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Dairy Tips By Dr. Randy Lyle, Ph.D.

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HOT COWS IN THE SUMMERTIME

If Pennsylvania temperatures continue on their May - June pattern, you can be sure that cows will be looking for a cool place to hide all summer. The common situation on most dairy farms that I've seen in this area is that there are few, if any, cool places for cows to hide. Cows usually are much appreciative if they are offered some relief from the summer heat and humidity. They have been known to return the favor by giving their owners more milk, and also by rebreeding easier and more quickly.

This summer, I will present a series of articles on how to minimize heat stress in dairy cows. Let's first begin by discussing heat stress in general terms.

Cows most enjoy temperatures between 45 and 55 degrees. When temperatures reach 75 or 80 degrees, they become stressed. Rumen fermentation generates a great amount of heat, thus requiring cows to dissipate more heat than non-ruminants. In addition to the heat produced in the rumen, other sources of

heat gain are associated with physical activity, basal metabolism, and radiative (solar) heat gain.

Cows attempt to keep cool by losing as much, or more, heat than they gain. Cows demonstrating the following behavior are heat stressed: 1) increased rate of respiration and perspiration; 2) lying flat on cool surfaces, such as bedding or the ground; 3) decreased feed intakes; 4) increased water intakes. Blood flow distribution is also altered, favoring peripheral circulation, but most people can't see this change.

If cows can't dissipate all of the heat gain by the above behavioral changes, their body temperatures rise further, thereby causing feed intakes to dramatically drop. This is when cows really get stingy with the milk and go on strike. If severe enough, the last symptom of heat stress is death.

In my next article, I'll discuss some management tips that will help cows keep their cool, and tolerate the summer heat.

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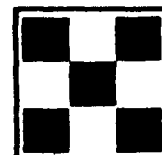
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