



# Vet Call

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## Preparing bulls for the breeding season

*Good reproductive efficiency occurs when a high percentage of cows become pregnant in a controlled 60-day (or slightly longer) breeding season and almost all the cows become pregnant early in the breeding season. In order to accomplish this goal, bulls must be able to find cows in heat and to deliver fertile semen to the female reproductive tract. Because bulls are so important to the reproductive and economic success of a cow-calf operation, they should receive special attention throughout the year, but especially during the weeks leading up to the breeding season. There are a number of important management actions that should be implemented as bulls are prepared and evaluated for the upcoming breeding season.*

### Body condition and physical condition

Bulls should have adequate body condition at the start of the breeding season so that weight loss caused by high physical activity does not cause stress. At the same time, bulls should not be overconditioned. If bulls are too fat, physical activity is reduced and excessive weight loss during the breeding season can occur.

Two-year-old bulls in good body condition (BCS 6) are near their mature weight and only need to gain about 1 pound (lb.) per day during the period leading up to the breeding season. For mature bulls, the ideal energy level during the conditioning period will depend on their physical condition. If bulls are in good body condition (BCS 5.0 to 5.5), then a forage-based diet with a small amount of supplemental concentrate will be adequate to build the desired energy reserves. If the bulls are thin, then they may need substantially more grain.

Yearling bulls require some special attention to their nutritional needs and body condition because they are still growing. Generally, yearling bulls need to gain around 2-2½ lb. per day leading up to the breeding season so that they maintain a body condition score of 6. This rate of gain should allow adequate growth without becoming overly fat.

Yearling bulls from bull tests, sales or shows may be overly conditioned (too fat) for optimum breeding performance and should slowly lose weight prior to the start of the breeding season. These bulls should be

started on a ration that is similar to the one they are accustomed to, but at about 70% of their previous intake. The amount of grain can be reduced at a rate of about 10% per week until the desired nutritional level is obtained. Dramatic nutritional changes can have an adverse effect on semen production, so it is important that these changes be done gradually.

Exercise is important during the prebreeding period because during the breeding season, the bull may travel several miles per day and maintain long periods of physical activity. If given ample area in bull pastures, bulls will usually exercise themselves, but when designing bull

facilities, it is a good idea to locate feed and water areas as far apart as possible to encourage exercise.

### Breeding soundness examination

A breeding soundness examination of bulls (often referred to as a BSE) is a thorough examination of the bull to estimate his ability to get a high percentage of exposed cows pregnant in a short period of time. The need for breeding soundness exams is based on the fact that many prospective breeding bulls are infertile, subfertile or unable to mount and breed successfully, and examination prior to the breeding season reduces the risk of breeding failure due to bull problems.

The overall effect of the exam is to eliminate many infertile bulls and to improve the genetic base for fertility within the herd and breed. Although individual

situations vary, national reports indicate 10%-20% of bulls will fail a thorough breeding soundness exam (and another 10% that pass the exam will perform poorly in the breeding pasture).

A breeding soundness exam should evaluate the entire bull, not just his reproductive system. Because bulls detect cows in heat by observing mounting behavior, scars from pinkeye will diminish a bull's ability to be a successful breeder and are grounds for failure.

During the breeding season, bulls will travel many miles per day, and sound feet and legs are essential for mating success. Foot and leg problems that are genetically transmitted, such as being post-legged or having screw-claw, should be heavily criticized and will cause a bull to fail a breeding soundness exam. Respiratory disease and other diseases that limit a bull's ability to be a sexual athlete will cause him to fail a breeding soundness exam, as will abnormalities of the penis, prepuce or testicles.

Scrotal circumference is measured because small testicles may not produce adequate amounts of sperm even though the testicles are healthy; or small testicles may be an indication of testicular degeneration and the production of abnormal sperm cells.

Testicular degeneration may be temporary or permanent and may involve one or both testicles. The primary cause of testicular degeneration is the elevation of testicular temperature for a variety of reasons (extreme environmental temperature, fever, localized inflammation of the testicle or scrotum) or due to prolonged stress.

If a bull is determined to be free of noticeable defects that could cause problems detecting heat, finding and following females that are in heat, and mounting and delivering semen to the female reproductive tract, the next step in a breeding soundness exam is to evaluate the semen itself. A semen sample examined under a microscope provides a snapshot view of testicular health. The semen is generally collected with the aid of an electroejaculator and examined for evidence of normal motility. The semen is then examined under higher power magnification to determine if at least 70%

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of the sperm cells are normal in their shape and appearance.

### **Trichomoniasis testing**

Trichomoniasis is a very important disease that is passed by bulls to cows during mating. It can cause a high percentage of cows in a breeding pasture to abort their calves. Because bulls act as the most common carrier of this disease, any bull that has been used in other herds should be tested until your veterinarian is confident that he is unlikely to be infected. Most commonly, this requires three tests one week apart using samples taken from scraping the prepuce and penis.

Young bulls that have not been used for mating are not considered to be a risk for carrying the disease.

### **Monitoring mating ability**

Close observation of bulls during the breeding season is required to be assured that the bulls are getting the cows bred. Injuries to bulls during the breeding season are relatively common. When a bull does become lame or incapable of breeding because of an injury to his reproductive tract, he needs to be removed from the breeding pasture and replaced by another bull.

Healthy, reproductively sound bulls are required for good reproductive and economic success. Careful attention to body condition, physical condition, semen production and disease status are important in overall herd management. Work closely with your veterinarian to develop the best system for your herd's unique needs and goals.



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