Heat stress is hard on livestock, especially if it is in combination with high humidity and low wind speed. The level of heat stress is dependent on the animal’s activity, body condition, coat cover and color, and disposition.

**Signs of Heat Stress**
- Bunching in the shade
- Slobbering or excessive salvation
- Foam around the mouth
- Panting or open mouth breathing
- Lack of coordination
- Trembling

**Water Requirements**
- At 90°F, water consumption can be almost twice that at 70°F
- Requirements will vary depending on the weight of the animal, lactation needs, and outdoor temperature

**Effects of Heat Stress**
- Reduced feed intake
- Reduced weight gain
- Poor breeding efficiency
- Lower milk production
- Increased disease susceptibility
- Changes in behavior
- Death can occur

**What is a Heat Index?**
Environmental stress is dependent on temperature, humidity, wind speed, and solar radiation; which is best determined by an index. The index that is most commonly used is the same one used for humans, which is also the same one reported on TV stations and the radio during the summer. This index has a threshold that is very close to the old livestock temperature-humidity index.

<table>
<thead>
<tr>
<th>Heat Index above 105°F</th>
<th>Heat Index above 110°F</th>
<th>Heat Index above 115°F</th>
<th>Heat Index above 120°F</th>
</tr>
</thead>
</table>
| • Still stressful for the animal
  • Will be able to tolerate if the outside wind speed is at least 10 mph.
  • Show animals will need shade and/or moving air via fans. |
| • Stressful regardless of wind speed
  • Show animals should be in the shade with fan
  • Have plenty of access to water
  • All livestock shows should be completed by noon, if possible
  • Loading of livestock should also be completed by noon |
| • Avoid moving or handling market ready animals, if possible
  • Livestock show rings should be shaded with fans and misters; the show should also be postponed due to excessive heat |
| • No activity should occur for animal or human
  • May cause serious health risks or even death |
Management Options

Some management options include providing: shade; ventilation and air flow; clean and cool water; wetting; cool water drench; and sprinklers or hoses.

- **Shade** can be provided by trees, buildings, or other sunshades. In addition, the temperature can be lowered by spraying cool water on the roof of buildings where the animals are being housed.
- **Improved ventilation** can be provided by fans or opening windows on a breezy day. Sunshades should be high enough off the ground to allow for adequate air movement.
- **Clean and cool drinking water** is essential to keeping the animal’s internal body temperature within normal limits. Providing cool drinking water will help cool the animal’s core. If water space is limited, provide additional portable water troughs.
- **Wetting** is a good way to cool an animal suffering from heat stress. The animal should be gradually wetted with cool water. This process may need to be repeated until the heat stress symptoms have dissipated.
- **Cool water drench** (administer orally) may help quickly decrease the animal’s core temperature. This very effective method should be performed by someone who has experience in drenching an animal.
- **Sprinklers or hoses** can provide some relief to heat stressed animals. The water droplet size should be large; misting (small droplets) may only add humidity and moisture to the air. Keep in mind, if animals are not acclimated to sprinklers they may become frightened, which will add to their stress level.

Resources