



# Madison County Soil and Water Conservation District Grazing Program

December 2010

Five years have passed since I was hired to enhance the grassland resources, protect the watersheds from runoff and positively contribute to the farmer's bottom line in producing local food for Madison County and beyond. After half a decade there still seems to be plenty of work, however job diversity rules the day. My varied duties are a function of an ever-changing agency funding stream and a certain maturity of my experience within the grazing community.

This year I have once again been intimate with the District's post pounder helping farmers install buffers, planning and setting up grazing systems and teaching other agency staff the nuances of proper fence building. I have installed various water systems, laneways, poured some concrete, frost-seeded, built deer fence around a wetland, surveyed conservation sites, gathered biological and brix data on pastures and mentored an intern.

I've been working on the Upper Susquehanna Coalition's Ag. Team as their eastern basin grazing advocate in developing New York's watershed implementation plan for the Chesapeake Bay. I worked on the development and maintenance for the Graze-NY and USC websites, have led and hosted pasture walks throughout the state, given farm tours, done outreach in various capacities and have lectured around the northeast on pasture based farming systems. And for the record, my role is not that of a licensed physiologist even though many have used my ear as a sounding board on

horrid milk prices, government regulation and making stressful paradigm shifts within a family.

Since I am part of the local agricultural community and farm over the border in

Oneida County, the trust and the working together is especially important to me. Many times I have helped milk while we talk about the grazing plan, got animals back in the fence, help pull a calf and see the kids show off their favorite pet. I am indeed fortunate to share such experiences. I have even received a nice letter or two.

The diversity of the service area from Madison to Susquehanna County, PA has had its limitations in helping all the customers and getting back to the farm for visits, especially during the critical grazing times. The phrase, "I haven't seen you all summer" doesn't make me very happy but resources at the district are only going so far. I do appreciate your patience and phone calls to keep me in the loop.

The tightening belt to keep local people on the ground was recognized five years ago and the district has worked hard to develop strong grazing networks of farmers that can answer questions when the one-man crew is on the road. This movement towards "no grazier left behind" is an utter bright-spot in our grazing program. We routinely have 50 farmers at each gathering from all genres of grass farming to discuss real issues on the farm. Serving five gallons of ice-cream doesn't hurt either. I have appreciated serving this community for 5 years with the passion and work ethic of my rural roots. To carry out this mission I owe a great deal to my District Board, District Manager, Steve Lorraine, The Upper Susquehanna Coalition, The Graze-NY Program sponsored by Congressman Michael Arcuri, in partnership with the USDA-NRCS, The NYS Ag AEM Program, The Madison County Grazer's Group, The NYS EPF Fund, The CNY RC&D Council Inc., the local media, the Colgate print shop crew, my conservation professional colleagues and fellow farmers for your support. Thank you and Happy Holidays— *The Grass Whisperer*





# Another Class of Fence Builders

This year over 40 farmers throughout the Chesapeake Bay Watershed took advantage of the Madison Co. SWCD/Upper Susquehanna Coalition sponsored post driver to install over 3 miles of high tensile fence excluding animals from streams, around barnyard and laneway projects, facilitate planned grazing systems and buffer wetland areas.

Here are some poignant quotes about our little red machine:  
“A note of thanks for all your help in working with me to further the progress we have made on this farm. Being able to get the streams fenced out and new pastures established has made it easier to go to a grazing system. The use of the post driver and teaching me on doing the corners and layout were invaluable.” ~ Don McCoach.

“I feel that the SWCD’s post driver has provided one of the most tangible services to many farmers in the area.”  
~ William Lipsey.

“The fence building and the water development to all the paddocks was a lifesaver for us. Just the work alone of building fence and setting it all up was immense. The labor we saved by just moving from pasture to pasture and not having to supplement feed and also clean barn was good for our wallet.” ~ Rend Cache Farm.

“It is a great benefit to have the availability of the post driver, and a great way to not only do the right thing with your fences and animals but save a few bucks in the process.”  
~ Ron Wright Jr.

“It’s hard to put into words the amount of time and labor that was saved by the post pounder for our grazing project. The utility of this piece of equipment is immeasurable. The expertise of the Conservation District employees were also invaluable to the project.” ~ Wes Roberts





## Nutrient Value of Baled Hay

David K. Davis, University of Missouri—Forage Systems Research Center

A significant amount of fertility is contained within a bale of hay so we recommend feeding hay in areas where you would like to increase soil fertility. Of course, not all hay is created equal when it comes to the quantity of nutrients per ton of dry matter. Hay differs in nutrient content due to species, yield, growing conditions including soil fertility, haying conditions, etc. Summarized below in Table 1 are estimated hay nutrient values for some of the commonly grown forages.

Approximate quantities of nutrients contained per ton of hay dry matter for selected hay species.

Forage species	N	P2O5	K2O
----- lbs./ton DM -----			
Alfalfa	55*	15	60
Clover-grass mix	50*	15	60
Bromegrass	35	15	60
Tall Fescue	40	20	50
Orchardgrass	50	20	60
Timothy	40	15	60

\*most of the N derived from nitrogen fixation by legumes.

As a rule of thumb, cool season grasses will contain approximately 40 lbs. N, 20 lbs. P2O5, and 55 lbs. K2O per ton of hay dry matter.

However, N losses from a hay feeding system can often be in the neighborhood of 75% so that only 25% of the N contained in the hay is returned to the soil and available to be utilized by growing plants.

Our current fertilizer prices at Brookfield, MO (\$/lb.) are: N \$0.62, P2O5 \$0.75, and K2O \$0.50. Using the rule of thumb stated above, we estimate that there is \$67.30

worth of nutrients (N, P, and K) contained in a ton of grass hay (this equals \$40.38 worth of nutrients per 1200 lb. bale). After adjusting for the expected loss of nitrogen from the system, we estimate the value of nutrients returned to the soil from feeding a 1200 pound bale of grass hay is approximately \$29.22.

Remember to manage nutrient deposition (manure distribution) to areas where it is most needed by unrolling hay, moving bale rings across the landscape, or by space bale feeding.

Winter feeding options that will help reduce fertilizer needs include managed (strip grazing) stockpile systems that result in uniform manure/nutrient distribution, bale feeding in areas where additional fertility is needed, unrolling hay to distribute nutrients more evenly across the pasture, and supplement feeding in areas requiring added fertility.

When buying hay you should not only consider the feed value of the hay but should also consider the value of nutrients contained within the bale. Often times, purchased hay is a better deal than hay grown and baled on your own farm when considering both feed and nutrient values of the hay.



## The Grasshopper and the Grass Whisperer Team Up to Host Pasture Walks

Bill Paddock (nice grazing name) from Oneida Co. SWCD combined forces with Brian Aukema from Broome Co. CCE, John Wickham from The Upper Susquehanna Coalition and Troy Bishopp from Bishopp Family Farm and the Madison Co. SWCD to hold a summer legacy pasture walk (in memory of David Huse) and an inaugural, one of a kind winter pasture walk this past month. Over 80 farmers participated in the two events to learn about the nuances of pasture management over 20 years and utilizing stockpiled pasture for extending the grazing season.





# A Sweet Pasture Walk

In the headwaters of the historic Unadilla River, Brian Hackley's farming roots and 20-year template of rotational grazing are providing positive attributes for the local agricultural community as well as the distant Blue crab eating public. Brian's contagious smile, full head of hair, hands-on knowledge, happy cows and beautiful pastures inspired more than 60 farmers, including youngsters, to come and share experiences on profitable grazing strategies.

The 40 acres of river bottom, sandy-loam soil separated by 10 paddocks containing 40 percent clover and a newly installed high-tensile fence and water system with full flow water valves was a source of joy for the veteran grazier.

"Right now, I'm averaging more than 50 pounds of milk per cow on 10 pounds of corn silage and a 6:1 milk-to-grain ratio," Brian said, beaming.

He showed the herd of farmers with a tug on the poly-tape, how he utilizes portable Gallagher tumble-wheels to move cows every 12 hours within a paddock and how quickly they did move!



This simple execution garnered many questions on when to move, grazing heights, rest periods and plant species establishment. Kevin Gano and Dave Balbian from the CCE CNY Dairy and Field Crops Team fielded questions on precision feeding strategies and nitrogen use on pastures.

Nathan Weaver, Madison County dairy farmer from Peterboro, NY demonstrated the use of the Madison County Conservation District's newly purchased refractometer by squeezing the juice of the pasture plants relished by the cows and measuring the sugar content or brix of the forage.

The trend to study higher pasture brix levels correlates to disease resistance and energy values in plants, which also contribute to better animal performance.

Brian commented that he learned a lot of practical ideas over the years from other farmers at these types of events. "The chance to talk with others about real issues has been invaluable," said Brian.

He discussed the benefits of working with field staff from the USDA-NRCS, Otsego and Madison county Soil and Water Conservation Districts and the AEM Program on a milk-house waste system, laneway project and installing more fence infrastructure with the district sponsored post driver.

Aaron Ristow, Ag. Coordinator from the Upper Susquehanna Coalition, highlighted the good work New York farmers are doing in protecting the Chesapeake Bay Watershed and described how the looming EPA Total Maximum Daily Load allocation may affect agriculture in the basin.



No successful pasture walk can end without homemade desserts and conversations among new friends. John Troyer from Troyers Country Store in Nelson furnished five gallons of home churned vanilla ice-cream and the David Yoder Family from Richfield Springs provided homemade donuts.

John commented that was enough for 90 people or an equivalent 60 farmers as the scoop scraped the bottom of the freezer. Needless to say, the brix level was high for many of the guests. To say the pasture event was sweet may have been an understatement!





# Measuring the Quality of Pastures

In an effort to learn more about forage quality, your conservation district purchased a new refractometer to measure the plant's sugar content or brix level on area grazing farms. Brix refers to the total soluble solids (TSS) in the juice of the produce or sap of the plant. Total soluble solids refers not only to sucrose (sugar) but also to fructose, vitamins, minerals, amino acids, proteins, hormones, and other solids found in a plant, fruit or vegetable. The higher the TSS or Brix value, the healthier and more nutrient/mineral rich the plant is. It has also been observed that when given high Brix grass, cows eat only half of the amount of grass they would eat when fed low Brix grass. In this case, the cost of forage fed to the cows was immediately reduced by half.

Dairy cattle fed with high Brix grasses increased the quantity of their milk production. The cattle were healthier because of the nutritious food, resulting in vastly lower veterinary bills for the farmer. In addition, the milk produced had a yellower, creamier color, a desirable quality attributed to more carotene contained in the high Brix grass.

High Brix forage thus increases production in farm animals even as it lowers production costs. The combination of these factors adds up to more profits for the farmer. To read more: <http://www.articlesbase.com/environment-articles/why-higher-brix-readings-in-forage-makes-animal-raising-more-profitable-1116237.html#ixzz17Sn5SUaj>

**Note:** Results from this summer's readings showed mostly low levels even taken in mid afternoon. We have yet to experience a level that warrants the above statements but it makes sense to monitor more and find a local farm with a mecca of ultra-sweet grass. TB



## Charting Your Own Grazing Progress

Many farmers keep a grazing plan in their head, on the back of a notecard or in a daily diary. The district grazing program with help from CNY RC&D staff and graziers from across the region are developing a practical daily grazing plan in combination with a laminated map to hang in your office or milkhouse to chart you pasture management system. Give the office a call to find out how to get an individualized grazing plan.



Handwritten grazing plan chart titled "Grazing Plan & Control Chart" with columns for "SEASON" (Spring, Summer, Fall, Winter) and "Pasture" (1-20). The chart includes handwritten notes such as "Dairy cattle arrive 29 head", "70 head", "Dairy cows", "FALLOW Bld Habit", "FALLOW Bld Habit", and "Stock PILE". It also features a "Grazing Cell" column with "74 days" and "Stock PILE" entries.

Year	Season	Pasture	Notes
2010	Summer	1	5.5 3 8
		2	5.9 2 2
		3	6.0 2 3
		4	6.2 5 4
		5	6.6 4 6
		6	2.7 5 6
		7	2.8 5 7
		8	2.2 4 8
		9	2.1 5 9
		10	2.4 7 10
		11	2.6 5 11
		12	2.6 5 12
		13	3.2 5 13
		14	2.8 7 14
		15	2.7 5 15
		16	2.0 5 16
		17	2.0 5 17
		18	3.0 5 18
		19	2.7 5 19
		20	2.8 5 20



## Poor Grounding is the Leading Cause of Electric Fence Problems Period!

**80% of all electric fence problems can be traced to faulty grounding systems.**

For an animal to receive a shock it must complete a circuit. The circuit can be either from the energizer through a "live" wire through the animal, through the soil, and through ground rods back to the energizer, or from the energizer, through a live wire, through the animal, through a ground wire back to the energizer.

The grounding system for an electric fence is a little like a radio antenna. With a radio, the bigger the antenna, the better the reception. Likewise, your electric fence energizer requires a large grounding system to collect enough electrons from the soil to complete a powerful circuit.

**A minimum of three ground rods should be used for each energizer.**

One half inch diameter galvanized steel rods or 3/4" galvanized pipe make the best ground rods. They should be at least 6 feet long and driven 5-1/2 feet into the soil. They should be spaced at least ten feet apart. More ground rods may be needed in dry areas. If your fence includes ground wires, it is advisable to install additional ground rods connected to the ground wire at 1500 foot intervals along the fence line (3000 foot intervals are adequate where soil is moist year round).

Energizers should be connected to ground rods with 12-1/2 gauge wire attached with ground rod clamps. The connecting wire should be insulated so that it does not come in direct contact with the soil (i.e. 12-1/2 gauge direct burial cable is ideal).

**Use one continuous wire to connect all ground rods.**

Try to place ground rods near permanent moisture (electron flow to ground rods in moist soil greatly exceeds the flow in dry soils). Locate ground rods away from:

- Any ground rod connected to other electrical systems
- Telephone ground rods
- Underground plumbing or metal piping (even if not in current use)
- Any metal building in contact with the soil



## The Central New York Resource Conservation and Development Council Receives 2010 Northeast Sustainable Agriculture Research and Education (SARE) Program Professional Development Project Grant.

This on-going, three year comprehensive practical grazing training for



conservation professionals, extension educators and farmer mentors throughout the northeast entitled; *"Utilizing Holistic Planned Grazing as a Regenerative Engine for Sustainable Agriculture"* seeks to build

"on the ground" agency capacity to help farmers profit from a triple bottom line, whole farm approach to grazing management. A record number of professionals applied for this training (60 applications for 30 slots) from Maine, Vermont, Massachusetts, New Hampshire, New York, Pennsylvania and West Virginia. 42 participants were chosen to participate from the Northeast SARE region.

The passionate home-town professionals are being trained to "meet farmers where they are" and deliver holistic and practical grazing



strategies to 120 farms, representing 24,000 acres, of which 72 farms on 14,400 acres will develop and implement a holistic

planned grazing system. The project estimates impacts on these 72 farms will be (1) financial - \$2,000 increase in profitability due to reduced production costs, value added products and/or production increases; (2) ecological – 25% increase in ground cover, biological activity and improved soil & forage health; and (3) social – measureable subjective improvement in family quality of life.

To carry out this important mission of training the next generation of grazing advocates, the CNY RC&D Council has partnered with the hands-on team consisting of: Project Leader, Troy Bishopp, 5th Generation Grass Farmer & Madison Co. SWCD; NY Coordinator, Nancy Glazier, Northwest NY Dairy Livestock & Field Crops Team, Cornell CCE; VT Coordinator, Jen Colby, UVM Center for Sustainable Agriculture Pasture Program Outreach Coordinator; PA Co- Coordinators, Stacy Koch, USDA NRCS/Endless Mountains RC&D (PA) and Jim Weaver, Tioga Co. Planner; with technical assistance from Phil Metzger, USDA – NRCS/ CNY RC&D, Steve Lorraine, Madison Co. SWCD Manager/NYS Conservation District Employees Association President and Lauren Lines, CNY RC&D Office Manager.

To find out more about this exciting training go to: [www.cnyrcd.org](http://www.cnyrcd.org)





# Extending Both Ends of the Grazing Season with Stockpiled Pasture

Area farmers are discovering the benefits of utilizing stockpiled grass to reduce daily feed & labor costs, reduce time in a barn or wintering area and grow stronger roots. We've been experimenting with removing over wintered thatch with dry cows and "waking up" the bunchgrasses. Just as important, is how to plan for winter grazing by setting aside pastures and hayfields in early August for late fall and winter grazing. We have found that with a little mindset change and monitoring pasture conditions positive results can be achieved. Feed quality can also be surprising with measured forage tests yielding relative feed values of over 105 and TDN of 58 or better. Now would be a good time to start thinking outside the box on how you could use a combination of stockpiled forage, crop residues and bale grazing to add profit to your operation. Contact the SWCD office for more information and to get in touch with area farmers that have some hands-on experience with this system.



Congratulations to the Richard Bargabos Family on receiving the 2010 Madison County Conservation Farm of the Year by creating a Sustainable, Environmental Legacy

Powered by  
Sunshine and  
Gravity



Teaching the Benefits of Madison County Grasslands to the Next Generation of Conservationists





# Conservation District Projects



## Buffer projects



## Laneways

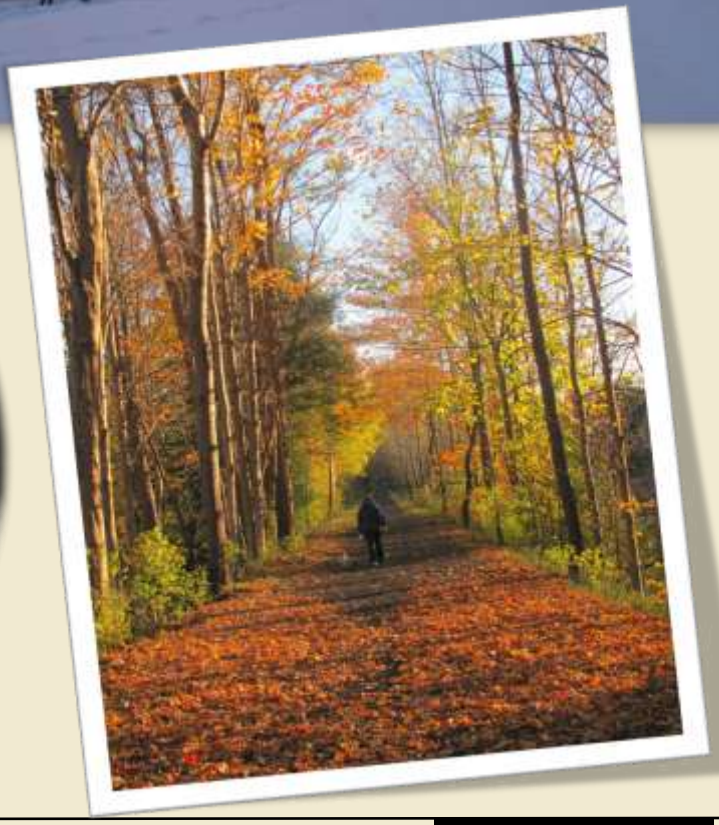








# A Farmer's View



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All programs and services of the Madison County Soil and Water Conservation District and the USDA-NRCS are offered on a nondiscrimination basis, without regard to race, color, national origin, religion sex, age, martial status or disability.