

## Getting Your Bull Checked For a Successful Breeding Season

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Breeding soundness evaluation is a series of tests to identify bulls that have potential for satisfactory fertility [1]. This evaluation determines bulls' health, physical and reproductive soundness [2]. A bull requires the following criteria to be fertile: physical soundness, good libido, and good quality semen [1]. Things that are not checked as part of a routine breeding soundness evaluation, but which can have profound effects on breeding success include:

- Serving capacity or mating ability – some physical and reproductive organ problems keep bulls from breeding cows.
- Libido or sex drive- tests have been developed but they are not widely used.
- Venereal diseases – Trichomoniasis and Campylobacteriosis

Breeding soundness evaluation is a useful tool for screening out low fertility bulls. Herd with evaluated bulls achieve higher pregnancy than for the herd with untested bulls [2]. Producers should have their herd bulls tested for breeding soundness before turning them out with cows to avoid economic loss from unsatisfactory bulls. Unsatisfactory bulls delay conception, prolong the calving season, reduce calf weaning weights and increase female culls. Low breeding pressure may mask sub-fertile bulls in multi-sire groups; however, the risk is heightened in single-sire groups.

Producers' assume that bulls that have previously tested and proven fertile are of sound breeding value for the rest of their lives. It is incorrect. Annual breeding soundness evaluation is the only way to assure whether the bull maintains its satisfactory breeding potential. Also new or young bulls also need evaluation before allow them to breed cows.

Many bulls are penned with cows during the breeding season. The producers should invest some time to increase the likelihood of high performance of bulls and of high percentage of cows pregnant at the end of the breeding season. A breeding soundness examination is an inexpensive insurance policy to protect against costly open cows.

Libido/serving capacity can be best checked as soon as bulls are penned with cows in the breeding pasture. Observing a cow be successfully bred by a bull is a good assurance for mating ability and sex drive. Bulls with higher libido/serving capacity achieve more pregnancies than bulls which have low libido/serving capacity [4-6]. The work of Birkner et al. (1984) showed that high libido beef bulls achieve higher conception rates (51.5%) than low libido animals (30.6%) over a 21-day mating period. Dominance is a problem in multi-sire mating groups [7]. Bulls of high social ranking mate more cows than lower ranking animals [8,9]. The dominant bull generally mates more cows than subdominant bulls and actively prevents subdominant bulls from detecting estrus [10] and mating [11]. Thus, the major adverse consequence of dominance is that low conception rates can occur in group-mating systems when the dominant bull is sub-fertile.

Breeding injuries are very common happenings in the breeding pasture [12,13]. Some common findings are swelling or abnormal appearance around the preputial sheath or testicles, tears of the prepuce. This results result in a protrusion of pink tissue from the opening that does not readily retract. Another finding is penile hematomas result in swelling between the sheath opening and the scrotum. Bulls with these problems should be removed from the breeding pasture immediately and given veterinary attention as it results in disappointing breeding consequences [12,13].

Any bull lameness issues [14,15] are best managed by removing the bull from the breeding pasture. Bulls with simple problems return to health much faster if they are given sexual rest. If injuries are severe no breeding will result. In a multi-sire breeding pasture presence of a dominant bull that is lame may dramatically inhibit breeding by less dominant bulls that are sound. Dealing with problems quickly by removing and replacing bulls with problems will pay big dividends in terms of pregnant cows.

Bull: Cow ratio

Major goals of breeding season is to – 1) get the cows settled early in the breeding season; 2) get them bred to the bulls with the highest possible genetic worth; 3) get cows bred with the fewest possible bulls. Defining the optimum bull to female ratio is important to a successful breeding season [16,17]. However, no one ratio is optimal for all ranches or small herd operations. The number of bulls required to adequately cover the breeding females is related to many factors [16]. As a rule of thumb a bull that is 14 months old going into his first breeding season should be expected to breed 14 or 15 cows; whereas a two-year old bull may be placed with 20 - 25 cows. Mature bulls can be placed with 25 - 35 cows and normally give good results [16].

Some points need to be considered before the breeding soundness evaluation

- It is a time consuming procedure. Assign adequate time on the day of testing and rushing fast will frustrate both the producer and veterinarian, also the bulls.
- A facility must be provided to allow examination of the semen in an area protected from the weather and cold.
- The facilities should be well designed and should be sturdy with adequate space to allow easy handling of the bulls and to prevent injuries to the bulls and handlers. Bulls are extremely rough on fences and chutes. If a bull is allowed to escape, they may become completely unmanageable.
- Schedule the exam for near the beginning of the breeding season, but still leave enough time (4 to 8 weeks) for a re-exam of some bulls, if needed.

***Remember.... bulls should have been examined by a veterinarian and should have passed a breeding soundness evaluation prior to the breeding season.***

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