Beat the Heat - Having your cows ready to avoid the hot summer temperatures

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The summer season is upon us and for the average lactating dairy cow that means longer and warmer days, with the potential of heat stress, which is a serious concern for your dairy. In preparation for these hot temperatures, ask yourself these critical questions while monitoring your cows for heat stress:

1. Are the cows comfortable?
2. Do the cows need more ventilation?
3. Is there enough available water being used appropriately to keep cows cool?
4. What can I do to help?

Comfort

Comfort is a cow's best friend. When a cow is content she will lay down, rest more comfortably, ruminate, consume more water and dry-matter, be more reproducively sound, and as a result, produce higher quantities of milk. With higher feed inputs and higher milk outputs comes a greater metabolic heat output. An extremely productive lactating dairy cow is then more sensitive and susceptible to negative impacts from increases in environmental temperatures.

Temperatures greater than 70°F or a temperature – humidity index value of 68 will cause cows heat stress. The longer the cow is affected by heat stress, the more time she spends trying to cool off instead of resting. Cows will attempt cooling maneuvers to avoid dehydration and heat stress by continually moving around or standing, thus impacting the needed resting time for health sustainability, well-being and overall productivity.

Being proactive and lessening temperature-induced stress with heat abatement strategies will reduce the implications associated with hot summer temperatures. Giving your cows the opportunities to stay cool and comfortable during all parts of their day will decrease the burden heat has on them. Make sure to provide heat abatement in areas of resting, eating and high animal density locations (ie. holding areas).

Reducing stocking density will allow for improved heat abatement.

Ventilation

Ventilation is crucial when it comes to keeping cows cool. Increase air velocity and air exchange to prevent stagnant air, as this is a cow’s worst enemy when it comes to ventilation and heat stress issues. As mentioned before, if a cow is too hot, she will stand and walk around to cool off. Make sure to provide adequate air velocity in free-stalls, resting areas, over feed rails/bunks, in the holding area and the parlor to allow cows to stay cool in all areas of the dairy. It is important to provide ample air exchange. Opening up side walls and end walls on barns (depending on your facility) will allow for increased air exchange. Fresh air permits easy breathing. Increased ammonia levels often accompany the hot and humid temperatures, but adequate air exchange reduces associated consequences.

Providing air circulation alone is insufficient. Always provide fresh air inlets and outlets. Air exchange and air velocity must be implemented first when it comes to ventilation.

Remember to always provide shade in all resting areas.

Water

Providing water is two-fold when it comes to heat abatement strategies – consumption and evaporation! Offering clean, cool, fresh water will lower a cow’s internal temperature, causing increases in overall consumption of water and dry-matter, and relief from heat stress. When a cow is heat stressed her water consumption will increase 50%. This is your opportunity to make sure access to clean, cool water is readily available. Increase the amount of times per day you visit water feeders to ensure they are clean and cool. Remove all dirty water and anything in it that would make it a deterrent, thus decreasing water intake. Providing water access immediately after milking will also help keep them cool throughout the day. Cows consume most of their daily water intake right after being milked.

Evaporation can be direct or in-direct. In-direct evaporation is the process of cooling air first then cooling the cow with this colder air. Direct evaporation (sprinklers/soakers) is more commonly seen in dairies. Although a great way to keep cows cool, there are circumstances in which one should avoid while using this type of evaporation. Cows must be soaked to the skin
then dry completely when using direct evaporation. If too fine of a mist is used to spray a cow down, air will actually lock between the hair and the skin. By doing this, you are insulating the cow and not allowing the evaporative cooling process to occur. Provide sprinkler access to areas of high cow density – feeding and holding areas. Avoid letting sprinkler water get into free stalls or on to feed. Saturating feed with too much water in hot temperatures will decrease dry-matter intake and increase the spoiling rate of feed. Be mindful of your water usage during this time and your ability to store the extra waste water in your manure handling facilities.

**Other Tactics to Consider**

Decreased dry-matter intake occurs during heat stress but may be counteracted by adjustments to feeding programs. Slowly and gradually adjust feeding times so that cows are consuming dry-matter at cooler times of the day - early morning and evening hours. Providing higher quality, nutrient dense rations during predicted long periods of hot weather may reduce the effects of heat stress on production. WHEN CONSIDERING ANY RATION MODIFICATION IT IS ABSOLUTELY NECESSARY TO SPEAK WITH A QUALIFIED VETERINARIAN OR HERD NUTRITIONIST.

Providing great cow comfort, ventilation, and access to cool, clean, fresh water are just a few things you can implement and manage on your dairy to reduce the repercussions associated with heat stress. Do not forget about your dry cows, young stock and calves as they too can be adversely affected because of heat related stress. Keeping them cool and healthy during the hot times of year will ensure healthy, productive animals for your operation in the future.