June 2007

Farm Flashes

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Please feel free to give us a call and let us know what we can do for you. Our office hours are Monday—Friday, 8:30 am to 4:30 pm. Our phone number is (315)736-3394 or (315) 337-2531 or check us out on the web at: www.cce.cornell.edu/oneida

Cornell University
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Oneida County

Crop Shorts

By Jeff miller

Grass for energy

There has been a great deal of emphasis on corn production for ethanol because of our current great need for liquid fuels for transportation. That need will continue probably for decades to come. Researchers at Cornell and across the country are working on a multitude of the components that are needed to make biomass ethanol production feasible and economical.

Jerry Cherney, Cornell Forage Specialist is focusing his research efforts in a different direction. He explains that when you burn corn it yields 2-4 times as much energy compared to turning that same corn into ethanol. He also emphasizes that burning grass is about twice as energy efficient as burning corn. His focus is replacing the liquid fuels used for heating, with grass. The northeastern US is the biggest consumer of oil for heat so his efforts could be very rewarding to home and business owners in our region.

Reed canarygrass and switchgrass hold the most promise for biomass production in the Northeast. Cherney has been collaborating on a project to collect *wild type* reed canarygrass seed samples for evaluation. A similar project in Sweden improved reed canarygrass yield by 20% just by selecting the top entry. Using the latest genomic tools could prove even more successful.

More types of biomass stoves are being produced even as you read this article. Some stoves are being built to burn undensified grass. HeatWerks Inc. from Kansas has installed a boiler in northern NY that accepts loose, coarsely chopped hay and heats hot water to service multiple buildings. The advantage to undensified grass use is its minimum cost for biofuel preparation. It also makes it possible to have a completely closed energy loop on-farm. The disadvantages to undensified grass are that it requires relatively large scale and there is potential for a less complete burn and increased emissions, compared to pellets.

To-date there has still been no serious attempt by North American pellet stove manufacturers to design a stove better adapted to high ash fuels such as grass. Currently, the Harman PC45 corn stove remains one of the best options for burning a range of biomass pellets, including grass. European companies are already producing a line of stoves and boilers that will effectively burn grass. Some examples of these companies are Verner boilers from the Czech Republic and boilers from Solagen Inc.

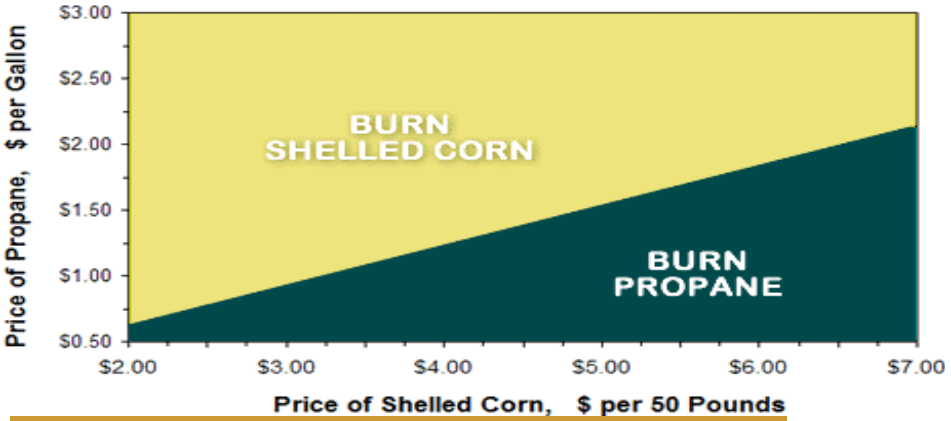
Why am I writing this article, you probably are asking yourself? Because, this may become another market for farmers in Central New York. Should you start planting your alfalfa ground to reed canarygrass? Probably not. Can you look towards the harvest of the neighbors lot once

or twice a season as dry hay (what ever the quality) and have a market for that hay. That is what I am hoping.

Grass has a huge potential to meet heating needs within a localized area at a competitive cost. The technology (biomass stoves and boilers) are catching up now. Two additional steps that need to happen are consumer awareness and acceptance of this alternative and finally an infrastructure to move the hay from production to use.

Penn State has a good website that shows the economics of energy sources as prices change in the market place. You can check out this website at: http://energy.cas.psu.edu/EnergySelector/

Burn Corn or Propane?



Grass management for Hay

Hopefully you are reading this after you have already harvested your grass stands. If you are managing the stand for high quality and yield you probably already applied 100 lbs of N at green up this spring. You should also be considering 50 lbs of N applied as soon after harvest as possible, especially if using UAN or Nytan because they will burn the plants foliage when applied later. Nytan is still running $0.02/lb cheaper than urea at this time. The nitrogen improves yield and supplies the needed N for protein content but timely harvest remains a key factor in optimizing NDF. Most growers find it best to take 2nd harvest 30 days after first to catch NDF near 55.

Alfalfa Grass NDFs so far this season

CCE of Oneida county has an active hay sampling program each spring to provide local growers with information on NDFs in hay stands at several locations in the county. We note the location, elevation, percentage of grass in the stand, CP, ADF and NDF from each stand that is sampled.

First round of hay samples collected Monday May 14th

Sangerfield, the field was mixed mostly alfalfa. Alfalfa height was 7.5 ", elevation is about 1200'. **CP 30.4, ADF 17.6, NDF 23.1**

Clinton, a mixed mostly grass stand with alfalfa measuring 11.5", approximately 50% alfalfa at about 900'. **CP 22.6, ADF 22.8, NDF 39.1.**

Verona at about 300' elevation. A mixed mostly grass stand with 15" tall alfalfa. **CP 26, ADF 21.2, NDF 32.5.**

We didnt visit the 4th site in **Remsen**. The farmer called and said that the alfalfa

Second round of samples taken May 21st

Remsen mixed mostly grass field est. 80% grass, alfalfa 9.5" tall, soil temp in nearby plowed field was 47F at 4". ***Cutting Goal 48 NDF, 16" alfalfa.*** **CP 26.4, ADF 20.1, NDF 32.4**

Sangerfield mixed mostly grass stand est. 75% grass, 12.5" tall alfalfa, elev about 1300' ***Cutting Goal 47 NDF, 17" tall alfalfa.*** **CP 30.3, ADF 19.9, NDF 26.5**

Clinton mixed mostly alfalfa stand est. 85% alfalfa, elev about 700', 19.5" tall alfalfa, ***Cutting Goal 39 NDF, 32" tall alfalfa.*** **CP 29.4, ADF 20.6, NDF 30.4**

Verona mixed mostly grass stand est 65% grass, elev 300' Alfalfa height of 20" .

Third Round of samples May 30th

Remsen mixed mostly grass field est.75% grass, alfalfa 17" tall, soil temp in nearby plowed field was 61F at 4". ***Cutting Goal 48 NDF, 16" alfalfa.*** **CP 19.8, ADF 30, NDF 45**

Sangerfield mixed mostly grass stand est. 75% grass, 18" tall alfalfa, (**Mowed**)elev about 1300'. ***Cutting Goal 47 NDF, 17" tall alfalfa.***

Clinton mixed mostly alfalfa stand est. 85% alfalfa, elev about 700', 33" tall alfalfa, ***Cutting Goal 39 NDF, 32" tall alfalfa.*** **CP 24, ADF 27, NDF 34**

Verona mixed mostly grass stand est 65% grass, elev 300' Alfalfa height of

We start sampling the first week of May and continue to run weekly samples at the sites until first harvest. The following are the results from the first two rounds of samples taken.

Alfalfa Weevil

Adults, larva and pinhole feeding have been sited in alfalfa fields in Oneida county, but at levels no where near an economic threshold. To scout your own field for economic damage:

- Step into the field 50' away from any border and randomly select one stem of alfalfa.
- Zig zag across the field randomly selecting a total of 50 stems
- Examine each stem for pinhole feeding of the leaves in the top 3"
- The economic threshold is 20 of the 50 stems showing damage
- If within 10 days of harvest, harvest is the preferred control

Grasses

Unlike making haylage, **conditioning the forage is important for making dry hay**. The goal for conditioning should be to have 90% of the crop's stem with a crack or some limpness, yet no more than 5% of the leaves showing bruising or blackening from conditioning. Generally there should be 1/16 to 3/32 of an inch clearance between the two rollers. To measure this clearance do this test: set the cutter bar completely on the ground and disconnect the PTO between the haybine and the tractor; cut 3 pieces of household aluminum foil 18" long and roll each one ona rod 3/8" in diameter; slide the rolled up foil off the rod without crimping it; placeone foil roll in the middle of the conditioner and perpendicular to the rolls; similarly place the other two foil rolls one foot away on each side of the first; turn the conditioner rollers by hand; and measure the thinnest part of the crimped foil in several places.

The average thinnest thickness should be between 1/16 and 3/32 of an inch. As you go from field to field, check the conditioned forage to be sure it is properly conditioned. Adjust the tension as needed. Orchardgrass has headed out and brome and reed canarygrass are right behind it. I did not check timothy this week, but I expect that seed heads are halfway up the stems. For dairy feed, all grasses should be cut now. Grass fields are a good target for summer manure spreading. For biosecurity reasons, forage harvested from manured fields should not be used for heifers. For top quality, typically a 30-day harvest interval is practiced.

Aaron Gabriel, Washington Co. CCE

NYS Department of State

Recently issued new regulations requiring that all nonresidential buildings be inspected for compliance with certain aspects of the NYS building codes, particularly the Property Maintenance Code and the

Fire Code. These two codes provide little recognition of the unique nature of farm buildings and would impose costly mandates on farmers. These codes are designed to ensure upkeep of certain types of buildings, such as commercial office spaces, which are very different from dairy barns. The result is that farm compliance with these new inappropriate codes will be a substantial cost to the farm businesses.

In response, Assemblyman William Magee, chair of the Assembly Agriculture Committee, and Senators James Seward and James Wright, sponsored legislation that provides relief from the new regulations. This legislation exempts agricultural buildings from the property maintenance and fire safety codes and would not require the buildings to be inspected every three years for compliance with the property maintenance code and certain aspects of the fire safety.

The legislation excludes permanent buildings used in conjunction with the working of a farm operation as defined by Ag and Markets law. Ag and Markets defines "farm operation" as the land and on farm buildings, equipment, manure processing and handling facilities, and practices which contribute to the production, preparation and marketing of crops, livestock and livestock products as a commercial enterprise, including a commercial horse boarding operation. Last week, both the senate and assembly passed the legislation and it will be sent to Governor Eliot Spitzer for consideration. While this is good news for farm operations, it is unclear what the impact will be on other rural buildings not associated with a commercial farm operation, eg. the back yard chicken coop, tool sheds, wood working sheds, storage sheds, etc. As we know, there are many of these in rural Oneida County. The expense of complying with these codes could be a substantial cost to the owner and provide no added benefit to the owner or to public safety.

Corn

- One week after corn is rowed up is enough to allow population counts; 1/1000 of an acre in a row with : 30" row spacing..17'5"; 32" row spacing…16' 4"; 36" row spacing..14'6". Most growers with silt loam soils should be shooting for 28-32,000 pl/ac for grain and 32-34,000 pl/ac for silage
- Skips in the rows should be dug out with a pocket knife to look for seed or seed injury from compaction "corkscrew", slimy seed associated with disease, hole in seed from wireworm or seed corn maggot
- Wilting plants may be the signal for stem borers, possibly cutworm. Look for quack grass, an attraction for stem borers or broad leaf weeds an attraction for cutworms
- Plants with light green to purple leaves can indicate inadequate

soil warm up which led to temporary nutrient deficiencies due to our crappy spring weather. If symptoms persist give me a call at 736-3394 ext 120

- Rows of cigar shaped holes in the leaves can indicate bill bug damage, look for nutsedge another attraction for bill bugs
- Rows of round holes in the leaves can indicate European corn borer injury
- Whole seedling plants left on the surface without seed….indicate bird damage
- Whole areas of corn crushed with wheel tracks and beer cans or bottles indicate human damage
- If you have applied a preemergence herbicide this is a great time to check weed populations in your fields. Remember if you have RR corn that you want to target annual weeds at 2" height and most perennial grasses at 4-6" height. Add a residual like atrazine or banvel if you know of some other specific weed problems

Presidedress Nitrate Test

With urea prices climbing above $500 per ton timely application of N rates based on crop requirements is essential. A presidedress nitrate test (PSNT) may be useful in determining if nitrogen is needed.

When is it appropriate to use the PSNT? When you have planted corn into a field that had hay in it within the past 3 years or had some amount of manure applied during the past 2 years and you are unsure whether there will be enough N contributed by the sources to meet crop needs. The test measures the amount of N in the nitrate form in the soil at a time close to when the plants will need that N. If you have broadcast applied N to the field already the test will not work. To obtain a soil sample for a PSNT:

- Take 15 or more representative soil cores to a depth of 12" when corn is 6" to 12" tall.
- Sample between the rows to avoid the starter fertilizer band
- Do not use any containers that may wick up moisture and associated nitrate from the sample, use a plastic or metal bucket
- Composite the cores from an individual field and dry as soon as possible to stop soil microbes from creating more nitrate nitrogen in your sample by heating in a stove at 200F, microwaving or air drying over night by spreading the sample very thin in front of a fan.

- Drop the sample off quickly at a local agriservice or Cooperative Extension office for analysis
- If the sample contains 25ppm nitrate N or more there is sufficient N for optimal corn yields. If the PSNT is less then 25ppm nitrate N use the standard N recommendation recommended by the laboratory or consult with your local Cooperative Extension.

Pasture Management Tips

It is getting very dry for this season of the year in some places. If we end up seeing a drought period, then we need to be thinking of strategies to make the most of pasture resources even under adverse conditions. Some infrastructure pointers to consider:

Livestock Watering:

- Lower yields of water in your source (wells, springs, etc.) can create problems. If pumps are starved of sufficient water, air can get into lines. Pumps and the motors driving them are designed to operate with only water within the pump chamber. Even drawing in a relatively small amount of air can not only limit their performance, for submersible pumps there may not be adequate cooling for the motor to keep within desirable operating temperatures.
- When water levels are lower at the source, there is also a possibility of increased sediment or other particles (organic or inorganic) being drawn into the distribution pipes. If this occurs, pay careful attention to the float valves in the water troughs. The diaphragm controlled style valves (e.g., Jobe, Hudson, Apex) have an extremely small hole inside which has to allow water to pass through in order to shut off when the water level is full. If they become plugged, then the trough overflows and makes a muddy mess in no time (besides wasting precious water from the source).

Its going to be fly season again soon

What can you do about it? Understanding the life cycle is helpful.

- Each female housefly can lay 100-150 eggs in each of 4-6 batches of eggs in their 3+ week lifetime.
- Development from egg to adult takes 9-11 days
- Flies seek out wet organic matter (wet feed or manure) in undisturbed areas both in an around the barn to lay their eggs. If left undisturbed for more then a week these sites can produce generation after generation of flies. One study showed that 25,000-40,000 stable and house flies could develop from the bedding of one calf hutch during the summer
- Places that can have high potential for fly breeding include:
  - Calf rearing areas
  - Near waterers, feed troughs and bunks
  - Adult animal resting areas
  - Maternity and hospital pens
  - Manure traps / conveyor systems
  - Base of stored big bales

- You can monitor areas in the barn for fly problems by simply hanging a white card in the areas that you want to monitor. Collect the cards in a week. If there are 100 or more fly specks on a card then that is a problem area
- Sanitation is the most effective long-term means of fly control. Cleaning areas that are known to accumulate organic matter or are wet on a weekly rotation helps to interrupt the fly life cycle significantly reducing the fly population.
- Adult flies can be removed using sticky tapes, ribbons or fly paper placed in areas where dust is less of a problem.
- Adult flies can also be trapped using bait stations like blue streak and golden marlin in gallon plastic milk jugs with 1" diameter holes cut into the upper part of the jug. Hang jugs with stiff wire in areas where flies tend to be found . Hang jugs out of reach of animals, kids and out of the way of barn activities.
- Parasitic wasps (*muscidfurax raptor)* can be purchased and released at regular intervals in adequate quantities to feed on fly larva and keep fly populations at low levels in the barn. IPM labs 315-497-2063
- Several insecticides are labeled for use for fly pest control. Call Jeff at CCE, if you want the name of some products

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Come Farm With Us

Farm Wanted:
Family looking for Tie Stall Dairy Farm for 80-120 Cows. Would be interested in rent to own option. Contact: (410) 692-6305 or angilen@aol.com

Standing hay for sale:
Gehl 940 and 970 chopper wagons. 315-826-3812

FAMILY FARM CRITICAL DECISIONS

by Mary Wrege

Installment #1:

We will offer, over the next several issues of Farm Flashes, ten critical decisions about family farms that are viewed as challenges and opportunities. These decisions are not ranked, but presented so that they may provide a starting point of discussion among you and your family members, other farm decision makers and farm advisors with the outcome of helping to improve the overall management and direction of your farm/family future. These are issues and questions that you can think about, whether you are on the tractor or in the barn, and hopefully act upon before an undesirable event happens.

At a recent meeting, sponsored by Pro-Dairy, Cornell Cooperative Extension, New York Viability Institute, Inc., NY FarmNet, and the RMA Northeast Center for Risk Management Education, numerous Extension educators and representatives from ag service and business discussed principles of managing for success. Excerpts and some specific materials were developed by Dr. Patricia Frishkoff, founder and former director of Austin Family Business Program at Oregon State University

Farms are in jeopardy for many reasons. That they are often family owned is both the good news and the bad. The link between family and farm can cause challenging situations and conflicts that individuals often ignore or avoid.

There are many decisions that span the breadth of issues a farmer must consider as he/she looks to the future of the family farm. There are farm and family considerations.

Stephen Covey advises: *"Start with the end in mind."*

Here is the 1st critical decision:

1. What is your vision of the future in terms of continuing as a family farm business?

What is your vision of the future? Maybe you don't know. Likely you do, though it's less likely that you have it written down as part of your plan.

How long do you plan to have your farm business last? Dr. Leon Danco once proposed that every business post this sign-

"This business shall last forever."

Does this fit your situation?

Vision-"golden opportunities" and your commitment:

Here is your "To do" list:

1. Have a family meeting. Start by having **each** family member write or draw something that captures a vision of the future.
2. Include the following questions in your meeting:
   - How long do you want your farm to last in your family?
   - What legacy do you want to preserve?
   - Do you hope to transition the farm to the next generation, and if so, what will it take?
   - What does the farm mean to you and your family? (note: often each family member has their own opinion)
   - What makes your family better because it has the farm business?
3. Make a long list of the opportunities and make copies for everyone. Bring the list out, on a regular basis and especially when conflict arises.
4. What is your commitment?
   - How much would you be willing to commit of these resources, in the next year, to pursue what you want for the future?
   - $$$
   - Time

If you have questions, comments, or suggestions on where to begin, don't hesitate to contact me or others in the agricultural group. The next installment will discuss ***RISK***.

We will also offer various training modules in the future on managing for success.

Visit www.cce.cornell.edu/oneida for more information or call 736-3394 or 337-2531

Deadline Extended for Dairy Assistance Program

In the last issue of Farm Flash, you received application materials for the New York State Dairy Assistance Program. This program provides payments estimated at $.30 - $.35 per hundredweight of eligible milk production in 2006 up to 4.8 million pounds for all dairy producers who were in operation as of April 1 2007.

The deadline for applications for the Dairy Assistance Program has now been extended to July 9, 2007. If you haven't applied yet, you still have time. If you need more information or another copy of the application, go to www.agmkt.state.ny.us and click on *Dairy Assistance Program*, or call 1-800-829-1040.

Start Tracking Your Key Performance Measures!

Pro-Dairy at Cornell University has developed a new business management tool for dairy producers to track business performance and make production decisions. The Dairy Profit Monitor (DPM) analyzes the primary drivers of profit in a dairy business for ongoing decision-making. Establishing the monthly discipline of the Dairy Profit Monitor can also provide a better basis for yearly evaluations of the business's performance.

Participation in the Dairy Profit Monitor will provide you with a one-page monthly report focusing on the following five areas:

1) Milk Production
2) Herd Health
3) Milk Check
4) Efficiencies
5) Financial Management

Some of the most valuable information will be found in the Financial Management section. For example, given changing feed costs and the large impact these costs have on profitability, you can use the DPM report to evaluate the effectiveness of your ration and feed programs. One key output will be "Net Milk Income over Lactating Purchased Grain Cost per Cow", which captures the price of milk, the cost of feed, and milk production. By watching monthly trends, you can make changes in your feeding program and track the results of your decisions in the following months.

Other report features include components sold per cow per day, cull rates, net milk price, and cows per worker. These and other benchmarks will provide you with a quick snapshot of business performance over the last month. Understanding changes from previous months and rolling averages help guide your future decisions in each area of production.

The DPM also allows you to benchmark against other DPM participants. All of the report parameters can be benchmarked against other users every month. In the future, this capability will be enhanced to allow you to compare your results to specific groups of other producers, for example producers with similar herd size, location, and milk production levels.

The data you will need to collect is fairly straightforward; most users spend around 30 minutes to source and enter the monthly data. The sources of the required information are the milk check, vet and medicine bills, labor hours, herd management storage data, and 'as fed' forage and grain data for the month from batch sheets or feed management software.

The Dairy Profit Monitor is a web-based program, available to new users at www.dairyprofit.cornell.edu. You enter the input data online, and then can view your reports instantly.

If you'd like more information about participating in the Dairy Profit Monitor, contact Jim Manning, Farm Business Manager at Cornell Cooperative Extension of Oneida County ph. (315) 736-3394 ext. 129 or by e-mail at jpm277@cornell.edu .

Save state and local taxes on purchases of motor fuel

In the last issue of Farm Flash, we discussed how farmers and horse boarders can use New York State's from ST-125 to avoid paying sales tax on farm-related purchases. You can also save taxes on purchases of motor fuel, but you need to be familiar with some different forms.

1. Diesel motor fuel:

There are three relevant state and local taxes:

- Diesel motor fuel tax
- Petroleum business tax
- Sales tax

To benefit from the available exemptions, you will need to provide the fuel vendor with a completed copy of Form FT-1004. This form is available from the New York State Department of Taxation and Finance, and may be downloaded at www.nystax.gov .

If the fuel will be consumed directly and exclusively in the production phase of farming, AND is delivered to your farm, check box (a) on form FT-1004. This will allow you an exemption from all three taxes.

If the fuel will be consumed either in farm production OR in a commercial horse boarding operation OR both, check box (b) on form FT-1004. This will allow you an exemption from sales tax but not the other two taxes. (This exemption does not require the fuel to be used directly or exclusively in farm production or commercial horse boarding operations.)

In both cases, the fuel is not to be consumed on public roadways except to reach adjacent land used by the farm or horse boarding operation. These exemptions are limited to 4,500 gallons per month unless you have prior written clearance from the Tax Department.

2. Gasoline motor fuel:

The relevant state and local taxes are:

- Motor fuel excise tax
- Petroleum business tax
- Sales tax

You cannot get an exemption from these gasoline taxes up-front. However, if you use the fuel directly and exclusively in farm production, AND the fuel is delivered to your farm, you can file for a refund of these three taxes using Form FT-420, also available at www.nystax.gov .

You have up to three years from the date of purchase to file form FT-420, but you will need to supply complete records of the purchases, including original purchase invoices showing name and address of the dealer, date of purchase, number of gallons, type of fuel, and the amount of each tax paid. You also need to keep a record of how the fuel was used. If your gasoline is delivered to a storage tank, you need to keep records of additions and withdrawals from the tank.

If the gasoline is not delivered to your farm, or if it is used in farm production but not directly and exclusively in the production phase of farming, you may still qualify for a refund of the sales tax (using Form FT-500), or the motor fuel excise tax (using Form FT-946/1046). In future issues, we'll cover federal tax savings opportunities on fuel purchases.

Local "*Super*" *Milk* Winners

Quality milk is a win-win for consumers, dairy farmers and dairy processors. To emphasize the importance of producing milk that is safe, nutritious and tasty, the Empire State Milk Quality Council annually presents its "*Super*" *Milk* award to New York dairy producers who maintain a somatic cell count of less than 250,000 for at least 10 months of a calendar year and keep a neat farm environment.

In 2006, a total of 1,163 dairies received the "*Super*" *Milk* Award. Of those, 151 dairies join this prestigious group of super milk producers for the first time. Consistency is important to cows and also to producing quality milk, and 10 dairies illustrate consistency by receiving the Award for 15 consecutive years. In 2006, many dairies also reached other "*Super*" *Milk* hallmarks: 56 New York dairies attained their 5-year mark and 20 achieved their 10-year goal.

CONGRATULATIONS! to the following new, along with 5-year, 10-year, and 15-year "*Super*" *Milk* Award winners from Oneida County:

Brabant Farm Partnership (The vanLieshouts)
Robert Breckenridge
Charles Brubaker
Kathryn/Andrew Burholder
Dale Champion
Noel/Mary Clemens
Collins Knoll Farm
Da-Ma farm
John Diaz, Jr.
Anthony DiNitto
Hope Elliott
Flowing Spring Farm (The VanHattens)
Robert Frost, Jr.
Cynthia Gallagher
Douglas Hotchkiss
Hu-Nan-Son Farm (The Pritchards)
Paul Janowski
Carl Lindberg
Hans/Tammy Moser
Brett/Beth Roberts
Nathan Stoltzfus
Robert Stricker
Edward/Barbara Tyler
Vaill Brothers
David Ward
James Williams
Robert Williams
Don/Samantha Wivell
Wormont Dairy (The Wordens)

Walking In and With the Paddocks!

Wednesday, June 20th
11:00a.m.-1:30p.m.
at Groeslon Farm

Ray and Wanda Paddock in Remsen, NY, Oneida County. All graziers are invited to attend this pasture walk in which we will be discussing weed control, clipping, fly control, paddock sizing, laneways and water systems. This pasture walk will be a sharing of ideas and what practices each person has found that works for them. The cost is free; and there will be hamburgers and hotdogs for lunch that will be provided by the hosts. This event is sponsored by the Oneida County Soil and Water Conservation District. For more information contact Bill Paddock at 315-736-3334 or william-paddock@oneidaswcd.org

FSA Accepting Emergency Loan Applications

Oneida County has been declared eligible for Farm Service Agency (FSA), formerly Farmers Home Administration, disaster emergency loan assistance for snow that occurred February 14th, 2007 and continuing. Family farmers who have suffered physical losses only due to the excessive snow may be eligible for FSA loans. Proceeds from crop insurance and any FSA programs are taken into account when determining eligibility for physical losses. Losses must be supported with documented records. Under the FSA Emergency Loan Programs, farmers may be eligible for production and physical loss loans of up to 100 percent of their actual losses, or the operating loan amount needed to continue in business, or a maximum principal balance outstanding of $500,000, whichever is less. Farmers must be unable to obtain credit from private commercial lenders. The interest rate on Emergency Loans is 3.75%.

Application for loans under this emergency designation will be accepted until November 7, 2007. The FSA office is located at 9025 River Road, Room 20, Marcy, New York, 13404, telephone number 315-736-3316x2.

Hot Weather - Ready or Not!

Warm sunny spring days feel nice after cold winter nights. For many of our cows these days are already the harbinger of uncomfortable hot weather to come. Too many cows find themselves inside barns that are still operated as if it's a cold January night! Sidewall curtains are closed, fans are not operating, plastic or old feed bags exclude fresh air from coming in, large inlets are not opened. Think about your cows and your barn, or if you are an advisor, your client's barn. How many nice spring days find the cows in hot stuffy under ventilated conditions? After finally getting the barn closed up there seems to be a fear of opening things up too soon, "it might be cold again next week."

Barns with large summer fan(s) on thermostats do better on these warm/ hot spring days. These fans turn on and even with inadequate inlets manage to get more air moving through the barn. If you have trouble getting the door open, or it slams shut when you stop to check on the cows after lunch, open some inlets, let your cows enjoy some of that nice spring air! Barns with temperature controlled sidewall curtains do much better at providing comfortable conditions for cows during changing weather than manually adjusted curtains. It is always surprising to see how often temperature controlled curtains are open even when it seems cold outside.

Often by the time we start talking about opening up barns, taking windows out, getting fans operating and checking on water supplies there have been several days when the cows were uncomfortable. Listen to the cows; they may be saying "we want fresh air!"

It is too late to make your cows more comfortable this spring but "what about next year" or "what about July and August?" Just think **SAAWS** as the sun gets higher in the sky and the temperatures in our humid climate start to go above 75 degrees:

- **S**hade protects cows from the extra radiant energy from the sun.
- **A**ir exchange brings fresh outside air into the barn and removes stale, hot moist air.
- **A**ir velocity over cows helps them to remove excess heat from their bodies and if their hide is wet promotes extra evaporative cooling.
- **W**ater to drink is even more important as things warm up and cows evaporate more water from their respiratory system and their bodies in an effort to maintain comfortable body temperatures.
- **S**prinklers that provide large droplets of water to wet the hide will increase the heat energy lost to evaporation as cows dry off.

Nice spring days are for more than getting the outside equipment ready for spring work, ordering seeds for the garden or thinking about baseball practice. Start practicing your skills and building the foundation for a cooler more comfortable summer for your 24 hour a day dairy workers.

Robert E. Graves , Agricultural, Biological, Engineering Extension

Saving Fuel During Field Operations

When tractor power is used for drawbar fieldwork (whether it's fertilizer injection, planting and spraying in a no-till operation, or tillage) several strategies can save fuel. Key points to saving fuel during tractor field use are:

- keeping a current maintenance schedule
- proper ballasting and tire inflation
- selecting a fuel saving gear and throttle setting.

Keeping your maintenance schedule current as suggested in the tractor owner/operator's manual will improve fuel economy. In an earlier Missouri case-study, replacing air and fuel filters on tractors brought in for dynamometer testing lowered fuel use by about 4 percent for the same power output.

Although recognized as important, tractor operator's often don't check total tractor weight or front- and rear-axle ballasting. Proper ballasting enables the tractor to efficiently transfer power to the drawbar and avoids wasting energy. Total tractor weight required depends on tractor style (true four-wheel drive, mechanical-front-drive, or two-wheel drive) and field speed. Use your tractor manual or see Table 1 for suggested pounds per tractor horsepower. Having this weight properly split between the front- and rear-axle also affects efficiency. Proper weight split is affected by tractor style and whether the attached implement is pulled or mounted. Check the tractor operator's manual or see table 2 for suggested guidelines. Using cast-iron weights allows ballast to be removed for fuel savings in lighter drawbar work (e.g. spraying).

Table 1. Gross tractor weight, lb/Hp

Speed, mi/hr	4.5	5	5.5
Tractor type			
2WD & MFD (lb/Hp)	130	120	110
4WD (lb/Hp)	110	100	90

Table 2. Front-to-rear axle ratio as percentage of total weight

Tractor type	Towed/drawbar %Front/%Rear	Semi-mounted %Front/%Rear	Fully-mounted %Front/%Rear
2WD	25/75	30/70	35/65
MFD	35/65	35/65	40/60
4WD	55/45	55/45	60/40

Tire inflation pressure should be correctly adjusted for the load the individual tire is carrying. Consult the tractor operator's manual or check with the tractor or tire dealer as correct inflation pressure for a given weight depends on tire size, use as a single or dual, and if the tire will be used at high speed (e.g. greater than 25 mi/h). Most operator's are aware of the damage under inflation can cause to tires. Over inflation contributes to excessive wheel slippage and fuel use. For lighter drawbar loads such as moving equipment, spraying, and lighter tillage (e.g. rotary hoeing, row-crop cultivating, or field cultivating if implements are not too wide or operated too deeply) shifting to a higher gear and reducing the engine throttle setting will reduce fuel use per acre. If using the power-take-off (PTO) such as with a windrower or baler, engine speed will need to be maintained at the rated PTO speed. Some newer, high-horsepower tractors use electronic controls to automatically shift to a higher transmission gear and reduce engine speed to maximize fuel economy while also maintaining correct PTO shaft speed for PTO applications.

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