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### Heat Stress and Mastitis

Environmental mastitis and summer heat can cause a dollar drain in your herd, but the effect of both can be reduced.

The level of mastitis and somatic cell counts rise as temperature and humidity levels move upward. Somatic cells are elevated in response to environmental stress - such as high summer temperatures - and it may take weeks or months for them to decrease. Environmental mastitis increases during this time because of the increased likelihood of teat end exposure to bacteria.

Cattle are physically more stressed during the summer. Research has shown high circulating levels of stress hormones interfere with the ability of the immune system to destroy bacterial invaders. Somatic cells enter the udder as part of the immune response. When somatic cells are under the depressing effect of stress hormones, they cannot function fully to protect against mastitis organisms.

#### *What can be done to help reduce stress?*

- In pasture situations, provide portable shades and move them frequently to reduce manure build up. Although, trees provide a good source of shade and reduce stress, muddy, wet areas around trees result from manure accumulation. This is a source of environmental organisms that increase clinical mastitis. Also, high cow density can kill trees.
- In free stalls, bacterial contamination of bedding material increases during the summer. Take extra steps to keep bedded areas dry and maintain free stalls to minimize cows lying in the alleys.
- Use of sprinklers to cool cows requires constant management to eliminate or greatly reduce the likelihood of "wallow" places. Locating shade only over feed aisles results in cows constantly occupying the area for feed as well as shade. The area becomes overloaded with manure, cows become dirty and mastitis increases as a result.
- If you are using cooling ponds, make certain the water does not become contaminated with mastitis-causing organisms.
- Flies are also important vectors of disease. Biting flies greatly increase stress in your herd and carry disease organisms. This may result in a decrease in production as well as spreading mastitis.
- Provide clean water. Cows drink about 50 percent more water when the temperature is 80 degrees versus 40 degrees. They need water to cool themselves through increased respiration and perspiration.

- Make sure milking procedures and teat dip applications are adhered to in the milking parlor.

All these steps add up to ways to reduce mastitis, either by reducing the stress-promoting hormones or by decreasing the likelihood of creating sites for growth of environmental mastitis organisms.

Watching, implementing and correcting management practices to reduce summer mastitis increases milk production and your herd's health thereby providing another plug to stop the Dollar Drain.

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