The Revolving Door In The Close-Up Pen
Heather Dann, WH Miner Institute

I often think of the close-up dry cow pen as a revolving door. Cows are entering or leaving on a frequent basis to allow for changes in diet and management. On many dairies, cows from the far-off pens are moved usually to the close-up pens on a weekly basis. Cows are removed from the close-up pens just before calving or immediately after calving resulting in daily exits on many dairies. These movements cause a disruption in the hierarchical order among cows. Thus, regrouping forces cows to reestablish social relationships through physical and nonphysical interactions that may negatively affect feeding and resting behavior.

University of Wisconsin veterinarians, Cook and Nordlund, suggested based on clinical experience that weekly regrouping of close-up cows may increase the risk of metabolic disorders and disease after calving and reduce lactational performance because of behavioral changes associated with regrouping that reduces feed intake and increases stress. They suggested that to eliminate the stress related to regrouping, that cows should be moved in groups (not individual cows) to close-up pens and no new cows should enter the pens until all the cows had calved. This idea is similar to the “all-in-all out” (AIAO) strategy used in the swine industry to minimize disease transmission. The idea is being implemented successfully on some dairies (http://www.hoards.com/10aug25transitionbarn). A downside to this AIAO idea is more space in the barn is needed and the space will be underutilized at times. Also, many dairies cannot accommodate this idea because of the layout of existing facilities.

What should we take away from dry cow grouping research studies? A dairy does not need to build a new facility or renovate an existing facility to accommodate the AIAO approach in the close-up pen to achieve transition success. However, a dairy does need to manage the closeup pen to minimize social disruption. It appears that this can be achieved with weekly entry pens as long as the pens are understocked to provide appropriate feedbunk space and lying space. With understocked conditions, weekly regrouping of close-up cows does not seem to cause long term stress, impair immune function, reduced feed intake, or reduced lactational and reproductive performances.

* References available upon request.
Calf Blanket Tips
Grober Nutrition

Ontario, Canada-based Grober Nutrition offers the following advice on most effectively using calf blankets:

Why should you use a calf blanket?
Calf blankets are a great tool to help a young calf regulate body temperature. When a calf is born, they are not capable of regulating body temperature. Calves are born with very little brown fat (1-3% on average for a 100 lb. calf) – this is what can be used as energy to the young calf … not very much! When a calf is comfortable they will turn feed into gain more efficiently. In other words, a calf that isn't comfortable will need more milk replacer to grow.

When is it best to use a blanket?
Use blankets in conjunction with adequate bedding (straw is best for warmth and comfort). Using a blanket without adequate bedding will not achieve an optimal environment for a calf – it will be like using a blanket to stay warm with no clothes on.

Use a blanket for newborn calves or calves that are struggling with illness. Blankets will not make up for cold drafts – properly ventilated barns are still a necessary aspect to raising strong calves.

Use a blanket if the ambient temperature is below 40°F (if calves are well bedded with straw, this will raise their ambient temperature). Calves older than three weeks should not require blankets if housing is adequate, bedding is dry, fresh and plentiful and the area is free of drafts.

How do you use a blanket?
Put on a blanket (which should cover their torso) and be sure to check them periodically. If a calf is sweating then the calf will become wet and this can increase their chances of illness and will definitely increase their level of discomfort. Check areas where there are straps/secures to ensure they are not too tight – it is best if you can fit your flattened hand inside the blanket.

Source: Calf GroFacts by Grober Nutrition
Need a Slaughterhouse?
New Map Simplifies Search

Are you a livestock or poultry farmer looking for a slaughterhouse and/or processing facility? You’ve probably discovered that the kind of species you raise, the unique production practices you use, and the way you market your meats are all factors in determining the type of slaughterhouse facility that’s right for you. With both state and federal systems for slaughtering and processing animals, it can be confusing to understand which certifications and exemptions apply to your farm enterprise. Once you do, it can be difficult to locate a slaughterhouse that offers the specific set of services you need within a reasonable distance.

In an effort to simplify your search for the most suitable facility, the Cornell Small Farms Program is pleased to announce a new tool, the NY State Slaughterhouse Map (go to http://www.smallfarms.cornell.edu to view the map).

The goal of the map is to connect NY State livestock and poultry farmers to the nearest slaughterhouses and processors that will best meet their needs. From poultry slaughter and processing to the handling of non-amenable exotic meats such as farmed deer, bison, ostrich, and rabbits to smokehouses and curers, the map has indexed 45 diverse facilities at this time. You can view detailed information for each business listed, including species accepted, organic certification, religious exemptions for halal and kosher, and complete contact information. This resource also directs you to more information about what each federal and state classification, whether USDA, 5-A, 20-C, or Custom Exempt, means for your farm and your animals.

Who was included in the map? 45 NYS slaughterhouse and processors are listed, but this is not an exhaustive list. We included only the facilities that granted us permission to include in the map. Many custom facilities are still in the process of being verified and are not included yet. A complete list of all USDA, NYS 5A, and NYS Custom Exempt slaughterhouses, compiled by the Cornell Small Farms Program, can be found on the map. This list includes slaughterhouses approved before 2010 and includes all processors, regardless of whether or not they have a kill-floor.

Help us expand the map. If you are a slaughterhouse and/or processing facility and would like to be listed on the map, please send your contact information, services offered, certifications, and species accepted to smallfarmsprogram@cornell.edu. If you are on the map and would like to make a correction to the details listed for your business, please email the amendments needed.

Special thanks to Tatiana Stanton, Cornell Department of Animal Science, for advising this project.

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The Impact of Cold Stress on Calves
Sarah Williams, W.H. Miner Institute

As the temperature keeps dropping and the days get shorter it’s a good indication that winter is here. As you’re gearing up to keep yourself warm on these blustery cold days, make sure you give a thought to your animals as well, especially your calves.

Whether in a barn or in hutches, calves are more susceptible to the negative effects of cold temperatures than are cows and more mature heifers. The range of temperatures where calves use no additional energy to maintain body temperature, or thermoneutral zone (TNZ), ranges from about 55°-70°F, varying slightly due to age and other factors.

In general, for every 1°F drop in temperature below the TNZ maintenance requirements of the calf increase by 1 percent. Calves are especially susceptible to the negative effects of cold due to having a larger surface-area-to-body-mass ratio than more mature animals, resulting in more body heat loss with the larger surface area. Cold stress causes calves’ energy to be used for maintenance rather than being utilized elsewhere in the body.

In more mature animals, fat can be mobilized to make up for this energy deficit. Calves, however, are born with low body fat reserves and excess energy must be supplied to avoid negative consequences.

Calves that are cold stressed right after birth have negative consequences from the start. Cold stress decreases the rate and delays the absorption of immunoglobulins from colostrum, though net absorption of colostral immunoglobulins is generally not affected.

Calves exposed to cold conditions also have a higher percentage of neutrophils and decreased percentage of lymphocytes compared to calves housed in TNZ and heat-exposed conditions between days 3 and 14 of exposure. This could be indicative of a delay in the development of the immune system in the cold-stressed calves.

Any delay in the immune system, be it the rate of absorption of colostral immunoglobulins or development of lymphocytes, puts calves even more at risk than they naturally are at this early period of life.

The more noticeable consequences of cold stress on calves, however, may be the decreased average daily gains. Unless adequate supplemented energy is provided, the energy used for growth in TNZ conditions will be used for maintenance.

Calves under cold stress will not grow as well as calves do in the TNZ; even a slight loss in growth can be detrimental to future productivity. A summary of calf data from Cornell found that a difference of 2.2 lbs. daily gain in the pre-weaning period resulted in 1,874 pounds more milk in the first lactation, and the trend continued in later lactations.

Average daily gain of calves must be kept optimal to ensure replacements entering the herd will have the opportunity to be as productive as possible. Easing the effects of cold stress can be done through feeding and management practices. Feeding practices to counteract the energy lost maintaining body temperature will have the greatest effect.

When feeding milk or milk replacer, more milk could be fed at each feeding, or a third feeding could be introduced. If that’s not an option, many companies sell a winter blend milk replacer that is higher in fat and carbohydrates, accounting for the energy deficit created by cold temperatures.

It’s important to deliver milk as close to body temperature as possible (~102°F). This decreases the energy the calf spends to heat the ingested milk up to body temperature.
Water offered to the calf should also be delivered at this temperature and topped off multiple times a day. Increased calf starter intake also can help to ease the energy deficit in these calves.

It’s important to provide an adequate starter grain ad libitum to calves starting when the calf is two or three days old. A study conducted with the same milk replacer feeding in cold and warm environments tried to measure the effects of cold stress on calves, though calves in the cold environment had a higher starter intake than calves in the warm environment.

Consequently calves were similar in growth and immune measures. This shows that as long as calves are provided adequate nutrition during cold stress periods, the negative effects can be averted.

It’s also important to modify management practices to account for the cold temperatures. Calves should be kept warm and dry. This can be done by helping to dry calves after birth, and the use of calf coats especially on younger calves.

Bedding is very important in the calf area; it should be dry and ample enough to allow for “nesting” to help insulate calves.

If a calf’s legs can be seen while the calf is lying down, the bedding depth is not optimal and will not properly help insulate the calf in cold weather. Calf housing should allow for adequate airflow but also protection from wind and drafts, as this can greatly impact the temperature.

Calves are very susceptible to the effects of cold stress; those effects can be very detrimental to calves themselves and farm productivity as a whole. It is imperative to analyze management and feeding practices to ensure that your calves will have appropriate housing, nutrition, and management to accomplish your preweaning goals this winter.

**Signs of Mycoplasma Bovis Infection In Dairy Cattle**

Dairy Calf & Heifer Association

Mycoplasma bovis infection is caused by mycoplasma, the smallest free-living pathogen in animals. The pathogen attaches itself to mucosal surfaces, then invades tissue and liberates toxins that cause severe tissue damage. M. bovis also can suppress the immune system and increase the severity of disease caused by other pathogens. Symptoms can appear two weeks after birth, with severe symptoms appearing later.

**Symptoms include:**

- Inner-ear infection. Calf may hold its head slightly lower than normal, have droopy ears and tilt its head.
- Discharge from eyes and nose.
• Increased respiration. Calf may experience faster breathing and struggle to draw air in and out of the lungs.
• Frequent, hacking cough.
• Fever. Low-grade early on, with minimal fever as infection becomes chronic.
• Arthritis. Usually seen one week after pneumonia and can involve swelling around the joints.
• Mastitis. Udder swelling and decreased milk production that is watery, flaky and tan or brown in color.

Infection spreads easily via cough, nasal secretions and direct contact with infected animals, milk, feedbunks and waterers. Infected cattle do not respond well to treatment so prevention is necessary to stop the cycle of infection.

Working with your veterinarian to develop a prevention strategy is the best way to keep mycoplasma from creating chronic problems with your herd’s health and profitability.

Protein Supplementation for Beef Cows

Protein prices remain high as corn prices declined by 50 percent

Source: Kevin Gould, Michigan State University Extension

With 2013 corn harvest prices approximately half of those in 2012, cow-calf producers may choose corn for supplementation again. It’s probably the cheapest source of energy on the market if you can feasibly deliver it to the cow herd. The challenge may be meeting the protein requirement of the cow as she moves into late gestation and early lactation. Protein requirement of the pregnant cow steadily increases as the fetus develops reaching a peak requirement near 10.3 percent crude protein in early lactation. Generally forages offer a significant portion of the protein requirements but may be insufficient when lower quality feedstuff like crop residues or poor quality hays are utilized. In the past five years, producers have chosen distillers grains (DG) to increase protein in the diet cost effectively. This is generally very effective if you compare feedstuffs based on protein cost per unit. In the past DG has been priced very similar to corn on a per ton basis. This year is definitely different. DG prices the week of Dec. 15 2013 at 19 markets across the Midwest averaged 142 percent of corn and was nearly 50 percent of the cost of soybean meal. The rule of thumb suggests when DG reach 62 percent of soybean meal, the value per unit of protein in each feedstuff is equal. Without attempting to guess future market prices, one would suspect the DG value will remain high as global demand and high domestic soybean prices keep pressure on protein prices. Bottom line; know the values of your feedstuff inventory.

We all need to recognize the increased nutritional needs of cows in late gestation and lactation. If ration deficiencies occur, do the math and calculate protein or energy costs, consider trucking, storage and local availability in your decision making process. At present, corn is the cheapest energy source and DG looks like the cheapest protein source, but like the weather, it will probably change.

What Factors Affect Feeder Cattle Prices in NY?

Do you raise cattle for feeder sales or are you considering feeder cattle sales as a potential market channel for your livestock? If so please join the Tri-County Grazing group when they welcome Dr. Mike Baker, Cornell Beef Cattle Extension Specialist and Matthew LeRoux, CCE-Tompkins Ag market specialist to discuss their three year research project that evaluated various factors that affected feeder cattle sale prices. Dr. Baker will describe the multi-year project during which they collected data on feeder cattle at special feeder calf sales held at Finger Lakes Livestock Exchange. Through the spring of 2013 data was collected on nearly
10,000 head and 3900 lots. They found that preconditioned feeder cattle only brought a $2.80/cwt. Premium. Compared to prices reported on 550 lb. by CattleFax, NY steers, weighing 500-600 lbs. were priced $29/cwt. less. Obviously there is still work to do in increasing the price of NY feeder cattle. Matt LeRoux will discuss his Market Channel Assessment tool that helps farmers decide which marketing path is the most profitable option.

This workshop is free and open to the public. Join us Tuesday January 21 from 6-8pm at the Steuben County Civil Defense Center, 7220 State Route 54, Bath. RSVP’s appreciated; contact CCE-Steuben at 607-664-2300 or email ksb29@cornell.edu.

This event is sponsored by the Tri-County Graziers, with support from Cornell Cooperative Extension of Steuben and Schuyler Counties, the Upper Susquehanna Coalition, and the NYS NRCS Grazing Lands Conservation Initiative.

Upcoming Dairy Producer Webinars
These webinars are geared toward bringing pertinent information to dairy producers, extension educators, allied industry professionals, and veterinarians across the United States. Visit http://www.extension.org/dairy_cattle to connect!

Basic Vaccinology: Why Vaccines Work or Don’t Work
Dr. Dan Grooms, Michigan State University
January 13, 2014 12:00 PM Central Time
Vaccines are a vital part of maintaining the health and well-being of a dairy herd, but have you ever wondered about what makes them work? Dr. Grooms will cover some of the basics of vaccinology, including basic immunology and how vaccines work, as well as the different types of vaccines and important considerations for designing and implementing a vaccine program for your farm.

Forage Fermentation: How to Make Good Silage
Dr. Limin Kung, University of Delaware
February 17, 2014
With so many variables affecting the quality of silage, it can be difficult to manage the fermentation process to produce an optimal feed. Dr. Kung will cover the general factors which affect forage quality, the basic types of silage fermentation, factors that affect fermentation and silage stability, and some management practices to help in attaining high feeding value.

Dairy Reproduction: Identifying Problems and Solutions for Your Herd
Ray Nebel, Select Sires
March 17, 2014
Many dairies experience difficulty in their reproduction programs, and a wide range of factors can affect reproductive success in a herd. In this session, Ray Nebel will take a look at some of the factors that affect reproduction on dairies, including labor, nutrition, environment, and the cow herself. He’ll also discuss how you can find and fix problems that could be affecting the success of your reproduction program.

Milking System Design and Analysis
Roger Thomson, DVM, Milk Quality Consultant
April 7, 2014
The milking system is the heart of any dairy operation, and requires a lot of consideration! Dr. Thomson will talk about the design and analysis of a milking system, including some reasons a producer might consider changing the milking system, frequency of evaluation, and basic system design. He will also cover regular maintenance concerns and will discuss the National Mastitis Council's analysis fundamentals and goals.
DAIRY MARKET WATCH

Dairy Commodity Markets (USDA Dairy Market News):

Butter: Friday CME cash prices: 11/22 $1.68, 12/6 $1.65, 12/13 $1.57, 12/20 $1.58, and 12/27 $1.55. The butter market is firm behind good sales and lighter supplies throughout the regions. Butter production rates increased late in the month as additional cream supplies were secured for churning. Export interest is good with more opportunities available as 2013 comes to a close.

Cheese: Friday CME cash prices (40# blocks): 11/22 $1.84, 12/6 $1.87, 12/13 $1.93, 12/20 $2.00, and 12/27 $2.00. Cheese production saw some increases in December as surplus holiday milk became available. Smaller plants and many Class I and II production lines go quiet over the holiday and their milk clears to larger facilities. Retail sales continue to be good with specials for football super bowl and playoff viewers.

Dry Products: Nonfat dry milk prices moved mostly higher behind a firm market and tight supplies. Production levels increased on the holiday week from additional milk supplies. Prices for dry buttermilk were steady in the West and steady to higher in the Central and East. The market tone is firm throughout the regions due to tight supplies and good demand.

Fluid Milk: Bottling demand backed off as schools are on break, but remained steady in Florida, in part, due to tourists and seasonal residents. Additional milk supplies that would have gone into bottling went into many butter/powder and cheese production plants throughout the regions.

Milk Production: Milk production in the 23 major States during November totaled 15.0 billion pounds, up 0.3 percent from November 2012. Production per cow in the 23 major States averaged 1,762...
pounds for November, 1 pound above November 2012. The number of milk cows on farms in the 23 major States was 8.50 million head, 22,000 head more than November 2012, but 4,000 head less than October 2013.

Comments:
2014 Dairy Outlook excerpted from the Cornell Ag Economic Outlook, written by Mark W. Stephenson, University of Wisconsin-Madison:

Dairy producers in many parts of the country have been trying to restore balance sheets that were damaged by credit needs from low milk prices in 2009 and high feed prices in 2012. 2013 was the second highest milk price year on record, and for many producers, it was the third year of milk price recovery in a row. However, high feed prices continued to challenge many dairy farms that purchase the majority of their feed. Western producers who experienced unusually high forage prices found 2013 to be another financially stressful year.

Dairy Product Demand:
Income elasticity and changing tastes and preferences have put a damper on fluid milk sales in the U.S. Current consumption has fallen to about 19.5 gallons per capita. As fluid milk and ice cream sales have declined, cheese, butter and notably yogurt sales, have increased.

Dairy Exports:
U.S. trade in dairy products has been favorable for both imports and exports. Imports have declined as a percent of milk production, in part because we are producing excellent cheeses domestically and in part because the U.S. dollar has remained historically weak compared to the Euro. Export opportunities have been truly extraordinary. Last year, New Zealand finished their production season in extreme drought. What looked like a very promising beginning to their season ended very poorly with total milk production down 1.3 percent (production season June 2012 through May 2013). In contrast, the European Union experienced excessive rain in latter half of their season (April 2012 through March 2013) which also resulted in diminished milk production and exports from Europe. The U.S. was well positioned to take advantage of those market opportunities. Export sales growth will help to sustain our increased milk production in the long-run.

Dairy Stocks:
We were carrying unusually large stocks of butter and cheese through the first half of 2013. However, when U.S. prices returned to a discount relative to other world prices, export sales picked up and our stock levels began to recede. By the fourth quarter of 2013, stocks of dairy products have been reduced to comfortable levels again.

Dairy Outlook:
My forecast for the Northeast Federal Order blend price is to decline by $0.48 in 2014 when compared to 2013. I also expect that the New York All Milk Price may decline by about $0.80 reflecting some loss in over order premiums. The premium loss reflects the strong growth in milk supplies in the region. While this may sound like a mildly pessimistic milk price forecast, I am projecting purchased feed prices to decline by much more. Dairy producers should find favorable margins which would help restore balance sheet losses sustained in 2009 and 2012.

Virginia Carlberg
Extension Community Educator

Schuyler and Steuben – January 2014
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February 27 & 28, 2014 - Good Agricultural Practices (GAPs)
Steuben County Civil Defense Center, 7220 State Route 54. 8:30 am-3:00 pm both days
This is for those farmers who are being required by buyers to provide third party verification of their food safety practices and for farmers thinking about moving in this direction.
For more information and updates, Registration info will be up approximately 4-6 weeks before the workshop. For more info, contact Craig Kahlke at cjk37@cornell.edu or (585) 735-5448.

March 19 – Growing Barley & Hops for the Brewing Industry
Steuben County Civil Defense Center, 7220 State Route 54, Bath.
Look for detail registration information in next month’s Ag News!

TRADING POST:

Wanted: Subsoiler for primary tillage. Farmer in Hammondsport seeking to rent subsoiler with 1 or 2 shanks, minimum depth of 12”. Relatively small parcel being tilled, only need for a weekend at most. If interested please call Peter at (914) 588 2860.

For Sale: 7’ Bushhog 287, Excellent condition, $1,850 or BO. Phone: 607-776-1711
COMING EVENTS:

January 21 – Factors Affecting Feeder Cattle Prices
Mike Baker, Cornell Beef Cattle Extension Specialist and Matthew LeRoux, CCE-Tompkins Ag market specialist, will discuss a three year project during which time they collected data on feeder cattle at special feeder calf sales held at Finger Lakes Livestock Exchange. 6-8pm, Steuben County Civil Defense Center, 7220 State Route 54, Bath. RSVP’s appreciated; contact CCE-Stuben at 607-664-2300 or email ksb29@cornell.edu.

Feb 20 – WNY Potato Grower Processor Meeting
12:30pm – 5:00pm, Club 57, Hornell
The cost is $50 per person – please pay at the door. We would appreciate knowing if you plan to attend by February 18, 2014 so we can plan for dinner. To make reservations please call Robert Mahany at 585-335-2391 or Jim McCormick at 585-322-7274.

February 25 – Crop Symposium
10:00am – 2:00pm Steuben County Civil Defense Center, 7220 State Route 54, Bath. Topics: Soybean diseases & pests and Understanding the differences between restricted and unrestricted pesticides. NYS-DEC pesticide recertification credits pending in categories 1a, 10, 21, and 23. RSVP’s appreciated; contact CCE-Stuben at 607-664-2300 or email ksb29@cornell.edu. $15.00 per person, lunch provided.