What you need to know about ...

Cattle Stress

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Oklahoma's extreme weather can have a dramatic impact on livestock. Extreme conditions can alter feed intake, reduce daily weight gain and increase feed requirements.

Why use cattle stress maps?

The cattle stress maps, provided by Agweather, are designed to help producers identify current and future periods of stress.

The maps indicate three levels of heat stress, three levels of cold stress and periods of no stress. The stress maps are designed for outdoor cattle.

Forecast maps

Forecast maps offer producers a look into the future and show predicted stress conditions for the next 60 hours.

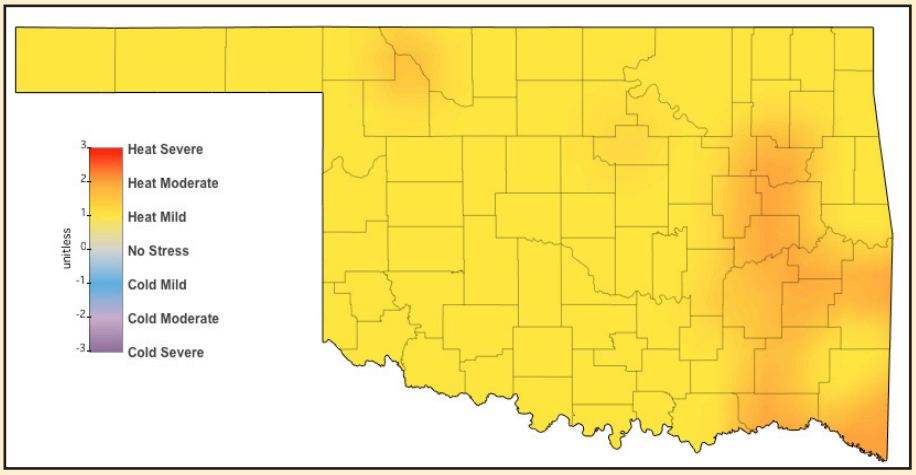
These maps start 12 hours in the future and continue in 6-hour increments.

Battling heat

- Provide plenty of water
- Avoid handling cattle
- Provide shade
- Provide water mist
- See back for more information

Combatting cold

- Increases energy fed during wet, cold weather
- Feed best hay during stressful periods
- See back for more information



To view cattle stress maps, go to http://agweather.mesonet.org/. Click on the Livestock link in the menu bar and select Cattle. Choose Cattle Stress Advisor. For help, call (405) 325-3126.

Oklahoma Mesonet

Combatting cold

Beef cattle can be comfortable from 20°F to 70°F, depending on hair coat length and condition.

Research indicates that wind, wet hair and muddy pastures or pens can make cattle more sensitive to cold. Anything done to reduce these negative factors will dramatically reduce cold stress. In general, a cow's energy requirement increases as the weather gets colder.

The common-sense approach is to make a small increase in energy fed during wet, cold weather, and to extend the feed energy increase into more pleasant weather in order to help the cow regain lost energy.

A second approach is to reserve the highest quality hay for feeding during stressful weather.

Battling heat

- **Control biting flies**
  Stable flies cause cattle to bunch, which inhibits cooling. Eliminate shallow pools where flies can breed.
- **Improve airflow**
  Consider ways to improve airflow where cattle are located. Buildings, solid fences and vegetation reduce airflow.
- **Provide water mist**
  Water misters will help cool animals. They should be on timers and located away from feed.
- **Avoid handling cattle**
  When cattle are experiencing moderate heat stress, work the animals before 8 a.m. and avoid keeping them in holding pens for more than 30 minutes. Cattle should not be worked after 10 a.m. when heat stress reaches moderate levels.
- **Change feed times**
  Try to feed 70 percent of the animal's daily feed two to four hours after the peak air temperature.

Additional Resources:

- Managing Feedlot Heat Stress. NebGuide G1409. Univ. of Nebraska-Lincoln Cooperative Extension. 2000. http://www.extension.unl.edu/
- Environmental stress in confined beef cattle. J. Anim. Sci.: 81: E110-119E. 2003. http://jas.fass.org/

Authors: Laura McKay, David Lalman, Glenn Selk, Bob LeValley and Al Sutherland (April 2007)

Our story

In 1982, Oklahoma scientists recognized the need for a statewide weather network.

At OSU, agricultural scientists wanted to upgrade weather instruments at their research sites. Their goal was to expand the use of weather data in agricultural applications.

Meanwhile, scientists from OU and the Oklahoma Climatological Survey were helping to plan and implement a flood-warning system for Tulsa.

OSU and OU joined forces in 1987 when they realized that one statewide weather network would help both universities achieve their missions. No other state or nation is known to have a network that boasts the capabilities of the Oklahoma Mesonet.

Agweather is a site that features information from the Oklahoma Mesonet. Agweather is be found at http://agweather.mesonet.org/.

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