen development, mothers' milk will provide for full and proper development, including vascularization and capacity. Our calves are super-capacious even at six months old. In addition, the perfect fat in mother's milk plays an essential role in not only bone development, but also is most important in the developing endocrine system.

Perfect endocrine system development should be the centerpiece of discussions of calf rearing. Generally, debate revolves around rumen and bone development. We focus on the endocrine system development, however, because it governs glandular function and hormone production. These in turn translate into the most important issues for our cows' production years: lactation and gestation. Let's face it, we lose money when we feed a cow that is not producing calves and milk; nothing costs a dairyman more than an open cow. Growth, breeding cycles, healthy gestation, and strong lactations are all functions of the endocrine system. And it takes ten months on mother's milk for the endocrine system to fully develop.

We see the signs of this healthy system and abundant hormone production in adrenal swirls in proper placement between the shoulder blades, thymus swirls that are large and prominent, bald vulva and udders, and clear escutcheons. These characteristics are obvious at weeks old, and this abundant health continues with healthy coats, full development of heart girth, muscle strength, and full, standing heats in animals as young as six months of age.

It should be noted that use of the term "replacements" includes bull calves as well. We raise our bull calves in the same manner so that they will obtain early sexual maturity, strength, stamina, and the very important high sperm count with excellent motility, along with full genetic expression.

Full genetic expression of traits is a very valuable element gained by raising calves this way. As breeders, we strive to improve our herd, a job that cannot be accomplished effectively unless we can see our cows as an expression of their full genetic potential. One cannot properly select the best cows and bulls



Cows Raising the calves is financially rewarding and a lot more fun for everyone involved! Photos by Dietrich Gehring

for improving the herd if one cannot see the full genetic expression of their traits. We believe only cows and bulls raised by their mothers reach full genetic expression.

Practical Applications

Some logistical considerations need to be made, and each farmer will develop his or her own system. Generally, things to consider include the milking setup and how best to isolate the mother and baby that first week, how to keep the calves safe while they are with their mothers in the milking group, where they will go after the first eight weeks, and how you will be breeding back the mothers. About a week of close attention is required as soon as the calf is born to ensure a strong bond between the cow and the calf. This saves a lot of trouble later in the process. Some pairs don't need any help, but we have had to foster the relationship between some very new, i.e. first-calf heifers or cows that have never raised a calf before, and some old and tired mothers. Once the calf has bonded well and will not look to another cow for milk, the rest goes very smoothly. For the first two months we run the calves in and out of our tie stall with their mothers and our other milkers. This imprints the calves to us and to the barn routine and makes them easy to handle throughout their lives. They also become trained to respect our single strand electric wires used for rotational grazing by the time they leave the milking group at eight weeks old.

We milk the mothers twice a day, but do not keep the calf from them at all, except to tie them in at milking time so they don't trash the barn. By about eight weeks post-calving, the calf is drinking all of the mother's milk, or if it isn't, the cow is likely losing weight trying to produce enough milk for everyone. This aggressive push for production in the first two months post-calving seems to be very good for our cows' udders. We have noticed improved milk production and more complete let-down in subsequent lactations from the cows that have previously raised calves. However, about eight weeks of this heavy production is about the limit before weight loss begins to become a problem, so that is when we send the pair out to pasture to be rotated with the dry cow or bred heifer group.

We feel that having our replacements born in the early spring is a must. Having the calves on grass as soon as possible after they are born is extremely important to us because their mothers will be teaching them to graze at a couple of days old. Our calves graze and begin chewing their cud at three to five days old. The next year, the spring grass is pivotal once again after weaning. We also try to keep replacements that are close in age (within two months) because the calves will form a very tight bond with each other, and the ability to wean them as a group later is easier on them.

We run a bull with our dairy herd, and as long as we use a mature bull, over 24 months old, we do not have a problem with him breeding heifers while they are in the milking group (up to five or even six months old). A young bull, however, will breed baby heifers.

Once the heifers are ten months old, the mothers return to the milking herd, and the heifers remain with the bred heifer or dry cow group. Weaning is surprisingly easy when a calf is left on its mother until it is ten months old. They call to their mothers on and off for two or three days and then settle down. They do not lose weight, even when weaned in the winter months. We have tried weaning earlier, and it is not only a difficult separation for the calves to make, but they do not thrive as well after they have been weaned. The mothers are brought to the milk herd to be milked once a day and then dried off before calving again.

The most difficult aspect of raising replacements on their mothers is finding the courage to try it. It is not a process without kinks. But if you get started and are determined to make it work, you will never go back to any other method.

Phyllis Van Amburgh and her husband Paul, along with their five children, operate Dharma Lea Farm in Sharon Springs, NY. Dharma Lea produces 100% grass fed milk and meat from a 90 cow certified organic dairy and 20 cow Devon beef herd. The Van Amburghs welcome your input and can be reached at 518-542-7736 or dharmalea@gmail.com.

You can find the Van Amburgh's grass-fed milk at Maple Hill Creamery in Little Falls, New York www.maplehillcreamery.com and Grass-fed Beef at Honest Weight and Mohawk Harvest Coop.

HORTICULTURE

Experimenting with Caterpillars: Another Option for Season Extension

By Molly Shaw

Last fall CCE Tioga staff and local farmers put up two "caterpillar" tunnels on vegetable farms in the Southern Tier of NY, one in Tioga County and one in Schuyler County. We decided to trial these "caterpillars" at a couple of local farms because, while more widely used in Eastern NY, their use and construction isn't very familiar to Southern Tier farmers.

Caterpillar tunnels are, at their most basic, high tunnels on the cheap. They have three endearing qualities over the regular 30 x 96 high tunnel. First off, they're easily moveable, which means they can be built quickly over an established crop (field prep and planting can be done with a tractor) and crop rotation is easier. If you want to grow tomatoes in your caterpillar tunnel every year, have at it--erect it in a different spot every season. Secondly, they're wonderfully cheap, making them an easy way to experiment with growing crops under cover and accessible to even beginning farmers without a lot of capital. Whereas it's common for more standard 30 x 96 ft high tunnels to cost \$7-8,000 (\$2.00-2.50 per square foot), caterpillars are usually built for under \$1/square foot. And, as mentioned above, you can't beat the construction ease. Third, you don't have to level the ground for these tunnels. They can go up a slope or down and up a dip, following the contour of the land. A word of caution here--Ted Blomgren, an experienced tunnel grower who uses both caterpillars and fixed tunnels, comments that while caterpillars are cheaper, you kind-of get what you pay for. The caterpillars don't have a high roof to help moderate temperature swings, and you don't have any automation when it comes to venting. Getting in and out of the tunnel when there's snow is also no easy task.

We started in the fall of 2009, with a caterpillar made of pvc pipe, greenhouse plastic, rebar and baling twine. We used 20 ft long 1" schedule 40 pvc pipe, except for the ends which were 1.5" in diameter. First we measured out a 10 ft by 100 ft rectangle and put twine along the edges, adjusting it until it was square. Then we drove our 24" pieces of #5 rebar (5/8" in diameter) every 4 feet along either side, leaving 6" above ground--our bows were set 4 ft on center since we wanted this thing to carry a snow load. Between each bow anchor, we drove a 48" piece of #3 (3/8 inch) rebar that was bent in half, like a 24" giant "ground staple." These were pounded in nearly flush with the ground and slightly inside the edge of the hoops, with the tip angled inward so that when pulled on, they don't come out. Rocky soils required more pounding, but were not insurmountable. We bent the pvc pipe in an arc between opposite bow anchors, and voila, we had our hoops.



This caterpillar tunnel was built with pvc pipe, greenhouse plastic, rebar and baling twine over established beds of spinach in early November. Materials cost \$550, \$0.55/square foot. Photo by Molly Shaw

After all the rebar pounding, it was really gratifying to see how fast the ribs of the tunnel went up--it's by far my favorite part in the construction process. We tied 26 ft lengths of baling twine (heaviest we could find, UV resistant) to each of the ground staples on one side of the hoops. At the ends of the caterpillar we drove a hefty stake angled outward into the ground. We also tied a string (or rope) "purlin" down the length of the tunnel, on the tops of the hoops, and stretched tight to the two ground stakes at the ends. This was the tedious part--that rope should be tight between all the hoops and to the stakes at the ground on either end, and it can take some finicky adjustments to make this happen while the bows are all reasonably plumb. Then we rolled out our plastic and pulled it over the tunnel. Nice when the farmers you're working with are tall, it makes this part easy! Note on this: if you want a 100 foot tunnel, start with a piece of plastic at least 130" long, if not 150"--you'll need 12-15 feet extra on either end to pull and bunch to the ground.

Now came the tying down steps: these are very important. We bunched the narrow end of the plastic together and stretched it to the ground. Then we put a soft-ball sized smooth rock in the middle of the bunch (like a fist punching out through a t-shirt), wrapped twine around the neck of the plastic-wrapped rock so it didn't fall out of its pocket, and tied it tight to the stake at ground level. We did the same thing on the opposite end. Make sure at the plastic pulling stage, your caterpillar skin is taught along the whole length. To hold the plastic tight between bows, we threw each twine piece tied to a ground staples over the tunnel between its two neighboring hoops, and tied it snugly to the ground staple on the

opposite side. Clothespins on the ends of the twine helped add weight for easier throwing.

Don't criss-cross the twine over the hoop, go right between the bows. Your finished tunnel should be tight and look segmented (hence the "caterpillar" name) where the twine stretches the plastic down over each hoop. You might need to tighten the twine in a few days. You vent the sides by pushing up the plastic between the bows--some time it stays on its own, sometimes you need a notched branch to make it stay. This tunnel cost \$550 in materials (\$0.55/square foot for a 10 x 100 foot tunnel). It probably took three of us an inefficient 4 hours to construct--this was our first one, and I'd expect that in non-rocky ground two people could do it in 2-3 hours. Look at figure 1 to see the newly constructed caterpillar.

Our other caterpillar tunnel we made with metal hoops. We used 3/4" galvanized water pipes, 20" long, and we bent them ourselves. That was an adventure. A metal electrical conduit bender doesn't work, it breaks. Farmers in eastern NY said to use a pipe bender, but we didn't have the right one. In our case, we wanted to make a little peak to the bows, so they were more gothic shaped than Quonset. We made ourselves a jig, put the bend in the peak first, then bent the rest of the hoop around another rounded wooden jig. Definitely more work (and expense) than pvc pipe, but this farm wanted something more durable and long lasting than plastic. The rest of the construction was the same,

Caterpillars 14

Shopping list for PVC caterpillar tunnel

Greenhouse plastic, 150' x 24'	\$200
PVC pipe, schedule 40 1.5" diameter, 20 feet long (26 of these)	\$208
Rebar, 24" long, #5's (52 of these)	\$55
Rebar, 48" long, #3's, bent in half (50 of these)	\$65
Heavy duty UV-resistant baling twine	\$15
Total materials cost	\$543

Shopping list for metal caterpillar tunnel

Greenhouse plastic, 150' x 24'	\$200
Galvanized water pipe, 3/4" diameter, 20 feet long (26 of these)	\$900
Rebar, 24" long, #5's (52 of these)	\$55
Rebar, 48" long, #3's, bent in half (50 of these)	\$65
Heavy duty UV-resistant baling twine	\$15
20 feet wiggle wire channel and wiggle wire, tek screws	\$12
PVC pipe, schedule 40, 1" diameter, 20 feet long (2 of these, used for bracing on door end)	\$14
Duct tape (hold bracing to metal bows)	\$9
Total materials cost	\$1270

Useful note about buying supplies: plumbing stores have much better prices than home stores like Lowes, Home Depot, etc. The store managers were a little incredulous about the orders--they're not commonly used sizes/lengths by plumbers, apparently--but in the end they were good to work with. We even got the metal pipe delivered, since my little wooden 2x4 jig I used to hold floppy pvc pipe to my Subaru roof rack wasn't going to cut it for the heavier galvanized pipe.

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Matthew and Liz from Muddyfingers Farm with Matt LeRoux, Molly Shaw, and Eric Yetter, extension employees who helped bend the pipes and build the tunnel. This tunnel's material costs were \$1270, or \$1.27/square foot.

Photo by Matt LaRoux

except this farm wanted a door in the end (instead of ducking in the side) so we tried the structural compromise of not tensioning the plastic to a stake at one end, but rather attaching it with wiggle wire to the metal bow, and resisting the tugging from the other end by using some pipes set at an angle (shoulder height at end hoop, touching the ground a couple hoops back into the tunnel). This seemed to work reasonably well. This tunnel cost \$1270 in materials (\$1.27/square foot for a 10x100 ft tunnel).

Both tunnels withstood snow well. The pvc tunnel did bend down under the snow load, but it sprang back up when the snow was pushed off. I wish we had used 1.5" pvc pipe that was stiffer for the hoops-that extra half inch gives an amazing amount of rigidity. For summer use, when snow load isn't an issue, the anchors and bows can be spaced twice as far apart so more area can be under plas-

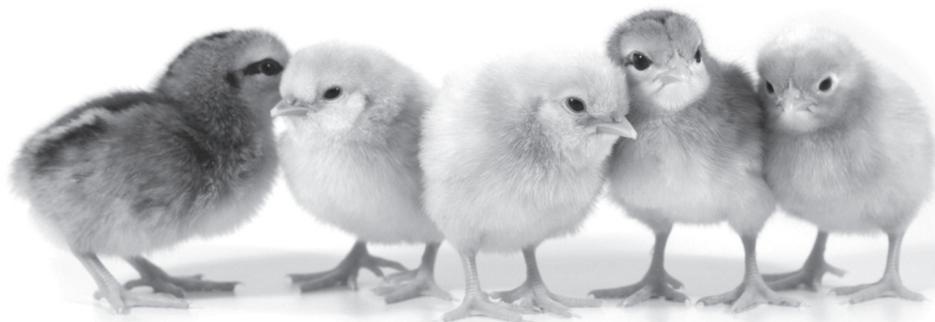
tic. Spacing the bows at 8 feet on center gives you two tunnels for only the extra plastic cost, which translates to about \$0.70/square foot in the summer configuration.

At the end of the trial, I think caterpillar tunnels have a useful place on a vegetable farm. They're the right price for beginning farmers and for those just experimenting with growing under cover, and they're mobile. We're starting to notice more soil problems in older tunnels, so this mobility factor may be even more important as we learn more about long-term tunnel growing.

If you want to try one and are looking for more details or pictures, contact Molly Shaw, meh39@cornell.edu, 607-687-4020 or Liz and Matthew at Muddyfingers Farm at maglenn_1999@yahoo.com.

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LOCAL FOODS AND MARKETS

Kale For Sale: One attempt to eat locally in Delaware County

By Rebecca Morgan

I spent three seasons on an organic vegetable farm in Virginia when I was in my twenties. The farmer there frequently quipped, "Anyone can grow food. The hard part is selling it to the right person." While "the right person" is not a static demographic across the board, for small-scale farms, it often means someone with money. Or at least someone who has enough money to spend \$7.00 a pound on tomatoes, and 6.00 a pound on broccoli and \$20.00 for a four pound chicken. In other words, not your typical permanent resident of Delaware County.

And yes, you've heard it all before. The particular conundrum of sustainable farmers charging what the real price of real food costs, while the benefits of the real food stay primarily in the hands of those with real money, or at least extra money, ironically not the same population generally suffering from obesity, diabetes, and other food-associated health problems.

Here in Delaware County numerous initiatives are underway to rebuild a vital farm and food system, and get youth, seniors, and just regular eaters engaged in eating locally. In Walton, we kicked off one local food initiative with the Walton Farm to School Project, which received funding from the Catskill Watershed Corporation to pay Walton High School students to grow food for the Walton community. Our motto was "Grown Here to Eat Here". The

larger objectives of the project were to get local food into the school cafeterias and teach students the process from Arugula to Zucchini of growing, harvesting and marketing organic produce. The focus of the 2010 season became selling our organic produce to the Big M. This was, as they say, a hard sell.

The Walton Farm to School Project delivered boxes of organic produce every week to the Big M, often less than five hours after harvest. However, due to a series of factors, the food did not exactly fly off the shelves. While the owner and managers at the Big M were generally supportive, the challenges grew. First, we had to engage in some aggressive advocacy strategies to get decent shelf space. After our initial requests to get better space for our produce didn't pan out (we were selling a local, organic product, grown by the hard-working youth of our community as cheaply as we could...what's not to love??), our crew showed up unannounced in the Big M parking lot to meet with the owner directly. He put it this way: "if you can get your product here every week in reliable quantities, we'll give you prime real estate. But if it looks like shit, it's over."

What we delivered was beautiful. Fresh and vibrant, newly-washed, the produce practically sang opera. However supermarket policies dictate that the newer product sits in the cooler until the older product sells out. While logical on some level, it often meant that our produce on

the shelves was older, drying and wilting. More raspy Johnny Cash than glorious Maria Callas.

Also, we had more swiss chard and kale than the Walton population was willing to purchase, and our other more palatable crops (cucumbers, beans, squash and zucchini) just couldn't compete with the box truck prices no matter how low we were willing to go. So we gave boxes of high quality, organic produce to the food pantry on Friday afternoons. "Grown Here to Eat Here" was our motto after all, and since our project was subsidized by grant money, we could afford to essentially give it away. Local? Yes. Economically viable? No. We also experienced significant marketing challenges. Our efforts to introduce Waltonians to the multiple benefits of kale (in the form of pamphlets, recipes, Hail to Kale signs, etc.) often resulted in damp, unreadable signs - shredded paper over the produce. The Big M simply did not have the staff, the time, or the ability (desire?) to effectively laminate all of our signs, so much of what we brought in was packaged up in plastic (it will last longer this way, we were told) and sold alongside the produce from Chile and California with no distinction.

Ultimately we moved a few thousand pounds and dollars worth of produce through the Big M. We had a small, but devoted following, and for that we are enormously thankful. We still had the fall school cafeterias to feed.

However, lo and behold, kale isn't such a hit with 9th graders either. We did get salad, spinach, radishes, swiss chard, peppers, tomatoes, and yes, kale into the cafeteria, but when abundant fall rains flooded our fields, our growing season came to an end.

All is not lost. The students learned a great deal and the ball was set in motion to ensure that



Women from the Walton school cafeteria with the farm to school's first harvest of salad, spinach, radishes and japanese globe turnips.
Photo by Rebecca Morgan

high quality food gets to those with limited resources.

Kale, anyone?

For more information on the Walton Farm to School project, contact Rebecca Morgan at 607-865-8747 or rebamacmorg@hotmail.com. Rebecca Morgan is the Walton Farm to School Project Volunteer Coordinator located in Delaware County, NY.

NON DAIRY LIVESTOCK

Livestock Guardian Dogs

By Ulf Kintzel

It occurred on a spring morning in the mid 90s in New Jersey. I had lambing season. I drove out to my flock to the pasture I rented from the state. When I arrived I discovered a devastating scene. The flock was clearly disturbed. The field was littered with dead lambs. A couple of sheep were injured. I did not know what had happened at the time. I had not been long in the United States and was unfamiliar with natural predators for sheep. I investigated the lambs but could find no mark on them. It was a scene that can make a grown man cry. I spoke with a local trapper and showed him the scene. Without hesitation or doubt he told me that this was the work of a coyote. He had killed the lambs by grabbing them by their throats and suffocated them. The trapper found the track where the coyote had come in and set his trap. Since this individual coyote was starved, mangy, and desperate it took only one day to trap and kill it.

The question became what should I do moving forward? I had heard about the tremendous losses sheep farmers out West had suffered due to coyotes. Many of them had been put out of business because of these losses. I feared I might become one of them. Black Bears were also multiplying in New Jersey at that time. I felt I had to do something. I researched my options and it soon became clear to me that I would not settle for a donkey or a llama. I had used herding dogs for many years, I was very much a dog person, and it had to be a guard dog. But where should I begin searching for such a dog? What breed would suit me? I knew absolutely nothing about them.

In my search for answers I came across a government employee who was part of the guard dog field trial the USDA conducted in the 80s in Idaho and at a second location in Massachusetts. I wish I could recall his name to give him full credit for a comprehensive introduction to guardian dogs and the time he was willing to spend with me on the phone. A description of the field trial and research of farms and ranches that were already using guard dogs can be found at this website: <http://www.nal.usda.gov/awic/companimals/guarddogs/guarddogs.htm>. The information on this website can also be found in a brochure called "Livestock Guardian Dogs: Protecting Sheep

from predators", United States Department of Agriculture, bulletin number 588. It is the most comprehensive and most accurate information that I have come across in a world full of misinformation about guardian dogs. Using guardian dogs is actually an ancient form of protecting livestock which has experienced a resurgence in the past few decades. The fact that many means of killing coyotes have become illegal as well as the growing numbers of coyotes have contributed to that.

Raising and training a guarding dog

After being weaned from its mom the guardian dog is raised with the sheep - or with whichever livestock it has to guard. That starts most commonly at the age of eight weeks. Just like our companion dogs view us humans as pack members, the guardian dog learns to see the livestock it will later protect as its pack. Raising the pup with the sheep must be done at a young age when this imprinting takes place; it cannot be successfully done with an adult dog. The ultimate goal is that the dog will seek the presence of the flock at all times, has no or little desire to leave it to go other places, and in fact only feels comfortable when being with the flock. When raising the pup with sheep it is advisable to do it while having little lambs to have "age-appropriate" companions for the young dog. It should also have a place where it can retreat, i.e. when being pushed around by protective sheep mothers.

The desire to guard is an instinctive behavior. Guarding dogs have usually very little prey drive and a strong innate desire to protect. It cannot be taught; if the instinct is not there the guardian dog will be useless. The training of a guardian dog is limited to stopping undesired behavior like playing too rough with sheep, chewing off docked tails that are about to fall off and the likes. The training methods are fairly simple. One just has to correct the dog when caught in the act and an appropriate command should be given simultaneously, i.e. "leave it" or "no". When the dog is straying too far from the flock just chase it back and shout "get back" at it - it should soon seek the comfort of the flock.

There are many more details about raising a guardian dog, what behavior to expect, why it is okay that the protector of the flock may eat an already dead sheep but not kill one. But it would go beyond the scope of this article to



This guardian dog is showing the appropriate instinct by placing himself between flock and intruder without leaving the sheep.
Photo by Ulf Kintzel

address them all. I would like to defer to the brochure about guardian dogs that I previously mentioned. Almost all the answers to your questions can be found there. When the dog reaches adulthood it should become an effective deterrent. Keep in mind that coyotes are opportunists and not brave hunters like wolves are. Between the electric fencing that I use and my current guard dog "Berthold", a four-year-old Great Pyrenees, I can sleep well at night, even when the coyotes are literally hauling in my backyard.

Misconceptions

The most common misunderstanding I run across is the desire to have a herding dog as well as a guardian dog in the same dog. That is impossible. Let's examine that. A guardian dog sees the sheep as its pack, its own kind so to speak. Herding is a form of hunting. The herding dog sees the sheep it herds as prey. Any serious herding dog would do all kinds of undesirable things to the sheep if not controlled and corrected by its owner. In short, a guarding and a herding dog show interest in the sheep for very different instinctive reasons. These reasons are mutually exclusive.

A true guardian dog is protecting the livestock and not its territory. That means it will protect the livestock wherever it is and not its familiar territory. That is especially important when the flock is not stationary, when it grazes at least temporarily away from the home farm. Protecting its own territory can at times look like the dog is protecting livestock. However, these dogs may fail to protect the sheep when they are on pasture that is not part of the dog's territory.

Using a guardian dog will reduce your predator losses but predator loss may not necessarily be zero. If you continue losing a sheep or lamb now and then it may not at all mean that your guardian dog failed. If the acreage is too large, too hilly, or too overgrown, a coyote may out-

smart your guarding dog at times. In fact, the guardian dog may have never known the coyote was there. Keep your pasture smaller in order to avoid it or use more than one guardian dog.

The most controversially discussed topic of raising a guardian dog is whether or not the dog can be part of the family as well as a true guardian dog. In other words, should the guardian dog be with and obey the farmer or should human interaction be avoided or at least limited? I am in the latter camp. While my guard dog may follow me around when I am in or near the flock and while he is certainly happy to see me, I cannot call or touch him. He will avoid me. I feed my dog in a little trailer that I can close up should I have a need to examine or treat the dog. A guardian dog that is too attached to the owner may want to leave the flock to be with the owner or his family. That is perhaps okay when you just have a few acres and a few sheep. The dog will be still near the sheep. However, that may become a problem when one farms several hundred acres and when the pasture is miles away from home. There is certainly a happy middle ground. After all, at times Humans need to be able to get a hold of the dog. But keep in mind what the dog's purpose is. It is to guard the livestock and not to be a companion dog for the farmer or the family.

Ulf Kintzel owns and manages White Clover Sheep Farm (www.whitecloversheepfarm.com) in Rushville, NY where he breeds grass-fed White Dorper sheep. He offers breeding stock and freezer lambs. He can be reached at 585-554-3313 or by e-mail at ulf@whitecloversheepfarm.com.

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URBAN FARMING

Creating Farms on Concrete, Rubble, and Roofs

The Story of New York City's Newest Farmers

By Daisy Bow

When anyone thinks about New York City, fixtures like concrete sidewalks, skyscrapers, large office buildings, heavy traffic, storefronts, and subway stations come easily to mind. Green spaces are generally relegated to designated city parks, and most flowers are pre-cut, bundled into ready-to-go bouquets.

However the metropolitan topography is changing.

Urban farms are popping up across the city on rooftops, in church basketball courts, and backyards. They are finding homes in otherwise abandoned spaces reclaimed by ambitious, enterprising, and entrepreneurial souls. These urban farmers are eager to take advantage of what they see as a common-sense solution to feeding local, seasonal produce without the carbon footprint to a hungry city. They are also looking to the future. In neighborhoods where you can live next door to someone for 20 years and never know their name, these urban farmers are committed to building community while at the same time expanding production and earning profit.

"There is just so much space across the city," said Ben Flanner, head grower for Brooklyn Grange. "I just heard the number: there are hundreds of thousands of buildings that are all empty on the top of the roof. The sun is just beating down on all these roofs, so it makes sense to do something productive with it and grow as much food as we can."

Located in Long Island City, Queens, Brooklyn Grange is one of the newer additions to New York City's growing urban farms movement. It is also the largest. At 40,000 square feet - a little less than an acre - the Grange is the first commercial farm in the city that has enough scale to support a full-time staff.

"We're kind of unique in that, almost stubbornly, we want to make it a real farm," Flanner said.

Flanner belongs to a new breed of urban farmer: motivated, autodidactic, curious, adventurous, and city-smart. These are traits shared by other urban farmers, essential characteristics that equip them to navigate a terrain both less complicated and more challenging than a traditional commercial farm. As a rooftop farm six stories above ground, Brooklyn Grange's growers must think outside of the box in order to work around factors unique to their environment.

"You can't drive a stake three feet into the ground," Flanner said, "I only have about ten inches of lightweight soil so I have to use techniques that are a lot more creative and more labor intensive. It's windy up there too, so you need even more staking."

Creativity is the key to growing in the city, something that Jordan Hall and Bennett Wilson of Tenth Acre Farms know well. Hall, Wilson, and Wilson's brother Adam are the three owners of New York City's newest commercial venture. Beginning as a project in Hall's backyard in 2009, the farm expanded last year, taking over a little-used ground space in the back of St. Cecilia's Church in Greenpoint, Brooklyn.

Wilson and Hall got the idea to expand the farm last spring: "We were digging in new stuff, turning over the soil in the backyard last April. We thought if we had sold everything, we would almost have made back what we had put into it."

The agricultural space that they carved out of the middle of hipster Brooklyn is impressive, sophisticated, clean and elegant. Using the skills and knowledge gained from experience in set-building and scenic design, they came up with the idea of "raised bed gardening" instead of planting into the ground.

"You just can't bet on most of the soil in Greenpoint and Williamsburg. You don't know what contaminants are in there. We knew we had to get new soil. Instead of digging in, we figured it was going to be much easier to build a structure where it can be raised off the ground," said Hall.



The first step in preparing a roof site for food production.
Photo by Anastasia Plakias

According to both Hall and Bennett Wilson, raised beds offer many advantages: they increase your growing season and keep pests away. There is no damage to any root structure because a foot never touches the soil. Harvesting is easier because you don't have to bend down.

"It benefits the plants in so many ways that it is worth that initial input. And it's somewhat cosmetically pleasing on a lot of levels. Where there is going to be shared property, we thought this was the right way to go," Hall said.



Flanner stakes tomatoes with lightweight bamboo knotted into pyramids to protect from high winds.

Photo by Anastasia Plakias

For Hall and Wilson, one of the biggest challenges to any urban farm is space. Not just limitations on how much space to give the plants, but also space to compost in order to fully realize the goal of farming using organic practices.

"You can't react like you can in traditional gardening," Wilson said, "You really need to make sure that your soil tests are good and that you keep up with it. We put fish emulsion, seaweed extract, bat guano tea, and things like that on the soil all year just to keep ahead of it."



Jordan Hall and Bennett Wilson of Tenth Acre Farms

Photo by Daisy Bow

Both farms are composting as much as possible, avoiding pesticides, fungicides, and chemical fertilizers. Tenth Acre Farms openly accepts compostable donations from the community. Flanner collects scraps from farmers' markets, coffee chaff from a local roaster, and pure wood shavings from a nearby woodworker. For Flanner, maintaining healthy soil is the key to staying successful. However, the difficulty of this task is compounded by logistical aspects unique to urban locations. In the case of Brooklyn Grange, delivery of new soil, compost, and compostable materials are limited by what the growers can bring up to the roof.

"It's like the bucket brigade the last two flights of steps. We can't get 20 or 30 yards unless we paid for a crane again,"

However, urban farming does have distinct advantages. For one, urban farms are literally in the market's backyard. Their proximity to New York City's restaurants, farmers' markets, and CSA's ensure that the consumer is never more than five miles away from the farm. Wilson points out other positive points: by eliminating the middle man, an urban farm of 2000 feet like Tenth Acre Farms can actually net as much profit as an 8000 square foot farm elsewhere.

"We don't have to pay a shipping company, a packaging company, or a wholesaler. We have the costs of big machinery," he said.



Brooklyn Grange is the largest urban farm in New York City.

Photo by Ben Flanner

Another challenge to any farm, not just urban farms, is distribution. How do you connect with the consumer? How do you find channels to move harvested produce and build the infrastructure needed to deliver perishable goods? How do you educate restaurants and customers to know what is seasonally available?

"Those are challenges to any farmer," Flanner said, "There are 8 million people here and not enough of them are eating good vegetables or spending their dollars on it, but for those who are, we're really close."

Brooklyn Grange and Tenth Acre Farms both have established markets that they run and maintain throughout the season. In addition to these, both will have Community Supported Agriculture (CSA) operations this season. They will be Tenth Acre's first, and Brooklyn Grange's second. In addition, Brooklyn Grange supplies several restaurants in the city. Last year, Tenth Acre Farms began developing relationships with local establishments - restaurants, cafés, and bodegas - to move more of their harvest.

According to Flanner, Brooklyn Grange produced 12 and 14 thousand pounds of produce last year, even with a shortened growing season. They sold almost all of it. For Tenth Acre, the farm's inaugural production exceeded all expectations - about 7 or 8 thousand pounds. Still, Wilson projects that the farm has not yet reached its full potential. Wilson spoke of experimenting with mirrors in order to direct sun to shadier areas of the farm, as well as building cold-frames to extend their productivity. This spring, he will work on the farm full-time (Hall and Wilson both currently work for College Humor, a comedy website).

"I think after this year, we'll blow people away. Now that I can devote more time, I can go out there every day and work the place. It's not like I have to pick everything, deliver it, and then get back to my job," he said.

Currently, all acknowledge that there is a certain novelty to what they are doing.

"I think there is a little bit of misunderstanding, or a curiosity about urban farming," Flanner said, "Real commercial farmers kind of sit and say, What are these kids doing?!"

Flanner does make the point that even given phenomenal growth, urban farming is not a replacement for local farming upstate and elsewhere. Citing statistics, he notes that if urban farmers were to cultivate every available space in New York, the appetite of city's 8,000,000 residents would exceed any supply.

"A big challenge is that only 2% of New York City's vegetables are grown in state. We still get massive shipments in from around the world," he said, "But what we're trying to do is create momentum. That is the overarching goal: to increase that 2% number. We're trying to change people's culture and the way they are purchasing their food."

For both farms, there is still room to grow. Brooklyn Grange has a ten-year lease on their rooftop, and Flanner is looking to the future with an eye to experimenting, learning, improving, getting smarter, and diversifying. Tenth Acre is looking to conquer not only ground spaces, but rooftop ones as well.

"There are plenty of one-acre lots owned by the city that are just sitting there being garbage dumps right now," Wilson said, "I don't care where it is: you can put me on the water, you can put me next to a bunch of cranes, I'm going to bring in dirt anyway and we're going to clean the place up. We can make anything work in this city."

Daisy Bow is a doctoral student studying food in contemporary French literature at New York University in New York, NY. She may be reached at daisy.bow@gmail.com.

To learn more about Tenth Acre Farms, visit <http://tenthacrefarms.com>

To learn more about Brooklyn Grange, visit <http://brooklyn-grangefarm.com>

NEW FARMERS

Get Started With Spin Farming

By Linda Borghi

Calling all aspiring farmers. If you have a calling to farm but you have no land, no money and no farming experience. No problem. Be a SPIN farmer!

My name is Linda Borghi, and I am a SPIN farmer in Walker Valley New York.

SPIN stands for Small Plot Intensive. It's an organic-based production system that allows you to generate \$50,000 + in gross sales from a 1/2 an acre of land, which is about 20,000 square feet. SPIN-Farming was developed by a Canadian farmer named Wally Satzewich, and here is his story.

Wally did not come from a farm family. Thirty years ago he began growing in his backyard in Saskatoon, Saskatchewan, a city of about 220,000. He began selling at the Saskatoon Farmers Market, and that sealed his fate. He realized he was a farmer, and like most farmers he thought to become successful, he had to get bigger. So he acquired 20 acres outside of Saskatoon, along the Saskatoon River, and invested in an expensive irrigation system and brought in outside work crews. But he continued to live in Saskatoon and grow in his small yard there.



Here is another high value SPIN crop - rainbow carrots. In the SPIN system, once beds are harvested, they are immediately planted to a different crop. This is called relay cropping, with the aim being to plant at least different three crops, one right after the other, in the same bed throughout the season.

Over time he realized he was growing high value crops, like carrots, spinach and salad mix in his small backyard, and he was growing low value crops, like potatoes and onions, on his larger acreage in the country. This distinction between a high value and low value crop made him realize the other advantages to city-

based sub-acre farming. He could grow high value crops in the city because he was not losing them to pests, like deer and large scale insect infestations. His irrigation system in the city was the water faucet, he did not have to depend on fluctuating river levels or worry about water quality. His work crew in the city was he and his wife. He did not have to depend on outside labor.



How about an urban backyard SPIN farm? This was one of Wally Satzewich's first plots, at his uncle's house. Here is where he grows one of his high value crops - salad mix.

When he looked at the financials, he saw that even though the land base and overhead of a sub-acre farming operation is a fraction of that of a large-scale farm, their bottom lines are similar. So a sub-acre farmer can earn as much, or more, income as a large scale farmer, but with a lot less stress and overhead, and with a lot more control over their operation, and with a lot more certainty of success from year to year.

So Wally sold off all his acreage in the country, Futility Farm as he called it, and he became an urban farmer. Now, the only land he owns in the city is his own small backyard, and he rents or barbers other backyards to make up his land base. He has been supporting himself farming this way for over 15 years. He has documented his system for maximizing income from sub-acre land bases, and he calls it SPIN-Farming.

SPIN-Farming is now being practiced by a growing corps of first generation farmers in the U.S. and Canada. Some of its concepts include a multi locational farm land base, 1-2-3 land allocation, high road/low road harvesting, high-value crops, structured work flow and work rate. What the SPIN system does is knock down the barriers that individuals face when attempting to enter the field of farming as a profession. The three largest barriers are: owning large tracks of land, major capital investment to farm those large tracks and land, and the education necessary to create a financially successful farming business. SPIN-Farming addresses all three.



The SPIN-Farming system makes it possible to gross \$50,000 or more from a half acre, which is about the size of many suburban yards. Like this one. Photos by Wally Satzewich

In addressing the first barrier, which is land, did you know that there are 46.5 million acres of lawn in the United States today, and it takes 40% of the drinking water on the East Coast and 60% on the West Coast to water those lawns? Some of that very same land is prime farmland, and where many SPIN farmers are now getting their start. Front yards, backyards, neighborhood lots, roof tops are all good land base options for SPIN's sub-acre scale food production model.

The second barrier to entering the farming profession is capital. The investment in a SPIN-Farming operation is a fraction of that of the conventional model. Some tractors cost tens of thousands of dollars. With SPIN-Farming, an investment of as little as \$10,000 can get you successfully farming in no time.

The third major barrier is education. I come from an Italian family of fine art dealers. They both start with the letter "f" - farmer and fine arts dealer - but they are worlds apart. I picked up a lot of my farming know-how through years of trial and error, and that is what SPIN-Farming eliminates. The system is explained in a series of guides that emphasize the business aspects and provides a financial and management framework for having the business drive the agriculture, rather than the other way around. Many a SPIN Farmer like myself has created a successful sub-acre farm business through the use of these guides. But for those that require a more personal approach to education, Abundant Life Farm in Walker Valley opens its SPIN-Farming Training and Education Center in April of this year. We will offer 3 courses per season, 6 weeks per session, 6 days a week, for further information : <http://www.abundantlifefarm.com/index.php/Site/AbundantLifeFarm>.

For more information on SPIN Farming go to www.spinfarming.com

Linda Borghi is a Biodynamic SPIN (r) Farmer and Educator at Abundant Life Farm, Walker Valley, New York. She can be contacted via email @ LBorghi@AbundantLifeFarm.com or by calling 866-993-8932 x 13.

LOCAL FOODS AND MARKETING

Pricing Your Farm Products Honestly

By Jim Ochterski

If you are calculating your farm product prices based on what others are charging, you are making assumptions that your farm probably can't afford.

We know it can be tough to get buyers to pay a price that provides a consistent profit for your farm. Yet, the whole idea of growing something and selling it is to earn money, while you enjoy the non-monetary perks of an agricultural life.

Consider "honest pricing." An honest price is one that gives you the income needed for your farm to survive the season economically. It is a combination of straightforward math and a responsible attitude about your farm. Bottom line - you need to cover all of your costs and then some.

In the end, your honest price might wind up being higher than you think the market will bear. This is when you need a truthful approach in your marketing, being ready to answer some tough questions.

Here's how one set of tough pricing questions can be answered in a hypothetical conversation between an unusually demanding customer and a market farmer:

Customer: I don't want to sound like a cheapskate, but you do realize that your lettuce is a lot more expensive than what they have at the grocery store?

Farmer: Well, I'd say the lettuce you are seeing at the grocery store has very little in common with this freshly-harvested lettuce. Would you mind if I asked why you have come to the farm market today?

Customer: To me it just feels like the right thing to do during the

summer. There are a lot of farms in the area. I do like the choices and the freshness.

Farmer: Do you think it should be a cheap way to buy your food - getting it right from the farm?

Customer: It cuts out the middleman doesn't it? You grow the fruits and vegetables nearby and sell them right to me. We both win. It should be the cheapest food around. So no, I don't understand why you would charge twice as much as the grocery.

Farmer: Look, I know you can always buy cheap food somewhere - go to Wal-Mart, or buy it when it's on sale. But when you are at the farm market or at my farm, it is going to be a lot more honest. And the price I charge on everything I sell is an honest price.

Customer: I'm sure you can call it an honest price, but it's still more than most people are willing to pay. How do you justify it?

Farmer: It's not that hard to explain, and you need to know that this is how I have chosen to create an income for my family. I am not going to entice you on price alone - that would be a laugh and I'm not going to even try. You are getting my assurance and accountability for everything about this food - how it was grown, harvested, and handled. You are getting my expertise to grow food that you can't or don't have time to. Any money you spend at my farm will be money well-spent if quality matters to you. The price is probably more reasonable than you would think.

Customer: Let's hear how you justify the price then.



Honest prices will make sure your farm survives the season Photo by Jim Ochterski

Farmer: We'll take this head of lettuce as an example. I have 250 heads growing this season in five rows. There is \$38.00 worth of seed, compost, transplant trays, and irrigation water in each row, plus another 11 hours worth of work to get the seeds going, work the soil, drop in the transplants, keep it weeded, control the bugs, then harvest, wash, and store the lettuce until I get here. There's a vendor fee to be at the market and a little gas in the tank. Also, there's the electricity for the cooler, insurance, and my farm phone. That brings me to about \$340 in expenses just for the lettuce crop and I base the final price per head on that. When you pay me for the lettuce, you are covering all those expenses I have already incurred.

Customer: What if you can't sell the lettuce? I mean, can you afford to not sell it?

Farmer: There are a lot of reasons why the lettuce might not sell. I try to make sure that the price is reasonable for the market

COMMUNITY/WORLD

The Youth Farmstand: Seeding Success for Youth, Farmers & Communities

Since 2003, the Seeds to Success program has been training New Jersey youth in new job skills, bringing business to farmers, and increasing community access to healthy food.

By LuAnne Hughes

In 2003, Rutgers Cooperative Extension (RCE) of Gloucester County launched Seeds to Success, a youth farmstand project. Now in its 8th year, Seeds to Success, part of a statewide RCE youth farmstand initiative, is the largest youth farmstand initiative in New Jersey. It prepares special needs*, at-risk youth for the workforce through classroom and on-the-job training. (*Special needs students have Individual Educational Plans developed to support learning and education.)

Seeds to Success Youth Farmstands bring new business and affordable, nutritious foods to residents of three limited resource communities. The farmstands are a unique example of economic development in at-risk communities. And, they support local farmers by offering three new outlets to sell their crops at competitive, profitable prices.

Seeds to Success is a multi-faceted project with four key goals: Support local farmers by creating new retail outlets for their products; Build food security and healthier, stronger communities; Increase workplace readiness skills in special needs, at-risk youth; and Improve life skills in at-risk, special needs youth.

Because the project is multi-faceted with a range of goals, Seeds to Success offers a plethora of benefits to a number of audiences within its targeted communities.



Seeds to Success youth partners and their customers.

Reaching a Diverse Audience

Seeds to Success addresses numerous county needs: food security, economic and community development, workplace preparedness, lifeskills development, community service opportunities for special needs youth and improved nutrition/health. The project reaches out to a diverse audience:

Community. At least 20% of the population in each of the target communities is considered "at-risk," that is, at or below poverty level. These communities have initiatives to address neighborhood revitalization and consider Seeds to Success a logical "fit" into these efforts. All community partners were anxious to bring fresh, locally grown produce to their residents, knowing that increased access to healthy foods directly correlates to increased consumption which may, in turn, reduce chronic disease risks.

Farmstand customers purchase produce with cash, food stamps and Farmers' Market Nutrition Program (FMNP) vouchers. The FMNP was established by Congress in July 1992, to provide fresh, nutritious, unprepared, locally grown fruits and vegetables through farmers' markets to WIC participants and qualifying senior citizens. It is also designed to expand the awareness,

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I am in and take that factor out of it. If it still does not sell, I'll take a lesson from that and make a choice about growing it again.

Customer: So what kind of profit are you really getting?

Farmer: The profit is different from crop to crop but it's there. I know what it costs me to bring any of these crops to market, and that always includes my salary and a little profit so we can take care of family and farm needs.

Customer: Wait a minute, you are getting a salary out of this?

Farmer: Anyone who grows things to sell should have a salary in their books - what they need to earn year in and year out. It's called a fixed expense. I try to be as frugal as I can with all the other expenses, but this is income for my family, not a hobby. The profits are not huge compared to other businesses. It is the money I need to replace my barns and equipment as they get worn out. And yes, there's some profit in everything I sell.



Seeds to Success youth partners on the morning shift set up their farmstand for business.

use of and sales at farmers' markets. In New Jersey, WIC clients and seniors receive \$30 per year, per recipient. FMNP vouchers account for 10-15% of Seeds to Success youth farmstand sales annually.

Youth. Although educational programs in our county provide workforce preparation to special needs students, there is a significant disparity between the number of youth who require training and the number of workplace opportunities available. All youth, regardless of their physical and mental conditions, need and deserve the opportunity to be involved in activities unique to their own talents and interests...in preparation for adulthood in a world with great diversity. Many Seeds to Success students would have few employment opportunities without the farmstands. Seeds to Success also fosters citizenship, self-esteem and personal development for "at-risk*" youth. (*Youth are classified at-risk due to family situations, behavioral problems or low academic achievement records.)

Seeds to Success involves both in-school and on-the-job training. During the school year, youth participate in food/nutrition, food safety, banking and financial education. During the summer, youth apply this knowledge at one of the three farmstands, where they experience many aspects of a retail entrepreneurial enterprise.



A typical Seeds to Success grand opening is a festive event that draws a large crowd of local customers and the media.

Farmers. Despite living in close proximity to local farms, residents of targeted communities have limited access to locally grown produce. Neither supermarkets nor area farm markets are easily accessible via walking or via public transportation. While there is a need, economic restraints, poor marketing conditions and lack of trained, affordable manpower limit the ability of local farmers to expand retail markets by opening and operating farmstands in new, low-income communities.

Customer: OK, I am feeling a little better about spending extra when I am here, but do all the farmers follow the same rules? It seems like some farmers are practically giving things away.

Farmer: There are women and men in farming who have no idea what their costs are, and it is really too bad. When you figure the time and effort they put into growing the food, I wish I could convince them to pay more attention. None of us will build wealth by undercutting our own farms. It starts with price, and like I said before, from my farm, the price will be as honest as it can be for me and for you.

Customer: How do you deal with other local farmers who sell fresh lettuce for less?

Farmer: My lettuce and their lettuce are not identical, and our prices are not identical either. I might have to charge slightly more, but you are also going to get more, and I guess it is my job to convince you of that.



Seeds to Success youth partners show off "Jersey Fresh" peppers, eggplant, peaches and tomatoes.

Photos by LuAnne Hughes

There have been attempts to increase access to locally grown produce in each targeted community. However, starting and keeping retail farm markets in operation demands a great deal of attention to consumer, vendor and community needs. Collaborations between farmers and local agencies established "portable" farmstands that traveled throughout the community to serve WIC clients, seniors and food stamp recipients have failed, largely because: there was no established, long-term allegiance to the initiative; participating farmers made little profit and were unwilling to continue; and there was limited awareness and support from the community in general. Other attempts to operate farm markets have met with limited success, primarily because trained, affordable labor to staff farm markets is not available. To participate, farmers must staff farm market booths themselves, taking them away from managing their farms and reducing profit.

Seeds to Success offers a profitable alternative to farmers, enabling them to establish new retail outlets for their products - with limited labor investments. Currently, we work with 3 local farmers, who stock our farmstands with New Jersey tomatoes, corn, cucumbers, peppers, squash, eggplant, blueberries, peaches, nectarines, plums, and melons. Seeds to Success youth farmstands purchase \$10,000-\$14,000 worth of produce each year, during a 5-7 week period each summer when they operate 3 days per week, 6 hours daily.

A Catalyst of Change

Seeds to Success has resulted in a number of positive outcomes since it began in 2003: improvements in:

- Nutrition knowledge
- Food handling skills
- Identifying locally grown fruits/vegetables and preparing snacks with them
- Ability to distinguish between locally and non-locally grown produce
- Working productively with peers and supervisors
- Customer service skills
- Working with inventory/ordering/pricing systems
- Using a scale, cash register and calculator
- Handling and managing money

While Seeds to Success provides increased access to the essential components of a healthy diet - fruits and vegetables - to those consumers with the fewest resources, the benefits of this project reach beyond mere nutrition and economics. Projects like Seeds to Success can serve as catalysts of change to support neighborhood revitalization and community food systems by addressing food security and economic development efforts, while offering youth an opportunity to earn money at a "real job" and develop personally with job and lifeskills training. They are a powerful example of how small collaborations can benefit many.

For more information on the Seeds to Success program, contact LuAnne Hughes at Rutgers Cooperative Extension, 856-307-6450 or hughes@AESOP.Rutgers.edu.

Customer: You got that done today. I'll take one of each kind. Honestly, it might just be worth it, eh?

Jim Ochterski advises hundreds of farms about business topics each year in the Finger Lakes region, based at the Cornell Cooperative Extension office in Canandaigua, NY (Ontario County). He can be reached at 585-394-3977 x402 or jao14@cornell.edu.

For more information, particularly about how to handle price increases with your customers and other marketing challenges, visit the Marketing School for Growers website:
www.MarketingSchoolForGrowers.org

STEWARDSHIP & NATURE

The Reasons to Garden

By Bill Duesing

The following excerpt, "The Reasons to Garden," is the fourth of a series of essays written by Bill Duesing from the book *Living on the Earth: Eclectic Essays for a Sustainable and Joyful Future*.

As the days get longer and the soil begins to warm -- thoughts of spring and the promise of a new beginning on the land abound. Part of this optimism relates to the planting of the home garden. In this essay Bill explores reasons to garden from the minds of second graders and shares the youthful excitement that gardening brings to a practicing lawyer in his senior years. Enjoy!

It feels good to get our hands into the soil again. Late snows and freezing temperatures kept us out of the garden longer than usual this year. Last weekend though, we found the soil in wonderful conditions (warm and with just the right amount of moisture) as we planted early greens and peas.

We also found some treasures left from last year's garden. A row of turnips we'd been using for greens into December has lovely rosettes of tasty leaves. We found garlic we'd missed at the harvest. We lifted it, took some inside to cook with, and separated and replanted the rest. We also discovered parsnips, just starting to put on their second year's growth to flower and reproduce. Sauteed in butter, they were delicious.

Recently, I asked the 28 students in Suzanne's fifth-grade class at Hallen School in Bridgeport to list some reasons to grow a garden. Over the course of the school year the students have harvested produce from the garden started by last year's class. They've also planted flower and garlic bulbs with the second-graders, sown a winter cover crop of rye inside in different media, i.e., compost, soil, sand and clay. Currently they are excited by growing seedlings of many garden vegetables and flowers for spring planting. We hadn't discussed the benefits of a garden, except perhaps to talk about saving money and transportation energy by growing lettuce in Connecticut instead of in California's deserts.

I was astounded and moved, by the reasons they provided and the quickness with which they produced a long list. These children want to garden:

- To eat
 - For beauty
 - To save money (instead of growing to the store)
 - For health
 - To provide a use for food wastes, that is, compost
 - To see something new
 - To have fun
 - To earn money
 - To feed others
 - To become more responsible
 - For experience
 - To learn
- To feel good about themselves
- To produce more seeds
- To do something good for the environment - you don't have to drive and can avoid packaging if your food is near your home.
- To keep busy
- To save energy
- To impress family and friends
- Because fresh vegetables taste better
- To win contests at fairs
- Because the food is fresher and more nutritious

These fifth graders understood the reasons to garden. And, judging by the enthusiasm with which they show me their seedlings, growing plant generates excitement.

Two days after this lesson, I was visiting a client in New Haven who is a successful lawyer, still practicing well past normal retirement age. As soon as he greeted me, he took me down to his basement. There, just beyond clothes drying on a rack in the boiler room, were his seedlings, hundreds of them, growing under lights - vegetables, herbs, and flowers - most for his own garden, but some for his friends, too.

The near miracle of the growth of seeds, with their promise of beauty, nutrition and pleasant activity for the rest of the year, brings the same excitement to this well-to-do 70 year-old as it



Plant some seeds for your health, pleasure and sanity.

does to the fifth-graders from Bridgeport. This excitement has been shared by gardeners throughout history, all over the Earth.

Since tax time is near, it may be useful to point out that, like the heat the sun delivers to our south windows in winter and the air conditioning that trees provide in the summer, food from our gardens is really tax-free income. When we do for our lives and for our families, we receive full value for our labor, we avoid the costs of subsidies and regulations which have become such a large part of everything else we do.

Doing more for ourselves and our community is consistent with what, more and more each day, seems like our only hope: to withdraw money and power as smoothly and quickly as possible from Washington and Wall Street, to shrink the political and financial bureaucracies which have ballooned to fill the space between us and the real world.

Get your hands into the soil this weekend. Plant some seeds for your health, pleasure and sanity.

Living on the Earth: Eclectic Essays for a Sustainable and Joyful Future includes essays from the first three of the ten years that Living on the Earth essays were aired weekly on public radio from Fairfield, CT. The essays were written by Bill Duesing and edited by Suzanne Duesing. Bill and Suzanne operate Old Solar Farm in Oxford, CT where they produce organic vegetables, fruits and poultry. The book is available for \$10 plus \$3 S&H from Solar Farm Education, Box 135, Stevenson, CT 06491.

NON-DAIRY LIVESTOCK

The Tale of the Tunis - Sheep Once Rare Now in Demand

By Martha Herbert Izzi

It is difficult to be objective when you're in love. And I confess to have fallen in love with the Tunis sheep breed nearly twenty-five years ago. A time when few people could identify those beautiful copper red-faced, red legged, creamy wool creatures with pendulous ears in our barn who gave new meaning to good mothering and docile temperaments. Their gorgeous almost-chocolate fleeced-lambs, born with a double coat of red fibre, look almost like teddy bears at birth, sometimes with a white spot on the forehead and on the tip of the tail. For the most part they find their way into this world unassisted, healthy and vigorous even in the Vermont January lambing season.

The Tunis are also known to breed out of season and I can attest to having lambed in June and July on a few cycles. This is a bonus for producers whose markets are New York and Boston restaurants where lamb is in high demand in the fall. Ewes most commonly have twins, but there were more than a few occasions when mom had triplets and one time in the coldest winter I can remember, 2004, that "Pumpkin" produced quads in the middle of the night when the thermometer registered - 20 below zero F. Sadly we could not save the lambs.

The Tunis are among our oldest sheep breed having been introduced in this country around 1799 as a gift to George Washington from the ruler of Tunisia, the Bey of Tunis, a North African country most recently in the world news. They date back to biblical times and were commonly known as "fat-tailed" also "broad-tailed" and "Barbary" Sheep who could be found on the John Adams farm in Braintree, Mass and at Thomas Jefferson's Monticello in Virginia among others. Over time they were crossbred with other European breeds which resulted in our uniquely American sheep breed.

Jefferson was known to prefer the Tunis over his Merinos principally for their wool attributes and meat quality. In the end, however, the Merinos took national honors in the fine-wool category and the Tunis became known as a meat breed confined largely to Eastern seaboard farms. According to the American Livestock Breeds Conservancy the "Tunis were a mainstay of sheep production in the upper South and mid Atlantic regions until the Civil War."



Ben Machin of Tamarack Tunis in Corinth, VT

Photo by Elizabeth Ferry

When all of the southern stock was decimated due to the military's high meat demand, the Tunis became nearly extinct. Whatever flocks were left found their way to the Great Lakes Region and New England. The American Livestock Breeds Conservancy lists the Tunis on their "Watch" list as a rare breed. But that could change. The National Tunis Sheep Registry reported in 2010 that the Tunis have surpassed 1000 lamb registrations per year "attesting to the breed's wider acceptance and growing popularity."

One of those producers is Douglas Heaversides of Stonewood Pastures in White River Junction, Vermont who has raised sheep for thirty five years (along with Saanen goats, cows, pigs, Morgan horses and assorted fowl) "I have owned just about every known sheep breed and Tunis tops the list." Why? "Because of their sweet temperaments, mothering qualities and mild-tasting meat. They do well on grass and there is little fat in the meat, it's tender and my customers love it too."

Interesting that this hardy breed is long lived and thrives in the heat and humidity of the south and the cold of the north. From long and personal experience I can never remember a time



Grace Bowmer of Tamarack Tunis in Corinth, VT



Amy Davenport of Otterknoll Farm in Wallingford, VT

Photo by Christine Davenport

Tunis from 23

when my Tunis stayed in the barn even during the worst of snow and cold weather.

When I visited Heaversides on a very cold, single-digit day in February, all of the ewes were out in the snow eating from a round bale guarded closely by the Tunis ram. Doug's flock is of the "old style" Tunis size and composition."

This is an important issue in the Tunis community and one that is causing a lot of concern among those of us who resist the idea that the Tunis should be larger for show judging and meat-selling purposes. The original Tunis genetics that have given us a multi-purpose, heavy-milking, medium-sized animal with the excellent qualities and ease of lambing are being compromised to varying degrees resulting in ever-increasing Tunis sizes and some worrying attendant problems.

Otterknoll Farm producers Amy, Jennifer and mother, Chris Davenport of Wallingford, Vermont are registered Tunis owners with a high regard for the breed. They also have Oxfords and Columbias among their stock. Though Amy shows Tunis the family does not support attempts to enlarge the animal. Chris says that she has seen problems with pasterns "almost to the ground" and thin legs among some flocks at shows. The Davenports have left dairying behind, having sold their herd and are confining their efforts to sheep, with Amy saying "there is more money in sheep than there is in dairy." Something I never imagined hearing. But the shortage of local lamb is acute just as the demand is growing and prices to shepherds are climbing.

One of the larger Tunis herds in Vermont numbering close to 200 ewes is to be found at Tamarack Tunis in Corinth, where owners Ben Machin and Grace Bowmer raise strictly grass-fed Tunis organically and freezer-packaged lamb for local markets as well as breeding stock and some wool products (made from the Tunis fleece blended with the wool of a couple of Navaho Churros.) But overall Machin's primary goal and market rests in meat sales.

Ben is a fourth generation Tunis producer with a strong interest in preserving the old genetics of these "just wonderful animals." His is the "oldest continuously managed Tunis flock in the country" which was started in the early nineteen twenties by his great grandfather. "Most of the Tunis people in the northeast have stock from my family." He is concerned about the alterations that he has seen in some animals, but he does not show and has no problems with legs or pasterns in his flock because he fiercely protects the old-style genetics.

Publicity about Machin's animals is largely word-of-mouth but he and Bowmer have developed a website (www.tamaracktunis.com) to chronicle the Tunis development and their products for sale. As with the Davenports and Doug Heaversides,

Machin is "getting quite a few calls from people who want to get into them." About half the flock is registered and he spends quite a bit of time, networking with the registry (NTSR) trying to find old style flocks in the country.

He has a partnership with the Swiss Village Foundation in Newport, Rhode Island who write on their website that "the partnership emphasizes several important goals: to preserve the planet's biodiversity through conservation of endangered breeds, to practice stewardship of the environment through

sustainable farming and to offer consumers alternatives by way of supporting a niche market." Swiss Village stresses the Tunis' "high resistance to disease."

Fancy Meats from Vermont, Manager, Lydia Ratcliff, who represents a Vermont cooperative selling lamb and other meat products to high-end New York and Boston restaurants, says "Tunis are on our short list of superior breeds. There are not many high-quality meat breeds, for reliably high quality. Tunis is definitely on that list."

For those readers who are wondering why I no longer have my beloved Tunis sheep, or other ruminants, stay tuned. As soon as I can move back to my farm in Vermont permanently in the spring, I will be on the "buy list" looking for "old-style" Tunis with the intent to sell breeding stock. That is if I can ever part with them.

Martha Herbert Izzi is the owner of Bel Lana Farm in Shrewsbury, Vermont. She may be reached at 802-236-3744 or mhizzi@yahoo.com.



Tunis twins in hutch at Otterknoll Farm

Photo by Christine Davenport

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