Marestail Control In Wheat And Some Other Weed Stuff

By Dr. Mark Loux

There are several methods for management of marestail in wheat, and following any of these will take care of most winter annual weeds as well. Keep in mind that where wheat will be planted following soybeans, the large marestail that may be present in soybeans are not a concern since they are finishing their life cycle anyway. The plants of concern are the seedlings that emerge in late summer into fall, which can overwinter. A few options to consider follow.

Tillage. Does not guarantee the complete absence of marestail but usually takes care of the problem for the season. Tillage should thoroughly and uniformly mix the upper few inches of soil to uproot existing plants and bury any new seed. Scout in spring to make sure control is adequate.

Preemergence burndown + residual. The combination of glyphosate + Sharpen + MSO will control existing marestail and also provide residual control into fall. We suggest Sharpen rates of 1.5 to 2 oz/A. Spray volume of 15 to 20 gpa is required.

Late fall POST. We have generally applied these in early November, and wheat should have 1 to 2 leaves depending upon the product. Options include Huskie, and combinations of dicamba (4 oz) with tribenuron (Express) or similar product. Do not apply products or mixes containing 2,4-D POST to wheat in fall.

Spring POST. In our research, spring herbicide plus the competition from an adequate wheat stand has been effective, even though 2,4-D can be weak on overwintered marestail plants. Options include Huskie, 2,4-D, 2,4-D + dicamba, or combinations of 2,4-D with an ALS-inhibiting product, such as thifensulfuron/tribenuron (Harmony Xtra etc). The rate of dicamba that can be used in spring is too low to control marestail on its own. Most marestail populations are ALS-resistant, so in the ALS mixtures indicated above, the partner herbicide is carrying the load for marestail control.
Fall is also a good time to work on poison hemlock infestations. Hemlock is a biennial (2-year life cycle). The large plants that become evident in spring were actually present in a low-growing form from the previous fall, when they are in their first year of growth. Control of this weed is often ignored until late spring when it is large and fairly difficult to control, but it is much more easily controlled in late fall. In areas, fencelines, etc where poison hemlock is known to occur annually, consider a late fall application of 2,4-D + dicamba, glyphosate + 2,4-D, etc.

Finally, some reminders on burcucumber control as herbicide programs for next year get planned this fall and winter. Palmer amaranth notwithstanding, burcucumber remains among the most difficult weeds to control. A number of preemergence and postemergence herbicides have substantial activity on it, but its ability to emerge in great numbers in mid-season allows it to escape even effective programs. It’s worth reviewing the burcucumber information in the “Problem Weeds” section of the “Weed Control Guide for Ohio, Indiana, and Illinois”. We have historically had more questions about control in corn, possibly because it can emerge in tall corn that is difficult to get through with a sprayer. Combination of preemergence and postemergence applications is certainly necessary in both corn and soybeans. POST options in soybeans include Classic, glyphosate, and glufosinate – multiple POST applications are most effective. We conducted a two-year study on control in corn, and found that inclusion of mesotrione (Callisto etc) in the POST application offered the most hope for limiting late-season emergence, although we still observed emergence in July where this was used. Mesotrione has both foliar and residual activity on burcucumber, whereas all other POST herbicides lack residual activity. Most effective residual control following planting occurs with products that contain isoxaflutole (Balance, Corvus) or mesotrione (Lesar, Acuron, Resicore, etc), which should be supplemented by the addition of atrazine.

## Countdown to Census:
### What You Need To Know

**Only eight weeks until producers start to receive the 2017 Census of Agriculture**

WASHINGTON – Sept. 25, 2017 – In just a couple months, farmers and ranchers across the nation will start receiving the 2017 Census of Agriculture. Producers can mail in their completed census form, or respond online via the improved web questionnaire. The U.S. Department of Agriculture’s National Agricultural Statistics Service has extensively revised the online questionnaire to make it more convenient for producers.

The updated online questionnaire is very user-friendly – it can now be used on any electronic device, and can be saved and revisited as the producer’s schedule allows,” said NASS Census and Survey Division Director Barbara Rater. “Responding online saves time and protects data quality. That’s our mission at NASS – to provide timely, accurate, and useful statistics in service to U.S. agriculture. Better data mean informed decisions, and that’s why it is so important that every producer respond and be represented.”

New time-saving features of the online questionnaire include automatically calculating totals, skipping sections that do not pertain to the operation, and providing drop-down menus of frequent responses. Producers still have one week to try the online questionnaire demo on the census of agriculture website (www.agcensus.usda.gov).
The census website will continue to be updated with new information through the census response deadline of February 5, 2018. One recently added feature is a new video from Secretary of Agriculture Sonny Perdue reminding all producers to respond when they receive their 2017 Census of Agriculture in the mail later this year.

Revisions and additions to the 2017 Census of Agriculture aim to capture a more detailed account of the industry. Producers will see a new question about military veteran status, expanded questions about food marketing practices, and questions about on-farm decision-making to better capture the roles and contributions of beginning farmers, women farmers, and others involved in running the business.

Response to the census of agriculture is required by law under Title 7 USC 2204(g) Public Law 105-113. The same law requires NASS to keep all information confidential, to use the data only for statistical purposes, and only in aggregate form to prevent disclosing the identity of any producer. The time required to complete the questionnaire is estimated at 50 minutes. In October, NASS will make a census preparation checklist available on the census website to help producers gather necessary information in advance.

Conducted once every five years, the census of agriculture is a complete count of all U.S. farms, ranches, and those who operate them; it is the only source of uniform, comprehensive, and impartial agriculture data for every state and county in the country. Farmers and ranchers, trade associations, government, extension educators, researchers, and many others rely on census of agriculture data when making decisions that shape American agriculture – from creating and funding farm programs to boosting services for communities and the industry. The census of agriculture is a producer’s voice, future, and opportunity.

For more information about the 2017 Census of Agriculture, visit www.agcensus.usda.gov or call (800) 727-9540.

Making Fall Alfalfa Field Decisions
Ken Wise, NYS IPM

Sometimes we forget that there are IPM practices for the fall in alfalfa. Conducting stand counts is one of these activities. Fall stand counts are an indication of the health of your alfalfa crop. There are a number of pests and crop management issues that can reduce a stand count in alfalfa. The following are guidelines for stand counts in NYS:

<table>
<thead>
<tr>
<th>Harvest Year</th>
<th>Crowns per square foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Spring Seeding</td>
<td>25-40</td>
</tr>
<tr>
<td>1st hay year</td>
<td>12-20</td>
</tr>
<tr>
<td>2nd hay year</td>
<td>8-12</td>
</tr>
<tr>
<td>3rd and older</td>
<td>4-8</td>
</tr>
</tbody>
</table>

Note: Number of crowns not stems

The following are photos of alfalfa stand counts from the Cornell Research Farm in Valatie, NY:

4 year old field-7 crowns/25 stems per square feet

4 plus years in production-5 crowns/15 stems per square feet
Fall scouting before the first hard frost can also reveal pest problems. Finding yellow to brown plants may be an indication of a disease problem such as: verticillium wilt, leaf spots, fusarium wilt, anthracnose and more. An inspection of the root system can also help diagnose disease problems. Yellow, reddish-brown to black discolored or damaged roots may indicate disease problems such as phytophthora root rot or verticillium wilt. In northern NY counties where alfalfa snout beetles (ASB) have been a problem, premature senescence, stunted or yellow alfalfa fields may indicate an ASB infestation. Fields should be evaluated for presence of the root feeding larval stage.

<table>
<thead>
<tr>
<th>Stems/square feet</th>
<th>Action</th>
<th>Predicted Yield Potential (assuming on winterkill)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;55</td>
<td>Stem density not limiting yield</td>
<td>Same as current year</td>
</tr>
<tr>
<td>40 to 54</td>
<td>Some yield reduction expected</td>
<td>If in good health same as current year. If not could be significantly less.</td>
</tr>
<tr>
<td>&lt;39</td>
<td>Consider replacing stand</td>
<td>If in good health same as current year. If not could be significantly less.</td>
</tr>
</tbody>
</table>

Note that you may have the recommended crowns per square foot but they may not actually be healthy. Make sure to dig a few plants up to check the roots for signs of disease. You may also want to look at the number of stems per square foot. Here is a guideline for an adequate stand of alfalfa using stem counts.

Source: University of Wisconsin:
http://learningstore.uwex.edu/assets/pdfs/a3620.pdf
2017 NNY Harvest Data Will Add to BMR vs Non-BMR Corn Research

Chazy, N.Y. The 2017 corn harvest in Northern New York is providing data to researchers with a grant from the farmer-driven Northern New York Agricultural Development Program to compare forage quality and yield between two distinct types of corn.

'We are interested to see if yields for the 2017 crop will continue to show no consistent difference between the BMR and non-BMR hybrids grown for silage,' said project leader Eric O. Young, research agronomist at the William H. Miner Agricultural Research Institute, Chazy, N.Y.

'In our regional trials to date the BMR hybrids have had a distinct advantage in fiber digestibility and therefore milk production potential,' Young added.

Brown MidRib, or BMR, corn has a naturally-occurring genetic variation that produces higher fiber digestibility that, in turn, increases the milk production potential of dairy cows. However, farmers are concerned that BMR corn may not yield as well as non-BMR corn hybrids.

'Until this project funded by the Northern New York Agricultural Development Program there has been relatively little research evaluating performance among brown midrib hybrids and non-BMR hybrids with respect to yield and forage quality,' Young noted.

The research in Northern NY includes commercially-available BMR hybrids currently on the market.

Data from the 2017 harvest will be compared with trial results with five corn hybrids grown at two farm sites in 2015 and 2016. Crop samples were evaluated for yield, digestibility, percent dry matter, acidity, starch and other components, silage fermentation and quality after harvest.

Young notes, 'The differences in yield, starch, and fiber digestibility all have important implications for dairy ration formulation and farm economics. Our early results in the Northern New York trials have shown clear differences in fiber digestibility related to corn hybrid genetics.'

This research provides a data foundation for analyzing the potential milk production impact of using BMR and nonBMR hybrids in the dairy cow total mixed ration.

The 2015 and 2016 NNY BMR evaluation reports are posted on the Northern New York Agricultural Development Program website at www.nnyagdev.org.

The Northern New York Agricultural Development Program funds agricultural research and technical assistance in Clinton, Essex, Franklin, Jefferson, Lewis and St. Lawrence counties. Funding for the Northern New York Agricultural Development Program is supported by the New York State Senate and administered by the New York State Department of Agriculture and Markets.

Cover Crops Create Savings
Utilizing Cover Crops Can Boost Soil Health, Reduce Pests, And Cycle Nutrients.

Dee Goerge

When Jack Thornton planted a 15-acre cereal rye cover crop in 2011, his goal was to stop erosion and runoff on sandy hills in his Reed City, Michigan, fields. Five years later, he
planted 300 acres of cover crops on sandy and clay soils and committed to “keep a living root in the soil 365 days a year.”

“Cover crops are something I’m always going to be planting because of the benefits of (improved) soil structure and soil health – and also for livestock feed,” Thornton says.

His farm operation has reduced costs and harvested higher yields due to management practices he has incorporated since he started farming in 2008. For example, one field was ready for corn harvest when he started farming. It yielded less than 80 bushels per acre. In 2015, the same field averaged about 150 bushels per acre of corn. Implementing no-till, paying attention to soil pH, and using the right fertilizers are part of that, but Thornton emphasizes that cover crops are essential to the overall management plan.

**A Believer**
Thornton saw the positive difference the first cover crop made, and he wanted more. He connected with Natural Resources Conservation Service (NRCS) and Extension services, and the following year he planted cover crop mixes between rows of corn and soybeans in mid-July with a drill he modified. The fourth year, he stepped up his program and modified a high-boy sprayer by adding an air seeder to plant cover crops and to side-dress fertilizer or spray at the same time.

“It broadcasts through drop tubes to get through the canopy of the row crop,” Thornton says, noting that he starts to plant cover crops around July 1.

He broadcasts red clover seed in his oat and wheat fields earlier when spraying herbicides in the spring.

Moisture is always a concern on nonirrigated ground, but Thornton says the cover crop seems to hold moisture in the root zone and benefit row crops. To ensure that a cover crop survives through extremely dry weather, he always includes drought-hardy varieties in his eight- to 12-way cover crop blends.

The blends also vary slightly between sandy and clay soils.

“For clay, I add more pounds per acre of radish and turnip; they are the deep penetrators,” he says. “I try to keep the cost around $30 per acre.”

**Savings**
Other than the cost of seed, cover crops don’t add management expenses, because the seed is planted the same time Thornton fertilizes or sprays. He says there are three reasons the cover crops save more money than they cost.

- Thornton’s long-term goal to build organic matter is an alternative to more expensive options such as adding irrigation or tiling. Incorporating management practices that focus on the soil will hopefully eliminate the need for the costly options. “By adding 1% organic matter, it adds 27,000 gallons – or 1 acre-inch of water-holding capacity to help through dry spells,” he says.
- Thornton has eliminated pesticides with crop rotations because he’s growing multispecies plants (including row and cover crops). Better soil microbiology creates a more natural cycling of nutrients and pest control.
- Instead of killing the 2017 cover crop next spring, Thornton plans to add another level of management to his operation: livestock. After the crops come off this fall, 40 cow/calf pairs will graze the fields using the paddock system. “I won’t let them graze down to the dirt, but with radish and turnip roots 30 inches deep or so, there are still roots in the ground even if they eat the tops. The manure brings in biology.” After grazing the cover crop, Thornton plans to set up bales in the fields for bale grazing, which will put even more nutrients from manure directly on the fields. “If I can produce an easy 2,000 pounds of dry matter per acre for cattle to eat for $30 per acre (the cost of cover crop seed), why wouldn’t I do that?” Thornton asks.
**Other Benefits**

Thornton credits all of his management practices (including cover crops) for positive changes in just a few years.

“The soil is getting darker, and the soil is warming up faster now than the neighbor’s field,” he notes. Extension staff checked the temperatures in fields that had a blanket of clover from the cover crop mix, and they were 1° to 2° warmer than other fields.

With no-till, Thornton doesn’t need to spend a week preparing fields, and he usually gets into his fields sooner. “I can feel the difference in the clay, heavy soils,” he says. “I can tell at harvesttime – in part, from the mat – that I’m not getting the ruts and the ponding of water. The equipment floats better.”

An unexpected benefit of exploring cover crops and other management practices is a new sideline business. Thornton Agriculture offers cover crop consultation services, seed sales, and management. In 2017, Thornton is contracted to plant cover crops on 3,000 acres, in addition to his own 300 acres.

**Learning Curve**

Thornton has come a long way since planting that first cereal rye cover crop, but he highly recommends it for producers interested in growing cover crops.

“For a single-species plant, cereal rye is very flexible, easy to manage, and good for the soil,” Thornton says. “It overwinters and dies with tillage or herbicides. It can be planted any time of the year as long as there is sun and moisture in the soil, but usually fall works the best.”

By working with Extension and NRCS, he has tried different mixes and planting times. Including species that survive dry weather (such as Sudan grass, millet, and cowpeas) is crucial, he says.

“The other challenge is overall management,” Thornton adds.

In the past, he had success killing the cover crop by spraying just before, during, or right after planting the row crop. In 2016, crimson clover and turnips made him modify that idea.

“I was nervous when they didn’t die right away. They died in time, but I thought they would be brown in 10 days. It took an extra week,” he says.

The lesson is, Thornton says, some cover crops need to be sprayed sooner rather than later. “It’s all part of the learning curve,” he says.

**Most Important**

Though he lists many benefits of cover crops, for Thornton, organic matter is the top focus. Improving soil health means it will release nitrogen and other nutrients to plants, which reduces input costs. It takes time to make those gains, but Thornton’s soils are now close to 3% organic matter, up from low to mid 2%.

“I’m working toward 6% organic matter,” he says. “In years past, it was said that’s not possible. But I’m learning from other farmers that I can attain that and have 120 to 150 pounds of nitrogen available to a crop.

“That’s the main purpose,” he notes. “The other purpose is to stop soil erosion so that I hold the nutrients I have in the soil right now.”

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**NYS IPM Weekly Field Crops Pest**

**Mechanical Cultivation Equipment Demo Day Registration**

Tuesday, October 3 at 1 PM – 4:45 PM

371 Big Island Road Goshen, NY 10924
**View from the Field**
The growing season is coming to a close and we have reached the end of our 16th season of the NYS IPM Weekly Field Crops Pest Report. We would like to thank all the producers, extension educators and field consultants for providing us with in-field observations each week for the report. Your data is critical to us for providing information statewide each week on the status of pests in the field. We will be posting an end of the season survey to determine what impact the report has had statewide. This survey helps us fine tune the report each year. Please make any suggestions on how we might be able to improve the report. Again, thank you for all your help and for sharing field observations this season!

I will be posting some off-season articles on the pest report blog about planning your IPM program for the next season.

There are reports of western bean cutworm damage in field corn in Northern NY. Many of the hybrids with the CryF1 BT trait are showing damage. This BT gene is not resistant to western bean cutworm. The vip3Aa20 gene does have resistance to western bean cutworm. Any conventional hybrid does not have resistance to western bean cutworm.

**Pest Records Help With the Future!**
Ken Wise, NYS IPM

Did you have insect pests, diseases, weeds or other pest problems with corn, small grains, soybeans, alfalfa or other forages this summer? Do you want to avoid such problems in the future? Field pest RECORDS is one of the practices we need to do to prepare or avoid many pests that cause reduced yields or quality of our crop. By keeping records on our crops we can better plan for the next year. So if you had a problem with a pest this year before you forget write it down. In recent years we have had a lot of corn in New York infected with grey leaf spot and northern corn leaf blight. There are hybrids that have resistance and yield much better than ones that are more susceptible. If you know the hybrid you planted that was susceptible you can avoid it in the future and select one that has a higher resistance. You could also decide to rotate because you had observed the diseases in the same field for several seasons. By keeping records on potato leafhopper (PLH) on alfalfa you may have observed that they reached threshold 2 times over the course of 4 years. This will reduce yield and the quality of the forage. By selecting a PLH resistant cultivar of you can avoid this in the future. By keeping track of rotation you can avoid some risk to diseases like fusarium head blight in small grains like malting barley. By not planting into a former corn field you may reduce the risk of getting the disease because it can over winter on the crop residue. Were there new weeds or weed escapes you did not expect this year? If you had weed escapes you might reconsider your selection of weed control products. Are your pesticide use records up to date? Rates, dates, efficacy, rotational restrictions, etc. It is always important to keep pesticide records up to date. Did you have western bean cutworm damage this year at lower levels? It would be good to keep track of this pest since it is new to NY and can become a problem in the future. Did your soybeans have white mold this year? Keep track of this because the disease can survive up to 7 years in the soil. You want to make sure not to plant soybean back in that field for several years. Don’t wait too long there are too many pests and other factors that may keep you from remembering. WRITE IT DOWN

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**Springwater Agricultural Products**
8663 Strutt Street, Springwater NY
585-315-1094 or 607-759-0405

Crop Production Materials, Foliar Nutrition & Adjuvant Sales
SeedWay, NK&WL, Seed Sales:
Corn, Soybeans, Small Grains, Forage & Pasture Grasses
Sun up until Sun down! Dave & Penny
Farm tested with friendly farm prices.
NYS Growing Degree Days

2017 New York Field Crop Pest Degree Day Accumulations for selected locations up to SEPT 27, 2017

<table>
<thead>
<tr>
<th>Location</th>
<th>Degree days (Base 50°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Croton</td>
<td>2258</td>
</tr>
<tr>
<td>Glovers</td>
<td>2445</td>
</tr>
<tr>
<td>Highland</td>
<td>2605</td>
</tr>
<tr>
<td>Ithaca (Orchard)</td>
<td>2392</td>
</tr>
<tr>
<td>Madrid</td>
<td>2349</td>
</tr>
<tr>
<td>Massena</td>
<td>2299</td>
</tr>
<tr>
<td>Portville (Coles)</td>
<td>2213</td>
</tr>
<tr>
<td>Ripley</td>
<td>2627</td>
</tr>
<tr>
<td>Valatie</td>
<td>2506</td>
</tr>
<tr>
<td>Versailles</td>
<td>2429</td>
</tr>
<tr>
<td>Watertown</td>
<td>2159</td>
</tr>
</tbody>
</table>

Clipboard Checklist
Keith Waldron, NYS IPM

General:
- Walk fields to check general field condition, weed, vertebrate and other issues
- Watch for crop maturity, stand assessments, weed escapes, nutrient deficiencies, lodging issues
- Update crop records and field history

Alfalfa:
- Monitor potato leafhopper, foliar, systemic and crown rot diseases, signs of alfalfa snout beetle (in counties where ASB has been confirmed).
- Monitor new seedings for potato leafhopper, pythium blight, phytophthora root rot.
- Evaluate established legume stands for health, productivity and potential rotation. Days until harvest

Small Grains:
- Plant winter small grains after the Hessian Fly Free Date.
- Monitor small grain seedings for stand counts, establishment issues

Corn:
- Monitor late-season corn pests including European corn borer, corn rootworm, western bean cutworm, slugs, foliar diseases such as northern corn leaf blight and gray leaf spot, ear molds, stalk strength/lodging potential, weed issues, nutrient deficiencies, vertebrate damage.

Soybeans:
- Monitor for growth stage, soybean aphid, defoliators, foliar diseases, white mold, weed issues, vertebrate damage
- Record diseases present, location and types of weed escapes

Pastures:
- Check water sources, mend fences as needed.
- Check crop growth, clip pastures between grazing as needed
- Monitor for invasive species, plants harmful to livestock
- Review/Plan rotations

Storage:
- Check stored grain bins for temperature, moisture and signs of mold and insects. Aerate, core, transfer grain or treat as necessary
- Clean and disinfect empty storage bins in preparation for grain harvest
- Mow around storage bins and facility to minimize pest hiding places

Dairy Cattle Barn Fly Management:
- Expect an increase in fly numbers in barns as flies seek warmer habitats to escape cooler outside temperatures.
- Monitor animals and barn area for house fly, stable fly and other pest management needs including presence of rodents and birds.
- Check facilities for favorable fly breeding conditions: (organic matter + moisture): leaks in watering systems, roof gutters for leaks and potential overspill, drainage,
- Sanitation, sanitation, sanitation – clean animal resting areas, feed
troughs, minimize source of moist organic matter i.e. fly breeding areas in barn and in adjacent animal loafing yard

- Continue fly monitoring: install “3X5” index card fly speck monitoring cards throughout barn
- Use, replenish, replace fly management materials: sticky fly tapes/ribbons, insecticide baits, natural enemies (parasitoids), fly population monitoring (3 x 5) spot cards

Dairy Cattle on Pasture:
- Monitor animals for presence of face flies, horn flies and stable flies. Action guidelines: face flies (average 10 per animal face), horn flies (average 50 / dairy per animal side, 200 / beef cattle per animal side), stable flies average 10 per animal (all four legs)
- Check feed bunk / water source locations for signs of stable fly breeding (moist undisturbed organic matter – spilled feed, round bales, etc.), minimize source of moist organic matter i.e. fly breeding areas in barn and in adjacent animal exercise yard.
- Check pasture for forage quality / quantity, rotate as appropriate
- Check pasture for vegetation poisonous to livestock
- Consider use of pasture fly traps to help reduce deer, horse and stable fly populations
- Plan to remove insecticide ear tags in fall to reduce risk of developing insecticide resistance.

Thistle Control During October
Bruce Anderson - Extension Forage Specialist

It's thistle time again. Even if they are hard to see, this is the time to control them.

Timing is everything. That's particularly true with thistle control. And October to early November is one of the best times to use herbicides.

Did you have thistles this year? If so, walk out in those infected areas this week. Look close. I'll bet you find many thistle seedlings. Most thistle seedlings this fall will be small, in a flat, rosette growth form, and very sensitive to certain herbicides.

Several newer herbicides like ForeFront, Milestone, and Chaparral work well for thistle control. Two other very effective herbicides are Tordon 22K and Grazon. Be careful with all these herbicides, but especially Tordon and Grazon, since they also can kill woody plants, including trees you might want to keep. Another option is 2,4-D, which works well while it’s warm; however, you will get better thistle control by using a little less 2,4-D and adding a small amount of Banvel or dicamba to the mix.

Other herbicides like Redeem, Cimarron, and Curtail also can control thistles in pastures.

No matter which weed killer you use, be sure to read and follow label instructions and spray
on time to assure cleaner pastures next spring.

Next year, avoid overgrazing your pastures so your grass stands get thicker and compete with any new weeds or thistle seedlings.

**Fall Cattle Louse Treatments**

Dave Boxler, Nebraska Extension Educator

As livestock producers start planning for fall weaning, pregnancy observation, and vaccinations they often will apply an endectocide treatment for internal and external parasites such as cattle lice. While this practice is efficacious for most internal parasites and horn flies, it does not always completely control a cattle louse problem. Cattle lice are a cold weather insect, thriving during wintery conditions. During summer months cattle lice undergo a process called estivation (a period of dormancy) when their reproduction is reduced significantly. If fall temperatures (September, October, and mid-November) are above 78° F, cattle skin temperature will exceed 100° F and suppress louse development. Thus, if endectocide treatments are applied too early during a warm extended fall, such as we saw in 2016, lice will be developing slowly and can largely escape the endectocide treatment. Later when cold weather does set in, lice outbreaks can occur if the endectocide has broken down. Livestock producers who utilize a fall treatment strategy should monitor their cattle for signs of lice especially during the months of December, January, and February.

In Nebraska we can encounter four different cattle lice species. The biting or chewing louse (little red) Bovicola (Damalinia) bovis, is reddish brown in color with dark bands running transversally across the body (Figure 1 [http://go.unl.edu/mmvy]). Typically the chewing louse feeds on hair, skin, skin exudates and debris near the skin surface. This species is initially found on the shoulder, top line, and back, but as populations increase, can be found on the sides and sometimes over the whole animal.

The other three species are sucking lice, which feed on blood, and can cause irritation, anemia, impact weight gain, and even death in extreme cases.

The short-nose cattle louse, Haematopinus eurysternus, is the largest louse (Figure 2 [http://go.unl.edu/d4za]) at 3-5 mm in length and is typically found on older animals, but can be found on any age or breed of cattle. This species can usually be found in the neck region, dewlap, back, and base of tail.

The long-nose cattle louse, Linognathus vituli, is about 2.5 mm in length, bluish in color (Figure 3 [http://go.unl.edu/rue3]) and differs from other louse species by its long slender head. This louse can be found on the dewlap, shoulders, sides of neck and rump, but when numbers are high, they can be found over the entire body.

The little blue cattle louse, Solenopotes capillatus (Figure 4 [http://go.unl.edu/7wcu]) is about 1-2 mm in length, bluish in color, and smallest of the sucking lice species. It often can be found in dense patches on the dewlap, muzzle, around eyes, and neck. Heavy populations can greatly impact cattle weight gains.

Nebraska cattle are usually infested with more than one species of louse and calves,
Yearlings and older poor conditioned cattle usually have the heaviest lice infestations. Heavy louse populations can lower milk production, stunt growth, cause hair loss, an unthrifty appearance and anemia.

University of Nebraska and other studies indicate heavy lice populations (more than 10 lice/inch2) may reduce calf weight gains by as much as 0.21 lb/day. These studies also indicate calves fed at a higher nutrition level had lower lice populations and were affected less severely by lice than calves fed a maintenance ration.

Cattle louse treatment products fall into several categories: animal sprays, non-systemic (contact) pour-on, and endectocides (systemic pour-on, absorbed internally and systemic injectable). Some non-systemic pour-ons require just one application and some require two applications spaced 14 days apart. Systemic injectables work better on the three species of sucking lice than on the little red chewing louse. A systemic pour-on can effectively kill both chewing and sucking lice. Use of systemic control products between Nov. 1 and Feb. 1 is not advised as they may cause a host-parasite reaction from killing developing cattle grubs while they are in the esophagus or spinal canal of the animal. A systemic product used during fall weaning will not be a problem. Producers who did not use a systemic during fall weaning, should consider using only non-systemic control products during this November to February time frame. If replacement animals are brought into a herd during the winter months they should be examined for lice. If present, the animals should be isolated and treated before introduction into the existing herd.

Insecticide treatments, regardless of application method, should be rotated through IRAC Insecticide Mode of Action groups (MoA) to reduce the likelihood of developing resistance. Continual use of products from a single numbered group against a pest species can lead to reduced control (resistance to all products in the group). To reduce control failures due to insecticide resistance, do not apply pesticides within the same group number repeatedly. The recommended management practice to manage resistance is to alternate insecticide classes, and that applies to animal sprays, dusts, non-systemic pour-ons, and endectocides (injectable and pour-on formulations).

**Cornell’s Ag-Analytics Ahead of the Curve**

**CORNELL DIGITAL AG PROGRAM INTEGRATES WITH JOHN DEERE OPERATIONS CENTER**

Source: [https://www.morningagclips.com/cornells-ag-analyticsahead-of-the-curve/](https://www.morningagclips.com/cornells-ag-analyticsahead-of-the-curve/)

Once again, Cornell is ahead of the curve in digital agriculture.

Ag-Analytics, a cloud-based application that provides digital agriculture analytics, has integrated its technology with the John Deere Operations Center, the manufacturer’s online platform.

Cornell is the first university to integrate with the John Deere Operations Center; Deere is the largest farm machinery manufacturer in the world.

When farmers log into Ag-Analytics.Org, they can easily and securely integrate their data with the John Deere Operations Center with a few clicks. This allows farmers to securely use their high-resolution agriculture data in real time to extract more useful operations information with AgAnalytics’ apps and tools. The secure service will provide farmers, at no cost, with better information with which to run their operations. And it works throughout the United States.

“This integration with the John Deere Operations Center is a first for any university, and will allow us to give value back to our farmers in pursuit of our university land-grant extension mission. It enables us to deliver relevant intelligence to our farmers quickly,
and fully leverage university research in a way we could not before,” said Ag-Analytics founder and creator Josh Woodard, assistant professor in the Charles H. Dyson School of Applied Economics and Management in the College of Agriculture and Life Sciences.

“With the synergies between what it allows us to do in research and development and what it allows us to offer back to our farmers, it’s a win-win for everyone,” says Woodard. What’s more, as a land-grant university, Cornell assurses the data is secure and farmers retain ownership of it. “Our primary goal is to better serve our farmers and bring them objective information based on cutting-edge research.

"Unlike other university programs, Woodard's AgAnalytics had an automated, secure and scalable platform that had the advanced technology in place to make the integration feasible.

Ag-Analytics offers free tools including a crop insurance estimator, forecasting tools, and real-time yield and risk-management forecasts. Vast troves of soil, weather and satellite vegetation data are automatically linked to farmers’ fields through a user-friendly interface.

Most modern farm equipment comes with sensors that pick up a reading every meter or so, measuring the field’s productivity as the farmer plants, harvests, tills or does other work. The problem is, farmers don’t always have an easy way to make sense of this raw data.

“That’s where we come in,” said Woodard, the Zaitz Family Sesquicentennial Faculty Fellow in Agricultural Finance and Business.

Ag-Analytics’ most useful tool is a field-specific crop insurance estimator, the only one of its kind. The Federal Crop Insurance Corp. insures about 80 percent of U.S. acreage, covering $100 billion per year in liabilities. Currently, farmers can find published crop insurance rates. But they don’t know exactly what their final premium will be until they report final acreage later in the season.

Ag-Analytics’ crop insurance tool allows farmers to run different scenarios based on their fields for different types of insurance, at any point in the season. For example, a farmer could see how her risk profile changes if she insures a few fields together or separately. The tool makes it easy for farmers to look at insurance costs for their fields and crops without manually loading data.

“Our integration with John Deere Operations Center allows us to give them back products that are valuable to them, but also to make better products in the future,” he said.

“Beyond our current tools, we also have many plans for the future, from developing new sustainability and conservation tools with partners like Cornell’s Atkinson Center for a Sustainable Future and the Environmental Defense Fund, to advanced variety analyses, and more,” Woodard said. “In terms of the land-grant role that we play, it’s really important we do this.”

Farmers can see a demo and sign up for the free tool at Ag-Analytics.Org.

Fall is Soil Sampling Time
Source: Miner Farm Notes, Sept. 2017—E.T.

Fall is the best time to take soil samples, for several reasons: After corn has been harvested it’s easy to walk between the rows of stubble; the press of spring planting and crop harvest is over; and soil analyses are more reliable than analyses from samples taken in early spring.

OTHER TIMELY TIPS:
1. Take plenty of subsamples to composite into the sample you’ll send to the testing lab. At least one
subsampling per acre, more than that in fields of less than 10 acres. Divide very large fields into at least two sections and sample separately. This is especially important if the big field was once several smaller fields.

2. Avoid areas that aren’t representative of the field. This includes wet holes and where you buried the manure spreader this past spring and had to unload much of it right there.

3. If you have two distinctly different soil types in a field and it’s practical to do so, sample the soil types separately. Soil analysis is cheap; fertilizer and lime are not.

4. Pick a reliable soil testing lab and then stick with it year after year. All soil test labs have the ability to accurately analyze soil samples, but the various analytical labs use one of several different soil extractants, thereby adding confusion to an already complex subject.

5. The potential problem isn’t in the analysis, it’s the fertilizer recommendations made by the lab. I’ve seen some absolutely wild and crazy fertilizer recommendations made by soil test labs, especially ones located thousands of miles away. If a recommendation seems unreasonable seek a third-party opinion from your Extension educator or crops consultant.

MeatSuite, started in 2012, is designed to increase freezer trade sales of local meat by connecting farms with consumers. Farms can create profiles featuring contact information, prices, photographs, descriptions of products, livestock raising practices, and more. Consumers visit the site to search for farms that match their buying preferences. There are currently 48 farms in Western New York participating on the site.

The “Meat” the Farmer dinner at the Hole in the Wall is the third event in western New York that will connect local farmers with consumers. This event is sponsored by Farm Credit Northeast AgEnhancement and Cornell Cooperative Extension Associations of Erie, Niagara, Allegany, Chautauqua, Genesee, and Wyoming Counties. MeatSuite is a project of Cornell Cooperative Extension, funded in part by the New York Farm Viability Institute.

For more information please contact Sarah Carlson at sac347@cornell.edu or 585-786-2251 ext. 112

“Meat” the Farmer Dinner at the Hole in the Wall Restaurant

Join Cornell Cooperative Extension (CCE) for a “Meat” the Farmer event at the Hole in the Wall Restaurant in Perry, NY on October 23rd at 6:30 pm. The evening includes an opening reception charcuterie board, and five course food and wine pairing featuring local meat and wines from Hosmer Winery. The cost to attend is $85/person (includes tax and gratuity). Please RSVP to the Hole in the Wall restaurant by calling (585) 237-3003 to reserve your seat. You will also have the opportunity to talk to farmers who raise livestock and sell local meat products in western New York. During the meal, CCE staff will provide an overview of MeatSuite.com, a free online directory of regional livestock farms selling meat in bulk quantities, and answer any questions you may have about buying meat products locally.
New Machine Evaluates Soybeans at Harvest
University of Illinois
College of Agriculture, Consumer and Environmental Sciences

The machine, which includes a high-speed camera, is mounted inside the tank of the harvester. It takes images of the beans as they pass by and a computer program analyzes the beans in real time. (United Soybean Board, Flickr/Creative Commons)

A new machine evaluates bean quality on the fly, so harvesting can go on uninterrupted

URBANA, Ill. — When a field of soybeans is ready to harvest, speed is of the essence. But harvesting grinds to a halt every time the combine operator has to climb down out of the cab to manually check for quality — whole, un-split beans without stray husk material. Researchers from Kyoto University and University of Illinois recently developed a machine to automate the process, evaluating bean quality on the fly, so harvesting can go on uninterrupted.

“The main objective was to develop an efficient, compact, on-board quality-monitoring system to evaluate soybeans as they are harvested, providing the combine operator with real-time grain quality information,” says Md Abdul Momin, lead scientist on the project.

Momin explains that when the threshing speed is too high, the soybeans split or break as they are harvested. This is undesirable because whole beans are considered to be higher quality and bring a higher price.

“Without this machine, operators need to periodically stop threshing and manually check the tank to evaluate the quality and make adjustments,” Momin says. “With this machine, operators can look at a screen and make adjustments as they go, without stopping.”

The machine, which includes a high-speed camera, is mounted inside the tank of the harvester. It takes images of the beans as they pass by and a computer program analyzes the beans in real time. One key is that it is a double-imaging system. It uses a combination of both front and back lighting so the camera can see the complete shape of the beans, making it possible to identify those that are truly split.

Momin tested the system first in the laboratory and then in field conditions. The prototype is currently in the hands of a Japanese company that is working to develop a higher-speed camera and ultimately to produce the machine.

“The same system can be used in the processing industry with a $100 web camera, making it very affordable,” Momin says. “Mounting it inside of the combine is more ambitious because it needs a super high-speed camera to evaluate the soybeans as they pass rapidly by.” Momin says soybean growers in Japan are eager to use this new technology to evaluate beans during the harvest. They believe it will improve the process by doing much of the sorting and cleaning of the soybeans before they reach the processing plant.
Researchers Examine Methane Emissions
Global methane emissions from agriculture larger than reported, according to new estimates

BioMed Central
Via EurekAlert!

Dr Ghassem Asrar, Director of JGCRI, a co-author of study, said: "Among global regions, there was notable variability in trends in estimated emissions over recent decades. For example, we found that total livestock methane emissions have increased the most in rapidly developing regions of Asia, Latin America and Africa. In contrast, emissions increased less in the US and Canada, and decreased slightly in Western Europe. We found the largest increases in annual emissions to be over the northern tropics, followed by the southern tropics." (U.S. Department of Agriculture, Flickr/Creative Commons)

WASHINGTON — Global methane emissions from agriculture are larger than estimated due to the previous use of out-of-date data on carbon emissions generated by livestock, according to a study published in the open access journal Carbon Balance and Management.

In a project sponsored by the U.S. National Aeronautics and Space Administration’s (NASA) Carbon Monitoring System research initiative, researchers from the Joint Global Change Research Institute (JGCRI) found that global livestock methane (CH4) emissions for 2011 are 11% higher than the estimates based on guidelines provided by the Intergovernmental Panel on Climate Change (IPCC) in 2006. This encompasses an 8.4% increase in CH4 from enteric fermentation (digestion) in dairy cows and other cattle and a 36.7% increase in manure management CH4 compared to IPCC-based estimates. Revised manure management CH4 emissions estimates for 2011 in the US from this study were 71.8% higher than IPPC-based estimates.

Dr. Julie Wolf, U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), senior author of the study said: “In many regions of the world, livestock numbers are changing, and breeding has resulted in larger animals with higher intakes of food. This, along with changes in livestock management, can lead to higher methane emissions. Methane is an important moderator of the Earth’s atmospheric temperature. It has about four times the atmospheric warming potential of carbon dioxide. Direct measurements of methane emissions are not available for all sources of methane. Thus, emissions are reported as estimates based on different methods and assumptions. In this study, we created new per-animal emissions factors – that is measures of the average amount of CH4 discharged by animals into the atmosphere – and new estimates of global livestock methane emissions.”

The authors re-evaluated the data used to calculate IPCC 2006 CH4 emission factors resulting from enteric fermentation in dairy cows and other cattle, and manure management from dairy cows, other cattle and swine. They show that estimating livestock CH4 emissions with the revised emissions factors, created in this study, results in larger emission estimates compared to calculations made using IPCC 2006 emission factors for most regions, although emission estimates varied considerably by region.

Dr Ghassem Asrar, Director of JGCRI, a co-author of study, said: “Among global regions, there was notable variability in trends in estimated emissions over recent decades. For example, we found that total livestock methane...
emissions have increased the most in rapidly developing regions of Asia, Latin America and Africa. In contrast, emissions increased less in the US and Canada, and decreased slightly in Western Europe. We found the largest increases in annual emissions to be over the northern tropics, followed by the southern tropics."

The estimates presented in this study are also 15% larger than global estimates provided by the U.S. Environmental Protection Agency (EPA), only slightly smaller than estimates provided by the EPA for the US, 4% larger than EDGAR (Emissions Database for Global Atmospheric Research) global estimates, 3% larger than EDGAR estimates for US and 54% larger than EDGAR estimates for the state of California. Both the EPA and EDGAR use IPCC 2006 default information which may have contributed to their under estimations.

Since forming in 2010, the National Animal Nutrition Program has created a database of animal feed ingredients. The database is a vital tool to inform cost-effective production decisions, animal welfare policies and procedures, and to guarantee the safety and nutritional value of consumers’ food.

Ryan Dilger, an associate professor in the Department of Animal Sciences at University of Illinois serves on the project committee. Activities conducted by the program aid in the development of feeding strategies and research to enhance animal health, which allows for better productivity and lowered costs. Consumers will also benefit from safer, more nutritious meat, dairy, and eggs.

So far, the program has collected and sorted 1.5 million feed ingredient records to create a reliable database that is used by organizations in over 30 countries, including the United Nations Food and Agriculture Organization.

The National Animal Nutrition Program is a National Research Support Project supported by the Agricultural Experiment Stations with funds administered by the U.S. Department of Agriculture’s National Institute of Food and Agriculture. The feed database is only one of many accomplishments of the NANP since its inception in 2010.


Land-Grant Universities Create Animal Feed Database
*Adapted from a press release from Agriculture Is America.*

URBANA, Ill. – Twenty-one land-grant institutions, including the University of Illinois, as well as partner organizations are collaborating to provide researchers, Extension professionals, regulators, feed industries, and producers with up-to-date, research-based information on the nutrient needs of agricultural animals.
Dairy Market Watch

<table>
<thead>
<tr>
<th>Milk Component Prices</th>
<th>Milk Class Prices</th>
<th>Statistical Uniform Price &amp; PPD</th>
<th>MPP</th>
<th>Milk Margin Minus Feed Costs ($/cwt)*</th>
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<tbody>
<tr>
<td>Month</td>
<td>Butterfat</td>
<td>Protein</td>
<td>I (Boston)</td>
<td>II</td>
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<tr>
<td>Aug 16</td>
<td>$2.48</td>
<td>$2.57</td>
<td>$18.32</td>
<td>$15.21</td>
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<td>Sep 16</td>
<td>$2.31</td>
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<td>Aug 17</td>
<td>$3.01</td>
<td>$1.55</td>
<td>$19.97</td>
<td>$17.56</td>
</tr>
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August Utilization (Northeast): Class I = 32%; Class II = 26%; Class III = 27%; Class IV = 15%.

Class I = fluid milk; Class II = soft products, cream, and yogurt; Class III = cheese (American, Italian), evaporated and condensed products; Class IV = butter and milk powder.

*At a milk margin minus feed costs of $8 or less, payments are possible depending on the level of coverage chosen by the dairy producer.

**Cheese:** Milk availability for cheesemakers has decreased across the country. Northeastern and Western cheese production is steady. Northeastern cheese stocks are adequate, while inventories in the West are overshadowing cheese demand. In the East, cheese sales are generally solid, excepting some disruptions caused by Hurricane Irma. The overall market tone is unsettled. Late last week and earlier this week, the CME price gap broke the 10 cent threshold, evoking the market instability felt by cheese sellers and buyers for the bulk of the summer season.

**Butter:** The United States retail butter sales are steady to lower this week, however, a number of grocers are beginning to build butter inventories ahead of the fall rush. Spot sales activity is moderate as butter prices have been lower than recent weeks, although some contacts are expecting stronger market prices in the near future. On the other hand, other market participants believe prices may move a little lower due to a seasonal shift from bulk to print butter.

**Fluid Milk:** Farm milk output is trending up in parts of the West, such as California and New Mexico. However, most of the country’s milk output ranges from steady to lower. Bottling orders are steady to increasing in the East, and haulers are starting to gain access to routes previously closed by Hurricane Irma. Cream supplies are generally available across the nation. As ice cream production has slowed, more butter is finding its way into butter churning and cheese production.

**Dry Products:** Low/medium heat nonfat dry milk (NDM) prices decreased on the top of the mostly price series in the Central and East, as prices were mixed in the West. Bakery demand for high heat NDM is fair, and expected to increase as fall has begun. Dry buttermilk prices were mixed in all regions. Dry whole milk spot market activity was quiet, however cocoa mix processing is increasing. Dry whey prices have decreased in all regions. Whey production is declining, as cheese making facilities are receiving less milk. WPC 34% spot activity was fairly light. Lactose prices were also unchanged. Lactose buyers/end users are hesitant, as the market is fairly weak. Some producers are trying to limit lactose production in order to manage inventory levels.

**Organic Dairy Market News:** Total organic whole milk products sales for July 2017, 79 million pounds, were up 8.4 percent compared with July last year and up 7.8 percent, January-July compared with the same period of 2016.
Forecasted milk prices for the remainder of the year have softened from what was expected earlier. The Class III price was $16.44 in June, fell to $15.45 in July, but increased to $16.57 in August and was expected to continue to strengthen reaching into the low $17’s by October. But, now the September Class III price will weaken some to around $16.25. And it will take a rally in cheese prices to strengthen the Class III price October through December.

Lower dairy product prices were the result of higher production, slower growth in sales and higher stock levels. The latest dairy product report is for July. All products showed higher production than a year ago with cheddar cheese up 0.8%, total cheese up 1.0%, dry whey up 21% and butter up 1.6%. Cheese and butter sales have been higher, but have not shown the same growth as last year. July 31st stocks of American style cheese were a record high for the month of July except for 1983-84 when government stocks of surplus cheese were high, but total cheese stocks did set a new record high. American cheese stocks were 8.8% higher than a year ago with total cheese stocks 7.8% higher. Dry whey stocks were 38.7% higher, but butter stocks were 7.5% lower.

Dairy exports have added strength to milk prices. But, after 12 straight months of year-over-year growth, dairy export volume declined in July. Exports of nonfat dry milk/skim milk powder declined 13%, the first decline since June 2016. Nonfat dry milk/skim milk powder exports are facing competition from the EU. Both whey products and lactose exports were unchanged from a year ago. However, exports of butterfat and cheese were 66% and 14% higher respectively. On a total solids basis exports were equivalent to 13.4% of U.S. milk production compared to 14.5% last year and the lowest since January.

The Class III price October through December could stay in the low $16’s and average about $1.30 higher for the year than last year. Currently Class III futures are not even this optimistic with the Class III staying below $16. Class IV futures could also stay in the $15’s and average about $2.25 higher than last year. But, it is not without a possibility that cheese prices could rally October or November pushing up the Class III price like last year. Last year 40-pound block cheese was $1.5175 per pound early October and rallied to $1.9425 by early November and were still $1.80 mid-December. The Class III price went from $14.82 in October to $17.40 in December. So unexpected big changes in prices can happen. If the monthly increase in milk production stays below 2%, there is strong seasonal increase in butter and cheese sales and exports hold up, we could see higher milk prices October to December than what is now forecasted. USDA is now forecasting milk production for the year to be 1.7% higher than last year.

Looking into 2018 the Class III price could be in the low $15’s first quarter before moving into the $16’s. Current Class III futures don’t reach the $16’s until July. With expected improvement in milk production in the EU and New Zealand U.S could face stiff competition for nonfat dry milk/skim milk powder exports. The result could be a Class IV price in the $15 the first half of the year with stronger butter prices pushing it into the low $16’s for the second half. Current Class IV futures also reflect this price pattern.
COMING EVENTS

October 13, 2017, 6:00 p.m. - 9:00 p.m. BQA in an Evening
Location: Empire Livestock Market, 357 Lake Street, Pavilion, NY 14525  Cost: This event is free.  Host: Northwest New York Dairy, Livestock & Field Crops, Cathy Wallace, 585-343-3040 x138.

October 17, 18 and 19th - Agroforestry in Practice - Save the Date
This three-day course is designed for service providers including extension educators, farm non-profit organizations, public and private foresters, and consultants who routinely work with landowners and farmers to implement best practices. Contact Schuyler County-CCE at 607-535-7161

October 20th from 9:30 am – 4:30 pm Growing Black Locust as a Timber Cash Crop
At the USDA NRCS Plant Materials Center in Big Flats, NY (3266 State Route 352) for a special day conference on “Growing Black Locust as a Timber Cash Crop”. For full agenda and to register by Monday, October 16th please visit: (https://docs.google.com/forms/d/e/1FAIpQLSeVZAVfiRORQ-cAl1kR1K6paFedO1Pr_Hm1w1w4OBUZ3KXYGw/viewform).
Cost is $20 (pay at the door) and includes a hot lunch and a Black Locust seedling grown from improved seed orchard seed. Please dress for the weather for an afternoon tour. Hosted by the USDA NRCS Big Flats Plant Materials Center (https://www.nrcs.usda.gov/wps/portal/nrcs/main/plantmaterials/pmc/northeast/nypmc) with support from Cornell Cooperative Extension and the Cornell Small Farms Program (http://smallfarms.cornell.edu). For more information, please contact Brett Chedzoy at Cornell Cooperative Extension of Schuyler County by phone: (607) 535-7161 or email: bjc226@cornell.edu

October 25, 2017, 10:00 a.m. - 3:00 p.m. Feeder School - 2 day on-farm training, Day 1
Location: CCE - Ontario County, 480 North Main Street, Canandaigua, NY 14424. Cost: $75.00 Includes lunch & materials (additional attendee $75.00 ea.). Host: Northwest New York Dairy, Livestock & Field Crops, Cathy Wallace, 585-343-3040 x138.  Pre-Registration Deadline: October 18, 2017

October 26, 2017, 10:00 a.m. - 2:00 p.m. Considering Small Scale Commercial Value-Added Dairy Production
Location: Milly’s Pantry Kitchen, 19 Main Street, Penn Yan, NY 14527 Cost: $30.00 per person, Light lunch included $40.00 for two members of the same farm. Host: CCE - Yates County, Caroline Boutard-Hunt, 315-536-5123, https://reg.cce.cornell.edu/smallscaledairy_257  Pre-Registration deadline: October 20, 2017

FOR LEASE

Attention Christmas Tree Farmers I have 40-60 acres to lease at a reasonable rate. The property is located in Steuben County between Bath and Hornell. Contact Merwyn Crane at 1-315-591-8104.