

**WINTER 2013**

# **SMALL FARM QUARTERLY**

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



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Cover photo:  
Newborn calf at Devon Point Farm in Woodstock, CT.

Photo by John Suscovich

## 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.

Small Farm Quarterly is produced by Lee Publications, Inc., and is distributed four times a year as a special section of *Country Folks*. Volume 10 publication dates: January 14th, April 1st, July 1st and October 7th, 2013.

### EDITORIAL TEAM:

• Violet Stone, Cornell Small Farms Program	Managing Editor	607-255-9227
• Anu Rangarajan, Cornell Small Farms Program	Editor in Chief	607-255-1780
• Laura Biasillo, Broome County CCE	New Farmers	607-584-5007
• Jamila Walida Simon, NYS 4-H Youth Development Program	Youth Pages	607-255-0287
• Sam Anderson	Livestock	978-654-6745
• Martha Herbert Izzi, Vermont Farmer	New England Correspondent	802-492-3346
• Betsy Lamb, CCE Integrated Pest Management Program	Horticulture	607-254-8800
• John Thurgood, USDA-Natural Resources Conservation Service-Vermont	Stewardship and Nature	802-865-7895
• Nancy Glazier, Northwest NY Dairy, Livestock and Field Crops Team	Grazing	315-536-5123
• Jill Swenson, Swenson Book Development	Community and World	607-539-3278
• Jason Foscolo, Esq.	Policy Corner	631-903-5055
• Valerie Walthert, Farmer	Local Foods & Marketing	

### FOR SUBSCRIPTION INFORMATION CONTACT

Tracy Crouse, Lee Publications, Inc., PO Box 121, Palatine Bridge, NY 13428  
888-596-5329 subscriptions@leepub.com

### FOR ADVERTISING INFORMATION CONTACT:

Laura Clary, Lee Publications, Inc., 518-673-0118 or 800-218-5586, ext. 118  
or lclary@leepub.com

### SEND YOUR LETTERS AND STORIES TO:

Cornell Small Farms Program  
15A Plant Science Building, Cornell University, Ithaca, NY, 14853  
607-255-9227 • vws7@cornell.edu

"Small Farm Quarterly is for farmers and farm families — including spouses and children — who value the quality of life that smaller farms provide." It is compiled by the Cornell Small Farms Program, based at Cornell University in Ithaca, NY. The Cornell Small Farms Program fosters the sustainability of diverse, thriving small farms that contribute to food security, healthy rural communities, and the environment. We do this by encouraging small farms-focused research and extension programs.

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# Cornell Small Farms Program Update

## Top 8 Priorities for Small Farm Investment

You might recall on February 29th of 2012, the Cornell Small Farms Program teamed up with Cornell Cooperative Extension to host the 2012 Small Farms Summit. This statewide meeting provided a venue for small farm supporters to gather and prioritize opportunities to increase the health and vitality of the small farm sector. After a lengthy process combing through responses, we have now published the recommendations. Download the report at <http://small-farms.cornell.edu/projects/summit/> We encourage you to print a copy to bring to a town hall meeting, a producer group, or a legislator. Choose a 'recommended action' that inspires you, or generate your own creative approach to addressing a priority area. Start building collaborations that can tackle the complexity of the issue. Cite the report as justification when applying for funding to support your project. Stay in touch. We'd like to share any outcomes of your work.

## From Grazing to Goat Marketing, New Grant Program Generates Resources

The Cornell Small Farms Program is pleased to announce a variety of excellent new resources generated from project recipients of the 2012 "Small Farm Grants Program." This program offers up to \$5000 per year to organizations in New York that present compelling projects to serve and support small farms. This year, four projects were funded. They include 1) A new series of 12 "How-to-Graze" videos 2) A study assessing small farmers' success selling to distributors 3) An initiative to expand "Work-place CSA's" and 4) a makeover to [www.sheepgoatmarketing.info](http://www.sheepgoatmarketing.info), a website that connects sheep and goat producers to markets. An additional project to support a small dairy field day series during Summer, 2012 was also funded. Detailed reports reflecting project successes and lessons learned, as well as additional educational materials for any of the initiatives,

are available at <http://smallfarms.cornell.edu/projects/grants/>

## Two Farm Financial Management Online Courses Offered January 2013

The old joke goes, "Know how to make a small fortune in farming? Start with a large one." For many farmers this hits too close to home to be funny. Whether you're just getting started or have been farming for a while, the Cornell Small Farms Program is offering two online courses this January to give you the confidence and tools to take control of your farm finances.

BF 104: Financial Recordkeeping is an introductory course designed for those who don't yet have well-established systems for tracking farm financial records. It will help you learn what records to keep, how to set up a system in either Excel or Quickbooks, and how to generate and analyze financial reports to get a picture of your farm's financial health. BF 104 starts Jan. 14, 2013. More info is available at <http://nebeginningfarmers.org/online-courses/all-courses/bf-104-financial-records/>

BF 203: Holistic Financial Planning goes beyond the basics for farmers who already have some financial records but want to increase the profitability of their operations. You will learn how to prioritize your investments in the farm, analyze and compare enterprises, and make your farm work for you. BF 203 starts Jan. 22, 2013. More info is available at <http://nebeginningfarmers.org/online-courses/all-courses/bf-104-financial-records/>

These 6-week courses include weekly live webinars featuring interactions with successful farmers and ag professionals, as well as readings, discussion forums, and homework assignments. Those who successfully complete a course receive a certificate from the Northeast Beginning Farmer Project. Course registration is \$200, which will easily pay for itself in the knowledge you gain about how to

manage your farm's finances well. Don't hesitate - courses often fill quickly, and registration is only open until the course fills or one week before the start date, whichever

er happens first. So visit <http://nebeginningfarmers.org/online-courses> today and check out your options for learning some new farming skills online this Winter.

## Message from the Managing Editor

Happy New Year! I hope many of you are getting some rest and enjoying looking through seed catalogues or planning for new infrastructure. With so much extreme weather the past two years (flooding followed by spring temperature fluctuation and then summer drought), now is the time to think through your farm systems and consider expanding the size of the pond or choosing more resistant crops.

Recently some farmer friends came over for dinner, and I was asking them how they fared with the lack of rain this past growing season. Their pond had run dry, but late enough in the harvest that their vegetable crops sailed through. In fact, they said it was their best season yet. I'm reassured, that despite the volatile weather patterns, farmers are finding ways to adapt and continue to prosper.

Even if you're not an animal farmer, I encourage you to read "A Four Dollar Grazing Chart" by Troy Bishopp. He

describes making it through the summer drought with very careful advanced planning and consideration of any "what if" scenario that might arise. He writes "For me, this visual chart reduced stress by constantly informing me of conditions on the ground to form battle plans weeks ahead of when I actually needed to speed up or slow down the rotation." All of us could benefit from such planning, no matter what our enterprise.



Violet Stone

As always, we love to hear from you. Drop us a line anytime!

Best wishes,

Violet

## BUSINESS MANAGEMENT

### Four Reasons to Take a Farm Business Class

by Jessie Schmidt

As the outdoor growing season winds down, the notices about upcoming classes, courses, workshops and conferences for farmers start filling email inboxes. Sometimes it's easy to see the value of these learning opportunities. You experienced a problem this season with soil management or pest control and a workshop appears that addresses the issue. However many classes and courses require a bigger investment of your time and focus on the aspects of your farm that are usually put in the low urgency category—planning, analysis, assessing values and goals, and the other big picture items. Of course many of us tend to focus on the high urgency categories of our operations—that 'putting out fires' mentality is hard to escape when you are managing a highly complex biological system known as a farm.

So is it worth the time to take a class this winter? Can a class really make a difference in the development and success of your farm? Here are four reasons why taking a farm business class is a good investment in the future of your farm.

1. **Proof is in the Planning** - Whether you have a great farm business idea, or want to grow or change your current farm, good planning pays off. Getting clear on your goals and values, thinking through your strengths and weaknesses, making sense of the market place and how your plans translate into dollars is an investment of time and paper. Paper is cheap; time... maybe not so much. But wasting paper and time on an unproven idea is less risky than wasting money and time. Classes give you the opportunity to discover mistaken assumptions and fully vet your plan, so you have confidence when you



Seth Wilner teaching a business planning course offered through University of Vermont's New Farmer Project.

Photo by Jessie Schmidt

do put your money on the line.

2. **Money Matters** - Like it or not, farms require money to operate. They might need a little or a lot, depending on scale and markets, but having access to capital to start and run your farm business is a key to its success. Farm business classes help you understand how much income your farm can generate, how much capital you will need to keep your farm humming, how to evaluate where you should invest your money on the farm (land? fencing? greenhouses? marketing?), and how to understand farm finances so you can make smart business decisions.

3. **Gaining Focus off the Farm** - Farms, like any business, take a lot of time and energy to start and maintain. It's easy to get caught up in the day-to-day details and forget about the big picture. Farm business classes give you the time to concentrate on your whole business and access to experts who can offer input where you need it the most.

See Reasons page 4

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**LIVESTOCK & POULTRY****The Finances for a Small Organic Broiler Flock**

by Mark Cannella

The expansion of production and markets for regional or locally produced poultry products is hot. Recent state processing exemptions that allow small farms to conduct business has opened the door for many small start-ups or add-on poultry enterprises to enter the marketplace. In Vermont, there are many farms now operating through a 1,000 or less bird exemption. This regulation allows farms to produce and sell broiler chickens through certain market channels without requiring the birds to be processed in a state or federally inspected facility. What are the business prospects for a farm seeking to sell up to 1,000 organic broilers? Are these farms viable stand-alone businesses or are they better left as add-on enterprises to an existing farm? Spend enough time with any farm business adviser and you get the standard yet thoughtful response, "It depends." It certainly does depend on a number of factors, but the UVM Extension Farm Viability program set out in summer 2012 to develop basic poultry budgets to get a better answer. We reviewed finances with several farmers, reviewed older studies and vetted the template with agricultural specialists to develop an "average farm" financial projection for an organic 1,000 bird operation. The conclusion is that it still depends...but at least now we can tell you how much it depends on and what to be watching out for.

Summary Financial Table for Year One: 1,000 Broilers		
	FARM A (stand alone)	FARM B (add-on enterprise)
Cash Receipts	\$22,266	\$22,266
(-)Feed Purchased	\$5,900	\$5,900
(-)Processing	\$3,500	\$3,500
(-)Other Variable Expenses	\$3,300	\$1,800
(-)Fixed Expenses	\$2,450	\$2,450
(-)Capital Expenses	\$2,000	\$2,000
Net Cash Income	\$5,116	\$6,616

**Summary Financial Table for Year One: 1,000 Broilers**

Financial performance for year one of an organic 1,000 bird operation showed a range of net cash income ranging from around \$5,116 for a stand-alone operation (FARM A) to near \$6,616 net cash income for an operation embedded into an existing business (FARM B). This net cash income describes real cash left in the owner's pocket for an "owner draw" or for "profits to be re-invested" in the business. This is both the paycheck for your labor and the profit (the return for your investment or risk). We did not include real estate payments or rental rates in this budget, so that is an additional

item that might come from this net cash income. This is not to be confused with an "enterprise analysis" which takes certain steps to pro-rate non-cash factors (like depreciation that estimates an annual expense for an item that has more than a one year lifespan). Our model is a cash in - cash out model. In either case: a \$5,116 cash payout or \$6,616 cash payout, we can conclude that this is a very part time occupation. This is an important realization for smaller producers who are currently selling 300-500 birds per year. Even if you have found a way to earn a small income now, we can say with certainty that expansion of the broiler operation to the 1,000 bird threshold in Vermont will not get you that much closer to achieving the full-time farm income that many people aspire to. Since this model assumes this is the first year, we have included the set-up of poultry housing into this budget as a one-time expense that won't necessarily re-occur in year two. We expect cash based performance will improve in year two for this reason.

Loss Factor	5% or 50 birds
Live Weight	6.25 pounds
Finish Weight	4.68 pounds
Sale Price	\$5.00 per pound
Processing Cost	\$3.50 per bird
Housing and Multi-Year Supplies (capital expense)	\$2,000

**Key Assumptions**

Conversation with several managers came to the same conclusion as our budget: a poultry set-up of this size can be a very nice complement to an existing business. Looking at an example of a vegetable farm (FARM B) with a CSA membership base and a slot at a farmer's market, it is easy to see that much of the marketing expenses are already covered. Customer recruitment is covered, delivery vehicles or on-farm pick up investments are already made, websites are in place and the farm records systems are set up to track sales. The obvious question emerges for the stand alone business (FARM A). If FARM B is going to net \$6,616 with all these potential expenses already covered by the base business, how much is it going to take in cash expenses, investments and owner labor to execute the marketing plan for 1,000 broilers? There is nothing wrong with a part time farm income as long as that is all you are expecting. It's also important to factor how many hours you should realistically invest in this part time business, especially since you'll need to

devote time earning money elsewhere.

We also know that for FARM B the owner could use labor already present on the farm. It is true that a full analysis would quantify this borrowed labor as a real cost (or opportunity cost in economic-speak) but the gut reaction from the owners we spoke to revealed that they had naturally occurring down time for crews that meant labor could be easily borrowed. The stand-alone business will not have this resource. That means that the owner of FARM A might require a higher payout that reflects the extra labor he/she needs to contribute.

Now for the major considerations: operating capital, processing costs, feed price and the price of your product in the market place. These items have the largest potential to impact the financial performance of this enterprise. First off is start-up capital or cash. It is going to take about \$15,000 in expenses over the whole year to run this. If we assume two batches it is fair to think you'll need \$8,000 - \$9,000 to get the first batch to a sellable form. More batches will ease up the cash flow pressure by reducing the needed cash to start each batch. Plan accordingly. Start saving now, locate a source of cash or consider if pre-selling birds fits into your business plan. Just know that we can make cases for and against each source of cash. Make a plan that fits best for you.

Our budget used a cost of \$3.50 per bird for processing. This reflected a mix of real-world responses from people who paid up to \$5.00 per bird or as low as \$2.00 per bird when excess labor was available. Basic 4math tells us that if the processing cost went from \$3.50 to \$5.00 per bird, then our projected net income of is reduced by \$1,425 (we figure only 950 birds survive to processing). Consider your access to processing or what it will cost you to do the job.



50 bird pens Photo by Mark Cannella



Mobile Pens at City Chicks Farm, Burlington, Vermont

Photo by Nicole Dehne

Price points stand to have a significant impact on net cash income for this operation. Under our research, this operation gets 950 birds to slaughter with an average finish weight of 4.68 pounds each. That's 4,453 pounds of meat. Every change of \$0.25 per pound in price results in a swing of \$1,113 up or down in net cash income. Prices under \$4.00 in 2012 would result in a loss of money for the farms we studied. Price points matter, so make sure you revisit this often.

Now for the last number to write down, the impact of a change in feed price. For every increase of \$100 per ton of feed (\$2.50 per bag) your cost per pound of finished meat increases by about \$0.20 per pound. Remember this calculation when you adjust your pricing for new feed prices in 2013. At \$0.20 per pound, that hits net income with a decrease of ~\$890 per year if you don't adjust your prices. That's real money!

I know that many of you are thinking these numbers don't match your specific operation. That is why "it depends." Estimates are just that, estimates... until you run the business and collect your own actual financials for the year. This budget model is built as a starting point for planning. You should take these templates and adjust them to reflect the reality for your business. To download details on this poultry budget and other farm business planning resources you can visit the UVM Extension Farm Viability website at: <http://www.uvm.edu/extension/agriculture/?Page=farmviability.html>

Mark Cannella is a farm business management specialist for UVM Extension and director of the UVM Extension Farm Viability business planning program.

**Reasons from page 3****Where to Take a Farm Business Class**

UVM Extension New Farmer Project - Classes focused on farm business development at locations across the state and also online for out-of-state participants. <http://www.uvm.edu/newfarmer>

Northeast Beginning Farmer Project - Many online classes, many with a production focus, for beginning farmers. <http://nebeginningfarmers.org/>

Holistic Management International - Offering whole farm planning courses for beginning women farmers throughout New England. <http://www.holisticmanagement.org> (search "Whole Farm Planning for Beginning Women Farmers")

4. **Networking for New Opportunities** - Ag based businesses can be isolating. Classes provide a rich environment for collaboration and support from other farmers, service providers and technical experts. By building these networks you are investing in the social infrastructure that you can rely on throughout your farm's development.

So as you think about your plans for this winter, consider how a farm business class might support your farm's success. Many classes are offered online to accommodate your schedule and location, or you can search for an in-person class with the organizations on left.

Jessie Schmidt is the Coordinator for Community & Agriculture Programs at UVM Extension and may be reached at [newfarmer@uvm.edu](mailto:newfarmer@uvm.edu) or 802-223-2389 x203.

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**COMMUNITY/WORLD****The Cheney Letters: The Night the Willys Went Skinny-Dipping**

**78 year old Vermont farmer shares memoirs with Lindsay Debach, daughter of a Pennsylvania-based butcher, after reading her Small Farm Quarterly piece "Slaughter Daughter"**

by Stewart Cheney

**Introduction:**

*In late February of 2012 I received a letter bearing the name of Stuart Cheney. A native of Brattleboro, Vermont, Stuart wrote to tell me that he enjoyed my memoir piece "Slaughter Daughter" featured in the Winter, 2012 issue of this magazine. I was flattered and surprised to receive such a heartfelt message, especially in the increasingly rare form of a hand-written letter. In the months that followed, Stuart and I became pen-pals. Nearly every week, I received a carefully addressed stamped envelope from him, each containing a new tale about Stuart's life. Over the next few issues, please enjoy some segments of what I tenderly refer to as "The Cheney Letters." I hope you are as blessed by these authentic recollections of Vermont farm life as I have been.*

~Lindsay Debach

I have a first cousin named Buddy. He lives in Roadsboro, Vermont and most every year Bud comes over to my house for a few weeks visit, and I go over to his house for a week in the summer. Well, my father had found me a nice car that belonged to a lady who worked at the furniture shop with him.

He knew she kept the car and didn't drive it. So, Dad asked the lady about it to see if he could buy it for me. She told him it was in a garage, and she wasn't going to drive it anymore because she didn't like driving, and she had moved to town and only lived a short distance from the plant.

Well she brought my father up to look at it. It was a black Willys coup - the same thing as an Army jeep only it had a steel cab instead of canvas. It was cherry and Dad bought it for \$100 and said I could have it as soon as I could come up with a hundred bucks. Well, I scrounged and raised the hundred bucks and got it registered, went down and put the plates on it, and brought it home. This was a real beauty, not a scratch on it, and it took a marvelous shine when you put the car wax and some elbow grease to it.

I had it about a month, when Buddy came over to stay for a few days. It was a hot summer evening in August and I suggested we drive to town and pick up a quart of orange soda, and we would share it - so we did. By the time we got there and bought the soda and had a few swigs, it became about dark and we headed home. Bud began talking about how his father had been letting him

drive his car so when he was 16 he would know how and could get his license. (There was no driver training back then.) So, I got it in my head, as I was his older cousin, that I probably should let him drive as soon as we got back on the dirt road. (Dumb thought, Buddy was born a wheeler-dealer and nobody knew that any better than I.) I certainly should have known better. Anyway, when we got to Greenland Bend on the way home there is a turn out, and I pulled over, stopped the car and said, "Do you want to drive?" Of course, he said, "Sure," so we polished off the soda, tossed the bottle on the back seat. I got out and he slid over. And, I got in on the other side. He got the old girl fired up and away we went.

Greenland Bend is a challenge even for a snake, and I soon realized he's been giving me a line of bull. He didn't know beans about driving but we finally got around all those corners. Then you drop down off the main road onto the Bonnyvale Road and across an old wooden bridge on which there is three planks on each side where your wheels are supposed to be. We were only chugging along in 2nd gear, but Bud missed the plank. He's way to the right. I reached over and grabbed the wheel to try to correct the problem, but too little too late. Leaning against the bridge is an old elm tree and we ended up hitting the tree with the right front fender...CRUNCH!

Well, the old girl hit the tree and those old bumpers had some spring in them, and we bounced back a few inches. The car sat there and kind of teetered a bit, then the back wheel slid over, and the car teetered some more. Next thing I knew, we were in the water upside down - 14 feet straight down. Thank God there wasn't much water in the brook. The lights were still on. I said, "Bud, go shut the lights off," and he did.

We stood on the bank for a minute. My heart was broke. My Willys had a busted windshield and a crushed roof, and a big hole in the radiator. There's a house about 150 yards up on the bank, and somebody hollered down,

"You boys alright?"



**The Willys was a line of automobiles produced by Willys-Overland Motors from 1937 to 1942.**

"Yup," I answered. "I'll call my father."

"I already did," he hollered back. How in the world did he know who we were? It was pitch black. I still don't have the answer to that question.

Well, Dad came down with his car and a few men gathered around. We tipped the car over and Dad took us home and harnessed up the ole horses Dick and Bub and I rode them down. Dick pulled the car out for us and dragged it all the way home (2 miles).

We dragged the car out behind the barn. I tinkered on it for a while and got it running the next summer. I was logging up to Halifax, and I drove it every day, but the radiator leaked so I had to put 5 gallons of water in to get up there and 5 more to get back. I would never be able to get the car inspected again.

Nothing was ever said about what happened or why. Case closed.

*Stuart Cheney grew up on a 145 acre diversified farm near Brattleboro, VT. He resides on the farm in a small 5 room house built by his grandfather in 1940.*

To read Lindsay Debach's story, "Slaughter Daughter", which inspired the Cheney-Debach correspondence, see <http://small-farms.cornell.edu/quarterly/archive-2/winter-2012/>

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## TECHNOLOGY ON THE FARM

# Farm Hack: A Community for Farm Innovation

by Kristen Loria

Started in 2011 by a team of farmers and engineers from the Northeast, Farm Hack is a project of the National Young Farmers' Coalition in partnership with the Greenhorns. The start of Farm Hack came with an offer from MIT to host a teaching event that could connect 'do-gooder' engineers with farmer's needs. Co-founders of NYFC, Severine Fleming and Ben Shute had been working to start up a blog for a project called "Farm Hack" and they jumped on the opportunity to launch a program at the world famous engineering school. Farm Hack has since evolved into a living open-source community for farmer-driven design collaboration.

And so it began... attendees of that first event were inspired to come to the second event; farmers, computer programmers, electrical designers, and organizers gathered again in New Hampshire to work on mapping out the website, the forums, and the methodology of our events, and building a strategic plan for the community. Now, a year later, they have been joined by core members of the community: Dorn Cox of Tuckaway Farms in NH, Rob Rock of Pitchfork Farm in VT, RJ Steinert, Drupal developer, Andy Wekin of Pedal Power, Chris Yoder of Van Gardens CSA and a few others are holding strong and working to develop more and better programming. We have now had 7 'Farm Hack' gatherings across the Northeast and are starting to branch out into other formats, both online and in person.

### Why Farm Hack?

Farmers have long been tinkering, designing and building farm technology on their farms and sharing it with neighbors. However, with the rise of industrial agriculture, the culture of on-farm tinkering, resourcefulness and scrappy adaptation was replaced with expensive, high-tech farm machinery. The goal of Farm Hack is to rejuvenate the historically rich culture of on-farm innovation, sharing and collaborative design and move it forward in support of a more resilient agricultural system.

This is particularly important for today's startup farmers, many of who are not employing laborers, are repairing older equipment, are running diversified farms, and trying to stay as cost competitive as they can with the global economy. It makes business sense to adapt new labor-saving devices, and particularly ones that aren't too expensive to hack together. Acquiring the skills to build, repair and adapt is a great asset to all farmers, and a growing strength of many in the young farmers movement. Farm Hack facilitates collaboration between advanced designers and old-timer fabricator neighbors, educating beginning farm-shop users, and connecting everyone involved in the goal of the project.

### What is a "Farm Hack" Exactly?

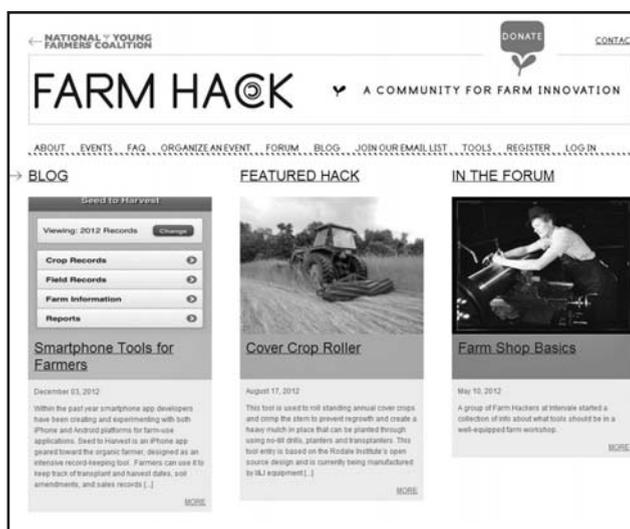
A 'Farm Hack' is a gathering to build community, in-person and online. Today's farmers rely on 21st century technology as well as the old fashioned method of conversation to learn what it takes to farm profitably and sustainably. Farm Hack follows this logic through discussion, demonstration, "show and tells" at in-person events as well as through an online wiki and forum at farmhack.net. Through this accessible platform, we can include and support a community of not just farmers, but software developers, engineers, architects,

machinists and backyard tinkerers that are able to pool their knowledge and resources and communicate and coordinate through online and physical meeting spaces.

Farm Hackers meet at regional Farm Hack events, discuss a new tool idea or adaptation, and draw up the beginnings of a design schematic and build plan. After continuing research, discussion and documentation through the online platform, collaborators can meet up once again to complete the build in those calmer winter months, testing the design, making alterations and finalizing the tool by spring.

Along with all of the hard thinking and productivity, Farm Hacks always wind down with good food and good drink. This is an important ingredient, that the engineers and other, non-farm team mates understand clearly that this work isn't about high pay per hour invested, instead that it is about satisfying relationships, delicious food, resiliency, network-building, and collaboration.

To date, Farm Hack has hosted 8 events in the Northeast and the Midwest: Farm Hack MIT, Rhode Island School of Design, SUNY-ESF, New Hampshire, Iowa City, Essex NY/Intervale VT, Ithaca NY (with the Groundswell Center), and Brooklyn/Queens. For all Farm Hacks, we partner with local universities or non-profits as well as local farms and farmers. In keeping with the scrappy grassroots spirit of the Greenhorns and National Young Farmer's Coalition, these partnerships ensure that each particular Farm Hack event is shaped by the needs of the that community, as well as its strengths.



### Farm Hack online platform

For Farm Hack Ithaca, the Groundswell Center for Local Food and Farming was a key organizer and host of the event, and is a perfect example of the kind of partner we love to work with. They have a huge stake in young farmer viability, and have convened an amazing community of talented, experienced farmers in the area to pass on their knowledge to new farmers.

### Upcoming Hacks

Farm Hacks on the docket for 2013: Farm Hack Davis, California in early February will focus again on grain production and processing, as well as equipment sharing arrangements and retrofitting. We are hosting this in partnership with NCAT and a couple of amazing farms in the Davis area. Farm Hack Detroit, Michigan will be in March 2013, and will focus on all things urban agriculture. We will be convening a great community of urban farmers and hackers to address the challenges of the flourishing farm community there. And stay tuned for a Farm Hack focused on horse technologies.

### The Online Platform

As a wiki site, Farm Hack users first make a username for the community, and introduce themselves. They then have the power to upload new designs in the Tools section, comment, edit and ask questions about other posted designs. In the Forum section, Farm Hackers can discuss various topics through conversation threads, whether it is brainstorming for an upcoming event, sharing resources for component sources,



### Flame Weeder Demonstration at Essex/Intervale

Photo by Kristen Loria

ing, or suggesting improvements to the website. Finally, the Farm Hack blog shares innovations and other news of interest to the Farm Hack community. The Farm Hack site is still young, and we have many plans for expanding and improving functionality in the coming year.

### FIDO: a Farm Hack Success Story

One Farm Hack success story is FIDO, a farmer-built electronic tool that can monitor greenhouse temperature, record greenhouse data, and alert the farmer to problems in the greenhouse via cell phone text message. FIDO is a project of Ben Shute (Hearty Roots Community Farm) and computer programmers Louis Thiery and RJ Steinert. The three met at Farm Hack NH, and came together over an idea for an automated arduino greenhouse monitor. Shute came to the event looking for a way to monitor greenhouse temperature and other conditions in a greenhouse located miles from his farm, and without the phone or internet connection usually required by such monitors. Thiery and Steinert proposed the arduino solution, and after continuing their research after the event, the three met up at Shute's farm to do a test run of the build. The three also applied for and received a SARE research grant from the USDA to develop the tool. Shute now uses the monitor in his greenhouse operations, and the full documentation is posted on farmhack.net. Thiery is in the process of developing pre-made greenhouse monitors to sell to farmers, with the help of a Kickstarter grant.

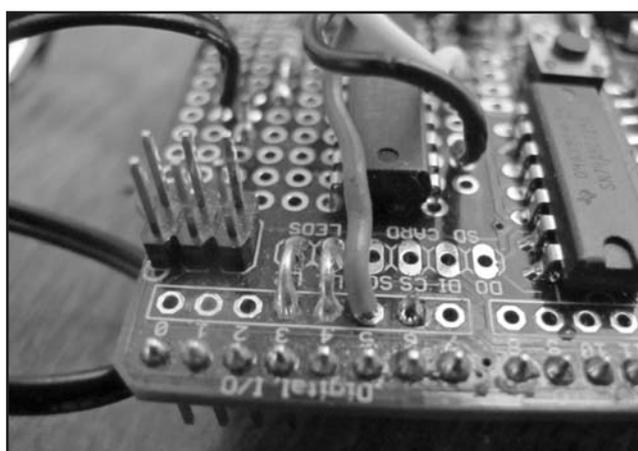
### The Future of Farm Hack

With the Farm Hack project, we hope to provide the spark and the structure for independent collaborative communities to develop and sustain at the local and regional level, while maintaining an online connection to a nationwide community of farm hackers. As with the tools that we prototype, adapt and document, Farm Hack itself is an open-source, evolving concept and framework. After each Farm Hack, we learn a bit more about how we can best facilitate the community and improve the process of design, documentation and dissemination.

This winter, we hope to buckle down on our projects, using the lull of cold weather to wrap up loose ends, return to the bright ideas brainstormed through the season, and document, document, document. Though Farm Hack is still a young community, we have a big vision for expanding the functionality of farmhack.net, growing our network of farm hackers, connecting farmers to seed money to develop and document their innovation ideas, and forming documentation fellows to preserve and share the vast number of tools, old and new, already in existence that can be of use to small farmers.

Find out more on past events, future events, and jump into the Farm Hack community at [www.farmhack.net](http://www.farmhack.net).

Kristen Loria is an organizer with Farm Hack. She may be reached at 607-351-0554 or [kal52@cornell.edu](mailto:kal52@cornell.edu)



FIDO, a farmer-built electronic tool that can monitor greenhouse temperature, is a product of Farm Hack.

**GRAZING**

**Let the Cattle do the Work!**

by Eric Noel

I've been studying human behavior and personal development for over ten years now. We as humans have the amazing ability to think. No other creature known to man has this ability. This is a blessing and a curse. Especially when ego steps in. We, and everything in the universe, seek expansion and fuller expression. It's human nature, a natural law of the universe. Now, you are probably wondering where I'm going with this, and I have to tell you, I am too. Just kidding! I think.

If you apply what I just wrote to anything we do or want to accomplish we tend to get in our own way because we let our ego step in. We as people, especially in our culture and in this day and age, think we are above nature and with the application of creativity and force can out-do her. This may be the case for the near future or even mid-term, but in the end nature has its own agenda. It will prevail. Carrying out our own agenda when not in line with nature is a lot of hard work, and most times is a constant battle. Just take a look at all the crop farmers in the

heart of this country that had to deal with the drought this summer and last.

The solution and the end to the frustration and suffering is to observe what happens naturally and become part of the whole, working in sync and in symbiosis with nature. This is where high density planned grazing comes in. This form of grazing management will team up with what nature already does to repair herself and stay healthy. Planned Grazing is a component of Holistic Management. With it community dynamics in the soil are restored, maintained or increased in abundance. The water cycle is slowed down. Precipitation stays where it lands and is utilized rather than running off and taking the soil along as a partner. Since the biological community is active and pumping along the mineral break down and assimilation process is quickened.

This leads to an increased energy flow. More solar energy is converted into nutrient dense forage for cattle to become more healthy and gain weight quicker. This can all happen without too much human intervention. Even I feel that I should be doing more. It's not



Biological mowing machine set at 600,000 lbs./acre

about doing more. It's all about the timing and density of cattle per acre. Grass land in general likes higher density for short periods of time. Soil likes herd effect and trampled residual forage. The greatest increases come not from what you take, but from what you leave behind. Once these principles are understood amazing things begin to happen at ever increasing speed and abundance.

If you have ever observed cattle grazing you will know that they can balance their own diet. They know that the bulk of the energy and nutrients are in the top of the plants. They only eat more if they are left too long in a paddock or don't have enough in front of them and are allowed to back graze. All we have to do is to get the timing and density right, and they do all the work. No need for excessive hay making (or any at all depending on location) or clipping. The cattle are our best tool to manage grass land. I get credit for being a good steward, but all I do is watch cattle and move some fence around. I look for ways that the herd can do all aspects of soil regeneration, adding fertility, forage management, and seeding. You can accomplish all of these things without buying in any of them. This is what is so beautiful about this mode of management. It only has good byproducts. We don't have to pay the workers. They pay us by converting the solar energy of forages to meat and milk. So it truly is a win-win. All things increase in this system. Soil is regenerated, increasing available nutrients for higher nutrient density in forages which boosts animal health and production. This adds to the bottom line with lower costs and higher profits. Side benefits include higher soil water capacity which helps in high precipitation areas by soaking up and storing more water in the soil, and in dry climates by retaining more moisture longer for quicker recoveries

and higher forage volumes.

One of the keys that makes this system of grazing work so well is the high amount of residual forage. The goal is to leave 100% of the soil covered 100% of the time. By leaving 40-70% of the plant and allowing the cattle to trample it, this can be achieved. Most of the fertility to build the soil is coming from this plant material, not from what is coming out of the back end of the cow. As you graze in this fashion and continue to use it year after year, recovery periods for your forages go down and volumes and nutrient density go up. I have added one whole grazing cycle on my farm. You end up growing your farm vertically. Soil tilth and depth increases and you can add on more animals on the same acres without sacrificing health or production. You truly become one with the land. You can feel it expanding and growing stronger. It gives off a different energy and flow. You see it in the sward, and you see it in the animals. The cattle then in turn work harder for you. They get so well trained to the system and what they want and need that they will let you know when you are going off course or getting lazy.

Let things work on their own. Be patient. Watch the plants. Let them signal when the time is right. Don't worry about making mistakes, it's just feedback so you can make decisions and improve the next time. Grass and forages are very forgiving. Nature always wants to heal itself and expand.

We just have to let go and let it.

*Eric Noel is an organic farmer, grazing and farm planning consultant, and coach. He lives in Northern, VT with his wife and two children. He can be reached at 802-752-8731 or ericnoel@hotmail.com*



The backside of what high density grazing looks like



The resulting trampled residue, looking across a paddock



Up close look at the amount of residue left behind

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**NEW FARMERS**

**The New American Farmer**

**Groundswell Center supports immigrants who want to farm in central New York**

Are you a "New American" immigrant, with experience farming in your home country? Or do you work with refugees or other immigrants in your community who might be interested in small-scale farming?

If the answer is yes, the Groundswell Center for Local Food & Farming is looking for you. Groundswell provides hands-on training and support to beginning farmers in the Central NY region. Now, with support from the NYS Department of State (NY DOS), the Appalachian Regional Commission and Southern Tier East Regional Planning Development Board, Groundswell is developing new programs and resources especially aimed at helping immigrants to get

started in farming.

Funding for this effort comes from the "New Americans Initiative" recently launched by NY DOS. The new funding will enable Groundswell to enhance outreach, training and farm business incubation for immigrant and refugee beginning farmers.

"We are proud to be partnering with Groundswell and others to fund a program that helps newcomers skilled in agricultural production realize their entrepreneurial dreams, while strengthening the Southern Tier local agricultural economy," said Secretary of State Cesar Peralas. "Like previous waves of new Americans, these new-

comers are engines for economic growth in our state. By working with this population to fill education gaps, locate capital, and identify property suitable for agriculture projects, new Americans will increase employment opportunities in the region, and preserve the region's agricultural lands."

Beginning this spring Groundswell will offer customized training in farm business management, production and marketing, as well as personalized mentoring from experienced farmers and business advisors. For those with limited English language skills, ESL support and/or interpreters and translators will be provided. Affordable access to land, water and equipment will also be available at the Groundswell Incubator Farm, at EcoVillage in Ithaca, New York.

"This project will significantly boost our ability to train and support New American beginning farmers," says Devon Van Noble, Coordinator of Groundswell's Incubator Farm. "We've already had a number of New Americans in our beginning farmer programs, including recent immigrants from Turkey, Mexico, Japan, Myanmar, Puerto Rico (US), China and Spain." Many immigrants are able to participate fully in Groundswell's existing programs, but those with significant language barriers or cultural barriers need more customized support.

"Our goal is to foster a new generation of farmers that reflects the diversity of culture, color, and class in our region," says Rachel Firak, Groundswell's New Farmer Training Coordinator. "Support from the Appalachian Regional Commission and the NY Department of State will help us connect with immigrant communities in our area, find out who is interested in farming, and help them get started."



**Groundswell trainees receive in-depth instruction from experienced Mentor Farmers like Nathaniel Thompson of Remembrance Farm in Trumansburg, NY.**  
Photo by Joanna Green

**Getting the word out**

Groundswell is looking for help from community-based groups who work with immigrants and refugees in Broome, Chemung, Chenango, Cortland, Schuyler, Steuben, Tioga and Tompkins Counties. If you know of individuals or communities who may have an interest in farming, please contact us at 607-319-5095 or info@groundswellcenter.org.

Groundswell has a strong commitment to supporting beginning farmers from historically disadvantaged populations, including people of color, immigrants, and those with very limited economic resources, who have often been excluded from the sustainable farming and local foods movements.

*Joanna Green is Director of the Groundswell Center for Local Food & Farming. Groundswell is a collaborative initiative of the EcoVillage Center for Sustainability Education/Center for Transformative Action, serving the broader Finger Lakes and Central New York region. Groundswell's mission is to engage diverse learners and empower them with skills, knowledge and access to resources so they can build sustainable land-based livelihoods and equitable local food systems. For more information about Groundswell's beginning farmer training programs visit [www.groundswell-center.org](http://www.groundswell-center.org).*

**Groundswell New Farmer Training Programs for English Speakers**

In addition to customized training programs for New Americans who have limited English-speaking skills, the following programs will again be offered in 2013 to English-speaking beginning farmers including, but not limited to New Americans. Additional information is available online at [www.groundswellcenter.org](http://www.groundswellcenter.org).

**Sustainable Farming Certificate Program.** This 100-hour curriculum runs April-November and includes on-farm educational workshops, class-room training, supervised on-farm work experience, and an introduction to business planning.

**Farm Business Planning Course.** This 30-hour program runs January to March and provides intensive class-room training and business planning support for beginning farmers.

**Finger Lakes Collaborative Regional Alliance in Farmer Training (CRAFT).** This is a farmer-to-farmer learning network comprised of experienced Mentor Farmers, beginning farmers and farming interns. The CRAFT meets monthly for educational farm tours and social events.

**The Groundswell Farm Enterprise Incubator** provides affordable access to land, production infrastructure, equipment, support services (such as tractor tillage), and mentoring from experienced farmers, on a ten-acre site owned by EcoVillage at Ithaca. The Incubator program is now open for applications from immigrant and non-immigrant beginning farmers, and offers a low-risk low-cost entry avenue for those who do not have access to land of their own.

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**LOCAL FOODS & MARKETING****Using Photographs to Market Your Farm**

by John Suscovich

We've all heard that a picture is worth a thousand words. So, by that math, you can write a 10,000 word article about your farm in ten photographs. Wouldn't it be nice to easily show your customers just how awesome you are without having to write a novel in your "free time"?

Your average consumer today is well-connected, in the know, and eager for more information about their interests. Digital cameras and the world wide web makes it easier than ever to reach out to your customers almost instantly and, in doing so, build value into your products and your business.

With today's technology growing by leaps and bounds, the size of cameras is decreasing as fast as the quality is increasing. The other side effect of a market flooded with good cameras is that they are very affordable. You do not



**The more interesting and zany the photo, the more reaction it will elicit. This spring when we were cleaning hedgerows and burning brush I took this self-portrait in front of one of our fires. It was the most talked about photo of the farm season.**

need a four pound DSLR camera with three lenses and an elaborate tripod to capture your farm in the best light. You can take high quality photographs with your cell phone, or a camera that is not much bigger.

**Reach Your Audience Like Never Before**

Even in the world of slow food, life is still pretty fast paced. As a farmer you are constantly racing to beat the weather, catch up on record keeping, and get the tractor fixed for the hundredth time. As a consumer, you are bringing the kids to after school activities, trying to figure out what to cook with your weekly CSA vegetables, or just like farmers, doing your best to catch up with paying the bills. By sharing your farm's story with photographs you allow that consumer to digest your update quickly by scanning the pictures, or slowly by taking time with each photograph and reading the captions beneath each photograph. Photographs also save you time as a farmer by relieving you of time spent writing and editing a detailed update for your news-hungry fans.

The wonderful thing about digital photographs is that they last forever (barring any tragedy to your computer, please back-up!). Those quick snapshots you took of your CSA pick-up, your cattle in the fields, or your pumpkin patch will serve as marketing materials for years to come. You can add them to your business flier, post them on your website, add them into your newsletter, and submit them to magazines, all to draw attention to your farm.

**Make the Investment**

Marketing is as important to your farm business as putting seeds in the ground or managing your pasture. Just like planting, marketing takes a little time and a little money. Time to learn the best way to use your camera, keep your photographs organized, and time to put photographs where your

customers are going to see them. Also a little money invested in a decent camera or phone.

While the investment of time and money may hurt a little up front, it will pay off when your farm gains recognition, you have a higher customer retention for your CSA from year to year, and you can charge prices that are more fair to you because you have built value into your products through your photos.

**Camera Suggestions**

On the high end, I would go with a Canon PowerShot s100 (\$379 on [www.bhphotovideo.com](http://www.bhphotovideo.com)). I use this camera as a professional photographer when I am not carrying my clunky DSLR. On the farm, I carry it in a case on my belt behind my back. The case keeps it relatively clean, and handy to reach for grabbing quick pictures on the farm. On the low end, search 'Nikon Coolpix' on [www.bhphotovideo.com](http://www.bhphotovideo.com). Prices range from \$20-\$60 depending on special offers.

I trust B&H for all my geek equipment needs. They almost always have the best prices, and always have the best customer support and knowledgeable staff. I buy a lot from them.

**Software Suggestions**

On the high end, I use Adobe Lightroom (\$129.95 from [www.bhphotovideo.com](http://www.bhphotovideo.com), \$149 from [www.adobe.com](http://www.adobe.com)). There is a little bit of a learning curve using this software. I use it almost every day and I love it. There are a lot of free tutorials online. On the low end, I would use iPhoto for Mac (free) and Picasa for PC (free download). Each will get you up and running quickly with uploading, organizing, and sharing your photos.

**Quick Tips For Better Photographs**

**Framing.** Follow the rule of thirds. Your photograph is a rectangle. Divide that rectangle into three horizontally, then vertically. Those four dividing lines (two vertical, two horizontal) will give you four intersections. Place your subjects on one of those intersections. This can give your photograph direction as well as make it more dynamic and interesting. You want to avoid photos where the subjects head is at the bottom or middle of the picture with a million feet of head space above them.

**Interest.** You see the world from one vantage point, your own. Somewhere around 4'6" to 6' high, and at a comfortable distance. To add interest to your pictures get up close and personal, take them seated very high up (get on the roof), or very low to the ground. Looking at the world from a different perspective will give your photos interest and attract more attention.

**Lighting.** Where is the sun? Are you inside? If so, where are the light sources? Lighting is a HUGE factor in photography. When shooting indoors, beware of low-light that will blur your images. When shooting in direct sun, be aware of harsh shadows on people's face that make them less attractive.



**Having my camera handy and on my belt helped to ensure I did not miss any of the special moments on the farm. This calf was born on the other side of the farm from the farm house. I was there to help deliver and capture the moment. Our CSA members loved seeing the new calf and how it helped them connect to the farm.**



**Photos of the CSA pick-up during the bounty of the season can be used all year, and for years to come to give customers a visual of what our CSA pick-up looks like. Note: I knelt on one knee to give a different angle and compose the photo to contain the flower share, vegetable shares, farm name, and beautiful white oak barn.**

You can save a picture by asking the person to turn a little. Here's a hint, shoot the picture with them in the shade of a tree or building with their back facing a bright background. They will have even light on their face, while the background will be slightly over-exposed (too bright) bringing the focus to the persons' face.

**Keep Shooting.** Keep shooting! Good or bad, the only way you learn is to keep doing it. Your pictures might be terrible in the beginning, but learn from them. What is wrong? How can you do it better next time? Ask others for advice. The only bad picture is the one you did not take. Digital photography lets you keep shooting cheaply.

**Don't Go It Alone**

Today everyone has a camera. As a farmer, you do not have to be the only one taking photographs of your farm. More importantly, your job is to make your farm and your farm products "picture-worthy". As a farm apprentice at Devon Point Farm in Woodstock, CT, I had no trouble finding my share of photo-ops because farmers Erick & Patty Taylor invested their time and energy into making their farm neat and beautiful, and their produce healthy and bountiful. I was not the only one with a photographic eye for their farm. While I was there, they were featured in Edible Nutmeg (my photographs) and twice in Foodies of New England Magazine. Which leaves me with a phrase to share: "If you build it, they will come... with cameras."

For more information on marketing your farm please visit [www.FarmMarketingSolutions.com](http://www.FarmMarketingSolutions.com) to download your free copy of our e-book Farmers' Guide to Increasing Profits.

John Suscovich is a sustainable farmer in Connecticut and founder of <http://www.FoodCyclist.com> and <http://www.FarmMarketingSolutions.com>.



**Photos taken of summer flowers can be used to market Flower CSA shares in the winter when nothing is in bloom. Farmer Patty Taylor was standing in the shade to give an even light on her face while the background is slightly over-exposed and "blown out" to give a good depth of field.**

Photos by John Suscovich

# Small Farm Quarterly Youth Page

## Horse Connections

by Haley Claes

*The Youth Pages are written by and for young people. 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!*

When I started taking lessons at 8 years old, my instructor, Marsha Douglass, introduced us to 4-H. Mrs. Douglass had a club when her kids were young, so my family and I decid-

ed to look into it. We eventually started our own club; Horse Lovers Unlimited, with Mrs. Douglass as our leader and my mom as the Project Coordinator. Through 4-H I met many other young ladies and participated in a 4-H horse camp, a horse quiz bowl and I have done Horse Communications for seven years making it to States four times. Horse camp is held at our local fairgrounds for a week, and some kids stay the night in campers. It is open to all 4-Hers in Fulton-Montgomery Counties. Every day we have clinics with volunteer instructors and trainers. We also have guest speakers come in to teach a topic. Sometimes we have a vet talking about first aid or equine diseases. I have learned so much during these 4-H horse camps.

I have had the pleasure of having many horses throughout my life. The first horse I ever rode was an eleven year old quarter horse named Misty. When I turned eight, I decided I wanted to do more than ride around in our backyard; I wanted to show. We had another quarter horse named K.C. who was also eleven, and he was a lazy bomb-proof horse: perfect for a beginner show horse.

I was only able to show K.C. for two years because he had an infection in his coffin bone, and had continuous abscesses. 4-H horse quiz bowl helped me understand and learn about where the coffin bone was and what an abscess was. I ended up with another horse called Little Bit. I continued taking lessons from Marsha and going to horse camp and small 4-H shows like at the local fair. We didn't click very well and my mom starting riding him so I had to look for another horse for myself.

It didn't take long until we found a beautiful sorrel mare; Belle. We connected immediately.



**Haley Claes and her horse 'Missy' featured at her local 4-H Bi-County Show in 2011.**

I was about twelve when I started showing Belle in 4-H and open shows. I started boarding Belle at a local barn two years after we got her, so I could ride in the winter. After only being there for 3 weeks, one day something was wrong. Belle kept coughing and began acting different. We thought she had choked so we ended up going to the vet clinic. Belle stayed there for a week and we learned she had a tear in her esophagus. We also learned there was nothing we could do. So we had to have her put down and I will never forget that day.

It took me a while to get over losing Belle. A few months later we found Missy. I was very lucky to find another wonderful horse; she was perfect for me, again we connected immediately.

I plan to show her and ride her in our 4-H show, 4-H horse camp, local fairs and open shows. I can't wait until the show season starts.

*Haley Claes, age 16, is in the Horse Lovers Unlimited 4-H Club of Fulton and Montgomery Counties.*

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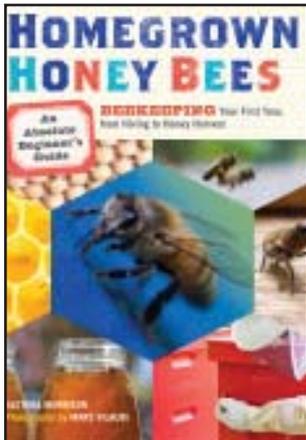
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**BOOK NOOK****The Buzz About Bees**

by Jill Swenson



It's cold outside. Steep a cup of tea and put in a teaspoon of pure, local, raw honey. Then take a sip, close your eyes, and feel that warm golden glow. Give thanks for the angels of agriculture: bees.

*Homegrown Honey Bees: Beekeeping Your First Year, from Hiving to Honey Harvest*, by Alethea Morrison is an introduction to beekeeping and a recruitment tool for a grass roots environmental

movement to protect the pollinators and savor their sweet honey.

There is a resurgence of interest in the traditions of beekeeping and an urgent need to prevent the extinction of *Apis mellifera*. Colony collapse disorder, the drastic disappearance of honey bee colonies in North America which began in late 2006, is something about which most farmers care because many agricultural crops are pollinated by bees. Apples, berries, peaches, pears, cantaloupes, cherries, cranberries, watermelons, cucumbers and soybeans are just some of the crops that honey bees pollinate.

While some attribute the problem of colony collapse disorder to mites or insect diseases, others attribute the loss of bees to pesticides, malnutrition, cell phone radiation, genetically modified crops, or environmental change-related stresses. The USDA reported in 2010 a combination of factors rather than a single cause, but to date has not developed an effective policy.

The good news is that colony collapse disorder is less common in small-scale beeyards than it is in large-scale commercial operations. If you are a small scale farmer, now is a great time to take up beekeeping and help protect our future as farmers.

I've always been a bit nervous about the whole idea of keeping bees. I've spent half a century avoiding getting stung. But who doesn't like honey? Bees aren't naturally inclined to sting like yellow jackets; which are actually in the wasp fam-

**Bees at work.**

ily and not bees at all. I started to relax when I learned African Honeybees aren't even honey bees but undomesticated swarms. They're the wild pigs who give pork the slur of swine in the insect world. Just like certain meat animals, bees are bred for their tendency to be less defensive and less likely to sting. This genetic trait in bees is known as gentleness. Like rounding up cows to head to the milk house, beekeepers use a smoker to corral the insects. Scientists think smoke may mask many of the pheromones that signal danger and diminishes their natural threat alert. Many of the practices of beekeeping are more steeped in historical tradition than scientific explanations.

"Aristotle surmised that bees collected honey from rainbows. He may not have gotten the science right, but he was spot on with the poetry of its flavor," writes Alethea Morrison in the opening chapter.

*Apis mellifera*, commonly known as the honey bee, is one of about 20,000 different species of bees. European settlers brought the bee with them in the early 1600s and the environment suited the species as it spread widely across the United States. Beekeeping and farming came of age hand in

**A hive frame filled with honey. The beekeeper, Mary Bouchard, cut a small square of comb to taste.****Bees carrying pollen back to the hive.**

Photos courtesy of Mary Bouchard

hand in the northeastern United States. One of the most successful and prolific beekeepers in the world during the 19th century was W.L. "Lamar" Coggshall of Groton, New York. His great grandfather, John Coggshall arrived in the early 1600s from England and the family farmed in Rhode Island, Connecticut and moved to richer soils in upstate New York in 1820. Lamar Coggshall (b. 1852) was a farmer who expanded his bee colonies and the first in New York to create out-yards. He expanded the bee business west to Arizona, Colorado, and to the south as far as Cuba.

*Apis mellifera* is the only species of honey bees cultivated for pollination and honey production. Scientists categorize bees by race and in North America there are Italians, Russians, and Carniolans. This colorful book is a wonderful introduction to apiaries and chock full of facts and photos. It provides the answers to why you might keep bees, but also shows you up close how to do so in sync with the seasons of the calendar. Winter is the perfect time to start reading about bees and now is the time to begin preparations.

The hum of ten thousand bees comes from rapid beating of wings. Bees have no voice. Morrison translates their behavior to address the question: What am I getting into? From the first month, the first season through the first harvest, these step by step instructions walk the novice through the annual cycle.

*Homegrown Honey Bees* includes contemporary stories of beekeepers in big cities, small towns, and on small farms. Matt and Jill Reed starting keeping bees in Portland, Oregon just a couple years ago and now manage 25 colonies in the metropolitan area. In Austin, TX, Karl Arcuri describes his single hive and introduces his four queen bees by name, including one known as 'Large Marge' from 'Pee Wee Herman's Big Adventure'. Drew and Ali Johnson's quarter acre homestead in Kalamazoo, Michigan is an extension of their backyard farming. And Bobbi and Greg Marsteller in Chicago who lost their rooftop hive over a harsh winter share their stories, too.

Beekeepers Alethea Morrison and Mars Vilaubi document their own beginnings with their first hive. They share their challenges of replacing a failing queen bee to sustaining a colony over an extremely cold winter, and the joys of tasting their own raw honey harvest and being part of the solution to the problem of colony collapse disorder.

Bees don't hibernate during winter. Bees huddle close together in their hive to generate heat and live off their stockpile of honey. By vibrating their wing muscles, which looks a little like shivering, the bees increase their body heat. They form a winter cluster, snuggling and wiggling toward the center. Bees rotate positions so none of them freeze.

Whether you start a hive this year or not, whether you dream of becoming the next bee whisperer, this is a warm read that glows with honey. If you have a family, or are a teacher, you will find this highly visual reference an introduction to becoming a happy, confident, and successful beekeeper. *Homegrown Honey Bees*, published by Storey in January 2013, gives good buzz to bees.

Jill Swenson is a former farmer and the president of Swenson Book Development, LLC, based in Brooktondale, NY. She may be reached at [jill@swenbooks.com](mailto:jill@swenbooks.com) or 607-539-3278.

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**POLICY CORNER**

**The Sustainable Lease Agreement, A Legal Tool for Land Stewardship**

by Jason Foscolo, Esq

Good lease agreements for farmland are more important now than ever before. The cost of farmland is at an all-time high, which often makes leasing land the only viable alternative for many farmers. This is especially true for new and beginning farmers who often begin their careers with limited capital. Of course, it is always a good idea to get an important legal agreement like a lease in writing, no matter how rudimentary the terms of the lease.

With the advent of alternative production techniques and the rise of sustainable farming, farmland leases can be more than a tool for merely securing access to farmland. Leases can be the legal bridge protecting and developing a limitless range of ecological or social benefits that are increasingly important to the agricultural economy. "Sustainable agriculture" is an umbrella term used to encompass the many different production methods, systems, and approaches that seek to meet the goals of profitability, stewardship, and quality of life. As farmers increasingly consider these alternative agricultural practices, such as organic production, both landlords and tenants have new opportunities to use leases in creative and wealth-building ways.

A "sustainable lease", therefore, can be used to mandate the type of agricultural practices used on farmland that guarantee a sustainable outcome. Some of the characteristics of the sustainable lease are the emphasis it places on things like soil conservation, wildlife protection, wind and water erosion, crop rotation, managed intensive rotational grazing, and even fair farm labor. Examples of "sustainable lease" terms are limited only by the desires of the landlord and tenant. A lease can prohibit a tenant from planting a crop that is known to deplete soil fertility. Conversely, a lease may require crops to be cycled in such a way as to replace those nutrients. Landlords can mandate the planting of buffer strips to prevent erosion on highly-erodible land, or demand that farmworkers working the parcel receive a set wage above the state and federal minimum wage. The potential list of such sustainable terms is virtually limitless.

Often, a lease agreement containing these types of mandates can positively affect the commercial or financial interests of both landlords and tenants in the

agricultural economy. It's not only ethical or environmental to have a sustainable lease - sometimes it's just good business. In our changing agricultural industry, the terms of a

sustainable lease can have significant economic affects for all parties to the agreement.

Landlords can use sustainable leases to protect the quality of their land. It is well within the ability of a landlord to use a lease to restrict a ten-

ant to a specific type of agricultural activity or to prohibit certain crops or certain other techniques. A useful example of this characteristic of a sustainable lease is the organic farmer who will lease land only to another organic farmer. Converting land to organic production requires

an investment of time, effort and expense. No sustainable lease could be complete without acknowledging, and then protecting, these significant costs. This same concept can be applied to any other type of agricultural practice in order to

See Sustainable page 13

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Mr. Prevor is the fourth generation of his family to be active in the food business in the United States. Prior to launching his own company, he served as a director of his family's company, which was an importer, exporter and wholesaler of foodstuffs.

Mr. Prevor combines the real world experience of one who has worked in the trade with the analytical perspective of an editor and analyst.

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**POLICY CORNER**

**Sustainable from 12**

preserve the characteristics of farmland that are most important to the individual landlord, such as soil conservation or wildlife preservation.

Tenants can benefit from sustainable lease agreements in multiple ways. A sustainable

tenant should take the perspective that increasing soil fertility in the landlord's land should be considered the equivalent of any other capital improvement to the land, like installing irrigation equipment or permanent structures. Sustainable agricultural prac-

tices often require that costly soil rehabilitation efforts be conducted on marginally productive or environmentally strained land. Fertilizing and remineralizing depleted land with sustainable inputs adds value to a parcel of land. It is an investment that cannot be

removed from the land at the conclusion of the lease term. For farming practices which rehabilitate soil, tenants should either seek a rent rebate for improving soil health or negotiate a longer term lease that will enable them to recoup a worthwhile

return on their investment in the land.

The biggest challenge to leasing land sustainably is the relative personal values of the parties to the agreement. Both parties need to appreciate the ecological or social



**Jen Carson planting garlic at Great Song Farm. She is leasing 80 acres of vegetable field, pasture, and woodland from Larry and Betti Steel in Milan, NY. Photo Courtesy Columbia Land Conservancy**

good that can be created by sustainable farming. Sustainable leases are therefore best used between sustainable landlords and sustainable farmers. The ecological or social benefits may not be obvious to all landlords, or to all farmers for that matter, but sustainable leasing has truly tangible and quantifiable value nonetheless. The sustainable lease begins with a mutual appreciation of these values.

The type of landlord most likely to appreciate a sustainably farming tenant is a land trust. These institutions have a strong interest in sustainable endeavors like land stewardship, soil conservation, habitat preservation, and water quality. In addition, they can benefit from sustainable leases in more ways than rehabilitating the health of their soil. Adopting a policy of sustainable leasing is a great way for land trusts to demonstrate to their supporters that they are conducting their stewardship role in an intelligent, responsible manner. They are not only more likely to have an appreciation for the agricultural practices of their tenants - it is in the nature of their mission to indeed brag about it.

Farmers are the first ecologists. Their land is a generational asset that deserves thorough protection and development by all participants in the agricultural community. Whether you are a landlord or a tenant farmer, think of the humble lease agreement as one of the most important tools you can use to fulfill your duties of stewardship.

*Jason Foscolo is the principal attorney of Jason Foscolo LLC, a general practice law firm dedicated to the special needs of farmers and food entrepreneurs.*

**Empire State Producers Expo**

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## LOCAL FOODS & MARKETING

# Online Distribution Channels for Farmers

by Rebecca Heller-Steinberg and Laura Hobbs

Are you looking for a new method to market your farm products? Recently, a group of farmers, Extension staff, and community members in Tioga County, NY joined together to evaluate more efficient methods for farmers to get products to consumers. The group is currently looking into online market models that enable producers to deliver pre-purchased products to a set pick-up location once a week. It turns out, in recent years, an overwhelming number of websites have come online for this purpose.

Two members of the group, Rebecca Heller-Steinberg, an AmeriCorps member serving at Cornell Cooperative Extension and owner of local food business Extended Harvest, and Laura Hobbs, a local farmer and web designer, offered to research the options and then present to the group. This article represents our personal opinions and not those of the group as a whole or Cornell Cooperative Extension.

Our hope is that sharing information about these models and how best to evaluate them can help you figure out which model(s) are right for you.

### Why do you need a new distribution channel?

What is the problem you are trying to solve by creating a new distribution channel?

That is, what is not working for you about your current distribution channels that you want the new model to address?

Possible problems include:

- Not selling enough, need a new outlet for products
- Spending too much time on marketing, travel and distribution
- Costs are too high/profit margins are too low
- Not finding enough local customers
- People can't make it out to or don't have time to visit the farm

### What are your criteria?

In addition to knowing what problem(s) you're trying to solve with the new system, you may also have some specific needs or features you want available on the online market site, such as:

- Credit card processing
- Ability for each producer to upload and update their own products and availability
- Incorporate actual costs into the system to create long-term viability

### Breakdown of the models

As you start to look at the online models, you'll notice that most fall into one or more of a few major functional categories:

- CSA vehicles (such as farmigo.com or seedleaf.com) - these often have options for adding a la carte items, but are intended primarily for producers operating CSAs and other subscription-based services
- Online farmers markets (such as goodeggs.com) - these are intended for retail customers and often designed to mimic the feel of a farmers market, where customers shop

The Local Food will design a website to suit each person/groups needs with many different functions.

separately from each individual farmer

- Online wholesale markets (such as farmersweb.com) - these are for larger sellers and buyers, including restaurants, schools, and other institutions

### Important things to consider

As you begin to look at some of these models/websites and narrow down which type is right for you, there are a number of other details you'll want to consider:

- Is it for individual producers or groups of producers?
- Is the audience local, regional or national in scope?
- Is there a start-up cost? How much?
- Does the site charge a monthly flat fee, a percentage mark-up or margin on sales, or both? What are those costs?
- If the site does not charge, how do they make money and does it seem viable long term?
- Are grants or start-up funding available?
- How many producers and/or customers are needed to make it viable?
- What are the delivery and pick-up options for customers?
- How do goods get from the farmer to the customer? If the farmer must transport them, are they able to add that cost into their pricing?
- Is there a way to incorporate consumer education?
- Does it foster connections between producers and consumers?
- Can you integrate it with your website, blog, facebook, or twitter?

For a group distribution model, there are some additional things to consider in your planning, plus what their costs might be. Does the group need a coordinator and a location for distribution and storage? Will any equipment be needed such as a scale or freezer?

### Aesthetics and usability

What does the site look like? Some of the websites we looked at are very basic visually or looked a bit dated. If they have the functionality you need, this may not matter to you or your customers. But in some markets, this could turn off potential customers. Also, how easy or intuitive is it to use? It is essential to get on the site and try it out, both from the consumer and producer ends. If it isn't easy to use, it's not going to be practical.

### Local vs. National

At first we considered having a website created for our group, though after some research we discovered so many existing websites that would fit our needs that having a site made locally was like "reinventing the wheel" and start up would cost more than using an established website. These regional and national companies can offer lower prices since the costs of website development and upkeep are spread out over a larger number of producers.

### Websites that could fit our needs

Researching a couple dozen websites yielded a few that had the right model we were looking for. The main differences between these websites were the upfront fees, the aesthetics of the website and the availability of different features. Almost all these websites took a small fee on sales but no start up fees, had webpages where products could be listed and described, processed credit cards, kept track of orders and produced invoices. We have included below some brief discussion on the websites we think could work for us and maybe you as well.

- The Local Food Marketplace (localfoodmarketplace.com) offers four different kinds of online markets for individual farmers to buying clubs. LFM will design a website to suit each person/groups needs with many different functions. There is a start-up cost to build a multi-page website but it is a really good price for all the functionality they can provide as compared to starting from scratch with a web design company.
- Local Dirt (localdirt.com) also offers services for farmers, Farmers Markets, buying clubs and wholesalers. Could set up a group of farmers to sell products online. The product list goes out as an email to customers vs. other websites that have items listed on a website. Their services are currently free except for wholesalers.
- Locally Grown (locallygrown.net) is set up as a virtual farm-

"Local Dirt" offers services for farmers, farmers Markets, buying clubs and wholesalers. The site is currently free to use.

ers market with groups of vendors. The design of the website is plain, not modern looking like other sites and the adding of logos or pictures is left up to the user. The site has been up and running for 5+ years.

- Fresh Nation (freshnation.com) is a virtual Farmers Market set up for connecting Markets to vendors to customers, social media style with customers following vendors and markets. Selling is an option for customers to pick up items at market.
- Wholeshare (wholeshare.com) is a buying club website but we are considering it since it has the option of adding farms or a farm collective as a vendor on the site as well as the other items sold through the buying club. Could be one stop shopping for customers; they could get products from local farms and other pantry and produce through the club for great prices all in the same delivery.
- Honorable mentions: goodeggs.com, farmfresh.org/hub/, greenling.com. These all had good websites but were only covering a small region.

### How to choose the right model for you

As you consider different distribution models, we recommend going through our list of questions and considerations. Then, generate your own list and use these criteria to compare models to each other and to your needs. Be sure to visit any website you are seriously considering and really try it out. Ask Vendors using the site already how well it works for them.

We wish you the best of luck finding a model that works for you!

Rebecca Heller-Steinberg is the owner of local food business 'Extended Harvest' and may be reached at tiogalocal-food@gmail.com. Laura Hobbs is the co-owner of Heritage Pastures Farm in Nichols, NY and may be reached at mail-to:laura@stantonhillstudios.com.

**GRAZING**

**A Four Dollar Grazing Chart**

by Troy Bishopp

My farm teetered between a D1 and D2 (Moderate to severe) on the U.S. drought monitor scale most of last summer which tested my 26 years of grazing experience and thinking skills. Although I must admit to being up for the challenge, at times it was a highly stressful endeavor to manage a newly started organic dairy heifer custom grazing business model without much snow or rain. Surprisingly, what saved me during this trying time was a 4 dollar grazing planning chart hung on my office door.

I know what you're thinking; a piece of paper (and not money) is credited with getting a farmer through the grazing season. Yep, but let me elaborate a bit. This change of managing through using better decision making tools has been a long time in the making. It has come about at my own expense, literally, as I dropped some coin to attend holistic management grazing planning workshops and to travel around visiting other successful graziers throughout the country. I also say expense because I have missed so many opportunities to manage grass more effectively but my pride, lack of monitoring and keeping records kept me in observational mode instead of being a strategic grazer.

On a trip to Missouri visiting Greg Judy's farm the light really clicked for me. As the "microbe messiah" was showing me all the exciting things he was doing on the farm and quoting day's recovery periods and such, I finally told him to stop yacking and show me how he makes decisions in grazing management. After the shock, he ushered me into his office where his wall was covered with 3 years of planned grazing charts like a military war room. He knew where he was, where he was going and where he had been all in a cohesive chart complete with paddocks, rest periods, weather info, animal dry matter calculations and major events identified like vacations, calving, breeding and stockpiling. It's exactly what I needed. At that moment I thought, I've got to get busy with this kind of management instead of always chasing grass or worse, losing money.

This led me to Allan Savory's Holistic Management Handbook with associated grazing charts but like many farmers, I had to tweak the chart to fit my needs and environment. At first I used it mostly as a visual diary of how long I was in a paddock but after the first rotation, curiosity had me planning ahead a week, then a month, then several months - all in pencil of course because we all know grazing plans are always in flux. With practice and feedback from other farmers who were also trying the tool we refined the chart down to its simplest form through a Northeast SARE



**Parched grass before the rains**

'Professional Development Project' grazing training grant. Now with three years of planned grazing management monitoring under my belt, the true test was about to happen amidst the 2012 weather freakshow.

Invaluable in this process is that you need to know what you're managing towards, know your paddocks and acreages, know your forage and animal needs and know your financial picture. To sum it up, you need a whole farm conservation plan before you can use this tool effectively. In my case I also have a nutrient management plan that tells me where to focus fertility for improved soil health. The hard part is just starting the process and learning that you can indeed erase the pencil marks of future planning as actual will probably be somewhat different.

From there I plugged in known forage inventory from all paddocks and what recovery period I wanted to achieve given the heifer's forage demand. I also determined known decision points in the margins above the calendar like my daughter's wedding, speaking gigs, concerts, vacations, stockpiling and frost dates, breeding window, conservation projects, grassland bird fledgling dates and paddock specific grazing management techniques to name a few.

On the bottom columns are a place for monitoring moisture and temps which helps to predict forage growth. How many actually keep rainfall records for future planning? Since this is a living document all aspects that would help a grazer make critical decisions are valuable. Most graziers follow a pretty cyclical schedule in moving animals through the paddocks at first but as paddocks or fields are dropped or added for harvest the dynamics of keeping a visual forage inventory is crucial. Your brain may hurt with all the hypothetical scenarios you may plan for but you must keep asking yourself, "What if"? What if it doesn't rain in the next two weeks? When do I supplement? How do I get more rest on the pad-



**Lush pasture after the rains**

docks? When and where do I utilize a sacrifice area? How long do I want to graze into winter? Is there money in my account and what is my borrowing power? Do I have a destocking strategy? Etc., Etc.

For me, this visual chart reduced stress by constantly informing me of conditions on the ground to form battle plans weeks ahead of when I actually needed to speed up or slow down the rotation. There was a point from June 8th to July 22nd when we had 16 days over 90 degrees and a 1/2" of rain. About June 24th I made a big circle on July 30th that said, "Decision day" for considering whether to supplement with hay which was still 30 days before I ran out of grass. On July 23rd it started to rain and for the next 21 days we got over 5 inches of rain and I never touched the emergency hay fund but it was planned anyway.

By monitoring longer recovery periods and maintaining higher residual levels, when the rain finally fell, it popped back like springtime. However I planned for it not to rain and was rewarded for my conservative stocking rates. You're a hero when it all works the way it's supposed to.

Beef Magazine's contributing editor, Troy Marshall, noted a good plan helps protect personal health - physical, relational, mental and spiritual. He poignantly mentioned, "Drought management puts a premium on acting early, being willing to adapt, and being creative. The best news is that it will rain again; it is nearly as inevitable as drought. Drought management is largely about employing appropriate risk management techniques."

In the final analysis, simple grazing management decision-making tools and using your noggin may be more valuable than increasing outside inputs to solve the weak links in yours and mine grazing operation. If you are a visual learner like me, a 4 dollar piece of paper might be just the ticket to get through another weather event. Remember to stay focused on the things you have some control over. Focusing on the things you have no control over is a waste of time and energy.

For more information on the grazing chart and its planning process, visit <http://cnrycd.org/planned-grazing-participants/> or contact Troy Bishopp, aka 'The Grass Whisperer' at the Madison Co. SWCD 315-824-9849.



**An image of my grazing chart**

Photos by Troy Bishopp

**Rugged outside. Smooth inside.**

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**LOCAL FOODS & MARKETING****Doubling Local Food in Vermont**

**Vermont Farm to Plate (F2P) Network unifies business, government & non-profits to scale up local food production and consumption by 2020.**

by Rachel Carter

The Vermont Farm to Plate (F2P) Network is localizing food production and distribution in a statewide collaborative effort to rebalance the food system. A network of over 160 organizations encompassing all types and scales of agricultural-related production and processing are working together to execute the Farm to Plate Strategic Plan.

In 2009, the 'Farm to Plate Investment Program' was signed into legislation by then Governor Jim Douglas. The legislation tasked the Vermont Sustainable Jobs Fund with the creation of a ten year 'Farm to Plate Strategic Plan' to increase economic development in Vermont's food and farm sector; create jobs in the food and farm economy; and improve access to healthy local food for all Vermonters. An economic impact analysis showed that every 5% increase in the consumption of locally produced food translates to at least \$197 million in additional annual output and 1,700 new jobs. By supporting instead of duplicating existing efforts through a cross-pollinating network approach, the Farm to Plate Network is working to strengthen Vermont's working landscape, build the resilience of farms, improve environmental quality, and increase local food access for all Vermonters.

Vermont has developed the most comprehensive food system plan in the country to date and the first in the New England states. All six New England states recognize that long term viability lies in regional food systems growth and each were represented at the recent Farm to Plate Network Annual Gathering, held in October at Lake Morey Resort in Fairlee, Vermont. A New England food system planning committee under the leadership of Food Solutions New England at the University of New Hampshire is convening to further cultivate conversations and share progress as each state begins to relocalize their own food system.

"Vermont leads the nation in direct-to-consumer farm product marketing, Farm to School programming, and community based agriculture. We are putting people back on the land to learn from it, work it, restore it, and steward it for subsequent generations," Chuck Ross, Secretary of the Vermont Agency of Agriculture, Food and Markets commented at the start of the Gathering, where connecting across the 160-member Network and creating action plans were the themes of the two-day event.



**Joe Bossen of Vermont Bean Crafters producing bean burgers at Mad River Valley Food Hub.**

Photo by Mad River Food Hub

At the start of the Network's second year, new processes are being facilitated allowing for collaboration among players who are not usually in the same room with one another. Sodexo, the state's largest food service provider, with contracts to serve all of the state colleges and two universities (serving 34,000 meals per day in aggregate), does not typically have regular conversations with local food hubs, processors, and distributors. From participating together in the Network, local relationships are developing to accelerate farm to institution purchases. A Sodexo "matchmaking" event held at the University of Vermont in November is helping small producers partner with institutions to determine the scaling up or down necessary on both ends to make for mutually beneficial relationships.

#### Farm to Plate Initiative Progress

In 2011 Fletcher Allen Hospital served more than 2 million meals, actually making hospital nutrition services the largest restaurant in Vermont. They partner with 70 local farmers and producers providing healthy, fresh, meals from scratch to patients while boosting the local economy. The hospital's restaurant is actually one of Burlington's most popular lunch spots to the general public.

Legislation passed in the spring of 2011 created the Working Lands Enterprise Fund and 15 Vermonters were appointed to the Board which will oversee investment in Vermont's forests, farms, and agricultural producers. The Board is in the process of determining the funding criteria for grant proposals for \$1 million in infrastructure development and technical assistance services in the coming year. Hopes are high that the Shumlin Administration and Legislature will approve elevated levels of funding in years to come.

Vermont Technical College's Institute for Applied Agriculture and Food Systems received a \$3.4 million federal grant in the fall of 2012 to serve the applied research and educational needs of agriculture, food production, waste disposal, and energy production businesses in the region through a cooperative education learning model.

Also in 2012, Vermont Law School established and hired a director for the Center for Agriculture and Food Systems to provide support, research, legal counsel, and leadership for community-based agricultural systems expansion.

Kingdom Creamery in Hardwick utilized the Vermont Farm Viability Program to diversify dairy farm production to premium ice cream, yogurt, and cream mixes. Self distribution grew to include Black River Produce and Vermont Roots, and channels are developing through the F2P Network with Sodexo. Additional collaborations with the Vermont Fresh Network to reach restaurants, the Vermont Grocers Association to reach independent grocery stores, and Farm to School programming to reach educational institutions are strengthening dairy farm sustainability.

The Newport Fresh by Nature program

launched this year as a downtown culinary designation of restaurants in Vermont's north-eastern most community serving food harvested or produced within Newport and the surrounding rural communities. The participating farms offer farm visits and educational partnerships through Green Mountain Farm to School.

Black River Produce, the state's leading fresh produce distributor, responded to Vermont and New England meat processing demands by purchasing the former Ben & Jerry's plant in Springfield and is converting it to a meat processing facility. Scheduled to open in the spring of 2013, the facility will relieve current processing bottlenecks and create new market opportunities for local producers.

The Mad River Food Hub opened early in 2012 and offers meat processing, storage units, and business planning at its facility in Waitsfield to over 17 value added producers, like Joe's Soups and VT Bean Crafters. The Food Hub also distributes fresh produce for local non-profit, Food Works at Two Rivers, an organization which provides nutrition training and farm-based agricultural education in the community.

As recognized by facilitators Curtis Ogden and Beth Tener at the annual gathering, the



**A food system diagram on display at the Vermont Farm to Plate Network Gathering.**

Photo by Rachel Carter

Farm to Plate networking approach navigates the multiplicity of organizations and missions and helps weed through "turfiness." Erica Campbell, program director for the F2P Network comments, "Decisions are developed through a democratic process in the different working groups where everyone has a voice and can run with projects and ideas. Many of the organizations and groups represented are already working towards strategic plan goals. The Network provides a deeper platform to not duplicate efforts, but rather piggy-back and cross-market collaborative opportunities, business growth, awareness efforts, and relationships. The Network is based on an adaptive process which shifts based on progress and outcomes or lack thereof."

The six operating working groups cover high impact leverage areas of aggregation and distribution, consumer education and marketing, technical assistance to producers and processors, education and workforce development, farmland access and stewardship, and dairy development.

"This self-governing collaborative made up of over 160-member organizations are working together to reach the 25 goals in the Farm to Plate Strategic Plan, as well as to advance their own organizations' goals," explains Campbell.

"Often, businesses and organizations get so busy with their day to day activities and work plans that they lose sight of the bigger picture. Working groups are meant to function at a higher elevation-viewing both the trees (specific strategies) AND the forest (how strategies interconnect). We really work to develop disciplined reflection during our meetings, so that we ask the bigger questions about what high impact projects can really move the dial in



**Jeff Smith of Smith Maple Crest Farm and Ryan Wood-Beauchamp of Evening Song Farm delivering food to Vermont Country Store as a part of the Farm to Work Program. Food from nine different farms is divided into order bins for the employees to pick up later in the day at their place of work.**

Photo by RAFFL (Rutland Area Farm and Food Link)

reaching our intended goals and outcomes," offers Ellen Kahler, executive director of the Vermont Sustainable Jobs Fund which oversees the Farm to Plate Strategic Plan.

Kahler continues, "The Farm to Plate Network also has a number of cross-cutting teams which meet less frequently, including food access, financing, soils and water, research, and policy. These teams are meant to support the needs of all the working groups, since these areas of focus are relevant to all aspects of the food system.

As the F2P Network delves deeper into action to meet strategic plan goals, the final key component nears completion for an early 2013 launch. The Vermont Food Atlas will be a web portal which will feature a mapping interface of Vermont food system's key attributes. An online database will provide people representing all areas of the food system the ability to locate and examine spatial relationships between farms, businesses, educational institutions, nonprofits and state entities. The Atlas will provide a communication and coordination forum for Farm to Plate Network members and an information clearinghouse of food system resources to be presented through industry relevant social networking capabilities.

The Farm to Plate Strategic Plan will be accessible through a searchable dashboard and a scorecard system will track progress in reaching the plan's goals. The Atlas will provide the interactive tools necessary for the Farm to Plate Network to expand Vermont's local food system and double food production and consumption by 2020.

Ellen Kahler perhaps puts it best when she says, "we've made incredible progress thus far because of our small size and the strong relationships and programs which have been built over the past 30 years. No one business or organization can transform our food system and it can't be done overnight. The new food system is one that is fundamentally based on relationships; it is community supported; and largely consumer driven." If the current path continues, it seems likely that Vermont will exceed their goal of doubling local consumption in the next eight years.

For detailed Farm to Plate Strategic Plan and Network information, please visit <http://www.vsrf.org/project-details/5/farm-to-plate-initiative>.

**NEW FARMERS**

**A Long Row and A Good Day**

by Max Taylor



Grazing Devon Cattle

Photo by Max Taylor

I met my wife, Kerry, planting garlic. It was an unseasonably warm October day during a crew exchange between the farm I worked for and the farm she worked for. I knew from our first date, that if we were going to stay together, we would be farming together. Our wedding planning was intertwined with farm planning, and our gift registry contained more items for the barn than the kitchen. We started Provider Farm in the winter of 2010 searching through classified advertisements and pouring over the details of our business plan. After spending hours driving all over New England looking at "farms" that were really gravel pits or swamps we finally found our farm in September of 2011. Provider Farm is located in Salem, Connecticut. Salem is a small town that you pass through on your way from Hartford to the ocean. Other than that, we don't seem to get much attention.

We raise a small herd of mostly Devon cattle for beef and compost on twenty acres of pasture and we grow vegetables for a 200 share CSA (Community Supported Agriculture), Farmers' Market, and wholesale on twelve acres. We use organic and biodynamic practices but we are not certified. We lease all of the land and buildings that we use but we own our business and we own our equipment. I don't know if this situation will be appropriate for us forever but it was a great way to get started.

We both believe strongly in the CSA model for small farm viability. Although we have branched out into farmers' markets and wholesale, we are at our hearts a CSA farm. It is our goal to provide the best possible share at a reasonable price. I want our members to feel like our farm is essential for their lives. If people are buying a share from us because they think it is trendy, or the



Max and Kerry Taylor

Photo by Larry Manire



The biggest sweet potato we grew.

Photo by Max Taylor

'right thing to do', as soon as times get tough, we will be the first thing they stop spending money on. However, if we can make our farm essential to how they feed their families, when times get tough, we will be the first check they write.

We strive to achieve this goal by distributing high quality produce, keeping good communication, and offering our members choice. We put our CSA first when it comes to produce. While one of the major advantages of the CSA is that your crops don't have to be perfect like they do for market, we make sure everything that goes into the share is fresh, clean and high quality. We spend as much time and energy setting up the display in the share room as we do setting up our farmers' market display.

We have found that offering our members choices makes our share more appealing to a much broader customer base. We offer three share sizes, and distribute all of our produce through a mix and match system. This allows people to take more of things they like and not be stuck taking home stuff they will never eat. We encourage people to try new things and are always delighted when we get requests for more Kohlrabi and Rutabagas. While in some ways, this creates more work for us in managing and planning the different share sizes, I think that the benefits for our business vastly outweigh the draw backs.

As much as possible we try to build good will with our shareholders so that if we do lose crops, or have bad years, they will remember the good times and forgive us. We strive to do this with regular reliable communication through our weekly newsletters and quick responses to business inquiries, regular facebook updates, and always staffing our shareroom with a farmer who strives to meet every shareholder.

Our CSA faced a major challenge this year when we lost 100% of our tomato crop to Late Blight in early July. At that point in the season, we had only had six distributions and our members had only been members for six weeks. The decision to destroy our crop was a tough call to make, but ultimately I believe that we made the right decision.

I felt physically sick from the moment I saw the first oily Late Blight lesion on our crop. This feeling stayed with me as I spent hours talking with our extension agent and other farmers about what we should do. The pit in my stomach would keep me up all night and was certainly present as we cut down thousands of feet of what only days ago had been beautiful healthy tomatoes.

Sitting down to write the newsletter informing our members that they would have no tomatoes this year was equally as tough. However, within hours of sending out this email, responses started to pour in. We were completely overwhelmed with the amount of supportive and positive feedback we received from our members. Finally, the terrible feeling in the pit of my stomach subsided. Not only were our members willing to accept the loss, but rather than blame us for letting them down, they viewed it as a collective disappointment. Our members seem to be more committed to the farm after this lose.

Now that we have reached the tail end of our first year, I like to look back on the time we spent last winter trying to conceptualize the farm that we are now running. We would spend hours pouring over maps of farmland available in New England and looking through our bank statements, tallying up our meager net worth, trying to figure out how we were ever going to start Provider Farm. I can remember sitting with Kerry, overwhelmed and over caffeinated, thinking to myself that if we ever do make it into the field, the actual farm work would feel like a relief from the stress of starting a business. Well, between late blight, tractor tires flying off the tractor, weed forests and too much or too little rain, the hands-on work hasn't presented the relief that I had imagined. The farm seems to present a new challenge almost every day, keeping us on our toes and keepin g our minds in a constant state of problem solving.

This year we grew just over half an acre of Sweet Potatoes: 8 rows, about 550 feet long, just over 1,000 pounds of sweet potatoes per row. With 100 feet of full sweet potato buckets behind me, 400 feet of unpicked sweet potatoes in front of me and beautiful, brilliant sky above, it was in the sweet potatoes that I finally found the relief I had hoped for. Covered from 'head to toe' in dirt and sweat, I couldn't think of anything I would rather be doing on a fall day than picking our sweet potatoes. I don't crave a Caribbean vacation and I don't covet the iPhone 5. All I need, all I want, is a long row and a good day.

For more information on Provider Farm, visit our website <http://www.providerfarm.com> or <http://www.facebook.com/providerfarm>

Max Taylor owns and operates Provider Farm with his wife Kerry in Salem, CT.



The entrance to Provider Farm

Photo by Larry Manire

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**GRAZING****Farmer-Professor Finds Fulfillment in Grass-fed Sheep**

by Tracy Frisch

Jennifer Phillips' love affair with grazing animals, and her subsequent farming career, began when she acquired a few lambs to mow her then two-acre yard. In 2001, after two decades in New York City she had just moved to Stuyvesant, in northern Columbia County, NY, to take a faculty position at Bard College's Center for Environmental Policy. Today, the part-time assistant professor of environmental science produces grass-fed meats in the sleepy town of Clermont, where she owns Gansvoort Farm.

Jennifer's animals - a flock of 55 ewes and their 100-plus lambs plus a dozen Red Devon cattle - spend their entire lives outdoors, even in the winter. For most of the year, they graze on a diverse mixture of pasture plants, including orchard grass, perennial rye, meadow brome, timothy, white, red and alsike clovers, birdsfoot trefoil, alfalfa and chicory. When the pasture runs out in winter and during severe drought, they receive hay. Grain and other concentrates have no place in their diet.

At one-day intervals, Jennifer moves each group of animals to a fresh paddock using portable electric fencing - netting for sheep, and a strand of wire for cows. She gauges the size of these temporary paddocks to allow the animals to eat the plants down to about 3 or 4 inches in height.

Each patch of pasture gets at least a three-week rest to allow grasses and legumes to recover and re-grow before being grazed again. With management intensive grazing she is increasing the carrying capacity of her 60 acres of pasture every year. By comparison, where pasture is grazed continuously, even for periods as short as a week or two, preferred plant species tend to get depleted. In their place, undesirable plants like thistle, burdock or multiflora rose often take hold. And animals' constant nibbling and trampling may expose bare ground, setting the stage for soil erosion.

**Reluctant marketer finds a niche**

Jennifer said her weak link lies with marketing. Until now, Jennifer has been selling her lambs directly to individual customers as whole or half animals, with a few carcasses going to chefs. Her lambs are ready from late September to early December. She distributes the meat from a cold storage facility five miles up the road where she rents space. Most of her animals are butchered and cut to order at a tiny state-inspected custom slaughterhouse operated by another farmer in the fall and winter. With such a "super small" facility, she can have confidence of getting back the meat from her own animals. "I like the fact that he's not killing animals 24-7," Jennifer said.

Jennifer attracts new customers with a bright yellow sign at the foot of her driveway and an EatWild.com listing, which draws "tons of traffic" to 100 percent grass-fed producers. Even so, with her growing flock, she was unsure how she

would sell all of her lamb. She got "lucky" when another farmer told her of a family-owned business in New York seeking a local source of wool and pelts. Farmers with larger flocks have been turning to hair sheep because the wool pool price was so low, Jennifer noted. The husband-and-wife team owns Marlowe and Daughters, an artisan butcher shop, as well as two farm-to-table restaurants and a boutique hotel. Last year they bought all her wool.

This year besides buying her wool and pelts, they arranged to receive regular deliveries of whole lamb for meat this fall. They add value to the wool with attractive handcrafted products, such as knitted sweaters and felted vests. Jennifer was astonished when they encouraged her to raise her prices. Previously Jennifer had gotten woolen comforters made, which were slow to sell. Now with an eager, discerning buyer, she considers wool in her breeding decisions. She also abandoned her goal of an all-white flock since she is well compensated for colored pelts.

**Low-stress lambing?**

By lambing later and on pasture, Jennifer has been able to take a laissez-faire approach to lambing, without fear of significant losses. In 2012, from April 26 until mid-May, the 55 ewes of Gansvoort Farm gave birth to 115 lambs. Only two lambs didn't survive. Jennifer believes her pasture system is more conducive to successful lambing because the animals have space to get away from the flock and give birth without interruption. Rigorous selection process has also paid off. "If you select very stringently for characteristics like good health and reproductive success, rather than relying on drugs or a lot of handholding, you end up with a flock that is more or less maintenance-free and requires less labor," she said. At the end of every January, she culls the flock based on her records. Ewes that had worm problems, lambing difficulties or mastitis go to the butcher. These days, she usually culls only three or four animals annually.

**Heat, predators and pests**

Besides lambing on pasture in mid-spring, Jennifer follows other practices endorsed by the organization Animal Welfare Approved. She doesn't dock tails on sheep or cows, and she always provides fresh water in every paddock. On any day when the temperature will exceed 75 she provides them with pasture that has shade. She's also planting more shade trees around the farm.

Jennifer vehemently disagrees with the practice of killing coyotes. Though she hears coyotes every night, she has never had a problem with them. "I have a theory that the coyote you know is better than the coyote you don't," she said. Not all coyotes attack livestock. Pups learn to hunt and what to eat from their mothers and other elders in the pack. When resident coyotes are killed, Jennifer says, the ones that move in to replace them may be more aggressive. Keeping a high-voltage charge in her portable electric fence has been a sufficient deterrent. She takes care though never to



**Jennifer sells the wool to a NYC business that has it made into sweaters.**

leave an un-electrified fence upright.

Jennifer started out with Finn Dorset crosses but the 140-pound ewes were a little big for her to easily handle. Many also had long tails and she doesn't dock. Today her flock is predominantly Icelandic. She chose the breed for its extreme hardiness and ability to grow well on grass. They also have short tails and are known for their delicious meat and exceptional wool. They have a coarse outer coat that sheds rain and snow and a very fine, soft undercoat once prized for undergarments.

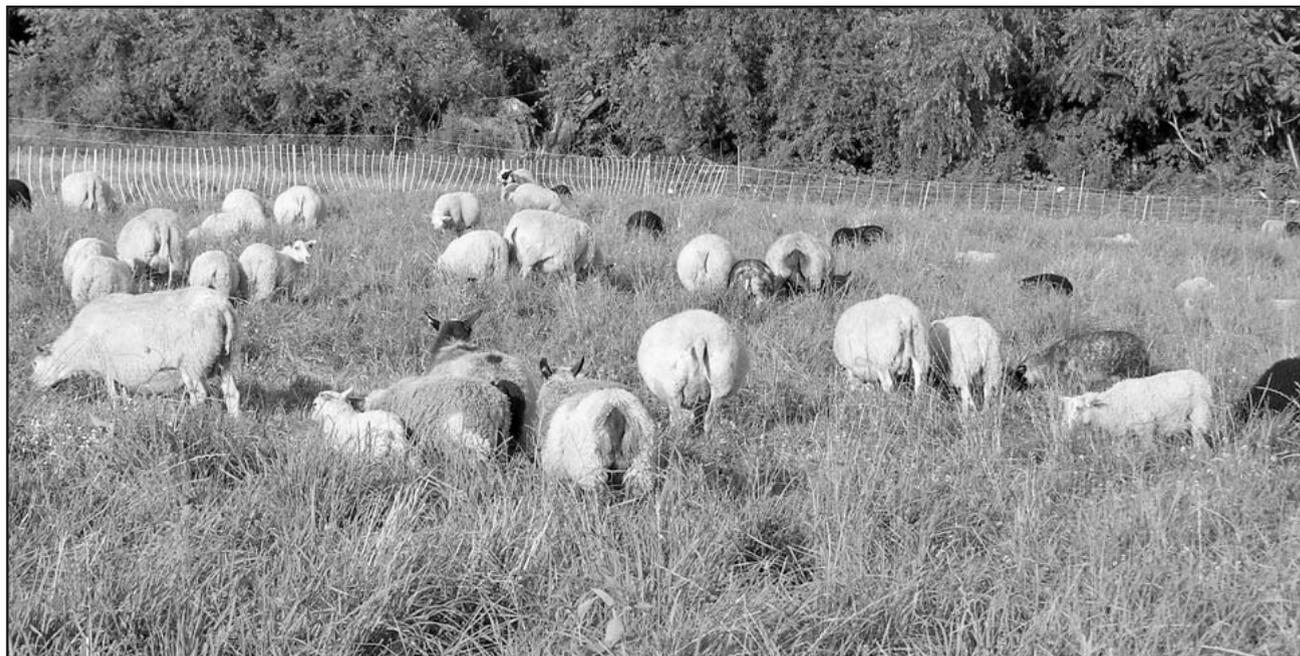
In a typical year, Jennifer only has to worm about 5 percent of her sheep. "There's a big environmental cost to using chemical wormers," she said. "They kill dung beetles and all kinds of other things. Also, repeated use of wormers causes parasites to develop resistance so when you really need a wormer, it's not effective." Instead she employs other strategies to reduce worms, such as seeding chicory, which is high in condensed tannins. These compounds are known to reduce worms in sheep.

Eight years ago, Jennifer added Red Devon cattle to her farm. The two types of livestock play host to different worm species. By grazing cattle after sheep in her pastures, she aimed to significantly reduce the worm load. But she hasn't been able to make the small herd profitable. Selling the cattle should enable her to extend the grazing season for her sheep so she won't have to feed hay until January.

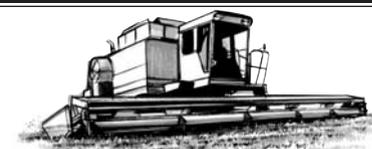
As a farmer, Jennifer is seeing the effects of global warming and climate change, like the drought and extended spells of hot weather this past summer that stress plants and animals alike. "This is going to become the new normal for us," Jennifer said. "We'll need to adapt our systems."

*Tracy Frisch is a homesteader, writer and community activist in Argyle, New York. She served as the founding director of the Regional Farm & Food Project from 1996 through 2004.*

A longer version of this article appeared in the September 2012 issue of Hill Country Observer.



**Animals are allowed to eat the plants down to 3 or 4 inches in height.**



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**Sustainable Agriculture Research & Education**

**Aroostook Hops: SARE Grant Results in Increased Yield**

**By implementing drip irrigation and mulching, a Maine hops farm significantly improves yields and net revenue.**

by Erin Roche

**Located in the heart of Maine's potato production**

To the passerby, the hops trellis rising from the ground at Krista Delahunty and Jason Johnston's farm triggers a second glance if not a close inspection. Tucked within a county of potato fields, Aroostook Hops LLC is an island of uniqueness, welcoming back the production of hops to the Northeast. Hops, a climbing herbaceous perennial, were once commonplace in the Northeast until the 1800's. Due to high humidity of the East, hops production largely migrated west where arid conditions limit the spread of pests and disease. Flash forward 200 years and with a growing interest in local microbreweries, hops production has returned east. As scientists and avid gardeners, Krista and Jason's interest in producing hops began with their own homebrew. When they searched for hop rhizomes (rootstock) to plant in 2008, they found them expensive and difficult to find. Noting this surge in demand and counting thirty microbreweries in Maine alone, the couple felt that local, organic hops would be a promising enterprise.

Krista and Jason started with a few plants in 2008 and now have over 600 plants on 1 acre. They currently sell to Maine and New Hampshire brewers. In scaling up, the couple real-

**Welcome to the Northeast SARE Spotlight! SARE (Sustainable Agriculture Research and Education) offers grants to farmers, educators, universities and communities that are working to make agriculture more sustainable - economically, environmentally, and socially. Learn about whether a SARE grant would be a good fit for you.**

ized a "scientific approach" to increasing production and net revenue was necessary. Krista and Jason presupposed drip irrigation might result in greater yields based on the success large-scale Pacific Northwest growers have with irrigation. They also were curious about the effect "green manures", or cover crops, might have on hop yield and soil nutrient levels. Krista and Jason stumbled across the Northeast SARE Farmer grant program online and decided to apply for a one-year grant. SARE requires all grantees to identify a technical advisor throughout the duration of the grant process. Krista and Jason sought out Dr. Steve Johnson for his expertise as a Crops Specialist with University of Maine Cooperative Extension and his prior experience with hops.

**The SARE Project**

Aroostook Hops was awarded a one-year grant of \$10,197, which covered labor, irrigation, mulch and soil sampling costs. Beginning in the fall of 2010, Krista and Jason experimented on their 1-acre hopyard, containing four varieties of hops of three planting ages (1, 2 and 3-year old plants). The couple devised a two-factor experiment to test the following questions.

*Are the costs of drip irrigation outweighed by an increase in yield and net revenue?*

Krista and Jason installed drip irrigation on every other hop row and irrigated 3-4 hours every two to three days without a soaking precipitation.

*Do cover crops and mulches increase yield and net revenue?*

In alternating rows, they spread straw between plants or planted summer alfalfa around the plants. The trial was designed so that every hop age experienced both cover type with irrigation, as well as cover type without irrigation. Summer alfalfa was selected because it suppresses weeds, fixes nitrogen and generally dies over the winter.

Throughout the growing season, Krista and Jason recorded supply costs, labor hours, and hop cone yield so they could evaluate the cost effectiveness of each treatment. Additionally, soil samples were taken at the end of the growing season.



**Hops at Aroostook Hops**  
Photo by Leslie and Jim Michael

**The Results**

The research ended in Autumn of 2011, and the findings were clear - yields in the irrigated treatments were higher than the non-irrigated treatments and increased revenue more than compensated for the costs of irrigation installment and operation (Table 1). Krista and Jason analyzed the economic returns per acre for each treatment by subtracting treatment costs (material costs and labor at \$15/hour) from estimated gross returns (calculated using the 2011 USDA National Agriculture Statistics Service average price for hops of \$2.77/lb). Of all of the treatments, irrigated rows with straw provided the highest revenue gain per acre. Based on soil sample results, alfalfa produced an increase in soil nitrate while soil test phosphorus and magnesium levels were higher in straw plots (data not shown). The alfalfa treatment produced an increase in yield in the non-irrigated plots. It is unclear why this same increase wasn't observed in the irrigated plots. See Table 1.

	Non-irrigated		Irrigated	
	Straw	Alfalfa	Straw	Alfalfa
Dry Yield (kg/acre)	145	217	440	269
Gross Returns (\$/acre)	\$886	\$1,323	\$2,689	\$1,639
Treatment Costs (\$/acre)				
Irrigation & labor	\$0	\$0	\$193	\$193
Straw, materials and labor	\$296	\$0	\$296	\$10
Alfalfa, materials and labor	\$0	\$355	\$0	\$355
TOTAL treatment cost	\$296	\$355	\$489	\$558
<b>Net Returns* (\$/acre)</b>	<b>\$590</b>	<b>\$968</b>	<b>\$2,200</b>	<b>\$1,081</b>

\* Net Returns = gross returns - total costs.  
Data courtesy of Krista Delahunty and Jason Johnston

**Summary**

This positive SARE experience encouraged Krista and Jason to apply for another SARE grant focusing on methods of establishing and maintaining a weed-free hopyard. Overall, Krista and Jason found the budget sufficiently covered all grant expenses.

Krista and Jason continue to use drip irrigation with straw cover across the entire farm, and this spring, they broke ground on a 2.75 acre addition to their original hopyard.

To learn more about Aroostook Hops, visit their website at <http://www.arostookhops.com/> To read the final report, visit <http://mysare.sare.org/mySARE/ProjectReport.aspx?do=viewProj&pn=FNE11-711>

Erin Roche is a graduate student at the University of Maine. She can be reached at [erin.roche@maine.edu](mailto:erin.roche@maine.edu).



Krista Delahunty & Jason Johnston with their family .

Photo by Leslie and Jim Michael

**SARE offers sustainable agriculture grants, bulletins, books, an online events calendar and many other resources. Learn more about the Northeast SARE program by visiting [www.nesare.org](http://www.nesare.org) or by contacting Northeast SARE 655 Spear Street University of Vermont, Burlington VT 05405 Phone 802-656-0471 Fax 802-656-0500 E-mail: [nesare@uvm.edu](mailto:nesare@uvm.edu)**

**LIVESTOCK & POULTRY****Does Red Clover Cause Infertility in Sheep?**

by Ulf Kintzel

Various legumes and clovers, especially the red clover, are said to cause temporary infertility in female sheep when grazed during breeding season. If grazed for a prolonged period of time, red clover can supposedly cause permanent infertility in ewes. The cited reason for that infertility is an estrogen-like substance called phyto-estrogen. If you are a subscriber to one of the national sheep publications you probably have come across an article warning you of red clover, perhaps even of white clover as well as other legumes. I seem to see at least one article every year.

Most studies conducted on clover were with grazing sheep on subterranean clover in Australia, starting in 1946 (Bennett et al). This was the first field trial to identify what is also referred to as "clover disease". According to my research there have been several other studies with sheep grazing subterranean clover. However, there has been only one field trial in North America on red clover (Fox et al. 1959) and absolutely none with grazing white clover.

On the other hand, there is ample anecdotal evidence of sheep farmers grazing clovers, including red clover, throughout the year and during breeding season and yet having lambing percentages. This includes me. I have grazed all kinds of legumes as well as lots of red clover during breeding season and have found no negative effect. My lambing percentage of my adult ewes averages 180 percent and has reached at times 200 percent. I also recall a field study conducted in my native east Germany that found no significant effect of red clover on sheep fertility. Unfortunately, I am unable to cite the study.

In my view, this begs the question if these stark and firm warnings of red clover are indeed warranted.

Let's examine what we do know about red clover. First, red clover, like many other legumes, forms a symbiosis with a soil bacterium called Rhizobium. This bacterium is able to fixate air nitrogen, which benefits the clover itself but also leaches in part into the soil, which benefits other species like grass. In return, this bacterium gets some energy in the form of sugar from the plant. Figures vary greatly but with only 20 to 30 percent of red clover in the pasture mix, 80 to 200 lbs. of nitrogen per acre can be fixated. I have red and white clover as well as some other legumes well above the 30 percent mark. That means the need for commercial nitrogen fertilizer can be completely eliminated.

Secondly, red clover is high in digestible nutrients and is well liked by sheep. High amount of nutrients, digestibility, and intake all enhance animal performance.

Furthermore, red clover is very easily and quite cheaply established by means of frost-seeding. In fact, I find red clover the easiest of all forage plants to be frost-seeded. Seed cost is relatively low, especially when you consider that only four or five pounds of seed per acre are needed in order to get a good stand of red clover in existing pasture.

There are additional advantages to red clover like relatively good drought resistance, good ability to be stock-piled for winter grazing, and high yield due to its relatively big plant size.

To make the list complete I should mention that red clover, like many legumes with the exception of birdsfoot trefoil, can cause bloat. However, that is entirely a management issue.

So should red clover be incorporated into sheep pasture? I believe so and I have done so for many years. Conception rates of 99 percent and lambing percentages of no less than 180 percent that I've achieved have long made me wonder



This stand is the result of frost-seeding.

about these studies conducted down under with mostly *subterranean clover*. I don't dismiss the science. In fact, I am a firm believer in science. However, I do doubt the relevance of these studies for us in the US. Therefore, I would like to see studies conducted in the Northern Hemisphere in North America. Studies should include field trials with grazing sheep on red clover at different stages and on different varieties, and trials that examine the effect on various breeds. One study (Croker et al. 2007) suggests that the estrogen level is lower when red clover blooms - which is exactly when I graze it. There are more questions than answers and until we know more, I would find it appropriate if there were less warnings against such essential legumes in sheep pasture. Meanwhile, I will rely on my 28 years of experience in grazing sheep and will continue grazing red clover throughout the year, including during breeding season.



Frost-seeding red clover is easy, fast, and inexpensive.

Photos by Ulf Kintzel

Ulf Kintzel is a native of Germany and has lived in the US since 1995. In 2006 he moved from New Jersey to Rushville in the Finger Lakes area in upstate New York. Ulf owns and operates White Clover Sheep Farm. He breeds and raises grass-fed White Dorper Sheep without any grain feeding. His website address is [www.whitecloversheepfarm.com](http://www.whitecloversheepfarm.com). He can be reached by e-mail at [ulf@whitecloversheepfarm.com](mailto:ulf@whitecloversheepfarm.com) or by phone at 585-554-3313.



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