



Male Fertility

Heat stress and disease can impact bull fertility.

by
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Short-term heat stress can cause long-term consequences in bull fertility, so management of heat stress is crucial during the breeding season. Robert Wettemann said moving the calving season to later spring due to available grass moves breeding season to July and August, and that can be problematic.

Bulls are often forgotten, the Regents professor in the Department of Animal Science at Oklahoma State University (OSU) told attendees of the 2014 Applied Reproductive Strategies in Beef Cattle (ARSBC) symposium in Stillwater, Okla., Oct. 8-9. They are more susceptible to heat stress and definitely influence many

potential pregnancies. Management of body temperature of bulls before and during collection of semen for artificial insemination (AI) is a major concern.

Why is heat stress such a cause for concern? Testicular temperatures must be cooler than a bull's body temperature. A short-term increase in body temperature, even for as short as one day, can influence the quality of semen and a bull's fertility. Exposure to high ambient temperatures, absence of shade, or even infection or disease can affect sperm motility and semen quality.

Wettemann shared data that reported testosterone function is not affected, so the quantity of semen is about the same. However, the number of sperm cells and motility dropped dramatically when

subjected to heat stress. A significant point is that it took six to eight weeks to return to normal semen quality.

Spermatogenesis is a continuous process and takes 60 days, Wettemann said.

Management to reduce heat stress will help maintain a bull's fertility. Bulls need to be able to cool themselves when ambient temperature is higher than body temperature. He recommended providing bulls with shade. Studies have shown bulls with shade have a tendency to have greater motility and more live sperm. Sprinkling cattle and the ground with water also helps alleviate heat, and give cattle plenty of access to water.



PHOTO BY TROY SMITH

A short-term increase in body temperature, even for as short as one day, can influence the quality of semen and a bull's fertility, said Robert Wettemann, OSU animal scientist.

He suggested using the Mesonet Cattle Comfort Advisor to monitor the heat index to proactively manage for heat stress.

"Breeding soundness exams (sometimes referred to as BSEs) are essential to eliminate bulls with potential fertility problems. However, a day or two of elevated body temperature can decrease fertility," he concluded.

Editor's Note: Wettemann spoke during Thursday's ARSBC session focused on fertility in the male. Visit the Newsroom at www.appliedreprostrategies.com to view his PowerPoints, read his proceedings or listen to presentations. Compiled by the Angus Journal editorial team, the site is made possible through sponsorship by the Beef Reproduction Task Force and provides comprehensive coverage of the symposium.