A partnership between Cornell University and the CCE Associations of Allegany, Cattaraugus, Chautauqua, Erie and Steuben Counties.
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For accommodations or accessibility concerns, please contact our specialists at least one week prior to the scheduled event. If you need information provided in a different format, call 716-640-0522.
When spring planting is delayed due to challenging weather or an already established forage crop fails, farms may need to reduce animal numbers, purchase additional forage, or plant an alternative forage crop. June 5 is considered the end of alfalfa seeding window. When selecting a summer annual to grow as an alternative forage, crop selection will depend on seed availability, soil moisture status, remaining growing season, any carryover of herbicide treatments, the intended use (for which animal species) and harvest and storage methods (dry hay, silage, grazing).

**Corn or Brown Midrib Corn**
- Warm season annual grass. Select a shortseason variety, for ear development, to target the R5.5 quality peak, or a longer-season variety, if ear formation is not important, to achieve the R1 quality peak.
- Plant by July 15; drill or use 15-inch row spacing; seed 50,000-60,000/acre at 1.5–2 inch depth.
- Harvest just prior to tasseling, about 60 days after planting; harvest for wet green chop (check for high nitrates) or after frost for silage or baleage.

**Brown Midrib Sorghum Sudangrass**
- Warm season annual grass.
- Plant by June 15 into 60ºF soils or warmer; drill; seed 65-70 lbs/acre at ½–¾ inch depth.
- Harvest at 36-48 inches and cut at 5-6 inches for good regrowth; cut again in about 40 days; wide swath for proper drying or chop at 65% moisture; prussic acid can be a concern if frosted; 15-16% crude protein; use as silage or baleage.

**Spring Oats**
- Cool season annual grass; use a rust-resistant variety if possible.
- Plant by mid-August; drill; 3-3.5 bu/acre at ⅛¼ inch depth.
- Harvest in 60-75 days; use as silage, baleage; high in crude protein (~20%).
- Consider cutting high into a wide swath to facilitate drying at this time of year.

**Spring Oats and Winter Triticale Mix**
- Cool season annual grasses.
- Plant by August 5; drill 100 lbs oats and 80 lbs triticale/acre at 1¾–1½ inch depth.

**Pearl Millet**
- Warm season annual grass; well-suited to warm, dry growing conditions.
- Plant early to late July; drill; seed 15–20 lbs/acre at ¾ inch depth.
- Harvest in 55–60 days; use as silage or baleage.

**Buckwheat**
- Warm season annual; saturated soil at planting or in the two weeks after planting can stunt growth.
- Plant mid-June through mid-July; drill 50–60 lbs/acre at 1–2 inch planting depth.
- Harvest at flowering, 5–6 weeks after planting; use as silage or baleage.

**Teff**
- Warm season annual grass; well-suited for dry growing conditions.
- Plant June through late July; tiny seed, needs a firm, fine seedbed; drill or use a cultipacker seeder; seed 4–5 lbs/acre at ⅛¾ inch depth.
- Harvest 50–55 days after planting (at 3-4 inch minimum mowing height) at early boot stage and then again 40-45 days later; use as silage, baleage or dry hay.

**Pea and Small Grains Mixture**
- Cool season annuals; oats and peas do not typically overwinter in New York.
- Plant before May 1; 30–45 lbs/acre for the small grain (oats, barley, wheat, triticale) and about 174,000 pea

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**Crops Cows & Critters newsletter**
In this factsheet, we present forage options for late spring or summer planting considerations, which include spring oats, buckwheat, and teff.

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*Continued on page 4....*
The forages listed in this factsheet can provide an alternative or emergency forage during challenging years. With a cultipacker seeder at ¼–½ inch depth, up to 1 inch in dry conditions; plant with an overwintering grass to capture nutrients from the decomposing tissue in spring. 

- Graze before heading for best forage quality; introduce animals slowly and/or supplement with dry hay to avoid health disorders.

Disclaimer

This fact sheet reflects the current (and past) authors’ best effort to interpret a complex body of scientific research, and to translate this into practical management options. Following the guidance provided in this fact sheet does not assure compliance with any applicable law, rule, regulation or standard, or the achievement of discharge levels from agricultural land.

Most of the Southwest region; Alleghany, Cattaraugus, Chautauqua, Erie and Steuben Counties are experiencing abnormally dry conditions and Northern Erie, Southern Allegany, and most of Steuben counties are also experiencing moderate drought. Drought can stunt plant growth, resulting in possible reduced yield with maturing. Many farmers may also experience a reduced yield on third cutting due to inadequate moisture. High temperatures along with dry conditions create the prime environment for insect development. Be sure to scout your fields for pests to ensure damage is not occurring.

Map released: Thurs. July 21, 2022
Data valid: July 19, 2022 at 8 a.m. EDT

Intensity

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

Authors

United States and Puerto Rico Author(s):
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Pacific Islands and Virgin Islands Author(s):
Ahira Sanchez-Lugo, NOAA/NCEI

The forages listed in this factsheet can provide an alternative or emergency forage during challenging years.
Grazing is an art and an essential component of this art is estimating the forage needs of the animal with pasture forage availability in the pasture.

After being involved with grazing livestock for much of my life, first on my family’s dairy then owning a grazing dairy, and finally working here at CCE, I am surprised that more grazing doesn't happen in the Northeast.

We have a good climate for growing cool-season grasses which support the nutritional needs of all ruminant livestock including the lactating dairy cow. The cost savings are substantial since no machinery is required to harvest the forage, store the forage, put the forage in front of the cow, and on top of that, they spread their own manure.

Then I consider the statement that "Grazing is an art" and I can understand why some farmers don't want to understand the complexities of grazing, considering the season is only 180-200 days a year.

An essential component of this art is estimating the forage needs of the animal with pasture forage availability in the pasture. I am only going to be describing rotational grazing in this article with a pasture residency or duration of 12 hours to 3 days.

I believe the adage that the first day of grazing in the pasture is like eating in the dining room. The second day is like eating in the bedroom, and the third day is like eating in the bathroom.

In order to make economic use of your pasture acreage, it's important to match the pasture size to your herd size. There are multiple reasons for this: One of the costs that are often ignored in a pasture operation is the cost of owning the land.

By matching your herd to the land base you can minimize this cost per animal. To maximize dry matter production of the sward (mix of forage species that make up a pasture) it’s important to allow for a proper rest period for the sward to recover.

Too many animals will weaken and reduce pasture productivity, and too few will limit your profit potential. Having more animals than the pasture can support will lead to overgrazing which leads to compaction and weakening the soil's health and its ability to support the higher-yielding pasture species.

**Eyeball Forage Inventory**

If you'd just like a quick, but less accurate estimate of your pasture dry matter, all you need is an estimate or measurement of the forage height. Once you have the average height in inches of the forage in your pasture, multiply it by 200.

This is an average estimate of pounds of dry matter per acre per inch of forage height. For example, if your grass is 10 inches tall, multiply 10 x 200 to get 2000 lbs/acre of dry matter. If you want to get a little more precise, use the table below to estimate. Just replace 200 with the relevant number below based on the type and health of forage you have in your pasture.

**Rising Plate Meters**

In my work with Extension, I like to have a quicker and more accurate way to evaluate the amount of dry matter both available and also consumed by the livestock. I use a Rising Plate Meter. This handheld tool combines height with the density of the pasture sward to provide a reading that can be calculated to give a more precise measurement of forage in a pasture.

The rising plate meter consists of a thin aluminum plate mounted on a shaft by a gear connected to a mechanical counter (see picture). As the rod is lowered into the pasture, the plate is supported at a height determined by the sward's thickness, height, and the plants that compose it. On farms where accurate calculations are needed to not only give what's currently in a pasture but also to monitor the growth of all pastures.

The monitoring allows graziers to get the most out of their pastures. If there is a predicted shortage in future pastures, they can lengthen the residency of the herd by adding stored forage. If there is an excess of future forage then some of the pasture can be harvested for stored feed.

Looking for more information on rotational grazing? Grab your copy of the Crops, Cows, & Critters newsletter.
Properly managing fertility, weeds, cutting height and timing, along with the consideration of introducing new species will all help to promote the long-term health of your perennial hayfields.

**MANAGING FERTILITY**

Managing soil fertility is important to forage production. For proper nutrient cycling and plant growth, alfalfa requires a pH of 6.5-7.0 while grass pH should remain 6.0 and above. For grass forages, nitrogen (N), phosphorus (P), and potassium (K) serve as the macronutrients which are critical for production. Although, legumes add N to the soil, over time, grass crops take over field composition requiring more consideration in nutrient management. Since N is the most limiting factor for grasses, a lack of nitrogen leads to low yields and decreased crude protein levels. Refer to Table 1 for topdressing legumes based on soil testing and manure applications.

A strong manure history can partially offset N needs but may result in the over application of P and K. Hay fields respond well to manure meanwhile legumes may be injured from application of manure either from smothering or salt injury. Adequate P is needed early in a plant’s life for development of reproductive structures. The macronutrient K moves water, nutrients and carbohydrates throughout the plant, helping to regulate the rate of photosynthesis. Completing soil testing to determine levels of nutrients and pH will help ensure that your field remains productive, and inputs are being used as needed.

**WEED MANAGEMENT**

If weeds are present in your field, possible reasons can include:

1. Harvesting interval is too close together.
2. The field is being mowed too close to the ground.

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**Table 1: Topdressing legume-grass with consideration of soil test levels and manure application.**

<table>
<thead>
<tr>
<th>Crop to Be Grown</th>
<th>Soil Management</th>
<th>No Manure</th>
<th>Manure</th>
<th>Nitrogen (N)</th>
<th>Phosphorus (P₂O₅)</th>
<th>Potassium (K₂O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topdressing of:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>legume grass stands with 25-50%</td>
<td>I</td>
<td>30-50</td>
<td>0</td>
<td>50</td>
<td>50</td>
<td>60</td>
</tr>
<tr>
<td>legume</td>
<td>II</td>
<td>30-50</td>
<td>0</td>
<td>50</td>
<td>75</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>30-50</td>
<td>0</td>
<td>50</td>
<td>110</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>IV</td>
<td>30-50</td>
<td>0</td>
<td>50</td>
<td>150</td>
<td>110</td>
</tr>
<tr>
<td>Topdressing grasses:</td>
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<td>50-75</td>
<td>20-40</td>
<td>50</td>
<td>80</td>
<td>60</td>
</tr>
<tr>
<td>2-cut system</td>
<td>II</td>
<td>50-75</td>
<td>20-40</td>
<td>50</td>
<td>100</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>50-75</td>
<td>20-40</td>
<td>50</td>
<td>120</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>IV</td>
<td>50-75</td>
<td>20-40</td>
<td>50</td>
<td>150</td>
<td>110</td>
</tr>
<tr>
<td>Topdressing grasses:</td>
<td>I</td>
<td>125-225</td>
<td>50-125</td>
<td>50</td>
<td>100</td>
<td>70</td>
</tr>
<tr>
<td>3-4-cut system²</td>
<td>II</td>
<td>125-225</td>
<td>50-125</td>
<td>50</td>
<td>120</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>125-225</td>
<td>50-125</td>
<td>50</td>
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<td>120</td>
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<td></td>
<td>IV</td>
<td>125-225</td>
<td>50-125</td>
<td>50</td>
<td>160</td>
<td>140</td>
</tr>
<tr>
<td>Topdressing grasses:</td>
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<td>125-225</td>
<td>50-125</td>
<td>50</td>
<td>100</td>
<td>70</td>
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<tr>
<td>4-5-cut system⁴</td>
<td>II</td>
<td>125-225</td>
<td>50-125</td>
<td>50</td>
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<td>100</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>125-225</td>
<td>50-125</td>
<td>50</td>
<td>140</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>IV</td>
<td>125-225</td>
<td>50-125</td>
<td>50</td>
<td>160</td>
<td>140</td>
</tr>
</tbody>
</table>

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Continued on page 7...
3. There is improper sanitation between fields that already contain weeds. Properly managing weeds is important for your animals because they reduce crop nutrition value overall, and some are poisonous to livestock. If weeds continue to persist, there are herbicides available to aid with control.

**PROPER CUTTING HEIGHT AND TIMING**

Perennial forages should be harvested at the earliest stages of maturity when both palatability and nutrient content is high. For alfalfa and other legumes, this occurs at the late bud stage. In NY, early harvesting is important to get subsequent crops off, but your alfalfa crop will persist best with a 40- to 45-day harvest interval.

Grass mixes should be harvested around the time they start heading out which is different between each variety, usually averaging 30 to 40 days. Grasses should not be cut below 4 inches because they store energy above ground in the crown. If you mow them tightly, it takes away plants’ energy reserves and ability to photosynthesize. Improperly cutting your forage, will create long term yield loss and reduce stand levels.

**INTRODUCING NEW SPECIES**

If your stand does not improve with changes to management, it may be necessary to seed new species. This can either be done by interseeding or frost seeding. But first, you must make sure to remove as much plant residue as possible to ensure proper seed to soil contact. Interseeding involves use of a no-till drill to sow seed during the growing season. With a properly adjusted drill, this seeding method has better success. Frost seeding, in comparison is relatively inexpensive and fast. This method requires broadcasting seed in late winter or early spring. Red clover is usually the most common seed for frost seeding because of its aggressive nature. See Table 2 for seeding rate guidelines.

**IN SUMMARY**

Perennial hayfields are an important forage source for many producers. Productivity often declines with age, which creates a need for increased attention to fertility management, weed management, proper cutting height and timing along with considering introducing new species to keep costs low while preserving productivity.

This information is for educational and reference purposes only and is not a substitute for sound consultation and following product labels. Cornell Cooperative Extension is dedicated to providing research-based information to our agricultural producers. Every effort has been made to provide correct, complete, and up-to-date recommendations.

Table 2: Seeding rate guidelines for frost seeding or interseeding into a thin existing stand.

<table>
<thead>
<tr>
<th>Species</th>
<th>Frost seeding</th>
<th>Interseeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Clover</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Tall Fescue</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Orchardgrass</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Meadow Fescue</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Timothy</td>
<td>Not recommended</td>
<td></td>
</tr>
<tr>
<td>Reed Canarygrass</td>
<td>Not recommended</td>
<td></td>
</tr>
</tbody>
</table>

*Retrieved from Nutrient Management Spear Program Fact Sheet #109

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**2022 Aurora Farm Field Day**

**Date & Time**
Thursday, August 18, 2022
9:45 am - 3:00 pm

**Location**
Musgrave Research Farm
1256 Poplar Ridge Road
Aurora, NY 13026

2.0 Agricultural Plant, 2.0 Demonstration, 2.0 Private Field and Forage NYS DEC Certified Pesticide Applicator Recertification credits will be available and CCA credits will be requested.

The program will include:
- Effects of tillage and cropping system on deep soil organic carbon
- Pesticide compatibility
- Biological Soil Amendments
- Dairy Net Zero Greenhouse Gas Measurements & Rainfall Simulator Studies
- Managing rodents on the farm
- New tools and new crops for organic no-till systems
- Supporting New York Crops Producers for the Future
- Risk assessment tool for predicting seedcorn maggot
- Proximal Sensing for Modeling Development Curves and Accelerated Breeding of Climate Resilient Crop Varieties

Register Here: https://cals.cornell.edu/field-crops/about/extension/field-days

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We hope to see you at the 2022 Aurora Farm Field Day on August 18th from 9:45am - 3pm! Call Katelyn Miller with any questions or concerns.

If your hay stand doesn’t improve with changes to management, it may be necessary to seed new species by interseeding or frost seeding.
Six Steps to Lower Your Fan Energy Bill
By Taylor Leach - Dairy Herd Management

Throughout the country, fans are running at maximum speed to help keep cows cool and comfortable. However, the non-stop heat of summer also has electric bills soaring.

According to Donna Amaral-Philips, Dairy Extension Educator at the University of Kentucky, ventilation systems can account for a large portion of a farm’s energy bill. In fact, some ventilation systems - particularly mechanical systems - can account for 20%-25% of a farm’s total energy usage. As energy prices climb, some farmers are feeling the sting of high electric bills.

"Even with increased costs for electricity, the use of circulation fans for increased air speed are a necessary expense to reduce heat stress and to prevent the associated decreases in milk production, reproductive performance, and performance of future generations," Amaral-Philips says. Poor or inadequate fan maintenance can decrease the overall airflow by fans as well as the efficiency of these motors by as much as 40%, thus, increasing electric bills unnecessarily. As little as 1/8 inch of dust on the fan blades can decrease the efficiency of the motor of the fan, Amaral-Philips notes.

"Maintenance on fans should be completed not once, but 3 to 4 times per year, to improve/maintain the efficiency of the fan motors and air speeds within the facility," she says. To help improve fan efficiency and lower energy costs, Amaral-Philips recommends the following steps.

- Clean dust from the blades, motor windings, sensors and thermostats.
- Lubricate the fan according to the manufacturer’s recommendations.
- Check the belts for wear and stretch. Belts should ride on top of the pulley. Replace belts as needed.
- Check the electrical cords and wiring for breaks or disintegration of the wiring covering.
- Check that the thermostat is operating properly - i.e. comes on at the proper temperature (65ºF).
- Check the angle of each fan such that the air movement of the fan "blows' to the ground level below the next fan.

Scan QR code or access our website swnydlfc.cce.cornell.edu to view the videos

To help improve fan efficiency and lower energy costs check out these 6 tips! If you have any questions feel free to contact Camila Lage at 607-422-6788.

Understanding and Mitigation Lameness - Resources in Spanish now Available!

Check out this series of short animated videos created in Spanish by Cornell Cooperative Extension staff based on our recent program Understanding and Mitigation Lameness. A total of 4 videos are available covering the following topics:

1. Lameness overview: La Cojera en Vacas Lecheras: un Resumen - In this short video, we will discuss the impact of housing facilities and management on lameness and some best management practices for employees.

2. Risk Factors and Best Management Practices: Facility considerations: Factores de Riesgo por La Cojera: Consideraciones sobre las Instalaciones - In this short video, we will discuss the impact of housing facilities and management on lameness and some best management practices for employees.

3. Lameness Risk Factors and Best Management Practices: Impact of Nutrition: Factores de Riesgo por la Cojera: Impacto de la Nutrición - In this short video, we will discuss the impact of nutrition on lameness, risk factors associated with nutrition and lameness, and best management practices for employees to use when working with groups of cows.

4. Hoof Trimming and Footbath: El Manejo del Recorte de Pezuñas y Baños de Pie para reducir la cojera en vacas lecheras. - In this short video, we will discuss the importance of hoof trimming and footbath management to prevent lameness in dairy cows.

Do you employ Spanish speakers’ workers at your farm? Check out this series of short animated videos created by CCE staff about lameness.
Clean water should be provided to newborn calves starting from birth. Researchers shown that this increases weight gain and rumen development.

It is widely assumed that calves receive all required nutrients from liquid feeds - milk or milk replacer - until weaning. However, it has been shown that offering grain at 3 days of age drastically improves rumen development by weaning. Additionally, the amount of grain and number of days grain is consumed prior to weaning is commonly used as a metric for ensuring a smooth transition.

A commonly forgotten nutrient for rumen development is access to drinking water outside of the milk provided. In general, whether group housed or individually housed, clean water should be provided to newborn calves starting from birth. Water provided to newborn calves should be clean and residue free to encourage intake. Water with residue, mold, or that is generally unclean could discourage newborn calves from drinking - negating any potential benefits of providing water. Like all equipment utilized by newborn calves, water buckets should be thoroughly cleaned and disinfected between each calf and group. Intake of contaminated water sources could contribute to disease spread or further health complications. Pennsylvania dairy farms vary in their calf water availability with some farms providing water shortly after birth and others waiting until calves are moved into group housing.

Water provided to calves varies in quality and cleanliness. If water quality is suspected of impacting calf health, a sample can be collected and tested by a laboratory. While not much research has been conducted about the added benefits of providing drinking water to calves from birth throughout the liquid feeding period, a recent study by Wickramasinghe et al. (2019) provides clarity on this topic. The researchers conducted a study comparing calves offered water at birth or 17 days later. Comparisons across both study groups included milk and starter intake, performance, health status, and nutrient digestibility. Calves were offered free choice drinking water access and bottle fed 6 kilograms (kg) per day (2 kg at 3 feeding times) until 14 days of age and then milk increased to 9.6 kg per day. Results from the first 16 days of this study showed that drinking water intake alone was 0.75 ± 0.05 kg per day.

The researchers concluded that the water requirements of calves are typically not met in a production setting as a large portion of dairy calves are fed less than 5.0 kg per day of milk replacer and not offered free choice water until 17 days of age. Milk intake of calves offered supplemental water starting at birth increased through the preweaning process. Contrary to milk intake, starter intake remained unchanged between calves offered water starting at birth versus those offered water starting at day 17.

As expected, water and starter intake both increased drastically when calves were partially weaned. Although there was no difference in average dairy gain preweaning, calves offered water from birth tended to have increased body weight and heart girth compared to calves offered water at day 17. Post-weaned calves offered water starting at birth were taller, indicated by increased hip height, and had longer bodies than calves offered supplemental water starting at day 17. As expected, water and starter intake both increased drastically when calves were partially weaned.

Although there was no difference in average dairy gain preweaning, calves offered water from birth tended to have increased body weight and heart girth compared to calves offered water at day 17. Post-weaned calves offered water starting at birth were taller, indicated by increased hip height, and had longer bodies than calves offered water starting at day 17. As expected, water and starter intake both increased drastically when calves were partially weaned.

Continued on page 14...
Six Things I Learned from Attending the National Association of Agricultural County Agents Professional Improvement Conference and Annual Meeting
Thursday, July 14th - Friday, July 22nd, 2022 in West Palm Beach, Florida

Where can you get the chance to see thousand-acre ranches, beaches, gators, seminars on extension programming, and good friends? Florida of course - where anything can happen! I was given the incredible opportunity to attend my very first NACAA AM/PIC in late July. This experience was extremely educational and I feel that I’m coming back to SWNY excited to share new ideas. The improvements to my professional skills will be exciting to showcase and continue to build upon with my colleagues, our agricultural community, and our stakeholders.

From New York, six extension folks were in attendance. Mary Kate Wheeler of the SCNYDFC team won an Early Career Achievement Award. Margaret Quaassdorff and myself won awards for Communication and Program Development. Steve Haddock of the CAAHP served as a National Committee Chair, Julie Kikkert from CVP presented an outstanding poster, and Beth Claypoole from CCE-Wayne served as our Northeastern NACAA Regional Director.

Wanting to get a jump start on all of my reporting for this trip, I’m currently typing this up in the airport waiting to begin my journey back to SWNY where I’ll be greeted by some excited kiddos, a dozen voicemails, and hundreds (thousands?) of emails. Before I get bogged down in those logistics, I’d like to share six things that I learned during this time while they’re still fresh in my mind!

Continued on page 11...

For more information go to: newyorksoilhealth.org/fielddays
Western NY Event is located in Portland, NY on August 2, 2022.
1. **New York State’s Cornell Cooperative Extension system is world renowned and has an incredible presence at the national extension level.** Among thousands, NY Cooperative Extension stands proud and holds its own. While our numbers might be smaller than other states, our caliber and dedication is (in my completely unbiased opinion, I assure you) unmatched. Our programs, resources, and models are known and recognized nationally.

2. **Heat Stress in dairy cows is hard to manage, but absolutely critical to prevent.** I learned in Florida about all of the heat management efforts farmers have to make 10 months out of the year. Cooling pools, fans, sprinklers, shade, and selective breeding are all utilized. In NY, we’re lucky to have relatively few days where this is critical. However, as our climate continues to warm, and we continue to push more efficient milk and meat production, this will only continue to become more and more important. In this photo taken by a colleague, cows are willing to RISK FACING AN ALLIGATOR to stay cool.

3. **Don’t be afraid to walk up and ask someone to share their story.** Agriculture unites us all. It creates a shared story and shared passions. While early in my career, I am sometimes intimidated by meeting new people and finding a seat at the table. However, we can always find common ground and learn from each other - whether it’s at a conference, at the local diner, and out in the field. Everyone has a story to tell and the stories are all full of struggles, hardships, and triumphs.

4. **When you’re feeling bummed that your first tour pick “Cowboys and Ice Cream” is overbooked, and you’re given the opportunity to go on a tour titled “Liquid Vices in the Land of Sunshine”… you should absolutely attend.** Bring a spare liver. I won’t share on more on this, other than I highly recommend.

5. **There is a group of thousands of people whose only job is to help other people.** That’s it. No sales, no ulterior motive, no commissions. Extension agents/educators/specialists help farmers, help youth, help families, help communities. They have feelings, bad days, and administrative struggles - but their innate desire to help people carries them through.

6. **Farmers feed the world - no matter where they farm.** I know that this is corny, and almost cliché at this point, but it’s true. Farmers work 365 days a year to make sure their families, communities, and the whole wide world are supplied with safe, wholesome food. While production practices will differ, personalities will clash, and farming will remain hard - really, really hard - the shared values of growing great food bring us all together.

This has been an incredible opportunity, and I’m already re-envisioning how to make some small and positive changes to our program based on this experience.

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**AM/PIC brings together hundreds of extension professionals working within agriculture for farm and industry tours, hardy trainings, professional improvement seminars, and award celebrations.**

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**CROPS COWS & CRITTERS newsletter**

If you want to see my slide deck of too many photos to admit, I’d be happy to share and show off my New Yorker sunburn. And maybe even share some of my coveted trade show pens and notepads.
When we bring livestock to the butcher, there are general rules of thumb regarding the percentage of meat a customer will get back, and the approximate pounds of each of the common retail cuts. From live animal to hanging weight, which is what many farmers who sell bulk meat base their pricing from, there is a loss of anywhere from 28% - 50%, depending on the species. From there, the transformation into retail cuts will result in additional loss from excess bone, fat, and connective tissue. For those looking for a more exact breakdown of what to expect, let’s take a closer look by species.

**Beef:**

![Beef diagram]

<table>
<thead>
<tr>
<th>Cut</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-bone</td>
<td>8 sirloin</td>
</tr>
<tr>
<td>2 sirloin tip roasts</td>
<td>4 arm roasts (3 lbs)</td>
</tr>
<tr>
<td>8 packages of stew meat (1 lb)</td>
<td>14 rib steaks</td>
</tr>
<tr>
<td>4 packages of soup bones</td>
<td>8 round steaks</td>
</tr>
<tr>
<td>6 chuck roasts (4 lbs)</td>
<td>2 rump roasts (3 lbs)</td>
</tr>
<tr>
<td>4 packages of short ribs (1.5 lbs)</td>
<td></td>
</tr>
<tr>
<td>80-100 lbs of ground beef</td>
<td></td>
</tr>
<tr>
<td>Tongue, heart, liver, tail, etc</td>
<td></td>
</tr>
</tbody>
</table>

Above, you’ll see the list of cuts to expect from half of a 1,000—1,200 pound live beef animal, assuming the steaks are cut to 3/4” thick. Variables that can impact the yield include the breed of cow (dairy cattle yield less meat), fatness of the animal (fatter animals have more loss due to fat trim), and gut fill (more food and water in the belly results in a heavier live weight, which is lost during processing). Dry aging the carcass also results in weight loss from dehydration. Further, a higher percentage of boneless cuts results in less weight in the freezer. The finished cut weight as a percentage of the live weight will range from about 38% to 43% so a whole 1200 lb steer will yield 491 to 516 actual pounds of meat cuts.

**Pork:**

![Pork diagram]

- 12 pounds of pork chops
- 6-8 pounds of ground pork of sausage
- 2 packages of spare ribs (1.5 lbs)
- 1 ham (15-17 pounds – can be cut in half)
- 3 shoulder roasts (can be steaks)
- 8 lbs of bacon
- 2 smoked hocks
- Lard, heart, liver, tongue, etc.

Many customers choose to buy direct from the farmer as a way to know where their food comes from, ensure availability of product, and get a product that they may otherwise not be able to purchase in a supermarket.

Educating bulk meat customers on the expected weight of meat that they will receive from each species you sell can help limit confusion and concern that “the butcher took my meat!”
Participating in the Ag Census is important for agricultural reporting, petitioning for support funding, and it’s required by law. A 225 hog will yield 162 pound hanging carcass (dressed weight) and about 120 pounds of meat.

**Lamb:**

- 16 shoulder chops (or you could have shoulder roasts)
- 16 small lamb chops
- 16 small loin chops (usually packaged 4 chops together)
- 2 foreshanks
- 2 hindshanks
- 2 packages of riblets (good in stew)
- 2 bone-in leg roasts (5 to 6 pounds each) (many people have these cut in half or make leg steaks)
- (2-4) packages of meaty neck slices for stock or stew

Organ Meats, stew meat or ground lamb, also can make sausage if you are doing several lambs and have enough ground meat.

Lambs are the smallest of our livestock species and are well-suited for small family freezers. Lambs generally have about a 50% yield for the carcass weight and then about a 75% yield of meat from that carcass or about 34 pounds of meat from a whole 90 pound lamb. Many people are surprised by how small the chops are on locally raised lamb. That’s because our domestic lambs are generally smaller than lambs used for processing for the grocery stores (Local is about 90 - 100 pounds live and western lambs can be up to 140 pounds). When considering the chart above, the number of chops and steaks will vary depending on the thickness you want. A larger framed lamb will yield bigger cuts.

On the previous page, we see the yield of cuts from half of a 225 pound hog. The losses from live animal to carcass follow those associated with beef cattle, though hogs generally have a higher yield of useable meat. Hogs will yield between 47% and 53% of the live weight (or about 74% of the carcass weight).

**THE AG CENSUS COUNTS**

**BECAUSE IT SHOWS THE VALUE**

**OF THE WORK I DO.**

**COMING THIS NOVEMBER**

nass.usda.gov/AgCensus

**YOUR VOICE. YOUR FUTURE. YOUR OPPORTUNITY.**

Hogs have the greatest meat yield as a percentage of live weight, followed by cattle, and then lamb & goat which have similar yields.
supplemental water starting at day 17. Average daily gain did not differ between the two groups, either preweaning or post weaning.

Although there was no difference in average daily gain preweaning, calves offered water from birth tended to have increased body weight and heart girth compared to calves offered water at day 17. Post-weaned calves offered water starting at birth were taller, indicated by increased hip height, and had longer bodies than calves offered supplemental water starting at day 17. Average daily gain did not differ between the two groups, either preweaning or post weaning.

Offering supplemental water starting from birth had no impact on protein or starch digestibility and reduced apparent total tract digestibility of ether extract (fat). However, apparent total tract digestibility of both neutral detergent fiber and acid detergent fiber improved in calves offered water starting at birth. Improved fiber digestibility was related to a trend in improved feed efficiency (defined as average daily gain) post weaning. Water consumed free choice, without suckling stimulation, travels directly into the rumen rather than being diverted past the rumen into the abomasum. It has been established that water entering the rumen can affect rumen development, pH, feed mixing and passage, as well as volatile fatty acid composition. Unlike other nutrients, fiber digestion occurs mostly in the rumen and because of this improved fiber digestion typically suggests improved rumen function.

Scours in calves can be a common occurrence on some farms. It is assumed that supplemental water during the early days of a calf’s life will lead to increased scour events. However, offering calves water starting at birth had no impact on the number of scours or the number of days they lasted in the above research.

The researchers concluded that offering calves supplemental drinking water starting at birth resulted in better growth performance and apparent total tract digestibility of nutrients. Calves receiving supplemental water at birth had improved rumen function - leading to improved growth and feed efficiency; however, this was not directly measured. With expected increases in feed expenses continuing into next year, improving feed efficiency by offering drinking water at birth could be a focus for producers in their heifer raising programs.

... Continued from page 9.
Dealing with Marek’s Disease in Chickens
By Amy Barkley, Livestock Specialist

Marek’s Disease is one of the most common flock illnesses. It is economically devastating for unvaccinated commercial flocks, and emotionally tough for small flock owners with unvaccinated flocks. However, with attention to flock health and vaccination status of new arrivals, it can be easily managed.

What is Marek’s Disease?
This disease is caused by a herpesvirus, which results in cancer at some point over the bird’s life. It does not transmit to people, but can easily transfer from bird-to-bird. Once a bird becomes infected, it remains infected for life. There is no cure. Younger birds are affected more severely than older birds.

What are the signs?
Marek’s most often shows up as leg weakness or stumbling, which ends up in paralysis. The lack of feed and water consumption, and/or cancer cells overwhelming the body, result in death. However, there are other symptoms such as cavernous feather follicles, where the follicles are too large for the feathers. Other birds may show what’s called “cancer eye”, where one pupil becomes permanently constricted and/or fixed. Upon necropsy, some birds show enlarged peripheral nerves (vagus, brachial, and sciatic). Necropsy can also reveal that some birds’ body cavities are riddled with tumors. Any of these signs, especially when they show up across multiple, unvaccinated birds in the flock, can be indicative of the disease, but should be confirmed by a veterinarian through necropsy and testing.

How do birds get it?
The disease moves through infective feather dust that is inhaled by susceptible birds. The dander can be infective for many years. It’s almost impossible to clean and disinfect to the point of eliminating it from the henhouse. If you keep chickens, poultry dust is everywhere and can be found on farm implements, equipment, other animals, clothing, and hands. Because of how ubiquitous it is, it can re-enter a cleaned premise easily. Remember that all birds in a flock with Marek’s are infected, and even if they don’t show signs, they are spreading infected dander.

Can I prevent it?
The only preventative measure is to vaccinate chicks within a day of hatch. Administering vaccine after this time is ineffective. Most hatcheries provide the vaccination for less than $0.50/chick, and it’s cheap insurance to ensure that your flock lives a long, healthy life. There are also a limited number of farm supply companies that sell Marek’s vaccine to vaccinate day-old chicks at home, but this is typically not cost-effective for most poultry owners, and the potential for error caused by improper storage and administration is high.

That said, the vaccine does not stop the infection. Rather, it limits the damage that the infection will cause the flock. Birds that are vaccinated and exposed to the virus will still get the virus, and still shed the virus, but will live long lives. Any newly vaccinated chicks should be kept away from the main flock for two weeks to allow their immune systems to develop and stave off the infection. Additionally, once the virus is found on a property, all new birds coming in will need to be vaccinated unless there is a at least a one year rest period following depopulation, cleaning, and disinfection.

For questions on flock health and management, reach out to Amy Barkley, Livestock Specialist, at (716) 640-0844 or amb544@cornell.edu.

Photo of paralyzed White Leghorn pullet with Marek’s by Dr. Jean Sander

White Leghorn hen exhibiting a constricted pupil from Marek’s Disease. This photo was shared by Cornell University.
Across the country, cheese inventories are available for spot purchasing. Contacts in the Northeast and West report that cheesemakers are running busy schedules across the country as Class III milk supplies remain widely available. Labor shortages and delayed deliveries of production supplies are causing some Western cheesemakers to run below capacity. Cheese inventories are available for spot purchasing. Contacts in the Northeast and West report that domestic demand in both retail and food service markets is softening. Across the country, cheese inventories are available for spot purchasing.

**Butter**: Cream is available throughout all regions, though contacts in the Northeast and West note that availability is declining seasonally. Strong demand for cream is present in the West, but contacts report that high transportation costs and limited tanker availability are causing most loads to stay local. Butter makers in the Northeast are running lighter schedules due to higher cream multiples and softening demand. Meanwhile, contacts in all regions relay that staffing shortages are limiting their ability to run full schedules. Demand for butter is declining in the Northeast and West.

**Fluid Milk**: Warmer temperatures are affecting farm -level milk production output levels throughout the U.S. In the East region, milk declines are being reported in most areas as a downswing also occurs in the Central region milk. Overall, Class I bottling sales are seasonally slower. Condensed skim spot availability is mixed. Supplies are tighter in the East, but handy in the West. Cream availability varies as the summer heat chips away at milkfat levels in some areas of the country.

May’s Albany $/Gallon paid to the farmer was $2.24. This is, again, a new record high. We will continue to see high milk prices through the rest of the year.

For more information on Dairy Business Management and Market Analysis, contact Katelyn Walley-Stoll, Farm Business Management Specialist, at 716-640-0522 or kaw249@cornell.edu.
USDA is looking at 2022’s All-Milk Price to average at $26.50, and 2023 to see a slight decline at $23.80.

Milk prices are at a record high (see above), with continued trends for strong prices. These prices will carry the second half of the year out on a high note. Although we’re experiencing record high input prices as well, the continued slower than “normal” growth of milk production and steady domestic and international demand will provide prices that should be profitable for most farms.

USDA is forecasting 2022 and 2023 prices at the figures outlined below. Their 2023 forecast prices have increased from last month due to higher than expected prices and demand.

Lactose exports hit a record high in April (shown to the right), with increased demand largely from China, but also Japan and New Zealand. April’s dairy exports (milk-fat basis) totaled 1.21 billion pounds, an increase of 7% from April 2021. Exports made up 18.7% of US dairy sales by milk solids in April, which is the third highest month ever. In spite of international economic challenges, US Dairy remains a strong competitor on the international market and is poised to meet increase in demand.

May 2022 milk production was down 0.7% from May 2021, and production per cow increased by less than half of a percent over that same time. New York saw a 1% decrease in cow numbers from a year ago, a loss of 6,000 head, and relatively stagnant milk production. This will keep milk prices elevated over time.

Where do prices go from here? I had a farmer tell me recently that I needed to stop raining on his parade by reminding him of all of the things that could go wrong with milk prices (decrease in consumption due to inflation, increases in milk production as farms hold onto more cows, another pandemic). So, for the most part, it does look like most things are going just right for Dairy Markets and the remainder of 2022 should continue to go well.

More Information:
- May DMC Margin Hits $12.51 per cwt from Progressive Dairy by Dave Natzke.
- Milk Production Report from NASS.

### From USDA

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Succession planning can be a daunting task. Many farm managers, particularly in smaller businesses, may only be involved in succession planning once or twice in a lifetime, when getting into or out of the business.

Thinking about succession planning as a process rather than an event can help one gain perspective on the intentional time commitment required to make your transition plan work.

Often business owners rely on a facilitator, coordinator, or navigator skilled in understanding family businesses to help keep the process moving and be certain the right people are involved in developing and carrying out the succession plan.

A facilitator’s role is to foster the process and create an inclusive environment for developing and executing a succession plan for a business. The business owner(s) remain in control of the decision making associated with the plan while the facilitator keeps the process moving forward.

The role of the facilitator includes convening meetings of the owner(s), successor(s) and family members or advisors who are helping with the planning process. The facilitator does not usually provide advice on specific aspects of the plan. The facilitator may help identify advisors who are able to address specific issues the business owner(s) and successor(s) want to know more about.

A trusted neutral party, who understands the various aspects of a successful succession plan is needed for the facilitator role. Sometimes an advisor like an accountant, attorney or business associate can fulfil the facilitator role. Other times it is another person like an extension specialist, community member or colleague who understands business succession.

Characteristics of a fair process are:

- Open and transparent with no hidden agendas
- Everyone has an opportunity to be heard without fear of reprisal or judgement
- Consistent, unbiased process for decision making
- Implementation of decisions requires participant commitment to follow through
- Assessment and evaluation of decisions and process to allow making course corrections when warranted

The facilitator will guide the process to:

- Gather information
- Outline the purpose of each meeting based the goals and timeline of participants
- Encourage participants to make decisions
- Hold participants accountable to their words and commitments to the process
- Create honest expectations surrounding the process
- Help participants to clarify their values, vision and goals for the business

Succession planning is about developing a roadmap for change of leadership and ownership of a business and in agriculture that is typically a family business.

A quality facilitator brings knowledge and skills for engaging the family in a process to complete the tasks necessary to initiate, carry out and follow through on the family business succession plan as well as skills to help the family maintain good relationships through the process.

To foster and maintain good relationships among the family, facilitators will:

- Encourage participation
- Promote inclusion
- Address power dynamics
- Reduce influence factors
- Interrupt dysfunctional behaviors
- Discipline problem members
- Encourage anger management

Skilled succession facilitators will understand the barriers to succession planning. One key barrier is the reluctance of elder farmers to relinquish control of their farm and business.

A skilled facilitator recognizes power dynamics and will help each party to be heard and work toward a mutually beneficial path forward. A facilitator benefits farm businesses throughout the succession process by providing a framework and keeping focus on decisions farm business owners must make to advance their plan.

They are familiar with the roles of all the professional advisors on a business transition team. Often, the facilitator anticipates roadblocks and provides the grease needed to keep the decision makers working together to advance the plan to fruition.
At this time of year, we expect to see adults that measure an inch long with pink, black, and white wings. Spotted Lanternflies don’t have many natural predators here in the U.S., which is one of the reasons it’s important to contain a potential outbreak as long as possible.

Spotted Lanternfly, an invasive pest that has a huge appetite for grape vines, fruit trees, maple trees, and other plants, has been sighted in WNY. While there have been two sightings, one in Buffalo (Erie County) last year and one most recently in West Seneca (Erie County), the spot of good news is that these insects were isolated sightings, and only adults have been found. Furthermore, the West Seneca spotting was a skeletonized adult, meaning that it had been there since last year. It is thought that both insects were transported into the region via inanimate objects (cars, building materials), due to the isolation of the insects and the fact that they were adults.

Based on how quickly the bug has spread since its introduction in 2014, and because SWNY is relatively close to outbreak regions in NY and PA, we know that at some point, it will make its way to us. However, we may be able to delay the spread until we have the tools developed that can decrease the huge agronomic losses it causes. While the two cases that were identified in SWNY were deemed isolated, it is not guaranteed that the next sighting will be. We all need to be vigilant to help identify where this pest is moving.

If you think that you’ve found a Spotted Lanternfly in any life stage, take a photograph, which will allow the NYS Department of Ag and Markets to confirm an ID. Next, kill the insect (by freezing is best if you can manage it), and bring it to someone who will ID it and report it to Ag and Markets. Your local CCE office can help with this.

**Have you seen a Spotted Lanternfly?**

**EGG MASSES: September – May**

Spotted Lanternfly Egg Mass Description

Found on the tree bark, rusty metal, rocks, outdoor furniture, vehicles and other smooth surfaces. About 1 inch long and a half to three-quarters of an inch wide. Mud-like covering, color can vary from white to tan to gray or brown. Freshly laid eggs are often shiny and appear to have a waxy coating that becomes dry and cracked over time. Old egg masses can shed their covering and look like four to seven rows of seed-like eggs, 30–50 eggs total.

**NYMPHS: April – October**

Spotted Lanternfly
Early Nymphs – Late Nymph Description

Black with white spots without wings, becomes red with white spots and black patches as it matures. Fourth instar nymphs are over ½ inch long. Hop suddenly when approached or touched.

**ADULTS: July – November**

Spotted Lanternfly
Early Nymphs – Wings Closed / Wings Open

At rest – greyish-faint pink wings with many round black spots. The wing tips are black and gray with a webbed appearance. Flying or startled - insect will show bright red hind wings, 1.5” – 2.5” wide with wings spread. Adults are about 1 inch long and a half inch wide while wings are folded. Adults can hop several feet if startled.

To report a spotted lanternfly sighting, scan the QR code, or visit: https://agriculture.ny.gov/slf

Crops, Cows & Critters newsletter

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Periodical Postage Paid at Jamestown, NY 14701.