

Keep cooling in mind, even as temperatures drop

Dairy basics - Cow Comfort

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Progressive Dairyman

As summer comes to an end, we must remember to keep our cool when it comes to heat abatement for our dairy herds.

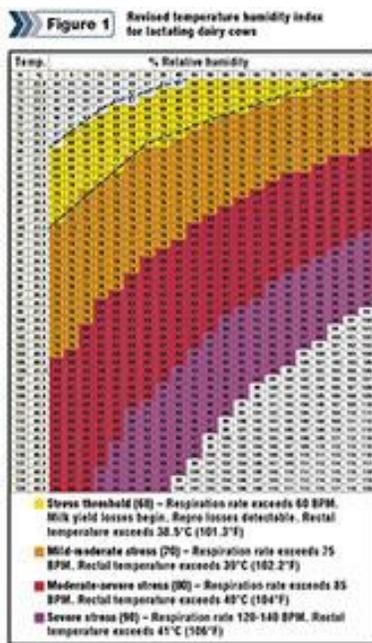
We may be enjoying some cooler weather, but for our high-producing dairy cows, the temperature is still running plenty warm for peak production.

Days warmer than 50°F still can create problems in the holding pens and milking parlors where your cows are crowded together.

A quick check on respiratory rates in these areas can let you know that your milk yields, reproduction rates and overall herd health is still being influenced by Mother Nature and heat stress.

Any cow with more than 60 BPM (breaths per minute) or a rectal temperature above 101.3°F is beyond the stress threshold.

You will be surprised what a little exercise and crowding will do in a holding pen.



A 0.9°F increase in core body temperature can increase the abortion rate by as much as 13 percent (see **Figure 1**).

This is also a good time to do a quick fall fan check by visually inspecting your dairy and performing your fall maintenance program to replace broken fans, blades and motors, and cleaning the guards and blades.

It is good practice to grease bearings per your manufacturer's recommendation.

If you have an evaporative cooling system, it is a good time to inspect the pads for bowing and sagging or dry spots that indicate uneven application of water due to a clogged hole.

Inspect the sump, remove any debris and check the distribution system for leaks.

The same applies for your misting systems. Check the nozzles and distribution system for clogs, cracks or leaks, and make the necessary repairs.

You should also look at your controls and note your settings for next year or if you want to evaluate the effectiveness of your plan and make changes.

Document all of your notes and make a complete list to give to your supplier so they can order up any parts needed and get them installed before the next heat-stress season.

In colder markets, many of your dealers perform a fall fan check when they come and blow out your water lines prior to the point of freezing.

Many dealers review your complete cooling systems and perform the necessary repairs. It is much easier to do the check and repairs today than it is to wait until the next hot day arrives.

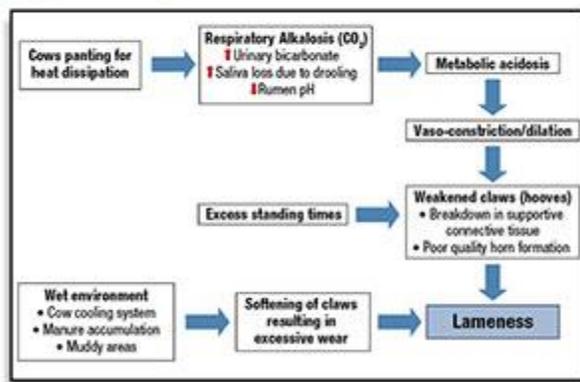
Fall fan check is the time to take an extra minute or two and evaluate the hot spots you had, areas within the pen where the cows avoided or areas where cows were constantly standing, which is an indication that they were within the stress threshold and were standing to allow the air to circulate around them to dissipate heat.

Did your cows bunch together in areas that were much cooler? What changes can you make to keep the cooling even and to spread the herd out?

Make notes while your thoughts are fresh so that when you ask questions later, you can review your thoughts and notes to create a better plan for heat abatement. Did your heat-abatement plan work effectively in reducing your milk loss?

After looking at your conception rates and comparing them, did you make improvements over the heat-stress months?

Figure 2 Impact from heat stress on claw health



Did heat stress have an impact on claw health (**Figure 2**)? If so, what can you do to change that? What other areas need a heat-abatement plan?

If you have those notes and thoughts plus a little research, you can look at some of the new technological changes that can create a better environment and can produce a better return on investment.

Last but not least, keep your cool as you head into winter.

Winter ventilation and fresh air is critical to good herd health. Review your minimum ventilation needs during your fall fan check. Be sure to include the calf barn in that review, especially in colder markets.

Placing calves into a microenvironment, which is defined as a relatively small, distinctly specialized and effectively isolated habitat, will create aerobiological microenvironments, which is the distinct difference in airborne microbial concentrations and populations in small areas.

Typical microbial counts in an outdoor area are about 100 to 1,000 cfu per m³. Once you reduce the size of the environment to, say a clean office space, the count goes up to 2,000 cfu per m³.

A well-ventilated barn is about 10,000 to 15,000 cfu per m³. The smaller the environment, the greater the bacterial count.

Low airborne bacteria counts are critical to good respiratory health and can be achieved by lower temperatures, good ventilation and good nesting conditions.

Failure to have a good ventilation system for your calf barn will play havoc on your return on investment and your growth plans.

Gathering respiratory scores, airborne bacterial counts (total cfu + coliform) in the pens and alleys along with ammonia will start to get you the information on how you may improve.

Monitoring the inside and outside temperature and humidity, outdoor wind speed and direction, as well as bedding depth, will give you a starting point to make improvements.

Look at the microenvironment of the calf, not where you are standing.

I have been in many calf barns where the ventilation seems to be good, but once I stepped into the microenvironment of the calf, tucked down low under a covered pen where the calf was standing, it had a much different aerobiological microenvironment, and I could clearly understand why the calf had a low respiratory score.

Summer may be over, but keeping your cool through fall and winter could never be more important to your dairy. **PD**



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