It appears that many New York herds will have some limitations in terms of forage supply for the winter feeding season. This paper will provide some thoughts on how a dairy producer and their agribusiness advisors can address this situation.

1. **Forage Inventory** – As soon as corn silage is harvested, a total farm forage inventory needs to be done. How many tons of forage are available to feed the herd? Worksheets to do forage needs and inventory calculations are available at:
   - [http://nwnyteam.cce.cornell.edu/submission.php?id=5898&crumb=forsges12](http://nwnyteam.cce.cornell.edu/submission.php?id=5898&crumb=forsges12)

2. **Animal Inventory** – How many dairy cows and heifers are on the farm? Are there any options to cull or sell some animals? Check with your lender before doing this.

3. **Forage analysis** – Know what nutrients you have to work with. Taking some forage samples during harvest will provide information helpful in planning the winter feeding program.

4. **Forage allocation** – Are forages stored by quality? Can specific forages be reserved for specific animal groups?

5. **Buying Forage** – If forage inventory is short, is it possible to purchase any forage?

6. **Plant a winter forage crop and harvest as animal feed** – A winter grain can be ready for harvest and available to feed 1-2 weeks before 1st cutting. Pasturing this ground can be another option.

7. **Ration adjustments** –
   - Lower forage rations may be needed if forage inventory is short and additional forage cannot be purchased.
   - Key principle – No matter what changes are made animal health must not be compromised.
   - If lower forage rations need to be fed, be conservative on starch and use non-forage fiber type feeds (soy hulls, citrus pulp, whole cottonseed, gluten feed, wheat midds, wet brewers grain, distiller grain, etc.) to replace forage. The challenge is that many of these may be in tight supply so early booking may be important.
   - Consider using a small amount of chopped straw or low quality hay to provide chewing fiber.
   - Consider multiple rations for the milking cows.
   - Consider adding buffers to the ration.
   - Consider added fat to the ration to provide energy.
   - Potentially consider limit feeding some animal groups (bred heifers). This should only be considered in situations with good management, adequate feed bunk space (all heifers can eat at the same time) and with groups with uniform body weights. This practice may only be applicable to a small number of farms.
   - Put heifers out on pasture in the spring. Other animal groups may also be candidates for this. Consider having heifer’s custom raised.

8. **Management adjustments** –
   - Adjust rations for changes in forage dry matter. This will help keep rations on target and minimize over or under feeding of forage.
   - Adjust feeding management to lower the quantity of feed refusals. A small change here can conserve forage.
   - Improve silage face management to keep the silage fresh and lower spoilage.

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- Pricing Standing Corn For Silage
- Preparing Your Calves For Cold Weather
- This Isn't Your Father's Cereal Rye
- Dairy Market Watch
- Natl. Dairy FARM Program / Leprino Animal Care
- 2016 Feed Dealers Seminar / Merck Animal Health
- Calf Care Workshops / “Someone’s Farmer”-Dairy Farmers Proving Healthy Options Locally
- Calendar of Events
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“Diversity and Inclusion are a part of Cornell University’s heritage. We are a recognized employer and educator valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.”

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**WELCOME! Abbie Teeter**  
**Organic Dairy Assistant**

Abbie grew up on her family’s beef and crop farm in Ithaca, NY. She recently graduated from the State University of New York at Cobleskill with a Bachelor’s of Technology in Agricultural Business Management. While there, she was a Resident Assistant and was active in numerous clubs on campus including Epsilon Pi Tau and Student Government. Abbie recently did a semester long internship with Quality Milk Production Services at Cornell University working to improve their marketing techniques and shadowing their field and lab technicians. Abbie is on the Tompkins County Dairy Princess Program Committee and a member of Farm Bureau.

While at CCE Cortland, Abbie will be working with Fay Benson, Small Dairy Extension Educator, on various projects. ♩
The August rains saved our crop! This is the hottest and driest summer on record. Trumansburg was recognized as one of the driest areas in the state.

Crops were looking pretty desperate in July. Corn was rolling, some of the corn planted after first cutting was dying back because soil water stores were transpired out by the first hay or cover crop. Second and third cutting hay were very light or virtually non-existent. Beans showed stress in their slow growth and color. Corn tassels started to emerge in late July on stalks that were much shorter than normal.

Corn yields looked like they were going to be highly compromised. Then the rains came, in some cases a little late to save pollination but for many, field ears have developed well except for blank tips. Corn even gained in height. The crops are still highly variable across the region and even within fields, where the corn shows a wavy effect. Overall corn yields will be reasonable, grain development is good to excellent. There are ears with 16 & 18 kernels around. Of course there are nubbin ears and those with spotty kernels too but considering the severity of the early dry season, we have been very fortunate. Counties to our west are in a much tougher situation with even lower yielding crops.

In early September we had a good stretch of hot weather and many were harvesting a beautifully recovered haycrop. Grasses came out of dormancy and legumes took advantage of the weekly rains in August to grow aggressively. Early corn silage harvest got underway the first week of September. I’ve heard comments about how nice it is not to have to fight with mud. At extension we’ve been chopping and drying stalks for two weeks now. Don’t be deceived by the green stalk and leaves, the plants are drying down. Moving into the third week in September corn is pretty well dented and anything planted by mid-May is approaching or at about ½ milkline and moistures are running between 68-70 percent. Farms will be chopping in earnest in the coming week.

Pest pressure. Disease has been lighter this year in corn. I have seen only a very few spots of Northern Corn Leafblight around. I did see a field on wetter, hill ground that had leaves covered in NCLB lesions so it not non-existent. If you find hybrids that do have a significant infestation of NCLB this year I would make a note and discard them from future planting since they obviously have no natural resistance and will be hit even harder in a year with greater incidence. There have been reports of white mold also getting a late toehold in soybeans.

I haven’t encountered any severe insect pressure this year, especially considering the mild winter. There was some heavy potato leaf hopper on drought stressed alfalfa. Weed pressure is much more common and heavier than usual in corn and soybeans which I attribute to the dry conditions. Possible reasons include; pre-emergent herbicide applications lacked adequate rainfall to activate them. For post emergence control tougher, drought stressed weeds were harder to control and dry conditions delayed weed seed germination and later rain showers brought successive weed germination.

Danger of **High Nitrates** is mostly past. Pro Dairy’s Fact Sheet - Resources for Forage Management in a Drought Situation states, “Forage Nitrate issues warrant attention but are most generally only an issues in feeding green chop or when harvested immediately after a “drought ending” rain event. If you have crops that you feel haven’t recovered from the drought you might want to have them analyzed before feeding. Nitrates are reduced by about half in the ensiling process. [The entire factsheet can be found at http://prodairy.cals.cornell.edu/sites/prodairy.cals.cornell.edu/files/shared/Forage%20Resources%20-%20Drought%202016.pdf]
Fall planted Small Grains Could Boost Forage Inventory in the Spring

If your inventories are tight consider dual purpose small grains for an early first cutting. Winter rye and triticale can be planted after corn silage harvest. They will protect the soil over the winter, provide living roots to support your soil ecosystem and with some fertilizer at green up can provide several tons of forage in early to mid-May.

Cornell Agronomy Fact sheets provide planting and harvesting details. Winter Triticale Forage can be found at: http://nmsp.cals.cornell.edu/publications/factsheets/factsheet56.pdf.

Tom Kilcer, an independent agronomist (http://advancedagsys.com/), outlines his recommendations in the article below borrowed from his August newsletter.

Winter Forage Steps for Success

Use only quality seed. You don’t know what you are getting with bin run seed. What is the germination percentage (depends on how it was dried)? Like buying a steer to breed your cows, buying bin run may not even get out of the ground. I have looked at many a bin run field that was more downy brome and annual ryegrass than the grain the farmer paid for. Even worse, if it is a mix of rye grain and triticale grain do you cut when the rye is peak quality and take a 35% yield hit on the triticale, or cut when the triticale is optimum yield and quality but has 20 – 30% of the dry matter over mature rye straw? Spend slightly more and plant good seed. 100 lbs of seed/acre is suggested for planting.

Earlier planting gives higher potential yield. The Best Management Practice we found in NYFVI supported research to plant winter triticale forage 10 days to two weeks before your LOCAL wheat planting date. It is more critical as you go further north where winter comes early. Early planting is critical to maximize tillering. The more tillers the more potential mature stems next spring which means more potential forage yield. In our replicated trials, planting September 10 yielded 32% more than October 5. If your corn is delayed you can still plant into October, but you just have to recognize that yields will be down compared to timely planting. This is something we have repeatedly found in our trials. Planting late with more seed does NOT work. Last year I repeated a test at the Valatie research farm and had the same results as 8 years ago; planting late with increased seed rate gave no significant yield increase.

Early planting establishes both increased top to protect the crown (photo this page), and increased roots to resist heaving (photo this page) that often damages stands not planted correctly. My trials also found that early planting was more resistant to snow mold as the early spring standing water covers less of the plant. Even more important, the earlier planting with ground covering crown of leaves may completely eliminate any need for a fall herbicide program in the crop.

Finally, earlier winter forage takes up more nutrients. This crop will allow environmentally sound, manure incorporated, applications in early fall that minimize ground and surface water losses. Dr. Ketterings of Cornell and I have documented earlier fall planting with more vegetative growth will take up and store more nitrogen (residual or manure). This has the bonus of both increasing the number of fall tillers, and potentially reducing the amount of nitrogen need to grow the crop the next spring. Without fall manure we suggest 40 – 60 lbs. N/A for early planting. Late planting (wheat date or later) needs none. We are testing a different system that may allow all the nitrogen needs to be met by incorporated manure application. Keep watch on this newsletter next spring.

Drill triticale 1.25 inches deep. First, a drill will do a more accurate seed placement to maximize the yield potential of the seed you bought. Broadcast and disk in had seeds haphazardly placed in the soil. Some grew some didn’t. A friend of mine switched from broadcast to drill and was amazed by the yield change the next spring from the uniform, solid stand. Seed depth is critical as we move further north and on wetter soils because of heaving the next spring. In the some farms lost their crops to winter kill while neighbor farms that planted deep enough did not have that problem. The deeper planting allows the roots to have a firm grasp to resist early spring heaving. The smaller the plant (late planting) the more critical this is to survival. Triticale is winter hardy if planted correctly. The newer drills do a far superior job with this. Remember you are NOT planting a cover crop. You are planting a high yield crop that with proper management produces the highest quality forage you can grow and feed.

Finally when you select your corn seed this fall, adjust for a shorter season crop to allow maximum yield of both the corn and the winter forage crop. You can drop 20 days in maturity and may only lose 3 tons of corn silage/acre (some shorter season varieties do not lose yield but equal the yield of longer ones). It is replaced with 5.5 – 10 tons of higher milk producing winter forage.
### Pricing Standing Corn for Silage

<table>
<thead>
<tr>
<th>Description</th>
<th>Per Acre</th>
<th>Per Bushel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grower's Gross Income (bu x price)</td>
<td>$480.00</td>
<td>$4.00</td>
</tr>
<tr>
<td>Harvest cost per acre</td>
<td>- $40.00</td>
<td>$0.33</td>
</tr>
<tr>
<td>Grain Hauling (field to mill)</td>
<td>- $30.00</td>
<td>$0.25</td>
</tr>
<tr>
<td>Drying Charge</td>
<td>- $72.00</td>
<td>$0.60</td>
</tr>
<tr>
<td>Cost of additional P &amp; K removal w/ silage harvest</td>
<td>+ $ -</td>
<td>$ -</td>
</tr>
<tr>
<td>Corn Grain Discount ($/bushel)</td>
<td>- $ -</td>
<td>$ -</td>
</tr>
<tr>
<td>Chopped corn price, breakup with shelled corn net</td>
<td>= $338.00</td>
<td>$2.82</td>
</tr>
<tr>
<td>Potential chopped corn yield (Tons/acre)(^1)</td>
<td></td>
<td>20.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Per Acre</th>
<th>Per Bushel</th>
</tr>
</thead>
</table>

**Buyer's Perspective**

<table>
<thead>
<tr>
<th>Description</th>
<th>Per Acre</th>
<th>Per Bushel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price of corn silage from silo (^*)</td>
<td>$45.00</td>
<td></td>
</tr>
<tr>
<td>Harvest cost</td>
<td>$10.00</td>
<td></td>
</tr>
<tr>
<td>Storage Cost</td>
<td>$2.00</td>
<td></td>
</tr>
<tr>
<td>Dry Matter Loss (^*)</td>
<td>$5.85</td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td>$27.15</td>
<td></td>
</tr>
<tr>
<td>Corn Silage Quality Discount (^*)</td>
<td>$ -</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) The relationship between Corn Grain Yield and Forage Yield:
- Often the grain yield equivalent of corn harvested for silage (at 65% moisture) is about 25% lower than the grain yield equivalent of corn harvested for grain. Corn silage is typically harvested at 30% moisture.
- Corn silage typically has a yield of about 50% less than the grain yield equivalent.
- The silage yield is determined by the forage yield and the silage yield factor (usually 0.5). Products will be lost during the harvesting process.

\(^*\) Typical dry matter losses:
- 70% moisture and over: 12% loss
- 70% moisture and under: 9% loss
- 60% moisture and under: 5% loss

---


<table>
<thead>
<tr>
<th>Machinery</th>
<th>2012 Machinery Custom Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grain Hauling</td>
<td>$0.25 $/bushel</td>
</tr>
<tr>
<td>Drying Charge</td>
<td>$0.60 $/bushel</td>
</tr>
<tr>
<td>Corn Combining</td>
<td>$40.00 $/acre</td>
</tr>
<tr>
<td>Chop/Haul/Fill</td>
<td>$10.00 $/Ton</td>
</tr>
<tr>
<td>Silage Delivery Charge</td>
<td>$5.00 $/Ton</td>
</tr>
<tr>
<td>Dry Matter Loss(^2)</td>
<td>13%</td>
</tr>
<tr>
<td>Storage Cost Silage</td>
<td>$2.00 $/Ton</td>
</tr>
</tbody>
</table>

1 Man 1 Truck $64.90/hour
- $4.06 /ton for 16 Ton Load - 1 Load per Hour

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Penn State is committed to affirmative action, equal opportunity, and the diversity of its workforce.

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If you are buying or selling standing corn this one of the best tools I've seen to help determine fair pricing.

This spreadsheet is available online at:
or search: "Pricing Standing Corn and Look for the Pennsylvania article: Janice"
With the days getting shorter and the nights getting cooler, my mind has been focused on what the coming months will be bringing. Most everybody is focused on putting up rest of the forage for the year, but my thoughts are on how we can set up our animals for the coming winter, especially calves. There are quite a few steps that we can take now that will impact the success of growing calves through the winter, before the snow flies.

**Care for Newborn Calves**

Getting calves the right start as soon as they hit the ground is critical. In the winter months, it’s even more critical because our margin for error is smaller. Ensuring we get that gallon of colostrum in every calf an hour after birth at the proper temperature (at least 102) sets that calf up for her life. However, in cold barns, making sure that colostrum stays at her body temp or higher can be a challenge. If it’s below her body temp, she’ll need to use energy to warm it up. As a newborn calf, she has very little energy reserves so making sure we keep that milk warm from the beginning is key. Getting her dry within two hours of birth is another key step to check off. A calf jacket on a wet calf is not really better than a wet calf – that coat becomes wet and now she’s trying to warm up a wet coat along with her own body. Either we need to get that calf dry – a supply of terry cloth towels will help – or we need to make sure we change the calf out of a wet jacket into a dry jacket. Another approach can be to put wet calves in a “hot box” after removing from the dam. They are pretty simple and inexpensive to build, and are very effective in drying calves off when it’s cold outside. Once the calf is dry and warm, the calf should be moved to the calf facility with a dry jacket.

**Understanding that calves will need more energy when it’s cold**

Research from Cornell has shown that calves born in winter months, when compared to calves born in summer months, will produce 1226 lb less milk in their first lactation. This could be because of the impact of cold stress that newborn calves face. We know that calves have a much higher thermoneutral zone than cows, with calves less than a month old starting to expend energy to stay warm under 50 degrees. Calves older than one month old can withstand a little colder temperatures, down to about 32 degrees. While we can’t control the temperature outside, we can impact how much energy they have available by feeding more calories. Changes that we can make to help calves deal with the cold more effectively can be through more milk at each feeding, adding another feeding, or increasing the fat content in milk replacer. We may need to increase milk from 25 to up to 50 percent more in times of extreme cold. For every degree below the thermoneutral zone, the energy requirement of the calf increases one percent. At a minimum, most calves should be drinking two gallons of milk per day to properly combat cold. The added energy will ensure she stays healthy and continues to grow throughout the winter months.

**Spot Check on Protocols**

You and your calf feeder (the relief people, too) should know how you will handle the feeding of water throughout the time when it doesn’t get above freezing out. Water is key to growing calves, and simply not giving water to them isn’t an option. Having warm water available an hour after feeding milk is pretty standard now, and the calves will learn to drink water before it’s dumped. Even if young calves aren’t drinking much, the little that they do drink is beneficial to them. Water consumption goes hand in hand with starter consumption, which will be limited if water is not available. Taking time to go over what things will change when the weather changes, in terms of calf care, will be time well spent.
spent. In addition, updating your method for tracking calves is recommended. During the period of up and down weather before cold temps might be the best time to start tracking respiratory using the University of Wisconsin School of Vet Medicine’s Calf Health Scoring Chart. It ranks the health of calves on a 1 to 3 scale, depending on observations of the calf’s temperature, presence of cough, nasal discharge, eyes, ears and fecal consistency. These observations can be tracked on paper, but they do also offer an app to download. In addition, tracking weight gain throughout the winter can tell you if something needs to be addressed in your calf program. If you see weight gains slow up or stall, you know that calves are dealing with energy expenditure somewhere.

**Other Spots to Check**

The fall is a good time to check through calf feeding equipment and discard anything that isn’t up to par. Bottles and pails that have scratches or gouges in them are a spot for bacteria to grow. Any nipples that are worn out or cracked should also be discarded for the same reason.

Making sure the calf area is as biosecure as possible is a continual effort. Anyone coming into contact with calves should have separate clothing and boots than those working with mature cows and older calves and heifers. This means that people that don’t work with calves aren’t passing through the calf area. The youngest calves are fed first and older calves last to minimize contact to the youngest animals.

**Doing the Basics Right**

Remember the ABC’s of calf care: Air, Bedding, Calories. Spend some time in the calf’s environment without your jacket on. Calves need proper ventilation without drafts and bedding needs to be ample and dry. If you’re feeling chilled, your calves are probably expending energy to keep warm – which means they’re probably not growing and are more susceptible to disease. Are your knees dry? If calves are wet, they’re going to expend even more energy. We know we will need to feed more calories to offset this. Think about their energy as a balance – the more demands we put on the calf in the form of cold stress, poor ventilation and inadequate or wet bedding, the more the calf will need in the form of calories to stay healthy and continue to grow. We need to provide the correct environment for her and feed enough milk to achieve both of these goals.

### Quick Checklist for Calf Area

- Colostrum reserves – do you have enough? Are bags of colostrum replacer out of date?
- Getting wet calves dry – can you build a hot box? Do you have enough terry cloth towels to help dry calves off before putting the calf jacket on?
- Air – is ventilation up to par? Are there drafts?
- Bedding – are calves clean and dry?
- Calories – are calves getting enough energy through their milk to stay healthy and grow?
- Calf Jackets – do you have enough? Do you have a way to wash them between calves? Check them once a week to make sure they fit the calf properly
- Spot check calf protocols – has something changed in your calf program since last winter?
- Do all calf feeders know the protocols for winter?
- Are you tracking incidence of respiratory disease?
- Are you tracking weight gain of calves?
- Have you discarded old/cracked/worn out calf feeding equipment?
- Have you took the time to experience the calf’s environment as she feels it?
How low can we go in terms of feeding lower forage rations? There are a number of ways to express forage needs for dairy cattle. Guidelines for minimum forage levels in rations are:

- 1.5% of body weight as lbs. of forage dry matter
- 15% of the total ration dry matter as forage-NDF
- 0.7% of body weight as forage-NDF

Each of these will result in a slightly different answer in terms of the quantity of forage fed and needed. Table 1 is an example for a 1,450 lb. dairy cow. A 25% reduction in forage needed per cow results if the forage feeding rate drops from 2 to 1.5% of body weight.

<table>
<thead>
<tr>
<th>Daily Forage Intake, % of BW</th>
<th>Lbs. Forage DM/Cow/Day</th>
<th>Tons Forage DM/Cow/Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5</td>
<td>36.2</td>
<td>6.6</td>
</tr>
<tr>
<td>2</td>
<td>29</td>
<td>5.3</td>
</tr>
<tr>
<td>1.5</td>
<td>21.8</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 2 is from the 2001 Dairy NRC. This looks at forage NDF intake as a % of total ration dry matter. These are minimum suggested values with good management. Note that as ration forage NDF decreases, that total ration ADF and NDF increase while NFC (non-fiber carbohydrates) goes down. In most dairy rations, starch is the primary source of NFC. This indicates that starch needs to be limited and the space filled up with fibrous byproduct feeds.

<table>
<thead>
<tr>
<th>F-NDF, % - Minimum</th>
<th>Total Ration NDF, % - Minimum</th>
<th>Total Ration NFC, % - Maximum</th>
<th>Total Ration ADF, % - Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>25</td>
<td>44</td>
<td>17</td>
</tr>
<tr>
<td>18</td>
<td>27</td>
<td>42</td>
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<tr>
<td>16</td>
<td>31</td>
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</tr>
<tr>
<td>15</td>
<td>33</td>
<td>36</td>
<td>21</td>
</tr>
</tbody>
</table>

Table 3 is an example of the percent of the total ration that would be forage based on Table 2 and varying forage NDF levels. The values in Table 3 look really low in terms of the proportion of forage in the total ration. I have seen herds feed < 40% forage with good management that make milk and maintain cow health. The key to making these lower forage rations work is ration balance, controlling ration starch levels and daily feeding management. The potential for disaster is high if they are improperly formulated and/or managed.

<table>
<thead>
<tr>
<th>Minimum F-NDF, %</th>
<th>40% NDF Forage</th>
<th>50% Forage NDF</th>
<th>60% Forage NDF</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>47</td>
<td>38</td>
<td>32</td>
</tr>
<tr>
<td>18</td>
<td>45</td>
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<td>17</td>
<td>43</td>
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<td>28</td>
</tr>
<tr>
<td>16</td>
<td>40</td>
<td>32</td>
<td>27</td>
</tr>
</tbody>
</table>

Summary

There is a wide range in the amount of forage that can be fed to dairy cows while maintaining milk production, milk components and herd health. The key will be to determine the quantity of forages by doing a forage inventory. This will provide the base information for setting the amount of forage that can be included in dairy rations during the 2016-17 feeding season.
Use management objectives to determine rye cover crop seeding rates.

Cereal rye is widely used due to its ability to establish late in the season and can still be successfully established in most of the state into October. In dry years when lower than expected yields result in un-captured soil nitrogen, N-scavenging plants such as cereal rye can be especially important in consuming excess nutrients and releasing them the following spring. However, the traditional seeding rate of 2 bu./ac. should be more closely reviewed, with spring management objectives helping to determine seeding rates.

**Determining your ideal rate**

**Know your seeds per pound**

A study of planting dates at the Big Flats (NY) Plant Materials Center showed seeds per pound for rye varied from under 12,000 to over 33,000 based on the cultivar. Assuming traditional small grain seeding rates of 1.5 million viable seeds per acre and a germination of 85%, pounds of seed per acre would vary from 53 to 147 to hit the 1.5 million seed mark. While many older cultivars may have been accurately planted at 2 bu./ac., knowing your rate of seeds per pound and the germination rate of the seed can better help determine how many total pounds should be hitting the field.

**Follow traditional seeding rates for late planting and early termination**

The traditional seeding rate of 1.5 million viable seeds/ac. is still a good starting point for establishing adequate ground cover when rye is planted later in the fall or northern areas of the state where little fall growth is expected. This is particularly true when termination is performed well ahead of planting when plants are younger and shorter. So if you’re managing rye for winter cover and are terminating early, you may only need to consider seeding at rates of less than 2 bu./ac. when your number of seeds per pound is above 16,000.

**Less may be more if you’re applying manure**

A study of three rye planting rates and three poultry litter rates in Pennsylvania and Maryland showed that poultry litter application had an effect on rye biomass while planting rate had relatively little effect. In this case biomass yields were similar at seeding rates of 80 and 186 lbs./ac. when litter was applied. So for those applying manure to rye this fall or in the spring, a lower planting rate may be acceptable for achieving high forage yields, providing erosion control and meeting soil health objectives.

**More may be more if you’re looking for weed control**

The same study showed that the increase in seeding rates from 80 to 186 lbs./ac. resulted in greater weed control when the rye cover was rolled and crimped. This was likely due to increased ground cover early in the season owing to greater plant density. A commonly accepted target for good weed control from rolled and crimped rye is 7,000 to 8,000 lbs./ac. of dry matter, which can be achieved with 1.5 million viable seeds per acre, with planting dates as late as mid-October depending on location and termination date in the spring. However, it should be noted that rolled and crimped rye may not suppress all weeds and that follow up treatments may be needed later in the growing season.

**Higher rates may not be necessary if soil health is your objective**

For those looking to use a late terminated rye cover as a means of maintaining living roots throughout the year and improving soil structure, higher seeding rates may not be as important. Veteran no-tillers that use rye as a soil health tool may go as low as 30 to 60 lbs./ac, although due to smaller seed sizes some may still be planting close to 1 million seeds per acre. Those that plant at lower rates cite reduced input costs, improved light penetration and airflow to the soil surface resulting in quicker drying in the spring and ease of planting when going into a standing cover crop, commonly referred to as “planting green”.

So before the drill hits the ground this year, determine what your objectives are and what seed you intend to plant. Depending on your rotation, need for spring forage and manure application practices, you may even want to use multiple planting rates. By considering your needs and resources now, you can better obtain the ideal cover crop stand when spring rolls around.
Dairy Market Watch
August 2016

An educational newsletter to keep producers informed of changing market factors affecting the dairy industry.

Funded by Cornell Pro-Dairy. Compiled at Cornell Cooperative Extension of Chautauqua County by Katelyn Walley-Stoll, Community Educator.

Dairy Commodity Markets (USDA Dairy Market News)

**Cheese:** Many U.S. cheese vats are less full this week as manufacturers face declining milk intakes. The pull for fluid milk into Class I is strong in the East and picking up in the Midwest, leaving less milk for cheese production. Mozzarella and provolone orders are strong in the East. Domestic demand is strong and industry contacts anticipate that demand will continue to climb. Inventories vary depending on the variety of cheese. Overall, stocks for young and fresh cheeses are tight while cheddar stocks are mostly long. Market participants in the East report balanced inventories.

**Butter:** Across the nation, butter production has slowed. Most manufacturers notice a reduction in available milk supply, slowing production schedules for some processors. Lower cream availability has pushed many butter makers to slow down butter churning rates, creating a tight market for near term butter needs. However, some processors are still able to meet short term demands and current orders, by finding spot loads of cream. Some suppliers are expecting a turnaround in supply as the expectation of increasing availability follows in the coming weeks.

**Fluid Milk:** Throughout most of the country, farm milk production is lower, excluding those areas where cow comfort avoids the frustration of persistent daytime heat and humidity. Bottled milk demand continues to increase as more school districts begin the school year. The increasing demand for fluid milk has generated additional cream volumes, however, there is some tightness reported in pockets of the East and Midwest regions. Ice cream and frozen dessert demand is also strong, as operations continue to run full production schedules. Condensed skim is mostly moving under contract agreements versus spot load sales.

**Dry Products:** Prompted by mounting fluid demand, manufacturing milk declines affect the production of most dry ingredients. Condensed skim availability is well below most plants’ drying capacity, thereby causing nonfat dry milk production to decline. Prices are mixed, with both the Central-East and West observing steady to higher prices in the mostly series. As well, dry buttermilk market prices are mixed. Inventories have tightened. Markets show signs of firmness. Dry whey prices are mostly higher. As buyers anticipate a firming market, volume purchases are on the rise. Whole milk prices are steady on light trading. Whey protein concentrate 34% prices are higher. The lactose price range is steady to higher. Active demand from export markets is helping to drive current lactose prices. Casein prices moved higher, with a drop in New Zealand and EU casein output expected in the months ahead.

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### Friday CME Cash Prices

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<tr>
<th>Dates</th>
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<th>Cheese (40# Blocks)</th>
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<tr>
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<td>$2.29</td>
<td>$1.71</td>
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<tr>
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</table>

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**July Utilization (Northeast):**

- Class I = 29%
- Class II = 25%
- Class III = 25%
- Class IV = 20%

*At a milk margin minus feed costs of $5 or less, payments are possible depending on the level of coverage chosen by the dairy producer.

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**Building Strong and Vibrant New York Communities**

Cornell Cooperative Extension in Chautauqua County provides equal program and employment opportunities.
**Weekly Average CME Cash Price - 2012 to Present**

**Comments:** Prices have continued to increase slowly, especially in Class III where we’ve seen a much higher increase than previously expected over the past few weeks, and prices continue to strengthen as compared to our lows in April and May. Class III price should be near $17 for August, which will put it $1.75 higher than in July and $4.25 higher that May’s $12.76. Cheese prices are at their highest since November of 2014, which along with improvements in dry whey prices, have helped with Class III’s boost. August’s Class IV price should be near $14.77, $2.09 higher than April’s low of $12.68.

Exports still aren’t helping milk prices, and it doesn’t look like they will come into play until late in 2017. June exports continued to remain below levels seen a year ago, 9% lower for nonfat dry milk, 33% lower for butterfat, 12% lower for cheese, and 2% lower for dry whey. Whey Protein Concentrates did see a jump, however, as China bought a record amount that pushed exports up by 52%. June exports were 14.9% of milk production on a total solids basis, the highest since April 2015; while imports amounted to 4.1% of milk production. Milk production in the EU has slowed from running 5% higher earlier this year to just 1% higher, and production is also expected to slow down in Australia, New Zealand and Argentina. World dairy products prices are improving, but are still lower than our domestic prices, keeping it difficult to compete on the world market.

Milk prices should continue to climb incrementally, but will be impacted greatly by the rates of increasing milk production. Milk production for July was 1.4% higher than a year ago as milk production per cow was up 1.2%. Cow numbers were up for the second month in a row by 2,000. July’s milk production in New York was up 4% in spite of the hot and humid weather. Continued increases in milk production will hamper price increases through the rest of the year.

Class III futures are near $17 for August through November, and drop to the $16’s in December and into 2017, which are probably optimistic as buyers prepare for the Holiday season. The Class III price might end up near the $15’s by November and December, more realistically, and it will take strong cheese sales and slower milk production growths to support the higher Class III futures prices. (Cropp, Bob. Memo to Dairy-L August 19, 2016).

The USDA announced this week that they will purchase $20 million worth of surplus cheddar cheese. While this is just a drop in the bucket for our dairy industry (amounting to 1.5% of inventory), it will result in 770 million pounds of cheese that will be donated to food banks across the country. The USDA also announced that they are extending the deadline to enroll in the Margin Protection Program for Dairy from September 30th to December 16th, 2016. (Novakovic, Andrew. Memo to Farmmg-L August 23, 2016).

**Building Strong and Vibrant New York Communities**

Cornell Cooperative Extension in Chautauqua County provides equal program and employment opportunities.
The National Dairy FARM (Farmers Assuring Responsible Management) Program was developed to “simply demonstrate farmers’ commitment to consumers that they’re doing what’s right – for their cows and for consumers.” The Leprino Quality Animal Care program “works in combination with the FARM Program” to ensure consumers of the quality care practices being done on dairy farms across the nation.

Over the past few months many of producers in our region have been asking about the requirements that need to be implemented by the end of 2016. Most of the concerns focus on the employee training component. Farms with non-family employees have to provide and document yearly training in stockmanship and areas of responsibility to employees who work with animals. For example, a cow milker needs to receive yearly training in stockmanship or cattle handling and training in or a review of milking procedure and protocols. The training can be done in a group setting or individually on the farm during the course of work. Employees are also required to sign a Dairy Cattle Care Ethics agreement annually.

There are several resources available for such training programs.

- Your herd veterinarian.
- National FARM Program and Merck Animal Health have teamed up to put together a webinar series on dairy animal care. Webinar topics range from calf care to handling non-ambulatory cattle. Webinars will take place at http://nationaldairyfarm.com/merck-training-materials
- Merck Animal Health Dairy Care365 Online Training Visit http://training.dairycare365.com and find several training videos on a variety of topics related to dairy animal care. Videos are available in both English and Spanish. (See next page)
- Extension Meetings- Consider attending the following programs available through the South Central New York Dairy and Field Crops Team. These programs can count as technical training. Contact Betsy Hicks for more information or visit our website at http://scnydfc.cce.cornell.edu/
  - Calf Care Workshop planned for November.
  - Winter Dairy Management 2017: Lameness Treatment and Prevention
- Reading farm related magazines and documenting the articles read

If you desire on-farm training in a specific topic, please do not hesitate to reach out to our team to see what we might be able to provide or set up for you in collaboration with industry representatives. While we are not the experts on these programs, we can work with you to meet the requirements of the programs. Technical questions about the programs should be directed to your milk market’s animal care representative or your herd veterinarian.

Life is 10% what happens to you and 90% of how you react to it. Our dairy industry is ever changing. Consumers care about where their product comes from and want to know it is produced in the highest quality manner possible. We all know we are doing our best to provide quality care for our cows and that without this care they would not produce milk. The National FARM Program and Leprino Cow Care program are a way to show consumers we care about producing high quality milk for them.

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2016 Feed Dealers Seminar
Thursday, November 17, 2016 (Tentative)
Cortland

Speakers:
- Dr. Thomas Overton, Pro-Dairy Program Manager & Professor of Dairy Management, Cornell University
- Joe Lawrence, Pro-Dairy Dairy Forage Systems Specialist

This annual seminar blends the latest concepts in feeding and other management aspects of dairies with field level application.

More Information will be available on our website: http://scnydfc.cce.cornell.edu/ as the date gets closer
What is the series schedule?
Please see below for a complete schedule of the webinar series.

What time are the webinars scheduled?
Each webinar will be at 12:00 pm EST.

Do I have to register for the webinars?
No. Just simply visit this page on the day on the webinar air date and click the "Watch" link beside the webinar topic. You will have to install Webex application onto your computer. Webex is a safe program and should take about 5 minutes to download.

Will the webinars be offered in Spanish?
Currently, the webinars will be presented in English and offered for re-watch in English only.

How can I watch the webinar after the original air-date?
To watch the webinar after the original air-date simply visit this page and click the "Watch" link beside the webinar topic.

Can I receive a hard copy of the webinars? 
Currently, there is not a hard copy available. However, check back after the completion of the series for an update.

Calf Care | October 6, 2016 | Watch
Speaker: Liz Cox, DVM, MS, dairy technical services veterinarian, Merck Animal Health
Top-quality care from trained employees, along with positive human interactions, favorably impacts a calf’s future performance as a milk cow. Liz Cox, DVM, MS, Merck Animal Health dairy technical services veterinarian, will explain good stockmanship practices, colostrum management, water and feed availability, and written protocols for newborn and milk-fed calf management. She will also review handling and movement, employee training and ways to reduce stress during processing.

Euthanasia Guidelines | October 20, 2016 | Watch
Speaker: Jan Shearer, DVM, MS, professor and extension veterinarian, Iowa State University College of Veterinary Medicine
Making the decision to euthanize an animal is always difficult. Jan Shearer, DVM, MS, professor and extension veterinarian, Iowa State University College of Veterinary Medicine, will review the decision-making process for euthanasia and considerations for selection of method. In this webinar, Dr. Shearer will provide tools and information that can minimize pain and distress in the animal.

Handling Non-Ambulatory Cattle | November 3, 2016 | Watch
Speaker: Greg Crosley, DVM, practicing veterinarian, Countryside Veterinary Service, Cement City, Mich.
Providing the best care is especially important when a cow goes down due to illness, injury or weakness. Greg Crosley, DVM, is a practicing veterinarian and expert in training dairy employees to understand, assess, properly transport and care for down cows. This webinar will help you develop the skills and a protocol for responding to a down cow emergency.

Record Keeping & Drug Residue Prevention: An Industry Opportunity | December 8, 2016 | Watch
Speaker: Norman Stewart, DVM, MS, manager of livestock technical service, Merck Animal Health
Increased public pressure around judicious use of medically important antimicrobials and the Veterinary Feed Directive guidelines present an industry opportunity to demonstrate the good work dairy farmers are doing to provide safe food from animals that are well cared for in a healthy environment. In this webinar, Norman Stewart, DVM, MS, manager of livestock technical services, Merck Animal Health, will guide you through adherence to important best practices including ensuring animals are permanently identified and permanent drug treatment records are maintained and easily accessible.

Building Strong Herd Health Programs | December 15, 2016 | Watch
Speaker: Scott Nordstrom, DVM, director of dairy technical services, Merck Animal Health
A strong herd health program emphasizes prevention, rapid diagnosis and quick decision making on necessary treatment for sick or injured animals and is vital to ensure healthy cows reach their full performance potential. Because every dairy operation is unique, it is important to work with your veterinarian to create a herd health plan. Scott Nordstrom, DVM, director of dairy technical services, Merck Animal Health, will review what is new with Farm 3.0 as it relates to the veterinary-client relationship (VCPR), and developing a written herd health plan for your dairy.

Cattle Marketing | January 12, 2017 | Watch
Speaker: Lowell Midla, MS, VMD, veterinary technical services manager, Merck Animal Health
Marketing a dairy animal as beef is an important part of dairy farming and transitioning a cow to the beef sector at the right time is important. Lowell Midla, MS, VMD, Merck Animal Health veterinary technical services manager, will share guidelines on when to market, fitness for transport, observing withdrawal periods and proper protocols for selling and transporting as specified under FARM 3.0.

Preparing for the Unexpected | January 26, 2017 | Watch
Speaker: Rick Jackson, U.S. dairy product manager, Merck Animal Health
Preparation is the key to avoiding an emergency and will save you valuable time, if and when an emergency happens on your farm. A preparedness plan should cover a variety of issues that could arise on the farm from a natural disaster to a herd health epidemic. In this webinar, Rick Jackson, U.S. dairy product manager, Merck Animal Health, explains how to develop an on-farm preparedness plan, as outlined in the Dairy C.A.R.E. Initiative, and walks through possible scenarios and how to put a plan in place to deal with them.
The SCNY Dairy & Field Crops Team, in conjunction with the CNY Dairy & Field Crops Team, CCE Madison County and Cornell University’s Pro-Dairy Program putting on a 2-day calf workshop, offered in two different sessions later this fall. The workshops will have a classroom component in the morning and a hands-on portion in the afternoon.

**Day 1 Focus** – Maximizing calf potential before birth, colostrum management and pre-weaned calf nutrition. Hands-on activities of evaluating close-up cows and maternity area, testing colostrum and serum.

**Day 2 Focus** – Calf health, calf housing and ventilation.

Hands-on activities of calf necropsy, calf health assessments and housing evaluation/walk-through.

| Session I | Wednesday 11/16 – Day 1  |
| A.M. session & lunch  |
| Wednesday 11/16/16 – Day 2  |
| A.M. session & lunch  |
| Fad’s Inn  |
| 5149 Rt. 12  |
| Norwich, NY 13815  |
| P.M. on-farm session  |
| Tiger Lily Holsteins  |
| (John Marshman)  |
| 3633 County Rd. 32  |
| Oxford, NY 13830  |
| Session II | Thursday 11/17/16 – Day 2  |
| A.M. session & lunch  |
| P.M. on-farm session  |
| Shelly’s Bar & Restaurant  |
| 1678 Cortland St.  |
| DeRuyter, NY 13052  |
| P.M. on-farm session  |
| Riverside Dairy  |
| 2258 Lower Cincinnatus Road  |
| Cincinnatus, NY 13040  |

**Cost:** $50/Person/Each Session  
**Includes:** 2 Days, Lunch & Materials  
**To Register:** Call Jen Atkinson at 607.391.2662 or email jma358@cornell.edu.

You can also register online:

**Session I:** [https://scnydfc.cce.cornell.edu/event_preregistration.php?event=443](https://scnydfc.cce.cornell.edu/event_preregistration.php?event=443)  
**Session II:** [https://scnydfc.cce.cornell.edu/event_preregistration.php?event=444](https://scnydfc.cce.cornell.edu/event_preregistration.php?event=444)

For questions, contact Betsy Hicks at 607.391.2673 or email bjh246@cornell.edu

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**Baby It’s Cold Outside**  
**Winter Calf Care Webinar**  
Oct 26th, 2016  
12:30-1:15 pm

Calves need extra care when the weather turns cold. This webinar will review:

- Cold weather nutritional needs.
- How to keep calves fed and growing.
- Health concerns when the temperature drops
- Keeping them clean and dry at calving and beyond.

**Registration is not required.**

To join the webinar click here [Dairy Webinars](#).

Or copy the following link into your browser: [http://prodairy.cals.cornell.edu/production-management/dairy-webinars](http://prodairy.cals.cornell.edu/production-management/dairy-webinars)

**Presenters:**  
**Dr. Jerry Bertoldo,** DVM, Northwest NY Dairy Team, Dairy Specialist  
**Kathy Barrett,** Cornell ProDairy Program.
Have you ever thought about how much milk goes into the cheese you eat? Aside from the labor to make the cheese, the equipment and storage needed and the time it takes to age, one pound of cheese requires ten pounds of milk. If you’re not sure how much milk that is, it’s about a gallon and a quarter. With that being said, I’m sure you could understand why a pound of cheese is more expensive than a gallon of milk in the grocery store – because it not only takes more time, labor and storage to make, but it also requires more milk!

Have you ever wondered where your cheese comes from? Or wondered if it was even possible to have 100% local cheese? Ed and Eileen Scheffler own and operate a certified organic farm in Groton, NY where they not only produce organic grassfed beef and eggs, they milk a herd of 40 dairy cows twice a day. Their milk is sold in a variety of ways, the most recent variety being local, organic, one farm only artisan cheese.

Their herd is pasture fed for the most part, with a supplement of stored forages in the winter. Ed notes the cows are happy in the summer, they graze on pasture and move over to the shade until they are hungry again. This summer has been hard on them though, the cows have spent a lot of time in the shade and were even moved back into the barn for a while. Some days in the extreme heat the cows were grazing for up to 4 hours, but even that was too much for them, they wanted to be in the shade or the barn.

Ed and Eileen began farming together in 1981, however Ed grew up on the farm, and says he has been there “forever.” In 2003, they were certified organic by the Northeast Organic Farming Association of New York (NOFA), and never looked back. They like the consistency of their milk check, saying the milk price is steady generally, and secure. However, Ed and Eileen have been looking for ways to spice up the products offered by their farm, expanding to raw milk, meat, eggs and most recently, three varieties of artisan cheese.

Ed and Eileen are interested in any value added products they can offer. Ed gets joy out of being “someone’s farmer” – meaning he likes when his customers are able to rely on him to provide their families with healthy, local products. Offering cheese enables Ed and Eileen to offer another unique product into the homes of their customers.

In 2009 the Scheffler’s opened their farm store, located on Cobb Street in Groton. They had certified organic meat processed, and needed a place to sell it. The store is generally self-serve, however Ed and Eileen are always around for help and questions if needed. In the store, customers can purchase a variety of meat products, eggs and raw milk all organically raised directly on the farm. About three weeks ago, they were able to pick up their first batch of cheese, and started selling that as well.

Eileen said they had been interested in making cheese for a few years now, however, it is quite the process. They looked into cheese makers that were not certified organic, and the processors just didn’t seem to fit with what they needed. From a neighbor’s recommendation, they looked into Lively Run Dairy, a goat dairy farm in Interlaken, NY that also focuses on specialty cheese making. They met the head cheese maker, Pete Messmer, and took a tour of the farm and cheese room. They were very impressed, and the two business seemed to work very nicely together. Pete wants to make cheese for other farms, and is willing to work with farms in the area to get the most of what both have to offer.

Eileen said Lively Run Dairy made incorporating cheese doable. Pete has a trailer and he comes to the farm and gets their milk. They send a tank at a time, which is the equivalent of 4,000 pounds of milk, and will make 400 pounds of cheese. He then brings the milk back to his farm where he makes the cheese and ages it for at least 60 days. The cheese is stored and aged at Lively Run Dairy, and is held there until there is a quantity desired by the Scheffler’s, who then go and pick it up. They currently offer three types of cheese: Raw Milk Cheddar, Garlic Cheddar and Italian Herb. The cheeses are named after Ed and Eileen’s two daughter as well as Eileen herself. It was noted that they also have a granddaughter and a daughter-in-law, so there is room for expansion.

Lively Run Dairy also allows Ed and Eileen to make their own labels, and Lively Run Dairy packages and labels the cheese for them. The labels were a very complicated part of the process, Eileen noted, because there are so many regulations that must be followed in order to maintain the NOFA Certification such as where certain things must be on the label and how ingredients must be listed. The Scheffler’s used the same labeling company they use with their beef products, because they knew they were a good, reliable company. Eileen designed the cheese labels, and it was Ed who suggested the individual names, such as “Goodnight Eileen” for their Raw Milk Cheddar.

So far, they have only sent one batch of milk, however have plans to send more in the future. They have cheese for sale currently, and have more cheese being stored at Lively Run Dairy. Their cheese, as well as other products can be purchased at their farm store anytime between 8:00 am and 8:00 pm, any day of the week. Eileen also attends the Homer Food Market, where she sells beef and cheese. They are hopeful their cheese will also be available in The Local Food Market in Cortland in the future.
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<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Location/Details</th>
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<tbody>
<tr>
<td>Oct 11</td>
<td>Farm Bureau Annual Meeting</td>
<td>Cortlandville Grange</td>
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<tr>
<td>Oct 18-20</td>
<td>Cornell Nutrition Conference</td>
<td>Doubletree Hotel Syracuse, East Syracuse</td>
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<td>More information online at <a href="https://ansci.cals.cornell.edu/news-events/cornell-nutrition-conference">https://ansci.cals.cornell.edu/news-events/cornell-nutrition-conference</a></td>
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<td>Oct 26</td>
<td>Baby It’s Cold Outside, Winter Care Webinar</td>
<td>12:30-1:15pm</td>
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<td>See Page 14 for more information</td>
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<tr>
<td>Nov 5</td>
<td>7th Annual Ag Trivia Contest</td>
<td>Empire Tractor, 638 Route 13, Cortland</td>
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<td>For more information or to sign up, contact Kaye Liddington-Hall at 607.756.4502</td>
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<td>Nov 9</td>
<td>Field Crop Dealer Meeting</td>
<td>Holiday Inn, Electronic’s Parkway, Liverpool</td>
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<td>For full agenda and registration online at <a href="http://nysaba.com">nysaba.com</a></td>
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<tr>
<td>Nov 15</td>
<td>County of Cortland Agricultural Corporation Annual Meeting</td>
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<td>Nov 9+16</td>
<td>Calf Care Workshop</td>
<td>Various Locations</td>
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<td>Nov 10+17</td>
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<td>Nov 17</td>
<td>2016 Feed Dealers Seminar</td>
<td>Cortland (Date Tentative)</td>
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<td>Nov 29-</td>
<td>Northeast Regional CCA Meeting</td>
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<td>Calf &amp; Heifer Congress - SAVE THE DATE</td>
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<td>“Don’t Be Lame” Winter Dairy Management Program - SAVE THE DATE</td>
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