

NUTRITION VS. ATTRACTION:

Comparing Nutritional Products and Lollipops

By **Matt Harper**

Photos by the Author

The older I get, the less tolerant I become of products that don't live up to their billing. You might think I'm getting cantankerous, but it could be a symptom of overabundant misleading or false advertising.



Good nutrition, including minerals can help produce massive antlers.

A few years ago, I purchased my first new four-wheeler. One day, as I was pulling a 6-foot cultipacker, my quad overheated. I stopped and let it cool down for a few minutes, and a half-hour later, the temperature light glowed amber again. I decided to stop before blowing up the engine. I was not happy or impressed by the machine. I resolved to get to the bottom of the situation, so I called the dealership and demanded to talk to the service department manager. When I told him the situation, his vexing reply did nothing to improve my attitude. He basically said that all four-wheelers aren't meant to pull heavy things such as a 6-foot cultipacker.

My carefully framed rebuttal was something like, "Well, that's a load of crap. It shows those things on commercials pulling freaking redwoods around."

He calmly replied, "Well yeah, those are commercials. It doesn't mean that's really what you're supposed to do with them."

My ATV story is not uncommon, as the world is full of advertising created by marketers trying to outdo each other at the expense of realism. It's simple sales and marketing theory. The more fantastic we can make a product seem, the more likely consumers will buy it. If you stretch a few details in the process, so be it.

You only need to do a quick search on deer minerals to find a plethora of products that infer they will produce the next world-record whitetail or be so powerfully attractive that deer will come from neighboring states to your property. If you doubt that, make your own search. The claims made by many manufacturers are not far from my slightly exaggerated examples.

However, most of those products have little — if any — research to back up the claims. Unlike the livestock and poultry industry, in which claims must be scientifically proven, the wildlife market can make claims without any proof. Additionally, most people do not have the nutritional training to analyze a product to determine the likely validity of claims. This article will not make you a PhD nutritionist, but it might help you determine the true nature of a deer mineral or deer attractant and which category the product likely fits.

Minerals and Attractants

It's generally true that deer minerals and deer attractants comprise



Trace minerals are vital for deer nutrition even though needed in small amounts.

separate categories, but that's too large of a brush stroke. Technically, to be a deer mineral, a product must be composed primarily of mineral. That doesn't mean the product is necessarily a beneficial nutritional supplement and designed as such. It simply means it's comprised of mineral, and you can feed it to deer.

Therefore, when I say a deer mineral, I mean a product formulated with the specific purpose of being nutritionally beneficial to deer by supplying the needed macro and trace minerals that will help improve performance characteristics. If a product purported to be a deer mineral primarily contains components designed to attract deer and has little actual nutritional benefit, I would throw that into the attractant group. Of course, some products will lean one way or the other and some are somewhere in the middle, making it more difficult to determine their true nature. Later, I will discuss a few things you can look at to help you make the best decision on which end of the spectrum a product seems to fall.

Attractants, likewise, is a general term under which many products fall. Some attractants are pheromone based, such as doe estrus or rutting buck, which attract deer based on triggering sexual drive. Other similar products simply smell like deer and are designed more for cov-

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ering your scent but in some cases attract deer. Some attractants are botanically based, claiming to have compounds that mimic natural botanicals to which deer are attracted. And some attractants appeal to a deer's nose and taste buds. That latter group is what I'll call attractants in this article, and we'll compare it to deer mineral.

What Should Be in a Deer Mineral?

As mentioned, I consider a true deer mineral to be designed first and foremost to improve the mineral nutritional plane of a deer herd to better all facets of deer performance. To accomplish that, appropriate amounts of macro and trace minerals must be formulated into the product at specific ratios. Macro minerals are those needed in large supply for normal life to occur. In a deer mineral, those typically include calcium, phosphorus, magnesium, potassium and sodium.

Of those macro minerals, calcium has the highest nutritional requirement and therefore should make up a large portion of a deer mineral mix. Exact levels of calcium, like all macro and trace minerals, might vary from product to product, as deer nutritionists differ in their opinions on the exact supplemental needs. Regardless, calcium should be present in the highest quantity. Calcium is nutritionally vital for many functions, including muscle contraction, milk production, antler growth, and skeletal growth and maintenance.

An analysis of a hardened antler shows calcium comprises the largest mineral portion — about 22 percent. On a product label under the ingredients section, the calcium source will typically be calcium carbonate. Because the ingredient section of a tag or label should be in order of highest to lowest in the mix, calcium carbonate will typically be one of the first three to four ingredients listed.

Phosphorus is normally second in terms of importance in a quality deer mineral. It has many functions, including energy transfer and metabolism, as well as protein synthesis. Like calcium, phosphorus is also critical for antler growth and makes up about 11 percent of a hardened antler. Phosphorus sources typically found in a deer mineral are dicalcium phosphate or monocalcium phosphate, both of which provide phosphorus and calcium. In a deer mineral, one or both of those phosphorus sources should be near the top of the ingredient list.

Third on the list of macro minerals is magnesium. It's important in carbohydrate and fat metabolism, as well as bone and antler growth. A hardened antler is about 3 percent magnesium. Although there are several sources of magnesium, including magnesium sulfate and magnesium chloride, the most commonly used source is magnesium oxide. In most quality deer minerals, magnesium oxide will be in the top five to six ingredients listed on a label.

Potassium plays a major role in osmotic or fluid balance and is also involved in metabolism. It's often in adequate supplies in green and growing vegetation but is sometimes found in deer minerals, especially when used in areas with vegetation that tends to be lower in potassium. There are multiple sources of potassium, but typically you will see potassium chloride or potassium sulfate on the label.

Finally, sodium typically comes in the form of sodium chloride, or salt. Sodium has several functions, but one of the most important is maintaining osmotic pressure and water metabolism. Sodium, or salt, is highly sought after by deer, especially in spring and summer, when they are consuming lush, green, growing vegetation. As mentioned, green vegetation is high in potassium but low in sodium. Because sodium and potassium work on opposite sides of osmotic balance, if a diet is high in potassium but low in sodium, deer will become “salt



Vitamins are critical for nutritional supplements. For example, vitamin D transports calcium and is vital for antler growth. 30-06 mineral products contain a high level of this critical nutrient.

hungry” and search out any source of sodium. That's true for all herbivores.

Trace minerals are those needed in smaller quantities but still vital for life. Quality deer minerals will contain zinc, copper, manganese, iron, selenium, iodine and cobalt. These trace minerals have unique functions and are vital for maximum performance. A small sample of these functions includes immunity, metabolism, lactation, bone and antler growth, and specific interactions with vitamins. Zinc, copper, manganese and iron can be sourced from oxides and sulfates. However, as with iron and copper, oxide forms have little to no digestibility. Selenium will normally be listed on the label as sodium selenite. Iodine will be listed as calcium iodate or EDDI, and cobalt is often listed as cobalt sulfate or carbonate. On a label, zinc, iron and manganese will usually be listed after the macro minerals but not necessarily in that order. Copper typically follows next, followed by selenium, iodine and cobalt, again with the latter three not necessarily in that order.

The other components in a quality deer mineral are actually not minerals but are still important nutrients. They include vitamins A, D and E. Like minerals, these fat-soluble antioxidant vitamins have many important functions. One involves vitamin D and its relationship to calcium and calcium transport, which lets it play an indirect but vital role in antler growth and milk production.

Is it a Deer Mineral or Attractant?

So how can you tell the difference between a product primarily designed for nutrition and one designed for attraction? First, it's important to note that a deer mineral must also be highly attractive. No matter how good its nutrition, if a deer won't consume a product in adequate quantities, its benefit will not be realized. Spinach and other vegetables might be good for you, but you won't get many nutrients from them if you don't eat them or only consume a tiny portion.

A deer mineral must have an attractant component to encourage consumption. Often, that component is the same as those found in a

purely attractant product. For example, we know salt is highly sought after by deer, especially in spring and summer, driven by the need for sodium to balance out potassium. That's why many attractant products are primarily salt or some other sodium source. The attractive power of salt is why most deer minerals have salt in them.

The difference in a salt-based attractant and a mineral that uses salt as an attractant is the level of salt in the mix compared to other minerals and vitamins. Although deer need salt, it doesn't play a major role in many of the functions we hope to influence, such as antler growth. Therefore, the trick is to put in only enough salt to meet nutritional demands and to get deer to consume the other minerals and vitamins.

This might seem a little confusing, but the point is to use a product with the right amount of salt. In my experience, that will be 40 percent and preferably less total salt in the mineral. So, if you look at a label and it shows a product contains over 50 percent salt, I would categorize that as more of an attractant than true deer mineral. Remember, salt might also be listed as sodium chloride. An additional bit of evidence is the amount of macro and trace minerals in a product. A product might claim it contains "32 essential minerals," but upon close examination of the tag, you may find it has less than 10 percent total of those minerals and over 90 percent salt.

Salt is not the only attractant used in deer minerals and attractants. Sweets can also be a powerful attractant to deer and come in many shapes and forms. Molasses is a commonly used sweet attractant, along with artificial flavors such as apple, persimmon, berry and vanilla. Those can be effective attractants, and not just as a flavor. Many of the flavors are not really flavors but aromatics, meaning they

smell like what they're supposed to taste like but don't affect the taste of the product.

Components that add flavor to a product are made differently from those that attract aromatically. That doesn't mean aromatic products won't entice a deer to investigate. It's just important to understand it might not improve the flavor. Regardless, many of those sweet-type attractants also claim they're "fortified with minerals." Fortified is a loose term, and as long as a product has a sprinkle of minerals, they can be called fortified. However, that doesn't mean the product will have any real nutritional benefit. To determine the validity of a legitimate mineral source, you must look at the label and search for the amount of mineral and vitamins the product contains. If it's an insignificant amount compared to the attractant portion of the product, it should be considered an attractant, not a mineral, in my opinion.

Conclusion

It is important to point out that this article is not intended to be negative about attractants. Attractants have their place for many deer hunters and can be effective tools for hunting and for using in conjunction with trail cameras. The purpose of this article is to make sure you are not duped into thinking you're getting something you're not. A true deer mineral is a great management tool and can produce tremendous results. Whitetail Institute's 30-06 and 30-06 Plus Protein have produced years of great results from hunters and researchers across the country. But sometimes other products claim to be mineral products when they should be considered an attractant in my opinion. Hopefully, you're now a bit more equipped to tell the difference. 🐾



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