A partnership between Cornell University and the CCE Associations of Allegany, Cattaraugus, Chautauqua, Erie and Steuben Counties.

Cornell Cooperative Extension is an employer and educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities and provides equal program and employment opportunities.

Volume 5 · Issue 1 · January 2024
Cows, Crops, and Critters Newsletter by the Southwest New York Dairy, Livestock, and Field Crops Program with Cornell Cooperative Extension in partnership with Cornell University and the five county region of Erie, Chautauqua, Cattaraugus, Allegany, and Steuben and their CCE Associations. To simplify information, brand names of products may be used in this publication. No endorsement is intended, nor is criticism implied of similar products not named. Every effort has been made to provide correct, complete and up-to-date pesticide recommendations. Changes occur constantly and human errors are still possible. These recommendations are not a substitute for pesticide labeling. Please read the label before applying pesticides.

By law and purpose, Cooperative Extension is dedicated to serving the people on a non-discriminatory basis. Newsletter layout and design by Katelyn Walley-Stoll.

Individual articles may be used for educational purposes with the permission of the author and proper credit given to the author and our publication.

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.
2024 SWNY In-Person Field Crop Congress

Our Field Crop Congress has moved! Join us at Cornell Cooperative Extension of Cattaraugus County for the 2024 SWNY In-Person Field Crop Congress! This program designed for Field Crop Producers will provide the latest research-based information on grain storage installation, emerging pests and diseases, and information about new crops available.

- Economic and engineering considerations of installing a grain storage system.
- Soybean Cyst Nematode and its Impact in NYS
- Ongoing Seedcorn Maggot Research
- Tar Spot Updates for SWNY
- On-Farm Processing of High Oleic Soybeans

Lunch is sponsored by these generous businesses:

NYP
716-296-5531

ADM

THE DETAILS

COST
$10
You can pay online or the day of the event!

LOCATION
28 Parkside Drive, Ellicottville, NY 14731

DATE
Wednesday, January 31, 2024

TIME
10:45 am - 3:00 pm

REGISTRATION
Register by visiting http://tinyurl.com/2024fieldcropcongress or by calling Kelly Bourne at 585-268-7644 ext. 10. Registration is required to plan materials accordingly.

DEC AND CCA CREDITS AVAILABLE!
Let us know at registration that you need credits and be prepared to share your Certification Number.
1.5 DEC credits pending in 1a and 21.
1.5 CEU’s in IPM and Crop Management.

FOR ACCOMMODATIONS
and accessibility concerns, please contact Katelyn Miller by calling 716-640-2047.

Cornell Cooperative Extension is an employer and educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities and provides equal program and employment opportunities.

Join us January 31st in Ellicottville for our Crop Congress. We’re offering DEC and CCA credits! Thank you to NYP and ADM for sponsoring our lunch.

You can register online using the link above or contact Kelly Bourne at 585-268-7644 ext. 10. Registration is $10/person and you can pay online or at the door.
Nutrient Roll Call

By Katelyn Miller, Field Crop & Forage Specialist

There are 17 essential nutrients that every plant needs to survive. Each of these nutrients perform a specific function, and we want to manage them effectively. Carbon, hydrogen, and oxygen are the basic elements necessary for plant growth. They comprise the structural part of the plant. The macronutrients consist of nitrogen, phosphorus, potassium, calcium, magnesium, and sulfur. The micronutrients are boron, copper, iron, manganese, zinc, molybdenum, chlorine, and nickel. Nutrients gain their titles of 'macro' and 'micro' based on how much of the nutrient a plant needs. The quantity a plant needs of each nutrient varies, but each is equally important to the overall function of a plant. N, P, and K are frequently discussed for our crops, but let’s review what function each nutrient performs for plants.

<table>
<thead>
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<th>Macronutrients</th>
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<td>Carbon</td>
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<td>Magnesium</td>
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**MACRONUTRIENTS**

**Nitrogen** is found in chlorophyll and amino acids and is a component of proteins and enzymes. Excess nitrogen creates very dark leaves, excessive growth, and delayed maturity. Plants deficient in nitrogen will have little growth, yellow, drop leaves early, and the plant will contain less protein.

**Phosphorus** is the backbone of energy in the plant, playing a major role in the energy system (ATP) of plants. This nutrient is a component of DNA and plays a critical role in cell membranes. Phosphorus in excess can cause other nutrients like zinc to become deficient. Deficiency symptoms include poor root growth, reduced growth and yield, delayed maturity, and a purple hue on leaves.

**Potassium** plays a role in plant metabolism, photosynthesis, drought tolerance, and winter hardiness. An excess of potassium reduces uptake of magnesium. Deficient plants will curl, develop yellow leaf veins, and experience reduced yields.

**Calcium** is responsible for moving carbohydrates and amino acids throughout the plant. Excess calcium can cause deficiencies in nutrients like boron and magnesium. Plants that are deficient in calcium can have stunted shoots and distorted leaves. Deficiencies are more likely to occur with a low pH.

**Magnesium** is a component of chlorophyll. Excess magnesium can create potassium deficiencies and poor growth. Deficient plants develop chlorosis in older leaves (green and yellow stripes). Calcium and magnesium are often provided by the addition of soil amendments like lime, or by chemical weathering.

**Sulfur** is a component of chlorophyll. In the past, sulfur did not have to be applied because of sulfur deposition from the atmosphere. Too much sulfur can cause necrotic areas to develop on the leaves. Sulfur deficiency symptoms are like magnesium in that chlorosis develops, but on the younger leaves.

**MICRONUTRIENTS**

**Boron** is a component of plant cell walls and reproductive structures. It leaches easily in the soil and affects vegetative and reproductive growth. Excess boron causes necrosis and is less available when pH is above 6.

**Copper** plays a role in chlorophyll and seed production. Too much copper causes necrotic spots on leaves and can even be deadly. Copper deficiency can result in darker leaves and the leaf edges can turn pale.

**Iron** is important for nutrient uptake in the plant. Excess iron can cause deficiencies in molybdenum and phosphorus. Reduced iron uptake can cause leaves to turn yellow.

**Manganese** is a contributor to photosynthesis and respiration. Too much manganese can cause scorching and rolling of leaves. Excess manganese causes chlorosis and crinkled leaves.

**Zinc** is required for the metabolism of plants. Zinc in excess can cause reduced yield and stunted growth. Too little causes small, yellow, and narrow leaves. Symptoms can also be induced by high phosphorus levels.

**Molybdenum** is important to the rhizobia that fixes nitrogen. Its deficiencies resemble nitrogen with little growth, yellowing, and early leaf drop. Excess molybdenum can remain in forage and develop concerns with livestock.

**Chlorine** helps with chlorophyll and photosynthesis. Excess chlorine causes salt injury which stunts plant growth. Plants deficient in chlorine will wilt and have reduced root growth.

**Nickel** works to enable the conversion of urea to ammonium. Deficiency symptoms can cause necrosis of leaf tips. When this conversion does not happen, urea will accumulate in the plant until it becomes toxic, which can kill the plant.

Many nutrients share deficiency symptoms, so you should not assume which nutrients are lacking based on symptoms alone.

For more information about plant tissue testing, reach out to Katelyn Miller at 716-640-2047 or km753@cornell.edu.
Although each of the nutrients are needed in different quantities, they are all equally essential to plant growth.
As one of my New Year's resolutions, I am trying to learn more about finances. I am fascinated by human behavior, and because of that, a friend of mine suggested I read the Psychology of Money by Morgan Housel. The book explores the behavioral aspects of personal finance and emphasizes the impact of individual history on financial decisions. The author explores different historical facts, like war and recessions, and how they impact the mindset of each generation. Moreover, it elaborates on how hard it is to forecast the future to know how our present decisions will impact our lives and businesses.

While reading the book, I couldn't help but draw a parallel between the lessons from an investing perspective and the farming world.

**Below are 5 points from the book that I believe also apply to farming:**

**Behavior over numbers:** This concept suggests that success in managing finances is more about cultivating healthy financial behaviors and habits than focusing solely on numerical knowledge. The author encourages people to understand their financial psychology, make decisions aligned with long-term goals, and avoid getting overly fixated on short-term fluctuations or attempting to predict market outcomes. From a dairy market perspective, fluctuations in milk prices can be overwhelming, but unfortunately, they are out of our control most of the time. Therefore, directing our attention to tracking our production costs and how we can be more efficient can help restore a sense of control.

**Know which game you are playing and focus on it:** Making decisions that align with one’s values and goals is essential. It is tempting to compare ourselves and our operations with the ones of our neighbors, or even get caught up on the new trends we see in magazines, articles, and social media. There are many ways of being successful, and because of that, knowing your values and your operation is essential. Whether you want to expand or maintain your farm size, adopt technology, or even retire from farming, getting other people's perspectives and opinions is valuable. However, ensure you are not losing sight of what is best for yourself, your family, and your business.

**Uncertainty and risk:** Acknowledge the unpredictable nature of financial decisions and the role of risk. Even the most well-planned choices can go wrong, as we cannot predict the future. Unexpected events, such as the COVID-19 pandemic, can completely change the scenarios for which we plan our decisions. Because of that, we must embrace uncertainty and plan accordingly. We should avoid always assuming the best-case scenario (i.e., high milk prices) when planning things. Always leave room for error.

**Time horizon matters:** While there is no way to predict the future, it is essential to consider the long-term implications of financial decisions before making them. A good example is deciding to invest in your farm infrastructure. You will likely need to pay for this investment for a long time, throughout good milk price years, and likely many bad milk price years. Make sure you plan accordingly. Take enough time to plan it and study the implications of a decision. Involve your farm advisors (nutritionists, veterinarians, crop management, etc.), visit people doing similar things, and talk about it with family and trusted ones. You don’t want to rush into a decision you will have to deal with for a long time.

**Adapting to change:** As markets evolve, we must adapt and learn from previous mistakes. Keeping our businesses alive requires staying open-minded, embracing learning opportunities, and maintaining a flexible mindset. It's about adjusting goals, finding new perspectives, and being proactive in uncertainty without compromising our values.

I know farming and investing in the stock market are very different things. However, it’s complicated and frustrating to navigate the dairy market and milk price uncertainty. A successful operation means different things for different people, so comparing your farm with other farms is not always helpful.

Understanding which game you are playing, your values, and keeping your attention on factors within your control can be a game changer for mental health. It allows us to be comfortable with our decisions because it reflects what is important to us in the long term. That said, embracing adaptability and leaving a margin for error is essential for business longevity as we deal with evolving markets and unforeseen challenges.

Warm Regards,
Camila
Join us in Franklinville for the Genesee Valley Winter Grower Meeting on February 7th. You don’t need to be a GVPA grower to attend.

<table>
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<tr>
<th>Time</th>
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<tr>
<td>8:40 am</td>
<td>Sign-in, visit info tables, coffee</td>
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<tr>
<td>9:00 am</td>
<td>Variety Recommendations &amp; Preventing Tomato Diseases</td>
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<td>9:30 am</td>
<td>Industry Updates</td>
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<td>9:45 am</td>
<td>Why Get a Spray License? – Elizabeth Buck</td>
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<td>10:00 am</td>
<td>Break</td>
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<td>10:15 am</td>
<td>Raise Better Flowers: Growing According to Natural Crop Groupings</td>
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<tr>
<td>11:00 am</td>
<td>Panel Discussion and Q&amp;A – Growing Flowers and Vegetables for FLPA</td>
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<td>12:15 pm</td>
<td>Adjourn &amp; Lunch (Must RSVP if attending lunch.)</td>
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**FLOWERS & VEGETABLES**

- Elizabeth Buck, CCE Vegetable Specialist
  - Hear results from recent trials of asparagus, sweet potato, broccoli, and potatoes. Learn which tomato varieties best resist early blight, late blight, septoria, & leaf mold.

**LIVESTOCK AND FORAGE**

- Optional lunch courtesy of the Genesee Valley Produce Auction
- Sign in, visit info tables
- Preventative Livestock Health Care
- Amy Barkley, CCE Livestock Specialist
  - Amy will lead the hands-on discussion of the best management practices for deworming, vaccinating, and tagging of livestock species including sheep, goats, and cattle.

You can RSVP using this paper registration or by calling CCE Cattaraugus at 716-699-2377. RSVP is required for accurate food and planning counts.

**REGISTRATION FORM**

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<tr>
<th>Registrait Name</th>
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You can RSVP to CCE Cattaraugus by phone at 716-699-2377 between 8:30 and 4:00 weekdays or return a paper registration (see below).

January 2024 - 7
STANDARD OPERATING PROCEDURE FOR LISTERIOSIS
This article is originally from Cornell’s Sheep Program Website. The following information is for educational purposes only. Any treatment protocols should be developed while working with your veterinarian for a confirmed diagnosis and treatment plan, including the use of antibiotic prescriptions.

Listeriosis occurs from time to time in the Cornell Sheep flock. Sheep are far more susceptible to listeriosis than are cattle. Prompt treatment of sheep with listeriosis and timely euthanasia of animals that do not respond to treatment are imperative.

SIGNS

Neurologic form - a selection of the following:
Depressed, off feed, circling, ataxic, hang head or twist head or neck to one side, drool, tongue hangs out one side of mouth, cud stuck in cheek, ear droop, can't close eyelid on one side (thus may appear to be blind), corneal ulcer from exposure, dropped jaw, unable to rise, convulsions. Some are just found dead.

Septicemic form:
Abortion or death of late pregnant ewes. Lambs (infected in utero) through umbilicus, from ewe's milk, or from eating spoiled silage) will be depressed, maybe with diarrhea.

TREATMENT

DO NOT SEND FOR SLAUGHTER. By law, animals with listeriosis may not be slaughtered for meat. Therefore affected animals must be either treated immediately or euthanized. Wear gloves/wash hands if the head is handled and whenever correcting dystocias or removing aborted fetuses or placentas. LISTERIOSIS IS ZOONOTIC. RABIES MIGHT BE PRESENT INSTEAD. As of July 11, 2023, all antibiotics, including the ones below, require a veterinary prescription. If you currently have antibiotics still in inventory at your farm, this treatment schedule can be used as a guideline.

- Treat with thiamine also (10 mg/kg at least twice a day) unless a classic severe unilateral facial nerve paralysis is present - polioencephalomalacia can resemble listeriosis. Down adults should receive 60 mL calcium gluconate. If late pregnant, treat for pregnancy toxemia but wear gloves when dosing with propylene glycol.

Pen separately so food and water will be accessible and other sheep will not trample the animal. If 24 hours after beginning treatment the animal is unable to sit upright or if it is eating and drinking nothing, euthanize or call for veterinary evaluation. If a veterinarian has already diagnosed listeriosis and the sheep has not responded to treatment in 24 hours, euthanize with captive bolt (or request barbiturate euthanasia by a veterinarian if confirmation of the listeria diagnosis or exclusion of rabies is required).

PREVENTION

Avoid feeding spoiled silage. If the TMR has heated, discard instead of feeding. The organism multiplies in silage that did not ferment properly or where exposure to air allows the pH to rise. Listeria also grow well at cold temperatures, so winter conditions provide no protection. Clean manger of all uneaten silage or TMR daily. Remove this feed from the pen entirely if possible, otherwise add bedding so sheep and lambs are less apt to eat the old silage. Rear orphans artificially so they don’t pick at spoiled silage on the ground. If forage quality and conditions are not ideal, use silage preservatives to hasten acidification of the silage. Protect AgBags and baylage from anything that would put holes in the plastic wrapper. Avoid incorporating dirt into the forage at the time of harvest - the listeria organism is commonly found in dirt.

For more information on sheep-related topics, stop by Cornell Sheep Program website at:
https://blogs.cornell.edu/newsheep/

There is no cure for this disease - only prevention. The best way to prevent listeriosis is through management, and treatment should be reviewed with your vet.
Katelyn Walley will be presenting on February 15th as part of her Value Added Dairy project. This webinar is free to attend and will be recorded!

“Putting the 4 P’s of Marketing to Work for Your Diversified Dairy”

Join Farm Business Management Specialist, Katelyn Walley and Dairy Management Specialist, Margaret Quaassdorff for this free webinar to learn simple and important marketing ideas for your dairy business. Marketing is one of the most important considerations for any type of diversified dairy business, particularly those with interests in on-farm processing. We’ll help you use product, prices, place, and promotion to plan for your farm’s growth and change.

The North American Manure Expo is coming to New York for the first time this summer on July 17th & 18th. We hope to see you there!
Tips & Tricks For Feeding Laying Hens  
By Amy Barkley, Livestock Specialist

Over the past month, I’ve been asked about feeding laying hens both now and in the summer months. This article shares some of my thoughts on feeding these feathered critters including guidelines for feeding and information about alternative feed sources (kitchen scraps and pasture).

**WHAT DO I FEED LAYING HENS?**

For a small pastured laying flock, my recommendation is to not look too much into the nutrition aspect of their whole ration unless you’re considering feeding to achieve a specific parameter like a specific egg size, nutrient density, or shell strength or are mixing your own diets. There are many really good complete feeds on the market that achieve optimal nutrition for laying hens. The highest quality ones are those which list the individual grain ingredients, rather than including things like “plant by-product” or “grains” or “grain byproduct” on the label. The mills that formulate with specific grain ingredients are going to have the most consistent quality. Those that have the other products are still absolutely fine to feed, but there may be more nutritional variation from batch to batch.

**General guidelines when it comes to nutrition:**

- **Laying hens need a complete feed,** meaning that it’s formulated to be their sole source of nutrition.
- **Protein content can range a little bit,** but according to the resource, Commercial Poultry Nutrition 3rd Edition, hens need the following protein by age:
  - 18-32 weeks: 19%
  - 32-45 weeks: 18%
  - 45-60 weeks: 16.5%
  - Older than 60 weeks: 15%
- **Flocks that are of mixed ages do fine on a diet with an average protein content somewhere in the middle.**
- **Find a diet formulated with amino acids in addition to protein containing grains,** since this makes for consistent egg size and less wasted indigestible protein. Organic feeds don’t use additional amino acids, but may have a higher overall protein content than conventional feeds to compensate.
- **The feed should provide about 4.2 grams of calcium/day,** and most laying feeds meet this. However, offering supplemental large particle calcium free choice in the form of oyster shells will help maintain egg quality, especially in times of stress and as the birds age. Many companies don’t add large particle calcium to complete feeds because it’s extremely damaging to their pelleting and crumbing equipment.
- **The general rule is that hens should be fed between 1/4 to 1/3 pound of food per hen per day.** Free choice feeding is ideal, but if you’re looking to feed what can get eaten up in a day, aim for this measure. Formulated diets contain salt to restrict intake to what hens’ bodies need, which reduces overconsumption. Production strains like Leghorns and Production Reds are going to eat closer to that 1/4 pound in ideal conditions, whereas the heavier heritage breeds will eat closer to 1/3 pound. Winter feeding increases energy needs, which means hens will likely eat more then than they do in better weather.

**SUPPLEMENTS AND SNACKS**

Many folks supplement calcium by feeding dried, crushed eggshells back to their hens. This is absolutely fine, and a great way to recycle nutrients. That said, the hens will still need supplemental oyster shells for optimal eggshell quality. Kitchen/garden scraps are another common supplement for hens, as are scratch grains. These treats should make up no more than 10% of the feed offered by weight, or you’ll end up with smaller/fewer eggs and a delay coming into lay for the younger birds. Hens that consume more than 10% of their diet in scratch grains tend to use the extra carbs to put on fat, which can cause mobility issues as they...
The day will feature hands-on, in-person training suitable for dairy producers and employees of all skill areas to meet FARM training requirements.

We’re still coordinating details for our March FARM Animal Care Training, but we encourage you to put it on your calendars!

**Pasture Nutrition:**
Many poultry keepers free range their hens on pasture as a way to decrease feed needs and increase egg nutrition. However, it’s not a panacea. Research indicates that if you restrict hens’ feed requirements by more than 10% to force them to forage to make up the difference, you start seeing drops in egg production and egg size. So, while egg nutrition will improve because the hens are getting more carotenoids and other vitamins/minerals from the forage, their lack of gut fermentation means they’re not getting much else out of it; the plant starches and proteins are too complicated for their monogastric gut to break down efficiently. Therefore, to keep production and egg size up, feed your hens free choice complete feed, and whatever they get from the pasture they get. As a rule of thumb, chickens tend to eat the younger sprouts and seeds from forages, so select which pasture to provide them that way.
It is a common practice on 70% of dairy farms to move cows to a separate maternity area before calving (USDA, 2014). About one-third use individual maternity pens and two-thirds use group maternity pens (USDA, 2014). Maternity pens are often utilized as they allow for personalized care of the calving animal and calf. Both individual and group-style maternity pens can be successful if appropriately managed.

With group maternity pens, it is essential to minimize social stress as much as possible, as competition can occur in this setting. Cows have been shown to begin seeking privacy from herd mates around 4 hours before calving (Creutzinger et al., 2021). Ideally, if a farm moves cows to a new pen for calving, this should be done before labor starts. Moving the animal during labor can extend labor time, which could increase the risk of dystocia (Proudfoot et al., 2013). Mixing heifers and cows in a close-up dry or maternity pen can cause unnecessary stress for the heifers. One study showed that in mixed-group housing during the transition period, first lactation animals are displaced from the feed bunk more frequently (Neave et al., 2017). Separating heifers and cows for the entire transition period, meaning three weeks before and three weeks after calving, can help alleviate added stress for the heifers.

Stocking density in the pre-fresh pen is very important. Dry matter intake naturally decreases before calving, so it is essential to give cows adequate space at the feed bunk so feed intake does not fall even more. It is recommended that the feed bunk be stocked at 80% or less, meaning when every cow is eating, there should still be 20% of space left; this should equal about 0.76m per cow (Nordlund et al., 2006). Thirteen m² is needed per cow in the resting area, whether cows are being housed in group or individual maternity pens (Proudfoot, 2019).

Studies have shown that cows seek privacy during calving, which may be hard to do in group maternity pens (Proudfoot et al., 2014), so an individual maternity area may be preferable if a cow cannot separate herself. Pushy or nosy cows may cause unnecessary stress for a cow during calving if they are in a confined area. Calves may also benefit from individual maternity pens rather than group pens. Individual pens can offer protection for the calf from exposure to pathogens from other dams and also prevent cross-suckling. Similar to group maternity pens, it is still important to minimize stress in individual pens. Therefore, cows should be moved to an individual maternity pen before labor starts and not during labor if possible.

Some good management practices are the same, whether a maternity pen houses one cow or multiple cows. Keeping bedding clean and dry is of utmost importance. Calves are born with little to no immune defense, so if they are born into a dirty environment, they are more likely to pick up a disease. Even though cows typically stop eating a few hours before labor, feed should be available at all times to encourage the cow to eat after calving. Fresh, clean water should also be available throughout calving, and offering an electrolyte supplement immediately after calving may be considered.

When designing calving areas, it is easy to design them for an average calving month. However, it is common for farms to experience swings in calving. For example, farms may have more cows calve in late spring or early summer because of reproductive troubles during heat stress. Because of this, calving areas should accommodate at least 120% of the regular calving rate (Cook, 2019).

When managing calvings, a farmer must also consider how long a cow will remain in the maternity pen after calving. It has been shown that allowing cows to stay in the maternity pen for two days after calving increases lying and feeding time, giving them a good jump start in their lactation (Campler et al., 2019). This may not be easy depending on the parlor setup and space availability, but it is a good idea to consider.

Individual maternity pens may be more beneficial as they allow for less competition around labor, and a less risky environment for the calf. Wherever cows calve on your farm, ensure that it is in a clean environment with ready access to feed and water. If managed well, both individual and group maternity pens can be successful.
Winter Beef Webinar Series

Understanding Beef Diseases and Vaccinations that Can Prevent Them
Feb 13, 2024 06:30 PM
Register here: http://tinyurl.com/3n37htz9

Raising healthy and productive beef animals is key to the success of your beef operation, regardless of the size. Join us on Tuesday February 13, 2024 at 6:30pm to learn about common beef diseases and ailments and what vaccines maybe used to prevent them. In addition to covering common beef diseases, this webinar will also discuss diseases caused by ticks. Clarifying the differences between types of vaccines: modified live, versus killed, as well as, explain how vaccines differ from bacterins. Guest presenter is Dr. Shannon Carpenter, D.V.M., Field Veterinarian with NY State Agriculture and Markets.

Getting Feeder Calves Off to a Good Start: Weaning and Backgrounding
Feb 20, 2024 06:30 PM
Register here: http://tinyurl.com/Sydsun4f

Livestock, Dairy and Equine Educator from Orange County CCE, Grace Ott, will join us to review the importance of adding value to your feeder cattle. Ensuring the success of your feeders’ future begins with getting them off on the right "hoof". This webinar will share tips and strategies related to weaning and backgrounding cattle.

SWNY Agribusiness Service Provider Directory Reference Expanded

Based on your requests, our team has compiled a list of farm service providers to help you locate additional experts! The list now contains: equipment rental companies, equipment sales/service/repair, farm fence installers, farm stores, feed mills, fertilizer & lime dealers, field & forage seed dealers, meat processors, sheep shearers, tax preparers, and veterinarians.

You can visit the following website to view the directory pages: https://swnydlfc.cce.cornell.edu/resources.php

For printed copies, contact Amy Barkley
amb544@cornell.edu
(716) 640-0844

We hope to see you for the beef webinar series! If you need assistance registering, contact Amy Barkley at amb544@cornell.edu or 716-640-0844.

Our SWNY Agribusiness Service Provider Directory was funded by American Farmland Trust’s Farmland for a New Generation Initiative!
Basics of Due Diligence on an Agricultural Parcel

**Shared with permission from Farm Commons, adapted by Katelyn Walley, Farm Business Management Specialist**

Are you trying to learn more about a parcel of land before renting or buying? Or researching the land you are currently on before beginning a new farm endeavor? Wherever you’re coming from, understanding if a piece of land is right for your farm business goals is an important undertaking. The process of researching whether a specific piece of land will meet your needs (from a legal perspective) is called “due diligence.” In this guide, we will go through some of the questions any farmer or rancher will want to explore in due diligence research and the rationale behind those questions.

**How can due diligence research increase my resilience?**

Land is enmeshed in a network of relationships. Farmers and ranchers are attuned to many of these relationships, such as which crops thrive in the soil, where the water flows, and what the neighbors are like. Buying or renting land may also bring relationships with banks, landlords, and/or investors. And, importantly, there are legal relationships: boundary lines, easements, additional leases, and other uses or access legally permitted or disallowed on the land.

These legal relationships are the easiest to forget when moving forward with a new land project. Imagine you’re looking for land to rent or buy. You’ve just visited a property within your price range. The location is great, the soil is rich, and there’s already a storage shed on site. You’re thrilled! This is a hard moment to remember to pump the brakes and ask, “Do the easements, boundary disputes, or zoning prohibitions here support my future vision for this land?” Or perhaps you’ve been on your land for years, but you have an exciting grant opportunity that could help you build the workshop space of your dreams. Do the legal characteristics of your land support the new project?

These are the questions that due diligence requires. Knowledge is power. The information you gather through due diligence will empower you to make a decision that is truly in service of your dreams and goals— even if that decision means walking away from land that initially looked perfect for you, or deciding to petition the zoning board to allow a project on your land.

Below, we offer some questions that can guide your due diligence research. Whether you are looking to buy land, lease, or understand the land you already own, the questions below will help you find a path forward that is in line with your business priorities.

**Will the zoning code allow me to do what I want on this land?**

Generally, the zoning map of a town, city, or county will section the area into zones of use. There are accompanying rules (usually called the zoning code or land use ordinances) set by the local governing body that describe what kinds of uses are allowed or disallowed in each zone. The idea here is that parcels of land near each other are restricted to certain uses or activities that are compatible— for example, allowing houses, schools, and parks in a residential zone but keeping noxious factories in a manufacturing zone. Even if the land you hope to use is in an agricultural zone, you may find that the ordinance disallows or does not explicitly permit non-farm activities, such as weddings, workshops, Airbnb, or festivals. In that case, you may need to seek a variance or special use permit from the zoning board or, alternatively, advocate for changes to the code. Deciding to buy or rent land with a zoning code that is ambiguous or incompatible with your dreams is a matter of personal risk assessment. Moving forward with a project on your land that is not explicitly allowed in your zoning code is a risk some farmers can tolerate while others cannot.

**Where are the property lines?**

Before planning any modifications or construction on your property, it is important to know where the property lines are. Any construction or changes to the property will need to comply with setbacks (the area between a structure and the property line in which building is prohibited). Accessing an updated survey from the land records office, or hiring a surveyor yourself, is the best way to ensure you know where the property lines are. This can be especially helpful in rural sites where the property lines are often not clearly marked or questioned.

Once you know where on the physical earth the property line falls, you can more easily spot issues that might lead to conflict, decreased property value, or liability issues down the road. For example, a neighbor may have unintentionally built a shed on your property, thinking the boundary line was in a different place. Their continued use of that shed or building could spell liability issues you’ll want to be aware of before moving forward. On the flip side, you may see the perfect area to raise mushroom logs or set up an agroforestry system— but that spot may be split between the property in question and the neighboring property. If so, you will want to know this! However, confidence in boundary lines is the exception...
rather than the rule. Usually, there is no updated survey on file, and hiring a surveyor is not in the budget. Many landowners (prospective and current) depend on existing markers like tree lines, fence lines, and the impressions of neighbors. Yet, as many farmers find out years later, these guidelines may not be accurate. Property boundaries are often an exercise in risk management.

**Am I comfortable with the neighbors?**
While not specifically a legal relationship, assessing your compatibility with the neighbors is a critical part of due diligence! You may be unable to meet the neighbors before committing to a purchase or lease, but don’t let that stop you from discovering what you can. Is there signage on their property that gives you concern? Are there indicators of chemical use that might impact your own operation through chemical drift? Is there loud machinery on the property? Or other influences that may interfere with your business plans and/or quality of life, such as sewage, runoff, or frequent traffic? This research is tricky because, ultimately, you are judging a book by its cover. Paying attention to how you feel about what you learn about the neighbors and assessing if you need more information before moving forward will help you feel confident in whatever decision you make.

**Are other people using the land?**
This is an important question to dig into because it will help you assess where you might find yourself in a legal battle down the road. The best way to gather information here is to walk the property thoroughly, making notes of any places where you notice signs of human activity. Are there signs that someone has been dumping garbage in the backwoods? How about old gardens, tire tracks, or signs of clear-cutting? It is very possible the current owner knows the history of all the activities you see. But where they don’t, more research is needed. There may be undocumented agreements with the neighbors or illicit land use that could spell liability issues and land disputes for you later.

**Are there any easements on the property?**
Most land is encumbered in some way, meaning there is a legal agreement that gives people other than the land owner(s) access to the land or limits what the land owner(s) can do with their land. Easements are one of the most common types of encumbrances. For example, many properties will have utility easements that allow utility companies to access parts of the property to maintain pipes, cables, wires, etc. This might involve moving earth, razing structures, or spraying chemicals. Many farm properties may also be subject to conservation easements, which preserve the land for agricultural use but may make it difficult for farmers and ranchers to do any development on their property that is not strictly agricultural (such as building a workshop space). It’s good to know where these easements are on your property, and the specific terms of the easements, when committing to a land project, lease, or purchase. Easements are generally documented at the county land records office (or your local equivalent) and available for you to review in person or online.

**Identifying the next step**
Due diligence is all about seeing if the land’s legal character matches your goals. This means doing research to identify the costs, benefits, and responsibilities associated with the intended parcel and balancing them with your uses, now and in the future. To that end, it might be helpful to connect with what, specifically, you are doing or hope to do with land!

Try this:
Take 5 minutes to write down everything you are doing or think you might want to do on the land. Here are some prompts to get you started:

- Do you want to expand the fields or pasture space in the future?
- Build new structures?
- Are you hosting workshops, AirBnb guests, or other forms of agritourism?
- If you own or plan to purchase land, will you pass the land on to family or do you hope to sell it when you retire?

Once you have your list, go through each item and place a star next to the plans/dreams that feel most critical to you. In other words, highlight the items on your list that would you not sacrifice, perhaps because they are vital to your profitability or are central to your quality of life? Identify 1-2 questions below that feel crucial to answer to support your priority plans:

- Will the zoning code allow me to do this activity?
- Where are the property lines for where I want to conduct this activity?
- Am I comfortable with the neighbors? Will they be comfortable with this activity?
- Are there any encumbrances on the land that would interfere with this activity?

Moving forward, consider working with an attorney with land use expertise to conduct the due diligence process for or with you.

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You might have heard Katelyn say “Just because you can, doesn’t mean you should” and it can apply to land purchases as well. Land is king, but it can cause a lot of headaches.

For more information on evaluating a land parcel for your needs, please contact Katelyn Walley at kaw249@cornell.edu or 716-640-0522.

January 2024 - 15
Dairy Market Watch

December 2023

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

Dry Products: Low, medium and high heat nonfat dry milk (NDM) prices held steady throughout the regions. Mexican demand has slowed for the holidays, as processors say trading activity was quiet on the whole. Dry buttermilk prices were steady to higher.

Cheese: Despite end-of-year holidays, cheese production schedules remained strong in the West and East but were lighter in the Central region. Due to the fact that Class I orders were largely stalled because of school closures, processors in the Northeast reported robust production schedules. Block cheese inventories are growing week over week.

Butter: Retail butter demand was strong to steady for the finishing stretch of 2023. Food service demand reportedly remains light in the east region. Stakeholders indicate inventories are more balanced in the west region than the central or eastern regions of the US. Unsalted and salted butter inventories are comfortable to lighter in the east region. Cream supplies are plentiful to ample throughout the country.

Fluid Milk: The holiday season has brought ample fluid milk, cream and condensed skim availability throughout the nation. Mild winter weather has continued to keep milk and milk component levels increasing. Bottling orders lightened earlier than contacts had expected this year.

Spot milk prices reported by cheesemakers in the Midwest reached a recent low of $8-under Class as $2-under Class was the top end of the range. Cheesemakers say they are having to turn away offers.

Dairy Commodity Markets (Excerpt from USDA Dairy Market News – Volume 90, Report 52, December 29th, 2023)

<table>
<thead>
<tr>
<th>Milk Component Prices</th>
<th>Milk Class Prices</th>
<th>Statistical Uniform Price &amp; PPD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Month</strong></td>
<td><strong>I (Boston)</strong></td>
<td><strong>II</strong></td>
</tr>
<tr>
<td>Nov 22</td>
<td>$3.37</td>
<td>$2.53</td>
</tr>
<tr>
<td>Dec 22</td>
<td>$3.15</td>
<td>$2.65</td>
</tr>
<tr>
<td>Jan 23</td>
<td>$2.77</td>
<td>$2.90</td>
</tr>
<tr>
<td>Feb 23</td>
<td>$2.71</td>
<td>$2.36</td>
</tr>
<tr>
<td>Mar 23</td>
<td>$2.73</td>
<td>$2.41</td>
</tr>
<tr>
<td>Apr 23</td>
<td>$2.70</td>
<td>$2.56</td>
</tr>
<tr>
<td>May 23</td>
<td>$2.75</td>
<td>$1.80</td>
</tr>
<tr>
<td>Jun 23</td>
<td>$2.76</td>
<td>$1.51</td>
</tr>
<tr>
<td>July 23</td>
<td>$2.79</td>
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</tr>
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<td>$2.08</td>
</tr>
<tr>
<td>Sep 23</td>
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<td>Oct 23</td>
<td>$3.71</td>
<td>$1.04</td>
</tr>
<tr>
<td>Nov 23</td>
<td>$3.46</td>
<td>$1.32</td>
</tr>
</tbody>
</table>

November Utilization (Northeast): Class I = 30.8%; Class II = 25.0%; Class III = 29.6%; Class IV = 14.6%.

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.

Friday CME Cash Prices

<table>
<thead>
<tr>
<th>Dates</th>
<th>Butter</th>
<th>Cheese</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/1</td>
<td>$2.65</td>
<td>$1.52</td>
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<tr>
<td>12/8</td>
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<td>$1.58</td>
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<tr>
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<td>$2.49</td>
<td>$1.52</td>
</tr>
<tr>
<td>12/22</td>
<td>$2.54</td>
<td>$1.39</td>
</tr>
<tr>
<td>12/29</td>
<td>$2.66</td>
<td>$1.40</td>
</tr>
</tbody>
</table>

November’s $/Gallon (Albany) was $1.74. This is a slight decrease from October’s $1.78, but an increase from July’s low of $1.52.
According to the USDA National Agricultural Statistics Service (NASS) Milk Production report, the milking cow herd was estimated at 9.37 million head in October, down 42,000 from October 2022 and 6,000 head from the previous month. The average milk production per cow was 1,997 pounds, about 1 pound less than October 2022. As a result of both a lower milking herd and yield, milk production totaled 18.710 billion pounds in October, about 0.5 percent lower than last year. Most of the milk production reductions were in the Western States, while milk output in the rest of major production States registered mainly year-over-year yield improvements.

The farm milk margin above feed costs reported by the Dairy Margin Coverage program was $9.44 per cwt, $1.27 lower than last year and 6 cents below the $9.50 threshold that triggers payments for dairy producers who choose the highest levels of coverage.

Notice in the chart above that in the past the U.S. milk cow herd usually responded to changes in prices and feed costs with a lag of several months, with the length of the lag affected by factors other than feed costs, such as the administrative and operational costs incurred at the farm level. For example, the index of prices paid by farmers for commodity and services, interest taxes, and wage rates for October was estimated at 138.8, up 0.2 points from last October (USDA, NASS, Agricultural Prices report).

The 2024 milk cow inventory projection is decreased by 15,000 head to 9.360 million head, while the forecast for milk per cow is adjusted down by 80 pounds to 24,465 pounds. Therefore, the projection for 2024 milk production has been lowered to 229.0 billion pounds, 1.0 billion lower than last month’s forecast.

Domestic use is adjusted down from last month’s projection. On a milk-fat basis, the domestic use forecast for 2024 is decreased by 0.5 billion to 224.6 billion pounds. On a skim-solids basis, the forecast for domestic use is lowered by 0.6 billion to 182.0 billion pounds.

Lower cheese prices are expected to persist into 2024, leading to a downward adjustment in the annual price forecast to $1.725 per pound (-10.0 cents). Meanwhile, the 2024 price for butter is adjusted higher to $2.595 per pound (+0.5 cent). The dry whey price forecast is revised upward to $0.400 per pound (+2.5 cents), while the NDM price is increased to $1.175 per pound (+0.5 cent).

Compared to the previous month’s projection, the Class III milk price forecast for 2024 is adjusted down 85 cents to $16.85 per cwt. The Class IV milk price projection for 2024 is $18.90 per cwt, 5 cents higher. The all-milk price forecast for 2024 is $20.25 per cwt, a decrease of 55 cents from last month’s forecast.
It’s that time of year when our region faces weather related challenges! These range from high winds, heavy snow loads, power outages, and more. Because these events are challenging and emergent, it’s difficult to deal with all of the requests you might receive to report damages and weather related impacts. However, it’s important for many reasons, and there are different routes of reporting you can take to best suit your needs.

Farms are encouraged to DOCUMENT AND SHARE any impacts the weather may have had on their home or business. This could include structure damage, crop loss, inventory loss due to power outages, damage to equipment or fencing, and more.

If your farm experienced any sort of damage, please reach out to any of the folks listed below (or all of them). The more impact information that is collected, the greater the likelihood of a disaster declaration which can bring vital emergency support and awareness.

**Reporting Weather Related Impacts** (For your home or farm business)

- First, ensure that all the people and animals on your farm are safe, and that there aren’t any unsafe working conditions created because of the weather (check your structures!). **If there’s an emergency, call 911 - don’t try to manage it all on your own.**

- Second, document all negative weather impacts for your farm and their estimated financial cost. Take photos, make estimates, and put it all in a safe place.

- Reach out to your insurance providers - farm, vehicle, crop, etc. to initiate the claim process as needed.

- Then, share your farm’s damage with any (or all) of the ag support agencies listed below. We all work together to collect storm damage information and funnel it up to Ag and Markets which can initiate a natural disaster declaration.
  - Your local Cornell Cooperative Extension Association Office.
    - Allegany: 585-268-7644
    - Cattaraugus: 716-699-2377
    - Chautauqua: 716-664-9502
    - Erie: 716-652-5400
    - Steuben: 607-664-2301
  - Any of our SWNYDLFC Team members (calls/emails/texts/site visit requests all ok)
    - Katelyn Walley: 716-640-0522

- Amy Barkley: 716-640-0844
- Camila Lage: 607-422-6788
- Katelyn Miller: 716-640-2047
- Kelly Bourne: 585-268-7644 ext. 10
- Your county USDA/FSA service center.
  - Allegany: 585-268-5133
  - Cattaraugus: 716-699-2375
  - Chautauqua: 716-664-2351
  - Erie: 716-652-1400
  - Steuben: 607-776-7398
- Your county farm bureau manager
  - Region 1: Tim Bigham: 716-474-6585

This is also a good opportunity to revisit your farm’s emergency management plan and communications. A great place to start is by checking in on the follow questions:

- Do you have enough generators to meet your farm’s electrical needs in the case of an extended power outage? Is everyone on the farm trained in operating them safely? Are they easily accessible?
- Is there a plan in place for monitoring and clearing snow load on barn structures?
- Do you have a useful and stocked first aid kit? Is it readily available? Are there trained staff?
- Is there adequate shelter for animals, including ones that may spend most of their time outside? Do you have extra feed and readily accessible forages in the case of delivery delays? How about health supplies?
- Is there a routine for barn inspection and maintenance? This might include checking side wall curtains, repairing roof or siding holes, ensuring door functionality, trimming any trees near structures, and ensuring that all of the beams and poles are structurally sound.
- Are there emergency plans in place to thaw water or ensure there’s enough water easily accessible for livestock (and people) needs? Are there hoses that need replaces or water lines that need new heating elements? Are electrical cords out of animal reach and not in need of repairs?
- Is the farm equipment prepared for cold weather? Consider batteries, oil, anti-freeze, fuels, tires, etc. and don’t forget to check your snow removal equipment!

Most importantly, stay warm and safe out there this season and don’t forget to take care of yourself! And, most most importantly, GO BILLS!

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You can report storm damage to your local CCE office, any of our SWNYDLFC staff, Farm Bureau, or your USDA service center.
If you’d like to sign up for our Value Added Dairy Tour, please contact Katelyn Walley via phone at 716-640-0522 or email kaw249@cornell.edu.

We hope you’re able to join our overnight tour! This will be a low cost way to see dairy innovation on the other side of the state and to spend time with your peers.
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