

Mineral Supplementation for Cattle
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Forages do not provide enough of some of the minerals that are required for reproduction, optimal growth, and health for beef cattle. Some of the forages are deficient in macro-minerals such as phosphorus and sodium. Macro-minerals are required in relatively large amounts. They are expressed as percentage (%) on the labels of mineral supplements. In addition, forages are deficient in some micro-minerals such as copper, cobalt, and selenium. These are expressed on the labels as milligrams per kilogram which is the same as parts per million. They are required in very small amounts.

There are interactions among minerals in the body of an animal. Consequently, minerals are dependent on one another to maintain the health of an animal. If one of these minerals is lacking in the diet, this deficiency can affect the health of an animal despite the adequacy of the rest of the required minerals in the diet. Consequently, all the required minerals must be present in the mineral supplement in the right proportion. Commercial mineral mixes offered free choice should meet the daily mineral requirement for beef cattle. You may wish to consider the following before purchasing commercial mineral mixes:

- (1) Mineral requirements vary with various stages of production of beef cattle. For example, growing and lactating cattle need more calcium than dry cows.
- (2) The preferred calcium to phosphorus ratio may range from 1:1 to 2:1. Cattle can tolerate a ratio of up to 7 to 1. The ideal ratio is considered to be 2:1 or 2 parts of calcium to 1 part of phosphorus in the final dry matter intake.
- (3) Phosphorus is the most expensive ingredient in a typical mineral mix, and so its level in commercial free choice mineral can vary from 0-12%. If one purchases a mineral supplement, based on price alone, it is possible that this may result in one's animal not getting enough phosphorus in the diet.
- (4) Sodium is always lacking in forages and feed for beef cattle. The source of sodium is common salt. The term salt and minerals are sometimes used interchangeable. Please note that salt is sodium chloride, and a mineral mix consists of other required minerals including salt. Salt is not stored in the body. Daily feeding of mineral supplement is necessary if salt is not provided separately.
- (5) Beef cattle can become deficient in magnesium especially when grazing lush pasture in early spring. This deficiency is referred to a grass tetany and can lead to death. You may wish to provide high magnesium mineral during late winter and early fall.

In concluding, remember to buy the right mineral mix for your cattle by knowing which one (s) they need and by reading the label before purchasing them.