

# WARNING: TRAIN WRECK AHEAD

## PREPARE YOUR ANIMALS TO DEAL WITH SUMMER HEAT



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If someone told you one morning that you would get into an accident that day driving to town to get parts for your tractor, you probably would do everything in your power to try and avoid any collisions...wouldn't you? The same applies to your farm: If you knew there was a large section of your bunker that had mold that could make your cows sick you would keep that feed out of the TMR. Yet many producers, year after year, are aware that their cows will lose production every year due to heat stress but do very little if anything to avoid the situation.

Heat stress can have a major impact on production and herd health. Reproduction efficiency can be drastically lowered, with some research indicating that only 10 to 20 percent of inseminations result in pregnancies when animals are under stress during periods of high heat. The effect of heat stress on animals is also a factor that can affect milk quality. By being proactive this spring and summer, heat stress can have minimal impact on your herd and bottom line.



Dehydration of cattle may occur from a multitude of challenges – such as shipping stress, movement, heat stress, calving, water quality and availability, ration changes, and stress from medical treatments and vaccinations. Bovine Accelyte II is a unique electrolyte designed to combat the losses due to dehydration. It can be used for both pre-hydrating (prior to stress) and re-hydrating (post stress) cattle. It is also very versatile and can be fed using a drench, in water tanks or dry-mixed into feeds for whole herd application.

One of the first things to be aware of is that temperature levels that may be comfortable to people can be stressful on high producing cattle. Ideal temperatures for a dairy cow can be between 41° and 80° F and high humidity (90%) can drop the comfort zone down to 72° F.

One of the most commonly used methods to monitor heat stress is the temperature-humidity index (THI). THI is a calculation resulting from the temperature and relative humidity. Dairy cattle suffer heat stress when the THI reaches 72. Symptoms are further exaggerated when the THI remains high for long periods without a chance to cool down at night. Table 1 lists symptoms at different levels of THI.

There are ways to be proactive to reduce the impact of heat stress on cattle throughout the summer months. Water intake is the first key to a successful heat abatement program. At least one water source is needed for every twenty cows at all times. Keeping the water clean and fresh is also important. Studies have shown that cattle will drink more water when a cool, clean source is available. When walking past a waterer you should ask yourself: Would I take a drink from that? If the answer is no, it needs to be cleaned. The use of electrolytes on cattle experiencing heat stress can be a good way of maintaining higher water intakes and increase absorption of the water that is used.

Along with the need for additional water, nutritional needs still need to be met. Heat stress depresses feed intake, so it is important to adjust the ration to meet the same requirements as it would in cooler

periods. Increasing nutrient density, such as feeding higher quality forage, feeding more grain and adding supplemental fat can help the cow meet its needs with less feed. Mineral requirements will also change during periods of hot weather. Anytime a cow increases perspiration and respiration, water is released from the body taking with it needed minerals. Lower intakes and a higher concentrated diet will also increase the need for a buffer to be added to the diet to maintain rumen pH.

Barn design and management can reduce heat stress as well. Regardless of what type of barn you have or how many animals are housed in the barn, there are three key points to keep in mind when making changes to a ventilation system:

- 1) AIR EXCHANGE:** Whether the barn has mechanical or natural ventilation, either type of system must have the ability to remove warm, humid air from the inside and replace it with air from the outside.
- 2) CONTROL:** Ventilation systems must have the ability to adjust according to the inside and outside conditions. Ventilation rates can be changed by turning the fans on and off and adjusting air exchange openings. Automatic control devices provide the best response to control conditions inside the barn.
- 3) FLEXIBILITY:** Ventilation systems must be designed with the entire year in mind.

A sprinkler system can also reduce heat stress if it is set up correctly. A properly working cooling system soaks the backs of the animals to allow evaporation to cool

TABLE 1. TEMPERATURE-HUMIDITY INDEX (THI) IMPACT ON DAIRY CATTLE.

THI:	SYMPTOMS:
72	Cattle start to feel heat stress. Reduced feed intake and increased respiration rate make occur.
77	Begin losing milk production. Symptoms become more apparent.
80	Rapid shallow breathing, profuse sweating and a 10% decrease in milk production.
90	Severe loss in milk yield (>25%), decreased feed intake, and panting. Risk of death if animal is ill or calving.