



Dairy Road Show 2006

With presentations on reproductive management, dairy cattle nutrition, biosecurity, research about crossbreeding and Transition Cow Index, the University of Wisconsin-Extension Dairy Team's 2006 Road Show has topics of interest to almost everyone in the dairy business.

This year's Road Show,

"Gaining the Competitive Edge - A Dairy Seminar Series," pulls out from UW-Madison for seven dates in January in locations around the state. Locally, the seminar will be held on Wed., Jan. 18 at the Apple Creek Inn in DePere and the Slovan Country Inn in Slovan. The program will be the same at each location.

Program

- Reproductive Management programs to Improve Conception Rates
Dr. Paul Fricke, UW-Extension Dairy Reproduction Specialist
- Dairy Cattle Nutrition Update
Dr. Randy Shaver, UW-Extension Dairy Nutritionist
- Where Does Biosecurity Fit on Your Farm?
Dr. Dave Rhoda, D.V.M., UW-Extension Milk Quality Outreach Veterinarian and Evansville Veterinary Service
- What We've Learned from Research About Crossbreeding
Dr. Kent Weigel, UW-Extension Geneticist
- Transition Cow Index (TCI)
*Zen Miller, Outagamie County UW-Extension Dairy & Livestock Agent
Jennifer Keuning, Kewaunee County UW-Extension Dairy Agent*

All meetings will run from 10:30 am to 3 pm. The fee for the program, which includes lunch and materials, is \$20 per person. Registrations are due Jan. 8. For questions and addi-

tional information or to register for the program please contact the Kewaunee County UW-Extension Office at 920-388-7141 or the Brown County UW-Extension Office at 921-391-4610.

Impact of Rainfall on Yield and Quality



Rain is the hay-maker's worst nightmare. Weather-induced losses can be caused by:

- Increased and prolonged plant respiration that reduces soluble carbohydrates and the overall energy content of forage.
- Leaching of soluble carbohydrates, protein and certain minerals.
- Leaf shattering and loss, removing the highly digestible and high protein portion of the forage.
- Microbial activity that metabolizes soluble carbohydrates, reduces forage energy content, and possibly produces harmful mycotoxins.
- Color bleaching.

Research from Wisconsin and Michigan have verified dry matter losses up to 44% as a result of rain on cut forage during the curing process. Losses appear to be greatest after partial drying of the forage has occurred.

How is forage yield reduced by rainfall?

Three primary factors are involved: leaching, respiration, and leaf loss. Leaching is the movement of cell solubles out of the plant. Components of the plant that are very water-soluble are leached out of the forage and lost during a rain event. Unfortunately, most of these compounds are those highly digested by the animal. Excessive leaching of soluble carbohydrates by rainfall impacts its value to make good silage. Reduced soluble carbohydrates provide less substrate for bacteria involved in the fermentation process.

Pesticide Applicator Training

The 2006 Pesticide Applicator Training is set for Tues., Feb. 28, 2006 at the Kewaunee County Administration Center from 9:30 am-3 pm.

The Pesticide Applicator Training is required for agriculture producers who purchase and apply restricted-use pesticides. This training provides basic practical pesticide knowledge including proper handling and application techniques to reduce risk of injury to oneself, to others and the environment.

How does rainfall intensity and forage moisture affect losses?

Research is conclusive on these two points. Given the same amount of total rainfall, a low intensity rain will result in more leaching of soluble compounds than a high intensity rain. In addition, as forage moisture declines, it is more prone to losses from rain. In Wisconsin rainfall studies, the maximum loss in yield (54% DM loss) was a treatment where 2.5 inches of rain fell on hay that was nearly cured.
Source: The Haymaker, Autumn/Winter 2005

Class fee is \$35 and covers materials and lunch. PAT materials can be purchased from the Kewaunee County Extension Office, the Kewaunee Cooperative Office in Luxemburg, Luxemburg Milling and Rio Creek Feed Mill.

To register for the training session contact the Kewaunee County Extension Office at 920-388-7141. All class registrants must present a photo ID (ie: driver's license) and Social Security number on the day of training.

Forage Ash Percentages on the Increase

Ash comprises the total mineral content of a forage. Ash content of a forage or total mixed ration is easy and economical to measure in a forage testing laboratory. The reason for testing the ash content of forages and TMR's is to estimate energy and calculate non-fiber carbohydrate content. Because feeding minerals to cows is a common and necessary practice it is important to understand what constitutes a normal ash content in a forage or TMR and what constitutes an abnormal ash content. If the ash content of a forage or TMR is abnormally high there is a very good chance the forage or TMR is contaminated with soil. The normal ash content of legume-grass forages is near 9.0% (DM basis). However Pat Hoffman, UW Extension Dairy Scientist, reports seeing lab reports with up to 18.0% ash. Legume-grass forages containing 10-18% ash are likely contaminated with increasing amounts of soil.

To understand the relative significance of feeding high ash, here's an example. If a dairy producer fed 25 lbs. of dry matter from forage containing 18.0% ash, the cows may actually be consuming 2.5 lbs. of supplemental soil. Unfortunately there is relatively little research literature to help understand what may happen to cows in this situation so we can only speculate that feeding 2.5 lbs. of soil would not have a positive effect on lactation performance.

Corn silage has less ash as compared to legume-grass forages. The normal ash content of corn silage is approximately 5.0% of DM but some samples have shown values up to 10.0%. Why are ash values in general on the increase? Here are some possibilities:

- Greater use of disc-type mower conditioners.
- Lower cutting height.
- Forage in bunkers or piles on earthen bases.

Monitoring Clinical Mastitis Management

The dry period of dairy cows is an opportune time to use treatments that reduce diseases in the next lactation. These would otherwise be inconvenient or impractical to use during lactation, or pose the risk of antibiotic residue in milk of lactating cows. The dry period is a window of opportunity that can be used to eliminate intramammary infections, build immunity, and prepare cows for a productive future. The dry period can be divided into five management phases: pre-dry off, dry off, early dry off, pre-fresh and calving. Proper management of each phase maximizes production during the subsequent lactation, while minimizing health problems for the cow and calf. Because there are many options at each phase, each dairy operation must design their own health management plan in accordance with their housing and management style under the guidance of the herd veterinarian.

Many health considerations need to be addressed when developing a dry cow health program. For example, the mammary gland is highly susceptible to new infections during the dry period. Use of suitable intramammary antibiotic therapy (dry cow treatment) can be effective in eliminating existing infections and preventing

new infections. The dry period can also be an appropriate time to administer vaccines to protect the cow in the next lactation. Health considerations that can be addressed at the time of dry off or during the dry period include: 1) treatments; 2) vaccinations; 3) deworming; 4) vitamin and mineral supplementation; and 5) hoof care.

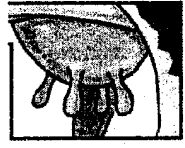
Health program needs differ greatly among farms because of differences in genetics, feeding programs, milking equipment, housing styles, and management abilities. Because of these differences, a team approach should include the farm staff, the veterinarian, the nutritionist, and other agribusiness personnel that can work together to identify the unique needs on each farm and to customize a dry cow health program for each individual farm. The following table outlines examples of some health management considerations and treatments along with the best time to incorporate these into the dry period to get the maximum benefit. Certainly, not all of these options are needed on every dairy farm, nor have all health and treatment options been included. Any changes made to your animal health program should be done only after consulting your herd veterinarian.

Dry cow health phases and considerations: the best times (indicated by X) to evaluate management approaches for treating, preventing or managing various health considerations.

Health Considerations	Pre-dry off—2 weeks	Dry off day	Early dry 0-10 days	Prefresh 3 weeks	Calving day	Post-calving 0-3 weeks
Mastitis: contagious	X	X	X			X
Mastitis: environmental		X	X	X	X	X
Udder edema				X	X	X
Milk fever				X	X	X
Ketosis				X	X	X
Displaced abomasum				X	X	X
Retained placenta				X	X	X
Foot care (trim)		X	X			
Special care and facilities					X	
Colostrum evaluation					X	
Colostrum—calf					X	6-8 hours
Dip navel—calf					X	
Separate calf & cow					X	
Johne's disease					X	



Teat Lesions Can Lead to Milking Problems



Teat lesions can be caused by a variety of events, including trauma, chemical injury, environmental conditions, insects and the milking machine. Traumatic lesions of the teat are most commonly the result of the cow stepping on her teats or wire cuts. They are a troublesome problem for the veterinarian as well as the dairy producer.

Histologically, the teat wall contains an abundance of elastic connective tissue which provides for expansion and contraction of the teat as it fills and evacuates milk in the lactating cow. The near constant movement associated with these physical dynamics of the teat combined with milking preparation procedures, and milk collection complicate the normal healing process.

The producer's challenge is in getting cows with teat lesions milked. Because these lesions are generally painful and cows resist preparation and milking procedures, they are difficult if not hazardous to milk.

A further complication is mastitis. Teat lesions are readily colonized by bacteria and thus serve as an important reservoir of infection. Udder preparation cloths, hands of the milker and milking machine components facilitate the transfer of infectious organisms between quarters of the same cow and can be responsible for cow to cow transmission as well. Emphasis on milking hygiene procedures becomes crucial for controlling new infections whenever teat lesions are present.

Depending on severity and the period of time prior to discovery, teat

lacerations may be repaired surgically. Fresh superficial lacerations of the teat skin (within 12 hours of occurrence) in which the vascular supply has not been significantly damaged have the best prognosis. These are generally amenable to surgical closure. If, on the other hand, such lesions go unnoticed for a couple of days and become heavily contaminated, cleansing in mild disinfectant solution and removal of the skin flap tissue are likely the best therapeutic approach.

Teat lacerations which extend into the teat cistern are of greater concern and generally carry a more guarded prognosis. The exposed edges of the cistern lining must be sutured using a suture pattern that will turn the edges inward creating an impervious seal. If this is not achieved healing cannot occur and draining fistulas develop. The teat wall muscle layers and the skin may be closed separately or individually. Most advise intramammary and/or systemic therapy for 4-5 days as a precaution against the development of mastitis. A protective bandage allowing access to the teat end for milking is recommended. Milk should be retrieved from the gland through the use of teat cannulas.

Pastured cattle have a lower incidence of teat trauma than confined cattle. Housing factors of primary importance are associated with the amount of space available to the cow for resting and rising. Further, individual cow characteristics and teat conformation increase the potential for teat trauma in some cows.

Source: *Udder Topics* - June, 1999

Cold Weather Calf Care Tips

Appreciation to Sam Leadley, DVM—Attica Veterinary Associates for the following.



For a newborn calf weather below 60° is cold weather. Below this temperature a newborn calf begins burning energy to maintain her core body temperature of about 102°. Naturally, when the air temperatures are farther from 60° a greater amount of energy is needed for maintenance. A best management practice is to feed body temperature liquids to these young or neo-natal calves. Liquids, either milk replacer or water, when fed at temperatures at or close to 102° do not have to be warmed by the calf. Stop and think about what happens when two quarts of cool milk replacer is fed to a newborn. If it's 70° when fed we know that within a short period of time the calf will have warmed it to her body temperature, 102°. Where did the energy come from to warm these two quarts from 70° to 102°? The answer is pretty obvious. From the calf's body resources.

One easy way to maintain temperatures close to 102° is to use hot water. Simply bottle the necessary volume of milk replacer. Place three or four two-quart bottles in a five-gallon pail. Add 130-140° water. By trial and error given varying outdoor temperatures you can judge how much hot water to add. At 40° not much is needed. At 10° you always have to fill the pail nearly brim full. Even if you are pail training

young calves this method still works well. It's common practice to fill pails for all of these calves with two quarts of milk. Then, we fuss with them feeding them one at a time. Meantime, while we fuss with the first calf in cool or cold weather all the rest of the milk is chilling to unacceptably low temperatures. Rather, leave the milk replacer in the bottle in the bucket until each calf is ready to be pail trained. Each calf receives warm milk, one at a time. Presto! The problem is solved at the minimal expense of washing several bottles and we may well have avoided several cases of early calthood diarrhea, as well.

A best management practice is to feed free choice water even in below freezing weather. With appropriate scheduling feeding water in freezing weather is not impossible. Most of the water consumed by calves during cold weather (even if not freezing) happens in the first hour after water feeding.

Feed water while calves are still active. This is generally in the morning between feeding milk replacer and starter grain. If water is not fed prior to grain, then come back after grain is fed and dump the pails.

Water fed to the youngest calves (not yet eating starter) should be close to body temperature. Only small amounts need to be fed since very few drink more than a quart or two. Observe drinking patterns and feed volume to match the calf's rate of water consumption.

7th Wisconsin FarmDirect Conference

Are you a farmer involved in direct marketing or interested in direct marketing? Maybe you're considering getting into farming and think direct marketing is the area to focus on. If so, you are invited to attend a University of Wisconsin-Extension Wisconsin FarmDirect conference on the direct marketing of agricultural products.

The 2006 conference will feature presentations by producers and industry personnel focusing on a variety of direct marketing topics. A sample of the presentations includes:

- * Pricing for Profit
- * Finding Your Target Market
- * Extending the Harvest
- * Finding a Mentor
- * Certified Kitchens

A past participant commented on the conference, "On the drive home, I kept thinking. I can do this, and I can do that. The conference provided me with a lot of options for improving my farm business."

In addition to the formal educational sessions, lunch is designed to be "food with thought." While making a stronger connection between farmers and consumers, the chefs working with UW-Extension to create the unforgettable lunch experience hope that

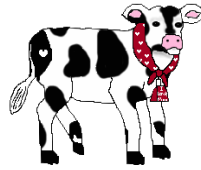
participants will walk away with a better understanding of how to help consumers create their own unforgettable food experience. Organizers make every effort possible to use local products in developing the lunch menu. Slow Food Wisconsin Southeast is organizing the lunch.

The conference is Sat., Jan. 21, 2006, and will be held at the Waukesha County Technical College, from 8:30 am to 3:30 pm. Early Bird registration costs are \$40 per person or \$70 for two people from the same farm or business until Jan. 10. After that date regular registration costs are \$50 per person or \$80 for two people from the same farm or business.

For more information or to request a brochure, please contact Rose Skora, 262-857-1945, rose.skora@ces.uwex.edu or Peg Reedy, 262-741-3175, peg.reedy@ces.uwex.edu.

UW-Extension and Slow Food Wisconsin Southeast organize this conference. UW-Extension Emerging Agricultural Markets Team and the Hospitality and Culinary Center of Excellence, Waukesha County Technical College provide additional sponsorship support.

Winter Calves Need Special Handling



Keeping new calves warm, dry and well nourished is the key to wintertime calf care, according to Pat Hoffman, UW-Extension Dairy Herd Management Specialist. In many dairy operations, most calves are born in late fall and early winter. Calving at that time means less heat stress and higher milk production for the cows. But wintry weather poses some special considerations when caring for newborn calves.

The first step is good management of the maternity area where the calf is born. It's very important in winter that the calf be born in a clean, dry place. It's nice to have a warming box - a simple isolated box with a heat lamp and dry bedding -- where the calf can be warmed quickly, if necessary, after the birth.

The next step is to immediately feed the calf at least four quarts of warm colostrum. During the colder seasons, it's really important to keep bedding deep and dry so the calf is protected and insulated. In addition, buildings should be checked for drafts and necessary repairs or building adjustments be made to keep chilling drafts off the calves.

Calves will use more energy to keep warm during the winter months, so they may need to be fed more often or fed more at each feeding. There are several strategies for feeding extra energy to calves. One is to increase the number of feedings from two to three a day. This is often impractical because of the additional

labor required. Another is to increase the amount of milk or milk replacer given at each feeding.

When feeding milk replacer, you can increase the dry matter concentration by adding more powder to the same quantity of water, but, because milk replacers are different, producers should check with their supplier regarding feeding and mixing guidelines in cold weather.

Another option to supply more energy is to switch to a milk replacer with a higher fat content. Most milk replacer companies manufacture products that are 20 percent fat for winter or high stress feeding situations.

Whenever you make changes in liquid feeding practices, keep a close eye on the animal's health and performance. Finally, make every effort to keep water available. Drinking water stimulates consumption of grain and rumen development, so calves that aren't drinking water will be weaned from milk or milk replacer later.

In very cold weather it can be very difficult to keep free-choice water available. Placing water inside the hutch, starting with warm water, and using insulated pails may keep it from freezing as quickly. Calf hutches or individual pens keep calves very warm in the coldest weather as long as the bedding is deep and dry. After calves are weaned and have outgrown the hutches or pens (at about six weeks) they still need protection from drafts, a high-energy diet and warm, well-insulated resting areas.

We're Moving!

Mark your calendar. The UW-Extension Office will be moving to the Administration Center, 810 Lincoln St., Kewaunee mid-January 2006. This means that we will no longer be located at the Courthouse.

Telephone numbers will stay the same, and the telephone service should be ongoing. Computer services will be down during the move, but the goal is to have the computers up and running within a 24 hour period.

We look forward to having you visit us!