Corns, 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.

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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.

2 - June 2022
I can remember sitting in my Dairy Management class at the University of Minnesota in 2012 and learning that a good milk fat benchmark for a Holstein herd was 3.75%. Fast-forward 10 years and we have seen this number rapidly increase, with 2021 seeing an average milk fat of over 4.0% for the first time.

The trend is continuing into 2022 with an average bulk tank fat test of 4.25 in January, up 0.13% from last year’s January average. The incredible strides in milk fat are related to four main factors:

1. Improved ration formulation with an emphasis on feeding rumen-protected fatty acid products and focusing on fatty acid digestibility.
2. Improved forage quality and fiber digestibility, which allows you to feed higher fiber diets without sacrificing available energy for milk production.
3. Improved feed and bunk management to maximize cows’ time at the feed bunk.
4. Improved genetic selection for milk fat percentage, mainly due to the use of the Net Merit $ selection index, which puts heavy emphasis on milk fat and protein yield.

Increased demand for high-fat dairy. The improvement in the average butterfat test coincided with increased consumer demand for high-fat dairy products, particularly butter, in recent years. One contributor to this is the changing public perception of saturated fat, particularly after the now-famous book "The Big Fat Surprise" by Nina Teicholz was published in 2014, which critiqued the long-held belief that saturated fats were the primary dietary risk factor for heart disease and showed that the science suggested that sugar intake was a much larger contributor.

The increased demand for butter has been reflected in increasing Class III milk prices over the past decade. I foresee this demand for butter continuing to rise as consumers better understand the health benefits of butter compared to vegetable-based alternatives. While the market improvements over the past decade have been amazing, it puts even more pressure on farmers to keep pace and capitalize on high premiums. To do this, we must understand the factors that influence milk fat production.

Adding fat to your nutrition program. Milk fat comes from two sources: either directly from the fat present in the diet and body reserves (we call this ‘preformed’ fat) or from synthesis in the udder (we call this “de novo” - meaning "new" - fat). There are milk testing and academic labs that can test the composition of fat in milk to determine the percentage of milk fat from each source. This information can be valuable to farmers and nutritionists when it comes to managing their nutrition programs.

Low concentrations of preformed fat (>30% of total fatty acids) indicate that the dairy could benefit from feeding supplemental fat, particularly saturated fats like palm oil, rumen-protected fat supplements or tallow. Right now, these sources are very expensive, with tallow prices being at an all-time high, so any supplemental fat feeding should be done in the context of income over feed costs. Several commercial products exist that can provide excellent courses of rumen-protected fats. Fatty acid products made of a blend of palmitic and stearic acid tend to be more digestible than products made up of a single fatty acid. De novo fatty acids should make up at least 23% of total fatty acids. Increasing the amount of de novo fatty acids is a cheaper approach to modifying milk fat because modification of de novo fat is heavily influenced by rumen fermentation. The production of a specific fatty acid (trans-10, cis-12 C18:2) by rumen microbes leads to direct inhibition of milk fat synthesis in the udder.

This fatty acid is increased in the rumen during times of low rumen pH and high rumen unsaturated fatty acid concentration. Factors such as high diet fermentability (through feeding highly digestible feeds), high unsaturated fatty acids, poor bunk management, and poor feed consistency are all risk factors for the production of this fatty acid, and therefore risk factors for decreases in milk fat.

Strategies for managing feeding. Feeding management strategies that increase the number of visits a cow makes to the feed bunk can have major benefits on de novo fat synthesis. Research has shown that to improve milk fat production substantially: Increase feeding frequency from 1 to 2 or more times per day.

- Increase feeding frequency from 1 to 2 or more times per day
- Push up feed 7 to 12 times a day
- Reduce stocking density below 110%.
- Increase bunk space to at least 24 inches per cow.
- Feed at a consistent time each day.

In this current butter-loving market, it is important to focus on these strategies to continue to improve your herd’s butterfat test.
Replacing dairy cows in the dairy herd is a major cost for the operation. The 2018 USDA/NAHMS Health and Management Practices on U.S. Dairy Operations reported that the average cow removal rate in the Northeastern U.S. was 31.4 percent plus a 6.2 percent cow death rate for a total of 37.6 percent cows permanently removed from herds per year.

Cows removed from the dairy herd for biological reasons comprised 73.2 percent of the total removal rate (2018 USDA/NAHMS Report). Considering the cows population of 9.4 million (ERS/USDA, 2021), average removal rate, and incidence of diseases, over 2.3 million cows were removed from dairy herds annually due to management diseases that can be largely prevented or reduced.

The most common management diseases that occur during the cow's transition period on US dairies are lameness, mastitis, retained placenta, metritis, ketosis, hypocalcemia, and left-displaced abomasum. Some of these diseases have a small effect on the biological removal rate or are not reasons for removal from the herd at all. Although these cows are kept in the herd, they incur costs for the treatment and their future performance is diminished.

The following table summarizes financial losses per incidence for the most common transition period diseases on US dairies that are discussed in this article.

<table>
<thead>
<tr>
<th>Transition period disease</th>
<th>Losses per case ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left-displaced abomasum (LDA)</td>
<td>432 - 639</td>
</tr>
<tr>
<td>Mastitis</td>
<td>325 - 457</td>
</tr>
<tr>
<td>Retained placenta (RP)</td>
<td>150 - 389</td>
</tr>
<tr>
<td>Metritis</td>
<td>171 - 386</td>
</tr>
<tr>
<td>Lameness</td>
<td>120 - 333</td>
</tr>
<tr>
<td>Hypocalcemia</td>
<td>246 - 300</td>
</tr>
<tr>
<td>Ketosis</td>
<td>111 - 232</td>
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</tbody>
</table>

Table 1. Financial losses per incidence caused by common transition period diseases in dairy cows.

The losses estimated in Table 1 consist of direct and indirect costs. The direct costs are expenditures including veterinarian's and manager's labor, medications, and supplies. The indirect costs or losses that occur include non-saleable milk, reduced milk production, reduced reproductive performance, increased risk of culling, incidence of other diseases, and reduced animal welfare.

**Left-Displaced Abomasum (LDA)** - appears when the abomasum is filled with gas and subsequently trapped by the descending rumen to the left side of the abdominal cavity. Left-displaced abomasum is the predominant type of displaced abomasum in the US. Most of the LDAs occur within 30 days after calving (80 to 90 percent), and 52 to 86 percent within two weeks after calving (Shaver, 2019). Two decades ago, the costs of LDA were estimated at a range of $250 to $400, depending on whether surgery was needed (Geishauser et al., 2000). Recent research indicates that the cost of a clinical case increased about 50 percent, ranging between $432 for primiparous and $639 for multiparous cows (Liang et al., 2017). Prevention and control should start in previous lactation when cows enter dry off period. Proper body condition score monitoring, prevention of other metabolic diseases, sufficient feed bunk space, dry matter intake, and proper particle size length are all important for prevention of LDAs.

**Mastitis** - or inflammation of the mammary gland, is the most common management disease on dairy farms. In fact, it is the top biological reason to remove cows from the herd. On average, 18.6 percent of cows leave the herd annually due to udder infection making it the second most costly management disease (Table 1.) Of the total costs, veterinary ($77) and costs of discarded milk ($53 and $65 for primiparous and multiparous cows, respectively) were the largest direct cost. Prevention and control of mastitis includes following correct milking procedures, using dry cow treatment, and a clean, stress-free environment for cows. Consult nutritionists regarding micronutrient supplements to boost the cow's immune system.

**Retained Placenta (RP)** - is a condition where all or part of the placenta or membranes are left behind in the uterus 24 hours or later after parturition. It is widely considered to be a predisposing factor for metritis. The prevalence among dairy cows ranges from 5 to 15 percent (Gilbert, 2015). Recently, Gohary (2018) estimated the cost of a single case of RP at $389. The largest portion of the estimate was reduction in milk yield, $287, increased time until pregnancy, $73 and increased disease risk, $25. Prevention and control of RP includes proper nutrition during the transition period, including adequate intake of selenium, and vitamin E. Retained placenta is commonly associated with hypocalcemia.
Direct costs are expenditures including veterinarian's and manager's labor, medications, and supplies.

Indirect costs includes non-saleable milk, reduced milk production, reduced reproductive performance, increased risk of culling, incidence of other diseases, and...
With the current volatile dairy market, rising input costs, and continued challenges in commercial dairy production, dairy farm owners are looking for new ways to improve their profitability. If you’re a dairy farmer interested in diversifying or vertically integrating your business, one option could be on-farm processing of raw milk into value-added goods and bottled fluid milk for sale. While this might seem like a fun, lucrative, and sustainable new venture at first glance, it’s important to consider how you’ll need to adjust and address your farm’s business plan to accommodate for this change.

Management Team Support
It’s no secret that there are many hands involved when it comes to dairy production. The owner, their family and friends, and employees seem the most direct, but there’s also folks outside of the immediate farm that provide insight and support. People like bankers, lenders, accountants, financial advisors, crop advisors, veterinarians, nutritionists, milk cooperative leaders, and more. When diversifying into value-added production, that circle of support will grow even larger. Direct customers and wholesalers, product suppliers, inspectors, and more. Thinking about the people around you, your trusted advisors and helping hands, consider how your farm diversification will affect them and your relationship with them. Hopefully, this is a positive move for all involved. But, you may work with some who are hesitant, or have (oftentimes, very valid) concerns for this business venture. Without everyone on board and in the loop, there could be potentially disastrous consequences later on down the road. Bringing in third-party advisors, like Cornell Cooperative Extension Specialists or NY FarmNet Consultants, to moderate a management team discussion can be a helpful preventative step.

Financial Position and Borrowing Capacity
You know the old adage “You Can’t Manage What You Can’t Measure”? This applies here as well, and having an accurate understanding of your farm’s financial position is a key business planning consideration. You can work with your lender, financial advisor, or local Farm Business Management Specialist to perform a Financial Analysis of your farm business. While it might seem tedious, it’ll give you a whole farm picture of your financial health by analyzing your balance sheet and income statement items. Do you know if your farm is profitable right now? If your farm is currently profitable, or has the potential to be, what would be the motivation to start a new venture? If you’re not profitable right now, what would change if you added a new venture? While it won’t come as a surprise to you, creating a milk processing facility on your farm requires a lot of cash. Consider your options for financing such a venture and the current borrowing capacity of the farm.

Cash Flow Budgeting and Profit Potential
For dairy producers, cash flow tends to be straightforward. Your milk is picked up regularly and you receive a check regularly throughout the entire year. However, a value added business will have an entirely different cash flow, depending on your market. If you’re working with wholesale buyers, you might be fronting product that you won’t receive a paycheck for right away. If you’re going to be marketing directly to consumers, how will you handle the times of the year where customers might not be buying? Additionally, start-up costs associated with this new venture will impact the liquidity of your overall farm business, and limit your responsiveness to change. It’s also important to have an idea of how long it will take for you to make a profit with this new venture as you balance start up highs and lows and customer recruitment to plan for cash availability.

Calculating Your Cost of Production
Do you know how much it will cost you to make and sell a gallon of milk? Tub of ice cream? Block of cheese? Calculating your cost of production by unit of sale can be a daunting process, but will be important to know what your breakeven price is and influence your business planning. An example – let’s say you have an idea to make the most delicious, pint sized chocolate milks around. So, you listened to your friendly, neighborhood Farm Business Management Specialist and calculated what it

On-Farm Value Added Dairy Processing involves taking the milk you produce and “adding value” to it as you transform it into things like bottled milk, cheese, and ice cream.

Most farmers look at On-Farm Processing as a way to better manage milk prices and sell directly to their customers, but there is still a lot of risk involved.
would cost for you to make each of these pints of milk. This included the actual cost of producing the milk, the processing equipment and utilities, flavor ingredients, packaging, marketing, and more! You add all of those budgeted costs up, divide them by your anticipated production, and get to a cost of $12.30/pint of delicious chocolate milk as your cost of production. In this scenario, how long do you think it would take to be profitable at $12.30/pint? Or, would you ever be profitable, depending on your target consumer? Knowing your cost of production, or anticipating based on your enterprise budgets, will help you make decisions about how to move forward.

**Business Life Cycle**

Over time, businesses tend to follow a general lifecycle, pictured here. Farms are no exception and travel through a launch and start-up phase (as a new farm entirely or under new management/ownership through succession), to a period of growth, then a peak production of business maturity, and, finally, a decline to an exit phase (or transition to new ownership/management). Depending on where you, or your successors, are in the business cycle will affect any decisions you might make when diversifying your dairy. For example, if you’re just getting started, do you want to add something new to your plate? If you’re thinking about exiting the business, how will this new venture affect your retirement goals or transition to new ownership? Understanding where your business is, and what your future goals are for production, is an important consideration when considering a new venture.

### Opportunity Cost

Now, this consideration is one of the ones that gets me the most eye rolls, but from a “let’s operate our farm as a business” perspective, makes a lot of sense. Opportunity cost is “the loss of potential gain from other alternatives when one alternative is chosen”. Consider how much time and money and management effort will be involved in starting up a new value-added venture. What would your return on investment be if you used that money somewhere else? This could look like improving your current farming operation, diversifying into a different venture, or even investing it via traditional routes. One example where I see this occur is, especially, with time. If the time you’re spending growing and developing your plan was spent on, for example, improving your herd health – what would happen? Another consideration is how your current farming operation will change if you’re spending time and effort on a new project – do you have a plan in place to keep things running smoothly if you’re elsewhere? If you consider alternatives, and Value-Added Dairy still has the biggest returns, great. If it doesn’t, how will this play into your business planning?

### Wellbeing

One final Business Planning consideration I would urge you to evaluate is how this new venture will affect the wellbeing of your farm, your family, and yourself. This will change over time and vary by situation, but, in general, any new venture will cause a lot of stress and could negatively impact your wellbeing. Having a support system in place and a “plan” for how to handle things when the going gets tough can make all of the difference during those low times. Additionally, knowing how value-added production will bring you closer to your overall goals, your “why”, will help motivate and safeguard your wellbeing which should be of upmost importance.

On-Farm Dairy Processing can provide a much needed lifeline for navigating volatile milk price swings, working through cooperative buying restraints, and providing new profitability streams to expand on-farm management and bring in new family members. However, this isn’t a venture that should be entered into lightly and will have long-lasting impacts on your farm business plan.

*This material is based upon work supported by USDA/NIFA under Award Number 2021-70027-34693.*
As part of Cornell Cooperative Extension’s role in strengthening New York State agriculture, we are helping to spread word of the New York State Department of Agriculture and Markets’ plans to launch a statewide online Farm Directory. The Farm Directory, which launches in mid-June, will connect consumers to producers of farm products and promote New York farms.

The Farm Directory will appear on the New York State Department of Agriculture and Markets’ website at agriculture.ny.gov/farming/farm-directory. It will show information for each listed farm, which can include the farm name, farm type, point of contact, addresses, telephone number, email address, website, social media, and a listing of all available products produced by the farm. Other categories of interest to the public, like the farm’s inclusion in the New York State Grown & Certified Program and designations of organic, halal or kosher certified may also be noted. Website visitors will be able to sort or search the directory by any field.

Since not every farm offers products to the public at the farm site, each farm can indicate whether it is open to the public, or if there is another means that their farm product can be accessed. This might include listing a distributor, a brand name that your product is eventually marketed under, or a specific consumer-facing website where the public can determine where to purchase your product in a retail location. The information available on the directory for each farm can be tailored to meet the individual needs of each business and farmers will be able to update their information as desired.

The creation of the Farm Directory derives from Section 16(52) of the New York State Agriculture and Markets Law, requiring the Department to create a directory of every farm in New York State. Farms will be receiving a package in the mail shortly outlining the Farm Directory purpose, a survey to collect information on the farm to be included in the Directory, and a return envelope.

If you choose not to have your farm participate in the Directory, you are required by law to notify the New York State Department of Agriculture and Markets of this decision by opting out. Farms may opt out by returning the provided survey or indicating it through the online survey linked at the website above.

Farms that initially opt out can later contact the New York State Department of Agriculture and Markets if they wish to be included at any point. Also, farms can also contact the New York State Department of Agriculture and Markets if they wish to opt out after initially choosing to participate in the Directory.

For questions or additional information on the Farm Directory, please contact the New York State Department of Agriculture and Markets at (518) 485-1050 or FarmDirectory@agriculture.ny.gov.

From Katelyn: If you want to opt out and don’t want to wait for your survey to arrive in the mail, you can go directly at the website listed above. The very first question on their asks if you’d like to opt-out. You submit your farm name, contact info, and attestation—and you’ll be all set.

This can be a great way to get your farm products, location, and contact information out to a greater audience for those who direct market goods!

You should be receiving a packet in the mail from Ag and Markets soon with a survey form to complete and mail back OR you can fill out the form (or opt-out) online.
NYS Offers Herd/Flock Health Assistance to Cattle and Small Ruminant Producers

The New York State Cattle Health Assurance Program (NYSCHAP) and the New York State Sheep/Goat Health Assurance Program (NYSSGHAP) were developed to aid producers with setting up whole herd/flock health management programs. All advice is free and confidential, and there is money available to cover the costs of the initial farm visit between you, a state veterinary advisor, and your herd/flock veterinarian, and subsequent annual visits. What’s covered in the visit is up to you, but generally, visits will cover the following topics:

- Increase herd/flock productivity and profitability
- Manage herd/flock health
- Assure food safety, public health, and consumer confidence
- Promote environmental stewardship

For more information, contact your herd veterinarian. They’ll work with your local NYS Agriculture and Markets Field Veterinarian to schedule a date and time for your first meeting.

Robotic Milking System Farm Tour

This program is applicable to any dairy farmers who are interested in learning more about robotic milking systems. Frontier Brook Farm currently milks 200 cows with 4 Lely robots. Come tour the farm, talk about managing cows under robotic system, enjoy lunch, socialize with other farms, and learn from each other.

Agenda:
11:00 am - 12:00pm — Tour Frontier Brook Farm
12:00pm - 1:00pm — Lunch

Facilitators:
Camila Lage, Dairy Specialist, CCE Southwest NY Dairy, Livestock, and Field Crops Team
Lisa Kempisty, Ag Educator, CCE Chautauqua
Lindsay Ferlito, Dairy Specialist, CCE North Country Regional Ag Team
Casey Havekes, Dairy Specialist, CCE North Country Regional Ag Team

Lunch will be provided thanks to the generous sponsorship of Finger Lakes Dairy Service - Whitney Davis

Registration: This program is FREE, but pre-registration is preferred.

July 12, 2022
11am - 1:00pm
Frontier Brook Farm
5777 Route 83
Conewango Valley, NY
14726-9610

Contact Info:
To register, contact Camila Lage at 607-592-0290 or cd546@cornell.edu

NYSCHAP is a free program that will help to cover expenses associated with your herd’s veterinary time and some testing. It’s helped farms improve herd health.
Welcoming Katelyn Miller to SWNYDLFC!
We’re so excited to introduce our team’s new Field Crops Specialist

Cornell Cooperative Extension’s Southwest New York Dairy, Livestock & Field Crops Program (SWNYDLFC) is excited to welcome Katelyn Miller as their team’s Field Crops Specialist. Katelyn will be working on programming related to pest and disease management, nutrient management, grain production, variety selection and soil analysis. You can reach Katelyn by emailing km753@cornell.edu or calling 716-640-2047.

Katelyn Miller grew up on a small dairy farm in Chautauqua County, and graduated Summa Cum Laude with her Bachelor’s Degree in Agricultural Entrepreneurship at Alfred State College. During her schooling, she completed an internship at Western New York Crop Management Association as a summer crop scout, focusing on corn, soybeans and alfalfa production. She scouted for crop population, disease and pest presence along with weed identification. Katelyn resides in Cherry Creek, NY on her family’s dairy farm where, in her free time, she assists with milking, calf and heifer management along with helping build the farm for the future generation through the addition of robots. Katelyn is excited to connect with our local farms to provide research based support and services.

“Katelyn Miller will be a wonderful addition to our program, and we’re so grateful to have her on board,” said Katelyn Walley-Stoll, SWNYDLFC Team Leader and Farm Business Management Specialist. “With her experiences, ability to connect with our region’s incredible agricultural community, and knowledge of field crop management issues and resources, she’ll be sure to hit the ground running this growing season.”

The Southwest New York Dairy, Livestock and Field Crops Program is the newest Cornell Cooperative Extension regional program and covers Allegany, Cattaraugus, Chautauqua, Erie and Steuben Counties. Southwest New York Dairy, Livestock, and Field Crops regional specialists work with Cornell faculty and Extension educators to address the issues that influence the agricultural industry in New York by offering educational programming and research-based information to agricultural producers, growers, and agribusinesses in the Southwestern New York Region.

SWNYDLFC is a partnership between Cornell University and the CCE Associations of Allegany, Cattaraugus, Chautauqua, Erie, and Steuben counties. Their team includes Katelyn Walley-Stoll, Farm Business Management (716-640-0522); Amy Barkley, Livestock Management (716-640-0844); Camila Lage, Dairy Management (607-422-6788), and Katelyn Miller (716-640-2047). •

Are You Growing Field Crops or Forage in SWNY?
The Answer Is Probably Yes!

Give Katelyn Miller a call (716-640-2047) to host her for a quick farm tour! She’s looking forward to getting out in our region this season to learn more about the region’s crop production, and gather ideas for possible programming, research projects, and support as she continues in this role.

Would your farm be willing to host Katelyn Miller for a brief tour and discussion? Give her a call at 716-640-2047 to schedule at your convenience!
Farmland for a New Generation New York - A Resource for Farmers, Landowners, and Aspiring Farmers!

By Katelyn Walley-Stoll, Farm Business Management Specialist

Farmland for a New Generation New York is an incredible resource available for farms and landowners to help keep agricultural land in agriculture. The program uses a farm/farmer “matchmaking” database, reminiscent of the old “FarmLink” program. Listings are free and you can post farm properties, search for aspiring farmers who are interested in collaborations/lease/purchase, view available farmland and farm jobs, and access several resources and event notifications.

Additionally, the program features an incredible directory of “Regional Navigators”. These folks are from partner organizations all across the state who provide training and on-the-ground customized support for farmers and landowners in regions across New York.

In SWNY, our Regional Navigators include Katelyn Walley-Stoll and Amy Barkley from the SWNYDLFC program, Kathleen McCormick from CCE-Erie, Alexander Wright from Blegacy Farms, Allison Dehonney from Buffalo Go Green, and NY FarmNet. There is also a regular newsletter that features success stories, available properties/new listing highlights, event reminders, and new resources.

The program, and all of its offerings, are entirely free. Listing your property, sharing your aspiring farmer profile, accessing the resources, connecting with the Regional Navigators, and more.

Farmland for a New Generation New York is coordinated by American Farmland Trust in partnership with the State of New York and various organizations across the state that are all dedicated to keeping land in farming.

If you’re interested in learning more about the program, visit nyfarmlandfinder.org or call Katelyn Walley-Stoll at 716-640-0522.

Are you interested in retiring from day-to-day farm management and don’t have a succession plan in place? Consider utilizing Farmland for a New Generation!
Dairy Market Watch

May 2022

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


**Dry Products:** Prices for low/medium heat nonfat dry milk are mixed. Prices contracted in the Central and East region and are steady to lower in the West. Despite some downward market pressure, some contacts suggest market tones for NDM are more sideways than bearish. Dry buttermilk prices are largely steady but moved lower at the top of the Western price series. Inventories are snug and production is limited. The national dry whole milk price range expanded this week on slightly busier trading.

**Cheese:** Across all regions cheese production is active, though some production facilities in the Northeast and West are, reportedly, running below capacity due to labor shortages. Midwestern cheese demand is mixed; contacts report that slipping prices in previous weeks caused some hesitance from purchasers, while others are purchasing to get ahead of a potentially bullish market. Meanwhile, demand is noted to be hearty in the Northeast and West. Cheese inventories are present to satisfy demand in the Northeast.

**Butter:** Contacts in the Northeast and Central region relay that local cream spot availability is tighter. Some butter makers in the Northeast say that more cream is being churned this week, though butter production schedules vary across manufacturers. Food service demand for butter is stable in the Northeast and West, while retail demand is trending lower. Spot inventories are unchanged in the Northeast, but are becoming more available in the West. Bulk butter overages range from 4 to 15 cents above market, across all regions.

**Fluid Milk:** While milk production is still trending higher across much of the northern tier of states, milk output transitions to steady in the middle and southwestern states and then to lower in the southern states from New Mexico to Florida. The specific demarcation line varies week to week. Higher temperatures and humidity are starting to take hold in the south, suppressing cow comfort and milk. output. Class I milk sales are moving lower as educational institutions reduce orders ahead of the summer breaks. Class III demand is active, and spot milk loads are available.

**Friday CME Cash Prices**

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<tr>
<td>Butter</td>
<td>$2.66</td>
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April’s Albany $/gallon paid to farmers was $2.20. This is a record high milk price - matching record high input prices.
USDA’s estimated April milk production was 1.0% below a year ago, the sixth consecutive month milk production was below a year ago. Milk cow numbers were 98,000 head below a year ago, a 1.0% decrease with no increase in milk per cow.

Milk prices continue well above year ago levels. The April Class III price was $24.42, and May will be near $25.00. The April Class IV price was $25.31 but May will be lower near $24.5. While volatile, dairy product prices have held at levels to maintain Class III and Class IV prices near these levels.

But milk prices for the reminder of the year are uncertain. Prices should stay well above year above levels but how much higher is uncertain. There is uncertainty as to the level of milk production, domestic sales, and dairy exports all of which will determine the level of milk prices. With much higher feed prices and the price of all other inputs milk production is not likely to show much of any increase this year. Dairy replacement numbers are also lower, and some dairy cooperatives have in place base type plans that limited their members increasing milk production. USDA is forecasting just a 0.2% increase in this year’s milk production over last year. Milk production at this level will support higher milk prices. If milk production would increase at higher levels by the last half of the year, milk prices could weaken some.

How milk and dairy product sales hold up for the remaining of the year is uncertain. Inflation is cutting into consumer spending power. This may cause consumers to cut back on going to restaurants which would dampen butter and cheese sales. Higher retail prices may also reduce consumer purchases of dairy products in the grocery store. While fluid (beverage) milk sales are expected to decline butter and cheese sales are still expected to show some increase in sales. Dairy exports continue to do well but may not match the record exports of last year. The volume of March exports were just one percent lower than a year ago. This was the fourth consecutive month the volume of exports was below a year ago. The exports of nonfat dry milk/skim milk powder and dry whey resulted in the lower total volume. Cheese exports continue to do well being 13% higher than a year ago and butterfat was 59% higher. Milk production in Oceania and Western Europe, two leading dairy exporters continues to run below a year ago levels which leaves open opportunities for U.S. exports. World dairy products prices have been declining but as U.S. prices are still competitive on the world market.

In summary, milk prices will stay well above year ago levels. But it is uncertain as to how much higher. But, if milk production does strengthen some last half of the year this could dampen Class III and Class IV price increases. Nevertheless, 2022 should end the year with prices averaging well above a year ago. USDA is forecasting the Class III price to average $20.50 compared to $17.08 last year and the Class IV price to average $21.40 compared to $16.09 last year. Prices could very well average higher. Current dairy futures are more optimistic with Class III $24 until August then $23 and ending at $22 in December. Class IV futures are $24 until October then $23 and ending at $22 in December. We need to keep in mind that milk prices can change quickly with small changes in milk production, milk and dairy product sales and dairy exports.

Crops, Cows & Critters Newsletter

If milk production does not increase the Class III price could strengthen by summer and fall while butter and cheese inventories start to build for the seasonally high sales for Thanksgiving and the holidays.

June 2022 - 13
Johne's disease is a chronic, incurable bacterial infection that primarily affects the lower small intestine of ruminants. Infection most commonly occurs when young animals ingest the bacteria Mycobacterium avium paratuberculosis (MAP). After infection, the bacteria grow slowly inside the animal's intestinal cells. Over time, the animal's immune cells multiply in response to the bacteria's presence, eventually leading to thickening of the intestine, impairing the ability to absorb nutrients, and leading to the clinical signs of Johne's disease in some animals. The disease progression in the small intestine may take up to two to six years or more before late stage clinical signs are seen. These signs include weight loss, intermittent or continuous unresponsive diarrhea, but a normal appetite. Some animals develop "bottle jaw" - fluid under the jaw caused by protein loss. Late stage animals continue to deteriorate and can die in a few days or a few months.

There are no good estimates of prevalence in beef herds in the United States. A NAHMS survey in 1997 showed less than 10% of beef cow/calf operations positive for Johne's, however, this is considered a very conservative number based on the survey design and the lack of registered operations being a part of the survey. Johne’s disease is a herd problem that worsens with time, reducing production and profit.

Johne’s disease has the largest impact on seedstock and purebred producers since they are selling animals that will be kept long enough for an animal to break with the disease. These are the operations that should be more motivated to do something about the disease especially when it is perhaps at a more lower, manageable level in their herd. The operations who do implement Johne's control will have a distinct advantage in marketing their breeding stock.

Johne’s is primarily transmitted through the fecal-oral route and that is where management needs to focus. Also, young animals less than 6 months of age especially the newborns are the most susceptible to infection so they are the ones to protect against exposure. It may be difficult but not complex to prevent new infections. We are not going to tell beef producers to take calves away from their mothers like we recommend in the dairy industry. However, we can institute management that takes new cow-calf pairs and puts them in a clean environment to minimize spread. Also, we encourage producers to get feed off the ground and use bunks or racks to minimize manure contamination as well as fence off surface water sources and use water tanks which are cleaned regularly. Also, beef operations can utilize Johne's testing to identify late stage infected animals for culling and more intense management to control the exposure of the manure from these animals to young stock.

**Critical management points for Johne’s disease control**

**Reduce infections by manure management (all manure is suspect)** - Avoid manure build up in pastures, corrals and barns. Have a clean calving area and move new cow/calf pairs to a clean pasture as soon as possible. Avoid keeping high risk or sick cows in the calving area and avoid overcrowding. Provide clean feed for all cattle and avoid manure contamination by using feed bunks and/or hay racks. Use separate equipment to hand manure and feed. Provide clean water, not contaminated by potentially infected animals. Keep adult cow manure away from young stock by housing in separate facilities or pastures not recently used by adult cattle. Prevent transporting bacteria to young stock by people, runoff and equipment.

**Reduce infections by colostrum management** - Feed "low risk" colostrum from test negative cows. If colostrum supplementation is needed use clean harvesting procedures or consider using a quality commercial colostrum supplement product.

**Reduce infections by managing infected animals** - Identify and remove clinical and late state animals immediately. Consider Johne's testing to identify subclinical animals and define herd status. Johne’s testing can also help identify infected animals that are shedding Johne's in their manure. These animals can be culled or segregated away from the herd and especially the young animals to help minimize spread in the environment.

![Guernsey cow with clinical Johne's disease (paratuberculosis), showing significant weight loss. Photo by Dr. Michael T. Collins.](image)
**Purchased animals** - Do not buy from herds with unknown Johne's infection status. Obtain herd health information from source herds ask about their Johne's disease monitoring and management. Pretesting purchases will not detect Johne's infections in the early stages of the disease so additional follow up tests are recommended two or three times at six to twelve month intervals.

**Johne's Disease Control Program** New York State offers cattle producers a free program - the New York State Cattle Health Assurance Program (NYSCHAP). This is a voluntary disease management program that helps farms identify disease risks, create obtainable goals and implement strategic herd planning that works within the farm's resources to meet their goals. The program uses a team approach bringing together the farmer, the herd veterinarian and a NYSCHAP herd planner who is either a NYS veterinarian or a NYSCHAP certified private veterinarian. The program pays the herd veterinarian for their participation so there is no cost to the producer. Also, enrollment in NYSCHAP allows farms to receive subsidized pricing for Johne's testing. This program can tailor an effective plan for Johne's identification, control and testing for the farm. More information on the program and how to enroll can be found here: www.nyschap.vet.cornell.edu.

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**When is the Right Time to Castrate Bulls?**

By Jeff Robe, Oklahoma Quality Beef Network Coordinator

The practice of castrating animals goes back to ancient times. Egyptian farmers found castrating bovine bulls made the animal much easier to handle. It's doubtful the Egyptians were concerned about the value-added components of their animals. But today, adding value to market cattle is the name of the game and castration is a key component to any preconditioning program that can greatly influence market price premiums or discounts, especially in older bull calves.

Castrating bull calves has become common practice in U.S. beef herds. In 2017, the USDA-APHIS NAHMS Beef Cow Calf study indicated that 62% of commercial cow-calf herds used castration methods in their management practices. Castration has provided economic benefits to both the cow-calf producer and feedlot operators through increased market prices and meat quality. Castration also decreases unwanted pregnancy and increases the safety of workers and other animals.

There is a perceived notion that intact bulls have an advantage in body weight gains during the preweaning period and post weaning weights than calves castrated at or near birth. However, numerous studies have shown the weaning weights are similar for bulls and steers (approx. 600 lbs.). Advantages in calf weight gain due to testosterone production are presumably realized at a time following average weaning dates closer to puberty.

The timing of castration can influence weight gain and stress management. Studies examining how timing of castration effects average daily gains (ADG) in cattle castrated either in early life (birth to 2 mo.) or those castrated at weaning or postweaning (6-10 mo.) demonstrated higher ADG during the post-weaning period in the early castrated calves (approx. 0.30 lbs/day greater) than those castrated at or after. The period calves experience weight loss post-castration increases with age as does risk of disease susceptibility. The stress experienced is also related to the time of castration as the level of discomfort and trauma increases with the size of testicles. Calves castrated at 5½ months of age or later experienced a greater duration of stress than those castrated at birth or at branding.

Bull calves entering the stocker or feedlot segments of the industry have numerous health and performance factors associated with late life castration such as increased risk or morbidity and mortality, sick treatments and decreased ADG. Therefore, price discounts for bull calves being sold at market can be substantial when compared to steers marketed in the same weight class. Lighter weight bulls (300-400 lbs.) are viewed as less risky, and discounts are generally minimal if any. As the weight of a bull increases, so does the risk. Discounts can average $6-12/cwt or $30-60 per head.

A herd management practice that dates to ancient times and still used today has clearly proven beneficial. Utilizing the practice and with a timing that makes sense may be the difference between dollars made or dollars lost.
What Adds Value to a Beef Feeder Calf?
By Amy Barkley, Livestock and Beginning Farm Specialist

With the costs of doing business going up, farms that raise beef calves need to take steps to help increase the return on investment from their feeders. This can be achieved through pre-conditioning, or setting animals up for success when moved to the feedlot. The move to the feedlot from a pasture-oriented home is a huge change, and while there will naturally be some loss in rate of gain, there are also chances for increased illness and death of animals that are not pre-conditioned. No one wants an animal to die while in their care – both from welfare and financial standpoints. While some market channels don’t pay high premiums for pre-conditioning, others will because they understand the value added by the farmer from birth through the pre-weaning period.

What is Pre-Conditioning?
This is a series of protocols taken by the cow-calf operator to get a steer or heifer ready for its new home. These happen over the course of the calf’s life. While they can vary from farm-to-farm, they will follow the basic points, below.

Castration
Bull calves destined for meat production should be castrated. Many times, males and females will be run together in a pen at the feedlot, which means there is a chance that the females could be bred by intact males. Growing fetuses cause finishing efficiency decreases because the heifer is diverting energy to grow a fetus rather than put on muscle and fat.

Best practices for castrating recommend that bulls should be castrated within 2 months of birth to minimize pain and stress. Those animals that are castrated earlier can realize a gain advantage during the post weaning period of up to 0.3 pounds/day.

Vaccinations
Properly, timely administered modified live vaccinations for common respiratory ailments of cattle (at minimum) are something that buyers look for. The movement from your farm to the final feeding destination is stressful, and even more so when the animal is sent through an auction and/or is grouped with other cattle to make a lot or truckload. Increases in stress decrease the animal’s immune system, resulting in increased incidences of respiratory illness, which will decrease rates of gain and can lead to death if severe enough. Working with your veterinarian to provide a robust vaccination program will go a long way to keeping your cattle healthy for their lifetimes.

Don’t have a vaccination protocol yet? The New York State Cattle Health Assurance Program provides veterinary advisors that will work with you and your herd veterinarian to create a robust disease prevention program.

Weaning
Cattle that are weaned are better prepared for the changes in diet that a feedlot delivers and have a decreased chance of getting sick when they reach their new home. Complete weaning is best. That is, weaning the calf 45-60 days before that animal is intended for sale. Buyers from traditional feedlots are pleased when animals enter the feedlot, walk up to the feed bunk, and start eating. This compares with animals that enter the feedlot, pace, bawl for their mother, and don’t understand what a bunk is.

Animals that aren’t weaned prior to this life transition will experience high levels of stress. They are not only changing environments, but also their social circle, which included their mother, and their diet, which previously included milk. Getting animals used to a feedlot ration (or a purely grass ration if they are moving to a grass-finishing facility) is ideal. Regardless, calves should be completely independent from their mother for those 45-60 days prior to sale.

Deworming
Feedlots are looking for animals that have been dewormed. While on pasture, cattle pick up internal parasites. While they’re not picking up additional parasites in a feedlot, they could experience depressions in rate of gain from what they’ve accumulated while on pasture. Talk with your herd veterinarian to determine what deworming protocol is right for you.

While these are best management practices for selling at auctions or other large sales, there are some direct buyers who may have slightly different requirements for their pre-conditioning needs. Make sure to communicate with your buyer(s) in advance to ensure that you are meeting their expectations. The money received for quality animals with thorough pre-weaning protocols will most times justify the money invested. Also remember that at larger sales, buyers can’t read what an animal’s received in terms of pre-weaning protocols, so provide documentation of what’s been provided; many auctioneers will read out this information prior to selling your lot.
First cutting of a perennial hay crop offers the opportunity to capture high quantity and quality, but timely harvest can be met with a number of obstacles. This fact sheet provides links to several current resources to aid in successful decision making for the upcoming season.

**Have a safety plan**
The spring season on the farm is exciting, but also very busy, increasing the chances for accidents. Work with your harvest team to identify and mitigate potential hazards and maintain balance between the critical time demands of this work and adequate breaks.

**Managing forage digestibility to combat high commodity prices**
The optimum percent forage in the diet will vary slightly based on individual farm resources; however, regardless of what the optimum percent forage is for your farm, higher inclusion rates of forage in the diet are linked to improved income over feed cost. Maintaining high levels of forage in the diet requires high forage quality. Optimizing the timing of first cutting is a significant opportunity to manage forage digestibility to optimize forage use in the diet and combat high commodity prices.

**First cut timing and impact on subsequent cuttings**
The weather patterns of the coming season are anyone’s guess; however, in most areas of New York three of the last five years have resulted in dry conditions following first cutting and persisting through July or longer. This weather pattern led to a notable impact on second cutting and sometimes third cutting performance which could be linked back to the harvest date of first cutting. Timely harvest optimizes yield and quality while also removing the crop at a time when soil moisture and rainfall is often still more prevalent, which is very beneficial to get regrowth off to a strong start. Late harvest of first cutting sacrifices quality while also increasing the risk that a lack of soil moisture and lower rainfall will significantly hinder regrowth performance.

**Implement the harvest plan**
Success culminates with putting planning into action when the crop tells you it is time to harvest. It is critical to be prepared to harvest at the optimum timing even when that means parking the corn planter or putting other tasks on the back burner for a few days. Prioritize securing lactating cow quality forages with dynamic harvest scheduling and store it by quality to assure it is available to feed to the targeted animal group at the targeted time. Once adequate inventories of lactating quality forage is secured, attention can turn to forages for non-lactating animals.

Harvest operations also have the potential to impact yield, quality and crop performance. While alfalfa can technically be cut lower, a three to four inch cutting height is preferred for legumes while four inches is strongly encouraged for grasses. Cutting grasses lower than this can stunt regrowth and introduce the potential for greater soil contamination. Utilize wide swathing techniques and focus on proper setup of all field equipment to minimize losses from respiration in the windrow and high value leaf material from mechanical injury.

Attention to the proper setup and operation of mowers, rakes, mergers and harvester pickup heads can have meaningful impacts on ash content (soil contamination). Work with equipment representatives and agronomic advisors to assure proper equipment setup.

**Manage storage to minimize losses**
Forage shrink losses can have a significant impact on both the quantity of forage available as well as the quality and palatability of that forage. Further, forage shrink costs more when input cost are high, which heightens the importance of this already important stage on the forage process.

Joe Lawrence, from Cornell PRO-DAIRY, has amazing resources available on their website. If you need help or would like information printed and mailed to you, let us know!
We've gotten a positive response from dairy producers all across the state, and even the country, for our Value-Added Processing Series.

**Recordings Available!**

Three webinars for dairy producers interested in diversifying or vertically integrating their business.

**MAY 25**
**Wednesday, 6-7 pm**
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Fitting On-Farm Dairy Processing into your Business to Improve Profitability

**JUNE 1**
**Wednesday, 6-7 pm**
Session 2
Considerations for Designing your Processing Facility for Quality Production

**JUNE 8**
**Wednesday, 6-7 pm**
Session 3
Managing the “Red Tape” for Efficient and Sustainable Value-Added Dairy

**SPEAKERS INCLUDE:**
- Anika Zuber Gianforte
  Dairy Processing & Marketing Specialist
- Robert Ralyea
  Senior Extension Associate
- Kimberly Bukowski
  Extension Associate
- Katelyn Walley-Stoll
  Farm Business Management Specialist
- Camila Lage
  Dairy Management Specialist

**REGISTRATION**
is FREE but required for this event:
tinyurl.com/onfarmdairy22, scan the QR code, or
contact Camila Lage
607-422-6788/ cd546@cornell.edu

All of the presentations have been recorded. Slides, resources, and recordings will be made public AT NO COST for anyone who is interested.
Unsure of the quality of your forage? We recommend a forage test! Contact Amy for more information.

Pastured broilers is a typical starting enterprise on many farms, but do you know how profitable it is? You can’t manage what you can’t measure!

Our team was awarded a grant to look at just that!

We are currently seeking participants in Allegany, Cattaraugus, Chautauqua, Erie, and Steuben counties who grow slow growth or conventional broilers. Farmers will need to produce at least two batches of a minimum of 50 broilers annually over two consecutive years to be considered for the project. Farmers will be compensated for their time. We are looking for participants for 2022/2023 and 2023/2024.

If you're interested in learning more, reach out to Amy Barkley at amb544@cornell.edu or 716-640-0844.

CCE Seeks Participants for Pastured Broiler Cost of Production Study

Do you raise pastured broilers as a farm enterprise? Are you curious about your true costs of production and ways to improve efficiency? Want to know how your costs of production compare to farms across the state?

The Effect of Rain on Hay Quality

By Amy Barkley, Livestock Specialist

Cutting hay always incurs slight gamble, especially if the hay needs to be cut and we’re in a rainy pattern. The question then becomes: what will happen to my hay’s quality if it gets rained on? Is it possible for it to be exposed to some rain and still be OK? The answer depends on the time since it was cut, and on the intensity + duration of the rain event.

Hay freshly cut, short & light rain event - this is the best-case scenario. There will be limited nutrient losses, and only a slight increase in drying time. Heavier rainfall leads to higher nutrient losses than lighter rainfall.

Any hay, long rain event - Longer rain events result in more nutrient leaching, with heavier rains being worse than lighter rains.

Drier hay, any rain event - drier hay will leach more nutrients when re-wetted. Heavier rain events will result in some leaf shatter, with the exact amount depending on the rain intensity and how dry the hay was to start.

Multiple rain events - this is highly detrimental to hay quality, with dryer hay and heavier rains resulting in more quality losses than more recently cut hay and lighter rains.
Are you on YouTube? So are we!

With all of the virtual programs and trainings we’ve been offering over the past few years, we’ve built up a pretty robust database of videos. Check out recordings of presentations, how-to’s, and more. Subscribe today!

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