Harsh winters can hit bulls hard

By Heather Smith Thomas

Cold weather and windchill can cause testicle damage and semen deterioration in bulls, but wind is the greatest danger, says Ahmed Tibary, Department of Veterinary Clinical Sciences, Washington State University.

“Risk for scrotal frostbite increases in below-freezing temperatures, with additional factors such as wind, wet areas or sweat on the bull’s testicles that may freeze, or lying on frozen ground,” Tibary explains. “If a bull can’t pull his testicles up close enough to his body to keep them warm during cold weather, there is more risk for damage,” he says.

Older bulls with lower-hanging scrotums are more frequently and more adversely affected. Yearling bulls are generally least damaged.

Druane Mickelsen, DVM, a cattle breeder near Pullman, Wash., and retired from Washington State University faculty, has conducted thousands of breeding soundness exams on bulls. He recalls one severely affected bull in which testicular damage resulted in a dramatic difference in scrotal circumference.

“He went from 37.5 centimeters down to 31.5, and scarring was evident,” says Mickelsen.

“I examine bulls closely in the spring following a cold winter. A scab at the bottom of the testicle is a clue there has been some damage,” he adds.

A bull’s testicles are very sensitive to temperature changes. Cold weather causes temperature extremes in the scrotum, according to Tibary. “First, there is supercooling at the onset of frostbite. The second extreme is superheating as frozen tissue thaws and inflammation occurs. Supercooling is temporary, while superheating can last 10 days after the initial injury. Inflammation causes swelling, and testicle swelling always produces lowered semen quality.”

New bulls going into a herd should be checked. Tibary sees quite a few lesions from scrotal frostbite in breeding soundness examinations conducted in February and March.

“There’s typically a skin discoloration or scab. If frostbite was recent, there may be swelling at the bottom of the scrotum,” he says. “This is the area covering the tail of the epididymis. We classify lesions as mild or severe depending on degree of soreness and extent of the lesion.

“Frostbite will affect quality of sperm and can result in a period of infertility lasting a few weeks or longer, depending on extent and duration of exposure to cold,” Tibary notes.

Minor frostbite involving areas from one-half to 1 inch in diameter at the bottom of the scrotum is common, and generally has only short-term detrimental effect on semen quality, according to Tibary.

The more severe the frostbite and the closer it occurs to the start of the breeding season, the higher the probability that fertility will be impaired.

Smith Thomas writes from Salmon, Idaho.

Learn more about the severity of frostbite and its impact on Page BP5.