

Cornell Cooperative Extension of Oneida County's

Farm Flash



**Bunker and pile management at
Brabant Farm**
Story on page 7

October 2009



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CCE of Oneida County Farm Flash
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Become an enrolled member in 2009,
make a financial contribution!

Commercial farmers in Oneida County receive the Farm Flash free of charge, because many of you have commented that the newsletter is one of your preferred sources of information and we want you to receive that information.

Being an enrolled member and making a financial contribution demonstrates your support for the programs we offer. Financial contributions from individual residents represent a significant part of our budget, allowing us to continue to offer high quality programs and services. Whether its commercial agriculture or 4-H youth development, our office strives to meet the educational needs of the residents of Oneida County.

Please fill out the card below and return it to us with your contribution.

On behalf of the board of directors, staff, and most importantly, the people of Oneida County, thank you for your enrollment and your belief in our mission. We appreciate the help you have given us in the past and are grateful for the gift you provide us now. Thank you.

Cooperative Extension Oneida County *Agriculture* Enrollment

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Amount: \$_____

() Check here if you would like to receive an email notice of the latest Farm Flash Online in replacement of receiving a paper copy.

Upcoming Events

Food Preservation Workshop

Making Sauerkraut—October 14th 6:30 pm
Rome Polish Home, 415 S. George St. Rome NY.

There is a \$10.00 fee for this workshop.

Please call 736-3394 to register

Please visit our website at: www.cce.cornell.edu/oneida/

Direct Marketing

Tuesday, October 13 - 7pm to 9pm

CCE Oneida County, 121 Second Street, Oriskany

Selling your products directly to the consumer means keeping more of the profits, controlling the quality of the end product, and establishing rewarding customer relationships. But doing so successfully requires a new set of skills and capabilities, as well as an awareness of unique regulatory and liability issues. This is the first in a series of free meetings on direct marketing. We will focus on how you can use the internet and other computer tools to build community and sales. RSVP requested, or for more information contact Jim Manning at 736-3394 x129 or by e-mail at jpm277@cornell.edu.

Landowner issues and opportunities

Saturday, November 21 – 9am to 12pm

CCE Oneida County, 121 Second Street, Oriskany

Even if you are not a farmer yourself, as a landowner you are an important part of the future of farming in Oneida County. In this session we will:

- Help you understand how Ag Districts and the Ag Value Assessment program work

- Discuss what goes into a good contractual agreement between landowner and a farmer, including insurance issues

- Detail some of the opportunities for landowners presented by new biofuel crops

RSVP requested, or for more information, contact Jim Manning at 736-3394 x129 or by e-mail at jpm277@cornell.edu.

Labor Regulation

December 10, 2009 (10-12:30pm)

QuickBooks I

January 7, 2010 (10-12:30pm)

QuickBooks II

January 14, 2010 (10-12:30pm)

Please call Cornell Cooperative Extension at 736-3394 for information

Timber Tax Workshop:

October 6, 2009, at the Farm and Home Center in Oriskany. This workshop is designed for anyone who has a role in advising or preparing federal tax returns associated with private woodlands. Tax preparers (CPAs and Enrolled Agents), foresters, land trust managers, and real estate advisors at banks, are common participants. Some woodland owners actively contribute to tax preparation and would benefit from the workshop. Participants receive a large 3-ring binder of presentation materials, example worksheets, sample federal forms, and supplemental reading. Participants have the option of including their contact information on the Cornell University Forestry Extension webpage for reference by forest owners and others. Continuing education credits are available for CPAs, enrolled agents, and foresters. The workshop begins at 8:00am and ends at 5:00pm. The cost is \$70.00 per person which includes meals and materials. Preregistration is required. To register contact Diana Bryant at dlt5@cornell.edu or 607-255-2115.

Cornell Cooperative Extension's 2009 FIELD CROP DEALER MEETINGS

October 28 – Holiday Inn, 1777 Burrstone Rd., New Hartford, NY
Registration begins at 9:00 a.m. with the program underway at 9:50. Registration (including lunch) at the door—*no preregistration*—will be \$35.00. Registration alone, which includes one copy of the *2010 Cornell Guide for Integrated Field Crop Management*, will be \$20.00. The agenda features topics of current interest to those involved in field crop production. Extra copies of the Cornell Guide will be available. (Please let Larissa Smith (607-255-2177) know in advance of meetings if you will be needing 10 or more copies of the Guide).

Field Crop Dealers Meeting Agenda

Time	Topic	Speaker
9:50	Introduction	Jeff Miller
10:00	Enhance Efficiency Nitrogen Fertilizers & Nutrient Management Research and Extension: Ongoing Projects and Future Work	Quirine Ketterings
10:50	Role of HPPD Inhibitors in corn weed control and Herbicide resistance programs	Russ Hahn
11:20	New disease and insect resistant field crop varieties From Cornell	Margaret Smith
11:55	Questions and Discussion	
12:00	Lunch	
1:00	Weed management research updates and changes in Weed control guidelines	Russ Hahn
2:20	2009 corn hybrid trait and soybean seed Treatment results	Bill Cox
3:00	Questions and Discussion	



Farm Wanted: Looking for a dairy farm suitable to raise goats, field crops, fruits & vegetables. They would prefer 50 to 100 acre farm with a free stall barn. Contact Barbara Kampfer at 518-661-6055.

For Sale or Rent: Farm and or land near the Town of Western 140 acres of pasture & tillable meadows. Stantioned barn Holds 60. Contact Ed at 335-2745.



NOTICE: Dairy Farmers - H.P. Hood in Vernon is still looking for local farmers interested in feeding Whey by-product. If interested, contact Phillip Campbell or Steve Shaw at 829-2350. For more information contact Marty Broccoli, CCE at 736-3394 Ext. 121.

FARM WANTED: Couple looking for 100 – 300 acre dairy farm that has room for vegetable production and/or small greenhouse. Barns to hold 75-100 cows and 50-75 heifers. Contact Keith at 1-410-482-8661

Farm for Sale: 67 acre farm in the Deansboro area. 11 Room Victorian Home with Three car Garage. Two Barns with 21 Stalls, Hay Barn and a 200 foot Indoor Arena. Contact Gary at Equine Properties 518-875-6220

Farm Wanted: Looking for a small dairy/horse farm with 100-300 acres. 40-50 acres tillable, 30-50 pasture and the rest woods for firewood & timber. Tie stall barn to hold 5-10 milking cows & 30-40 heifers. Contact John U. Hershberger, 798-A Five Mile Line Rd., Ogdensburg, NY 13669.

Bunker and pile management at Brabant Farm

Elsewhere in this issue you'll find a new article from Cornell's Larry Chase and Tom Overton about "Management considerations for immature and frosted corn silage", which includes some great tips on storage practices. With this year's delayed growing season in mind, as well as the difficult financial times for farms, we visited with Joe Van Lieshout at Brabant Farm in Verona to look at what they are doing to maximize silage quality and minimize spoilage. The Van Lieshouts are storing silage both in bunkers and in a pile without walls. Joe confirmed that both systems can work well, but require different approaches.

When getting ready to fill their bunkers, the Van Lieshouts line the side walls with plastic that extends along the floor of the bunker about 1-2 feet and then hangs over the sides. If the plastic doesn't extend along the floor of the bunker, Joe says it will tend to work its way up as the bunker is filled, leaving a gap at the bottom. The plastic hanging over the sides needs to be tied down during the filling operation, because a good breeze will blow even heavy plastic around. Once the filling and packing operation is completed, the plastic hanging over the sides is pulled over the top of the pile and the whole pile is covered with a single sheet. Joe likes to make sure the sidewall plastic is sufficient so that the top sheet overlaps it by about 10 feet; if the top of the pile is sloped, that plastic will tend to slide down, so you want to make sure there's enough so that no gaps can form for water infiltration. With the top covered with tires, and the side walls sealed, not only is air largely excluded from the pile, but water drains down the walls outside the plastic and leaves the bunker through the joints rather than penetrating the pile.

When piling silage on a pad, covering the feed is simpler because there are no side walls that might allow air and water infiltration. On the other hand, because the average depth of a pile for a given area will be smaller, you'll need a larger area to store the same amount of silage. Packing silage well is of course one of the biggest factors in producing quality feed that will store well. In terms of packing, Joe noted that the pile can be somewhat easier than the bunker just because of the logistics of maneuvering equipment around the pile.

When both time and money are tight, and you need to maximize your silage resource, it's worth considering that a well-managed pile can produce results comparable to a well-managed bunker; as Cornell's John Conway told us, "both storage systems will work well with about the same level of management intensity."

Agriculture Tax Tip

Dues Dates:

October 15, 2009- Personal Income Tax, Partnership, and Fiduciary Returns Due for Calendar Year Taxpayer who requested an Automatic Six Month Extension to File.

October 20, 2009- Sales Tax Return for Monthly Filers Due

The Home Office Tax Deduction:

When you use part of your home to run a business you may be able to deduct expenses for what the IRS calls "business use of your home". To declare this deduction the IRS states you must meet two tax law requirements.

Requirement #1: You must use the space *regularly* and *exclusively* for a trade or business. The IRS doesn't offer a clear definition of regular use, only that you use that part of your home for business on a continuing basis, not occasional. For example, if you work a couple days a week from home, or a few hours each day you probably meet this test.

Exclusive use means that you use a portion of your home only for business. You can set aside a portion of a larger room to be used only for business, as long as your personal activities do not take place in the area. For example, if you do your monthly recording keeping at the kitchen table, you probably do not meet this test. There are two exceptions to the exclusive use rule, if you use part of your home to store inventory or products, or if you run a qualified day care facility in your home.

Requirement #2: *Principal place* of business. In addition to using part of your home regularly and exclusively for your business, your home must be your "principal place of business". If you have more than one business location (including your home), you must determine whether your home is your principal place of business. Your home will automatically qualify as your principal place of business if both of the following are true:

- You conduct administrative or management activities for
- your business from your home.
- You have no other fixed location where you conduct those activities.

Continued on the next page

There are alternatives to the principal place of business rule. Check IRS Publication 587, *Business Use of Your Home*, at www.irs.gov.

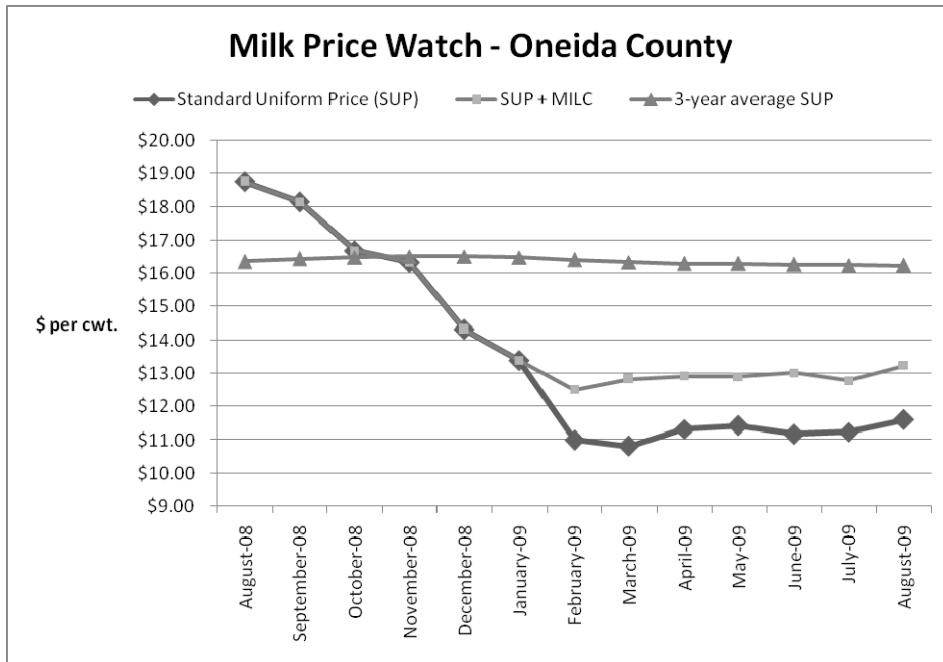
The claim for home office deduction is taken on IRS Form 8829, *Expenses for Business Use of Your Home*. Please discuss the Home office deductions with your tax advisor and how you can be ready to prove to the IRS that you are entitled to take the Home Office deduction.

Milk Price Watch for Oneida County

Thirteen months through August 2009

These prices are adjusted from the Federal Milk Order No. 1 for the Syracuse location, which determines Oneida County prices. When MILC program payments are in effect, this chart also shows the total price after MILC (SUP+MILC) using actual or estimated payments.

Remember that these prices do not reflect marketing and hauling charges, and they are based on a standardized component mix (3.5% butterfat; 2.99% protein; and 5.69% other solids). Your actual check will depend on these factors.



Expansion on a budget

By Dairy Herd news staff | Monday, May 11, 2009

Expansion is still possible in hard economic times; you just have to be creative. Joe Harner, agricultural engineer at Kansas State University, shared these tips for maximizing facility capacity and heifer throughput at the annual Dairy Calf & Heifer Conference.

- Reduce breeding age. "If you can reduce breeding age by one month, you can increase capacity (or facility throughput) by 6 percent," he said. In other words, each month that breeding age is delayed past 15 months of age results in a 6-percent reduction in capacity.
- Move heifers off-site after breeding. This increases throughput or capacity 5 percent, based on a 22-month age-at-first calving.
- Lease facilities. However, "know and identify existing problems" first, he cautioned.
- Cull earlier. Cull animals in the lowest percentile for growth at four to six months of age rather than after they are bred. This can yield a 10-percent change in capacity. If calves are below the median (50th percentile for weight gain), "there's a high probability" that they're only going to "take up space" in your facility, he said.
- Move offsite heifers back home sooner. If you can ship bred heifers back home one month after breeding or at 16 months of age, you can move 37 percent more heifers through a facility, he said.

WANTED: QUALITY REPLACEMENT HEIFERS

If you would like to diversify market for your pregnant commercial or pure open and bred heifers, consider the **Cornell Beef**

Replacement Sale. This sale was started to add value to heifers that graduated from the Empire Heifer Development Program. It is now being expanded to include similarly developed farm raised heifers. The sale is facilitated by students enrolled in Cornell University **Beef Cattle Merchandizing** class. Get the best bang from your marketing dollar by enlisting the enthusiasm of 30 students to sell your quality replacement heifers.

There are **requirements** to assure the buyer that the risk of calving difficulty has been minimized and that performance has been optimized. Requirements include being sired by a registered beef bull, a body condition score ≥ 5.0 , negative test for BVD, brucellosis and TB and properly vaccinated for BVD, PI3, BRSV and IBR. Bred heifers are to be veterinarian checked pregnant to a known calving ease EPD sire. **Ultrasound data** will be collected on heifers while at the Cornell Beef Teaching and Research Center. **Sale date: Saturday, October 24, 2009.** Cornell Beef Teaching and Research Center, Dryden, NY. **For more information:** Mike Baker, Cornell Beef Extension Specialist, mjb28@cornell.edu, 607-255-5923

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CENTRAL NEW YORK BIOMASS CROP STUDY UNDERWAY

During the week of September 14, 2009 approximately 1000 owners of agricultural property located within 25 miles of Morrisville received a mailing from a research consulting firm that is working in collaboration with SUNY ESF, Madison County Planning, CCE Madison County, Madison County IDA, Colgate University and SUNY Morrisville on a practical assessment of the potential for biomass crop production in Central New York.

The study will focus on potential costs and returns for the production of three crops – **warm season grasses** like switchgrass in a one-cut system, **cool season grasses** like reed canary grass in a two-cut system (first cut for energy, second for forage), and **shrub willow** (harvested every three years). A group of 100 landowners will be selected from those who mail back the card accompanying the invitation letter to participate in the study. They will receive an assessment of the biomass crop potential for each open field on their property, along with a visit by a study team member who can generate cash flow projections for an investment in any of the three study crops over a ten-year period, based on various price assumptions.

To obtain representative data, the mailing went out to owners of properties selected at random from almost 7000 parcels containing at least 10 acres of agricultural land within the study region. In order to maintain the research design, it will not be possible to include properties outside the original sample. Landowners who are interested in biomass crops but did not receive the invitation letter can send an e-mail to info@cnylm.com, requesting to be put on an e-mail list to receive study results, to be put on a list of people who would like to be contacted by companies that are looking acreage that they might be able to rent for the production of biomass crops, or both.



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CORNELL'S DAIRY FARM BUSINESS SUMMARY WHY IT MATTERS.... AND HOW YOU CAN PARTICIPATE

For over 50 years, Cornell Cooperative Extension has worked with dairy farms of all sizes and all over the state to collect the key operating and financial information needed to analyze the business operations of these farms. These years of experience have resulted in a system that provides critical information for individual farm operators, educators and policymakers.

Because of the Dairy Farm Business Summary program (DFBS), we have a reasonable basis for benchmarking such critical aspects of New York's dairy farms as:

1. Rates of production (milk per cow, hay dry matter per acre, corn silage per acre, etc.)
2. Labor efficiency (cows per worker, cwt per worker, labor cost per cwt, etc.)
3. Costs of production (feed and crop cost per cwt, operating cost per cwt, etc.)
4. Profitability (net farm income, rate of return on capital, etc.)

At the broadest level, the DFBS information allows us to benchmark over time the performance of the investment in the farm vs. a desired 5% rate of return on capital. But at a more detailed level, the reports from the DFBS allow farmers to identify where their businesses are performing well and where they could be improved. The key, of course, to developing this information is a commitment to careful record-keeping on the farm. The motto of the DFBS program is: "You can't manage what you don't measure; but if you measure it, you can improve it!"

The records you need to maintain in order to analyze your farm business, whether using the DFBS or any other tool, are:

- Assets
- Liabilities
- Receipts
- Expenses
- Crop production
- Labor

Following is the first in a series of Farm Flash articles detailing the *essential record-keeping requirements* for participating in, and benefiting from, the Dairy Farm Business Summary program. Oneida County dairy farmers who are interested in participating in the Dairy Farm Business Summary should contact Farm Business Management Educators Jim Manning (736-3394 x129) or Bonnie Collins (736-3394 x104).

ASSET RECORD-KEEPING REQUIREMENTS FOR THE DAIRY FARM BUSINESS SUMMARY

First of all, it's helpful to have a definition in mind for the word "asset": for our purposes, let's agree that *an ASSET is the monetary value of anything owned and available for use by the farm business*. To analyze the performance of your business during a given year, you'll need to record the value of each asset at the beginning and the end of that year.

On most farms, the biggest ASSET categories are:

- Machinery and Equipment
- Land and buildings
- Livestock

Each of these categories raises some questions, of course.

Machinery and equipment: It's easy to know how much to value a piece of machinery in the year that you buy it – its value is the price you paid for it. Over time, of course, some of that value gets "used up", and accountants use depreciation tables to record that loss of value over time. But accounting rules may allow for that value to be written off more quickly than it actually disappears, so the best way to value these assets is to look at what comparable used machinery and equipment is selling for at the point in time you are looking at.

Land and buildings: Again, land and buildings that you purchased very recently are easy to value; but in most cases your best estimate of the value of land and buildings will come from looking at comparable recent sales. In a perfect world, you would have an appraisal of your farm property done each year (and even that would be an estimate!); but the more realistic approach is to monitor the value of similar properties in your area and make adjustments only when you can see a sustained change in market values. Assessed values used by your local assessor to calculate your property tax bills can be one data point in estimating your property value, but they should not be the only one.

A special note about land and buildings: This is one asset category in which you may want to include at least one asset – your home – that might not be "owned and available for use by the farm business". This is because it's often difficult to separate the value of the farm home-stead from the other land and buildings that are owned by the farm.

Livestock: The value of livestock can vary dramatically over relatively short periods of time, and for purposes of analyzing your dairy business you probably don't want to try and track the ups and downs of livestock auction prices. After all, you're in the business of producing milk, not in the livestock-trading business, so what should matter to you are the long-term trends in the value of this asset. But it is essential that you record, at the beginning and the end of the year, how many of each category of livestock you have (dairy cows, bred heifers, open heifers, calves, and bulls), with a reasonable estimate of the value per head for each category.

In addition to these three major categories, to get a good snapshot of the value of your assets you'll also need to record the following:

Inventories of feed: For both grown and purchased feeds, record the quantity (bales of hay, bushels of corn, tons of silage, etc.) as well as an estimate of the market value of feed on hand at the beginning and end of the year.

Inventories of supplies: These include fuel, oil, grease; vet supplies, semen; bedding; fertilizer, seeds, pesticides, fencing materials, etc.. Make an estimate of the value of these supplies on hand at the beginning and end of the year. Include estimated values for "grown supplies", such as straw for bedding, or lumber.

Accounts receivable: The value of anything that you sold prior the end of the year but will not get paid for until next year is an asset. Most dairy farms will have an accounts receivable for milk shipped in December that will be paid for in January.

Pre-paid expenses: If you pay rent or insurance or other "non-inventory" expenses in advance, record those amounts as an asset. (Feed, supplies, or other "inventory" items that you pay for in advance should be included above in your inventory values.)

Cash, savings, stocks and other financial assets: To the extent possible, these should include only those financial assets "owned and available for use by the farm."

If you maintain good records of these ASSETS, you are well on your way to being able to complete the Dairy Farm Business Summary. In the next issue of Farm Flash, we'll address the record-keeping requirement for LIABILITIES.




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Crop Shorts

By Jeff Miller

Corn Grain Hybrids for New York

*Margaret Smith, Ramie Ericson, Sherrie Norman, Keith Payne, and Judy Singer,
Department of Plant Breeding and Genetics, Cornell University*

In choosing corn hybrids for grain production, the two most important considerations for any grower are maturity and yield potential. Maturity comes first, because it's of no use to have the most fantastic yield potential in the world if the grain will not be able to mature and dry down reasonably in the production environment available to it. Recent years have included a number of growing seasons with plenty of summer heat and nice warm fall weather with late frosts. Growers have been able to produce hybrids that are longer season than one might expect in many areas. Summer 2009 provides a reminder that it's not always going to be that way! With growing degree days running well behind over much of the state and weather during September and early October unknown, it's a good year to have planted some hybrids that are guaranteed to mature in the available growing season. For any season, it's a good strategy to choose a mix of longer season hybrids that will take good advantage of a year that happens to have a long, warm growing period and shorter season hybrids that are virtually guaranteed to mature and that can be planted in cooler microclimates or at later dates.

Beyond maturity, any grower wants to choose a hybrid with excellent yield potential as well. Yield potential is a function of the genetics of the hybrid and is clearly also affected by hybrid maturity. It's a simple relationship with maturity – the more heat and light a hybrid absorbs during active growth, the more photosynthate it has available to fill out grain on the ear. So if the growing season were unlimited, the later hybrids would always yield more because they have more time to capture and utilize the sun's energy in forming their grain. Growers need to focus on choosing those hybrids that have good genetic potential for grain yield within a maturity class that will fit their production areas.

Every year, Cornell University invites seed companies to enter their corn hybrids in grain yield evaluation trials within each of three maturity classes: early (70 to 90 days relative maturity), medium-early (85 to 105 days relative maturity), and medium to late (100 to 120 days relative maturity). Within these groupings, hybrids are planted in three to five locations that are appropriate for their maturity. Trials are grown in farmer-cooperators' fields at about nine locations around the state, and also at one location on an experimental farm (Chazy in northern New York). Cooperators carry

out land preparation, weed control, and side-dressing as appropriate. We plant the hybrids using a precision vacuum planter, collect data throughout the growing season, and harvest them by machine (except at Chazy where hybrids are hand harvested by Mike Davis and his crew – we thank them!). Each hybrid is evaluated in a two-row plot that is 17.5 feet long (plot size 1/500th acre), with three replications of each hybrid per location. Data are collected on final plant stand, stalk strength (a scale of 1 to 9 is used, where the stalks are pushed by hand, and resistance to pushing and breaking is rated as 9 if the stalks have strong resistance against breakage when pushed, or lower if they are weak and break easily), grain yield, and grain moisture at harvest.

Every year, we summarize the data over years for all hybrids that are included in that year's testing program. Many hybrids will be new to our testing program, so may have only one year worth of testing data. Others will have been tested in one or more previous years. You can always have more confidence in the data from those hybrids that have been tested in the most environments, because they have proven their performance over a greater range of different conditions. Because hybrid performance will vary from location to location and year to year, we report the data as percentage of the test average. In other words, a hybrid with a comparative yield of 110 had a yield that was 10% above the average of all the hybrids tested in the same locations. The tables below report our hybrid grain yield evaluation data: early maturity hybrids in [Table 1](#), medium-early maturity hybrids in [Table 2](#), and medium to late hybrids in [Table 3](#).

Recall that you should compare hybrids only with others in the same table. Comparisons of ratings between tables are misleading because the different maturity groupings are tested in different locations. Early hybrids are tested at short-season locations, medium-early maturity hybrids at slightly longer season locations, and medium and late hybrids at sites with a moderate to long growing season. High-yielding hybrids in the early group would probably do poorly in medium or late tests and vice versa, because they are unadapted and inappropriate maturity for the sites where those tests are done.

In developing these tables, only those hybrids that performed above 90 percent of the test average and those that companies plan to offer for sale in New York in the coming cropping season are included. Not all hybrids are available in all regions of the state, however. For further help in selecting hybrids specifically suited to your needs, check with your Cornell Cooperative Extension educators and/or with seed company representatives. You can also find detailed results of each of our last four years of annual testing data at:

**[http://plbrgen.cals.cornell.edu/cals/pbg/
programs/departamental/corn/index.cfm](http://plbrgen.cals.cornell.edu/cals/pbg/programs/departamental/corn/index.cfm)**

Table 1. Hybrids for early grain (1400–1900 growing degree days¹, 70–90 days relative maturity).					
<i>Hybrids in order of maturity</i>					
Brand or Source	Hybrid	Comparative Yield²	Comparative Standability³	Years in Tests	No. Tests
Cornell	M1821	90	7.8	1	3
Hyland	HL CVR44	102	8.1	1	3
Growmark FS	3968VT3	107	7.8	1	3
Hyland	HL R230	99	7.6	1	3
T A Seeds	TA290-19	97	7.5	1	3
T A Seeds	TA370-00	113	7.6	1	3
Dekalb	DKC38-89(VT3)	111	8.1	1	3
Hyland	HL CVR48	108	8.0	1	3
Doebler's	372XRR	104	8.3	1	3
Growmark FS	3989VT3	110	7.8	1	3
Croplan Genetics	294RR/BT	108	7.3	1	3
Growmark FS	4282VT3	107	7.8	1	3

¹Growing degree day ratings for New York–adapted corn hybrids range from 1400 to 3000. Within the growing degree day range for this table, the hybrids listed first are earlier maturing and those listed last are later maturing.

²Comparative yield ratings are obtained in Cornell statewide tests from yields adjusted to an average of 100. A hybrid with a rating of 110 has performed 10 percent above average in trials where it was entered. Rating differences smaller than 5 percent are probably not statistically significant.

³Comparative standability is the comparative resistance to stalk lodging in Cornell tests on the basis of 1 to 9, with 1 indicating the lowest resistance and 9 the highest.

Table 2. Hybrids for medium-early grain (1900–2400 growing degree days¹, 85–105 days relative maturity).					
<i>Hybrids in order of maturity</i>					
Brand or Source	Hybrid	Comparative Yield²	Comparative Standability³	Years in Tests	No. Tests
Dyna-Gro	54V78	108	7.7	1	4
N K	N27B-CB/LL/RW	96	7.7	1	4
LICA	1898CB/LL	98	7.5	1	4
Growmark FS	4465VT3	106	8.0	1	4
Hyland	HL CVR54	96	7.7	1	4
Hyland	HL CVR64	99	8.0	1	4
T A Seeds	TA451-11	105	7.6	2	8
Growmark FS	4373VT3	99	7.9	2	8
Dekalb	DKC46-60(VT3)	101	8.1	2	8
Croplan Genetics	388TS	105	7.7	1	4
Doebler's	468RB	104	8.0	3	13
Dyna-Gro	55V18	104	7.9	2	8
Growmark FS	4861VT3	107	7.9	2	8
Garst	88C97CB/LL	106	7.6	1	4
Dekalb	DKC50-44(VT3)	112	8.0	1	4
LICA	9707BT/LL	94	7.4	1	4
Growmark FS	4819XRR	103	8.1	2	8
Croplan Genetics	421TS	108	8.0	2	8
Hyland	HL CVR72	104	8.0	1	4
Hyland	HL CVR74	113	7.8	1	4
T A Seeds	TA500-16	108	8.2	1	4
Doebler's	467BVR	103	7.9	1	4
Hyland	HL B49R	108	8.2	1	4
LICA	19C00	110	7.8	1	4
Growmark FS	5484VT3	107	8.0	1	4

¹Growing degree day ratings for New York–adapted corn hybrids range from 1400 to 3000. Within the growing degree day range for this table, the hybrids listed first are earlier maturing and those listed last are later maturing.

²Comparative yield ratings are obtained in Cornell statewide tests from yields adjusted to an average of 100. A hybrid with a rating of 110 has performed 10 percent above average in trials where it was entered. Rating differences smaller than 5 percent are probably not statistically significant.

³Comparative standability is the comparative resistance to stalk lodging in Cornell tests on the basis of 1 to 9, with 1 indicating the lowest resistance and 9 the highest.



Field-Scale Studies Evaluating the Agronomics and Economics of Selecting Double and Triple-Stacked Hybrids

Bill Cox¹, John Hanchar², Phil Atkins¹, Elson Shields³, , Dep. of Crop & Soil Sciences¹, Dep. of Animal Science², Dep. of Entomology³, Cornell University

Double and triple-stacked hybrids dominate the hybrid corn industry

now so we conducted field-scale studies on four farms in New York in 2007 and 2008 to evaluate the agronomics and economics of the base genetics of a corn hybrid with double-stacked (Roundup Ready, and Bt trait for corn borer) hybrids in a corn-soybean rotation as well as triple-stacked (Roundup Ready, Bt trait for corn borer, and Bt trait for rootworm control) hybrids in continuous corn. The objective of the study was to determine if growers in New York would benefit from selecting stacked-hybrids because European corn borer is only an occasional pest in New York, western corn rootworm damage is not as severe in New York as in the Midwest USA, and Roundup Ready resistant weeds have not been observed in New York.

There were two rotations tested in the two year trial: corn after soybeans and corn after corn. There were some site by hybrid interactions which means in this case that two sites (Jefferson Co. and Onondaga Co.) showed a 5 and 3% yield advantage in the second year of a continuous corn rotation while the Livingston and Cayuga sites showed no advantage to the double stacked hybrids. In general the response to the BT corn borer trait was site specific, if there were enough corn borers in the field you saw a benefit from having the corn borer trait. This has been shown in many trials. So the take home message is: you wont see a benefit from this trait unless you have a problem. There was no response to having the third trait (corn rootworm Bt) at any of the 4 sites. Remember this is only the second year of continuous corn. Elson Shields showed in many trials that seed treatment is adequate for lower levels of CRW usually found in the second year and CRW Bt hybrids should be used in the third, 4th, etc.

Another factor uncovered in this research trial is a consistent increased level of grain moisture in the stacked hybrids (1.5% greater) then the conventional. This would necessitate delaying the harvest of the stacked corn waiting for it to dry down more or pay for the additional drying costs.

An economic analysis of the profitability of stacked vs conventional hybrids also showed mixed results with increased profitability in the corn after corn rotations in Jefferson and Onondaga county sites and no additional profitability to losses of profitability using stacked hybrids in all other sites and corn following soybean rotations.

The conclusion is this: New York corn growers have to be careful when choosing stacked hybrids. There is a great deal of variability in corn borer damage in our state. If you have a problem with borers on your farm you will probably increase your production and profitability by using the Bt trait for corn borer on the affected fields. Corn rootworm continues to be a serious pest with the potential to reduce your yields and profitability. It is totally unnecessary to use a CRW Bt hybrid in first year corn or corn following soybeans. You probably won't see an economic response to using CRW Bt hybrids in second year corn either. The best place to use the CRW Bt traited hybrids is in your fields that are 3rd or more years in corn production.

The cost of using the glyphosate tolerant corn hybrids is the cost of the tech fee for the seed plus the cost of the herbicide. Many of you may have started to use glyphosate tolerant GT corn hybrids in fields where you had significant perennial weeds that were best controlled by glyphosate. So you went in with a preemergence herbicide to control most of your weeds and then went in at a later date to spot spray the perennials with glyphosate. So you controlled a whole mass of annual weeds early in the season with the preemergence spray not allowing those weeds to compete with your corn crop and then handled a much lower population of perennial weeds with the second spot spray. This practice has now shifted to a one time pass with glyphosate at a later time to control mainly annual weed problems at least on 50% of our GT corn acres. Could you be losing yield potential during the time that weeds are growing in the field as the corn germinates and at early stages of development? If the annual weeds are at a 2" height at the time of treatment.....you probably are not losing yield. Did you spray glyphosate on all your fields when the annual weeds were 2" tall?



Seeding rates

for Soft Red Winter Wheat

Bill Cox and Phil Atkins, Dept. of Crop & Soil Sciences, Cornell University

Soft white winter wheat represented over 80% of the New York wheat acreage in the mid-1990s. Over the last 15 years, however, soft red winter wheat now represents close to 80% of the New York acreage, primarily because of its

greater tolerance to sprouting damage. We have conducted numerous studies on seeding rates on soft white winter wheat at timely (late September) and late (mid-October to early November) planting dates. Soft white winter wheat has a very broad optimum seeding rate range with optimum seeding rates generally about 1.5 to 2 bushels/acre for September planting dates and about 2.5 bushels/acre for mid-October to early November planting dates (Table 1). Surprisingly, seeding rates of generally about 1.5 to 2 bushels/acre at both planting dates maximized straw yields of soft white winter wheat so growers who also harvest the straw should not increase seeding rates to increase straw yields, even at late planting dates (Tables 1). Soft red winter wheat now dominates the NY wheat acreage and recommended seeding rates from Pioneer and other states that grow soft red wheat is about 1.4 M seeds/acre, which usually translates into about 1.75 bu/acre, depending upon the number of seeds/lb of the variety. A new three year study was initiated in the Fall of 2008 to determine the optimal rate of seeding for soft red wheat at Cornell. Growing conditions were near ideal for wheat production 08-09. There was little response to seeding rates this season with the selected soft red wheat producing maximum grain yield at 1.4bu/ac and maximum straw at the lowest rate of 1bu/ac of seed. The study will continue for the next two years before a recommended rate will be reported.

Table 1. Grain yield and straw yield of Geneva soft white winter wheat for September-planted wheat (~9/20) and October-planted wheat (~10/15) at 1.5, 2.0, 2.5, and 3.0 bu/acre seeding rates at the Aurora Research Farm in 1989 and 1990.						
Seeding Rate	PLANTING DATE					
	9/20/89	9/21/90	Avg.	10/14/89	10/17/90	Avg.
Bu/acre	-----Grain Yield (bu/acre)-----					
1.5	75	77	76	54	58	56
2.0	72	77	75	55	65	60
2.5	70	81	76	58	69	64
3.0	71	85	78	59	72	65
Mean			76			62
LSD 0.05†			6			
	-----Straw Yield (Tons/Acre)-----					
1.5	2.0	1.5	1.8	1.0	1.1	1.1
2.0	2.1	1.6	1.9	1.6	1.1	1.3
2.5	2.1	1.6	1.9	1.2	1.2	1.2
3.0	2.1	1.7	1.9	1.4	1.4	1.4
Mean			1.7			1.2
LSD 0.05†			.015			

†LSD 0.05 compares means between planting dates.

Harvesting, storage and feeding of frosted corn silage

L. E. Chase and T. R. Overton, Department of Animal Science, Cornell University

The 2009 growing season in New York has again not been "normal". Reports from around the state indicate that corn planted for silage is highly variable around the state. In some areas, corn maturity stage and potential yields appear to be very good. In other situations, corn is behind normal maturity. This variation in maturity status is evident within fields and between fields in the same area. Some corn was also flooded in parts of the state. There is a good possibility that at least some corn planted for silage will not attain "normal" maturity at harvest unless we get a large number of growing degree days and a late frost. However, an early frost will increase the acres of immature corn harvested as silage.

What do we do in this situation? The key is to remember and apply the basic principles for harvest, storage and feeding of the 2009 corn crop. We have been through this same scenario a number of times in the last 10 years so many people have some experience in managing this situation. The key points to concentrate on for the 2009 corn crop are:

A. Harvesting

- a. Do everything possible to harvest corn silage at the **right dry matter content**. The target range for harvest is 32 – 38% DM (62 – 68% moisture).
- B. Harvesting at the right DM increases forage yield, dry matter intake, forage digestibility, milk production and profitability.
- C. **Use whole plant dry matter** to determine when to harvest. With many of the newer hybrids, milk line **is not** a good indicator of when to harvest.
- D. It has been shown that the plant DM value obtained with a Koster tester is about 2 units higher than actual plant dry matter. A 33% DM determined with a Koster is really about 31%. Keep this in mind when interpreting the results and deciding when to harvest.
- E. Whole plant dry down rates is about 0.5% per day in September. You can use this as a gauge for harvesting. If your corn silage is 28% DM today, it will be about 10 days until it reaches 32% DM. Since the dry down rate can be variable, you should double check whole plant DM before starting harvest.
- f. Forage harvester settings:
 - If using a processor, theoretical length of cut (TLC) should be 0.75 inches.
 - Set the processor rolls with an opening of 1-3 mm.
 - If not using a processor TLC should be 0.25 – 0.5 inches.

g. Monitor what's actually coming out of the Harvester!

There are too many factors (hybrid, stand density, DM, maturity, field speed, etc.) that determine the **actual** particle size of the material leaving the chopper. The only way to know if the settings are right is to monitor particle size and kernel breakage. Guidelines are:

1. Penn State particle separator
 - A. 2 screens + pan
 1. Top screen = 10-20 % of the total weight
 2. Middle screen = 40 - 60 %
 3. Pan = < 40 %
 - B. 3 screens + pan
 1. Top screen = 10 - 20 % of the total weight
 2. Second screen = > 40 - 60 %
 3. Third screen = < 40 %
 4. Pan = < 5 %
2. Kernel breakage - The goal is > 90 % of kernels broke or damaged.
 1. Adjust chopper settings if particle size or kernel breakage is not meeting the above guidelines.
 2. You should recheck these measurements frequently since things like hybrid, stand density, maturity and DM will change both particle size and kernel breakage with the same settings.

H. Adjust chopper settings if particle size or kernel breakage is not meeting the above guidelines.

I. You should recheck these measurements frequently since things like hybrid, stand density, maturity and DM will change both particle size and kernel breakage with the same settings.

B. Storage

- a. If you have both "normal" and immature corn silage, try to store them in separate silos or Ag-Bags. This provides flexibility at feeding time.
- b. Store any BMR corn silage in a separate silo.
- c. Make sure you have enough packing tractor weight. The thumb rule is 800 lbs. of packing tractor weight for each ton of silage put in the bunk per hour. If you have a fill rate of 100 tons/hour, you would need 80,000 lbs. of tractor weight.
- d. If more than 1 packing tractor is needed, make such the silo is wide enough for both tractors to work at the same time.

- E. Pack thin layers (6-8 inches) if possible.
- f. Consider covering the bunker walls with plastic on the inside to minimize air infiltration through cracks and joints.
- g. Seal the silo with plastic and tires or the new lower oxygen permeability covering material.
- h. Consider the use of a research proven bacterial silage inoculant or acid preservative to assist in improving fermentation efficiency and dry matter recovery. Ask for research data that supports the product claims.
- i. Handle and use the product according to directions from the supplier. A number of things can decrease the effectiveness of bacterial products. These include improper application rates, the water use to mix the material, water temperature in the tanks and how long the product has been mixed up.

C. Feeding considerations

A. If possible. Let the corn silage ferment for 3 – 4 weeks before feeding. This will minimize the typical “October to December” ration adjustments and lower milk production associated with feeding “new” corn silage.

B. The weather conditions during the 2009 growing season make it difficult to predict digestibility and feeding value of the corn silage produced. The following forage sampling and analysis schedule should help:

1. Take samples at the time of harvest and analyze them for DM, CP, NDF, starch and NDF digestibility. This will provide a base or starting point for planning your feeding program.
2. At feeding time, feed off the front part of the silo to less sensitive groups (late lactation cows, far off dry cows, bred heifers) until you reach a good silo face.
3. Take samples from a number of places on the face, composite and send in for wet chemistry analysis of DM, CP, soluble CP, NDF, starch, NDF digestibility and fermentation profile. Your feed professional can use this information to adjust rations and take maximum advantage of your silage.
4. Repeat this sampling procedure at least monthly until the results become stable. It may take 3-6 months for this to occur.
5. **Observe safety precautions when working around the silo face. Don't approach the face if there are overhangs, etc. Always have a second person at the silo (but not at the face) in case you get buried. Make sure they know how to dig in and get you an airway for breathing. Have a cell phone available to call for help.**

6. An alternative is to use the front end bucket or silo facer to knock down forage. Remove this silage a safe distance from the face and then take your samples.

7. When you start feeding the 2009 corn silage, take 1-2 weeks to transition between the old and new corn silage. This will minimize potential fermentation and nutrient changes in the ration. Cows like consistency of both feed and nutrients!

D. Frosted Corn Silage

In some years, we get a killing frost before the corn has reached maturity for harvest. The following factors should be considered when managing frosted corn silage:

- The leaves will quickly turn brown and the plant will appear "dry". This gives a false reading on whole plant DM since leaves are only 10-15% of the total plant weight on a DM basis. Most of the plant moisture is in the stalk and ear.
- Whole plant DM needs to be determined to assess when to harvest. Corn for silage should be at 32% DM before you start chopping. The target range for harvest is still 32 – 38% DM.
- The frost may kill some of the normal bacteria found on the plant. The use of a research proven bacterial silage inoculant should be used to assist in getting a good fermentation started when ensiling this crop.
- Once you start harvesting, harvest as quick as possible. This will lower the risk of the plant getting too dry and any molds that could grow on the ear while it is still in the field.
- Follow normal guidelines for packing and sealing the silo.

Summary: Harvesting corn for silage in 2009 will be challenging in some situations due to the need to handle immature or frosted corn. The harvest and silo management principles used for harvesting "normal" corn silage still apply in these situations. The most single critical step is to use whole plant DM determinations as the base for determining when to start harvesting. Once chopping has started, check corn forage particle size and kernel damage to determine if the chopper settings are correct or need adjusted. Fill the silo fast, pack, and seal the silo. This should provide the best quantity and quality of corn silage to use in your feeding program over the next year.

Managing your woodlot: Most farmers have a woodlot which is another crop on the farm, that may not get the same level of management as their cropped acres. Cornell University has held a series of webinars on all sorts of aspects of woodlot management that can be found at this website: <http://www.sustainablewoodlands.info/> . You can go to this site pick a webinar that interests you and watch at your leisure. Below are a few examples of topics you will find at this site:

- Intergenerational Transfers and Long-Range Forest Planning
- Sustaining Healthy and Productive Forests
- Conservation and Maintenance of Soil and Water Resources

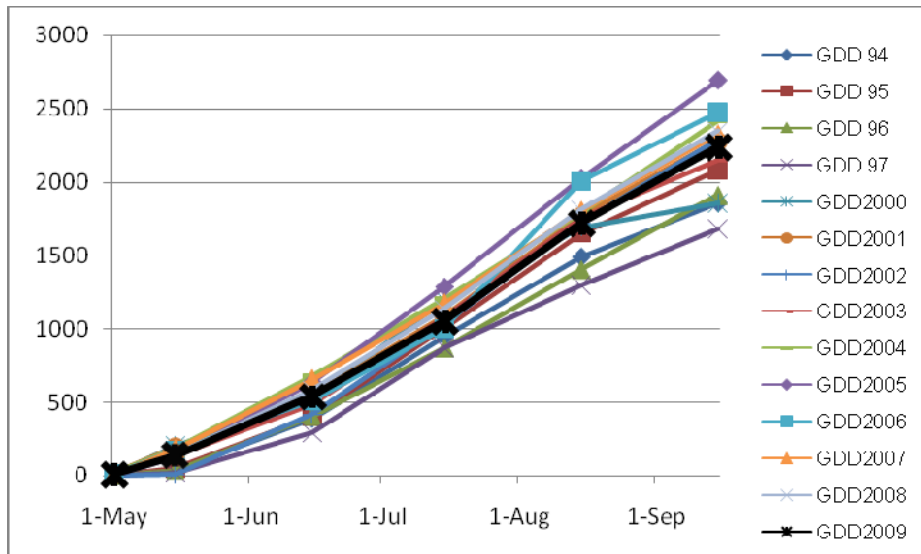
These webinars continue and you can join them live and ask and get answers to your questions by connecting to this site on the date of the webinar: www.ForestConnect.info at noon or at 7:00pm . Some of the upcoming webinars include:

- October 21st: Deer and forests - impacts, assessment, control and recovery. Presented by Susan Stout and Alex Royo, US Forest Service Northern Research Station.
- November 18th: Timber Harvesting Aesthetics Part 1. Timber harvesting options to improve aesthetics. Presented by Andy Egan, Paul Smiths College.
- December 16th: Timber Harvesting Aesthetics Part II. Perceptions of woodland owners and the general public about harvest aesthetics. Presented by Shorna Broussard Allred, Cornell University, and Shannon Rogers, Purdue University.

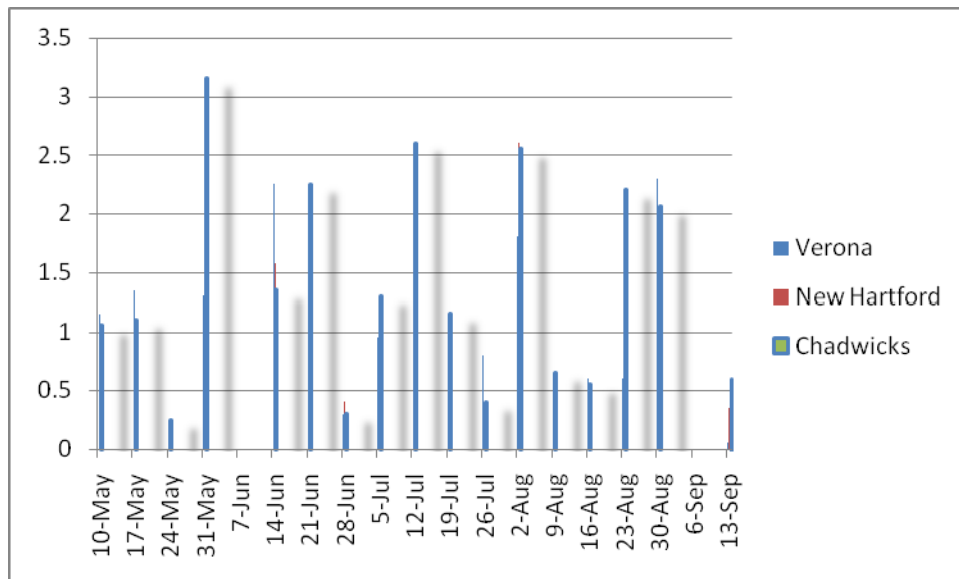
Oneida County Growing season for 2009

The chart below shows how growing degree days have been amassed during a number of growing seasons in Oneida County since 1994. You will note that the most prominent black line is this year's growing degree days. As of September 20th we have accumulated 2240 GDDs since May 1st.

As you can see in the graph we are far behind the GDDs accumulated at this time in 2004, 2005 and 2006 and still 100 GDDs behind 2007 and 2008. The week ending September 20th we only amassed 74 GDDs so at that rate of accumulation we are about a week to 10 days behind last season. Local growers have begun to chop some cornfields in the county but we are definitely not in full swing of corn silage harvest yet. John Brouillette, Mycogen has been doing a great deal of whole plant moisture tests for local growers with many in the mid 70s for moisture on September 14 indicating that they had 10 days to 2 weeks before the moisture levels would be optimal for storage. Other local growers were reporting black layering (physiological maturity) in early planted corn fields April 25-May 2nd) with maturities from 95-99 days.



We definitely had our fair share of rainfall distributed fairly evenly throughout the season as seen in the graph below:



The longest period of dry weather we had was between August 30th and our last week of recorded weather ending September 20th. In fact it has been so dry that it has been a little tougher this year for growers to till fields for winter wheat this year. Some local growers are taking advantage of this weather and are harvesting their 3rd or 4th cut of hay. Local soybean fields are changing color and dropping leaves going into their dry down phase. Hopefully most of our fields can be combined before the snow flies this year.



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