



Information Sheet

Strategies for Spring and Summer Mineral Programs



Information on Spring & Summer Mineral, Grass Tetany, Fly Control, and Footrot.

From the desk of Kelcey Swyers, Ph.D., PAS

Animal Nutrition, Technical Services Manager at Ranch-Way Feeds

Is a spring and summer mineral program really important to the cow herd?

A costly mistake we see when cow-calf producers are trying to “cut corners” on cow herd expenditures is to not offer a sound mineral program through the spring and summer months. The decision to not offer mineral during “green grass season” can often times lead to “wrecks” that don’t appear until later (during calving season or the following breeding season) and actually end up costing the cow-calf producer (or the stocker or feeder) more money in the long run. While green grass is certainly higher in protein and energy, vitamins A & E, and certain macro minerals, such as phosphorus (**Phos**) and potassium (**K**) than dormant winter grass, it is still deficient in critical minerals such as magnesium (**Mg**), copper, zinc, iodine, cobalt, and selenium (note that some ranches can have toxic selenium levels). In fact, most forages in our area NEVER supply even half of the minimum requirement of copper for cows at any time of the year (see **Figure 1** on the backside), so for that reason alone it is a good idea to always offer a balanced mineral program since copper is so essential for reproduction, immune function, and growth. While cows may appear to be in better condition on green grass (due to the elevated protein and energy in the grass), do not assume that their improved “fleshiness” equates to improved mineral status. In fact, the herd’s mineral status could be depleted during this time, especially if antagonists such as high sulfur in the water, or high iron or molybdenum in the forage persists (all of these are common antagonists in the High Plains and Rocky Mountain Region). Also, consider that most brood cows spend the summer recovering from winter / calving weight loss, are supporting a nursing calf, and are either pregnant (or soon to be) with next year’s calf. Not supporting the cow through the spring and summer months puts her in a deficiency state as she enters the next winter season and her last trimester, so she is never able to get caught up on winter pasture and plummets further into a deficiency state. While some producers can pull this off for a couple of years, eventually it catches up to them as deficiency-related problems start to appear. Inevitably, the herd experiences declining conception rates, more retained placentas, weak calves at birth, depressed calf health, vitality, and feed efficiency, etc. Furthermore, calves that are weaned off of cows with a depleted mineral status are mineral deficient themselves and are the most susceptible to develop problems like polioencephalomalacia (PEM) once they are put on a distillers-based diet in the feed yard. So, in short, YES, a summer mineral program is just as important as winter mineral program and is too risky to omit!

What should I look for in a well-balanced spring and summer mineral supplement?

The most important quality a green grass mineral supplement should have is palatability. It is much harder to get cattle to eat mineral supplements during the “green grass season” than winter months, because they’d rather be grazing! The last thing you want to do is spend good money on a quality mineral program and have cattle ignore it. Therefore, a well-balanced spring and summer mineral should have the right amount of salt to encourage (and limit) consumption, and in some cases (if the water source is high in salts), little to no salt may be appropriate. As a good rule of thumb, early spring minerals should be high in calcium (**Ca**) and Mg and low (or devoid) of K to help prevent grass tetany (see below). Furthermore, don’t spend money on unnecessary levels of Phos or Vitamin A, instead spend the money on testing your forages to make sure that your mineral program is right for your pasture, especially as it pertains to copper, zinc, and selenium. Ranch-Way’s standard summer mineral is **Ranch-O-Min Summer/Fall 12-6**, plus we specialize in customizing mineral supplements, so we encourage you take advantage of our services to fine-tune your program!

What causes grass tetany and how can it be prevented?

Grass tetany is a complex metabolic imbalance caused primarily by Mg deficiency; it can be exacerbated when K and nitrogen intakes are high and when sodium (**Na**) and Ca intakes are simultaneously low. This “perfect storm” of nutrient imbalances is very common during the spring when pastures and fields host rapidly sprouting lush, green, cool-season grasses and cereal crops. The animals most susceptible to grass tetany are older, high-lactating cows (usually the “best” cows in the herd) that are consuming lush green forages. Cows with grass tetany become hyperexcitable and have muscle spasms, convulsions, respiratory distress, and they can collapse (cannot get up) and die if not treated immediately. To help prevent tetany, early spring minerals should be offered that are high in Ca and Mg and low (or devoid) of K to help offset these imbalances. To be most effective, it is highly advised that cattle are offered a “high Mg mineral” at least 2-4 weeks prior to being moved onto lush green pastures to assure that they have consumed the mineral, otherwise cattle are likely not to get enough Mg once they are on the pastures due to more interest in grazing than eating mineral! To prevent grass tetany, Ranch-Way offers **Ranch-O-Min Spring Hi Mag 14-4** in either loose or block form.

(continued...)

What is available to put in my mineral to reduce the fly population?

Flies can significantly hamper beef cattle performance, either by feeding upon cattle or just annoying them. Blood-sucking flies cost the cattle industry by reducing weight gain and milk production, spreading diseases such as pinkeye and anaplasmosis, and can even cause anemic-like blood loss (when populations get really bad)! Face and horn flies are the two most common types that attack cattle, and they spend their entire life cycle on the animal, leaving only to lay eggs in fresh manure. Teamed with good manure management, oral larvicides, such as Altosid IGR and Rabon, can help reduce fly populations. Altosid IGR contains the insect growth regulator (IGR), (S)-Methoprene, which breaks the horn fly's life cycle and inhibits fly larvae in the manure from developing into adults that bite. Rabon works much in the same way, but is effective against a wider range of fly species (horn flies, face flies, stable flies and houseflies). Both are classified as biochemical pesticides, are regulated by the EPA, and can be added to a spring and summer mineral program. Ranch-Way offers an assortment of fly control options using either Rabon or IGR.

What causes footrot and how can I prevent it?

Footrot is an infection of the soft tissue between the claws (digits) of the feet caused by bacteria common in the environment and in the rumen and feces of normal cattle. Injury or damage to the skin between the claws allows bacteria to invade and cause lameness. Damage of this sort can be caused by stubble/corn stalk fields, abrasive surfaces laden with small rocks and pebbles, or muddy/swampy conditions. Additionally, high temperatures and excess moisture or humidity during the spring, lush pastures, and the advent of hot weather may provide the ideal conditions for footrot to persist during the spring and summer months. There are mineral strategies that can help prevent/reduce the advent of footrot among the herd such as Ranch-Way's special **Ranch-O-Min Hoof Support Mineral CTC3734** that provides elevated levels of Aureomycin (CTC), Availa-Zinc, Iodine, Vitamins A & E, and Sel-Plex (organic selenium yeast). This mineral may also help reduce the occurrence of Pinkeye infections, which can occur due to dry, dusty environmental conditions, shipping stress, and irritants such as pollens, sharp/dry grasses, and flies.

What about offering summer minerals to growing stocker cattle?

The "old school" way of growing stocker cattle is to offer just a plain white salt or a trace mineralized salt block on the pasture. While there is no doubt that salt consumption is critical to support adequate water and dry-matter intake (DMI), salt blocks alone cannot help calves get full performance and utility out of the grass. Keep in mind that trace mineralized salt blocks are mostly salt (92 to 98%), and therefore contain a minute amount of trace minerals. Furthermore, because consumption of trace mineralized blocks is very low (due to the high salt level), it is impossible for cattle to meet their trace mineral requirements on a salt-based mineral supplementation alone. It's also worth noting that salt blocks are not formulated with any of the macro-minerals or vitamins needed to appropriately balance summer forages. These imbalances and deficiencies result in reduced DMI and ADG, and inefficient feed conversion, which ultimately leaves "money on the table" at marketing time. With the strong calf prices, it makes sense for stocker cattle operators to pay just a few pennies more per head per day to get better performance and bigger profits from their calves. For example, offering an ionophore (such as Bovatec or Rumensin) to the salt block or the loose mineral program can consistently capture 10% increase in ADG for an added cost of ~\$0.04/hd/day. Ranch-Way offers an assortment of free-choice mineral strategies that can be offered in an extensive grass scenario for stocker cattle. Furthermore, we are happy to assist you in developing a mineral program for your stocker calves that works the best for you!

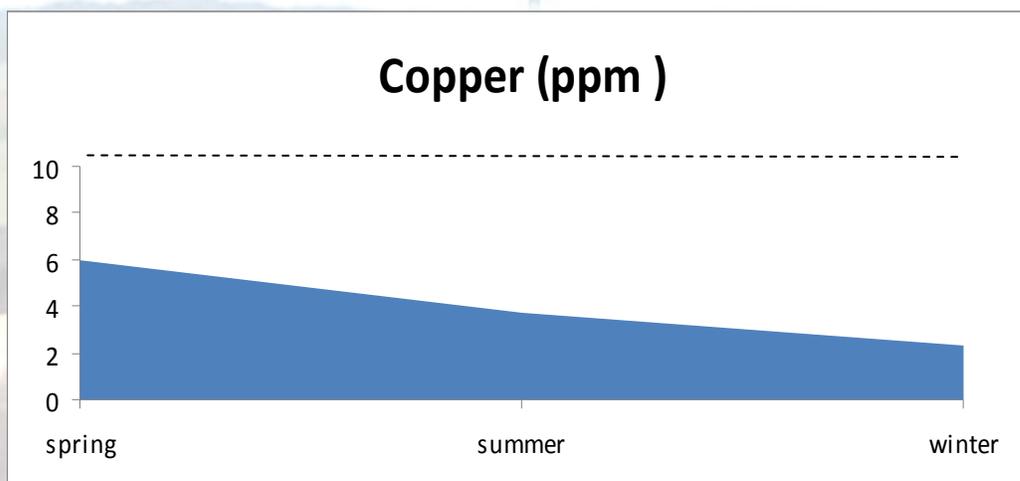


Figure 1. Typical copper concentrations (reported in ppm on a dry-matter basis) throughout the year of range pastures in the High Plains and Rocky Mountain Region. The dotted line (---) indicates the minimum maintenance requirement of beef cattle (NRC, 2000) assuming that no antagonists, such as sulfur, iron, or molybdenum persist in the forage or water source. Clearly, the minimum requirement for copper is never met in the forage alone (which is also typically the case for zinc, iodine, cobalt, and selenium), and therefore needs to be supplemented consistently year-around.