

AS2011

# Managing Purchased Bulls

**Rachel Wald**, NDSU Extension Agriculture and Natural Resources Agent, McHenry County

**Janna Block**, Extension Livestock Systems Specialist, NDSU Hettinger Research Extension Center

**Gerald Stokka**, Extension Veterinarian and Livestock Stewardship Specialist, NDSU Department of Animal Sciences

**Lisa Pederson**, Extension Beef Quality and Livestock Specialist, NDSU Central Grasslands Research Extension Center

## Biosecurity

### Consider Biosecurity Measures Carefully

In the future, biosecurity and livestock stewardship likely will become more important as the pressures of efficient production, food safety and quality, and international trade concerns increase. The first step in a biosecurity program is knowing where your seedstock come from and to what they have been exposed. If purchasing bulls from an unknown source, increased biosecurity measures will be necessary.

The cost effectiveness of biosecurity measures should be considered carefully and discussed with a veterinarian. The risk of introducing disease, the cost of the disease once it is introduced into a herd, the cost of the biosecurity measures and the amount of risk producers are willing to live with will determine the biosecurity measures that livestock producers utilize for their operation. As time goes on, biosecurity likely will become more important as food safety and quality, international trade concerns and efficient production pressures increase.

### 4 Components: Quarantining, Testing, Vaccination, Sanitation

**Quarantining** incoming cattle is one management practice that may decrease the likelihood of certain diseases being introduced to the herd. Quarantining means keeping incoming cattle separate from the established herd for a period of time.

The quarantine area should be set up so new arrivals are at least 6 feet apart from other animals and do not share feed or water with the established herd. Ideally, new bulls should be quarantined for 30 days, with two weeks being the minimum.

**Testing** of purchased cattle can be useful in decreasing the risk of introducing disease into a herd. Remember that disease testing is not 100% effective, and the sensitivity and specificity of the test should be considered when testing potential animals for addition to your herd.

**Vaccination** of the resident herd and purchased animals is another way to manage the risk of mixing cattle. Vaccination is the most common way veterinarians and producers have attempted to manage some biosecurity risks, such as IBR and BVDV.

However, the effectiveness of vaccines should be evaluated with a veterinarian, and vaccination should not be considered the only or even the primary means of decreasing disease risk. Even under optimal conditions, not all cattle will respond to vaccination, nor will all that respond to vaccination be protected from infection.

**Sanitation** involves protecting herds from exposure to infectious agents. Sanitation practices may involve requiring all visitors, including veterinarians, nutritionists, milk inspectors, artificial insemination techs and other service personnel, to wear clean boots and coveralls. A clean footbath and brush should be provided for visitors to disinfect their boots.

## Breeding Season Checklist

### Body Condition and Breeding Soundness

- Bulls should have a body condition score (BCS) of 5.5 to 6.5 prior to breeding
  - BCS on a scale from 1 to 9:
    - Score 5 - moderate
    - Score 6 - high moderate
- Examine bull prior to turnout for:
  - Soundness – check feet and legs, and vision in both eyes
  - Reproductive soundness
    - Breeding soundness and physical exam should be conducted by veterinarian
      - Semen testing
      - Scrotal circumference
      - Visual exam of reproductive anatomy
      - Rectal palpation of accessory sex glands
      - Visual examination of feet, legs and eyes

### Parasite and Infectious Disease Management

- Deworming for internal and treatment for external parasites
- Vaccinations
  - Consult your veterinarian for vaccine recommendations

### Records

- Keep up-to-date records on all bulls to allow for quick evaluation of potential issues that may occur
  - Records to obtain for purchased bulls:
    - Health
      - Test results, BSE, Trich, BVD
      - Vaccination
      - EID, if any
      - Deworming products used
      - Pedigree or registration number
      - Expected progeny differences
      - DNA (if available) including genetic defect carrier status, parentage (if applicable)
    - Feed records
      - Type of diet
      - Nutritional analysis




# Step-down Nutrition After the Sale

Most young bulls are developed on high-energy diets. The gradual transition of a purchased bull from a concentrate to a forage-based diet is critical. Bulls that are turned out on pasture or placed on hay immediately after the sale can have digestive issues and may lose large amounts of weight prior to the breeding season. This weight loss results in body condition score losses of 1 to 3 points.

Having information about the feeding program that bulls experienced during development is important. If possible, a similar ration should be utilized after the sale, with gradual changes and reduction in energy content to adapt them to the new diet. An example step-down ration would be to start with 80% of previous concentrate intake, then decrease by 15-20% per week for several weeks until the diet is mostly forage.

Because spermatogenesis requires 60 days for completion, starting to step the bull down around 90 days prior to the breeding season is advantageous. This will reduce potential negative impacts on sperm production due to over- or undernutrition.

**Yearling bulls still should be gaining 1.5 to 2 pounds per day after the sale and prior to breeding.** This will require a diet containing about 10% to 11% crude protein (CP) and 60% to 70% TDN, (total digestible nutrients, which is a measure of energy).

If the previous ration is not known, a good idea is to start with high-quality forage (not pure alfalfa) and 4 to 6 pounds of grain. Bulls also should be provided with a vitamin/mineral supplement.

All feeds and forages should be analyzed for nutrient content at a certified laboratory to make the best use of available feeds. Consult with your local Extension agent or nutritionist for assistance in developing a ration.

Bulls should have a **BCS of 5.5 to 6.5** prior to breeding, based on the BCS system for beef cattle from 1 (emaciated) to 9 (excessively fat).



■ **BCS 5:** The 12th and 13th ribs are not visible to the eye unless the animal has been shrunk. The transverse spinous processes can be felt only with firm pressure, and they should feel rounded but not be noticeable to the eye. Spaces between the processes are not visible and are distinguishable only with firm pressure. Areas on each side of the tailhead are starting to fill.



■ **BCS 6:** Ribs are fully covered and are not noticeable to the eye. Hindquarters are plump and full. Springiness is noticeable over the foreribs and on each side of the tailhead. Firm pressure is required to feel the transverse processes. The brisket has some fat.

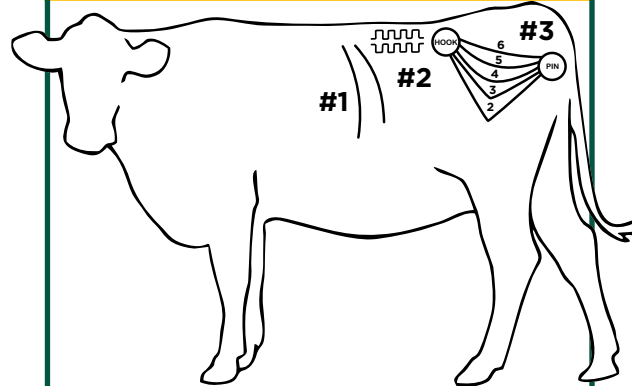
For related publications on these topics, visit the NDSU website at [www.ag.ndsu.edu/extension](http://www.ag.ndsu.edu/extension):

- "Biosecure Nutrient Management Practices" (NM1551) — <https://tinyurl.com/BiosecurePractices>
- "Checklist for Beef Producers" (AS1731) — <https://tinyurl.com/BeefChecklist>

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## Body Condition Scoring



1. Look at last two ribs
  - Visible: <5
  - Not visible: ≥ 5
2. Spine
  - Visible: ≤ 3
3. Shape between hooks and pins (thurl)
  - Shallow U: BCS 6
  - Strong U: BCS 5
  - V Shape: BCS 4
  - Strong V: BCS 3
  - Very Strong V: BCS 2

### U.S. Beef Body Condition Scores:

Range from 1-9

**BCS 1:** Starved, **BCS 9:** Obese

3-Step Body Condition Scoring (BCS) Guide for Range Cattle (B-1294), Scasta, et al, 2016, University of Wyoming Extension <http://www.wyoextension.org/publications/html/B1294/>

## Contributors

### NDSU Extension agriculture and natural resources agents:

Rachel Wald, McHenry County  
Greg Benz, Dunn County  
Craig Askim, Mercer County

### NDSU Extension specialists:

Lisa Pederson, livestock specialist, Central Grasslands Research Extension Center  
Travis Hoffman, sheep specialist  
Gerald Stokka, veterinarian and livestock stewardship specialist  
Janna Block, livestock systems specialist, Hettinger Research Extension Center  
John Dhuyvetter, livestock systems specialist (retired), North Central Research Extension Center  
Karl Hoppe, livestock systems specialist, Carrington Research Extension Center