

7 Ways to Avoid Heat Stress in Livestock



Summer heat and humidity may be great for corn, but it is dangerous for livestock. Though temperature can play a big part in keeping livestock cool, many other factors can impact the summertime health of a herd.

Heat stress can be exacerbated by several factors, such as humidity, lack of shade and poor water quality.

HERE ARE 7 TOP RECOMMENDATIONS TO AVOID HEAT STRESS:

1. PLAN AHEAD

Look for signs and monitor cattle that are at high risk for heat stress. These include heavy cattle, those with dark hides and those with past health problems. Control flies by fogging cattle and grooming lots. Reducing fly populations can reduce cattle crowding and the stress they experience while fighting flies.

Signs of heat stress in livestock can be subtle or severe depending on the temperature and humidity. Cows will start to show heat stress at temperatures above 72 degrees F if the humidity is high. Moderate heat stress signs will show as the temperature goes above 80 degrees. The higher the humidity, the less the temperature has to be for animals to show heat stress. The worst heat stress will happen when the night temperature stays warm. Typically, cool nighttime temperatures allow the cows to dissipate their warm internal body temperature. High nighttime temps will make the cow start the next day at the disadvantage of a warm internal body core.

An increase in respiration rate will be one of the first signs of heat stress. Often you'll notice cows

standing more frequently. It is not uncommon to find heat-stressed cows bunching together. They will seek out the darkest part of the barn looking for shade, which to them means a cooler place. When you notice cows standing more and bunching, it is a good indication to get

them cooled down soon. Long durations of heat stress or the failure to cool the cows will lead to problems in the future. The increased standing will lead to more feet problems that will show up three to four months after the heat has subsided. We often see reproduction suffer for several months.

After cattle get hot, it's too late to prevent problems.

2. HUMIDITY

Temperature levels that may not pose a threat at lower humidity levels can become dangerous as humidity increases. For example, consider a 90-degree F day. At 15% humidity, a watchful eye is needed; livestock drift into the "danger" level at 35% humidity, and are considered to be in an "emergency" situation at 65% humidity. At 100 degrees Fahrenheit, 10% humidity pushes livestock into the danger zone, with 30% translating into an emergency situation.

3. SHADE

While it's not easy to mitigate humidity, shade is a good option to keep cattle a bit cooler. Ruminant animals like cattle typically eat large quantities of forage, then rest and digest. The heat of fermentation produced in the rumen must be eliminated and a shady place to

rest can aid this process. Cattle cannot dissipate heat and their body temperature will rise when ambient temperature exceeds body temperature. Remove objects that are obstructing natural air movement. Indoor cattle will benefit from shade provided by the building as long as ventilation is good. Shade can be as easy as keeping the animals in the barn out of direct sunlight or building shade structures. Shade structures can be built to be movable or permanent. Because animals

will congregate under the shade, care must be taken so these areas don't become mud holes.

4. SPRINKLERS

Outdoor cattle will benefit from sprinklers to cool them off. Make sure cattle are used to sprinklers before employing them during a heat wave and before they are under significant heat stress.

Waiting until the cattle are overheated is too late. An additional supply of emergency water may need to be acquired so that the supply system can meet both sprinkler and drinking-water demand.

If using water to wet the animals down, make sure to apply enough to wet them to the skin. Air must be moved across the back of the wet animal to help remove heat through evaporation. Usually fans are used that can provide a 3- to 7-mph wind speed.



5. WATER

An adequate supply of clean drinking water is important to helping livestock maintain a safe body temperature. When it's hot and humid, consuming water is the only way cattle can cool down. Make sure the water flow is sufficient to keep tanks full, and ensure there's enough space at water tanks (3 inches linear space per head.) Introduce new water tanks before a heat event occurs so cattle know where they are.

6. FORAGE CONTENT

Endotoxins from fescue pastures have been known to cause a rise in body temperature of several degrees. This can make the difference between safe and critical conditions even when other factors are marginal. Feed 70% of ration in the afternoon. Heat from fermentation in the rumen is the primary source of heat for cattle. When cattle are fed in the morning, peak rumen temperature production occurs during the heat of day when they can't get rid of it. By feeding 70% of the ration in late afternoon, rumen heat production occurs when it is cooler.



7. ACTIVITY LEVEL

Activity level can be perhaps the greatest heat stress danger. Working animals when environmental factors approach the danger zone is not recommended. Rather, work animals early in the morning before the day's heat buildup begins and after the previous day's heat buildup has dissipated.

Avoid processing cattle in the evening, because it can take several hours for the animals' body temperatures to return to normal, even though ambient air temperatures might have declined into a more comfortable range.