Factors That Affect Bull Fertility

TERESA L. STECKLER

MT. VERNON, ILL.

One major goal for cow-calf operators is the production of a calf from each cow annually. To achieve this goal, not only must the females be fertile, but also the bull.

A breeding bull is a large investment, and his ability to sire desirable calves is paramount. But, 10 to 25 percent of bulls have reduced fertility or possess physical problems, reducing their ability to sire calves. Use of a subfertile bull, which will service many females, can have a bigger impact on the calf crop than one subfertile cow by extending the breeding and ultimately calving seasons, increasing the cost of maintaining open cows, and resulting in fewer calves born. The bottom line is that the use of a subfertile bull can substantially affect profitability.

Regardless of whether the bull is farm-raised or purchased, there are five general factors that can affect bull fertility: plane of nutrition, capability of the reproductive organs, quality of semen, libido and structural soundness.

The nutritional plane of the bull can affect overall health, and poor health can reduce libido, mating ability, and semen production and quality. Bulls can lose as much as 400 pounds of bodyweight during the breeding season. The amount of bodyweight and body condition loss will be influenced by the age of the bull, prior body condition, length of the breeding season, level of activity and breed type. A conditioning period, usually 60 days, before entering service is recommended and also provides adequate time for quality sperm to develop and be present at breeding time. By providing a conditioning period, the bull also has adequate body reserves to use during the defined breeding season.

Capability of the reproductive organs and semen quality can be evaluated by conducting a breeding soundness exam (BSE) prior to the breeding season. A BSE consists of a physical exam (internal and external), measurement of scrotal circumference, and collection and evaluation of semen. However, most BSEs conducted do not evaluate the level of libido of the bull. The manager should periodically evaluate the bull's libido throughout the breeding season. Occasionally, a bull that has passed a breeding soundness exam may have difficulty serving cows in heat, especially after heavy service.

Structural soundness, including functional feet, legs and associated joints, is critical for the bull to effectively travel the breeding pasture and service females in heat.

A good manager keeps an eye on the bulls during the breeding season to make sure they are getting the cows bred. Inability to complete normal service and low fertility are more detrimental than failure to detect cows in heat. If problems are detected early in the breeding season, the bull can be replaced while salvaging the remainder of the breeding season. Δ

Teresa L. Steckler is Extension Specialist, Animal Systems/Beef, with the University of Illinois at the Mt. Vernon Extension Center.