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## **Risky Business Prevented**

The impact of the cold weather experienced in the southeast Kansas area in early February will not be soon forgotten and will leave lingering effects. Livestock producers commonly prioritize more sensitive life, like newborns, over the pen of prized sires. But, if the pasture housing the sires lacked adequate bedding or wind protection, scrotal frostbite may not have been prevented.

Breeding soundness exams (BSE) were first developed due to concerns regarding bull fertility after a series of storms during the winter of 1948 – 1949 in Colorado. A massive blizzard hit in early January that lasted three days, followed by another onslaught in mid-February creating huge snowdrifts. The effects of frostbite followed closely behind. Almost half of the affected bulls refused service for six months.

Herd sire anatomy is designed to keep the testicles at a lower temperature than the body. During cold weather, the testicles are drawn closer to the body. However, compared to the rest of the body, the scrotum has less hair and thinner skin, making temperature maintenance problematic. When temperature regulation is not maintained, fertility is reduced. A bull, ram, buck, or stallion suffering from frostbite *may* exhibit inflammation or swelling of the scrotum a few days after the weather event. The subsequent heat produced from the inflammation negatively effects the sperm cells maturing and being stored in the epididymis. The effects of frostbite may be temporary but may also result in permanent damage to sperm production. Scabs of various sizes may become evident as healing occurs, but the lack of a scab does not mean there is no injury. In more extreme cases, tissue adhesion can influence circulation in the scrotum and scrotal circumference can be reduced. Older males, with pendulous scrotums, seem more prone to issues than yearlings.

Regardless of weather and species, all herd sires should have a breeding soundness exam before each breeding season. Research shows that 10-30 percent of mature bulls fail BSEs annually. It is recommended that breeding soundness exam be delayed 60 days following the occurrence of frostbite or illness with elevated body temperature. Exams earlier than this may result in culling when recovery may yet occur.

A breeding soundness exam consists of a physical evaluation, palpation of accessory sex glands and testes, and semen evaluation. The exam does not evaluate the willingness to mate or serving capacity so observing activity during the breeding season is an important component of minimizing the risk of open females.

Finding out after the fact your bull was only a 'cow companion' during the breeding season is a costly problem. Schedule breeding soundness exams with your veterinarian so unsatisfactory breeders (cow companions) can be replaced before the breeding season begins.

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