

BEEF BRIEF

Smart Mineral Supplementation Strategies for Summer Beef Herds

As summer settles in and cattle graze pastures and rangelands, ranchers shift focus to irrigation and haying—but don't overlook mineral supplementation. Adequate mineral intake is essential for cow performance, reproduction, and calf health, especially during the critical summer months. This brief outlines how to make mineral delivery more consistent, cost-effective, and beneficial to your herd's health.

Why Cattle Need Minerals

Minerals play a critical role in animal performance, reproductive success, and overall health. Many forages common in Wyoming are deficient in one or more essential minerals, making supplementation necessary. A consistent supply of minerals supports vital functions such as immune response, enzyme activity, and proper growth. Macrominerals like phosphorus and magnesium are needed in larger quantities for processes such as bone development, while trace minerals like copper, zinc, and iron are equally important despite being required in smaller amounts.



Understand What Your Cattle Need

Mineral requirements vary by:

- **Stage of production** (e.g., lactating cow vs. dry cow)
- **Forage type and quality**
- **Time of year and weather conditions**

Start with forage sampling to get a basic understanding of what's lacking in your pastures. Although mineral content in plants fluctuates across the grazing season, testing can help guide your supplementation decisions.

Note: The Nutrient Requirements of Beef Cattle (NRC) is the standard resource for general mineral needs by class of animal (See Table 1.)

Delivery Method

While custom blends can be ideal, they can also be expensive. Most producers opt for a commercially available, free-choice supplement. The best choice depends on your operation's needs:

- **Forms:** Block, tub, or loose mineral
- **Weather-resistance:** Some are weatherized for better performance in rain and wind
- **Delivery method:** Always use a feeder—never place mineral directly on the ground

Feeding Tips: Improving Access and Consumption

When it comes to feeders, a few key considerations can improve mineral access and minimize waste. Covered feeders are especially beneficial, as they help reduce nutrient leaching caused by rain and weather exposure. Feeder height should be low enough to allow access for calves if they are expected to consume the supplement. It's also important to provide enough feeders—at least one for every 25 to 30 head of cattle—to ensure more uniform access. Using multiple feeders in different locations across the pasture helps reduce crowding, limits competition among animals, and encourages more consistent intake across the herd.

Related Tools

• Hay Testing for Cattle:

Understanding the Results:

https://www.wyoextension.org/ag_pubs/pubs/MP-159.pdf

Where and how mineral is offered greatly affects whether cattle get what they need:

- **Location matters:** Near water or shade to boost intake; avoid riparian areas (especially on public land) to prevent overuse or regulatory issues
- **Monitor intake:** Most supplements are designed for 2–4 oz. per head per day
- **Watch for over- or under-consumption:** Some cows may eat too much; others not enough

Mineral intake is primarily driven by salt content. If intake is too low, adding a bit of salt or a palatability agent like molasses can help. If it's too high, increasing salt content can actually limit intake.

Preventing Intake Imbalance

Preventing intake imbalance within the herd is a common challenge, as dominant animals often over-consume mineral, leaving less aggressive cattle without adequate access. To avoid this, it's best not to place an entire week's worth of mineral in a single location. Instead, distribute mineral across multiple feeders to give more animals a fair chance to consume their share. Refill the feeders regularly and keep a close eye on access points to ensure they remain available and effective. Rotating feeder locations can also help minimize hoof traffic and protect sensitive areas of the pasture. This strategy is particularly important for macrominerals like phosphorus and magnesium, which cannot be stored in the body and therefore must be consumed consistently to support herd health.

IMPROVE YOUR SUMMER MINERAL PROGRAM

Evaluate your current mineral strategy and feeder setup. Start with these steps:

- Sample your forage to identify deficiencies
- Choose a weather-appropriate mineral product
- Use enough feeders to reduce crowding
- Monitor consumption and adjust salt levels if needed

Move mineral locations periodically to protect land and improve access

Table 1. Macro Mineral requirements and maximum tolerable levels for beef cattle

Mineral	Lactating Cows	Dry Cows	Growing Calves	Max Tolerable Level
Calcium, %	0.31	0.18	0.58	-
Magnesium, %	0.1	0.12	0.20	0.40
Phosphorous, %	0.21	0.16	0.26	-
Phosphorous, %	0.6	0.60	0.70	3.00
Sodium, %	0.07	0.07	0.10	-
Sulfur, %	0.15	0.15	0.15	0.40

NRC, 1996. Adapted from NRC. Nutrient Requirements for Beef Cattle, Sixth Edition

DID YOU KNOW?

According to the National Animal Health Monitoring System (NAHMS), many range forages in the West are deficient in critical minerals—making supplementation one of the most cost-effective ways to support herd health during grazing season.

For help fine-tuning a summer mineral program for your beef herd, consult with a livestock nutritionist or your local Extension Educator.

This brief was created by UWyo Extension Beef Team, 2025-3

Author:

Dagan Montgomery

Edited by:

UW Beef Extension Team

Sources:

National Academies of Sciences, Engineering, and Medicine. (2016). Nutrient Requirements of Beef Cattle: Eighth Revised Edition. Washington, DC: DOI: <https://doi.org/10.17226/19014>