



## Choosing the Right Mineral Supplement for Goats

By Jackie Nix

Mineral supplementation is a very important, yet often overlooked, facet of goat production. A goat's diet very rarely provides all of the needed macro- and micro-minerals without supplementation. A combination of soil type, plant species and climatic conditions result in consistent deficiencies in certain geographical areas. For example, the Southeastern United States is deficient to marginal in the following minerals: cobalt, copper, iodine, manganese, selenium and zinc. These minerals need to be supplemented in the diet in this area. Additionally, today's superior genetics result in animals that require higher amounts of minerals in order to perform up to their genetic potential. For these reasons, it is imperative that a complete mineral supplement is offered to goats at all times.

When choosing a mineral supplement, it is very important to first know what minerals are typically deficient in your area. If you do not already know this information, contact your local nutritionist, feed store representative, Cooperative Extension agent, or veterinarian to learn typical mineral deficiencies in your local area.

### **What to Look For in a Mineral Supplement?**

When you walk in to the feed store, you are often assaulted by a wide variety of mineral supplement options. How does one choose? The following is a list of items to consider when comparing supplements in order to choose the right one for your situation.

1. **Mineral content.** Take a look at the guaranteed analysis, located on every tag by law in the United States, to find what minerals are guaranteed to be present and in what amounts. Do you see the minerals that you previously learned are deficient in your area? If not, keep looking for another product.

Also consider the amount of desired consumption when comparing mineral concentrations. A product designed to be consumed at a rate of 0.5 oz. per head per day needs to be twice as concentrated as a product designed for a consumption rate of 1 oz. per head per day. Be sure to compare "apples to apples" when looking at mineral tags side by side.

2. **Mineral Form.** It does the animal no good if we provide minerals in a form that it cannot utilize. Take a look at the list of ingredients. As a general rule of thumb, the sulfate forms of most minerals are more bio-available than the oxide or chloride forms, however there are exceptions. For instance, magnesium oxide is a highly available form of magnesium. As the bioavailability of the mineral decreases, the amount of mineral needed increases. Contact a nutritionist, feed representative or Cooperative Extension agent for information on the availability of different forms of minerals.

3. **Palatability.** Are there ingredients included which would increase palatability like molasses, salt or fat? Many minerals are bitter and unpalatable to livestock in their natural forms, especially magnesium, and need to be mixed with other ingredients that encourage consumption. When utilizing trace mineral supplements it is important to remove all other forms of salt unless the label specifically states otherwise because salt is used to encourage consumption and if the goat is obtaining salt from other sources, it will not receive the desired levels of minerals.

Another factor affecting consumption is block hardness. Is the block so hard that the animals cannot consume the desired amount? Hardness is often used to regulate consumption in mineral blocks. Blocks can become harder when exposed to high heat or are stored for an extended period. An opposite problem is over consumption of mineral supplements. Is the mineral supplement block in question too soft so that goats are eating too much?

Be sure to periodically check the consumption rate per head per day after a period of acclimation (1 to 2 weeks) to make sure that goats are eating proper amounts of supplement. Wait for a few weeks because it is not unusual for over-consumption to occur when minerals are first offered after a long absence without them. Goats will typically consume from 0.5 to 2 oz. of mineral supplement. If they are not, either make management adjustments or consider another mineral product.

You can calculate the consumption rate by determining the amount of supplement consumed in one month (i.e. number of blocks or bags) and then multiply this number by the weight of the blocks or bags (For example 5 blocks @ 40 lb each = 200 lbs). Divide this figure by 30 days to determine the consumption per day (200 lb/30 days = 6.7 lb/day). Next, divide this figure by the number of goats exposed to the blocks or mineral to determine consumption per head per day (6.7 lb/day/100 goats = 0.067 lb/hd/day). To convert this into ounces, multiply by 16 (0.067 lb/hd/day X 16 oz/lb = 1.1 oz/hd/day).

4. **Weather Resistance.** How weather resistant is your mineral choice? Will it dissolve in rain or snow? Will it blow out of feeders on windy days? Wastage can be a large production cost that must be considered.
5. **Feeding System.** What is your current feeding system? Would loose minerals or blocks be the best choice? What feeding equipment do you have available? Do you need something that you can put out for a week at a time or are daily checks not a problem?
6. **Cost.** Even though cost is a very big concern in commercial production, don't let price be your main deciding factor. Look at the things discussed previously; minerals guaranteed, amounts, mineral forms, palatability and consumption factors, weather resistance and current feeding systems in use. A cheaper mineral that doesn't guarantee the amount of minerals needed in usable forms won't be very useful.

Also, take a look at the consumption rate and calculate the cost per head per day. A more expensive product with a lower consumption rate may very well have a less expensive cost per head per day than a cheaper product that has a higher consumption rate. For instance, if a 50 lb. bag of mineral supplement costs \$10 and the target intake is 1 oz. per head per day, the cost per pound is \$0.20 and the cost per head per day would be \$0.0125. Similarly, if a 25 lb. bag mineral supplement costs \$8 and the target intake is 0.5 oz. per head per day, the cost per pound

is \$0.32 and the cost per head per day would be \$0.01. Even though the first product is cheaper per pound, the cost per head per day is 25% more than that of the “expensive” supplement.

Even though \$0.01 and \$0.0125 doesn't seem like much of a difference; for a herd of 100 goats, this will translate into a cost per year of \$365 and \$456.25, respectively. In this instance, use of the \$8/bag mineral at recommended levels will save you \$91.25 per year.

### **Choosing the Best Mineral Supplement**

When choosing a mineral supplement for your goats, consider the factors discussed previously. Do the minerals supplied match the needs of your goats? Are the minerals provided in a form that is bioavailable for goats? Is the mineral palatable and is consumption guaranteed? Is the supplement weather resistant and finally is the cost per head per day competitive?

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Sweetlix invites you to compare our goat products against those of our competitors. We think that you will return to Sweetlix for the sweet taste of success.

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