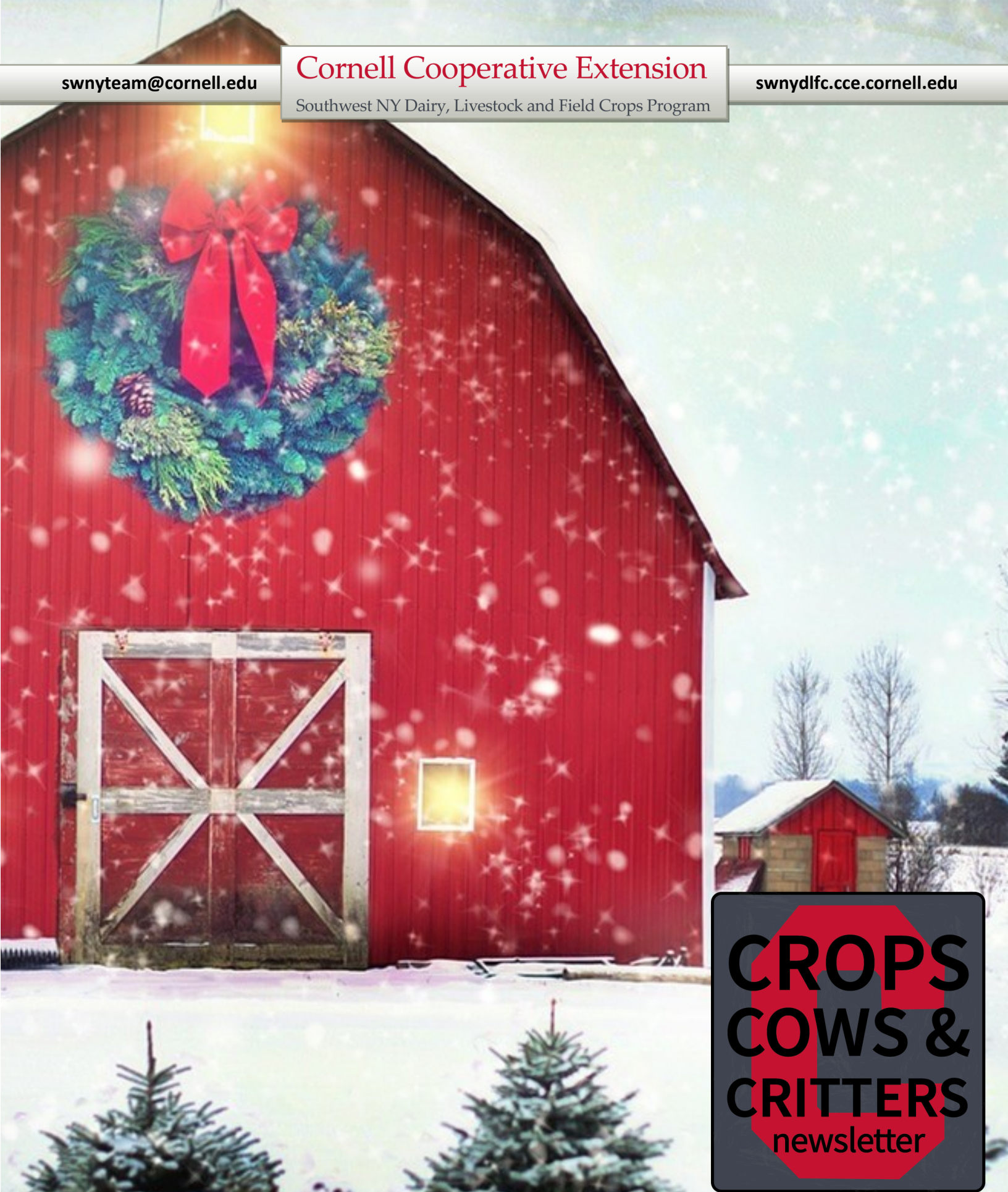


swnyteam@cornell.edu

Cornell Cooperative Extension

Southwest NY Dairy, Livestock and Field Crops Program

swnydlfc.cce.cornell.edu



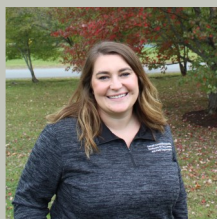
**CROPS
COWS &
CRITTERS**
newsletter

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 4 · Issue 12 · December 2023

Contact Our Specialists



Katelyn Walley

Team Leader
Farm Business Management
716-640-0522
kaw249@cornell.edu



Amy Barkley

Livestock
716-640-0844
amb544@cornell.edu



Camila Lage

Dairy Management
607-422-6788
cd546@cornell.edu



Katelyn Miller

Field Crops
716-640-2047
km753@cornell.edu



Kelly Bourne

Administrative Assistant
585-268-7644 ext. 10
klb288@cornell.edu

County Association Executive Directors

Allegany County

Laura Hunsberger
lkh47@cornell.edu
585-268-7644 ext. 17

Cattaraugus County

Kelly McDonald
kmm525@cornell.edu
716-699-2377 ext. 122

Chautauqua County

Emily Reynolds
eck47@cornell.edu
716-664-9502 ext. 201

Erie County

Diane Held
dbh24@cornell.edu
716-652-5400

Steuben County

Tess McKinley
tsm223@cornell.edu
607-664-2301

(USPS #101-400)

Cornell Cooperative Extension of Chautauqua County
Subscription included in minimum of \$65 Program Participation fee.
Periodical Postage Paid at Jamestown, NY 14701. "POSTMASTER:
Send address changes to the: Chautauqua County Extension
Connection at 525 Falconer St. JCC Carnahan Center, PO Box 20
Jamestown, NY 14702-0020." "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.

County Association Agriculture Educators

Cristian Acosta - Allegany County

Agriculture Educator
cfa34@cornell.edu
585-268-7466 ext. 14

Kathleen McCormick - Erie County

Agriculture Educator
km864@cornell.edu
716-652-5400 ext. 146

Sharon Bachman - Erie County

*Agriculture & Natural
Resources Educator*
sin2@cornell.edu
716-652-5400 ext. 150

Shannon Rinow - Cattaraugus and

Chautauqua Counties
Master Gardener Coordinator
smr336@cornell.edu
716-664-9502 ext. 224

Lynn Bliven - Allegany County

*Ag & Natural Resources
Issue Leader*
lao3@cornell.edu
585-268-7466 ext. 18

Rose Clark - Chautauqua County

Ag Program Coordinator
rmc339@cornell.edu
716-664-9502 ext. 202

Lisa Kempisty - Chautauqua County

*Dairy/Livestock
Community Educator*
ljk4@cornell.edu
716-664-9502 ext. 203

Susan Walker - Steuben County

Agriculture Educator
smw272@cornell.edu
607-664-2574

John Whitney - Erie County

Agriculture Educator
jrw44@cornell.edu
716-652-5400 ext. 146

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

2 - December 2023

**CROPS
COWS &
CRITTERS**
newsletter

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.

Custom/Third Party Manure Applicator Registration - Update & Resources

By Kirsten Workman, PRO-DAIRY

NYSDEC now requires commercial manure applicators that apply manure on CAFO farms to register with the department and complete annual reporting. PRO-DAIRY put out a fact sheet this summer outlining the new requirements [here](#). While applicators need to register by January 18, 2024 to be in compliance, ***it is my recommendation that they wait until after January 1, 2024 to do so***. This will delay the need for annual reporting until the conclusion of 2024, when NYSDEC will have annual reporting forms ready and will allow more time to put the protocols and record-keeping systems in place to ensure compliance.

Here are a few things that applicators can do to be ready in the meantime:

- Start working with farm clients now to ensure good communication about their CNMP, signing contractor certification forms, and getting maps for all fields.
- Set up record-keeping systems that allow accurate accounting of manure applications to share with farm clients within the required 21-day time period (date, gallons & rate, fields applied) and aggregated data to report back to NYSDEC (total gallons spread/farm).
- Properly calibrate all spreading equipment and keep a record of these calibration activities.
- Get the registration forms assembled and completed accurately so they are ready to submit between January 1 and January 18, 2024. I have attached forms with example information filled out to assist in the accurate completion of those forms. Feel free to use them as a guide and/or reach out to me directly for assistance.



To learn more about this registration requirement, what it entails and the type of record-keeping that will be required, you can visit the following guidance documents:

- PRO-DAIRY Fact Sheet PD-23-07-02:
<https://cals.cornell.edu/sites/default/files/2023-07/part-361-manure-applicator-registration--2023.pdf>
- NYSDEC Fact Sheet:
https://www.dec.ny.gov/docs/materials_minerals_pdf/thirdpartymanureappliers.pdf

You can access the registration forms here*:

- REGISTRATION FORM FOR A SOLID WASTE MANAGEMENT FACILITY:
https://www.dec.ny.gov/docs/materials_minerals_pdf/360regform.pdf
- ORGANICS RECYCLING ADDENDUM:
https://www.dec.ny.gov/docs/materials_minerals_pdf/orgformadden.pdf

If you would like any of the resources mentioned printed, let Katelyn Miller know at 716-640-2047 or km753@cornell.edu.



While applicators need to register by January 18, 2024, it is recommended to do so after January 1st so reporting will not need to be completed until the end of 2024.

December 2023 - 3

Addressing and Remediating Compaction

By Katelyn Miller, Field Crop and Forage Specialist

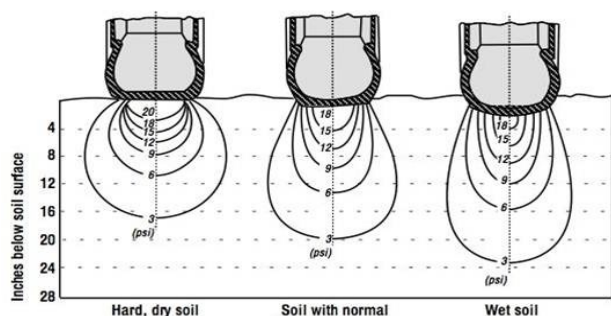
Soil can become compacted when aggregates are forced close together. There are three types of soil compaction: surface sealing/crusting, surface layer, and subsoil compaction. Each type has different causes and presents itself differently in the soil.

Surface compaction is the result of the loss of soil aggregation with three primary causes. These include erosion, reduced organic matter levels in the soil, and the weight distribution of field equipment in combination with poor field activity timing. When intensive tillage is used, soil can become “addicted” to the tillage passes and the soil will become cloddy. This will require additional tillage passes to prepare a good seedbed, causing additional soil breakdown.

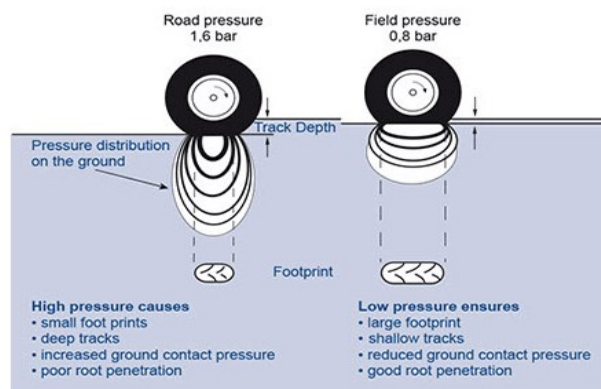
Surface sealing/crusting occurs at the immediate soil surface. It is a result of aggregate breakdown on the surface when it is not protected by plant residue. This type of compaction is the most damaging when heavy rains occur between planting and seedling emergence. A hard surface crust may delay seedling emergence and set the crop back, reduce water infiltration capacity and total available water to the crop, as well as increase runoff.

Subsoil compaction is also referred to as a plow pan because it occurs deep in the soil. The subsoil is typically wetter, has higher clay content, is lower in organic matter, is less aggregated than the surface, and is not loosened by regular tillage. Because it's deeper in the surface, it's typically not noticeable to the eyes, making it difficult to identify. Subsoil compaction occurs when heavy equipment is run over the field, especially with uneven weight distribution. Consider reducing the air pressure in your tires to spread out the weight of the load.

Effect of soil moisture on load penetration under a tractor tire. (Tire size 11-28 inches; load 1,650 lb; inflation pressure 12 psi.)



Source: USDA, adapted from Soehne 1958.



The top diagram shows the impact of field traffic at different soil moistures. The bottom photo (rata equipment) shows how adjusting the tire pressure will impact the total pressure applied to the soil.

Compaction pushes particles closer together, removing the total amount of pore space in the soil. Pore space is responsible for good infiltration, the percolation of water, air exchange, and root growth. If measures aren't taken to alleviate compaction, yield losses can be significant. The first step is to decide whether you have compaction. If so, the next step is to decide what type. The chart below from “Building Soils for Better Crops” highlights the different types of compaction, indicators, as well as preventative and remediation measures.

Table 15.1
Types of Compaction and Their Remedies

Compaction Type	Indications	Remedies/Prevention
Surface seal or crust	Breakdown of surface aggregates and sealing of surface Poor seedling emergence Accelerated runoff and erosion	Eliminate tillage or reduce tillage intensity Maximize surface cover: leave residues on surface, grow cover crops Add organic matter
Surface layer	Deep wheel tracks Prolonged saturation or standing water Poor root growth and more disease symptoms Hard to dig and resistant to penetrometer Cloddy after tillage	Use zone builders or strip tillers to break compaction but minimize soil disturbance Use cover crops or rotation crops that can break up compacted soils Add organic matter Use better load distribution with equipment Use controlled traffic Don't travel on soils that are wet Improve soil drainage
Subsoil	Roots can't penetrate subsoil Resistant to penetrometer at greater depths	Don't travel on soils that are wet Improve soil drainage Till deeply with a zone builder or strip tiller Use cover crops or rotation crops that penetrate compact subsoils Use better load distribution Use controlled traffic Don't use wheels in open furrows

There are different remediation strategies that can be used to alleviate compaction. Remediating compaction will not happen overnight, so patience and commitment are important to help future crop yields. If you want to learn more about compaction, or other soil topics, check out “Building Soils for Better Crops” from SARE.

Each type of compaction has different causes, so it's important to properly identify which is impacting your fields to use the right remediation tactics.

**CROPS
COWS &
CRITTERS**
newsletter

If you have any questions, reach out to Katelyn Miller at 716-640-2047.

SAVE THE DATE

WHOLE-FARM EFFICIENCY WEBINAR SERIES



Join us for this series on enhancing farm efficiency. Explore innovative practices and cutting-edge technologies to optimize feeding and management.



REGISTER NOW



**Tuesdays from 12pm-1pm EST
Jan 9th through March 12th, 2024**



TOPICS AND SPEAKERS:

- **Precision Feeding** - Betsy Hicks, Margaret Quaassdorff & Joe Lawrence
- **Labor Management** - Dr. Richard Stup
- **Feeding Management** - Dr. Barry Bradford
- **Successful Onboarding** - Mary Kate Mackenzie
- **Managing for High Milk Quality** - Dr. Paul Virkler
- **Maximizing Return on Colostrum** - Dr. Sabine Mann
- **Targeted Reproduction Programs** - Dr. Julio Giordano
- **Managing Repro Programs** - Dr. Matias Stangaferro
- **Managing Transition Cows** - Dr. Tom Overton
- **Managing Dairy Replacements** - Betsy Hicks & Margaret Quaassdorff

Cornell CALS
College of Agriculture and Life Sciences



Cornell Cooperative Extension

Register for this webinar now by scanning the QR code.

**CROPS
COWS &
CRITTERS**
newsletter

If you need help registering or need accommodations for the webinar, reach out to Camila at cd546@cornell.edu or 607-422-6788.

Managing Corn Rootworm in NY to Delay Bt Resistance (& Save Seed Cost)

By Elson Shields, Entomology, Cornell University

Across the US and within NY, corn rootworm (CRW) is developing resistance to the BtRW traits in our GE corn varieties, causing increased root damage and decreasing yields. Yield losses from CRW root feeding can surpass 10% without any above ground symptoms, making this type of losses difficult to detect. In addition, corn grown for silage is more sensitive to yield losses from CRW feeding than corn grown for grain. As CRW resistance increases to Bt-RW, the damage becomes more apparent and easier to detect, but losses have been occurring in the field in prior years, going undetected. Increased damage has been reported in NY for all of the Bt-RW traits regardless of company.

Important points about CRW biology: There are two important points about CRW biology which need to be remembered when managing this pest and reducing its potential for developing resistance to any of our management tools. 1) In NY, all eggs are laid in existing corn fields during August, and 2) if the newly hatch CRW larvae in the spring do not find a corn root, they die. Since CRW eggs are laid in existing corn fields in August of prior year, crop rotation is our best resistance management tool. Since the majority of the corn grown in NY is in rotation with alfalfa for our dairy farms, NY trails the rest of the nation in the development of CRW resistance to Bt-RW.

For our dairy farmers, that grow corn in rotation with alfalfa, corn is typically grown in a field for 3-5 years. The longer corn is grown continuously in a field, the higher risk the field has for economically damaging CRW root feeding and yield losses. After rotating out of a non-corn crop, first year corn does not need any CRW management (or expensive Bt-RW trait costs). A non-Bt-RW corn variety should be planted with a seed corn maggot/wireworm effective seed treatment. This choice in year 1 saves \$15-\$20 per acre in seed costs. In year 2, the risk of CRW loss increases to 25-30% in NY. To offset this risk, a farmer has several options. Many farmers will assume the risk and plant a non-Bt-RW corn variety without any additional protection such as a soil insecticide. A second option in year 2 is to use either a 50% rate of soil insecticide (if insecticide boxes are available), high rate of neonic seed treatment or an insecticide added to the liquid pop up fertilizer. The CRW pressure in year 2 is not high enough to recommend the use of Bt-RW in most cases and the option of an insecticide is often a less expensive route to reduce production costs. The deployment of different modes of

toxicity in year 2 from Bt-RW significantly reduces the selection for Bt-RW resistance by CRW. In continuous corn years 3-5, the risk of economic loss from CRW is high enough to merit the use of Bt-RW corn varieties. A second option in years 3-5 of continuous corn is the use of a full rate of soil insecticide, if insecticide boxes are available. Adding insecticide to the pop up fertilizer during years 3-5 is not recommended due to unreliable efficacy with the higher CRW populations and increased risk for economic damage.

Strategy 2 for our dairy farmers: Incorporating biocontrol nematodes into their rotation and crop production.

By using the biocontrol nematode technology developed to combat alfalfa snout beetle in NNY, our dairy farmers can reduce their corn seed costs by eliminating the purchase of the Bt-RW traits in their corn varieties. A single inoculation of each field with native persistent NY biocontrol nematodes provides protection from corn rootworm larval feeding by attacking these insects before they damage the corn roots. NY research data indicates a single soil inoculation (\$50-\$60/acre) establishes these NY adapted biocontrol nematodes in the soil profile for many years, where they attack a wide range of pest soil insects across a wide variety of crops. During the corn years, these biocontrol nematodes attack rootworm larvae and during the alfalfa years, attack wireworms, white grubs, clover root curculio feeding on the alfalfa and grass in the field.

If the biocontrol nematodes are inoculated into the field during the alfalfa portion of the crop rotation, the farmer can use corn varieties without Bt-RW for the entire corn rotation. Biocontrol nematodes take until the second growing season after application to become fully established in the soil profile and when applied to the alfalfa crop, become fully established before corn is planted. If the field is inoculated with biocontrol nematodes during the first year of the corn rotation, the corn variety planted in year 1 can be without the Bt-RW trait because rootworm is never a problem in 1st year corn in NY. By the second year, the biocontrol nematodes are fully established and corn varieties can be planted without Bt-RW for the remaining years of the corn portion of the rotation.

However, if the corn field is inoculated with biocontrol nematodes during the 2nd-4th year when rootworm damage risk is higher, the corn variety planted during the year of inoculation needs to have the Bt-RW trait to provide some

Across the US and within NY, corn rootworm (CRW) is developing resistance to the Bt-RW traits in our GE corn varieties, causing increased root damage and decreasing yields.

**CROPS
COWS &
CRITTERS**
newsletter

The longer corn is grown continuously in a field, the higher risk the field has for economically damaging CRW root feeding and yield losses.

additional protection while the biocontrol nematodes become fully established in the field. If the cost of establishing biocontrol nematodes in a field is a one-time cost of \$50-60/acre and the Bt-RW trait adds \$20/acre/year to the seed costs, the breakeven point for the nematode application is year 3 when the Bt-RW trait is not purchased or used. In the years beyond 3-years after application, the seed cost savings will continue to be the cost of the Bt-RW which is an unnecessary expense.

For our cash grain farmers, an annual rotation of corn and a non-host crop like soybeans completely eliminates the need for any CRW management tools. During the corn years, non Bt-RW corn varieties can be safely planted without risk of losses from CRW. The elimination of the Bt-RW trait in the corn planted reduces the seed cost \$15-\$20 per acre and the use of a Bt-RW trait is completely unnecessary. However, a seed treatment for seed corn maggot to protect plant emergence is recommended due to our typically wet cold soils. The enhanced adoption of cover crops to protect our soil from erosion and any history of animal manure application significantly increases the risk of plant stand losses from seed corn maggot.

Long-term continuous corn fields: The culture of corn continuously in the same field for multiple years using only Bt-RW to control CRW places tremendous selection pressure for the insect to develop resistance to the Bt-RW toxins. This widespread practice across the corn belt has resulted in the documented CRW resistance to all Bt-RW traits and the insect is causing economic losses for farmers adopting these continuous corn practices. Closer to home, Bt-RW failures have been reported in Central NY corn fields, multiple corn growing areas of Ontario, Canada and to the south in Pennsylvania. With no new technology against CRW available for the next few years, these growers have a real challenge on their hands to minimize losses from this adaptable insect, if these farmers continue with long-term continuous corn production without breaking the CRW cycle with crop rotation. Farmers with fields producing corn continuously for multiple years need to seriously consider working a crop rotation into their farming practices. There are well documented agronomic yield advantages/responses from crop rotation over continuous corn, even without considering the reduction in CRW root feeding damage.

However, if farmers insist on growing continuous corn in field without interruption, there are several issues to consider. The continued use of Bt-RW accelerates CRW resistance and the single field failure becomes the source of highly resistant

beetles moving into neighboring fields, causing significant yield losses even in neighboring fields where farmers are utilizing crop rotation to minimize CRW-Bt-RW resistance development and yield losses. The farmer growing continuous corn and producing highly resistant beetles becomes “a neighborhood social problem” for his neighbors. Some farmers add a soil insecticide over the top of the Bt-RW trait, think this is a solution to the resistance issue. While the corn stands better with less damage at the plant base, selection for CRW Bt-RW resistance continues to accelerate within the root system in areas outside of the soil insecticide treated zone.

The addition of biocontrol nematodes to the continuous corn culture is a way of introducing an independent mortality factor to help the Bt-RW trait control rootworm larval populations. However in these high CRW pressure systems, biocontrol nematodes should not be used alone. CRW has developed resistance to every other management strategy used to manage its damage, biocontrol nematodes used alone will also select for CRW resistance. If farmers are interested in incorporating biocontrol nematodes into their continuous corn production, farmers should continue to use varieties with the Bt-RW trait to continue to kill the susceptible CRW larvae or match the use of biocontrol nematodes with a full rate of soil insecticide.



PHOTO CREDIT: Katelyn Miller

There are different strategies that can be used to manage CRW. Consider what may work best for your operation.

**CROPS
COWS &
CRITTERS**
newsletter

With no new technology available for managing CRW, farmers need to minimize their losses from this insect.

The 5Q's of Colostrum Management

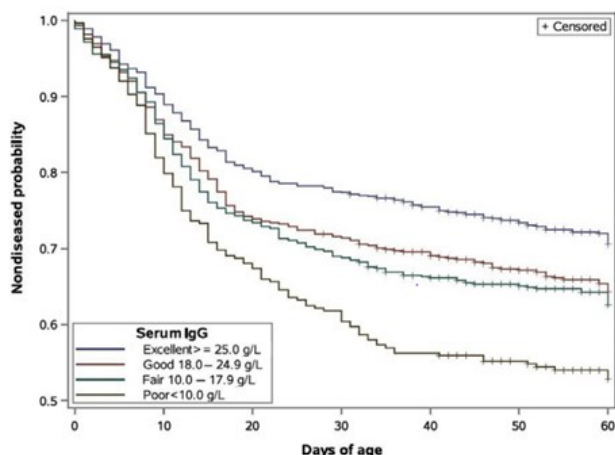
By Camila Lage, Dairy Management Specialist

Evaluating colostrum management is essential to the heifer program. Colostrum audits can be an alternative to routine monitoring transfer of passive immunity if labor is a constraint to the farm. A snapshot of herd immune status can indicate the farm's current success in colostrum management and suggest whether or not procedures need to be reviewed.

How is it done? – Periodically, blood samples of 14 animals are taken between 2 and 7 days of age, and serum is separated. Total protein is then evaluated using a refractometer, and results are plotted on a spreadsheet.

The latest research from the USDA team, based on the 2014 NAHMS, demonstrated that animals with higher serum total protein values are not just more likely to have lower mortality in the first three months of age but are also less likely to get sick (see figure below) and can recover faster if affected with diseases.

Animals with higher serum total protein values also have improved growth rates and feed efficiency, are more likely to have a decreased age at first calving, and have increased milk production on 1st and 2nd lactations



Non-diseased probability for pre-weaned heifer calves by days of age and serum IgG concentration categories. Corresponding with serum IgG levels of greater than or equal to 25.0 g/L, 18.0 to 24.9 g/L, 10 to 17.9 g/L, and less than 10.0 g/L were serum total protein categories of greater than or equal to 6.2 g/dL, 5.8 to 6.1 g/dL, 5.1 to 5.7 g/dL, and less than 5.1 g/dL, and Brix score categories of greater than or equal to 9.4%, 8.9% to 9.3%, 8.1% to 8.8%, and less than 8.1%, respectively. Godden et al., 2019

Based on Lombard and colleagues' study, passive immunity should be evaluated at herd levels to maximize calf health, reduce the use of antibiotics, and minimize future performance losses. The target % of animals in each category of total protein is shown in the table below, as suggested by Lombard et al. (2020)

Table 1. Target percentages of calves in each transfer of passive immunity category, IgG concentration, total protein, and equivalent Brix values

Classification	Serum IgG (g/L)	Total protein (g/dL)	Equivalent Brix (%)	Herd goal (% calves)
Excellent	>25.0	>6.2	>9.4	>40
Good	18.0-24.9	5.8-6.1	8.9-9.3	~ 30
Fair	10.0-17.9	5.1-5.7	8.1-8.8	~ 20
Poor (Failure)	<10.0	<5.1	<8.1	<10

Source: Lombard et al. (2020)

The 5 Q's of Colostrum Management



Bleed 12+ clinically normal 1-7 d old calves & separate serum.
Use serum on total protein or brix refractometers

New passive transfer herd recommendations: Lombard et al., 2020

Classification	Goal for % calves in each category	Serum Total Protein, g/dL	Equivalent Serum Brix Levels, %
Poor	< 10%	<5.1	< 8.1%
Fair	~ 20%	5.1-5.7	8.1-8.8%
Good	~ 30%	5.8-6.1	8.9-9.3%
Excellent	> 40%	≥6.2	≥ 9.4%

Calves with animals higher serum total protein values have lower mortality, are less likely to get sick and can recover faster if affected with diseases.

**CROPS
COWS &
CRITTERS**
newsletter

Animals with higher serum total protein values also have improved growth rates and feed efficiency.

5 Q's of Colostrum Management

1. Quantify

Evaluating farm data routinely or periodically, as done by this project, is essential to keep colostrum management in check. If feasible in your management, routinely evaluate colostrum quality before feeding it to the calves.

2. Quality

- High-quality colostrum has an IgG concentration of > 50 g/L. Colostrum quality can vary from dam to dam, and cow-side quality testing helps predict IgG concentration. The colostrometer estimates IgG concentration by measuring colostrum density.
- The Brix refractometer also correlates with IgG in colostrum. When using a Brix refractometer to measure colostrum quality, aim to feed colostrum with a Brix reading of at least 22 percent, which equates to an IgG concentration of more than 50 g/L.
- If you need to feed medium to lower-quality colostrum, add a second feeding of 2-3 L 8 hours after birth.

3. Quantity

- The colostrum volume fed will depend on quality to provide the calf 150-200 g of IgG. The best way to reach this goal is by feeding a larger volume at first feeding (within the first 6 hours after birth).
- **For their first feeding, calves should receive at least 10 percent of their body weight in colostrum: approximately 3.9 L (4 qt) for an average-sized calf of ~85 lb.**
- Based on the 2014 NAHMS, on average, calves are fed only 2.9 L (3.1 qt) of colostrum at first feeding, which **does not meet** recommendations
- To increase calves' average serum total protein, consider including a second colostrum feeding of 2-3 L before 8 hours after birth for all animals.
- Remember, to be considered colostrum, it must be the secretion of the first milking.

4. Quickness

- A calf's ability to absorb antibodies across the gut is optimal in the first hours after birth and declines over time, with a complete closure by 24 hours after birth. The optimal management strategy aims to feed all calves **within 1-2 hours after birth and by six as a maximum.**
- Taking the calf out of the maternity pen to a clean place before the calf can stand (~ 1 hour after calving) will also ensure calves don't contaminate themselves by sucking in dirty teats or facilities.

5. sQueaky Clean

- Although an essential source of nutrients and immune factors, colostrum can also represent one of the earliest potential exposures of dairy calves to infectious agents, including *Mycoplasma* spp, *Mycobacterium* paratuberculosis, and *Salmonella*.
- High levels of bacteria in colostrum interfere with IgG absorption, resulting in calves with lower levels of serum total protein. Fresh/raw colostrum fed to calves should contain less than 100,000 colony-forming units (cfu)/mL total plate count (TPC) and less than 10,000 cfu/mL coliform count.
- Producers should avoid feeding colostrum from known infected cows (e.g., Johne disease) and pooling raw colostrum. Contamination during colostrum harvest, storage, or feeding processes can be reduced by properly cleaning and sanitizing udders before harvesting colostrum, milking into a clean, sanitized bucket, and transferring colostrum into clean, sanitized storage or feeding equipment.

References:

Godden, S.M., Lombard, J.E. and Woolums, A.R., 2019. Colostrum management for dairy calves. *Veterinary Clinics: Food Animal Practice*, 35(3), pp.535-556.

Lombard, J., Urie, N., Garry, F., Godden, S., Quigley, J., Earleywine, T., McGuirk, S., Moore, D., Branan, M., Chamorro, M. and Smith, G., 2020. Consensus recommendations on calf-and herd-level passive immunity in dairy calves in the United States. *Journal of dairy science*, 103(8), pp.7611-7624.

Based on latest USDA study, passive immunity should be evaluated at herd levels to maximize calf health.



Contact Camila Lage at cd546@cornell.edu or 607-422-6788 if you want to participate in our colostrum project or if you need assistance on calf care management.

Why All The Fuss About Pair Housing?

By Jennifer Van Os, Department of Animal & Dairy Sciences, UW-Madison Reviewers

Tina Kohlman, UW-Madison Division of Extension Fond du Lac County

Emily Miller-Cushon, Department of Animal Sciences, University of Florida

Theresa Ollivett, Department of Medical Sciences, UW-Madison School of Veterinary Medicine

Most pre-weaned dairy calves in the United States and Canada are housed individually. However, current research shows benefits to raising calves in well-managed pairs or small groups with full social contact. Housing calves with at least one companion can improve animal welfare, calf growth, and consumer perception. Although the impact on calf health is less clear, many of the benefits of pair housing are promising for the vitality and sustainability of the dairy industry. A growing number of producers have found when raising dairy calves, two heads (or more) are better than one.

Social Development Companionship

It is important for calves because they are social creatures. In pairs and groups, calves learn to play well with others, both literally and figuratively. In the literal sense, calves play more when housed with companions because of the social contact and access to more space. Figuratively, social contact early in life helps calves learn to interact appropriately with each other, and their learning ability is improved. Calves raised with companions also show greater adaptability to change. They are more willing to try new feeds such as grain, hay, and TMR. This translates into better resilience to stress and less bellowing during weaning. When moved into larger groups after weaning, calves previously housed in pairs or groups start eating sooner and do not show the growth slump often seen in individually raised calves.

Grain Intake and Growth

Several studies have shown calves raised in pairs or small groups consume grain and grow as well or better than individually housed calves. Table 1 summarizes studies comparing individually housed calves to those housed in groups of two to eight. The table shows the number of studies which found pair- or group-housed calves measured ahead of (+) or similar to (=) individually housed calves. To date, no study has detected reduced (-) growth or feed intake in pairs or small groups compared to calves housed individually. Growth advantages are especially apparent when group-housed calves are fed greater milk or replacer allowances (such as 8 quarts per day or more at the peak).

The scale of these benefits was as follows:

- **Grain intake:** greater by $\frac{1}{4}$ to 1 pound per day before weaning and by $\frac{3}{4}$ to 2 $\frac{1}{2}$ pounds per day after weaning
- **Average daily gain:** greater by $\frac{1}{4}$ pound per day
- **Body weight at weaning:** greater by 5 to 9 pounds
- **Eating grain** is critical for rumen development and a successful transition through weaning. Better early-life growth also means earlier onset of puberty and higher milk production.

Table 1. Studies¹ comparing growth or grain intake of individually vs. pair- or group-housed calves

Measure	+	=	-
Dry matter intake of grain	11	8	0
Average daily gain of bodyweight	6	7	0
Bodyweight at weaning	8	4	0

¹Adapted from Costa et al., 2016, plus seven studies published from 2016-2022.

Consumer Acceptance

In a recent study, over 1,300 adults were surveyed at the Minnesota State Fair. Nearly all of these fair goers were consumers of dairy products. Participants were shown photos of dairy calves in individual, pair, or small-group pens in a barn. They were asked to rate how acceptable they found each calf housing system. Approximately half of the participants disapproved of individual housing. Only 14% disapproved of pair housing, and only 7% disapproved of group housing. In contrast, two thirds of participants approved of pair housing and three quarters approved of group pens. Only a third thought individual housing was acceptable. For each housing system, roughly 20% of participants expressed no opinion. This is the first study evaluating consumer perceptions of calf housing. The researchers concluded social housing may be important for continued consumer acceptance of dairy production.

Calf Health

In general, having sick calves reflects problems in colostrum management, hygiene and sanitation practices, nutrition, housing strategies, or preventive care and monitoring. Research outcomes so far are mixed regarding the impact of social housing on calf health. Although some farms manage large groups successfully, the most consistent research finding is that large group size generally affects calf health negatively compared to smaller groups. Two studies however have found less diarrhea in group-housed calves than individually raised calves. For respiratory disease, some studies report worse outcomes in groups, whereas others found similar health status

Most pre-weaned dairy calves in the United States and Canada are housed individually.

**CROPS
COWS &
CRITTERS**
newsletter

Current research shows benefits to raising calves in well-managed pairs or small groups with full social contact.

between individually or group-housed calves. To date, no studies have detected significantly better respiratory health outcomes for pair- or group-housed calves compared to those housed individually. Individual housing may mask the impact of less-than ideal management on calf health by limiting disease transmission — much like a long-term quarantine. To avoid an increase in disease when moving to group housing, it is important to get the management ducks in a row beforehand. Because it can be harder to notice sick calves in a group setting, calves may already be sicker and less responsive to treatment when first discovered. These bottlenecks are manageable and should not discourage producers from considering social housing. With planning focused on raising calves in pairs or small groups, farms can reap the benefits of social housing and promote healthy calves. The second part of this guide, Benchmarks for calf health before pair housing, covers transfer of passive immunity, mortality, and morbidity. Measuring these outcomes will help determine if the time is right for pair or group housing. The third part of this guide, Hygiene practices, covers best practices for biosecurity, sanitation, and bedding. Limiting the spread of disease between different pairs or groups remains a best practice. The principles are similar whether managing individuals, pairs, or groups.

Housing Options

Social housing can be done in many ways. Calves can be housed in a barn or outdoors in hutches or super hutches. The fourth part of this series, Options for housing pairs or groups, describes various practices producers currently use to house calves in social groups. We also discuss the latest recommendations on space allowance. The fifth part of this series, Grouping

strategies, covers group size, age range within a group, and strategies for pen and barn moves. These are also important management aspects for ensuring good calf health.

Managing Undesirable Behaviors

Some producers are concerned social housing gives calves the opportunity to cross suck on each other. Excessive cross sucking is thought to lead to frostbitten ears, navel infections, mastitis, or udder damage. The little research on this topic has not found a consistent relationship between cross sucking and those negative outcomes. Nonetheless, there are strategies to reduce this abnormal behavior. The sixth part of this series, Feeding practices and reducing cross sucking, covers research on milk allowance, feeding methods, and weaning strategies to reduce unwanted behaviors like cross sucking, pen sucking, and milk stealing.

Disbudding

Finally, the seventh part of this series, Disbudding and dehorning considerations, presents the latest standards of care for disbudding, including considerations for pair- or group-housed calves.

If you are interested in learning more about pair housing, please go to https://animalwelfare.cals.wisc.edu/calf_pairing/ to check the full series.

We are also happy to share that Dr. Jennifer Van Os will be interviewed in our podcast Cornell Cow Convos on December 18th to talk about this topic.

If you would like to have questions answered by her on the podcast, please fill out this survey or email Camila at cd546@cornell.edu with any questions you have.

SAVE THE DATE

JULY 17-18 2024

North American
MANUREXPO
Professionalism in Nutrient Management

Auburn 2024 New York

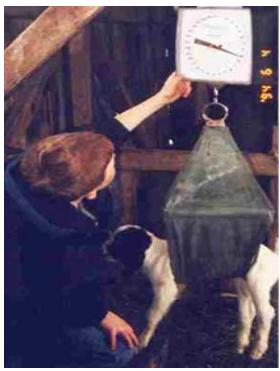
ManureExpo.com

North American
Manure Expo visits
AUBURN, NEW YORK

Calves raised in pairs or small groups consume grain and grow as well or better than individually housed calves.

**CROPS
COWS &
CRITTERS**
newsletter

Before deciding to adopt these practices, evaluation of benchmarks for calf health are recommended to determine if the time is right for pair or group housing.



How To Plan Your Breedings To Target Specific Holidays

By Dr. Tatiana Stanton, Cornell Small Ruminant Extension Specialist (July 2012)

Forwarded note from Amy Barkley:

There are many market opportunities for small ruminants. Depending on your business plan, agreement to management intensity, and penchant for risk, you may prefer timing your kids to meet specific harvest dates. Some farmers in WNY have access to holiday markets, while others do not. While this article uses the example of spring holidays for timing breedings, you can use these principles to manage breedings for any time of year. Keep in mind that some breeds breed more seasonally than others, so you may not be able to make every single lambing or kidding date you'd prefer.

It's important to time breedings carefully if the goal is to produce kids or lambs for specific holidays when demand is high. Many holidays such as Roman and Greek Easter, and Ramadan occur on different dates each year. It takes planning and skill to time your breedings to meet the demands of specific holidays.

The first steps are to check a calendar such as the Cornell Sheep and Goat Marketing **Holiday Calendar** to confirm the projected date each year for the holiday you are targeting. Additionally you need to find out what live weights your buyer is requiring for that holiday. Next, you need to calculate how long it will take a newborn kid or lamb in your herd or flock to reach that weight. This means being able to estimate birth weight and daily weight gain.

BACKGROUND INFORMATION FOR GOATS

Birth weights for kids can range from about 4 to 8 lbs. for Spanish goats and other small breeds, 5 to 9 lbs. for yearling dairy and Boer goats, and 6 to 12 lbs. for mature dairy and Boer kids. Yearling does and very old does tend to have lighter weight kids even though they often have singles. Male kids tend to be larger than female kids. The more kids there are in a litter, the smaller the weight of each kid tends to be. Severely over or underweight does tend to have smaller kids. Because birth weights can vary so much from farm to farm, it is good to keep track of the average birth weight for your own goat herd (or if you raise sheep, for your flock's lambs).

Daily weight gains for baby goats from kidding to weaning at 3 months range from about 1/3 to 1/2 lb. daily in many meat goat herds although some kids can grow as slow as 1/4 lb. daily and some big singles as much as 2/3 lb. daily. Kids from large litters will tend to grow slower than kids from small litters and kids to yearling does often grow slower than kids from mature does. Most herds count on their kids gaining about 10 to 15 lbs. per month from birth to weaning and from 8 to 12 lbs. per month from weaning on. It is good to know the average weight gains for kids in your herd (or lambs in your flock) because average gains can vary widely depending on breed and management.

THE SCENARIO

Let's pretend you want to market **suckling kids weighing 30 to 40 lbs. live for Western Easter on March 31st**. We'll assume that your kids average about 7 lbs. at birth and most of your kids grow about 1/2 lb. daily. However, your twin kids from yearling does and some of your kids from triplet litters only grow 1/3 lb. daily. Goats are generally purchased and shipped to slaughter about 7 to 10 days before Easter so you want your kids to weigh 30 - 40 lbs. by March 21st. When should your kids be born?

CALCULATIONS

Growthy kids: 40 lb. target weight – 7 lb. birth weight = 33 lbs. of gain. At 1/2 lb. of gain daily your growthy kids will need about 66 days to be ready to market.

Slower growing kids: 30 lb. target weight – 7 lb. birth weight = 23 lbs. of gain. At 1/3 lb. of gain daily, these kids will need about 69 days to be ready to market.

Count backwards on a calendar 66 to 69 days before March 21st to see when your kids need to be born. Mar, 21 days; Feb, 28 days = 49 days.

Thus, you want your kids born about 17 to 20 days before the start of February, i.e., **around Jan 11th -14th**.

Now you need to figure out when to breed your does to get the vast majority to kid around Jan 11th to 14th. The gestation period for goats is about 150 days so **ideally you want your does bred about Aug 11th to 14th**. The heat cycle is about 18 - 21 days but early in the season most does will be stimulated to come into heat about 4- 7 days after you put the buck in with them. This is called the "buck effect". Thus, the vast majority of your herd will likely get bred within 2 weeks of the buck's introduction. **Theoretically, if you get the buck into the herd by July 28th, almost all your does should get bred by Aug 11th to 14th**. However, Easter may be early and not all your does may be cycling initially. Chances are you will want to bring the buck into the herd by the beginning of the last week in July and hope that your does have begun to cycle by then. You may even want to "tease" the does in advance by either

It may take up to 45 days for a buck or ram to breed a pen of ewes or does. Count back the time from when you take put in the buck/ram plus 150 days for gestation.

12 - December 2023

**CROPS
COWS &
CRITTERS**
newsletter

Having a scale on your farm can help you determine your animals' rates of gain. Breeding in the spring can be less foolproof than breeding in the late fall and winter.

putting the buck across a strong fence from them or walking him through the herd a week or so earlier. Depending on when the holidays fall, you may want to pull the buck out for a couple of weeks in mid to late August depending on how tolerant your Western Easter market is of underweight kids and your Greek Easter Market is of overweight kids.

Please keep in mind that the best time to put your bucks in with your does (or your rams with your ewes) will depend on **1) your market's weight preferences, 2) the expected birth weight of your kids or lambs, and 3) their expected daily growth rates.**

You can do similar calculations for lambs from most sheep breeds using 8 to 10 lb. birth weights, .4 to 1 lb. daily weight gains and 146 to 148 gestation periods.

Cornell Cooperative Extension

Northwest NY Dairy, Livestock and Field Crops Program

Southwest NY Dairy, Livestock and Field Crops Program

SAVE THE DATE

Register [HERE](#)

12:00pm-1:00pm
EST



In partnership with:

NORTHEAST

DAIRY BUSINESS
INNOVATION CENTER

VALUE-ADDED DAIRY PROCESSING WEBINAR

More details coming soon

FEB 15 2024

Don't forget - it's county enrollment/
subscription season! We are funded
through the participation of our county
association partners.

**CROPS
COWS &
CRITTERS**
newsletter

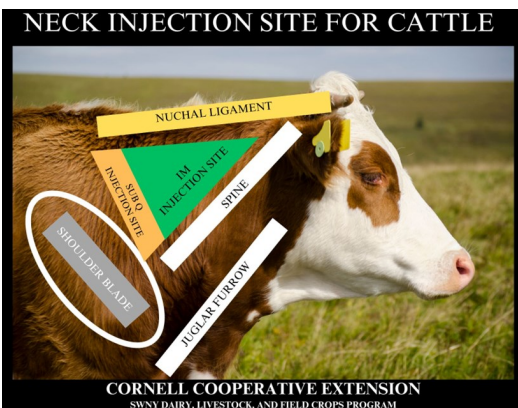
By supporting your local county Cornell
Cooperative Extension Association, you're
able to ensure programming like ours, and
the local programs you enjoy, can continue.

Beef Cattle Injection Tips

By Amy Barkley, Livestock Specialist

Giving injections of vitamins, vaccinations, dewormers, and antibiotics is a scientific process. Following label instructions, giving injections in the “injection triangle”, and opting for sub-cutaneous (sub Q) injections reduces the risk of muscle lesions and trim loss. Prior to the development and implementation of the National Beef Quality Assurance Program (BQA), processors and farmers were losing money from trim loss. Separate from bruising, lesions located in the muscle tissue from intramuscular (IM) injections into large primal muscles was severe. Once the data of loss was quantified, the BQA program worked to reduce this incidence in beef cattle and is now working to decrease this incidence in dairy cattle as well, since they are moved into the beef supply chain at the end of their milking lifetimes. This spawned a transition of many injectables to be reformulated for the subcutaneous injection route (under the skin) and for intramuscular injection (in the muscle) options to be removed from the product labels if they could be. While subcutaneous injections don’t prevent tissue inflammation and lesions, they greatly reduce them and their resulting trim loss. Some of these lesions and their severity can be seen below.

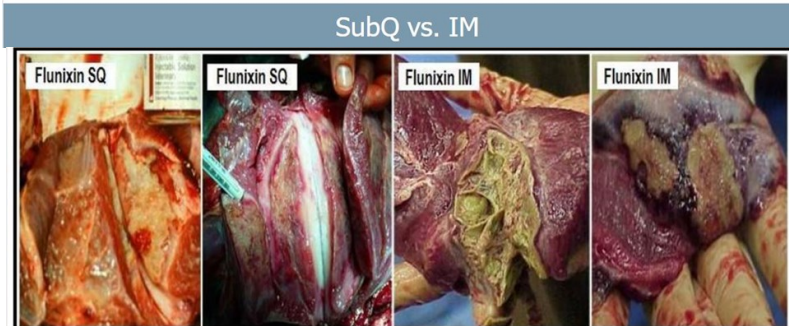
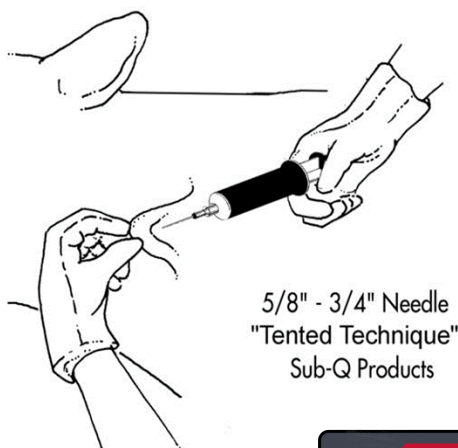
Regardless of when injections are given, intramuscular lesions will usually stay with the animal for life. Therefore, it’s important to place injections properly from day 1. The area that the industry broadly recommends for giving injection is in what we call the “vaccination triangle”. This is an area bordered off by the nuchal ligament in the top of the neck, the spine in the lower-mid area of the neck, and the shoulder blade. This area of the animal is low value in terms of the meat, so if there is trim loss from an injection, it will be less impactful to the overall value of the animal. See below to visualize the location.



The “injection triangle,” an area of the neck bordered by the nuchal ligament, spine, and shoulder blade. There’s an area recommended for subcutaneous injections and an area recommended for intramuscular injections.

Tenting the skin prior to injection within the injection triangle will aid in reducing errors in injectable placement. Diagram from the NY Beef Quality Assurance Program. Through proper placement and use of injectables, it’s easier to bring high quality cattle with limited lesions to the marketplace.

For questions, contact Amy Barkley, Livestock specialist at 716-640-0844 or amb544@cornell.edu.



Fascia and muscle lesions following subcutaneous and intramuscular injections. Photos from the NY Beef Quality Assurance Program.

Before you give your injections, remember these tips:

1. Read the label prior to giving your injection. Many are given under the skin (subcutaneously) and others are given in the muscle.
2. If you are placing multiple injections at once, you can utilize both sides of the animal. If you find that there is a need to place multiple injections on the same side, you will place them 3 inches apart at a minimum. Some labels recommend specific placement within the vaccination triangle for their injection.
3. Limit injections to 10 ccs or less per intramuscular site and 15 ccs or less per subcutaneous site.
4. Use the needle gauge and size recommended on the injectable package. Most IM injections require a 1” – 1.5” long needle, and most subcutaneous injections require a 1/2” - 3/4” needle. As the solution becomes thicker, you will need a thicker needle (gauge 16 for example) and if it’s closer to water in consistency, you’ll need a thinner needle (gauge 20 for example)

When giving a subcutaneous injection, use the tented skin technique. This is where you pinch the skin with one hand and slide the needle just under the pinched area. By doing this, you’ll help place a subcutaneous injection correctly every time. The image to the left shows more detail.

Lesions in the muscle or under the skin are a result of the body interacting with the injectable. Injecting a calf IM at day of age can result in a lesion that will remain in that animal for life.

**CROPS
COWS &
CRITTERS**
newsletter

Some injectables cause a large lesion by default, while others are less of an irritant. Always follow the label instructions to make sure you’re giving injectables properly. Reading the label may surprise you.

CROP MANAGEMENT COURSE

JANUARY 5TH 2024 - MARCH 1ST 2024

This course includes a wide range of topics, from basic agronomics to advanced practices and new research.

The information provided focuses on field crop systems, including row crop and dairy forages in New York and the northeastern United States. However, many of the agronomic principles covered in the course are applicable to other growing climates and systems.

- **Nutrient Management**
- **Soil Management**
- **Managing Environmental Risk**
- **Crop Management (by individual crop)**
- **Disease & Insect Management**
- **Weed Management**

It will be valuable for decision makers and key employees in the cropping system on the farm. Crop advisors and other technical service providers interested in crop production will also benefit from the class. There will be a mix of basic “101” level material combined with more advanced concepts and recent research findings.

There will be aspects of the course that are specific to northeast U.S. growing conditions and cropping systems, but most of the material will be applicable to any dairy or field crop operation.

REGISTER TODAY!



<https://web.cvent.com/event/3a71ba8e-6354-47d2-ad20-d9e67b8495ab/regProcessStep1>

TOTAL PRICE

\$250

CONTACT :

HEATHER DARROW
HH96@CORNELL.EDU

Don't forget - it's county enrollment/subscription season! We are funded through the participation of our county association partners.

**CROPS
COWS &
CRITTERS**
newsletter

By supporting your local county Cornell Cooperative Extension Association, you're able to ensure programming like ours, and the local programs you enjoy, can continue.

December 2023 - 15

Dairy Market Watch

November 2023



Prepared by Katelyn Walley-Stoll. Funded by PRO-DAIRY.

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

Milk Component Prices			Milk Class Prices				Statistical Uniform Price & PPD				
Month	Butterfat	Protein	I (Boston)	II	III	IV	Jamestown, NY		Albany, NY		Albany \$/gal. to farmer
Oct 22	\$3.65	\$2.45	\$25.96	\$25.73	\$21.81	\$24.96	\$23.62	\$1.81	\$24.22	\$2.41	\$2.09
Nov 22	\$3.37	\$2.53	\$27.34	\$24.67	\$21.01	\$23.30	\$23.12	\$2.11	\$23.72	\$2.71	\$2.04
Dec 22	\$3.15	\$2.65	\$25.83	\$23.11	\$20.50	\$22.12	\$21.91	\$1.41	\$22.51	\$2.01	\$1.94
Jan 23	\$2.77	\$2.80	\$25.66	\$21.61	\$19.43	\$20.01	\$20.71	\$1.28	\$21.31	\$1.88	\$1.84
Feb 23	\$2.71	\$2.36	\$24.03	\$20.83	\$17.78	\$18.86	\$19.60	\$1.82	\$20.20	\$2.42	\$1.74
Mar 23	\$2.73	\$2.41	\$22.24	\$19.52	\$18.10	\$18.38	\$18.78	\$0.68	\$19.38	\$1.28	\$1.67
Apr 23	\$2.70	\$2.56	\$22.10	\$19.20	\$18.52	\$17.95	\$18.62	\$0.10	\$19.22	\$0.70	\$1.66
May 23	\$2.75	\$1.80	\$22.82	\$19.11	\$16.11	\$18.10	\$18.31	\$2.20	\$18.91	\$2.80	\$1.63
Jun 23	\$2.76	\$1.51	\$21.26	\$18.83	\$14.91	\$18.26	\$17.46	\$2.55	\$18.06	\$3.15	\$1.56
July 23	\$2.79	\$1.19	\$20.57	\$19.12	\$13.77	\$18.26	\$17.08	\$3.31	\$17.68	\$3.91	\$1.52
Aug 23	\$3.02	\$2.08	\$19.87	\$19.91	\$17.19	\$18.91	\$18.28	\$1.09	\$18.88	\$1.69	\$1.63
Sep 23	\$3.12	\$2.30	\$22.15	\$19.98	\$18.39	\$19.09	\$19.27	\$0.88	\$19.87	\$1.48	\$1.71
Oct 23	\$3.71	\$1.04	\$22.72	\$21.95	\$16.84	\$21.49	\$20.05	\$3.21	\$20.65	\$3.81	\$1.78
October Utilization (Northeast): Class I = 30.1%; Class II = 26.6%; Class III = 30.5%; Class IV = 12.8%.											
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.											

Dairy Commodity Markets (Excerpt from USDA Dairy Market News – Volume 90, Report 47, November 24th, 2023)

Dry Products: Low/medium heat nonfat dry milk (NDM) prices were unchanged. End users are not shying away from the market at current values. Aside from a slight movement lower at the bottom of the western high heat range, prices held firm. High heat NDM markets were quieter this holiday week. Dry buttermilk prices held steady.

Cheese: Strong milk volumes continue to clear into Class III processing in the East. Retail demand is steady to stronger, while foodservice demand is down due to restaurant downtime for Thanksgiving as well as high menu prices. Industry sources relay international demand is light for the time being.

Butter: Cream volumes are looser, and spot load availability has improved across all regions of the country. The current holiday week has continued to improve cream supplies for butter production. Bulk butter production schedules are busier as more manufacturers reach comfortable levels of retail inventories for the November/December holiday season. Butter production is mixed nationwide. While production schedules are generally steady to stronger in the East and West regions, central butter makers say they are hesitant to add the abundant cream to the churns. Some manufacturers note planned downtime during the current holiday week.

Fluid Milk: Aside from California, milk production is steady to higher throughout the country. Class I demand is lighter with educational institutions going through holiday breaks this week. Class II, III, and IV demands are strong to steady with some manufacturing facilities planning downtime for the holiday week.

Friday CME Cash Prices					
Dates	10/27	11/3	11/10	11/17	11/22
Butter	\$3.19	\$3.10	\$2.60	\$2.49	\$2.50
Cheese (40# Blocks)	\$1.73	\$1.66	\$1.60	\$1.60	\$1.59

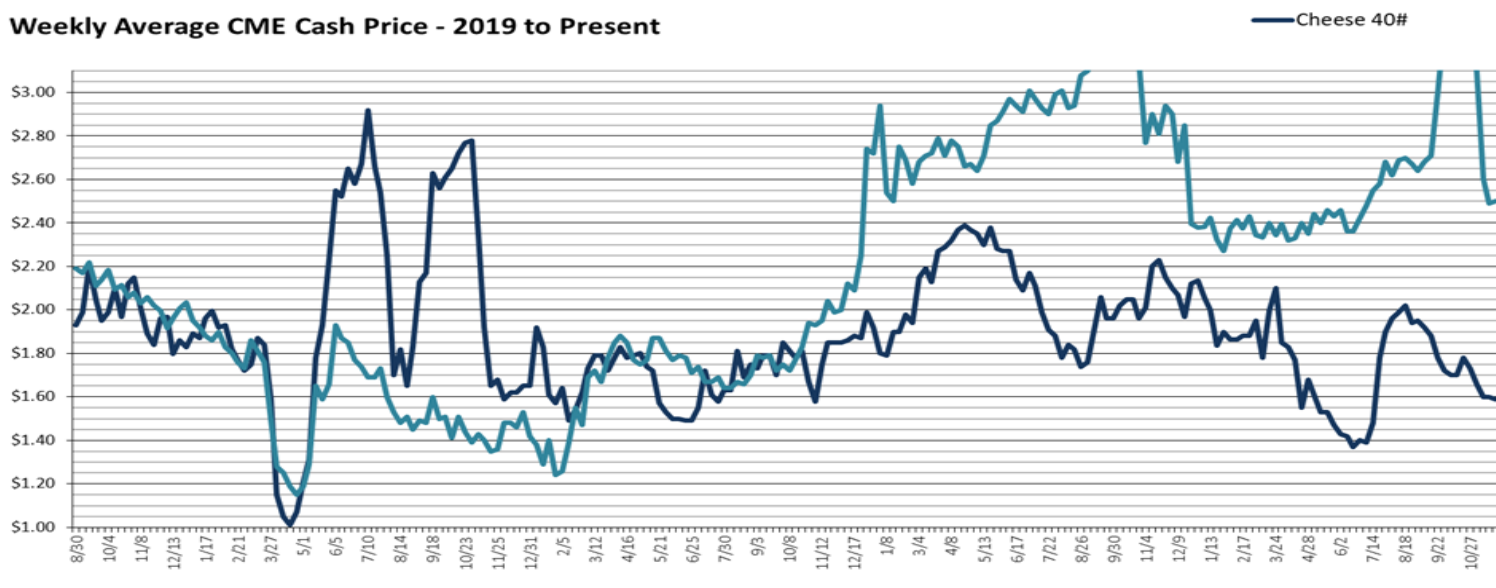
November's Albany \$/gallon was \$1.78, the highest it has been since the beginning of this year. With the holidays approaching, prices should climb.

16 - December 2023

**CROPS
COWS &
CRITTERS**
newsletter

For more information about Dairy Farm Business Management, or analyzing your farm's current finances, contact Katelyn Walley-Stoll.

Weekly Average CME Cash Price - 2019 to Present



Livestock, Dairy, and Poultry Outlook: November 2023 (Adapted)

Originally published here: <https://www.ers.usda.gov/webdocs/outlooks/107888/ldp-m-353.pdf?v=6076.2>

Milk production forecasts for 2023 and 2024 are lowered to 227.1 billion pounds (-0.5 billion) and 230.0 billion pounds (-0.4 billion), respectively, as the dairy herd is expected to further contract and the average yield per cow is expected to grow at a slower rate. The all-milk price forecast for 2023 is unchanged at \$20.70 per hundredweight, while the forecast for 2024 is raised to \$20.80 per hundredweight to account for higher price projections for most dairy products, although the butter price projection is lowered as the market is expected to soften for the rest of 2023 and 2024.

According to revised data from USDA, National Agricultural Statistics Service (NASS), during the third quarter of 2023 U.S. milk production declined by 0.7 percent compared to the same period last year, totaling 56.1 billion pounds.

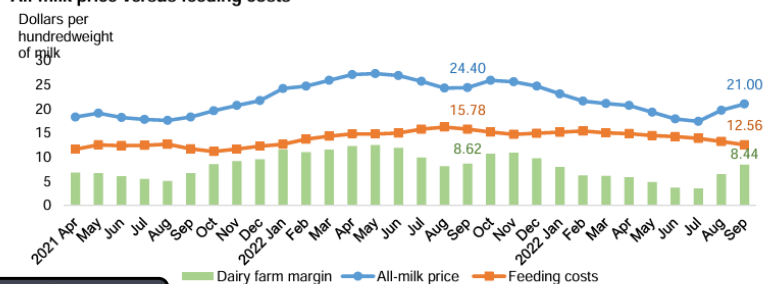
The U.S. dairy industry experienced an uptick in the all-milk price in September 2023, reaching \$21.00 per hundredweight (cwt), a \$1.30 increase from the previous month but \$3.10 lower than September 2022. Dairy farmers' feed costs declined in September 2023 compared to the same month in 2022. Corn prices declined by \$1.88 per bushel to \$5.21, alfalfa hay prices by \$56 to \$224 per short ton, and premium alfalfa hay prices fell by \$54 to \$288 per short ton. Soybean meal prices also showed a downward trend, averaging \$411.1 per short ton in September, a significant decrease of \$62.9 per short ton from September 2022. With a modest increase in milk prices and lower feed costs, the NASS milk-feed ratio was 1.89 in September 2023, an increase of 0.18 points from September 2022. Based on the USDA Dairy Margin Coverage program, the dairy farmers' milk margin above feed costs was \$8.44 cwt in September 2023, \$1.98 cwt above the

previous month but \$0.18 cwt lower than September 2022.

The increase in domestic use of dairy products so far in 2023 may be partially associated with growth in sales at grocery stores and restaurants, pushed by a hearty demand. According to the U.S. Department of Commerce, Bureau of the Census, estimated sales at grocery stores and foodservice and drinking places from January to September 2023 were higher than the same period in 2022. Meanwhile, according to the U.S. Department of Labor, Bureau of Labor Statistics, the Consumer Price Index for all products (CPI) declined on average on a year-over-year basis for the same period.

The contraction of the milking herd is expected to continue into the first quarter of 2024 in response to the low margins through most of the 2023, but then gradual herd expansion is projected for the remainder of the year. However, given the smaller expected 2023 milking herd, the 2024 average number of milk cows is projected at 9.375 million head in 2024, 10.0 thousand head less than the previous forecast. The milk per cow forecast is also lowered from the previous forecast to 24,545 pounds. ■

All-milk price versus feeding costs



Research Service using information from USDA, Farm Service Agency, Dairy Margin Coverage Program.

The average number of milk cows during the quarter was 9.375 million head, a decrease of 41,000 head from the previous quarter and 33,000 head lower than the same period.

**CROPS
COWS &
CRITTERS**
newsletter

With lower yields and further contraction in the milking herd, 2024 milk production is projected at 230.0 billion, 0.4 billion pounds lower than the last forecast.

● **Cornell Cooperative Extension**

Southwest NY Dairy, Livestock and Field Crops Program

Cornell Cooperative Extension ●

Northwest NY Dairy, Livestock and Field Crops Program

NORTHEAST

DAIRY BUSINESS
INNOVATION CENTER

SAVE THE DATE

for our

VALUE-ADDED DAIRY TOUR



• MARCH 13 & 14, 2024 •

**JOIN US AS WE TOUR ON-FARM DAIRY
PROCESSING FACILITIES IN EASTERN NEW YORK
TO LEARN MORE ABOUT FARM DIVERSIFICATION
OPTIONS AND BENEFITS/CHALLENGES**

ADDITIONAL DETAILS, INCLUDING TOUR STOPS, DEPARTURE/ARRIVAL
TIMES, AND FORMAL REGISTRATION WILL BE RELEASED IN JANUARY
OF 2024. LET US KNOW YOU'RE INTERESTED NOW BY CONTACTING
KATELYN WALLEY AT 716-640-0522 OR KAW249@CORNELL.EDU OR
MARGARET QUAASSDORFF AT 585-405-2567 OR MAQ27@CORNELL.EDU.

We hope to see you on our March tour!
You can reserve your spot now, or indicate
your interest, by emailing
kaw249@cornell.edu.

**CROPS
COWS &
CRITTERS**
newsletter

Funding for this tour was made possible by
the USDA's Agricultural Marketing Service
through Dairy Business Innovation Grant
21DBIVT1004-00.

Cornell Cow Convos

This monthly podcast series led by PRO-DAIRY and CCE Dairy Specialists features current, new and emerging topics of interest to the dairy industry right now. New episodes are released on the last Thursday of the month. Our first few episodes include discussions on preventative healthcare for cows, the trend of beef on dairy, what to look forward to in the new year for dairy, and socially grouping or pair-housing calves. This series also features specially selected interviews with dairy farmers and industry experts and invites suggestions from our listeners for future topics. You can find this podcast on SoundCloud.

Episode 1: Welcome to Cornell Cow Convos!

Available Oct 19, 2023

In this first episode of Cornell Cow Convos, Dairy Specialists Lindsay Ferlito and Betsy Hicks cover what to expect in this new podcast series, introduce other hosts and their areas of specialty, and present topics for the first few episodes.

Episode 2: Preventative Health Care for Dairy Cows

Available Oct 26, 2023

In this second episode of Cornell Cow Convos, Northwest New York Team Dairy Specialists, Margaret Quaassdorff and Kaitlyn Lutz, interview Jimena Godoy, Animal Welfare Specialist and manager at Aurora Organic Dairy, to discuss preventative health care for cows, the importance of technology and training, and compassion for both employees and cows on conventional and organic dairy farms.

Episode 3: Trends in the Beef x Dairy Industry

Available November 30, 2023

In this third episode of Cornell Cow Convos, Northwest New York Dairy, Livestock and Field Crops Team Dairy Specialist, Margaret Quaassdorff and South Central New York Dairy and Field Crops Team Dairy Specialist.

SUBMIT A TOPIC SUGGESTION

by emailing Camila at
cd546@cornell.edu

or

filling out a survey by
scanning the QR code.



Cornell Cow Convos

a podcast by Cornell Cooperative Extension

Episode 3:

Beef x Dairy

Available - November 30, 2023

Betsy Hicks

Margaret
Quaassdorff

CCE Dairy Educators

**CROPS
COWS &
CRITTERS**
newsletter

Dr. Jennifer Van Os, from the pair calving article on this newsletter, will be interviewed in our podcast Cornell Cow Convos on December 18th to talk about this topic.

If you would like to have questions answered by her on the podcast, email Camila at cd546@cornell.edu with any questions you have.

The Crops, Cows, and Critters (USPS#101-400)
is published monthly by Cornell Cooperative Extension
of Chautauqua County, JCC Carnahan Center
525 Falconer Street, PO Box 20
Jamestown, NY 14702-9608.

Periodical Postage Paid at
Jamestown, NY 14701.

THANK YOU TO OUR SPONSORS! WE APPRECIATE YOUR SUPPORT.

WANT TO SEE YOUR AD HERE?

Contact:

Kelly Bourne, Administrative Assistant
585.268.7644 ext. 10 | klb288@cornell.edu



ERNST SEEDS

www.ernstseed.com

(800) 873-3321

sales@ernstseed.com



GROWMARK FS, LLC

Bradley Griffith

716-664-3294 or 716-499-4826

bgriffith@growmarkfs.com

Fertilizer, Crop Protection, Seed
and Custom Application



Principal

Curtis T. Corkey, ChFC®

Financial Representative
Principal Securities Registered Representative
Financial Advisor

607-661-2734

Corkey.Curtis@principal.com

Insurance products issued by Principal National Life Insurance Company (except in New York), Principal Life Insurance Company, and the companies available through the Preferred Product Network, Inc. Securities and advisory products offered through Principal Securities, Inc., member SIPC. Principal National, Principal Life, the Preferred Product Network and Principal Securities are members of the Principal Financial Group®, Des Moines, IA 50392. 2119116-042022



THE EVANS AGENCY INSURANCE

Sherry B Coventry

Agricultural Insurance Account Executive
716.926.8698

scoventry@evansagencyins.com

SPECIALIZING IN FARM & CROP INSURANCE



PROGRESSIVE DAIRY SOLUTIONS, INC.

A NUTRITION & MANAGEMENT CONSULTING FIRM

Andy Vosburg

avosburg@pdcows.com

716-697-5758



FARM CREDIT EAST

Patrick Coates

607-654-3660

Patrick.Coates@farmcrediteast.com

COUNTRY CROSSROADS

FEED & SEED, LLC

"We plant the seeds to your success"

Feed | Seed | Lime | Fertilizer | Farm Supplies

3186 CR 61 | Andover NY | 607-478-8858

94 Front St | Addison NY | 607-359-2424



NYFARMNET

Providing free and confidential consulting
for NYS farmers and agribusiness
professionals.

Contact us today!

1-800-547-3276

www.nyfarmnet.org

Dominion College of Business

Cornell CALS



WILD ACRES FAMILY FARM

Don Wild

Box 7, Great Valley, NY 14741

716-969-4386

King's Agri Seeds - WNY, Forage Mgt. Ser.