

# Health & Husbandry

## Bull selection and health

by Brad White, Kansas State University Beef Cattle Institute



Selecting the right bull for your operation is based on many factors, but even after the correct bull

is chosen, he must be healthy and physically able to perform.

When preparing to purchase, there are some things to evaluate to be sure the bull is not only a good genetic fit, but also a sound health addition for your herd. For starters, the bull should have passed a breeding soundness examination (sometimes referred to as a BSE) and have a solid health history.

### Soundness exam

A breeding soundness exam is more than just a semen evaluation. A complete breeding soundness exam includes several

components: physical examination, scrotal circumference measurement, and evaluation of sperm motility and morphology. Bulls need to be physically capable of breeding cows, which includes normal locomotion, good sense of sight and smell, and no major physical dysfunctions.

A good physical examination evaluates these areas with an emphasis on the external and internal reproductive tract. The external reproductive tract is evaluated by palpating the testicles and visualizing the penis during semen sample collection.

The internal reproductive tract is evaluated through rectal palpation. The bull should be in

adequate body condition and show no outward signs of illness to pass the physical examination.

Scrotal circumference is measured because testicular size provides an indication of sperm-producing capacity. Passing the scrotal circumference portion of the examination means a bull must meet a minimum criteria (based on age for young bulls). Anything above the threshold is considered passing.

Semen evaluation includes two main criteria for sperm: motility and morphology. Motility is an evaluation of the sample soon after collection to determine what percent of the sperm are actively mobile. Morphology is an evaluation of the percent of

sperm with normal shape and structure. While some abnormalities are expected, if the bull is over the thresholds for motility and morphology, he passes the breeding soundness exam.

### Results

The result of a bull breeding soundness examination is one of three categories:

- ▶ Satisfactory (passed);
- ▶ Unsatisfactory (failed); or
- ▶ Deferred.

To be considered as satisfactory, a bull must pass all components of the examination. A bull may be deferred if he failed one or more components of the examination, but the failure was believed to be short-lived and may be resolved soon. A bull with “deferred” status should not be

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used for breeding unless he passes a subsequent breeding soundness exam.

### Limitations

The breeding soundness exam provides good information on the physical characteristics of the bull and his ability to breed cows, but it does not assess factors such as libido or how the bull will perform in multi-sire pastures.

Many bulls have a breeding soundness exam performed prior to sale. However, this is also valuable to perform annually on herd sires. As bulls age and go through multiple breeding seasons, annually evaluating physical health is an important step to prevent unnecessary reproductive losses. An annual breeding soundness exam is recommended for all sires.

### Health history

The current physical health of the bull is evaluated during the exam, and additionally, the preparation of the bull for future exposures to diseases should be considered.

An appropriate vaccination program should protect bulls from common diseases that may affect physical health or reproductive performance. The specific diseases to include vary slightly by region of the country. Consult your veterinarian to determine which diseases to consider in your area.

Biosecurity is a mechanism to attempt to keep diseases from entering the herd. Two main tools are used in biosecurity programs: quarantine and diagnostic testing.

Quarantine, or keeping the new arrivals separate from the base herd, is a good procedure for diseases transient in nature. For example, if a bull were exposed to a transient respiratory disease,

the bull may not show illness for a few days. Thus, keeping the bull in isolation for three to four weeks after arrival would avoid introducing this type of disease into your herd.

Some important diseases do not cause animals to show overt signs of illness, and the biosecurity program for these diseases involves diagnostic testing (ideally, prior to purchase). These diseases often have a long-term carrier state during which the animal houses the pathogen without showing signs of illness.

One example is trichomoniasis, commonly referred to as trich, where a protozoa infects the bull and can be passed to cows during breeding, leading to pregnancy losses. To prevent this disease, bulls should either be purchased as virgins or confirmed negative through diagnostic testing.

The level of concern for several other specific diseases varies by operation. Consult with your veterinarian to determine which diseases a bull should test negative for before arrival.

### Conclusions

Selecting the right bull and keeping him healthy is important for breeding success. The first step is to be sure the bull passes a breeding soundness exam. This should be followed by an evaluation of the bull's vaccination history. A biosecurity plan, including potential quarantine and specific diseases to confirm negative status prior to arrival, should be created. **ABB**

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Editor's note: Author Brad White is on faculty at Kansas State University College of Veterinary medicine and serves as director of the Beef Cattle Institute. To learn more on this and other beef herd health topics, tune in to the weekly Beef Cattle Institute *Cattle Chat* podcast available on iTunes, GooglePlay or directly from [www.ksubci.org](http://www.ksubci.org).