

DAIRY PIPELINE

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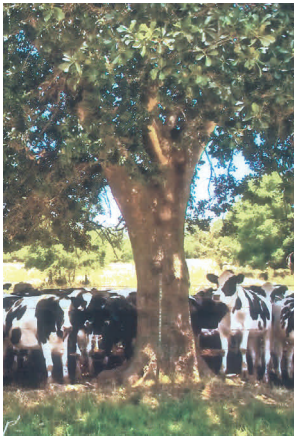
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FIVE SIMPLE TIPS TO REDUCE THE NEGATIVE IMPACTS OF HOT WEATHER ON DAIRY CATTLE

Each year it's not unusual to see production drop 10–15 lbs. per cow. Waiting until hot weather subsides is not an effective management strategy as milk production lost is never regained once things get cooler. Here are five tips to alleviate summer heat stress.

1. Pay special attention to close up cows. Feed bunks must be covered to prevent spoilage from summer sun and soaking from thunderstorms.

Fluctuation of intake prior to calving has very undesirable effects on successful transition to the milking herd and peak milk yield. Shade clothes can provide economical temporary solutions.

“Waiting until hot weather subsides is not an effective management strategy...”

2. Provide cow cooling with 36–48” fans 20’ apart and 8’ off the ground angled at 15–25° downward. Above the feed lanes place soaker nozzles (10 psi, 180° spray) 8 ft. above the cows and immediately below the fans. Run sprinklers on a timer that soaks cows for 2–3 minutes at 15 minute intervals.
3. The holding pen is the hottest place on the farm! Consider reducing group size to reduce time spent in the holding pen along with ample fans to move hot air away from cows.
4. Clean water. What’s the water trough look like for your milking and dry cows? During the summer, waterers should be cleaned at least every other

day to prevent accumulation of algae and spoiled feed. Wiping the surfaces with a dilute bleach solution prevents algae growth for several days. Provide at least two waterers per group with a water supply of at least five gallons per minute. Consider adding more water trough space near the holding pen during the summer months.

5. Ration modifications are needed to increase energy supply and decrease heat load on the cow.

- Add supplemental fat. Whole oil seeds such as cottonseed and whole soybeans can be added to the ration to increase fat to up to 5% of the ration dry matter. Additional fat (up to a limit of 6–6.5% fat in the ration dry matter) should come from rumen inert fats which would not have an adverse impact on rumen fermentation.
- Don’t overfeed protein. Many of the new ration formulation programs will permit your nutritionist to balance rations based upon amino acid supply to the intestine. With the right combination of feed ingredients, ration crude protein can be reduced to 16% or less for high producing cows.
- Increase potassium, sodium and magnesium to 1.5%, 0.45% and 0.35% of the ration dry matter for lactating cows.

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Upcoming Activities

July 24, 2013

State 4-H/FFA Dairy Youth Field Day, Wed., Clarke and Frederick Counties

September 27, 2013

State Fair Junior Dairymen's Contest, Doswell

If you are a person with a disability and require any auxiliary aids, services or other accommodations for any Extension event, please discuss your accommodation needs with the Extension staff at your local Extension office

“...in most instances mastitis is easier to prevent than it is to treat.”

For more information on Dairy Extension or to learn about current programs, visit us at VT Dairy—Home of the Dairy Extension Program at: www.vtdairy.dasc.vt.edu.



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TEMPERATURES ARE RISING – MAKE SURE YOUR SCC DOESN'T FOLLOW

Although the national limit for bulk tank somatic cell count (SCC) has not been reduced, many cooperatives have already instated lower limits, some as low as 250,000 cells/mL. These lower limits put utmost importance on maintaining bulk tank SCC through the hot summer months. It is during these months when the incidence of mastitis and the bulk tank SCC tend to rise—in part, due to additional stressors placed on the cows. However, there are steps we can take to reduce the impact these summer months have on milk quality. Of paramount importance is maintaining a clean and dry environment for all cows. New mastitis infections predominantly occur in the early dry period, around the time of calving and into early lactation. For this reason, we cannot forget about dry cow housing or the calving pens. Freestalls should be raked out at each milking, calving pens should be cleaned out between each birth and loose housing should be maintained on a daily basis. Additionally, animals on pasture must be fenced out of bodies of water. For those producers using sawdust as a bedding material, consider purchasing kiln-dried sawdust and adding hydrated lime as a conditioner. The general rule of thumb for the application of lime is 2 lbs./stall/day or 2 parts bedding to 1 part lime for loose housing. Skimping on the application rate can render the conditioner ineffective therefore, it is important to apply in adequate quantity and frequency to maximize effectiveness.

Aside from bedding, we also have tools at our disposal that help to improve milk quality. Fly control will help reduce the spread of certain mastitis pathogens, including *Arcanobacterium pyogenes*, also known as ‘Summer Mastitis’. This type of mastitis is very difficult, if not impossible, to treat and therefore, much easier to

prevent. Secondly, the use of an internal teat sealant during the dry period has been shown in research studies to reduce new mastitis infections seen at calving. Although this may not be necessary in all herds, it is something to consider if your herd historically has an environmental mastitis problem at calving. Similarly, the J5 vaccines help to reduce the severity of clinical coliform mastitis. The summer months are known to be particularly problematic when it comes to coliform infections. Therefore, some veterinarians have started recommending whole-herd vaccinations prior to the heat of the summer. If your herd has had problems in the past with summertime coliform mastitis, discuss this option with your veterinarian. Finally, “know your bug”. It is important to know the pathogens causing mastitis on your farm. Routine culturing of all clinical mastitis cases will provide you with the information you need to combat the problem most effectively. Herds with a predominant environmental mastitis problem (coliform, *Strep. uberis*, for example) will need to focus their preventive efforts differently than a herd with a predominant contagious mastitis problem (*Staph. aureus*, for example). The Mastitis & Immunology Laboratory has the capability of running routine cultures. If you are in need, please contact me (milk@vt.edu).

The summer months continue to bring about concern related to milk quality. However, in most instances mastitis is easier to prevent than it is to treat. Therefore, our focus needs to turn to the management tools we have at our disposal and maintaining a clean, cool and comfortable environment for our cows.

—Christina Petersson-Wolfe
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