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W-S FEED & SUPPLIES LIMITED

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# COPING WITH SUMMER—HEAT STRESS

Heat stress occurs when a dairy cow's heat load is greater than her capacity to dissipate the heat. Cows exhibit signs of heat stress in several ways, such as increased respiratory rates, water intake and sweating, decreased dry matter intake and slower rate of feed passage, decreased milk production and reduced reproductive performance. Ultimately, these can have an economic impact on any dairy. The severity of heat stress is measured by using a temperature humidity index (THI), which uses both temperature and humidity to calculate the theoretical level of stress to the animal. Signs of heat stress can be seen when the THI exceeds 68 (for example, 75° F with 30% relative humidity = 72 THI).

It is critical that cows "cool off" when the weather is hot and humidity is high! This will help reduce the negative effects of heat stress. While we cannot control weather-related factors, we can provide ways to alleviate the impact of heat and humidity on livestock, such as:

1. Sprinklers and fan cooling systems
2. Continuously available fresh, clean water
3. Shade
4. Appropriate rations for times of heat stress

Areas that require special attention may include:
• Holding pen – often a place where cows are crowded and heat gets trapped around the animals with little relief. Ensure adequate shade and ventilation, and examine ways to reduce the amount of time they spend in this area!
• Exit lane cooling – an excellent place to use sprinklers as cows leave the parlor; works best as a supplement to good holding pen heat abatement.
• Freestalls and feeding areas – cows spend most of their time here. These areas need to provide adequate ventilation and a continual source of fresh water. Additional cooling may be obtained with fans, shade or sprinklers, etc. It is important to ensure that bedding does not become wet.

Last, but also of importance, is the cows' diet. Changes in ration formulations and summer feeding procedures can help to reduce the effects of heat stress on dairy cows. Any changes should be made slowly and preferably prior to the onset of hot weather. One of the goals is to ensure the cows maintain dry matter intake. Rations should safely accommodate the need for additional energy and possibly undergo an increase in DCAD (dietary cation-anion difference). "Cool off" your cows this summer. We can help you to implement or improve your summer program for maximum results. Call today and be proactive before hot weather arrives!
(Kansas State University Agricultural Experiment Station and Cooperative Extension)

***The Dairy Newsletter is now posted on our website. If you wish to have it e-mailed or mailed directly to you, please contact our office at 1-800-265-2203.***

## CHECK YOUR CALEDAR

**WE WILL BE CLOSED FOR CANADA DAY ON MONDAY JUNE 29, 2015.**

**PLEASE ORDER YOUR FEED IN ADVANCE.**

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# WATER ANALYSIS: GET A GOOD SAMPLE FIRST

Water, both availability and quality, are critical for your cows. It is important to obtain an accurate water-quality analysis on a regular basis, which begins with proper water sampling. When you're assessing the quality of your herd's water supply, take two samples, advises Dave Beede, professor of dairy nutrition at Michigan State University. Take one sample as close to the well or primary source of the water supply as possible. Then, take a second sample after the storage compartment of the reserve tank/pressure tank or as close to the cows as you can. Avoid sampling from tanks and other water sources that cows come into contact with, since this can contaminate the sample. Submit the sample for a standard lab analysis for livestock water. Then, for instance, if the lab report shows iron concentrations greater than 0.3 parts/ million (ppm), or either sulfate or chloride concentrations greater than 250 to 500 ppm, take two more samples and send each to a different certified lab for another analysis and to obtain a comparison. "This may seem like over-kill at the time, but water treatment systems can be a major investment, so it is important to know absolutely for sure that concentrations of a particular analyte are in excess," Beede says. Water quality is important to your livestock! Also, when collecting water for analysis, label and seal two additional samples in screw-top bottles to serve as back-ups and as a historical record. *(Kim Schoonmaker, Dairy Herd Management )*

## *WHEN IT COMES TO HEAT...DON'T FORGET CALVES!*

Heat stress can negatively impact calf performance, causing rapid dehydration and reduced immune system function. Researchers have determined that heat-stressed calves often have reduced circulating immunoglobulin concentrations and increased stress hormone concentrations. Elevated body temperatures can result in very sick calves with reduced growth rates, lower feed intakes, and higher maintenance energy requirements. When ambient temperatures exceed 80° F, calves must burn more energy in order to dissipate heat from the body by sweating and increasing their respiratory rate. In this case, less of the nutrients consumed are devoted to growth and average daily gains suffer. Efforts should be made to identify and avoid heat stress in calves. Increased respiratory rates, open-mouth breathing, decreased appetite and a reluctance to move are symptoms that your calves may be suffering from heat stress. This summer, consider the following tips to assure proper calf health and growth is maintained: reduce sun exposure; improve air flow in calf-housing areas; use sand bedding, which does not insulate like straw or hay; **provide fresh, clean water free-choice**; and avoid additional, unnecessary stressful situations like moving and vaccinating during times of heat and humidity! *(Dr. A. Holloway)*

## *HOW COMFORTABLE ARE YOUR COWS?*

If your cows could give you a "cow comfort and facilities management report card", what grade do you think you would receive? The importance of cow comfort in all kinds of weather and every season are critical. There are several issues on a farm that can make a difference in the health and productivity of your cows. Let's consider just a couple on the list.

Do your cows suffer from overcrowding? This is a big problem on many farms. If you have no other option, try doing it where it will impact you less: mid- to late-lactation groups. The best way to deal with overcrowding is not allowing it to happen. Overcrowding creates an environment for stress, along with increased risks for environmental mastitis and lameness. Giving your cows plenty of "elbow room" can positively impact their health and productivity.

Provide free-choice access to plenty of fresh, clean water and feed a balanced ration at all times.

Addressing cow comfort in a positive way is an investment, offering many excellent benefits.

So, how does your report card look? Cow comfort really pays off.

## *CELEBRATE DAIRY MONTH*

We all need to support and encourage our dairy industry! Join us in supporting the dairy industry locally and nationally...encouraging people everywhere to take advantage of the many available dairy products, which are among the safest and most nutritious foods you can eat. Our dairy industry is helping to feed Canada...and the world! We are proud to serve dairy producers with quality nutrition, products and services, management insights and information...all the tools needed for maintaining the health, productivity and profitability of dairy animals. Support the Dairy Industry today and everyday.