

Livestock Producers May Experience Lowered Fertility In Herds This Fall

PINE BLUFF, ARK.

As if drought damage to pastures and high hay and feed prices aren't enough, livestock producers may see reduced fertility in their breeding herds this fall, says Dr. David Fernandez, University of Arkansas at Pine Bluff Cooperative Extension Program livestock specialist.

"The exceptionally high heat could impair the ability of bulls, bucks, rams and boars to produce viable sperm," he says. Cows, does, ewes and sows may produce less viable eggs or experience higher levels of early spontaneous abortions.

Here's why. Most male mammals' testes are located in the scrotum outside their bodies. This allows the male to maintain his testes at a temperature several degrees below his body temperature which is essential for sperm production. When temperatures exceed 103 F for several days, the testes cannot be cooled adequately, and sperm production can be impaired, says Dr. Fernandez.

The damage to sperm production can be long term. Sperm production in the ram requires an average of 47 days plus another nine days for the sperm to migrate to the storage area. That's 56 days. Similar timeframes are believed to exist for bucks. For bulls, it is more than 70 days. The damage is not readily apparent, he says. In

some cases, the number of sperm and their motility may be reduced.

"Much of the damage appears to be done to the DNA of the sperm," he says. This means that a sire may appear to be normally fertile after a breeding soundness exam, but pregnancy rates of dams may be low, with many repeat breeders.

Compounding the problem are the effects of high heat on female reproduction. When temperatures are high, eggs may be less fertile and may not survive to form a viable embryo after fertilization. Fortunately, the effect of high temperatures on females tends to be limited to the estrus cycle in which it occurs.

"Unfortunately, no cost effective on-farm method exists to determine whether the problem is with the male or female," says Dr. Fernandez, who advises that the best thing to do is to provide plenty of cool water and shade to help keep livestock cool. Also, monitor the herd's nutrition as they may not eat enough feed when days are extremely hot.

Finally, producers should plan ahead so they are prepared if their herd's breeding season begins and ends later than usual. And, investigate alternative marketing strategies and parasite management schemes for next spring and summer, he says. △