



## Why You Should Supplement Minerals To Cattle Throughout the Summer

By Jackie Nix

While the majority of cattle producers provide supplements containing minerals and vitamins during the winter and spring, most do not provide mineral supplements once pastures are green and growing. While this practice can cut production costs in the short run, it can be very costly for cattle producers in the long run. Mineral and vitamin nutrition is more important than ever as brood cows are going into the summer pregnant with next years' calf and nursing this year's calf. Also, stocker calves that are recovering from weaning stresses and rapidly growing need high levels of minerals and vitamins to perform up to their genetic potential.

### **Why minerals and vitamins are important**

Minerals and vitamins are a very small and yet extremely important part of cattle nutrition. Minerals and vitamins play vital roles in reproduction, immunity and growth. Inadequate intake of any of the essential minerals and vitamins results in reduced feed intake, decreased average daily gains, inefficient feed conversion, decreased reproductive performance and poor immunity. The result is cattle that don't grow or reproduce as quickly or efficiently as they could.

### **What are the minerals and vitamins needed by cattle?**

Minerals are loosely grouped into two categories: the macro-minerals and the trace or micro- minerals. Macro-minerals include: calcium, phosphorus, magnesium, potassium, sulfur and salt and are needed in relatively large amounts in the body. The trace minerals include: cobalt, copper, iodine, iron, manganese, selenium and zinc and are needed in very small or "trace" amounts in the body. The vitamins that are typically supplemented are vitamins A, D and E. Here is little more information about a few key nutrients that may be deficient in summer forages:

*Phosphorus.* Phosphorus is important for bone and teeth structure and milk production. It is also vitally important in energy metabolism and fertility. Cattle on summer pasture are often at least marginally deficient in phosphorus. Common deficiency symptoms include breeding problems such as reduced conception rates and reduced average daily gains.

*Magnesium.* Magnesium supplementation is usually only needed during lush, rapid growth of forages (usually Spring). However, some soil types and fertilization practices call for high magnesium supplementation year-round. Magnesium is important for milk production, bone growth and enzyme functions. Grass tetany is caused by magnesium deficiency.

*Copper.* Copper is vitally important for fertility and immunity. Many US soil types are marginally to severely deficient in copper and thus most cattle need copper supplementation. Inadequate copper levels will result in decreased conception rates, early embryo deaths, decreased ability to respond to immune challenge and faded hair coats.

Selenium. Selenium is also important for reproduction and immunity. Selenium works in conjunction with Vitamin E in the body. Most of the soils in the US are marginal to deficient in selenium so selenium supplementation is also vital. Selenium supplementation can help prevent retained placentas, uterine infections, and white muscle disease.

Zinc. Zinc is needed for epithelial integrity, meaning that zinc plays a role in the maintenance of skin, hooves, the gut linings, and the lining of the reproductive organs. Deficiencies will result in decreased fertility, skin problems, hoof and joint problems, and decreased average daily gain due to decreased nutrient absorption.

Vitamin A. The precursor for vitamin A is typically abundant in green growing forages, but is low in mature or drought-stricken forages. Also, cattle under stress (weaning, lactation, transportation, etc.) have a higher vitamin A requirement than normal and can benefit from supplementation. Vitamin A plays a role in integrity of the eye and immune function as well as bone and tooth growth. Inadequate vitamin A will result in stunted growth, reproductive disorders, runny eyes and increased susceptibility to diseases such as pinkeye.

### **But don't they get what they need from forages?**

While most cattle receive adequate levels of needed minerals and vitamins from available forages in order to survive, the vast majority are not receiving the mineral/vitamin nutrition needed for high levels of production. An important point to remember is that the mineral content of forages are limited by the mineral make-up of the soils they grow on. If it's not in the soil, it can't get into the plant. And while soil types vary, no one soil type provides optimum levels of all the minerals needed by cattle. In fact, some soils are severely deficient in some minerals (selenium or copper for instance) or have an overabundance of a mineral that interferes with the availability of another mineral (for example soils heavily fertilized with poultry litter will be high in potassium which will interfere with magnesium availability and utilization by forages). For this reason, it is commonly recommended to provide free choice mineral and vitamin supplementation to cattle at all times.

### **What if I feed just salt or a trace mineralized salt?**

While cattle need salt, salt blocks or trace mineralized salt blocks will not meet all of the nutritional needs of cattle. Trace mineralized salt blocks are mostly salt (typically 92 to 98% salt) and contain relatively low levels of trace minerals. Because of the high salt content, consumption of these blocks will be low; resulting in sub-optimum intakes of needed trace minerals. Additionally, these blocks do not contain the macro-minerals or vitamins needed by cattle. A complete mineral/vitamin supplement will provide necessary macro- as well as trace minerals in addition to needed vitamins.

### **Think of Mineral/Vitamin Supplementation as an Insurance Policy**

Just like you pay every month for car insurance "just in case" you get into an accident, it is best to provide a complete mineral/vitamin supplement "just in case" your cattle aren't receiving adequate levels of minerals and vitamins from forages. The cost of auto insurance seems high until you think about how much an accident would cost, then it seems like a bargain. In the same sense, the cost of mineral/vitamin supplementation seems high until you factor in the costs in lost profits and reduced production caused by inadequate mineral/vitamin nutrition. By maintaining high quality pastures for your cattle you can meet the majority of your cattle's nutritional needs, but by providing free choice access to a complete mineral & vitamin supplement you can make sure that ALL of the cattle's nutritional needs are being met. For a cost of pennies per day, you can ensure that your production objectives are not being hampered by inadequate mineral and/or vitamin nutrition.

For more information about the mineral/vitamin supplement that is best for your individual situation, contact your local Sweetlix<sup>®</sup> representative or call Sweetlix<sup>®</sup> at 1-800-325-1486. You can also locate a Sweetlix<sup>®</sup> dealer near you through our website at [www.sweetlix.com](http://www.sweetlix.com).

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