The 48th Annual 4-H Conservation Education Days

6th grade students (over 700) from around Oneida County attend the 2 day event at Delta Lake State Park.

The students visit 12 stations that highlight a different Conservation topic.

Photo: Environmental Conservation Police Officer Russ Rizal speak to youth about Wildlife and Outdoor Safety.

October 2012
CCE of Oneida County Farm Flash

Table of Contents

Page 3-5  Upcoming Events
Page 6    Legal & Practical Record Keeping Rules for HR
Page 7-9  The Milk-Feed Ratio Dilemma
Page 9    Milk Price Watch
Page 10   Hay Storage Considerations, Don’t waste it!
Page 11   Colostrum management & calf care
Page 12-21 Crop Shorts

“Cornell Cooperative Extension provides equal program and employment opportunities”
Please contact the Cornell Cooperative Extension of Oneida County office if you have any special needs.
2012 Field Day Series offers “How-to” information on incorporating solar panels, wind turbines, radiant heat, passive solar and ecological stewardship practices into your farm or homestead. See Registration information that follows for each location.

Have you been considering transitioning from fossil fuels to renewable energy on your farm or homestead? The farmers in the 2012 “Light Up the Farm with Sustainable Energy” Fall field day series are eager to show you how. The farms in our 2012 series produce a wide range of products spanning vegetables, poultry, milk, eggs, honey, garlic, koi fish, and even lemons and figs! And they are all doing so using sustainable energy. Solar thermal, solar photovoltaic, wind turbines, radiant heat, and a variety of other ecological production techniques are empowering these farms to stabilize their energy bills into the future and conserve resources for the next generation. During these farmer-led, inspiring tours, you’ll learn about how to decide what renewable energy source is right for you; grants and loans available for financing; installers that work with farmers; and other sustainable production techniques. All field days are free and open to the public and refreshments will be provided. Sponsored by Northeast Sustainable Agriculture Research and Education (SARE) and the Cornell Small Farms Program. To learn about funding opportunities from NE SARE, visit www.nesare.org

Region: Central NY, Schoharie County
Address: 116 Davis Rd. Summit, NY 12175.
October 5, 2012. 10am – noon. Energy from the Sun! Summit Naturals Organic Farm. Leo Siemion will give us a tour of the sustainable energy features on his 25 acre organic farm. The farm produces 11 varieties of garlic in raised fields, eggs from heritage Dominique breed of chickens, and bottled honey, comb honey and beeswax candles from 12 bee colonies. Leo and his farm crew have spent the past several years raising approximately 450 pond bred Koi fish for retail sale. Their 60 X 21 foot high tunnel is double walled plastic and excess solar heat is circulated through 250 feet of corrugated pipe 2 feet underground. This active solar heating system allows Summit Naturals to grow greens throughout the winter. Their smaller glass greenhouse attached on the south side of the family home has 520 feet of corrugated pipe, 5 feet underground which runs through an insulated stone pit and radiates back up thru the concrete floor. Leo has been able to produce tropical fruits such as oranges, lemons, and figs in this green house. The 9.4 KW grid tied PV electric system consists of two separate arrays: Each array has three pole mounts and its own inverter. Their roof mounted evacuated tube solar hot water system provides all of their hot water
needs. The farm is considering an electric tractor purchase in 2013 to use the excess electricity they now produce and reduce diesel fuel needs. More info on Summit Naturals at http://www.summitnaturals.com Free and open to the public! Refreshments will be provided. Register by email vws7@cornell.edu Cosponsored by Cornell Cooperative Extension of Schoharie and Otsego Counties

Region: Fingerlakes, Tompkins County  
Address: 266 Blackman Hill Rd., Brooktondale NY 14817.  
October 12, 2012. 10am – noon. Farming Off-Grid. One Earth Farm. Erika and Mauricio Medina will give us a tour of their small off-grid permaculture farm. The farm provides vegetables, eggs, raw honey, turkeys, chickens and wool from a small flock of Finn sheep. A 3kW solar photovoltaic (1.5PV is currently installed) system powers the family and farm’s current electrical needs (including water pumping). Erica and Mauricio have a small CSA and offer workshops at the farm in sustainable living skills, renewable energy, and permaculture. They also run a Renewable Energy Business (One Earth Energy) which designs and installs solar PV and solar thermal systems with a specialty in off-grid/battery based systems. If you are interested in low-input, off-grid farming and homesteading, this tour is for you! Free and open to the public! Refreshments will be provided. Register by email vws7@cornell.edu

Region: Central NY, Oneida County  
Address: 7874 Walter St. Oriskany Falls, New York 13425  
October 19, 2012. 10am – noon. Wind, Water & Pasture: Managing for Sustainability. Fuess Meadows Organic Dairy. Kevin and Christine Fuess use multiple energy and ecological conservation strategies on their 100 acre organic dairy. In early 2012, they worked with the company “Earth, Wind and Solar” to install a 10KW Bergey Wind Turbine. The Fuess’s took advantage of grants and tax credits available to farmers and rural businesses so that the costs associated with the purchase and installation were affordable. Additionally, the Fuess’s conserve water by using pre-cooler water to supply fresh drinking water to their pastures. Their herd of 40-50 milking cows are rotated though one acre sections of pasture. Each lot has its own supply of fresh water piped through a network of tubing for all the grazed pastures. Another method of land conservation for the farm is the recent installation of a French Drain which aids in managing waste. If you’re interested in wind power or sustainable energy for a small dairy, this field day is for you! Free and open to the public! Refreshments will be provided. Register by email vws7@cornell.edu
**Upcoming Events**

**2012 Cornell Sheep & Goat Symposium, Oct 27, 2012**
The 2012 Cornell Sheep & Goat Symposium will be held Saturday October 27 in Morrison Hall on the Cornell University campus. A pre-symposium practical day will be held at the Cornell Sheep Farm on Friday, October 26. For details and registration, see: [http://www.sheep.cornell.edu/calendar/sgsymposium/](http://www.sheep.cornell.edu/calendar/sgsymposium/)

---

**You are invited to an Open House at Tayl-Wind Farm,**
1680 Marshall Road, Cassville on Friday Nov 2, 10AM-3PM, sponsored by Finger Lakes Dairy Services, Inc.
The Taylors transitioned from a double 6 milking parlor to 4 Lely robotic milking units in June 2012. They are also utilizing Lely robotic feed pushers. The milking system was put into an existing 4 row freestall barn.

---

**On Monday, November 5th at 6:00 pm, CCE Oneida County presents: A brief introduction to genomics and its relevance for improvement of fruits and vegetables**
The class instructor is presented by Kenong Xu, Assistant professor of Tree Fruit Genomics from the Department of Horticulture, Cornell University.
The class will cover the following: Genome is the blueprint for “building” all organisms. Genomics studies the structure and function of genome. This class covers the basic concepts, DNA sequencing technologies and major accomplishments in genomics, and explains why genomics is important for improving fruits and vegetables. Cost to the public $5. **Pre-registration is required.**

---

**Farmsitters Chore Services** is made up of former dairy farmers. We will make sure your animals are well cared for. Call Terrance (315) 397-2593 and leave a message. **References**

---

**2nd Cutting Hay for Sale Camden area call Roy 571-5013**

---

**Contact Information for Local Agency’s that support Agriculture**
NYS Dept. of Environmental Conservation (DEC) 793-2554
Oneida County Soil & Water Conservation District 736-3334
Natural Resource Conservation Service 736-3316
As a busy producer, you know personnel records contain sensitive information and it needs to be handled carefully plus staying in compliance with governments record keeping requirements can be a filing nightmare.

The following Federal law requirements will help you determine which documents you must keep and for how long.

The U.S. Equal Employment Opportunity Commission (EEOC) is responsible for enforcing federal laws that make it illegal to discriminate against a job applicant or an employee because of a person’s race, color, religion, sex, national origin, age (40 or older), disability, or genetic information.

Employers with at least 15 employees are covered by EEOC laws. The laws apply to all types of work situations, including hiring, firing, promotions, harassment, training, wages, and benefits. EEOC Regulations require that employers keep all personnel or employment records for one year. If an employee is involuntarily terminated, his/her personnel records must be retained for one year from the date of termination.

Under the Age Discrimination in Employment Act (ADEA) recordkeeping requirements, employers must also keep all payroll records for three years. Additionally, employers must keep on file any employee benefit plan (such as pension and insurance plans) and any written seniority or merit system for the full period the plan or system is in effect and for at least one year after its termination.

Under Fair Labor Standards Act (FLSA) recordkeeping requirements applicable to the EPA, employers must keep payroll records for at least three years. In addition, employers must keep for at least two years all records (including wage rates, job evaluations, seniority and merit systems, and collective bargaining agreements) that explain the basis for paying different wages to employees of opposite sexes in the same establishment.

These requirements apply to all employers covered by Federal anti-discrimination laws, regardless of whether a charge has been filed against the employer.

Farm for Sale: Apple Orchard consisting of 41.6 acres of land, approx 10 acres of apple trees that includes over 20 varieties of apples. There are 25 acres of open land for additional apple or other fruit, vegetable crops. The customer base comes from a very wide surrounding area. Just one mile from scenic state Rte. 20 and minutes from state Rte. 8, approx. 18 miles south of Utica. The current owners will assist new owners with the operation of business if needed.
Contact Janet Decker at the Benson Agency at 607-432-4391
USDA’s Milk-Feed Ratio (tinyurl.com/mfratio) has come under scrutiny by industry experts in recent years. Many say this measure, which is intended to show the relationship between the price of milk and feed costs, is outdated. For July 2012 the announced ratio was 1.29, the lowest since the USDA starting publishing the ratio in the 1980’s. Should dairymen pay attention to this ratio? How might they use this and other tools to affect the management of their dairy?

The Definition
According to USDA, the milk-feed ratio is the number of pounds of 16 percent protein-mixed dairy feed that is equal in value to one pound of whole milk. The formulas used to calculate the ratio are:

\[
\text{Feed Value ($/Cwt.)} = \left(\frac{51}{56}\right) \times \text{Price of Corn ($/bu.)} + \left(\frac{8}{60}\right) \times \text{Price of Soybeans ($/bu.)} + \left(\frac{41}{2000}\right) \times \text{Price of Hay ($/ton)}
\]

\[
\text{Milk-feed ratio} = \frac{\text{Price of Milk ($/cwt.)}}{\text{Feed Value ($/cwt.)}}
\]

The formulas above illustrate that a simple feed formulation of 51 pounds of corn, 8 pounds of soybeans and 41 pounds of dry hay is used to calculate this measure.

Some History
When milk-feed ratios were greater than 3.0 it was considered a time when purchasing feed to supplement forages would be profitable for dairies; when the ratio dropped below 2.0 it didn’t make a lot of sense to buy feed to increase productivity. Another interpretation was, when the ratio is above 3.0, milk and feed prices are in a relationship that encourages production expansion; when it is below 2.0 the industry would contract and cull rates would increase, dropping cows that were less profitable.

Of course, many things have changed in the last three decades: Dairies have adopted a wide range of feeds including more silages and by-product feeds. Rations are being managed more closely. Production strategies range from management intensive confinement systems to organic dairy practices or pasture based systems. The genetic production potential of cattle has increased. In the information age, prices of both milk and feeds are much more volatile. All these factors contribute to increased production per cow, less uniformity among farms, and ups and downs in farm profits.

Alternative Indexes
Critics of the milk-feed ratio feel that the measure is outdated and should be replaced by something that is more easily understood and more reflective of our current industry environment. Among the
proposed alternative measures are: Income over Feed Costs; Milk Margin; and the Cow-Jones Index. All of these are new ways of looking at impacts of changing price relationships on the profit potential in the dairy industry.

**Income Over Feed Costs (IOFC):** Drs. Kenneth Bailey and Virginia Ishler at Penn State Cooperative Extension use the IOFC benchmark to measure the profit over feed costs on a per cow per day basis. IOFC is what remains to pay all other production costs, mortgage payments and family living once feed costs are covered. These researchers have also defined a Milk Margin (MM) ratio, which measures on a per hundredweight basis, the amount left to pay all other costs after feed costs are paid.

\[
\text{Income Over Feed Cost (}$/\text{cow/day}) = \text{Price of milk} \times \left( \text{Daily Average Milk Production [lbs./ cow/day]} \div 100 \right) - \text{Daily Feed Cost (}$/\text{cow/day})
\]

\[
\text{Milk Margin (}$/\text{cwt}) = \text{Price of milk} - \left( \text{Daily Feed Cost [}$/\text{cow/day}] \times \left(100 \div \text{Daily Average Milk Production (lbs./cow/day)} \right) \right)
\]

These measures show the relationship between the income generated per cow per day and the cost of feeding her each day and the relationship between the price of 100 pounds of milk and the cost of producing that 100 pounds of milk respectively. Both measures only reflect the cost of feed for the milking cow and do not reflect the cost of feed for dry cows or replacements.

IOFC and MM are detailed in Penn State’s *Dairy Risk-Management Education Fact Sheet – Tracking Milk Prices and Feed Costs*, available at [tinyurl.com/iofcpsu](http://tinyurl.com/iofcpsu).

**The Cow-Jones II Index:** Developed by Dr. Normand St-Pierre at Ohio State University, this measure tracks dairy productivity and margins both nationally and across six regions of the United States. Dairymen, accountants, bankers and analysts are able to use the Cow-Jones Index as a tool to both track historical margins and project future margins based on Chicago Mercantile Exchange futures prices. By looking at the historical and projected margins over a period including two years prior to the date when you are doing the analysis and two years of projected data, analysts are able to both review recent margins and project future margins. This information can be used to make decisions about future risk management strategies for dairies. Progressive Dairyman’s Market Watch Margin columns on July 1 ([tinyurl.com/cowjones1](http://tinyurl.com/cowjones1)) and July 21 ([tinyurl.com/cowjones2](http://tinyurl.com/cowjones2)) provide a detailed description of the Cow-Jones and how it can be used here.
Culling Decisions
Many producers are asking at what production level to cull in the current price environment.
The answer is, it depends… on factors like pregnancy status, milk quality, your farm’s feed costs and the price of milk. Wisconsin’s Center for Dairy Profitability’s Culling Guide, available at tinyurl.com/uwisc is a simple spreadsheet to help dairy managers determine when to cull a non-pregnant cow by calculating her contribution to fixed cost per day. When her contribution to fixed cost becomes negative she should be culled. This calculation requires knowing her current production (pounds per day), butterfat test, protein test and SCC. Other pieces of information required are the base milk price and the feed, labor and miscellaneous costs per hundredweight.

The bottom line
Milk prices are down and projected to slowly improve; feed prices are up for the foreseeable future. Dairies need to think about tightening up management of the herd in response to these price relationships to enhance their profits and protect their equity. Use the tools available to you to evaluate risk and make decisions early to help your farm business to thrive rather than just survive the price and weather ups and downs.

Milk Price Watch for Oneida County - Thirteen months through August 2012

These prices are adjusted from Federal Milk Order No. 1 for the Syracuse location, which determines Oneida County prices. 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. This month’s chart shows actual MILC payments for February through July, and an estimate of MILC payments for August provided by the University of Wisconsin/Madison.
Hay Storage Considerations, Don’t Waste it!
By: Nancy Glazier, NWNY Dairy, Livestock and Field Crops Team

Now may be a good time to think about hay storage. With lost hay this season from armyworms and dry conditions, and high purchased feed prices, more of the bale will need to be utilized. Large bales are a convenient form of hay for one-person operations. These bales can be moved, stored and fed relatively easily with the right equipment.

Hay loss can occur when baling, moving and feeding and some is unavoidable. The biggest loss – both dry matter and digestibility – occurs with outdoor storage. Dry matter loss can reach 50% depending on the beginning quality, storage conditions and length of storage. It is not always realistic or practical to build a barn to store hay. Here are some tips to minimize waste from outdoor storage.

Tightly wrapped bales tend to shed water better. The outer layer forms a thatch to reduce water infiltration. What helps with shedding precipitation is placing the bales lined up tightly together end to end. Pick a site that has good ventilation, away from hedgerows and wooded areas. This gives bales a better chance to dry out from air movement. And think about row spacing of at least 3 feet for good air flow and sunlight penetration.

It’s also a good idea to keep vegetation mowed between rows. Ideally, bales should be stored off the ground. Hay stored directly on the ground may lose up to 12 inches on the bottom of the bales due to wicking action. Find some waste material such as old fence posts, pallets or tires and place the bales on top. Gravel or stone may work.

Research was conducted by University of Tennessee animal scientists comparing different methods of storing large round bales of grass hay. The hay was cut and baled in June in Tennessee. The bales were weighed at the time of harvest and storage. Then they were weighed again the following January at the time of winter feeding. The following table lists the type of storage and the resulting percentage hay loss.

<table>
<thead>
<tr>
<th>Type of Storage</th>
<th>Percentage (%) Hay Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>On ground, no cover</td>
<td>37%</td>
</tr>
<tr>
<td>On tires, no cover</td>
<td>29%</td>
</tr>
<tr>
<td>On ground, covered</td>
<td>29%</td>
</tr>
<tr>
<td>On tires, covered</td>
<td>8%</td>
</tr>
<tr>
<td>Net wrap on ground</td>
<td>19%</td>
</tr>
<tr>
<td>In barn</td>
<td>6%</td>
</tr>
</tbody>
</table>

Note the difference between storage in the barn and on tires and covered. Some small changes can make a big difference! Plastic tarps can be relatively inexpensive when the saving from reducing loss is calculated.
Colostrum, more than just IgG

In bovines, the placental membranes prevent the transfer of maternal immunoglobulins (IgG) to the calf. Immunoglobulins are critical to immunity and as a result the calf relies on colostrum to obtain immunoglobulins and subsequent protection from disease. This acquisition of immunoglobulins through colostrum is known as passive transfer or passive immunity. Conventionally, feeding high quality colostrum to calves as soon as possible after birth has been stressed to ensure a successful passive transfer; however, colostrum also provides the calf with high quality nutrition, beneficial growth factors, hormones, fluid, and warmth.

Colostrum is different from milk as it contains a mixture of both lacteal secretions and proteins found in blood serum. Colostrum production is under hormonal control and is influenced by estrogen, progesterone, corticosteroids, growth hormones, and prolactin. During late gestation, high levels of estrogen and progesterone initiate colostrum production. At parturition, the spike in corticosteroids and drop in progesterone facilitate the transition to normal milk production. In general, the first six milkings after parturition are considered colostrum due to differences in milk composition.

These differences in milk composition include higher levels of protein, fat, carbohydrates, vitamins and minerals. In addition, high levels of fat and lactose provide the energy necessary for the calf to regulate its own body temperature. This is critical, as research has suggested that without this energy source calves fat stores would only last about 18 hours. Moreover, colostrum represents the first time the newborn calf will obtain nutrients through digestion instead of from the placenta or maternal blood supply. In addition to energy, the high levels of vitamins and minerals in colostrum may be necessary to initiate the calf’s metabolism and facilitate the development of its own digestive system. More interestingly, researchers have discovered that colostrum contains high levels of numerous growth hormones which include insulin-like growth factor I (IGF-I) and insulin-like growth factor II (IGF-II), epidermal growth factor (EGF), transforming growth factor (TGF), insulin, cortisol, relaxin and thyroxine. Most notably, IGF-I and II have been shown to be important for both mammary development and maturation of the digestive system, and may influence the long-term thrift and performance of the animal. Finally, because colostrum is fluid this helps hydrate the neonate and the warmth helps the calf overcome the initial shock of entering the world.

Combined these factors show how high quality colostrum is more than just IgGs and feeding this first meal as soon as possible following parturition can influence the long-term thrift of the animal and improve performance as she transitions into the lactating herd.
**Crop Shorts**  
*By Jeff Miller*

**Corn Silage:** At this time 9-18-2012 many local growers with bunks and drive- over- piles are well on their way to completing corn silage harvest into these structures. Most of these growers try to start harvesting corn for silage at approximately 68% moisture for optimal packing and fermentation in these structures. Other local dairy producers store corn silage in tower silos and bags. The optimal moisture content for storage of corn silage in bags is (63-67%) for concrete upright silos (62-65%) and for sealed upright silos (50-60%). Cornell Cooperative Extension of Oneida County provides free dry matter determination of corn plant samples for local farmers to help producers harvest corn at optimal moisture levels for their storage structures. Many thanks to Bill Paddock, SWCD for his assistance this year. The results obtained to date (9-18-2012) are below:

### Silage moisture tests: 2012

<table>
<thead>
<tr>
<th>Sample Date: 8-22-2012</th>
<th>Location</th>
<th>Day Maturity</th>
<th>Planting Date</th>
<th>%moisture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verona</td>
<td>105</td>
<td>5-9-2012</td>
<td></td>
<td>72</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample Date: 8-30-2012</th>
<th>Location</th>
<th>Day Maturity</th>
<th>Planting Date</th>
<th>%moisture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterville</td>
<td>87</td>
<td>5-25-2012</td>
<td></td>
<td>69</td>
</tr>
<tr>
<td>Waterville</td>
<td>91</td>
<td>5-20-2012</td>
<td></td>
<td>73</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample Date: 9-4-2012</th>
<th>Location</th>
<th>Day Maturity</th>
<th>Planting Date</th>
<th>%moisture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remsen</td>
<td>98</td>
<td>May 18</td>
<td></td>
<td>70</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample Date: 9-5-2012</th>
<th>Location</th>
<th>Day Maturity</th>
<th>Planting Date</th>
<th>%moisture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinton</td>
<td>94</td>
<td>5-25-2012</td>
<td></td>
<td>69</td>
</tr>
<tr>
<td>Marcy</td>
<td>108</td>
<td>6-11-2012</td>
<td></td>
<td>79</td>
</tr>
<tr>
<td>Marcy</td>
<td>105</td>
<td>6-16-2012</td>
<td></td>
<td>75</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample Date: 9-10-2012</th>
<th>Location</th>
<th>Day Maturity</th>
<th>Planting Date</th>
<th>%moisture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remsen</td>
<td>78</td>
<td>5-20-2012</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Remsen</td>
<td>93</td>
<td>5-10-2012</td>
<td></td>
<td>70</td>
</tr>
<tr>
<td>Remsen</td>
<td>95</td>
<td>5-12-2012</td>
<td></td>
<td>67</td>
</tr>
<tr>
<td>Remsen</td>
<td>97</td>
<td>5-10-2012</td>
<td></td>
<td>69</td>
</tr>
<tr>
<td>Remsen</td>
<td>93</td>
<td>5-12-2012</td>
<td></td>
<td>72</td>
</tr>
<tr>
<td>Boonville</td>
<td>92</td>
<td>5-25-2012</td>
<td></td>
<td>68</td>
</tr>
<tr>
<td>Boonville</td>
<td>92</td>
<td>5-27-2012</td>
<td></td>
<td>68</td>
</tr>
</tbody>
</table>
Planting small grains in corn fields: Many local dairy farmers commented that their hay crop forage is going to be in tight supply this winter. With corn being harvested early for silage there is potential to plant a small grain for harvest as forage next spring. The authors of the article below show through their research that this can be a viable option for New York State growers.

Winter-Forage Small Grains to Boost Feed Supply: Not Just a Cover Crop Anymore!
Tom Kilcer1,2, Shona Ort1, Quirine Ketterings1, and Karl Czymmek1,3
1Nutrient Management Spear Program, Dept. of Animal Science, Cornell University, 2Advanced Ag Systems, 3PRODAIRY, Dept. of Animal Science, Cornell University
Many NY dairies will need to rebuild forage inventory going into 2013. Some farms are starting to take advantage of winter grains for spring harvest before corn planting. Properly managed, these crops can supply 2-4 tons of dry matter per acre (table 1), and in some fields in 2012 we measured up to 5 tons of dry matter of high quality forage from small grains planted after corn silage, even with little growth in the fall.

<table>
<thead>
<tr>
<th>Cover Crop Species (N fields)</th>
<th>Previous Crop</th>
<th>Planting Date</th>
<th>Fall above ground biomass (ton/acre)</th>
<th>spring harvest date</th>
<th>Spring above ground Biomass (ton/acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rye (3)</td>
<td>Corn</td>
<td>9/23 to 10/8/11</td>
<td>0.1</td>
<td>5/16,17/12</td>
<td>2.14</td>
</tr>
<tr>
<td>Triticale (3)</td>
<td>Corn</td>
<td>9/12 to 9/23/11</td>
<td>0.33</td>
<td>5/4,7/12</td>
<td>2.03</td>
</tr>
<tr>
<td>Triticale (6)</td>
<td>small grain</td>
<td>Sep-Oct/11</td>
<td>0.54</td>
<td>5/17/2012</td>
<td>3.14</td>
</tr>
<tr>
<td>Wheat (3)</td>
<td>Corn</td>
<td>10/12/2011</td>
<td>0.32</td>
<td>5/17 + 6/2/12</td>
<td>3.78</td>
</tr>
</tbody>
</table>

Table 1: Biomass fall and spring for winter cereals seeded in fall 2011 at locations across New York State. Since these are not side by side comparisons in the same field, the averages illustrate yield ranges and should not be compared directly to each other.

Crop: The main options are winter wheat, cereal rye or winter triticale. In 2011, we measured yields on all three species in a trial at the Valatie Research Farm in eastern NY and the results were very similar (2.31, 1.92, and 1.96 tons DM/acre for rye, triticale and wheat, respectively, sampled at optimal harvest time for forage. The data for 2012 are shown in Table 2. Triticale yielded between rye (highest biomass) and wheat (lowest biomass) consistently in both years. Triticale is very resistant to lodging when harvested for forage and has the best nutrition profile of the three crops.

Figure 1: A late planted crop can still generate high quality and high yielding forage in the spring. The pictures show triticale at one of the western NY sites in fall of 2011 (left; 0.2 tons DM/acre December 14, 2011) and at harvest time (right; 2.0 tons DM/acre May 11, 2012).
**Planting:** Winter grains are very well suited to no-till and will do nicely with a coat of manure after corn silage. Planting with a grain drill or air seeder is the best option to assure a good stand and to maximize value from certified seed. The crop should be planted as soon after corn silage as possible, ideally, mid-late September. The comparison at the Valatie Research Farm suggest that earlier planting produces significantly higher biomass in the fall followed by high forage yields in the spring. However, all cereals produced more than 2.5 tons/acre DM (more than 7 tons/acre silage equivalent) even when seeded in October and with very little fall biomass production (Table 2). The later the planting the more critical the seed be placed 1 – 1.5 inches deep to prevent spring heaving from decimating the stand.

<table>
<thead>
<tr>
<th>Cover Crop</th>
<th>Planting Date</th>
<th>Fall above ground Biomass</th>
<th>N at Greenup</th>
<th>Spring above Ground Biomass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rye</td>
<td>10/5/2011</td>
<td>0.13</td>
<td>No N</td>
<td>3.72</td>
</tr>
<tr>
<td>Rye</td>
<td>10/5/2011</td>
<td>0.13</td>
<td>40-0-0-45</td>
<td>3.9</td>
</tr>
<tr>
<td>Wheat</td>
<td>10/5/2011</td>
<td>0.06</td>
<td>No N</td>
<td>2.63</td>
</tr>
<tr>
<td>Wheat</td>
<td>10/5/2011</td>
<td>0.06</td>
<td>40-0-0-45</td>
<td>3.16</td>
</tr>
<tr>
<td>Triticale</td>
<td>10/5/2011</td>
<td>0.06</td>
<td>No N</td>
<td>3.06</td>
</tr>
<tr>
<td>Triticale</td>
<td>10/5/2011</td>
<td>0.06</td>
<td>40-0-0-5</td>
<td>3.77</td>
</tr>
<tr>
<td>Triticale</td>
<td>10/5/2011</td>
<td>1.06</td>
<td>40-0-0-45</td>
<td>4.94</td>
</tr>
</tbody>
</table>

The Sept. seeding of the triticale received 150 lbs of 10-24-19 at planting

Table 2: Yield for fall seeded winter cereals grown as cover/double crop at the Valatie Research Farm. Seeding took place 10/5/2012 or 9/16/2012. The above ground biomass was harvested 5/2/2012.

**Fertilization:** Fields with a manure history and a coat of manure applied after corn silage before, with, or shortly after planting will not need any starter fertilizer in most circumstances. For optimum yield, the crop could need some available N (supplied by fertilizer – e.g. UAN or urea) when dormancy breaks in the spring. We have seen applications in the range of 50-100 pounds of actual N work well. We will be doing more testing to hone in on a spring N guideline and invite farmers to participate in on-farm trials in the spring of 2013 to determine how much fertilizer N is needed for optimal economic yield.

**Harvest:** Flag leaf stage supports very high milk production with good yields. More biomass will be added through early head emergence, so harvest timing will depend on farm goals and weather conditions.

**Nitrates in corn silage and silo gas:** We experienced a significant drought this year which can support conditions that result in higher than normal levels of nitrates in plants, the potential for nitrate toxicity and also potential for silo gas. We probably will not experience these problems because we had several rain events in the latter part of the season but it would be prudent to cover these issues.
Nitrogen can concentrate in the lower stem of corn plants under specific conditions during drought stress. This usually occurs when corn plants are exposed to long periods without water. A rainfall following this period of drought can support significant intake of N into the lower plant. If plants are harvested immediately after this scenario they can have significant levels of nitrate. If these plants are green chopped and fed to livestock they can induce nitrate toxicity. Ensiling of this corn silage reduces nitrate levels, possibly below levels that have any negative impact on livestock.

The nitrogen dioxide produced during silage fermentation is a deadly gas that is produced within two hours of ensiling and will be present for at least two to three weeks afterward. Concentrations as low as 25 parts per million are invisible, odorless and toxic to humans. At higher concentrations, the gas is yellowish-brown and smells like bleach.

If it is necessary to enter a silo before three weeks of fermentation, run the blower fan for at least 30 minutes before entry, and leave it running while inside. It also is highly recommended to use a self-contained breathing apparatus.

**Minimizing soybean harvest losses:** An educator with Coop. Ext. in Pa. wrote an article that stated that losses of 12% of the beans at harvest is fairly common. He shows in the chart below that harvesting at a higher moisture content can help to reduce overall losses:

<table>
<thead>
<tr>
<th>Soybean Harvest Moisture, %, Wet Basis</th>
<th>Weight of Water Loss (+) or Gain (-), Lbs/Bu to Convert Soybeans to 13.5% Moisture</th>
<th>Price Per Bushel, $</th>
<th>Value Per Bushel, $ Adjusted for Moisture</th>
<th>$1.12 Per Bushel Per Point of Moisture (2% Per Point of Moisture)</th>
<th>$0.20 Per Bushel Per Point of Moisture (3.3% Per Point of Moisture)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybean Per Point of Moisture</td>
<td>Price Per Bushel, $ Adjusted for Moisture</td>
<td>Value Per Bushel, $ Adjusted for Moisture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-----------------------------------------------</td>
<td>------------------</td>
<td>---------------------------------</td>
<td>--------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>19</td>
<td>5.5</td>
<td>$0.66</td>
<td>$9.34</td>
<td>$9.76</td>
<td>$1.10</td>
</tr>
<tr>
<td>18</td>
<td>4.5</td>
<td>$0.54</td>
<td>$9.46</td>
<td>$9.80</td>
<td>$0.90</td>
</tr>
<tr>
<td>17</td>
<td>3.5</td>
<td>$0.42</td>
<td>$9.58</td>
<td>$9.84</td>
<td>$0.70</td>
</tr>
<tr>
<td>16</td>
<td>2.5</td>
<td>$0.30</td>
<td>$9.70</td>
<td>$9.88</td>
<td>$0.50</td>
</tr>
<tr>
<td>15</td>
<td>1.5</td>
<td>$0.18</td>
<td>$9.82</td>
<td>$9.92</td>
<td>$0.30</td>
</tr>
<tr>
<td>14</td>
<td>0.5</td>
<td>$0.06</td>
<td>$9.94</td>
<td>$9.96</td>
<td>$0.10</td>
</tr>
<tr>
<td>13.5</td>
<td>0</td>
<td>0</td>
<td>$10.00</td>
<td>$10.00</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>-1.5</td>
<td>$10.00</td>
<td>$9.93</td>
<td>$10.00</td>
<td>0</td>
</tr>
<tr>
<td>11</td>
<td>-2.5</td>
<td>$10.00</td>
<td>$9.86</td>
<td>$10.00</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>-3.5</td>
<td>$10.00</td>
<td>$9.79</td>
<td>$10.00</td>
<td>0</td>
</tr>
<tr>
<td>9</td>
<td>-4.5</td>
<td>$10.00</td>
<td>$9.72</td>
<td>$10.00</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>-5.5</td>
<td>$10.00</td>
<td>$9.65</td>
<td>$10.00</td>
<td>0</td>
</tr>
</tbody>
</table>

**Tips for Keeping Combine Losses Low**

Delbert Voight, PSU Coop. Ext. John Keller, product performance manager for Gleaner combines (Missouri Department of Agricultural Engineering)

Your best guide for correct combine adjustment is your operator's manual.

Remember that more than 80 percent of the machine loss usually occurs at the gathering unit. The following suggestions will help keep these losses to a minimum.
SOYBEAN HARVEST

- Make sure that knife sections, guards, wear plates and hold-down clips are in good condition and properly adjusted.
- Use a ground speed of 2.8 to 3.0 miles per hour. To determine ground speed, count the number of 3-foot steps taken in 20 seconds while walking beside the combine. Divide this number by 10 to get the ground speed in miles per hour.
- Use a reel speed about 25 percent faster than ground speed. For 42-inch-diameter reels, use a reel speed of 11 revolutions per minute for each 1-mile-per-hour ground speed.
- Reel axle should be 6 to 12 inches ahead of the cutter bar. Reel bats should leave beans just as they are cut. Reel depth should be just enough to control the beans.
- A six-bat reel will give more uniform feeding than a four-bat reel.
- Drought conditions mean plant materials are lighter and more brittle, which will lead to more stems and pods on the shoe; and instead of crop material coming out the end of the rotor, they will come over the shoe — requiring airflow to be monitored closely.
- Chaffer and sieve screen gaps should be narrowed to maintain air speed, while allowing for enough airflow to remove the pods and other plant material from small-size beans.
- Keeping the cutter bar low is essential in drought years, when plant populations are low and more pods are close to the ground. Ensure the sickle is sharp — dull sickles will tend to push stems over rather than cut them cleanly. The front drum of the feeder should be low enough so that the chain just clears the floor of the feeder house.
- Complete the harvest as quickly as possible after beans reach 15 percent moisture content.
- A pick-up type reel with pick-up guards on the cutter bar is recommended when beans are lodged and tangled.

CORN HARVEST

- Lower the header in order to take in more crop material than you normally would. The stalks and leaves will provide cushioning and prevent excessive kernel damage.
- If you experience grain damage or combine plugging, this is likely caused by an uneven flow of crop material caused by an improper adjustment.
- Refer to the combine operator’s manual or contact your local dealer for advice on combine adjustments for drought conditions.
- Be careful when threshing to prevent grain from going out the back of the machine. Fan speed should be slowed and sieve openings should be made smaller to account for smaller kernels.
- Remember to keep the stripper plates close and to narrow the snapping roll openings on your corn head to accommodate smaller ears and stalks.
Marketing grains: The fundamentals of supply and demand still play a role in setting prices. There are so many other factors that can impact the price of grain on any given day. John Berry, PSU has put together a list of a few websites that have charts of pricing activity for you to bookmark and follow to provide additional information as you make your decision to buy or sell grains.

**Chicago Mercantile Exchange (CME)**
Current futures and options prices on all available contract months and commodities as well as historical perspective charting and cross-commodity data.

**Trading Charts**
Similar to CME, except it includes some markets not necessarily involved with CME.

**Historical Charts**
When I’m exploring some very long-term scenarios I go here. Not everything Ag, but a good source to become familiar with, perhaps.

**Bar Charts**
Mix of many futures market data sources.

The above is not an exclusive listing. There are many additional sources of charted data. However, this limited list may serve to get you more comfortable with the uses and significance of charts when it comes to interpreting and understanding commodity market data. Additionally, these noted sites have “education” components that allow opportunity to enhance your commodity marketing expertise.

**Elements of a marketing plan:** John Berry PSU

A Marketing Plan is a proactive strategy to price your grain that considers your financial goals, cash flow needs, price objectives, storage capacity, crop insurance coverage, anticipated production, and appetite for risk.

A business-oriented marketing plan includes the following three steps:
1. Estimate your cost of production and expected break-even price per bushel.
2. Determine your marketing plan - how much you are going to sell at what price.
3. Develop a follow-through plan.

**Your Cost of Production**

Effective producers can be effective marketers because smart marketing is aided by a thorough understanding of the production process. By analyzing the production process, managers are able to estimate costs of production. Each productive activity involves the use of inputs and services. By listing the activities, you can estimate prices to cover each activity and eventually the whole production process. A good cost-of-production worksheet should contain sections detailing the operating and ownership costs incurred in production. These details give
perspective on which costs are cash costs and which are not. Cash costs are those expenses, such as seed and fertilizer that require cash to be paid to the supplier. Noncash costs include depreciation in equipment and land interest for owned land. An understanding of the nature of the costs (operating and ownership, cash and noncash) helps establish target prices.

<table>
<thead>
<tr>
<th>Cost of Production - Corn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penn State 2010 Agronomy Guide Crop Budgets</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Corn</th>
<th>Your Farm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yield</td>
<td>130 bu.</td>
<td></td>
</tr>
<tr>
<td>Direct costs (seed, fert, chem, etc)</td>
<td>$391.00</td>
<td></td>
</tr>
<tr>
<td>Machinery Ownership</td>
<td>$36.00</td>
<td></td>
</tr>
<tr>
<td>Land charge</td>
<td>$100.00</td>
<td></td>
</tr>
<tr>
<td>Total cost per acre</td>
<td>$527.00</td>
<td></td>
</tr>
<tr>
<td>Cost of production</td>
<td>$4.05</td>
<td></td>
</tr>
</tbody>
</table>

The marketing plan, no matter how good, may not be able to lock in prices that cover all costs of production. Key target prices that compensate for critical costs are important to have in years where opportunities to cover all costs are limited. In the absence of your own cost estimates, you can use published costs of production, available from Extension and other sources. However, these cost estimates provide only rough estimates of fixed and variable costs of production and do not have the detail necessary for personal business analysis and marketing.

**The Marketing Plan**

The primary objective of a marketing plan is to cover as many costs of production as possible. Use the cost-of-production estimate discussed above and begin to set target sales prices as follows:

1. Estimate the outcome of different pricing alternatives.
2. Determine a target and quantity to market.
Estimate different pricing alternatives.
Consider several marketing opportunities from cash sales to forward contracts to futures and options. Basis information for your local market is necessary to analyze the futures and options marketing alternatives. The result of considering all marketing alternatives is to arrive at expected prices for all marketing alternatives. These expected prices can be compared with the cost of production. Whether the current expected prices exceed or are less than the total cost of production, the decision becomes one of marketing a certain percentage of expected production now or taking a risk that a higher price can be obtained at a future date.

**Pricing Tools**
1. Forward contract
2. Sell futures contracts
3. Hedge-to-arrive contracts
4. Buy put options
5. Forward contract and buy call options
6. Getting fancy with options: selling calls to form a price window

**Determine a target and quantity to market**
Anytime a manager is waiting for a higher price, the possibility of getting a lower price exists. From this perspective, a marketer needs to have both a defensive and an offensive strategy. The offensive position indicates that you will sell when the price rises to a certain level and you are able to cover pertinent costs. The defensive position is the price at which you will sell some of your production in an attempt to lock in income you might otherwise lose.

The target consists of a trigger price and quantity to sell for both an offensive and a defensive position. The trigger price is the price for each marketing alternative that will create a response from the marketer. When the expected price reaches the trigger price for either the offensive or defensive plan, a sale is initiated. The quantity you decide to sell under each plan determines how much of the expected production you will market at different times. Your goal is to maximize the price you receive while minimizing downside price risk.

**The follow-through plan**
Once the target table is completed, the markets must be watched to determine when either trigger price has been reached. A key to effective marketing under this plan is to have a method of following the markets. Futures prices can be tracked by having continuous market information delivered to your office, using daily or weekly closing prices, or giving your broker or elevator manager authority to conduct the trade. Because the trade will be initiated at an unknown time in the future, it is necessary to make arrangements that facilitate quick trading. Open any necessary accounts with a broker and banker. Have forward contracts ready to be signed and delivered. When a trigger is pulled, the decision should be easily implemented.
Stick to your plan
Because marketing is an emotional activity, it is important to have someone to keep you accountable to conduct trades at the predetermined triggers. If prices are moving up, the tendency will be to postpone pulling the trigger because a higher price surely is ahead. When prices are moving down, optimism says they will bounce back and you should wait for the rebound. This is not objective marketing. You set trigger prices in an attempt to capture an acceptable price without undue risk. Because you market only a portion at each target, the price expectations experienced at each trigger can be built into future targets.

Accountability can be obtained by having another person know and understand the marketing plan. Spouses are often in a good position to implement a marketing plan because they may not feel as attached to the production as the person producing the commodity. When the target is reached, your spouse can remind you to initiate a trade. Marketing clubs, brokers and business partners can also serve as reminders to trade. Giving authority to grain traders to initiate a trade at certain targets can also be a way of keeping to the plan.

Aim at a second target
Whenever a trigger is pulled, aim at a second target. Select both offensive and defensive trigger prices, along with quantities to be marketed. The process of setting a target, pulling the trigger at key points and aiming at another target repeats until all of the production is sold. Marketers need to keep track of what percentage of expected production is forward priced so that they do not oversell as they repeat the marketing plan. Portions of the marketing plan worksheet assist producers in tracking what percentage of expected production is already forward priced.

Marketing Tips
The concept described here is an attempt to introduce objectivity into the marketing process. Other things need to occur to market production successfully. The following tips should help make your marketing more successful.

✦ Don't market all of your production at one time - especially anticipated production. Grain in the field is not as sure as grain in the elevator.
✦ Remember your strengths. Most farmers prefer production to marketing. Focus on production. Market as objectively as possible according to plans.
✦ Keep an eye on your financial position. Leverage and liquidity problems can wreak havoc on your finances and marketing plans. Having to sell to meet financial obligations is not part of the marketing plan and is not usually the best time to sell.
✦ Don't get greedy. If you can lock in a profit, do it. It may not be the highest profit, but it is a profit.
✦ Remember profit is a return to risk. You cannot reduce all risk and still expect to excel in profit.
Combine Fires

- Considering this year’s growing conditions the environmental and crop conditions themselves increase the chances of combine fires
- newer engines operate at higher temperatures
- engines are located in areas that are not easy to observe or reach
- The machine must be inspected periodically throughout the harvest day. Buildup of crop material and other debris must be removed to ensure proper machine function and to reduce the risk of fire
- Before carrying out any inspection or cleaning, always shut OFF engine, set parking brake and remove key.
- First clean all areas accessible from engine deck. Start with engine compartment and work outwards and counterclockwise
- Once top areas of machine are clean, proceed to cleaning areas accessible from ground level.
- you should have two fully charged and proper category (ABC) 10# fire extinguishers, one in cab and one accessible from the ground
- Yes combines are expensive!! But don’t risk your life call 911 if necessary

Its Round-up time: At this time (9-19-2012) we still have very good field conditions. Yesterday we had rain throughout the county of about 1.1” and the fields are still so dry that they seemed to just soak it all up. Many growers are in the process of harvesting corn for silage, a few growers will be starting to combine high moisture corn and early season soybeans. Field conditions are good and we may have some time to apply glyphosate to some hay fields that will be planted to corn next year. Fall applications of glyphosate remain the most effective at controlling hard to kill perennial weeds.

Update your field records: Be sure to note weeds on a field by field basis as you perform your last harvest of the season. Note the name of the weed, a measure of quantity (few, common, many) and location. This will be very valuable to you as you can use it to evaluate the results of this year’s weed control program and to help plan next year’s program.

A number of growers have used the same herbicide program for a couple of years now because it has worked. Unfortunately, continuing the same program will help to select those weeds that can escape the treatment. It is always a good idea to change herbicide programs to prevent build up of resistance. Having a list of weeds on a field by field basis can give you a chance to research alternatives this winter. Remember that it is important to rotate between chemical families of herbicides to prevent resistance.

Quality Springwater available for irrigational, gardening & potable use. Bulk loads available for pickup only.
Call 315-761-7214 for details
Farm Credit East, ACA
Your First Choice For Financial Solutions

- Farm Loans
- Agribusiness Loans
- Leasing
- Appraisal Services
- Tax Services
- Financial Records
- Crop Insurance
- Credit Life Insurance
- Payroll Services
- Business Planning
- Estate Planning
- Profit Improvement

995 State Route 12 • PO Box 60 • Sangerfield, NY 13455
(800) 762-3276 • (315) 841-3398 • FAX (315) 841-3397
www.farmcrediteast.com

Richardson Farms
Agricultural Spray Materials
Corn and Grass Seed
Bulk & Bag Feed
Custom Soybeans Roasting

Buddy Richardson & Family
Skinner Rd. Vernon Center, NY
(315) 829-8000

GROWMARK FS
PO Box 65
Office: 315/841/8886
7610 State Route 20
1/800/852/5003
Sangerfield NY 13455
Fax: 315/841/4405
Sangerfield@growmarkfs.com

Fertilizer, Lime, Seed, Agronomy
Satisfying Customers, Profitably

We Take A Personal Interest —
Protecting What You Value Most®

Farm • Business • Home • Auto • Life

Niedzielski Insurance Agency, Inc.
Gary Niedzielski, Senior Agent
1-800-735-3276
239 Academy Street
Boonville, NY 13309

Warner Sales & Service, Inc.
6470 Greenway New London Rd.
Rome, NY 13440
Phone: 315-336-0311
Email: sales@warnerss.com

SALES SERVICE
RENTALS
S.V.I.C.  
"Insure and Be Sure" 
Sauquoit Valley Insurance Co. 
Farmsowners ★ Homeowners ★ Manufactured Homes 
Dwelling Fire ★ Farm Fire ★ Commercial Fire 
Inland Marine ★ Landlord Policies 
P.O. Box 453 • 10170 Roberts Road • Sauquoit, NY 13456 
(315) 737-5911 • Fax: (315) 737-6887 • sjeffers@sauquoitvalley.com

LOUIS J. GALE & SON, INC. 
Waterville, N.Y. 13480 
7889 Canning Factory Road 
841-8411 OR 841-8410 
RETAIL FEED—GRAIN—SEED 
CUSTOM MIXING & GRINDING 
HI MAG LIME, PESTICIDES 
GROW RIGHT FERTILIZER 
SOY BEAN ROASTING 
CORN DRYING