FALL 2008

SMALL FARM QUARTERLY

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

Feature Articles

CORNELL Small Farms Program

Supplement to Country Folks

SMALL FARM QUARTERLY - FALL 2008

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Cover photo: Wall of sunflowers at a small cut flower market-garden in Salem, NY. Photo by Sandy Buxton

SMALL FARM QUARTERLY

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

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

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

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Cornell Small Farms Program Update

Small Farms Program Partners with NE SARE
Small Farms Program communications coordinator Violet Stone will now also serve as the NY State SARE outreach coordinator. SARE (Sustainable Agriculture Research and Education) is a USDA competitive grants program administered regionally. SARE provides grants and information to improve profitability, stewardship and quality of life for farmers and their communities. Look for the new SARE Spotlight on Page 11 to learn about upcoming grant opportunities and read stories of how farmers use SARE grants to improve the profitability and stewardship of their farms.

2007 NY Small Farms Summit Report Posted Online
The Small Farms Program is pleased to announce that the publication "Enhancing the Viability of New York's Small Farms; Report on the 2007 NY Small Farm Summit and State-Wide work teams" is now available online. The Report captures the critical issues that arose during the November 29th meeting and highlights the growing momentum of the four Small Farms Work Teams since last fall.

The 2007 Summit provided an opportunity to ask questions and raise concerns directly to Patrick Hooker, NYS Commissioner of Agriculture, and Mark Kenville, Center for Dairy Excellence. Out of that dialogue, the Small Farms Program was pleased to gain Jim Barber, Assistant to the Commissioner, as our designated Small Farms liaison at NY Agriculture and Markets.

The other major emphasis of the November 29th program was on four new statewide Work Teams addressing Livestock Processing, Local Markets, Grasslands Utilization and Beginning Farmers. Three of the Work Teams were funded by Cornell Small Farms Program extension mini-grants to address priorities that had been identified at the 2006 NY Small Farms Summit. Summit participants offered valuable input to the Small Farm Work Team's proposed plans of action and generated new regional concerns and priorities.

To view the most recent activities of the Small Farms Work Teams, visit: www.smallfarms.cornell.edu/pages/projects/workteams.cfm. To download a copy of the 2007 Summit Report, visit: www.smallfarms.cornell.edu/pages/projects/smallfarmssummit.cfm.

NY Beginning Farmers Project Launches Interactive Website
"What are my marketing options?" "How can I finance my farm start-up?" "What should I grow on my land?" If you have questions about starting a farm or are considering diversifying your farm enterprises, the new NY Beginning Farmers Resource Center at http://beginning-farmers.cce.cornell.edu can offer you information and inspiration to help you begin.

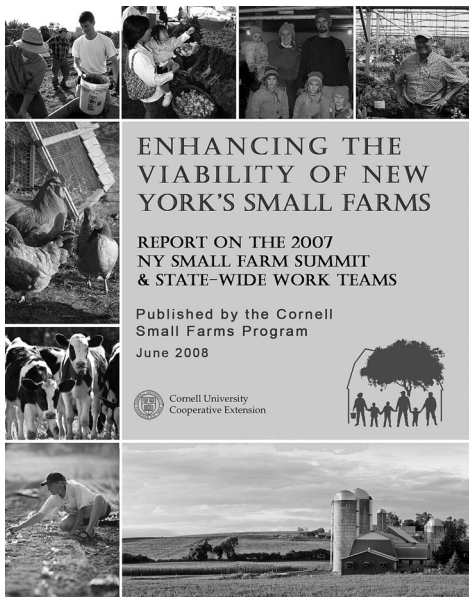
This interactive website offers a forum where new farmers can swap ideas and stories and ask specific questions. It also contains lessons that walk new farmers through the steps of starting a farm business, including setting goals, evaluating land, and learning about markets and regulations. Online worksheets embedded in the farm planning lessons allow new farmers to respond to questions and apply what they learn to their own situation, then download their completed worksheets for later use in a business plan if desired.

The site was developed by the NY Beginning Farmer Project, which is working to build the Grow Local movement to support the Buy Local movement. The NY BFP is funded by the NY Farm Viability Institute and Cornell Cooperative Extension and is a project of the Cornell Small Farms Program. Please visit the NY Beginning Farmer Resource Center online at http://beginningfarmers.cce.cornell.edu.

Local Markets Summit Identifies Statewide and Regional Issues
What are the most effective strategies to expand local market opportunities for New York's small farms? This was the mission presented to attendees at the Local Markets Summit on July 17th at the White Eagle Conference Center in Hamilton, NY. The Summit was organized by the Small Farms Work Team on Local Markets and attracted leaders working on strengthening farm-to-market connections around the state.

The proceedings from the Local Markets Summit are being compiled in to a complete report to be published in September. The report will be mailed out to survey participants, summit attendees, key local food/market stakeholders as well as policy groups across the state. Stay tuned for an online download available from the Small Farms Program website.

The Small Farms Work Team on Local Markets was organized in the summer and fall of 2007 to strengthen collaborations among the many agencies and organizations committed to developing local food market efforts. To learn more about the work team or view the survey questions/responses, visit: www.smallfarms.cornell.edu/pages/projects/localmarketworkteam.cfm



New RMA pasture and forage insurance program piloted in New York State
The Small Farms Program's Fay Benson is working with the USDA Risk Management Agency to get the word out about a new insurance program for pasture and forages, which is being piloted in the Southern Tier region and in Cortland County, NY.

The Pasture, Rangeland, Forage (PRF) is an insurance program for farmers who want to manage the risk of weather fluctuations on their pastures and forage fields. The program began last year in parts of the country including Pennsylvania. This year the RMA is including the NY Southern Tier and Cortland County. If farmers find it useful it will be offered across the US.

The deadline for signing up is November 30, 2008. There will be meetings held in the included counties this fall. For more information contact Fay Benson at 607-753-5213 or afb3@cornell.edu. For a complete description of the program visit www.rma.usda.gov/pubs/rme/prffactsheet.pdf.

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GRAZING

From pasture to palate...

Penn State study shows consumers find grass-fed beef acceptable

Penn State College of Agricultural Sciences news service

High feed-grain prices and the growing interest in "natural" foods have spurred both consumers and farmers to consider grass-fed beef, and a recent study done by Penn State College of Agricultural Sciences researchers may reinforce this trend.

According to John Comerford, associate professor of dairy and animal science, the study showed that most consumers find the taste and tenderness of grass-fed beef acceptable in blind taste tests. He recommends that producers look for ways to interest more potential customers in grass-fed beef.

"There are also some important human health benefits related to components of grass-finished beef," said Comerford, who oversees the University's beef research and extension programs. "While there is no difference in the cholesterol content of grass-and grain-finished beef, and the limited amount of conjugated linoleic acid in cooked steaks is too small to do much for human health, there is still an advantage in the increased omega-3 fat content in grass-fed beef."

Emily Steinberg, who recently completed her master's degree in the Department of Dairy and Animal Science, conducted consumer evaluations of cooked grass-fed beef steaks and analyzed production issues for farmers. Her work suggests that some of the preconceived notions held by farmers about the physical type of the cattle and the length of the grazing season needed for high-quality grass-fed beef may not be true.

"The results of the study showed that most consumer evaluations of the cooked meat were not influenced by frame sizes of the cattle, weight at harvest, range of grazing period from 120-180 days, and final fat composition of the carcass," Comerford explained. "However, all of the cattle must have plenty of high-quality forage to consume daily plus be harvested at 18 months of age or less. None of the production practices or consumer values studied were related to the final fatty acid profiles or cholesterol content of the steaks."

Comerford notes that these results give grass-fed beef producers tremendous flexibility in the kind of cattle they feed and the way they market their cattle. "Not surprisingly, we found finishing productive, healthy cattle on good pastures and stored forages for at least 120 days is far more important to consumer acceptance of the product than cattle's frame size or how fat the animals are.

"In fact, we found cattle that had the fattest final carcasses actually had lower scores from the consumer panels because of the influence of fat on beef flavor," Comerford said. "Further research will attempt to reduce the inconsistency of consumer scores for many traits of the meat by post-harvest interventions such as marinades and carcass aging."

Non-dairy Livestock

Managing A Sheep Breeding Season

By Ulf Kintzel

Most sheep breeds start to cycle when the days get shorter, typically in August or even late July. That allows for breeding anywhere between August and January when the days are again getting longer. There are some breeds that breed out of season, but in this article I will exclusively talk about a fall/winter breeding season.

The question of when to start breeding is best answered by another question: When do you want your lambing season to start? Then you count 145 days backwards and you have your starting day of breeding season.

EWES

A ewe cycles anywhere between every 14 to 21 days, with the average being 17 to 19 days. That means the bulk of the lambing season can be done within three weeks. A few ewes will return to season when they didn't get pregnant the first time around. Just a few ewes should return to season. If many do, it is likely that there are fertility or conception problems. I cull any adult ewe that returns to season a second time.

I routinely breed female lambs that were born in the spring of the same year. Since I start my main breeding season in November, these

This ewe is in excellent body condition to be bred.

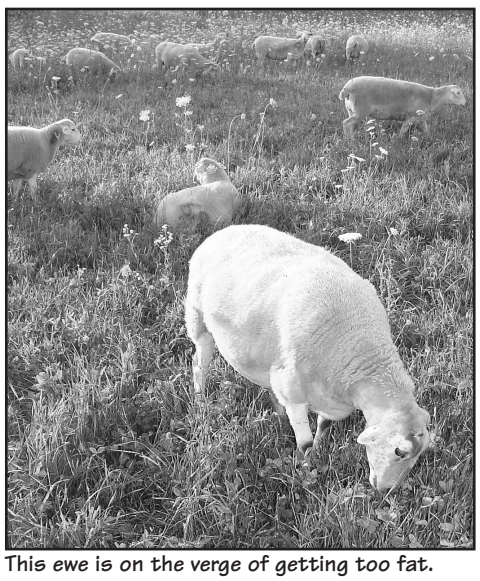
lambs are between 7 and 8 months old. About 90 to 95 percent of these lambs get impregnated the first year. The remaining percentage will breed the year after. However, one has to take into account that a good percentage of these lambs may not cycle in November just yet and will breed later in December and January.

Ewes should be in good body condition just before and during breeding season. It is obvious to many that a ewe that is too skinny may be a problem. It is less obvious to some that a ewe which is too fat can be just as much of a problem. Fat ewes have often a hard time getting pregnant.

FEED AND ENVIRONMENT

You may have heard about flushing. Flushing means that the ewes are offered better food two to three weeks prior to breeding. This can be better pasture as well as an increase in grain feeding. Mother Nature then tells the sheep's body that times are good and that the ewe can raise more lambs. The ovulation rate increases. The effectiveness of flushing is limited when the ewes are already in good condition. However, it is still a good idea to put the ewes in good pasture prior and during breeding.

It is equally important to reduce any stress during that time. Stressed ewes ovulate less. In addition, many lambs are lost just after they have been conceived if the ewe is stressed. Stress can be caused by heat, pain, thirst, parasites etc. I suggest a pasture that offers shade if there may be still warm weather in September or October. It is not so much because the sheep couldn't take a day with 80 degrees without shade. It is merely for their comfort.



This ewe is on the verge of getting too fat.

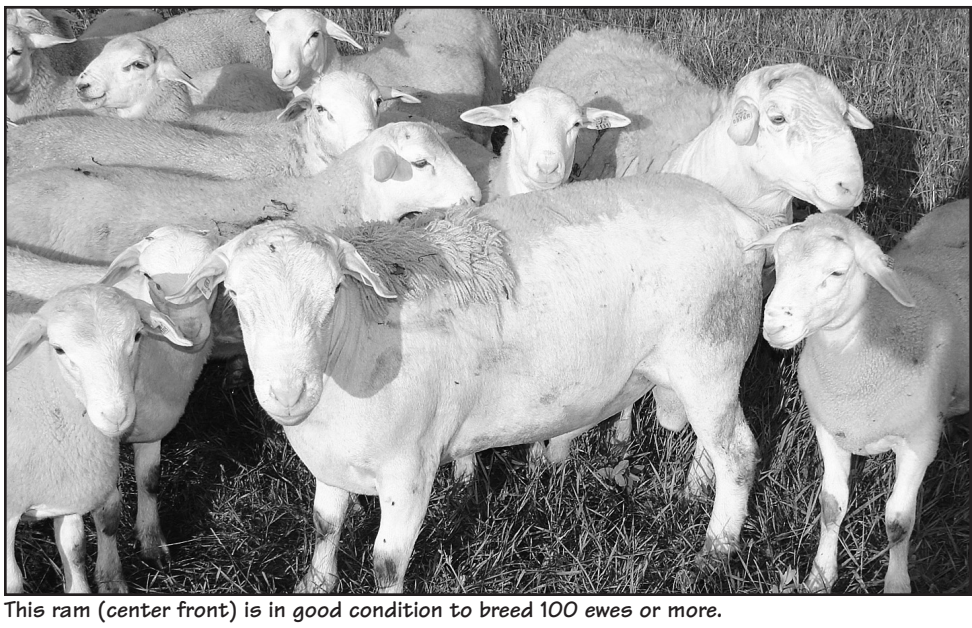
I also always offer fresh water and free choice minerals. I make sure that any limping sheep I may have is treated and healed prior to breeding. I reduce the activity of my herding dogs to a minimum during that time by styling my rotational grazing system so that my need for a dog is limited. I also de-worm all my breeding ewes prior to breeding. Should you have ewes that are soiled in the rear I suggest clipping those spots so that the ram can actually breed those ewes.

Many publications suggest not putting sheep into pasture with lots of Red Clover since its estrogen-like substance will keep the ewes from breeding or will reduce the ovulation rate. I have not had this experience. I recall a study that was made in East Germany (where I grew up) that concluded that there was no such influence of Red Clover. I have grazed my sheep on pasture with very high Red Clover content and have found no adverse effects. I am currently improving most of my pasture with Red Clover. I will report additional findings in the future.

RAMS

I prepare the rams for breeding season by cutting their hoofs well before it and I de-worm

These female lambs will be well over 100 lbs in the fall and can be bred at the age of 7 months.



This ram (center front) is in good condition to breed 100 ewes or more.

them. A ram should be in good condition before breeding. He will certainly lose weight during that time.

The question that I am often asked is "How many ewes can a ram breed?" It varies greatly. Many books and articles will tell you that a ram can breed only about 30 to 50 ewes. I have always expected an adult ram to breed 100 to 120 ewes in one cycle. I have never been disappointed. There are breeds that are considered "lazy" breeders and they may indeed not be able to breed that many ewes during a breeding season.

Experienced rams should be calm breeders and not fighters. I expect an experienced ram to breed a ewe in season and move on and look for another ewe in season, and not try to breed the same ewe over and over again, ignoring all the other ewes standing around him waiting to be bred. I also do not tolerate aggressive rams. Rams that are busy hitting people have no place at my farm.

I use a marking harness to track the breeding. The harness is worn by the ram, and carries a colored crayon marker which marks the back of every ewe that he breeds. There are several different kinds of harnesses on the market. Some of them tend not to stay in place. I have found the "Cross Your Heart" breeding harness from Premier is the most likely to stay in place. Marking crayons also come in three different temperature versions: warm, mild, cold.

I start with a lighter colored crayon marker (such as yellow) and keep the same color for about one cycle, usually 17 days. Then I switch to a darker color such as blue to be able to identify those ewes that have returned to season. In other words, blue will cover yellow. Since the harness can be tough on the ram over a period of several weeks, I remove the harnesses after two cycles, but usually paint the chest of one ram with a twist stick marker to be able to identify late breeders or sheep that continue to return to season.

Should there be a need for a second or third ram to avoid inbreeding I suggest that you separate groups of ewes into separate pastures, and that you use different colors for different rams The color remains on the ewe until spring, so you can identify when the ewe was bred and by which ram.

I also recommend writing down all details such as the beginning date of your breeding season and which ram had what color at what time. If you think you will remember take my word for it: You won't.

Last but not least, make sure you have your rams in a secure area BEFORE breeding season. Rams can be inventive to get to the ewes. If I had a dime for every time somebody told me that the breeding season was determined by the ram getting out of his paddock and in with the ewes.....

Ulf Kintzel owns and manages White Clover Sheep Farm (www.whitecloversheepfarm.com) in Rushville, NY where he breeds grass-fed White Dorper sheep.s

BUSINESS MANAGEMENT

Savings in Fuel, Fertilizer Bring Economic and Environmental Rewards

Some farms are finding that reducing fuel and fertilizer can reap rewards for the pocketbook, as well as the environment

By Rebecca Schuelke Staehr

As fuel and fertilizer prices continue to rise, farmers are increasingly looking at measures to control input costs. Three projects funded by the New York Farm Viability Institute explore how more deliberate and measured use of fuel and fertilizer can pay off economically and environmentally.

SAVINGS BEGIN AT HOME: Farms can reduce purchased fertilizer costs by conserving ammonia from animal manure.

A two-year research project led by Shawn Bossard, Executive Director of Cornell Cooperative Extension of Seneca County. explored ammonia losses from several manure application systems including surface spreading, drag hose and Aerway incorporation, and chisel injection, on three New York State farms.

Inspired by outreach efforts from this project, one farmer in Rensselaer County purchased an Aerway unit to begin incorporating the farm's manure. The farmer reported reductions in purchased nitrogen costs of $90 per acre over 200 acres, or $18,000 annually, after equipment costs.

All farms participating in the study found savings, although amounts and rates varied, as each manure application system was suited to unique conditions of the individual farm.

One western New York farmer found that switching from injector chisel shanks to an Aerway mounted behind the manure tank saved wear and tear on equipment and reduced fuel use by approximately 2 gallons per acre.

In addition to cutting the fuel and fertilizer bills, incorporating manure into soil can cut down on odor and runoff, Bossard said.

For more information on this project contact Shawn Bossard at (315) 539-9251 or seb38@cornell.edu. Read the final report at www.nyfvi.org/past-projects_dairy-a.asp.

LESS CAN BE MORE: Precise application of nitrogen to field corn has the potential to reduce the cost of fertilizing and environmental impact, without hurting crop yields.

Projects like the NY Guide to Sustainable Viticulture Practices are helping growers, like this Finger Lakes vineyard manager, reduce fuel and fertilizer use.

A project spearheaded by the Cornell Nutrient Management Spear Program evaluated the Illinois Soil N Test (ISNT) as a tool for identifying the need for additional nitrogen, particularly in first, second and third-year corn after alfalfa. Project leader Quirrine Ketterings is an Associate Professor with Cornell University Department of Crop and Soil Sciences.

To obtain an estimate of potential N release from readily available organic N sources, sampling should not take place within 4-5 weeks after application of manure or fertilizers that contain ammonium, after sod or cover crop plowdown, or chemical kill.

Results of the first 3 years of field trials showed that soil samples taken to 20-cm (8 inch) depth and analyzed for ISNT could predict the need for additional nitrogen, beyond starter fertilizer, for corn in New York State. Of the 16 first year corn farm sites in the study, none was responsive to sidedress nitrogen.

"We changed our practices. We used to apply manure to first year cornfields. Now we use just 30 lbs. of N in the starter band for first year corn and we target the second year fields with manure," Marvin LaGrange, of LaGrange Dairy Farm in Fuera Bush, NY, said in a case study developed through the research project.

With some farms previously applying as much as 100 lbs of purchased fertilizer per acre, a reduction to 30 lbs, at prices of $.70 per lb, the savings can add up. For more information, contact Ketterings at (607) 255-3061 or qmk2@cornell.edu. Fact sheets and farm case studies are available at no charge at http://nmsp.css.cornell.edu/projects/Nitrogenforcorn.asp.

BALANCING ACT: Combining environmental management with cost savings measures is giving grape growers a reason to raise their glasses.

VineBalance is a joint effort by the wine and juice grape industry, Cornell Cooperative Extension, and the New York Department of Agriculture and Market's Soil and Water Conservation Committee to define and promote the use of sustainable growing practices on the 33,000 acres of vineyards in New York.

VineBalance is working with table, juice and wine grape growers to reduce production costs and increase environmental protection when it comes to fertilization, controlling weeds and pests, preventing erosion and more.

Through funding from the NY Farm Viability Institute, VineBalance developed a workbook, with input from growers big and small across New York State, that allows growers to assess their vineyards and plan changes to reduce environmental impact.

One Finger Lakes winery reported reducing nitrogen fertilizer use from 300 pounds per acre to 50 pounds per acre. The winery was not testing soil and applied fertilizer by best guesses. More- precise application saves the winery an estimated $125 per acre per year.

"At the farm level, completing workbooks and action plans will directly reduce input costs, increase quality, connect growers with cost-sharing funds for conservation, and improve crop marketability," said project leader Tim Martinson, a statewide viticulture educator with Cornell Cooperative Extension. "At the industry level, adoption will reduce environmental risks, improve neighbor relations, enhance consumer awareness, increase repeat sales at tasting rooms, and facilitate product marketing to major wine and juice purchasers."

Some growers in the Northeast said they are looking at new production practices in response to vineyards in California, Washington and Oregon that have adopted sustainable certification programs. Some retailers and consumers are demanding third-party certification, growers said. Atwater Estate Vineyards in Hector, NY added a message about its sustainable growing practices to its wine bottles. Other wineries and juice makers are considering similar moves.

Participants in the VineBalance program have reported the low-impact environmental practices are a boon to neighbor relations. Vineyards, as with other agriculture enterprises, are increasing finding themselves adjacent to new houses and neighbors, many of whom seek out areas with scenic views. Unfamiliar with agriculture, new neighbors may find spraying and other production practices alarming.

The New York State Department of Agriculture and Markets' Agricultural Environmental Management program endorsed the VineBalance workbook as Tier 2 worksheets for vineyards. Soil and Water Conservation Districts in each county can help growers identify cost-sharing programs to finance conservation practices that reduce environmental impacts of agriculture.

Printable copies of New York Guide to Sustainable Viticulture Practices are available online at no charge at www.vinebalance.com. For more information, contact Martinson at (315) 787-2448 or tem2@cornell.edu.

Rebecca Schuelke Staehr is a communication specialist for the New York Farm Viability Institute, a farmer-led nonprofit group that funds projects to help farmers increase profits. The Institute receives funding from the NY State legislature.
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COWS AND CROPS

Raising Dairy Calves... A Job for Mom?

The practice of letting cows raise their own calves is beginning to make a comeback on some small dairy farms

By Sara A. Zglobicki

It's funny, but when we picture young animals growing up, we typically picture them with their mothers. Unless, that is, you are imagining the typical dairy calf nowadays. Then images of calf hutches, little nursery pens and bottle-feeding come to mind. In this practice, calves are typically separated from their moms within the first 24 hours. This method of raising dairy calves has been the norm in the dairy industry for the past 50 years or so.

To some extent, raising calves separately from their mothers has become ingrained in our collective thinking in the dairy industry as 'the best way.' This is true so much so that many of us can hardly imagine raising calves any other way. To do so is ridiculous, even blasphemous, disregarding all that dairymen have learned over the last half century.

Or is it?

Depends on who you ask. The practice of letting either the moms or designated "nurse cows" raise the calves is beginning to make a comeback on some dairy farms. One place that this practice is returning is on the grazing dairy. This approach to calf rearing can fit very well into a grazing system.

WHY LET COWS RAISE CALVES?

Darrell Emmick, the NY State Grazing Land Management Specialist with NRCS, explains that allowing dairy cows to raise calves offers important health and social benefits for the cattle, as well as social and economic benefits for the farmer. Emmick described a number of these benefits at a pasture walk I attended this summer:

Benefits to the cattle
* Lower rates of disease, illness, and death among calves
* Faster growth rates in calves
* Lower incidence of mastitis in cows
* Avoidance of antibiotic resistance issues in calves when waste milk is not fed
* Additional growth factors are present in mother's milk

Social benefits to the cattle and humans
* Calves become accustomed to milking parlors at a young age; they are far calmer when they become part of the milking herd
* For grazing herds, calves learn foraging behavior and diet selection from mom
* Mother can teach calf to eat concentrates
* Less labor raising calves means more time for other activities
* Visitors, animal welfare advocates, and farmers themselves enjoy seeing happy calves and cows together

Economic benefits
* Lower vet bills
* Less labor required
* Less infrastructure such as calf hutches, buckets, pens
* No cost for milk replacer
* Faster growing calves
* Cows suckled by calves produced more milk
* Calves raised by mothers bred earlier when entering the herd
* Calves raised by their mothers produced more milk during their first lactation
* Shorter postpartum interval for cows sucked by calves

Of course, Emmick says, there are also challenges that come along with letting cows raise the calves, including:
* The need to sort out the calves before putting cows through milking parlor
* Calves may not be as tame as bottle-fed calves
* Cows suckling calves may not let down their milk as easily in the parlor
* Calves may be slower transitioning onto concentrates
* Loss of income from fluid milk, although increased growth rates and health of heifer calves usually more than compensates for this

MOTHER KNOWS BEST

Rob and Pam Moore of Nichols, NY are in their 8th season raising calves on cows. "Our preference is for mothers to raise their own calves," says Pam, "because nurse cows do not necessarily 'mother' calves just because they allow them to suckle. The learned behaviors are one of the biggest benefits we see in this approach to calf-raising, and the bond between mothers and their babies factors into this. Our calves learn from their mothers what to eat, what to avoid, how to come in for milking and most everything else they need to know to do well on our farm."

Very young calves are allowed to come through the milking parlor with their mothers, although for the first milking common practice is to leave the new calves and dams to bond. When they are a little older, the calves go to a special pen near the parlor while the cows are milked.

One thing the Moores emphasize is how important it is to be sure the calf nurses for the first time from its own mom. They've found that this is especially important with first calf heifers, and it can be a challenge with high producing cows as well.

NURSE COWS

Jim and Ann Phillips of Cortland, NY, use nurse cows to raise their calves. They keep the nurses and calves indoors for the first few weeks until the calves can identify the nurses as "mom." Nurses tend to be the cows that give poorer milk, have two teats or a tendency to kick, those that try to steal other's calves, low-uddered cows, and even those with mastitis. Banked colostrum is fed to the newborns. As far as the nurse cow-to-calf ratio goes, the Phillip's have found a 1:3 ratio to work well, whereas the Moore's use a 1:2 ratio.

The first few days through the parlor may take time, but, as Rob Moore attests, it's worth it. Allowing the calves to have a good first experience in the milking parlor helps them return more calmly when they return as milkers.

Both the Phillips and the Moores think that keeping calves suckling on nurse cows through the wormy season has kept their calves healthier. Jim Phillips feels that keeping their calves in nurse groups past the parasite season results in less exposure to parasites as well as calves building immunity to the parasites through their nurses' milk.

These farmers have noted that their calf chores are minimal, with no need to purchase, mix or feed milk replacer, or bed individual calf pens. In addition, they find their calves grow quickly and robustly.

Calves graze alongside their moms at Jim and Ann Phillips' dairy farm in Cortland, NY

CHALLENGES

While there are undoubtedly a number of benefits of bringing calves up on their moms or in nurse groups, there can be challenges to this method. As farmers face and overcome these challenges they often discover more benefits.

One of the challenges is the increased time it takes to drive the herd from the pasture to the milking parlor. Rob Moore especially identified with this challenge, saying, initially it took two hours to bring the cows to the parlor. Moms would wait for their calves in the lane while Rob tried to keep the cows moving. Overcoming this challenge took patience, Rob said, along with a good herding dog.

Another difficulty with keeping calves on moms or in nurse groups is that there's a greater chance of escapees. Calves sneak out under the fences unbeknownst to the farmer. Rob deals with this by raising the fences enough to let the calves wander if they like. For the first few days calves still have the natural instinct to hunker down and hide somewhere away from the group. Mother cow always knows where her calf and or foster calf are hiding.

Jim and Ann Phillips have dealt with this challenge by training their calves to the electric fence. At the field day Jim opened the gate into the next paddock for the nurse group, the calves rushed in, but stopped when they reached the perimeter fence. Calves learn quickly.

In the end, you are the manager of your farm and the one who makes decisions about which practices to employ and why. Raising dairy calves with their moms is not for everyone, and it may not work for you. But maybe it would?

Sara A. Zglobicki is a student at Cornell University working in international agriculture and rural development. Currently she is working in Guatemala and can be reached at saz22@cornell.edu.

We Want To Hear From You

We welcome letters to the editor - Please write to us! Or send a question and we'll do our best to answer it. We're also looking for beautiful, interesting and/or funny small farm photos to print.

Write or email Joannna Green,
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Resource Spotlight

What's Cropping Up? Newsletter

"What's Cropping Up?" is a newsletter distributed by Cornell University Crop and Soil Sciences Department aimed at giving growers, educators, and others insights into key agricultural issues of the day.

Cornell University Cooperative Extension faculty and staff in the departments of Crop and Soil Sciences, Entomology, Plant Breeding, and Plant Pathology regularly contribute to the bimonthly newsletter.

What's Cropping Up? presents some of most up-to-date research available in short, easy-to-read articles, summarizing the latest research in crop and nutrient management, soil heath, yield trials, and evaluations for control of insects, pathogens, and weeds. Recent editions have covered topics such as reduced tillage, Brown Root Rot of alfalfa, and evaluations for planting rates during this time of high prices.

Free subscriptions are available in either hard copy or electronic form by sending a request to the Crop and Soil Sciences Extension Office, 237 Emerson Hall, Cornell University, Ithaca, NY 14853, or by sending e-mail to lls14@cornell.edu. Back issues from the year 2000 to present are available online at: http://css.cals.cornell.edu/cals/css/extension/cropping-up/archive.\

GRAZING

Vanity Mowing

By Troy Bishop

I admit it. I do it. I want to do less of it. However, can you feel the subtle pressure to keep pastures manicured, as society and neighbors judge your management by the place you keep? Unfortunately, perception is reality in today's world.

Mowing is an activity that almost everyone likes to do, because it gives you instant gratification over Mother Nature and her merry band of weeds. When you get done, it just looks prettier, neater and well managed. You didn't even fathom that you created an agri-tourism moment by keeping your grass mowed and your animals outside. What person driving by wouldn't think, hey, lets get a picture!

And what about the economic boon for our friends at the implement dealership selling all those compact diesels and bush hogs? I dare say that my local iron men sell more of these than anything else, so who am I to question a neat and clean paradigm that affects the purse strings of so many?

Well for starters, the price of fuel alone, to conquer the grass jungle is quite painful to the pocketbook. The chasing of that clump of buttercup, knapweed or thistle tends to, at least for me, cost plenty in equipment repair, and we all know the price of parts these days. Lastly it takes my time, which is the resource I have the least of. It might be all right for a person stuck behind a desk all day to feel the wind in their hair and the smell of diesel, but not for me. If this bantering about clipping has left you just a little guilt-ridden, I have some thoughts to help you shift to a more carbon-neutral system.

I submit to you there may be a better way and it starts right at home. This mindset starts with some holistic thinking and continues with pasture management, utilizing your own natural mowers, who by the way, were created to eat forage long before there was iron and fuel. The big question is do your animals even know how to eat a pasture smorgasbord, which includes various undesirable (according to humans) plants?

Without formal training from Mom or Mom-like peers, how would they know or even try something new? Countless farmers telling the story of turning out the cows, only to watch them stand in a sea of green wondering what to do substantiate this modern problem. I say modern because today's dairy animals just haven't had the life experiences like other livestock sectors have.

This predicament of inexperience needs to be addressed by training your animals to the landscape along with transitional feeding and lots of patience before you can curb your mowing habit. Check out www.livestockforlandscapes.com or www.Behave.Net for more on this important topic.

We all want our pastures to look good. But sometimes ugly is better.

So your animals are trained but are you? If you want an efficient gang of mowers you must change your management. And maybe even complimentary, different classes of animals, such as bred heifers, stockers, draft horses or cow/calf pairs mixed with sheep and goats to do this landscape design. This diversity would be ideal but unlikely on many farms. What a shame.

20 years of sculpting pastures has taught me that stock density, paddock sizing and timing are the keys to keep weeds and seeds at bay. For me to be successful in a mowing venture, I must instill a herd mentality, and nothing does that better than frequent moves on smaller paddocks. While it is true that I tend to have larger herds of up to 100 head on 2 acres/day, it could be mirrored by 10 animals on a 1/3acre/day.

The cool thing about this practice is how efficiently the animals graze because they don't want their buddies to move in on their sweet spot. If you've ever been to a farm meeting when there was only one chocolate milk left, you know what I'm saying. What is not eaten is usually trampled into oblivion or fouled on. In the case of severe infestations of thistle, knapweed or multi-flora rose, try punishing them by seeding a salt block or minerals in the middle and look out!

It may be somewhat unsettling to be left with a battle zone of cowpies, stomped in herbage and teaming armies of manure movers but take heart, you have just mimicked Mother Nature's design plan. One only has to remember the vast herds that roamed the prairie as a testament to this perfect system.

If you placed a "pasture cam" on my roughed up pastures you will notice within one day there will be holes all through the ground and manure as nutrients begin moving below. On day two, little yellow springs signal new plant growth using all that fertile water to their advantage. And on day three as if by magic my flock of turkeys and crows busily go through each brown food plot to harvest emerging juicy and delicious bugs and play manure spreader.

You can't believe how fast this effect gets compounded day after day until the forage is ready to be munched again, minus the weed weaklings. Don't get me wrong, I don't mind having so-called weeds (forage), like dandelion, lambsquarter and knapweed around because they add diversity to the sward along with high nutrition and medicinal qualities as well as an indicator of fertility needs. I'm just fine with what Mother Nature intended for me to have, given I work with her not against.

If you don't have the animal power to control the weeds, I would suggest consciously letting your pastures get a little ugly and get the most bang for your mower buck by shredding the undesirable plants when they are the most vunerable, before they set seed. It can be very tough to let yourself view uglyness till July, but it will curb next year's crop considerably.

I am still far from perfection when it comes to this mowing quandry, but I will let you in on a little secret. I do maintain our closest 4 acre picture window view of grassland with some fossil fuel mostly for my cul-de-sac neighbors and invited guests to the farm. When folks venture up the drive and see our painted barns, my wife's beautiful garden and green landscape, perception really is reality, even though they have no clue on how hard and expensive it is to maintain the "look" of a farm they read about in their childhood.

I figure with all the soil savings, carbon sequestration and sun-inspired meat we grow that it would be ok to exercise our pre-1974 tractor's and mower's oil. If nothing else, mowing scares up insects for my tree swallow friends, warms tractor gears for winter and provides time-lapsed therapy for my heavy metal disease.

Troy Bishopp is a fourth generation farmer-grazier and a grazing specialist with the Madison County, NY, Soil and Water Conservation District. You can reach Troy at 315 824-9849, or email troy.bishop@ny.nacdnet.net. This article first appeared in the August 23 issue of Lancaster Farming, and is used with permission. Visit Lancaster Farming at www.lancasterfarming.com.

Forest and Woodlot

Update on White-tailed Deer Diseases

By Gary Goff and Rich Taber

Pennsylvania and NY State are home to nearly 3 million of these graceful, beautiful animals. From the dense, cold forests of the Adirondacks, to the farmlands of the Finger Lakes and Pennsylvania, to the suburban landscapes of the Lower Hudson valley and Philadelphia, the white-tailed deer thrives in nearly all regions of PA and NY.

They are also victims of several diseases. Two diseases that deer acquire are relatively new to the region, namely Epizootic Hemorrhagic Disease and Chronic Wasting Disease. Neither of these is transmittable to humans. The purpose of this article is to give a brief overview of the diseases, sources of additional information and contact information to report suspected cases of the diseases.

EPIZOOTIC HEMORRHAGIC DISEASE

The first disease of interest is Epizootic Hemorrhagic Disease (EHD). This is an infectious viral disease in deer, carried and transmitted by biting midges or no-see-ums. The disease is of no health risk to humans and occurs very rarely in domestic animals. The disease was first documented in the northeast in 1955 in New Jersey, and is a "native" and fairly common disease in the southeastern US.

The first diagnosed cases were seen in PA in 1996 (not actually confirmed), 2002 and 2007. NY's first confirmed cases occurred in the fall of 2007. About 120 infected animals were found in Albany and Rensselaer counties and two in Niagara County. Outbreaks of the disease tend to be sporadic and more common and severe at the end of long summers. The disease ends for the season with the first hard frost that kills the midges. Because the disease is rare in the northeast, deer have not built up immunity and virtually all infected deer die within 1-3 days of appearance of symptoms.

Clinical signs of EHD include:
* hemorrhaging, with formation of blood clots and damage to blood vessels
* swelling of eyelids, tongue, and lips
* deer appear feverish and stay close to water sources
* respiratory distress, with white and red foamy fluid flowing from the mouth and nose

More information on EHD is available at: www.uga.edu/scwds/HD.pdf and at www.pgc.state.pa.us/pgc/cwp/view.asp?a=465&q=172441. To report suspected cases of EHD in NY State contact: DEC Wildlife Pathology Unit: 518-478-3032. In PA call 724-238-9523.

CHRONIC WASTING DISEASE

Chronic Wasting Disease (CWD) is also a new disease in the northeast region. It was first documented in 2 captive deer herds in central NY State in 2005 and subsequently found in 2 wild deer in the same area. Despite intensive sampling of deer since then (about 8,000 annually), no new cases have been discovered in the state. CWD was also documented in wild deer in WV in 2005, and a few deer have been diagnosed with the disease annually since. To date, no deer have been documented with the disease in PA.

The disease was first discovered in a captive deer herd in CO in 1967. Since that time it has been found in wild deer, elk or moose in Colorado, Wyoming, South Dakota, Nebraska, New Mexico, Wisconsin, Illinois, New York, Kansas, Utah, West Virginia, and two Canadian provinces.

CWD is a neurological degenerative disease that belongs to the family of diseases known as transmissible spongiform encephalopathies or TSEs. Other TSEs include bovine spongiform encephalopathy (BSE or mad cow disease) in cattle, scrapie in sheep, and Creutzfeldt-Jakob disease (CJD) in humans. The disease is caused by abnormal prions (pronounced "pree ons"). Normal prions occur in all mammal cells, but their function is unknown.

The abnormal form seems to transform normal prions to the abnormal form, resulting in essentially holes in brain tissue, hence the name spongiform. The abnormal form is very stable outside the body and resists break down by normal sterilization techniques and environmental forces.

CWD is spread by animal-to-animal contact and by environmental contamination. The disease usually does NOT cross to other species and there is no scientific evidence that CWD is transmissible to other animals or humans. Prions are concentrated in the brain, spinal cord, lymph nodes, eyes, tonsils, pancreas, and the spleen and to a lesser extent in muscle tissue.

The clinical symptoms of CWD in deerinclude:
* weight loss
* isolation and non-interaction with the rest of the herd
* nervousness
* excessive salivation, thirst, and urination

Once symptoms occur, the affected animals die within days or months. Up to 5 to 15% of wild deer can be affected in areas where the disease has been found, but the disease does not apparently devastate wild populations. Regulations imposed in NYS include:
* specific taxidermist regulations and reporting
* mandatory captive herd testing
* prohibiting the mixing of domestic deer with wild deer
* ban on importation of live deer, elk, and certain body parts into NY State
* a prohibition on the feeding of wild deer
* a requirement of retailers who stock deer feed to display signs on the prohibition of feeding wild deer

Hunters are encouraged to take the following precautions:
* do not consume deer that look sick or act abnormal
* wear rubber or latex gloves for field dressing deer
* minimize contact with deer brains, spinal cord, lymph nodes, spleen, or tongue
* bone out the meat
* clean and sanitize equipment with a 1:1 ratio of bleach to water
* dispose of unwanted carcass parts at sanitary landfills

For more information on CWD go to: www.cwd-info.org. In NY State report suspected cases to: 315-793-2557. In PA contact the nearest Game Commission Region Office.

White-tailed deer are valued as sources of inspiration, recreational activity, economic incentive, and integral components of our ecosystems. However, deer possess a tremendous ability to reproduce to very high population levels, which in too high concentrations can be conducive to the transmission of diseases that can be detrimental to their populations and of concern to human health and well-being. We must continue to monitor deer numbers and attempt to maintain their populations at acceptable levels.

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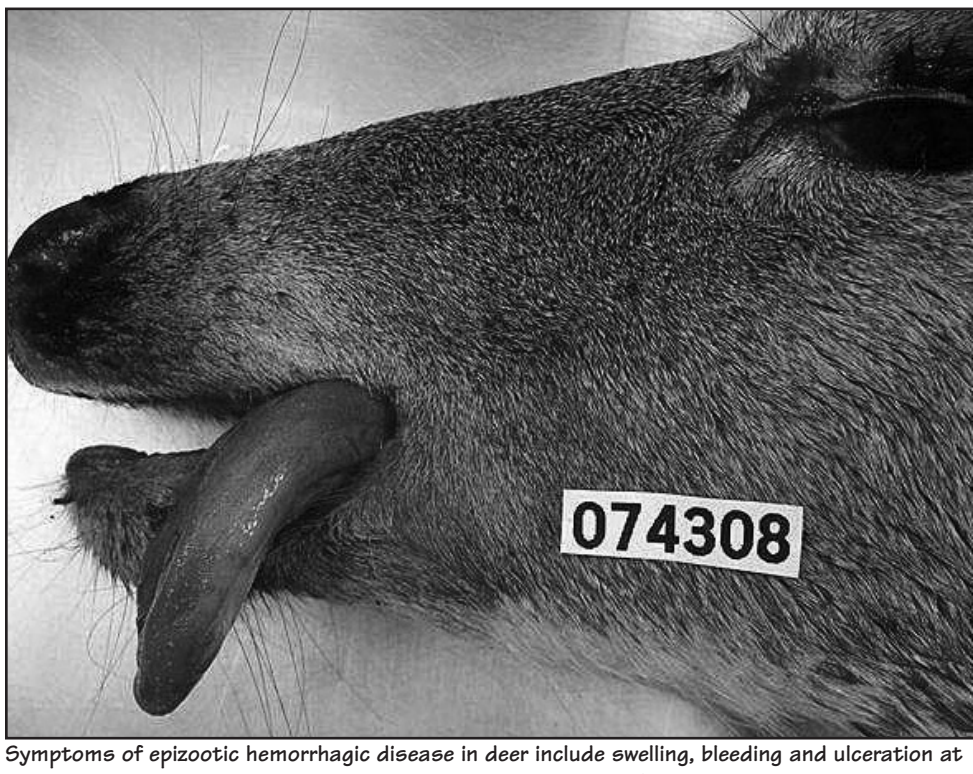
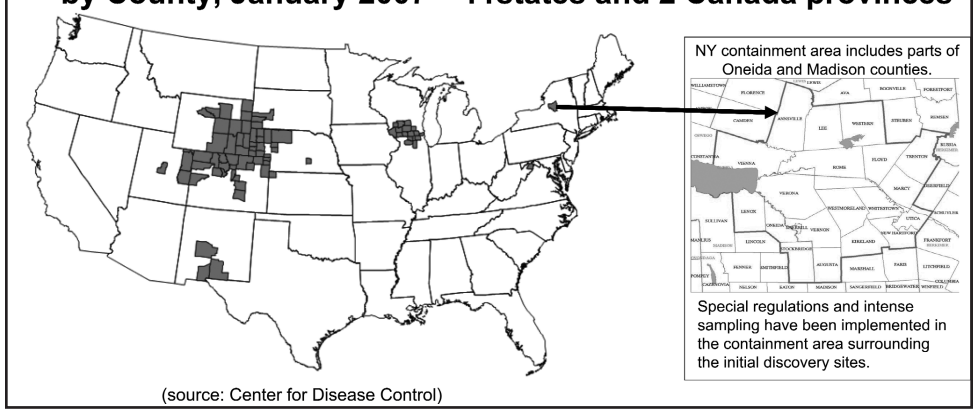


Symptoms of epizootic hemorrhagic disease in deer include swelling, bleeding and ulceration at eyelids, tongue and lips. Photo Source: Center for Disease Control and NYSDEC

Chronic Wasting Disease Among Free-Ranging Cervids by County, January 2007 – 11states and 2 Canada provinces



(source: Center for Disease Control)

Food for Thought

50 Million Farmers!

A leading Peak Oil expert predicts the US will need 40 to 50 million additional farmers in the next 20-30 years, as oil and gas availability declines

By Richard Heinberg

One way or another, re-ruralization will be the dominant social trend of the 21st century. Thirty or forty years from now-again, one way or another-we will see a more historically normal ratio of rural to urban population, with the majority once again living in small, farming communities. More food will be produced in cities than is the case today, but cities will be smaller. Millions more people than today will be in the countryside growing food.

They won't be doing so the way farmers do it today, and perhaps not the way farmers did it in 1900.

Indeed, we need perhaps to redefine the term farmer. We have come to think of a farmer as someone with 500 acres and a big tractor and other expensive machinery. But this is not what farmers looked like a hundred years ago, and it's not an accurate picture of most current farmers in less-industrialized countries.

Nor does it coincide with what will be needed in the coming decades. We should perhaps start thinking of a farmer as someone with 3 to 50 acres, who uses mostly hand labor and twice a year borrows a small tractor which she or he fuels with ethanol or biodiesel produced on-site.

How many more farmers are we talking about? Currently the U.S. has three or four million of them, depending on how we define the term. Let's consider Cuba's experience: in its transition away from fossil-fueled agriculture, that nation found that it required 15 to 25 percent of its population to become involved in food production. In America in 1900, nearly 40 percent of the population farmed; the current proportion is close to one percent.

Do the math for yourself. Extrapolated to this country's future requirements, this implies the need for a minimum of 40 to 50 million additional farmers as oil and gas availability declines. How soon will the need arise?

Assuming that the peak of global oil production occurs within the next five years, and that North American natural gas is already in decline, we are looking at a transition that must occur over the next 20 to 30 years, and that must begin approximately now.

Fortunately there are some hopeful existing trends to point to. The stereotypical American farmer is a middle-aged, Euro-American male, but the millions of new farmers in our future will have to include a broad mix of people, reflecting America's increasing diversity. Already the fastest growth in farm operators in America is among female full-time farmers, as well as Hispanic, Asian, and Native American farm operators.

Another positive trend worth noting: Here in the Northeast, where the soil is acidic and giant agribusiness has not established as much of a foothold as elsewhere, the number of small farms is increasing. Young adults-not in the millions, but at least in the hundreds-are aspiring to become Permaculture or organic or Biointensive farmers.

Farmers markets and CSAs are established or springing up throughout the region. This is somewhat the case also on the Pacific coast, much less so in the Midwest and South.

What will it take to make these tentative trends the predominant ones? Among other things we will need good and helpful policies. The USDA will need to cease supporting and encouraging industrial monocropping for export, and begin supporting smaller farms, rewarding those that make the effort to reduce inputs and to grow for local consumption.

In the absence of USDA policy along these lines, we need to pursue state, county, and municipal efforts to support small farms in various ways, through favorable zoning, by purchasing local food for school lunches, and so on.

We will also require land reform. Those millions of new farmers will need access to the soil, and there must be some means for assisting in making land available for this purpose. Conservation land trusts may be useful in this regard, and we might take inspiration from Indian Line Farm, here in the northeast.

Since so few people currently know much about farming, education will be essential. Universities and community colleges have both the opportunity and responsibility to quickly develop programs in small-scale ecological farming methods-programs that also include training in other skills that farmers will need, such as in marketing and formulating business plans.

Since few if any farms are financially successful the first year or even the second or third, loans and grants will also be necessary to help farmers get started.

These new farmers will need higher and stabilized food prices. As difficult as it may be even to imagine this situation now, food rationing may be required at some point in the next two or three decades. That quota system needs to be organized in such a way as to make sure everyone has the bare essentials, and to support the people at the base of the food system-the farmers.

Finally, we need a revitalization of farming communities and farming culture. A century ago, even in the absence of the air and auto transport systems we now take for granted, small towns across this land strove to provide their citizens with lectures, concerts, libraries, and yearly chautauquas. Over the past decades these same towns have seen their best and brightest young people flee first to distant colleges and then to the cities.

The folks left behind have done their best to maintain a cultural environment, but in all too many cases that now consists merely of a movie theater and a couple of video rental stores. Farming communities must be interesting, attractive places if we expect people to inhabit them and for children to want to stay there.

Richard Heinberg is a Senior Fellow of the Post Carbon Institute and author of eight books including The Party's Over: Oil, War and the Fate of Industrial Societies, Powerdown: Options and Actions for a Post-Carbon World, The Oil Depletion Protocol, and Peak Everything. This article was excerpted, with permission, from a lecture delivered to the E. F. Schumacher Society in Stockbridge, Massachusetts on October 28, 2006 (www.schumachersociety.org.) For the complete lecture, and for more information about Richard Heinberg and peak oil, visit: www.richardheinberg.com/museletter/175.

New Farmers

Small Dairy Success Story

An FSA loan helped Doug Durkee and his family get off to a strong start on a rented farm

By Rebecca Ferry

Doug Durkee and his family have a successful 50 cow dairy operation in Fort Ann, NY. It is made up of Doug and his wife Sandra and three kids Douglas, Allison, and Olivia. Sandra home schools the kids and also works part time in art at the local school. The kids help out some on the farm and enjoy working with the cows. Doug's father Willard and brother Donald have the home farm 3 miles away from Doug's rented facility.

It started like most dairies with humble beginnings. Doug grew up on his father's farm with his brother. After High school he worked for the family farm with his brother and father. But Doug realized the farm was not big enough to support them all, so he went to work for the Town Highway Department. He worked there for 8 years learning some valuable skills, like how to weld.

While he was working for the Highway Department he did relief milking and chores for different farms in the neighborhood. One day, while working under a truck, he came to realize that he really wanted to farm. Then came the tricky part of figuring out how he was going to make his dream come true.

He would have loved to go and take over the home farm but his father and brother were still running that and they didn't want to expand. So he found a farm to rent up the road from his father's, which helped him get started because both farms could share equipment and labor for crops.

The beginning was a struggle, as it is for many people starting out. He went to banks and they said it was a big risk without much equity to make a loan just on character even though everyone could see he had tons of character, drive, desire, and the passion that is needed to succeed. So then he met with Farm Service Agencies' Loan Officer Randi Sheffer and talked things through.

Since FSA is a supervised banking system Randi took the time to go through the projected numbers and helped Doug find prices to be able to make better decisions. Doug received numerous amazing recommendations from the farms he had worked on for all those years helping out.

With a lot of hard work, Doug and Randi were able to put together a feasible plan and FSA was able to make the loan to get Doug's dream started. After all, FSA is known as the "Lender of First Opportunities!"

Doug started by purchasing all his feed, that way he could focus on the cows. After a few years he found some additional land to rent and started growing his own crops. He cooperates with his father and brother to work the land and get everything done. It's a great thing to see farmers working together and sharing resources like this.

The biggest mistake Doug feels he has made thus far is with young stock. The rented farm didn't have any real place for young stock so after talking with other professionals he decided to sell his calves and planned to buy springing heifers for replacements out of cash flow. However the milk price dropped and there was no extra cash to buy in the replacements when they were needed.

As a result he became short on cow numbers and had to borrow money to get back up where he needed to be. He worked out an arrangement with his family for them to raise his heifers down at that farm in exchange for more labor in cropping season.

Doug has attributed his success to listening and learning from the local farmers and his family. When he was growing up he worked with cows but didn't feel the desire to work with them everyday. He liked the crops and tractor work more but now he would rather be in the barn all day than being out in the field. He always took pride in watching crops grow in the field, but now has an even greater feeling of satisfaction watching his cows develop over the years.

Doug with Durkee-D Mich Sunny-D and Allison, Douglas, Sandra, and Olivia.

Photos by Rebecca Ferry

Doug and his wife have some advice for the future young farmers.
* Always make sure you have enough equity that you can sell out and not still have debt.
* The cows need to be the focus of the farm
* Always be willing to share information and learn from others.
* Make sure you have a support system.
* Do a yearly analysis. It helps with understanding what has happened during the year and projecting for the next year. And it really helps when you see that equity number go up and up every year.
* The most important is to love farming!

Now Doug has graduated from the Farm Service Agencies programs into the Farm Credit system and hopes to be able to purchase a farm in the next few years. He and his family are weighing the options of buying a different farm or staying at this one but having to build a heifer facility there.

The Durkee family is planning ahead and figuring out what would be the best plan for the future of their business. They are just one of many small farm success stories in New York's agricultural industry.

Rebecca Ferry is a Farm Loan Officer Trainee with Farm Service Agency in Greenwich, NY. She can be reached at 518-692-9940 ext 2, or Rebecca.ferry@ny.usda.gov.

Resource Spotlight

USDA Agriculture Loans for Youth

Youth between the ages of 10 and 20 may may be eligible for loans of up to $5,000 to buy livestock, equipment, and supplies; buy, rent, or repair needed tools and equipment; and pay operating expenses for running the project.

USDA's Farm Service Agency (FSA) makes operating loans to individual rural youths to finance income-producing, agriculture-related projects of modest size in connection with their participation in 4-H clubs, Future Farmers of America, and similar organizations.

Each project must be part of an organized and supervised program of work. The project must be planned and operated with the help of the organization advisor, produce sufficient income to repay the loan, and provide the youth with practical business and educational experience in agriculture-related skills.

To apply or learn more about youth loans or other loan programs, contact your local USDA Service Center at www.fsa.usda.gov/FSA.

HOME AND FAMILY

Agrarian Domesticity

By Shannon Hayes

"Farmers are the new rock stars." That's the word in the papers and on the street. Chefs slip us their business cards, customers bring their children to meet us. Reporters schedule interviews six weeks out. As our nation trembles under the burdens of climate change, credit card debt, home foreclosures and fuel costs, farmers are 'the new cool.'

We exist in harmony with the earth, grow our own food, live within our means, don't try to earn the big bucks, and we're keeping the local economies alive. So the next generation digs us. Heck. They dig more than us. They dig our compost and our potatoes, too.

After years of lamenting "there's no good help anywhere," bright, enthusiastic, hard-working twenty-somethings are breaking down our fences for a chance to learn to be a farmer. It's a good thing, too. We seriously need young folks to take an interest in our work.

Within weeks on our land, these kids are evaluating pasture, doing chores, milking, building shelters, pounding fence posts, boning out pork butts and castrating livestock. They walk shoulder-to-shoulder with my dad in the fields, growing strong, confident and capable.

Meanwhile, I, his daughter, after 30 years on the land, share few of their skills. I don't know the chore routine by heart, I'm lousy with a hammer, it's been ages since I've castrated anything.

Growing up, my brother was directed to feed the sheep after school. My job was to tend the chickens and wash the dishes from breakfast. On weekends, he helped trim hooves and deworm the flock. I learned how to speed-clean. While I did a share of pitching manure, wrestling livestock and stringing fence, there was a definite division of labor along gender lines.
As a teenager, unsure whether I was too fragile or too incapable to do "the real farm work," I directed my attention instead to learning to cook pork chops so they didn't dry out. I took elderly farm neighbors to the grocery store and to their doctors' appointments. I helped in their gardens, scavenged for wild blackberries, then stood in the kitchen to make jam.

Today we have as many female interns come to the farm as male. They work in harmony with my folks, all equals in strength and skill. I hold a share in the family business and invest many hours into its well-being, but I still don't share the intern's skills with the livestock. Should I call myself a farmer?

Perhaps the division of labor while growing up was an expression of the innocent sexism that existed within the old farm culture. Maybe it was a personal choice regarding how I contributed to the family. Either way, today I am not exactly a farmer. I prefer to think of myself as a Commanding Officer of Agrarian Domesticity -- a.k.a. "farm wife".

And while the twenty-somethings are signing up for university sustainable agriculture courses and applying for internships to become farmers; I wonder how long it will take them to learn the skills they need not just to work the land, but to run a farm as a way of life.

If farmers are the rock stars out in the fields, then we Commanding Officers are more like the drummers, base players, back-up vocalists, agents, and business managers. We keep the music going at a steady beat using a set of skills that are nearly obsolete in this culture. If anyone out there is interested in an Agrarian Domesticity internship, below is a job description:

Job Title: Assistant to the Commanding Officer of Agrarian Domesticity
Description: Gain valuable experience putting the "quality" into a quality of life. Learn to complete a series of daily tasks essential to maintaining your family farm as a home and business*:

* Review bank statements, medical, fuel and feed bills for accuracy; maintain precise paper trails when discrepancies must be disputed.

*Develop communication skills to argue effectively in person, on paper or over the phone. Learn to do so tactfully, because these folks might be neighbors or cousins.

* Monitor the family budget and expenses, know where to stash money for a rainy day and how to negotiate with farmers to keep business expenditures in line.

* Identify socialization and learning opportunities for farm children or grandchildren that minimize expenditure of cash and gasoline. Protect non-farm playmates from typical agricultural hazards: protective sows, aggressive rams, guard dogs, watering holes, electric fences, rusty nails, etc.

* Cultivate relationships with benefactors of high-quality hand-me-down clothing.

* Generate a hot meal using fresh, local and seasonal ingredients for the family, other farm interns, and any extra help that happens to be present. Be prepared to generate additional meals for individuals the farmer invites in at the last minute, including neighbors, friends, family members or customers who drop by at meal time. Afterward, clear the table, wash dishes, store food, identify creative ways to make use of leftovers. Repeat every four hours.

* Change diapers, do laundry, pay bills, check in on neighbors, particularly the elderly and infirm.

* Oversee family bath time, story time, and bedtime, then pick up any toys, wipe down the kitchen and bathroom, tidy the house.

* Maintain a feeling of serenity and welcome throughout the home and business at all times.

In addition to daily chores, the intern can participate in myriad seasonal and weekly activities including:
* Sewing patches on Carhartts and refastening buttons on flannel shirts;
* Bringing farm products to market;
* Pickling, canning, freezing and lacto-fermenting enough fruits and vegetables to last through the winter;
* Rendering animal fats for lard and tallow; making soaps;
* Identifying other farmers with whom to barter for essential items such as maple syrup, honey or cheese;
* Coordinating trips to town for supplies to minimize fuel costs;
* Weeding the vegetable patch;
* Nurturing new customers and seeking new markets;
* Stepping in to assist in any duties the farmer may need help accomplishing; such as setting up the brooder, killing chickens, mowing hay, loading cattle, and on occasion, performing castrations.

Hours are flexible. Typical work days are about 12-14 hours, six days per week, you decide which hours to work. Only 8 hours required on Sundays. Come be a part of something great. This is work you will truly love. With more folks like you, we can generate great food, live within our means, create vibrant communities, raise joyful children, enjoy happy marriages, heal the planet and build a secure, sustainable future. Without you, the beat can't go on. All applications will be accepted on an ongoing basis.

* Once you've mastered the above skills, please be sure and teach me.

Shannon Hayes is the host of http://grassfedcooking.com and the author of The Farmer and the Grill and The Grassfed Gourmet. She works with her family on Sap Bush Hollow Farm in Upstate New York. Her newest book, Radical Homemakers: Reclaiming Domesticity from a Consumer Culture, is due out in September 2009.

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

NORTHEAST SARE

Sustainable Agriculture Research & Education

Welcome to our new Northeast SARE Spotlight! With each issue we will be sharing news and information from the Northeast Sustainable Agriculture Research and Education Program, including examples of how farmers are using SARE's Farmer Grants program to developing production and marketing innovations that help them become more sustainable.

Upcoming SARE Grant Application Deadlines

SARE, the Sustainable Agriculture Research and Education program, is a USDA competitive grants program administered regionally. SARE provides grants and information to improve profitability, stewardship and quality of life for farmers and their communities. The following grants are available to the Northeast States (Connecticut, Delaware, Massachusetts, Maryland, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia, and Washington, D.C.)

Sustainable Community Grants - Due December 2, 2008
Sustainable Community Grants involve organizations such as community nonprofits, Cooperative Extension, local governments, educational institutions, planning boards, farming cooperatives, and incorporated citizens' groups. The purpose of the Sustainable Community Grants program is to reconnect rural revitalization and farming. Most grants are capped at $25,000. Sustainable Community Grant applications are due in December 2. For more information, visit: http://www.uvm.edu/~nesare/grants_scomm.htm

Partnership Grant Program - Due December 9, 2008
Partnership Grants are awarded for on-farm research and demonstration projects developed by agricultural professionals who work directly with farmers. Grants are capped at $10,000. Partnership Grant applications are due December 9. For more information, visit: http://www.uvm.edu/~nesare/PARTinfo.html

Farmer Grant Program - Due December 16, 2008
Farmer Grants test new crops, practices and systems through on-site experiments and share the results with other farmers. Grants average about $5,200, and are capped at $10,000. Farmer Grant applications are due December 16. For more information, visit: http://www.uvm.edu/~nesare/FGinfo.html

Learn more about the Northeast SARE Program by visiting
www.uvm.edu/nesare
or by contacting:
Northeast SARE
655 Spear St.
University of Vermont
Burlington, VT 05405-0107
Phone: (802) 656-0471
Fax: (802) 656-0500
E-mail: nesare@uvm.edu

Farmers Market Frozen Food: Bringing Summer's Abundance to Winter's Supper

Ambrosia Farms of Bridgewater, NY, used a SARE Farmer Grant to create a brand new frozen food label based on locally grown heirloom vegetables

By Violet Stone

Farmers' age-old practice of carting their fresh-picked vegetables to the market square to sell to neighbors has experienced a popular revival in recent decades. But, as Saturday morning foot-traffic shifts from old main street shopping districts to big groceries and box stores at the edge of town, many village farmers markets still don't generate the crowds needed to support farmers' livelihoods.

With the help of a SARE Farmer Grant, Nina Bruno of Ambrosia Farms (Bridgewater, NY) re-invented the farmers' market concept, creating a brand new marketplace for small farmers to sell their vegetables in the form of a pure and natural frozen food line.

THE SARE PROJECT

Nina used the SARE funding to off-set the cost of purchasing heirloom fruits and vegetables from neighboring farms in addition to increased production at her home farm. All farmers were paid farmers' market prices for their "raw materials," an important factor in determining whether the product could successfully provide a viable wage to participating farmers.

As vegetables came in to season, Ambrosia Farms staff worked in the on-site commercial kitchen to lightly cook and freeze them in small packages. The vegetables were then stored for packing and distribution. The resulting product, called Farmers' Market Frozen Foods, enables locally grown produce to be sold in regional stores year-round.

"Frozen food is logical for Northeast farms, enabling preservation of abundant harvests in the short growing season", says Nina. Frozen food is also one of the fastest growing sectors of the processed food market.

Nina and her partner Gene

PRESERVING FARMING TRADITIONS

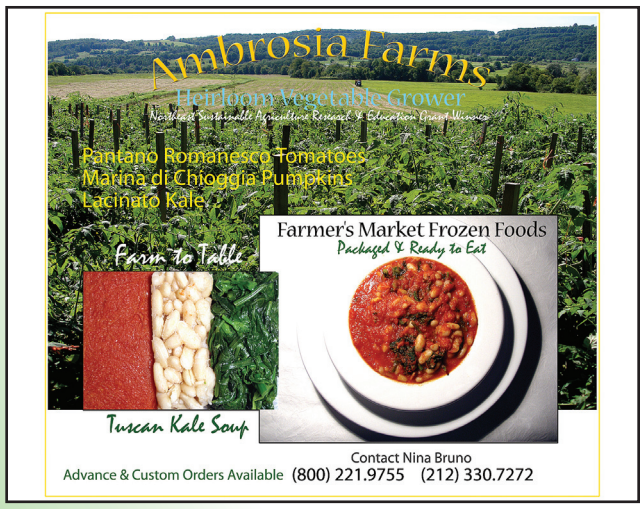
Any farmer interested in selling produce to Farmers Market Frozen Foods must grow heirloom varieties. Heirloom vegetables are grown from seeds that are open pollinated, meaning the seeds may be collected at the end of the harvest season and planted the following year.

Many of these excellent tasting varieties -- prized for providing pleasure to the palate -- have been left behind as hybrid or genetically altered breeds selected for grocery shelf life and shipping durability better meet the needs of a mass-transit agriculture. Nina hopes that marketing heirloom vegetables on the retail and institutional level will generate greater demand, ensuring these rare, genetically diverse varieties remain in circulation.

Another key goal of the SARE grant was to preserve the cultural authenticity of the seed's origin by packaging it with other heirloom vegetables paired in traditional recipes. Nina created a prototype frozen meal combination, called "Tuscan Soup", which includes Pantano Romanesco tomatoes, Cannelloni beans, and Tuscan kale. As the product line expands, she plans to create other meal combinations based on heirloom varieties and the cultural cuisine from which they originated.

MEETING FARMERS' NEEDS

One of the most unique aspects of Nina's plan to bring the farmers market concept into the frozen food realm is the flexibility it gives to farmers. As Nina says, "Farmers are independent people -- they want flexibility in growing different vegetables each year and a stable market for their fluctuating yields".



Label featuring Ambrosia Farm's Tuscan Kale Soup frozen vegetable combination pack. Photo by Nina Bruno

If local farmers have an outstanding heirloom tomato season, Nina intends to simply market more authentic Italian dishes. If there is a crop failure on heirloom cabbages, traditional Russian combinations might be limited in supply. And farmers are welcome to tweak their crop plans every year to include new heirloom varieties. In addition to combination packages, part of the plan for Farmers Market Frozen Foods is to sell individual bags of frozen vegetables - a locally grown, heirloom version of the common frozen peas or corn.

EXPANDING THE LABEL

Nina has accomplished her SARE project goal of selling 1000 Tuscan Soup prototypes to her existing customer base. Her next step is to pursue additional business opportunities, such as restaurant quantity packaging. In preliminary research, she found that some chefs are accustomed to the instant accessibility of canned vegetables, but it is her hope that educating clients about the higher nutrition of a frozen product and the benefits of supporting local farms will cancel out any preparation inconvenience.

Several years from now, she envisions farmers dropping off regular deliveries of heirloom vegetables at a much larger, centrally located commercial kitchen for processing. She believes firmly in continuing to pay farmers market prices for heirloom fruits and vegetables and expects to pass on the costs of processing and distribution to the consumer.

Nina is just getting started with the Farmers Market Frozen Food label, but her business is already remarkably accomplished in that it creates a model to unite two distinct and diverging food movements -- the slow and the fast - capturing the best of both. With frozen meal combinations such as "Tuscan Soup", she has found a way to supply the increasing demand for fast and easy-to-prepare meals while also providing local farms a fair payment for their product and preserving disappearing farming and cooking traditions.

Ambrosia Farms is currently taking advance orders on next season's product line. To place an order or to learn more about Farmers Market Frozen Foods, please contact Nina Bruno at 1.800.221.9755, 212.330.7272 (Business Office) or farmersmarketfrozenfoods@gmail.com.

To learn more about heirloom seeds, Nina recommends the site: www.rareseeds.com.

Violet Stone is the NY SARE Outreach Coordinator and Communications Specialist for the Cornell Small Farms Program in Ithaca, NY. She can be reached at 607-255-9227 or vws7@cornell.edu.

Local Foods & Marketing

Adirondack Harvest

This successful regional initiative has been building local food connections since 2000

By Laurie Davis

It's late summer in the Adirondacks and farmer Jessica Chevalier is loading her car with leftover vegetables after a busy day as a vendor at the Lake Placid Farmers Market. Her back seat is piled with boxes and trays of perfectly ripe produce, representing untold hours of toil on her Crown Point farm, Ledgetop Orchards.

Chauntel Gillilland tends to the family roadside farm stand in Willsboro Photo by Linda Gillilland

Yes, she could compost the veggies, turning them back into rich nutrients for her soil. But why not try to make a further profit for her labors? On the drive home she pulls up behind the Deer's Head Inn in Elizabethtown. Chef Matt Baldwin steps out of the kitchen door and eyes the produce eagerly - he has years of experience reaping the benefits of cooking with fresh, local food. After some brief haggling Jessica has nearly emptied her vehicle and both parties are pleased.

Such is the vision, come to life, of Adirondack Harvest, a regional initiative supporting and promoting local agriculture. Tom Both, former town supervisor in Keene and chairman of the Essex County Economic Development Committee, was instrumental in getting Adirondack Harvest off the ground.

"In 2000, a diverse group of individuals created a plan to not only preserve Adirondack farmland, but also to stimulate the growth of agriculture," says Tom. "It was felt that farming could make a substantial contribution to the economic well being of the area."

Using funds from the Essex County Board of Supervisors and a grant from New York State Ag & Markets, a committee was formed to develop a strategy, logo and mission statement:

Jessica Chevalier of Ledgetop Orchards brings an array of fresh produce to the Lake Placid farmers' market Photo by Laurie Davis

"We envision a picturesque and productive working landscape connecting local farmers to their communities and regional markets. Our goals are to increase opportunities for sustainable production and sale of high quality food and agricultural products; and to expand consumer choices for locally produced healthy food."

Although Essex County initiated the effort, the organization has grown to encompass all 12 counties having land within the Adirondack Park's blue line and neighboring Jefferson County has joined by special permission of the Board. Cornell Cooperative Extension of Essex County has been the leader in developing the Adirondack Harvest plan and continues to administer the program.

The Rivermede Farm crew transplanting new lettuce seedlings. L to R: Hillary Gonyer, Rob Hastings, Corina Jordan, Erika Neal, Megan Papineau, Matthew McClelland Photo by Fritz Sabbow

Adirondack Harvest's services have encompassed the publication of a regional map and guide to local food along with the launch of a website, www.adirondackharvest.com, which connects consumers, including stores and restaurants, to hundreds of local farmers.

At Ben Wever Farm in Willsboro, Linda Gillilland tends to her flock of laying hens. With her "girls" producing up to 70 dozen eggs per week, she needed to make sales beyond her farm stand. "How many farmers have time to set up their own website?" she asks, "Maybe someday we will, but for now we're lucky to finish our chores, keep the coyotes at bay and weed the vegetables. Marketing takes time. By using the Adirondack Harvest website we were able to connect with local stores that sell our eggs, honey and grass-fed beef at a price that works for us."

ADIRONDACK HARVEST

That's the whole premise of Adirondack Harvest: facilitating connections between local producers and consumers. Several events designed to bring folks face-to-face are held throughout the year.

The largest is the annual mid-September Harvest Festival, a week-long celebration of North Country agriculture utilizing farm tours. At Essex Farm in Essex, Mark and Kristin Kimball load visitors into their horse-drawn wagon for an up-close and personal farm experience. The wagon stops by rows of vegetables planted in rich Champlain Valley soil cultivated by draft horses and their equipment.

The visitors spill out and sample fresh carrots and peas while watching a dozen piglets cultivate their own patch of earth in a nearby field. Mark explains their farming techniques as chickens wander a newly harvested field pecking at insects and other delicacies before retreating to their mobile coop to lay their eggs. Everything around the tour group is lush and eventually headed for someone's table - veggies, pork, eggs. The farm tours are an invaluable tool for bringing people face-to-face with their food sources.

In the past, Adirondack Harvest has supported various projects designed to help the direct market farmer. For example, a videographer was hired to capture innovative Essex County farmers in action. Rob Hastings, owner of Rivermede Farm in Keene Valley, was delighted to have his market garden season extension techniques featured. The resulting DVD, Three Farms, has been broadcast across New York State by PBS and Rob is hopeful that it will inspire other farmers to make the transition into profitable niche markets.

Adirondack Harvest especially supports important producer-consumer connections such as farmers markets. A 2007 matching grants program helped market managers with advertising. Marjorie Swift, former manager of the Elizabethtown, Keene, and Wilmington farmers markets, used her grant to print coupons designed to lure new customers to the markets. Strategically placed throughout the communities, a third of the coupons were redeemed and overall market attendance was up at least 15% according to an Adirondack Harvest survey.

Adirondack Harvest, bolstered by the local food movement sweeping the country, has done its job well: there is tremendous demand for locally produced food. The challenge now is to encourage and train more farmers - not an easy task, especially in the High Peaks region where a July frost is not unheard of. Participation in the Come Farm With Us program, an effort to entice farmers to the North Country (www.comefarmwithus.org), along with mentoring and new farmer workshops are promising steps toward increasing farmer numbers.

As Jessica returns home to Ledgetop Orchard she reflects on her farming career. "I've been living and working in the Adirondacks for five years, and linking to local markets is critically important to my business. I'm grateful that Adirondack Harvest has helped to make some of those connections." Amidst such troubling news as tainted foods and mad-cow disease one thing remains clear: knowing your local farmer enhances feelings of food security. Adirondack Harvest is committed to guiding the North Country to a vibrant agricultural future.

Laurie Davis is the Coordinator for Adirondack Harvest. For more information she can be reached at Cornell Cooperative Extension Association of Essex County, 518-962-4810 x404 or lsd22@cornell.edu. Also visit www.adirondackharvest.com.
The farms mentioned in this article may be contacted as follows:
- *Ben Wever Farm: Shaun & Linda Gillilland, 518-963-7447 or gillillandsl@aol.com*
- *Essex Farm: Mark & Kristin Kimbal, 518-963-4613 or kimball7@localnet.com*
- *Rivermede Farm: Rob Hastings, 518-576-4686, rivermede1@aol.com*
- *Ledgetop Orchards: Jessica Chevalier, 518-597-9512.*

NON-DAIRY LIVESTOCK

Marketing Meat Goats in New Jersey

Some innovative research sheds light on this important marketing opportunity

By Stephen Komar and Robert Mickel

Over 36% of the meat goats produced in the US are consumed or harvested in New Jersey -- about 210,000 animals in 2006 (NASS). The main reason for this is our diverse population and the many religious, cultural and ethnic groups which desire goat meat. Much of this demand requires utilizing Halal or kosher slaughter. Globally, goat is consumed more widely than any other meat.

Here in the US, one of our marketing challenges is that the typical American consumer does not eat goat meat due to a historic lack of familiarity with it and the wide availability of alternatives. Finding ways to market goat meat to non-traditional consumers was one of the goals of our New Jersey meat goat project.

CONSUMER RESEARCH

We selected seventy consumers and gave them each a sampler of goat meat along with 3 specific recipes to use in preparing the meat. The sampler consisted of 1 pound of ground meat, 4 chops (rib and loin) and 2 pounds of stew meat.

After all of the three products had been eaten, the consumers were then asked to complete a questionnaire. Fifty-six were returned (80% return rate) with some interesting results. More than 38% of the group had eaten goat meat before most often in a restaurant setting.

After the taste test, 83% indicated they would purchase ground goat meat, the product with the highest likeability rating (90% gave it a 6 or higher, out of 10). However, 92% of the consumers felt that a branded name like "Cabrito" would be preferable to referring to the products as goat meat.

We did learn some interesting things from the project about the potential price point for goat meat products. We asked consumers to select a dollar figure for purchasing the three goat meat products they had tested, stew meat, cops and ground meat.

Only a fraction of consumers are willing to pay the price for goat meat that Northeast producers need to make a profit.
Photo by Stephen Komar

The results are shown in Table 1. Only 21 percent of consumers would be willing to spend $4 or more per pound of stew meat, while 36 percent would pay $4 or more for chops.

Table 1. Price range per pound as percentage of respondents

Product	$2-3.00	$3-4.00	$4-5.00	$6 or more
Stew	46%	33%	10%	11%
Chops	24%	40%	18%	18%
Ground	45%	48%	7%	

As more consumers experience different types of ethnic cuisine, it may be possible to increase the market opportunities for goat meat. As with many things, personal experience is one of the ways to encourage people. Sampling and recipes, or sales and specials are ways to encourage trial consumption, and are important tools to encourage potential consumers.

MEAT GOAT CARCASS OBSERVATIONS AND ESTIMATES

Another goal of the meat goat project was to examine the meat goat carcasses and to analyze the data that was collected on the fifteen goats processed for the consumer taste testing. Although prior work has been done on consumer patterns and goat meat consumption in general, very little work has been done on the fabrication of specific goat cuts (leg, shoulder, rack, etc.) and the corresponding weights to meet restaurant and general consumer needs.

Very little work to date has looked at the entire meat carcass to observe and record specific body weights and corresponding weights of body parts/cuts referenced as a percentage of a given meat goat carcass. Knowing that you can predict a percentage of the hot carcass weight to each cut based upon the total carcass weight would assist in predicting the sale price for the retail cuts according to your total production costs and fixed costs.

The average live-carcass and dressing percentage of the fifteen goats that were harvested for the applied project were as follows:
Live Weight: 67.2 pounds
Carcass Weight: 35.87
Dressing Percentage: 53.4

Table 2 shows the average weight and percent of carcass weight for a number of products. Based upon the meat goat carcass weights and percentages, the fabricated carcass cuts would have to sell for a minimum of $5.00 per pound to break even, based on the overall project expenditures.

Table 2.

Head Weight	2.36 pounds @ 6.6% of carcass
Heart, Liver, Kidney	1.54 pounds @ 4.3% of carcass
Rib Chops	2.22 pounds @ 6.18 %
Loin Chops	2.23 pounds @ 6.21% of carcass
Stew (made from shoulder & leg cuts)	12.54 pounds @ 34.96% of carcass
Ground (made from shoulder & leg cuts)	6.82 pounds @ 19.0% of carcass
Trim (excess fat and bone waste)	6.83 pounds @ 19.0% of carcass
Shrink Loss (hot weight to chilled weight)	1.33 pounds @ 3.75 % of carcass
*Shoulder	6.83 pounds @ 19.0% of carcass
*Leg	7.52 pounds @ 20.9 of carcass

*If shoulder and legs done as whole cuts, they reduced the stew and ground yield by 19-20 % each.

Clearly, our research shows that not all consumers are willing to pay the price for goat meat that you might need as a producer to make a profit. But by carefully targeting your marketing, encouraging new consumers, and controlling costs, you may be able to take advantage of this growing market.

Stephen Komar and Robert Mickel are Extension Agents for Rutgers Cooperative Extension in New Jersey. They can be contacted at 973.948.3040 or e-mailed at skomar@njaes.rutgers.edu or rmickel@njaes.rutgers.edu.

Need Info?

Subscribe to the Small Farms Update, a monthly email newsletter with announcements, upcoming events, resources, funding and farming opportunities and more. Send an email to smallfarmsprogram@cornell.edu. Please provide your name, farm name, postal address, and county.

Local Foods & Marketing

Why Farmers' Markets Can't Be Free

What is your market worth to you?

By Steve Miller

The old saying "you get what you pay for" is often true and farmers' markets can be a prime example. Yes, a market should be free to the public. After all, farmers are there to make money and there should be as few impediments to the consumer as possible. We want to make the experience as enjoyable and enticing as possible to our customers.

There are lots of ways you can strengthen your local farmers' market, from serving on the Board, to helping with promotion, to talking it up to local community leaders. Here Tom Giles of Maple Valley Farm Market participates in a cabbage promotion event at the East Side Farmers' Market in Chemung County, NY. Meg.

But what about the vendors? Just how much should they pay for the privilege to sell at a farmers' market? On the one hand, some might say, "Whatever it takes," while others may say, "Nothing at all, the market should pay me."

Somewhere in the middle is probably more realistic. How much would it cost in time, fuel and other expenses to sell the same product elsewhere, for example to build a stand and pay taxes and upkeep on the building? I won't attempt to put an exact dollar figure on the answer, but we can and should look at what we are getting, and should be getting for the fees paid to sell at a farmers' market.

MARKETS CREATE VALUE- PUBLIC AND PRIVATE

Farmers' markets offer great potential to the communities and businesses that create them. A new publication from the Farmers' Market Federation of New York extols "The Value of Farmers' Markets to New York's Communities." Markets bring consumers to the area around them. Consumers in turn spend almost as much in the surrounding businesses as they do at the markets.

Markets also provide economic value to farmers. Sales at the 59 Green Markets in NYC support over 25,000 acres of farmland. In the state there are now about 400 farmers' markets, each with farmers bringing fresh, local product to consumers, saving energy and stimulating their local economies.

In addition to economics, farmers' markets offer health and nutrition benefits to the consumers who include these products in their diet. Markets also create a place where social interaction benefits individuals and the community as a whole. They become one of the gathering places where the public recognizes value in their community.

WHERE IS THE PUBLIC SUPPORT?

Given all of these local benefits, why aren't farmers' markets supported by public funds? Markets in New York are for the most part run by not for profits or local governments and are managed by volunteers. The vast majority have managers that receive little or no compensation for their efforts. In many cases markets are locally supported, although sometimes minimally.

On the other hand, municipalities do often provide space for a market. Given real estate values in downtown locations, this can be a significant contribution. If the setting is good, it may be the most important contribution to the success of the market.

Some municipalities provide publicity and may even carry insurance for the marketplace. There are many villages which have provided staff to write grants and many have been successful in receiving Federal and State funds to improve the market.

WHAT DOES IT COST TO RUN A MARKET?

Let's look at a typical farmers' market budget. Certainly most markets in larger municipalities have more extensive budgets than those in more rural areas. However any manager would tell you that if they had more money they could always find ways to spend it that would benefit the market.

Larger markets may have paid staff, but often this may only be a part time manager as they may be tied to another city department with a range of other duties. Smaller markets are the norm. In a 2005 survey of NY farmers' market managers it was found that over 60% of markets in the state have less than 15 vendors. These same markets charged vendors fees of as little as $10 for a space for one season, to over $500.

Many are charging less than $100 per season, but does this figure cover the cost of creating and maintaining a strong market? A typical market of 10 vendors, paying $75 each will only generate $750 of revenue for the entire season. Management costs, advertising and promotion, security, and insurance are all supposed to be covered by this huge cash cow.

A minimum cost for a paid manager might be 10 hours/week at $10/hour for 20 weeks or $2,000; insurance $500 plus, professional membership$100-$300, and promotion and signage $1,500. Even a small market would need about $4,000 to do an adequate job for the market. Looking at these facts it is no wonder that new, smaller markets are struggling to get off the ground. Even long established markets may not have the funds they need.

WHAT ARE THE ANSWERS?

There are many, and although some markets are similar, there are no two that are the same. At first glance it might be easy to just increase the vendor fees. This certainly could help, but in our example, doubling the fee would only bring the revenue up to$1,500 for the year, still a relatively small figure.

Well then let's quadruple the fees from $75 up to $300, bringing in $3,000. This represents a cost to the farmer of only $17/week for 18 weeks. That could make quite a difference to the market, but many may have difficulty justifying this amount to their vendors.

Managers want vendors to be successful and to return next year. Most vendors should be able to meet this cost and as long as the funds are well spent, the market should grow. If fees are increased, it should be up to the vendors to make sure that the money is dedicated to items that they believe are important.

This brings us to our second point. There is another option in conjunction with fee increases to improve farmers' markets. In my view the farmers themselves may be an important part of the solution. After all, they are the ones who stand to benefit financially from a strong, successful market.

IT'S NOT ALL ABOUT MONEY

In my article title, I am not referring exclusively to dollars and cents when I say a farmers' market can't be free. There are other assets besides money that need to be mobilized to create a vibrant, successful farmers' market.

To begin with, most markets have governing boards and committees. Active participation in these groups can be very important. Items that need input and action include rules and governance, publicity, budgets and fund development.

Farmer participation in these issues has at least two major benefits. First of all, farmers have ideas about how they think a market should be run. What are the needs of the market? What is the public looking for? Being on a board allows you to express these ideas in a constructive way.

This is not to say that all of the input should come from the farmer/vendors because it certainly is valuable to have a balance of ideas from those who do not have a personal financial benefit. But most markets would be stronger if vendors were more actively involved in planning and decision making.

A second very important reason for farmer participation is that it shows a level of commitment and credibility to the market. Community leaders and market sponsors take a more serious view of the value of the market when the participants are willing to put their own time and energy into the market, beyond just being there to sell. This fact should not be ignored. Gaining outside support and having a community connection is very important to the long term success of a market.

Making sure your display is always attractive is one basic contribution you can make as a vendor. Photos by Steve Miller

HOW YOU CAN STRENGTHEN YOUR MARKET

Here are some ideas for how you can make your farmers' market stronger and better:

* Always bring the best quality products to the market.
* Be committed, view the farmers' market as an extension of your business.
* Volunteer to be on the board or a committee and be active not passive (but keeping in mind that when you are at the market, you are a vendor and not the sheriff!)
* Promote the market, always have only good things to say about the market and other vendors when speaking with the public.
* Advertise -- run your own ads in addition to what the market does. Let the public know you are there for them.
* Signage -- have excellent signage in the market, including prices and farm identification.
* Be part of a team, take turns helping with the market, such as setting up sandwich boards or other public signs.
* Attend market meetings and actively participate -- what you think and say really matters.
* Help find volunteers to do some of the tasks such as running an EBT machine, which can free up a manager to use their time and skills most effectively.
* Help develop a marketing plan and or long term business plan for the market.
* Offer product to be used for cooking demonstrations and weekly market basket giveaways.
* Offer to sponsor a special event at the market and remember to always work with the manager and board on these ideas.
* Speak to your local government representatives, let them know that the market is important to you and the community, give them ideas of how they can help.
* Be creative and add your own ideas to this list!

As a farmer you might expect that these are all things that should be done by the manager or someone else. That someone else could be you. With a tight economy, your market needs your help, and many of the things that need to be done don't require a lot of money. Many can be done during the off season. Take an active role in "your" farmers' market, you won't be sorry.

To get more ideas on what you can do, visit The Farmers' Market Federation of New York website at www.nyfarmersmarket.com, your local Cooperative Extension office, or contact Steve Miller Cornell FMNP Coordinator, 315 684-3001 x0206 or sgm6@cornell.edu. To read "The Value of Farmers' Markets to New York's Communities, visit: www.nyfarmersmarket.com/pdf_files/FarmersMarketsCommunityDev.pdf.

Steve Miller is Coordinator of Cornell's Farmers' Market Nutrition Program He may be reached at CCE of Madison County at 315 684-3001 x0206 or sgm6@cornell.edu.

Stewardship & Nature

Precision feeding -- A cash cow for dairy farmers and the environment

The US Army Corps of Engineers is helping dairy farmers protect water quality in critical watersheds

By JoAnne Castagna

Caramel vanilla swirl, mint chocolate chip, and vanilla fudge ripple are popular ice cream flavors that many of us savor here in Delaware County. Folks who buy these creamy treats are also supporting milk suppliers that are participating in an innovative program that's protecting critical watersheds from pollution.

The Delaware and Susquehanna watersheds in upstate New York provide fresh water to millions of residents and business on the eastern seaboard including the cities of New York, Philadelphia and Baltimore.

PRECISION FEEDING - WASTE NOT, POLLUTE NOT

The Delaware County Precision Feed Management Program, funded by the U.S. Army Corps of Engineers, New York District, is working with dairy farms in the New York City and Susquehanna Watersheds to implement cow feeding methods that are keeping the state's watersheds free of pollution. The program is also increasing the quantity of milk produced per cow and leading to increased farm profit.

This program is led by Cornell Cooperative Extension of Delaware County along with a multi-agency team that includes the Army Corps' New York District, Delaware County, the New York City Watershed Agricultural Council and the Delaware County Soil and Water Conservation District.

The program is working with farmers to develop ways they can reduce the amount of phosphorous and nitrogen in their cow's feed. On all dairy farms about two thirds to three quarters of the nutrients brought onto the farm in feed, fertilizer and bedding, remain on the farm. This is known as the mass farm nutrient balance. Over time these nutrients can be lost to the environment if not managed properly.

So far the program has reduced the amount of phosphorous and nitrogen remaining on cooperating farms by over fifty percent. The program is able to have this large an impact due to the fact that the single largest source of nutrients brought onto dairy farms is purchased feed.

On all dairy farms about two thirds to three quarters of the nutrients fed to animals ends up in the farm soil, where over time they can be lost to the environment if not managed properly.

For watersheds supplying drinking water, increased phosphorous in the water supply increases the growth of algae. Increased algal growth requires more chlorination at the water plant to destroy bacteria resulting in an increase in chlorination byproducts in the drinking water. These substances have been linked to cancer and other health issues in humans.

To reduce phosphorous and nitrogen in purchased concentrates, the program is encouraging dairy farms and animal nutritionists to develop feed mixes for their dairy cows that are better balanced with the nutrient needs of the livestock. The program has been successful in helping farmers and their feed representatives reduce ration phosphorus levels by approximately 25% percent.

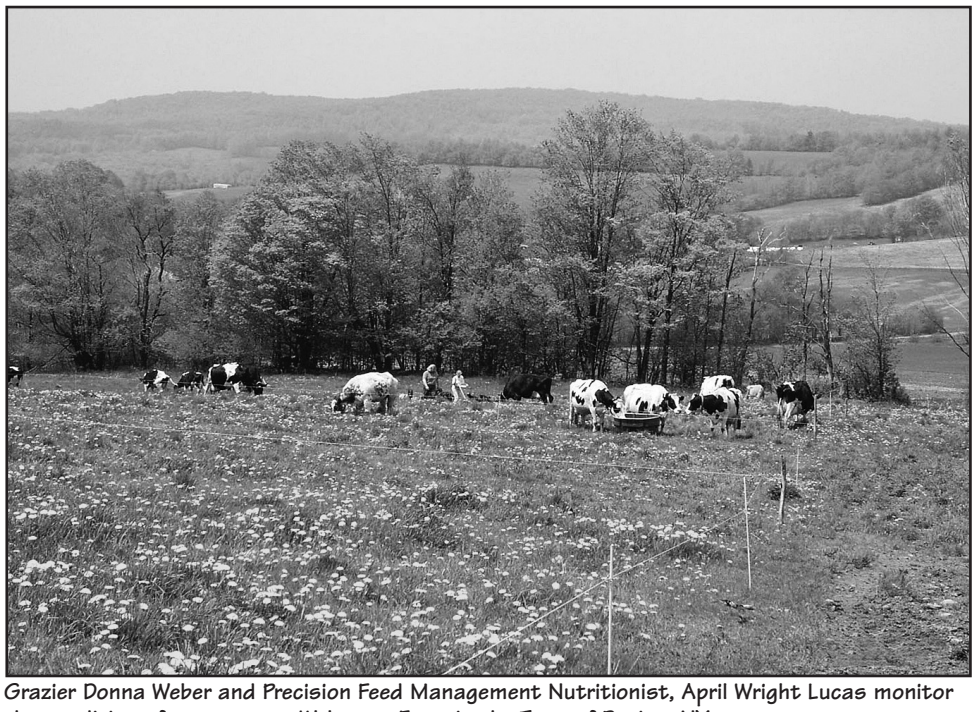
HOME GROWN FEEDS

In addition, the program has worked with farmers to enhance the quality of home grown feed so that they can rely more on their own crops and less on purchased concentrates. With grain prices skyrocketing, this switch can be very profitable.

Donna Weber explains her passion for grazing and its benefits to farmers and the environment at the Precision Feed Management Tour in 2007. Photo by John M. Thurgood

To grow their own feed, farmers get assistance from the program in adopting crop production methods that are beneficial in many ways, including no-till planting. This method reduces fuel-consuming tillage passes. Reducing tillage also reduces soil erosion from the watershed. This is soil that contains phosphorous and nitrogen.

No-till planting also increases the timeliness of hay crop harvest as it frees up time and labor from planting to focus on hay harvest. Timely planting and harvest can also increase crop yields and lead to enhanced quality. This allows for farmers to rely more on home grown crops versus purchased feed.



Grazier Donna Weber and Precision Feed Management Nutritionist, April Wright Lucas monitor the condition of pastures at Webcrest Farm in the Town of Bovina, NY. Photo by Paul Cerosaletti

IMPROVING FORAGE QUALITY

Improved forage quality is something the Webcrest Farm is experiencing with the Precision Feed Management Program. Webcrest is a 600-acre dairy and beef farm in Delaware County that's been in the program since its beginning in 2000.

"The program showed us how to test the ingredients in our feed and grain more often so that we can make adjustments," says Donna Weber. "This is important to know because it affects the quality of our milk. In the past we only tested our forages once or twice a year and called it good."

"Due to the program we also now intensively graze our cows during the summertime," she adds. "We take some of our highest quality hay and corn strips and turn them into eleven paddocks that we rotate our cows in and out of. In the past we use to just open our barn door and let the cows go wherever they wanted in the pasture."

She adds, "The farms in Delaware County are conducive to grazing. We have abundant rainfall and a six month grazing season. It just takes more work and the will to make it work. The cows will love you for it."

As a result of these changes the Weber Farm has experienced many benefits. "Production-wise and herd health-wise we have seen a big improvement, which in turn improves our bottom line as healthy cows make more milk," says Weber.

"Environmentally, our cows are excreting less phosphorus since we are watching closely how much phosphorus is going into our cows and how much is going back out onto the land," says Weber.

Paul Cerosaletti, the Delaware County PFM Team Leader with Cornell Cooperative Extension of Delaware County, is pleased that dairy farms like Webcrest Farm are benefiting from the program.

"When we started the program we knew it would be a major challenge. We were asking dairy farmers to change the way they feed their cows, which can directly affect their farm's profit engine, milk production," says Cerosaletti.

"Feeding cows is a complex process because what they are fed determines the health of the cow and milk production - it's a delicate area to be trying to change. We knew that if the farms experience one year of crop failure, while on our program that they wouldn't want to adopt it."

BOTTOM LINE BENEIFTS

To see what financial impact the program was having on the participating dairy farms, Cerosaletti and his team compared the financial records of dairy farms on the program with ones not on the program that are in the same region and of similar size.

"Study results showed that on average the participating farms' operating costs to produce milk were $1.33 per hundred weight of milk produced lower than the farms not on the program," says Cerosaletti. "Typically farms' operating costs can range from $10-$18 per hundredweight of milk produced, so $1.33 is a pretty good reduction in operating cost."

These farms are also producing more milk revenue. "Dairy farms on the program are making on average about 1,400 pounds more milk per cow per year. Depending on what the milk price is, this may be worth $250.00 more in gross milk sales per cow per year," says Cerosaletti. This is due to a number of factors including improved homegrown feed quality and diet mixes.

According to Cerosaletti, dairy farms make up a large percentage of the farms in upstate New York. Presently about 20% of the dairy farms in Delaware County are on the program, and the number is increasing as grant funding allows.

Cerosaletti attributes much of this success to the program's team of devoted individuals who he says are out in the field working closely with dairy farmers so that they succeed. One of the major ways the team brings information to dairy farmers is by holding monthly "farmer-to-farmer" learning group meetings that serve as a support group for the farmers.

"It's beneficial for all farms in our watershed to get involved with this program," says Weber. She continues, "Granted, it is a little more work and it can be overwhelming in the beginning, but in the big picture, the water will be cleaner, the cows will be healthier and in turn, your bottom line will improve and you will be able to stay in business."

Cerosaletti adds, "The real strength of the Precision Feed Management Program is that by working with farmers this closely we're achieving quantified benefits for the environment and the farms - it's a win-win situation."

For more information on the Delaware County PFM program, contact Paul Cerosaletti at pec6@cornell.edu, or 607-865-6531

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SMALL FARM SPOTLIGHT

Apple Pond Farm and Renewable Energy Education Center

By Sonja Hedlund

Life on this 80 acre Sullivan County, NY farm is never dull. Besides the day-to-day work on caring for livestock, keeping the land healthy and productive, doing repairs and maintenance and keeping us fed and warm, Apple Pond Farm has its fingers in many pots.

We have bred, trained and farmed with draft horses, especially North American Spotted Drafts. We raised sheep and goats for fiber and meat and to sell to others to care for. We have welcomed visitors, telling them about small scale farming. We provided work experiences for farm interns and most recently we are using the renewable energy of the wind and sun to make electricity and hot water.

HARNESSING HORSE POWER

Our first experience with horses was buying two mixed-breed riding horses from a farm in North Branch. We added a Monticello racetrack retiree, learned to drive him to a cart and bought a team of draft horses. Over time, we had a stallion or two, and did some serious breeding of Belgians and North American Spotted Draft horses.

Apple Pond Farm and Renewable Energy Education Center uses Belgian draft horses for both field work and wagon rides.
Photo courtesy of Apple Pond Farm

It is no understatement to say that the drafters paid the farm's mortgage. First Dick and Doc, and then Bill and Bart, these teams pulled wagonloads of people at local hotels, community events and wedding celebrations. On summer weekends we took a team to the Sterling Forest Renaissance Festival; we had to dress in costumes and speak with an Elizabethan accent when we drove the queen of the fair into opening and closing ceremonies. There was winter work too - double bobsled rides for guests at home and at local hotels.

The teams did farm work too: spreading manure, tedding and raking hay and bringing firewood down to the house. The drafters were also teachers at workshops we conducted every May and October; there have been more than 50 of these 4-day programs and in every one our teams were splendid teachers.

MEAT, MILK AND FIBER

When a neighbor's accident brought her pet goat, Shenanigans, to us I never imagined that I would come to love goats as I do. It was the gift of a single ewe that got us into raising sheep. Over the years we have had as many as 150 ewes at one time. Now we have about 25 ewes and 15 does. A few are pets, but most are workers here, giving us delicious milk, meat and fiber.

Learning to care for these animals, feeding them correctly, and coping with injuries and health problems is serious work and mentally engaging. Through guidance from other farmers and veterinarians, attending workshops and reading, we have learned to work with animals to keep them healthy. It is an undertaking that never ends.

FINDING MARKETS

Selling what we produce has not always been easy. Many farmers probably share the opinion that marketing is not their forte and not much fun either. But farms produce products...to be sold. Breeding horses, sheep and goats without an identified market leads to a sink hole of problems. So we developed markets.

We found people who wanted paint horses that could pull a cart as well as jump a fence or draft horses that could do farm work. There were people who wanted a lamb or kid for a Greek Easter celebration, or lamb chops for the grill on a hot summer day or to enjoy from the freezer year around. Others wanted to milk their own goat and have goats to clear overgrown fields.

Thanks to guidance from the Cornell University sheep and goat people (see www.sheep.cornell.edu) we have expanded to selling USDA inspected lamb in addition to meat custom butchered at a local facility. Our customers are people who want to buy local products produced by farmers who take special care of their animals.

EDUCATION & AGRITOURISM

Education has been another major market for us. In our lives away from the farm, teaching was part of our employment. As our farming skills expanded, we shared what we learned with others. Most significant was the decision to open the farm to visitors. We did this long ago, before agri tourism became an 'in' word for new income for farmers. Summer camps were our first and largest group of visitors. Over the years, several thousand people of all ages have come for a guided tour or participated in special events like 'Horses Come in All Sizes,' 'Farming with Kids,' Or 'Babies in The Barn.'

Kids enjoy milking a goat at a "Farming With Kids" event at Apple Pond Farm.
Photo by Ralph East

Ralph East and Ben Kellerman are two of 200 or so interns hosted by Apple Pond Farm and Renewable Energy Education Center over the years. Photo courtesy of Apple Pond Farm

Apple Pond Farm raises sheep, goats, and draft horses. Photo courtesy of Apple Pond Farm

Our beliefs about small-scale farming, factory farms, energy conservation and citizen action at the town, regional and national levels guide what we say to visitors. We want people to feel some of the energy of farming, to understand where food comes, how much it really costs to produce and hopefully to grow in their appreciation of farmers and rural communities.

To announce these events we have used the "I LOVE NY" program, local newspapers and radio, our own web page (www.applepondfarm.com) and now a new farm web page in Japanese. We even post our events on Craig's list! (You can too - see www.craigslist.org.)

MENTORING INTERNS

Then there have been farm interns, probably 200 or more over the years. We got into this through a splendid black and white quarterly called the "Small Farmer's Journal." We saw an ad from a person in Switzerland who wanted an internship on a farm with horses. Martin arrived more than 25 years ago, stayed almost a year, married another intern (we went to their wedding in Norway); they are both still our friends.

Since then interns have been here every year. Those from Europe often come to complete an academic requirement in their major field of study; they also want to improve their English (which rarely needs improvement).

Others desire to work out of doors, to learn to grow food organically, to farm with horses, to care for sheep and goats, to make goat cheese and spin wool. We provide housing and food and usually a stipend. There have been one or two duds - people who left almost immediately, but on the whole the interns have contributed a great deal to us though their hard work and positive energy.

Right now we have the very best interns ever. Their participation in farm work and our renewable energy projects gets lots more done and lifts our spirits everyday. Since each of us prepares the mid day meal once a week, we are eating better than ever.

Conversations around meals educate us about the culture of young people today - we are more than twice their age! They tell us about popular music groups like Metalica and Radioheads and what a 'mosh pit' at a concert is and how to use our computers more efficiently. They play the guitar, violin and sing together. They share their concerns about their futures with us.

ENERGY INNOVATIONS

The reality of the global energy crisis has added a new dimension to this farm. We first examined our energy use patterns and cut down on the energy we use. We decided that we really didn't need to use so much. Then we began to make electricity. With the construction of a 10 kw wind turbine and the installation of 50 photovoltaic panels on our garage roof, we make about 75% of our own electricity. We also have a solar hot water system, a small straw bale house, a grease truck and a hybrid car.

Though our work with the Sullivan Alliance for Sustainable Development (www.sasdonline.org) we offer workshops for homeowners and businesses on renewable energy the second Saturday of every month, March - November. We recently held our second renewable energy open house and were pleased to see how much more informed and passionate about this issue visitors were. We were also shocked that one visitor who is a green building contractor arrived in a Hummer!

THE NEXT GENERATION

Last week a family from Sand Pond came to our 'farming with kids' program. The three children remembered their visits here last summer. They asked about our dogs, picked and ate string beans, and with another child managed to carry a 40 pound bale of hay to a goat paddock. They were eager to milk a goat (whose name they remembered). They may not become farmers but as adults, I bet they won't flinch at paying the real price of free range eggs or naturally raised meat.

Sonja Hedlund and her partner Dick Riseling run Apple Pond Farm and Renewable Energy Education Center in Callicoon Center in New York's Catskill region. They can be reached at 845 482 4764. For more information visit www.applepondfarm.com.

READERS WRITE

Make hay while the sun shines

We try. But it is not always easy to do

By Sonja Hedlund

This year June haymaking didn't happen as it usually does. It was the weather and our equipment. It rained when we were ready to make hay. It was sunny when our equipment was not working. We had the labor power to do the work. But all the pieces of doing the job did not come together until July.

One problem after another. The old mower/conditioner, used every year for more than a decade, broke. The wheel spindle broken and the machine fell to the ground. It could not be moved. It sat in the hay field until replacement parts arrived and we got a mechanic with portable welding equipment to repair it.

The John Deere tractor failed too. It needed a new clutch - among other things. The tractor was taken away for repair, which took almost two weeks. Fortunately we had a second tractor that worked but its turning radius was not as good as that of the John Deere. Raking hay into nice round corners was very difficult to do with this tractor.

The tedder (a piece of equipment pulled by a tractor to speed the drying process) only worked at 75% of capacity; we resurrected another one. The rake was fine. The wagon used to haul round bales from the fields to the barn needed repairs - but they were easy to do.

Here is how making hay goes. We mow, ted and rake perennial grasses. When our work is done, a neighbor makes our hay into large round bales weighing about 500 pounds. He was having equipment trouble too. The hay in our last pasture was ready for baling but his milking responsibilities and a darkening sky might prevent him from baling it all up. If he was not able to do it, the morning dew would wet everything so much that we would have to rake it all again the next day. But we were unusually lucky; all the hay got baled. The rain did not come and the next day we worked non-stop to move the bales under cover by the barn. There are now more 133 round bales safely stored there and a few more covered with a heavy grey tarp in our horse-training ring.

Sonja Hedlund and Dick Riseling, front left, pictured here with Dick's sister Ruth Thorson and interns Karin Crowley, Ben Kellerman and Ralph East Photo by Ralph East

The barn haymow is full of about 1300 square bales, each weighing about 40 pounds. We usually feed these to sheep and goats. The round ones go to the horses.

The labor involved in making these large round bales is much less than what is needed to make square bales. They also tend to be cured better. Their small size also enables me to feed a smaller amount, just what animals need in a day. There seems to be less waste with the square bales. But on a snowy winter day, I appreciate having round bales that provide adequate food for a bunch of animals for several days.

"I have three loads of hay on wagons ready for you right now. Want it?"

The voice on the phone was of a farmer we have purchased hay from before. At the price he wanted, we agreed immediately.

Putting square bales into our old barn is a job for many hands. We drove our pickup to the field where the farmer was making hay and picked up a full wagon. But soon we realized that our old truck could not haul such a heavy load. The farmer had to deliver each load to us, parking it as close as possible to our barn and returning in his truck to get another load.

We tossed each bale off the wagon and carried it to our hay elevator. The elevator moved four bales at a time up to the haymow. There we stacked bales neatly, higher and higher, in some places 10 tiers high. Having three people working in the mow was best.

As the mow filled it got hotter and hotter and darker and darker, too. We had to add a spot light on the last day of stacking. We left a narrow walkway though the bales so that in winter we can enter the mow to toss bales out to sheep and goats housed around the barn.

We had many hands to help with hay this year. Workers ranged from 20 to 68 years of age! Some were new to farming, but eager to learn; they had the muscle and mental focus to work the long hours required to get the job done. Many hands really do make for easier work. Our bunch was cheerful, with a lively sense of humor, which helped get the job done quickly.

Now the barn is full. The hay has a wonderful sweet fresh smell. Looking at the round bales gives me a feeling of satisfaction. I know that we have sufficient hay to feed our horses, sheep and goats when there is no more grass. Having to buy hay this winter is sure to be a stunning experience. When we first bought square bales 30 years ago, it was .75 cents a bale. Last year it was $3.00. This winter it is sure to be close to $5.00/bale.

The price increase is no surprise. The costs of what is needed to do all farm work - including haymaking - have risen steadily, with huge jumps in the past year. Regular fuel for tractors is now over $4.00/gallon and diesel fuel is over $5.00/gallon.

We drive the tractor at least 3 times around each field that we hay. Our pickup and wagon can only move nine round bales at one time from the field half a mile away to the barn. Multiply that by more than 12 trips and that is a lot of fuel. Filling up the pick up truck we use to move bales cost $130.00.

And we are small farmers. Dairy farmers make thousands of bales of hay every summer.

Every year we make hay with equipment that is not the best and weather that often does not cooperate. I am always greatly relieved when the hay is in the barn. Like last year, we now have more hay than we need. We have fewer horses now and are reducing the number of sheep and goats we winter over.

Seeing the mow almost bursting with square bales and round bales stacked on top of each other where they will stay dry, it gives me a great feeling of safety and security. When children come to visit, I have them sit on bales as I tell them the story of making hay. The hay scratches their legs. They ask to play on the bales. Too precious a food for that!

Sonja Hedlund and her partner Dick Riseling run Apple Pond Farm and Renewable Energy Education Center in Callicoon Center in New York's Catskill region. They can be reached at 845 482 4764. For more information visit www.applepondfarm.com.

LOCAL FOODS & MARKETING

Research and Role Playing Can Improve Your Sales

By Sandy Buxton

Selling direct to consumers is a challenging profession. It requires people skills to be able to interact with customers and develop a good story to teach them about your business and its underlying principles. The marketers who do more than just survive but thrive are ones who pay attention and respond to what their customers say. Just because you can grow it is no guarantee that the customers will want to buy it at the price you have assigned.

While attending the National Association of County Agricultural Agents (NACAA) Professional Improvement Conference in Greensboro, NC last summer, I had the opportunity to see several examples of how this looks in action.

Jenny Carleo and Nicholas Polanin from Rutgers University Cooperative Extension in New Jersey worked with several farm stands and cut flower growers to assess 13 different varieties of sunflowers for the cut flower market. The flowers were evaluated both in the field on-stem as well as already cut and conditioned at the farmers' markets.

The thirteen varieties included in the trial were advertised as pollen-less and suitable for the cut flower market. The choices included a number of traditional type sunflowers with yellow ray flowers and dark colored disk centers as well as more novel and unusual varieties that were all yellow or dark, or had other colors and stripes.

The project involved tracking several aspects of buyer behavior related to the sunflowers. Original choice of purchase, return customer purchase behavior, sales by bunching or single stems in a display bucket and condition of the flowers all were tracked.

The researchers found that, while customers oohed and aahed over the flashy new sunflower varieties, they usually purchased the traditional varieties! They also found that repeat customers did not always make additional purchases of a given variety because of how it performed at home, in the real world.

They also found that, regardless of the price, there was a higher volume of sales when the flowers were pre-cut and bunched together rather than sold as single stems with the customers making the selections. It is possible that speed and efficiency affected their choice, and perhaps an immediate perception of cost-benefit. Or maybe people just prefer a ready-made bouquet rather than having to make their own.

The work of Carleo and Polanin raises some excellent questions to consider as you think about marketing. How are you introducing new varieties or items to your customers? Are you responding to their requests or to your convenience? Do you track repeat purchases? Or follow up on the initial purchase - how did they like it, was it what they expected, how long did they last? And finally, do you do your own quality control?

Some farms don't feel they have enough product to "waste" it by using some themselves. But it's important to do some "role playing" - do as your customers do, and find out how the product works for them in the real world. In the case of cut flowers, keep some of the flowers at home to see how they last, and to know whether or not you are conditioning them properly. Try different systems to find what works best.

A vegetable farmer selling wonderful looking potatoes will not have many repeat customers if all the potatoes are brown and hollow when a customer cuts into them. Understand that a customer may not want to tell you what the problem was for fear of seeming like a complainer but they won't buy any more either!

Understanding the needs and wants of your customers can help you better direct your efforts and increase sales income. Providing high quality products in an attractive and inviting manner is only part of the process. There also needs to be a perception of value received for dollar spent.

As a business owner, you have the opportunity to do some market research on your own customers, at your own location, to learn information that can dramatically improve your business success!

Sandy Buxton is an Extension Resource Educator for Cornell Cooperative Extension in Washington County, NY. For more information on these projects, contact Sandy at 1-800-548-0881.518-746-2560 or sab22@cornell.edu.

Buckets of sunflowers are summertime favorites at many farmers' markets. Make sure that their handling and variety will allow them to be outstanding cut flowers to brighten a customer's home.

Resource Spotlight

Getting Started with Direct Marketing

Adapted from the Guide to Farming in NYS: What Every Ag Entrepreneur Needs to Know, produced by the NY Beginning Farmers Project. The Guide is available online at: www.smallfarms.cornell.edu/pages/resources/business-manage/creating.cfm

Direct marketing is a common strategy for beginning and small farmers. The main attraction compared with selling through traditional wholesale markets is that you receive the full share of the consumer dollar and have more control over the price you receive for your products. But with direct marketing, you'll also incur extra costs - not the least of which is your time. Be sure to evaluate each option carefully as part of a farm business plan.

FARMERS MARKETS
Farmers markets are a good place to develop your marketing skills. To be successful, you need to enjoy interacting with people and be willing to invest the time it takes to pick, pack, transport, set up and sell. To maximize potential returns you need to sell for as long a season as possible.

To find NY farmers markets near you, contact the Federation of NY Farmers' Markets at 315-475-1101 or www.nyfarmersmarket.com/regions.htm or NYS Dept. or Agriculture and Markets at 585-457-7076 or visit www.agmkt.state.ny.us and click on Farms and Market.

In Pennsylvania, visit Buy Fresh, Buy Local at www.buylocalpa.com/splash.html for a listing of farmers' markets, or PA Dept of Agriculture at www.agriculture.state.pa.us/.

In Vermont, visit the Vermont Department of Agriculture at: www.vermontagriculture.com/buylocal/buy/farmersMarkets.html for listings of farmers' markets and other information.

In Rhode Island visit www.farmfreshri.org..

In Maine visit http://www.getrealmaine.com/buy/farmers_markets.html or the Maine Federation of Farmers' Markets - http://snakeroot.net/mffm for a listing of farmers' markets.

In New Hampshire Farmers' Market Association - www.nhfma.org visit for a listing of farmers' markets.

The Federation of Massachusetts Farmers' Markets - www.massfarmersmarkets.org will connect you with farmers' markets in Massachusetts.

In Connecticut visit their Department of Agriculture's website at www.ct.gov/doag/site/default.asp for a listing of farmers' markets.

INTERNET AND MAIL ORDER
If you develop unique, high-value products that are easy to ship, this strategy can complement your other direct marketing efforts. Current customers who love your product can order more and help you market your products through word of mouth. Packaging and shipping costs need to be considered but for products that are not bulky or heavy, this can be a profitable strategy.

One easy option for getting started with internet marketing is to list your farm on one or more of the following free sites:
www.localharvest.org
www.eatwild.com
www.newyorkfarmersmarket.com
www.buyfromthebackyard.com
www.marketmaker.com

Be sure to contact your local Cooperative Extension office to find out other internet options.

ADDITIONAL DIRECT MARKETING RESOURCES
NYS Farmers Direct Marketing Association - www.nysfdam.com

North American Farmers' Direct Marketing Association - www.nafdma.com

Marketing on the Edge, A Marketing Guide for Progressive Farmers. Available from the Canadian Farm Business Management Council, 888-232-3262 or www.nafdma.com - look under publications in bookstore.

Reap New Profits: Marketing Strategies for Farmers and Ranchers. Available from Sustainable Agricultural Network, www.sare.org/san/htdocs/pubs.

Sell What you Sow! The Growers' Guide to Successful Produce Marketing, by Eric Gibson, Available from New World Publishing, 503-823-3886, www.nwpub.net.

The Legal Guide for Direct Marketing, by Neil Hamilton. Available from Drake University Agricultural Law Center, 515-271-2065.

Growing for Market, a monthly online and print journal about growing and direct marketing vegetables, fruits, herbs, cut flowers and plants. It covers farmers markets, Community Supported Agriculture, the local food movement, organic growing, cut flowers, and much more. www.growingformarket.com.

HORTICULTURE

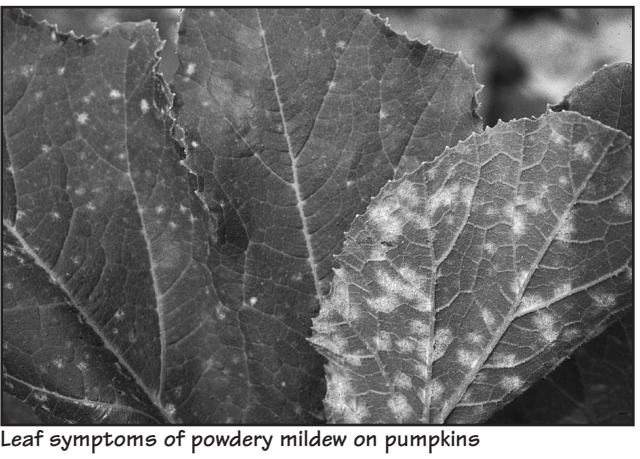
Searching for the Perfect Pumpkin

Powdery mildew resistant varieties

By Elizabeth Lamb

As fall arrives and the leaves start to turn, many folks visit their local pumpkin patch to search for the biggest pumpkin, or the one with the best handle to make that little jack-o-lantern, or to bake that great Thanksgiving pie. As a grower, you start making variety and production decisions much earlier in order to give customers a choice of ideal pumpkins.

One of the common diseases you must consider is powdery mildew, which affects many cucurbits like pumpkins. The fungus is evident as white powdery patches on the leaves, and infected leaves wither and die. The loss of leaves reduces the photosynthetic area, which then affects yields through a reduction in size or number of fruit.



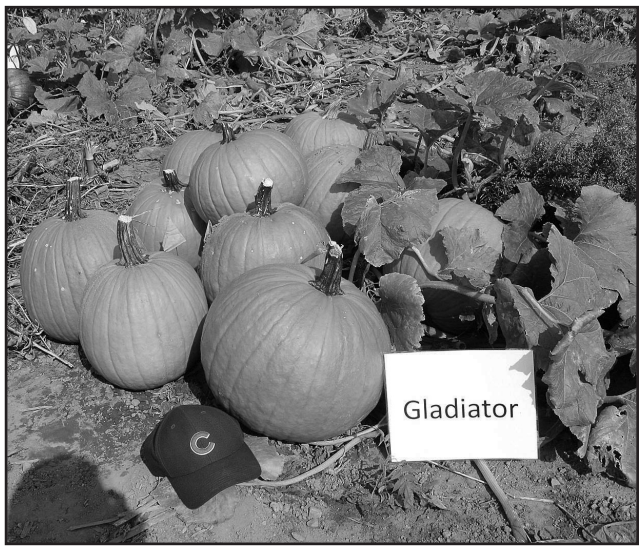
Leaf symptoms of powdery mildew on pumpkins
Photo by Meg McGrath

Damage from the disease can also affect fruit quality through sunburn, changes in rind color, and shriveled handles. Powdery mildew was traditionally controlled with fungicides, but some of the commonly used ones are no longer as effective.

To provide growers with an additional management tool, seed companies have been developing pumpkin varieties that are genetically resistant or tolerant to powdery mildew, so that growers need to use fewer fungicides to produce top quality pumpkins. A few years ago, there were only a few resistant pumpkin varieties and those were limited to a certain size category. Now, powdery mildew resistant varieties are available in all the various marketing sizes. You can choose from miniatures to large pumpkins and have the advantage of powdery mildew tolerance.

Poor color and handle quality (pumpkin on right) are the result of inadequately controlled powdery mildew.
Photo by Meg McGrath

To choose a powdery mildew resistant variety, it is best to see them grown under actual field conditions so you can determine fruit yield and quality, and susceptibility to other diseases. Field trials of pumpkins were run in growers' fields in eastern NY in 2007 and at the Horticulture Research and Education Center on Long Island in 2005-2007.



Gladiator, an example of a pumpkin variety with good powdery mildew resistance Photo by John Mishanec

The table shows the differences from year to year and from variety to variety among powdery mildew resistant pumpkin varieties. A lower resistance rating does not mean that the variety is not a good one to try. The level of resistance may be adequate to a particular field or allow for reduced fungicide applications.

Other factors may be sufficient to overcome the lower resistance. For example, Merlin, which had a rating of 4 in 2006, was rated the "People's Choice" at the Norwich Pumpkin Festival, based on appearance.
In order to choose the best varieties, you should visit field or demonstration trials in your region if possible. When trying a new variety on your own farm, start small - a trial plot of one or more varieties grown over several years will help you identify the perfect pumpkin for you!

Elizabeth Lamb is the Coordinator for Ornamental IPM for NYS IPM. She can be reached at 607 254-8800 or eml38@cornell.edu. She wishes to thank John Mishanec and Meg McGrath for providing information and photographs for this article.

Powdery mildew control rating (lower leaf surface)

Variety	Size (lbs.)	2005	2006	2007
Aladdin	25 - 35		4	
Bumpkin	0.5 - 1	8		
Cannon Ball	3 - 5		7	
Charisma	14 - 18		7	
Gladiator	20 - 25	10	9	
Gold Bullion	16 - 20	10		
Gold Dust	0.5 - 1		7	
Iron Man	3 - 4		10	10
King Midas	25 - 28		1	4
Magic Lantern	16 - 24	9	7	
Magician	10 - 16	10	9	10
Merlin	15 - 25	9	4	
Mystic Plus	7 - 8		5	
One Too Many	18 - 22		9	10
Prankster	3 - 5		6	8
Rockafellow	2 - 3		9	10
Spartan	25 - 30		6	10
Super Herc	30 - 40			7
Sweet Lightning	1 - 1.5		8	10
Touch of Autumn	3 - 5	8	8	
Wee-B-Little	0.5 - 1		8	10
20 Karat Gold	18 - 22	1	1	1
Susceptibles lines		1	1	1

Powdery mildew ratings from pumpkin trials at Long Island Horticulture Research and Education Center (higher numbers have better powdery mildew control). Data from Meg McGrath, LIHREC.

Resource Spotlight
Managing Powdery Mildew

Long Island Research and Education Center research reports, www.longislandhort.cornell.edu/vegpath/index.html

M.T. McGrath, 1997, Powdery Mildew of Cucurbits, http://vegetablemdonline.ppath.cornell.edu/factsheets/Cucurbits_PM.htm

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Are your pumpkins ready for harvest?

By Andy and Art Brown

For most roadside markets pumpkin season begins shortly after Labor Day and extends through the end of October. For those keeping track, that's roughly an eight-week market. The question for many is 'What to do with marketable fruit in the field until it's time for sale?'

As long as there is good, healthy foliage present, the best place for a pumpkin is on the vine. Foliage helps protect fruit from potential sunscald injury and will help any late setting fruit size. However, keeping foliage around may also require additional fungicide applications. If the foliage cannot be maintained, move the mature fruit to a dry, well ventilated area.

Many growers will let powdery mildew take foliage out a few weeks before they are ready to be harvested. Why? Pumpkins are a lot easier to harvest without dense foliage in the field. But growers should be aware that the major drawback to this method is that powdery mildew can reduce stem quality by causing them to turn brown and become brittle prematurely.

Once foliage is gone, pumpkins can easily be stored and 'cured' in the field by lopping them off the vine and placing them in un-stacked windrows as long as the weather cooperates. Temperatures of 80 to 85o F with relative humidity of 80 to 85% for 10 days after lopping are ideal. After this, temperatures between 50 to 60F with 50 to 70% relative humidity will keep respiration and potential weight loss down.

Cool, wet and 'frosty' weather will do most of the damage to ripe fruit in the field by slowing down the curing process, exposing fruit to potential fruit rot pathogens and in the case of frosts, causing fruit to melt if temperatures get too low. Knowing your market, your crop and keeping an eye on the weather will help go along way in having a successful pumpkin harvest season.

Andy Wyenandt is a Specialist in Vegetable Pathology, and Art Brown is Senior Associate Dean of Agriculture & Natural Resources at the New Jersey Agricultural Experiment Station.

Small Farm Quarterly Youth Pages

The Youth Pages are written by and for young people. Many thanks to Cornell Cooperative Extension of Oswego County and Washington County for contributing to this issue. We believe there's a bright future for young farmers in the Northeast. Whether you live on a farm or only wish you did, we'd love to hear from you!

Get your article published by sending it to:
SFQ Youth Pages
c/O Celeste Carmichael
CCE State 4-H Youth Development Office
340 Roberts Hall
Cornell University, Ithaca, NY 14853
607-255-4799 • cjc17@cornell.edu

Experiencing the fascinating world of Dairy

By Sandra Ferry, Cornell Cooperative Extension Community Educator, Washington County

This summer, the second annual Dairy Experience graduation was held at the Saratoga County Fairgrounds. Once again I had eight youth graduating from the program from Washington, Saratoga, Columbia, Fulton, and Montgomery Counties. As I start to gear up for the next group of Dairy Experience I find myself thinking about just how much the program graduates have been able to see and do.

The Dairy Experience Program is designed for youth 14 -16 in the greater Capital District that are interested in discovering the opportunities available to them in the Dairy Industry. Dairy Experience exposes youth to local leaders in the Dairy Industry who serve as an example of the exciting future that the industry can provide.

We start each year with a team building weekend to let the kids get to know each other and to give them the chance to let me know what there interests are and what they would like to see. And then the travelling begins.

The group has had the chance to travel to Connecticut and

The Dairy Experience group spent the weekend with the Junior dairy Leaders and learned some herd health skills.

visit Arethusa Farm. Here they were able to see some of the biggest names in the Holstein and Jersey breeds. They are the only herd to ever win both Supreme and Reserve Supreme Champion in the same year at the World Dairy Exposition! At Arethusa they described the reason that the farm started and the goals of the farm along with their motto, "Every Cow in this barn is a Lady, Please treat her as Such."

We also visited LaurelBrook Farm, another dairy in East Cannan Connecticut. Here we were able to see a multigenerational farm that has been able to not only survive but expand in an area were land pressure is extremely high, and they are surrounded by weekend homes. LaurelBrook is a 900 cow farm that crops in three states in order to keep their farm flourishing. They also worked very hard to establish a system of composting and spreading to avoid harming the environment or bothering the neighbors.

We traveled to Vermont to see a robot milking system and automated calf feeders belonging to Clark Hinsdale of Nordic Farm. The facility was built to accommodate visiting tour groups. While in Vermont we also visited Blue Spruce Farm, which has a methane digester producing cow power since January of 2005.

When the group headed west we toured a 3,800 cow family dairy farm that has grown that large by aiming to double their herd size every six years. They are now able to grow their herd by 500 cows a year. Last year they sold 400 cows.

The Dairy Experience group has also had the opportunity to visit many smaller farms that have worked to develop a niche market for themselves including:

The Dairy Experience group also did some exercises to learn about personality types and careers that interest them.

* a farm that is making cheese from their 50 cow dairy and selling it at farmers markets,
* a farm that has started bottling their own milk from their 400 cow dairy and have been able to sell it in stores, farmers markets and from the farm,
* and a fourth generation 50 cow dairy that bottles it own milk and makes ice cream which is then sold in Wegmans grocery stores and at the farm.

All of these farmers talked about the hard work involved in developing a niche market and also of the skills necessary to produce and market your own product along with having customers tour your farm.

Besides touring dairy farms, the group has been able to meet with different agribusinesses to learn about the services and opportunities that each provides. We have visited with the USDA, First Pioneer Farm Credit, Cargill Animal Nutrition, and many others that have talked to the group about different careers available in the Dairy Industry. The group also has the opportunity to work with the Statewide Junior Dairy Leader Program at Cornell University each year. The group spends a weekend touring farms and visiting with agribusiness people with the Junior Leaders and touring the Cornell Campus. This also helps to show them the possibilities for them in the Junior Leader Program when they are 16.
A young lady in the group said, "The Dairy Experience group was a huge benefit to my knowledge of the dairy industry. From the farms we toured I learned a great deal of how the farmers made their ways successful and efficient. Not all farmers, either large or small, use the same techniques. I found that their techniques were different but yet still helped them succeed."

The Dairy Experience group has had the chance to tour both commercial and registered farms. Here the group is outside of Arethusa farm in Litchfield Conn.

A young man in the group said that after visiting farms with the Dairy Experience group he has gone home and discussed different management practices he had seen with his family and they have now incorporated some things that he learned with the group into their farm.

One of the first activities the Dairy Experience group does is a teambuilding weekend where the kids get to know each other and help to plan their activities for the year.

None of these things would have been possible without all the generosity I have received from the agribusiness community and from the volunteers who have helped chaperone the program. I would like to thank the businesses that have sponsored this year's program: First Pioneer Farm Credit of Greenwich, NBT Bank, Washington County Farm Bureau,

The Dairy Experience group enjoys being able to talk to the farms about the different management practices they see when touring all the different farms.

Saratoga County Farm Bureau, Granville Large Animal Vet Clinic, Arnold Feed and Grain, Salem Farm Supply, Walkers Feed and Tack, Capital Tractor, Premier Dairy, Agri-Mark, Caro-Vail, Pat Evans, Randall Implements, Hudson River Tractor, Blue Seal Feeds, and Feed Commodities of Vermont.

For information about youth dairy projects visit the 4-H Resource Directory: http://www.cerp.cornell.edu/4h/ or or the Cornell Animal Science Youth Dairy page http://www.ansci.cornell.edu/4H/dairycattle/index.html

The group enjoyed being able to see two different robotic farms this past year along with automated calf feeders.

Lease and Learn

By Michelle Fuller, *Oswego County 4-H Alumna*

The 151st edition of the Oswego County Fair took place Thursday through Sunday and for 12-year-old Alinda Dygert, of Mexico, NY, the four-day fair was more than just rides and games.

Dygert got the chance to experience the responsibility of taking care of an animal and the excitement of showing it at the fair by "leasing" a Holstein cow from Michael Bonoffski, 18, of Pulaski. According to Linda Brosch, team coordinator of 4-H Youth Development Program for Cornell Cooperative Extension of Oswego County, the 4-H program offers a non-ownership lease program.

"It allows people who don't live on a farm and don't have the finances for livestock to experience the responsibility and joy of owning livestock," Brosch said.

Animals are leased from their owners at least 90 days before the first youth show for 4-H only. During that time period, the youth goes to the farm to care for, feed and train the animal. They also learn about the animal in general, such as the breed history.

"Both the owners and non-owners benefit from the non-ownership program," Brosch said. "The owner gains assistance with the care of the livestock and non-owners grow in responsibility of learning how to care for an animal." Often, she said, owners and non-owners develop a friendship that last longer than their time in 4-H. The only specific rule for the program is you can't lease an animal if you already own an animal of that species.

Dygert has been leasing and showing Holstein cows for four years now. "I like knowing that you have a responsibility to take care of the animal," Dygert said, "if you get a ribbon, you know you worked hard."

This year was Dygert's third year showing with Bonoffski. "Non-ownership teaches the youth responsibility and helps them understand the importance of animal care." Bonoffski said.

Dygert showed Miss Captain Charcoal, one of Bonoffski's Holsteins at the fair this year. She works with Charcoal once a month when the weather is cold, then more often once the weather gets warmer.

"I knew how to show," Dygert said about what she has learned from Bonoffski, "but Mike showed me how to hold her head and how to make her calm." Bonoffski has been showing dairy cows for 15 years.

Hard work pays off for Alinda Dygert and leased "Charcoal"

"It's worth it to see all her hard work pay off," Bonoffski said. "I feel proud of myself because I know I've worked hard, "Dygert said.

Previously ran in the Palladium Times newspaper in Oswego NY, July 7, 2008

Sweet

By Makayla Fowler, 12 years, Castaways 4-H Club, *Oswego County*

Making maple syrup is a fun and neat experience for anyone at any age! It's also really cool to see how maple syrup is made. I will walk you through the steps it takes my family and me to make pure maple syrup.

The first step to making maple syrup is finding healthy hard maple trees with a 10" diameter. Our trees are usually very easy to identify because they have signs of a previous harvest. We harvested sap from approximately 350 trees in the 2008 maple season, with some trees accommodating more than one tap depending on the tree size.

My family and I all start watching the weather in early January, anticipating the perfect time to tap. Dad drills a 5/16" hole in a tree at waist level. Then we put in a plastic tap and hang a collection bucket on the tap. Once we have tapped, we need to wait for the right weather for sap to run. We need above 32°F during the day, with no wind, and below 32°F at night to keep the sap flow going. This year we tapped between late February and late March, depending on the weather.

Making maple syrup with your family is "sweet"!

My two little brothers Kyle and Cooper and I collect the sap in a collection tank on a wagon. Somehow, someone always manages to come back wet! Once we have collected the sap we dump it into a holding tank that is elevated in the air. Sap then flows by gravity flow through a tube to the sap house and into a pre-heater before the sap travels down to our 2' x 9' wood-fired evaporator.

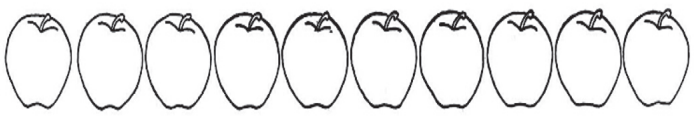
Once it's in the cooking pan the sap runs through a series of channels according to density. While the sap is traveling through the channels, the fire is evaporating the water out it. Once the sap has reached the third channel most of the water has evaporated. Dad and I then measure it with a hydrometer to around 66 brix and draw it off through several cloth cone filters. Then we finish the syrup to precisely 66 brix in a stainless steel pot over a controlled propane burner. Mom and Dad then filter the syrup again and bottle it at 180-200°.

I enjoy making syrup for several different reasons. Making syrup gives my family something to do in the dead of winter. I like to enter our syrup in the Oswego County and New York State Fair. Homemade maple syrup also tastes great and helps soothe our coughs and sore throats. And lastly, during maple season we always have tons of visitors that come to learn and help us make pure Hannibal New York syrup!

For information about making maple syrup visit the 4-H Resource Directory: http://www.cerp.cornell.edu/4h/ or or the Cornell Maple Program Website at Cornellmaple.com

Agriculture and You:
APPLE CHARM

Brought to you by NY Ag in the Classroom
www.nyaged.org/aitc



MATERIALS

- Yarn
- Small plastic bags (2" x 3")
- Scissors
- Hole Punch
- Apple seeds = seed
- Wooden beads = tree
- Foam Bees or Butterflies = pollinator
- Foam Flower = blossom
- Green Plastic Beads = green apple
- Red Plastic Beads = red apple

DIRECTIONS

1. Talk about the life cycle of an apple tree
2. Give each student one plastic bag
3. Have the students put one apple seed (seed), one wooden bead (tree), one foam bee or butterfly (pollinator), one foam flower (blossom), one green bead (green apple), and one red bead (red apple) in the bag
4. Close bag and punch hole on the bag - above the seal
5. Cut a long piece of yarn and thread it through the hole on the bag
6. Tie off the yarn and wear as necklace to help the students remember the stages of the apple tree life cycle

HELPFUL TIPS

- Punch holes in bags before hand (saves time)
- Cut pieces of yarn before hand (saves time)
- Make an assembly line and have the students come up in groups
- this way you can discuss the different stages with each group
- the other students can be doing a word search or crossword puzzle
- All materials are available at Wal-Mart or Craft Store (foam items)
- You can use real apples seeds or paper ones

Cows and Crops

Dear Vicki Vetch

Dear Vicki,

My question involves fitting cover crops into niches in our cropping system. We have some acres devoted to organic production. Our rotation is corn, soybean or cabbage, spelt with clover interseeded. My issue is that most of the corn and soybean/cabbage harvests are later in the fall with little or no opportunity for cover crops to follow. Is there a type of cover crop I can interseed before the corn or soybean fully canopies that could establish itself before the main crop harvest?

Casey

Dear Casey,

Fitting cover crops in a rotation following crops such as corn, soybean or cabbage is definitely a challenge in our northern climate. On the one hand, it is desirable to plant an overwintering cover crop in late summer to ensure time for establishment and growth for overwintering. On the other hand, an interseeded cover crop can compete with the cash crop and cause reduced yields or it can interfere with harvest of shorter crops such as soybean. There are a few options that farmers in our area are using successfully.

If your main goal is to cover the soil for the winter, grain rye or annual ryegrass are fairly dependable options and these seeds tend to be less costly than legumes. Grain rye has the advantage of growing very quickly, even under cool conditions so it can be planted later in the season when crops such as corn are already beginning to reach maturity.

It's important not to rush planting: Grain rye sown at the time of last cultivation can grow too quickly and compete with the cash crop. Planting rye later reduces the risk of competition. Drill in grain rye after corn silage harvest, or broadcast seeds at leaf yellowing for soybean. Note that if seeds are broadcast too late into soybeans, they may end up on top of soybean leaves, and germination will be reduced.

Rye is versatile in that it can be planted up to late October and in some years, even rye seeded in early November can produce a reasonable cover. Annual ryegrass is less aggressive so it can be planted into corn at last cultivation.

If you want to plant a legume cover crop in order to get some nitrogen fixation, then you have a shorter window for planting. Two legumes which can be interseeded into summer crops are medium red clover and Dutch white clover. Medium red clover, which is the more aggressive of the two, can be interseeded into corn in late summer. For interseeding into soybean or cabbage, New York farmers have had success with Dutch white clover.

Both of these clovers have the potential to fix significant amounts of nitrogen, however there is very little data on how much they are able to fix when they are interseeded under a crop and only allowed to grow over the winter. The longer you are able to allow these plants to grow in the following spring, the more nitrogen they will fix.

Because it is lower-growing and produces less biomass, Dutch white clover generally fixes less nitrogen compared to red clover. However, this clover is also less likely to interfere with soybean harvest or compete with cabbage. Both types of clover can provide other benefits, too: They help to reduce soil compaction and attract beneficial insects if they are allowed to flower.

Red clover can be drilled or broadcast at 10-15 lbs/ acre, although some recommend seeding rates up to 20-25 lbs/ acre when overseeding into a standing crop. Seeding rates for Dutch white clover are 5-9 lbs/ acre drilled or 7-14 lbs/ acre broadcast. Another option is to make a seed mix of half perennial rye, half white clover and seed this mix at 8 lbs/ acre, seeding only between the standing crop rows. Since Dutch white clover seed is more expensive than red clover, this strategy helps maximize investment in seed.

Studies on interseeding medium red clover with corn have shown positive results. Over a 5-year period, interseeding medium red clover with corn produced higher yields than unfertilized controls. Yields were equivalent to a control corn planting fertilized with 15 lb/acre of sidedressed nitrogen fertilizer.

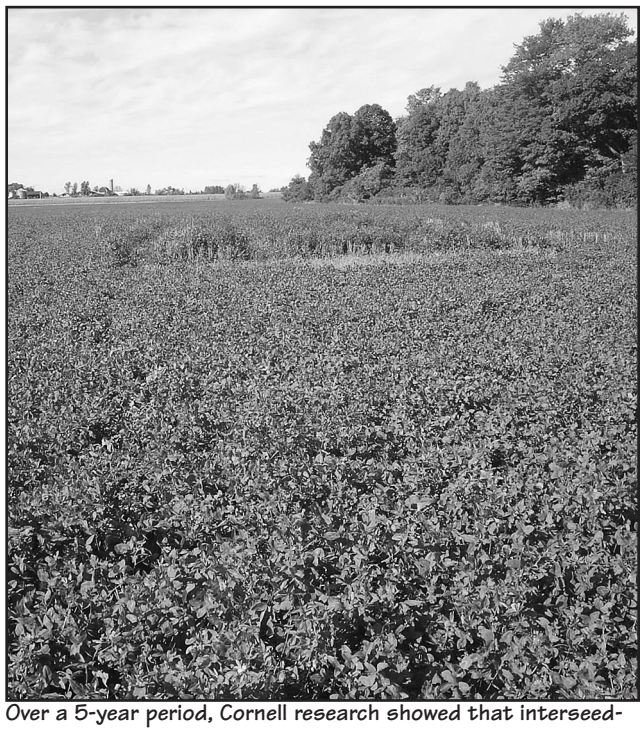
Studies on interseeding Dutch white clover with soybean also show positive results. On an organic farm in central New York, Dutch white clover was interseeded into soybean during the last cultivation in mid-July and later in the season, the soybean crop was harvested without interference. When weather conditions are suitable (not too much rain), the clover can produce sufficient biomass nitrogen to increase subsequent corn harvests compared to a control planting in a field that was not cover-cropped. Indeed, one local farmer has reported a 3-4 bushel/ acre increase in subsequent corn harvests after interseeding Dutch white clover with soybean.

Thanks for your question and good luck with your cover crop planting this fall!

Sincerely,

Vicki Vetch

Vicki Vetch is a creation of the Drinkwater Lab at Cornell University. We thank several local experts who kindly contributed to this reply including Thomas Bjorkman, Brian Caldwell, Chuck Mohler and Tony DiTomasso. Send us your questions! We will tackle any question related to cover crop and their management! Questions can be sent to: dearvickivetch@cornell.edu, or to: Dear Vicki Vetch c/o the Drinkwater Laboratory, Cornell University, 134A Plant Science Bldg., Ithaca, NY 14853.



Over a 5-year period, Cornell research showed that interseeding medium red clover with corn produced higher yields than unfertilized controls. Yields were equivalent to a control corn planting fertilized with 15 lb/acre of sidedressed nitrogen fertilizer.

STEWARDSHIP & NATURE

Agricultural Environmental Management:

Clean barnyards benefit livestock, neighbors and the environment

By Barbara Silvestri

Last year we started off our series on New York's Agricultural Environmental Management (AEM) Program by listing several AEM worksheets that many small farms find helpful. These worksheets guide farmers in assessing the ways their farm is benefiting the environment and identifying any pollution risks that might exist. In recent issues we've discussed most of those core worksheet topics, and in this issue we'll look at one of the most popular: Barnyard Management.

For many small farms, the barnyard is the center of the action. Often minor changes in barnyard management can have a big impact on how the farm impacts the environment. The AEM Barnyard Management Worksheet helps farmers take a careful look at their barnyard set-up to identify any pollution risks that might exist. Completing this confidential assessment can help match farmers with resources to improve barnyards and reduce potential risks.

Barnyards are an important area to examine because when livestock waste is concentrated (as it is in barnyards, holding areas or feedlots) the danger of pollutants reaching surface water or groundwater increases. Livestock waste contains high levels of nitrogen, phosphorus, sediments, degradable organic materials and microbes, which can pollute surface water and groundwater.

In general, good barnyard management involves two basic principles:
1. Keep clean water clean! Divert clean runoff from roofs and the land area above the barnyard away from the barnyard.
2. Treat the dirty water! Catch and treat or store contaminated runoff.

Improving barnyard management can have lots of benefits for farms. Reducing wetness, mud and manure can improve udder and hoof health. A regularly scraped barnyard can also reduce the fly population. Reducing odors and flies can improve neighbor relations, an issue that many farms struggle with. And of course, pure groundwater and clean surface water bodies are critical for drinking water, recreation, tourism and healthy ecosystems.

"The AEM barnyard management practices we implemented have improved herd health, protected our nearby well and help to keep water clean in the Cayuga Lake Watershed," said Jim Young, owner of Fleming Homestead Farm, a 50 cow dairy in Union Springs, New York. AEM professionals from the Cayuga County Soil and Water Conservation District helped Mr. Young complete the AEM Worksheets applicable to his farm operation. The District applied for State AEM cost-share dollars to develop a Comprehensive Nutrient Management Plan for the farm.

As a result, federal grant funds were obtained through the USDA Natural Resources Conservation Service to implement the necessary barnyard management practices identified in the farm plan. State AEM cost share dollars were also obtained to implement a streambank stabilization project, which included a laneway to keep the cows from entering the stream.

Barnyard management is not one-size-fits-all. The location of the barnyard, its proximity to water bodies, and the soil that lies beneath it can all affect the risk of water pollution. There is a greater chance of livestock waste affecting surface water if the barnyard is located close to a down-slope watercourse or waterbody. There is a greater risk of the barnyard affecting groundwater if the barnyard is located over sandy or gravelly soil, if groundwater or bedrock is near the surface, or if polluted runoff from the barnyard flows directly onto permeable soil or bedrock.

Conducting a free, confidential AEM Risk Assessment, including the Barnyard Management Worksheet, will help you take a careful look at your barnyard's location, size, and runoff management system. An AEM professional brings expertise on soil types and runoff control, and can help you identify potential pollution risks and connect you with resources to reduce them.
New York farmers can contact your county Soil and Water Conservation District today to schedule a free, confidential AEM Risk Assessment for your farm, including the Barnyard Management Worksheet! To learn more about AEM, view the Worksheets, including the Barnyard Management Worksheet, or to locate your Conservation District office, visit: www.nys-soilandwater.org.

Stay tuned for the next issue to find out how AEM is helping New York farmers get the word out about their efforts to lead the nation in conservation!

"The AEM barnyard management practices we implemented have improved herd health, protected our nearby well and help to keep water clean in the Cayuga Lake Watershed." Jim Young - Fleming Homestead Farm

In recognition of their long-standing commitment to conservation, Jim Young and his family were awarded an AEM 'Partnering to Protect Our Environment' sign by the Cayuga County Soil and Water Conservation District.

Barbara Silvestri is the Information & Education Program Coordinator with the NYS Soil & Water Conservation Committee in Albany, NY. She can be reached at 518-457-3738 or barb.silvestri@agmkt.state.ny.us.
Soil & Water Conservation Committee in Albany, NY. She can be reached at 518-457-3738 or barb.silvestri@agmkt.state.ny.us.

GRAZING

How to extend your grazing season

"Stockpiling" forage enables livestock to graze into the fall and even winter

By Mike Dennis

The 2008 grazing season will likely be remembered as one of the finest in many years here in central New York. I have talked with several "seasoned citizens" that remarked never recalling a summer such as we had, particularly in August. Haymaking excess pasture growth in August is quite rare, as this is usually a time when pastures have been grazed to their limits. Forage growth during the later half of this summer reminded me of late springtime.

If you were not able to stay ahead of the summer forage flush (that's a new one) via grazing or haying you may have accidentally or purposely stockpiled this forage. What is stockpiled forage? This is a simple process of letting forage re-growth go unharvested during the middle of the growing season, usually mid summer. The forage basically accumulates without a significant depression in quality or palatability until the time it is grazed at the end of the season or potentially during the winter.

Depending on the forage species present in your pasturelands the length of time that quality and palatability will remain can vary. Tall fescue will remain green and maintain quality throughout the winter months while a reed canarygrass sward will start browning in late fall as night time temps reach freezing and day length shortens. The other common pasture grasses will fall somewhere in between these two extremes.

If you haven't any 2008 pasture or hayland falling into the stockpiled category and would like to plan some acreage for this in 2009, lets look at some points to consider.

First, it doesn't take a lot of planning and the growing season will dictate if stockpiling can take place. Your local climate will determine when to set aside recently grazed or hayed acreage. Ideally you want to maximize re-growth or dry matter per acre. In climates with a shorter frost free season stockpiling should begin earlier, near the middle or end of July. For farms in regions with more extended seasons, beginning in early August will work. This ensures sufficient growth by seasons end. Forego one grazing rotation or last hay harvest.

Cool season grasses and other plants in the sward tend to be higher in sugar content toward the end of summer and early fall. Cooler, shorter days have much to do with this. Plants are great at saving energy for later during this time. Daily weight gains on pastured steers in September and October can sometimes exceed spring and early summer gains.

Improving yield and quality of stockpiled acreage can be accomplished with nutrient amendments depending on sward species, economics, and availability of nutrients. For instance nitrogen applied to a grass field after grazing or haying will increase yield and enhance quality if environmental conditions are favorable.

Applying manure or a composted manure to these intended acreages is a nice way to get nutrients for several reasons. Likely the manure or compost is home grown which minimizes input costs; it needs a home sooner rather than later; and sufficient time will pass before it is grazed to eliminate rejection by the animals.

Swards with greater than fifty percent legume will not benefit from a commercial nitrogen application; however they will do just fine with the "multi-vitamin" manure application. In addition to being a source of nitrogen manure is an excellent source of macro and micro nutrients. It goes without saying that acreage under several years of management intensive grazing will have elevated levels of organic nitrogen in the soil due to "direct deposits" of manure.

As I mentioned earlier tall fescue works very well for stockpiling. It maintains a green color throughout the fall and winter months. Granted, winter grazing in NY is rare due to our variable winters. However, having some of this grass on the farm on a limited acreage might allow for winter grazing when conditions permit.

Fescue has another advantage for grazing when conditions are less than ideal as it forms a dense sod. Fescue is a bunchgrass that may have short rhizomes under certain conditions. Generally a fescue stand gets better with age as far as density is concerned.

Stockpiling pasture and/or hayland is an excellent way to add end-of-season grazing acres to your farm. It provides a quality feed source for most classes of livestock, capitalizing on home grown forages, and is a place for manure during the growing season.

As you finish this article many of you are likely grazing some of those stockpiled acres, if conditions are permitting, and looking forward to frozen ground and minimal snow cover for some winter grazing.

Mike Dennis and his wife and family run a small pasture raised and finished direct market beef farm, under management intensive grazing, in Central New York. Mike is also the Small Farm / Agronomy agent for Seneca County Cornell Cooperative Extension. He can be reached at (315) 539 9251 or mgd3@cornell.edu.