

Reading the Labels; What you need to know

By Lisa Ross-Williams

Grow a whole new hoof in 30 days!
Formulated for all horses; foals, maintenance, performance and seniors! Change your horse's color from bay to gray in just a week! Ok, it's true that some of the claims made by some feed and supplement companies aren't quite this outrageous, they're pretty close.



But with the big marketing strategies any supplement or feed label can be made out to be the next miracle product. In fact, just looking at all the claims made, we should have a world full of healthy horses. This isn't so. However armed with some basic information, any informed horse guardian can weed out the good, bad and the ugly.

This ability to look past the fancy marketing/packaging and really understand what that label is telling you will help your equine partner have a chance for a balanced diet. Although total equine nutrition is a complex subject and outside the scope of this article, knowledge of some basic guidelines such as ingredients, key ratios and comparison techniques will allow you to look at the label and make a more informed decision.

What's really in concentrated feeds?

This category of products includes a feed base with additional vitamins and minerals added; either in sweet feed form or pellets. They are very common from the large feed companies and were designed for the convenience factor. Unfortunately, due to the over-processing and often second rate ingredients or fillers, these products are often not a good choice.

The first step in reading a feed label is the ingredient list. Be on the lookout for sub-standard filler products. Keep in mind often the first listed ingredients are in order of the amount in the over-all mix. Some common ingredients to watch out for include:

- **Wheat middlings:** A by-product of wheat milling which is an inexpensive filler with little nutritional value.
- **Soybean or oat hulls:** The outer covering of the grain or seed left over after the nutritious portion is milled. Another inexpensive filler.

- **Artificial flavorings:** Undisclosed synthetic material which are not overseen by the USDA.
- **Alfalfa meal or Bermuda straw:** Filler ingredients with very low nutritional value often made from poor quality and older hay. Green dye is often added to enhance the color.
- **By-products:** This term is more commonly seen in dog and cat food but also in some horse feeds. A by-product is leftover from processing another material. There is no law which governs what is considered a by-product.

Beneficial levels or not?

Some concentrated feeds also contain ingredients that may be pleasing to the horse guardian's eyes but isn't at levels which could benefit the horse. Two common such ingredients include MSM (MethylSulfonymethane) and probiotics. Often the MSM, a source of sulfur and joint health aid, amounts as listed in the guaranteed analysis is way below the maintenance dose of 10 grams per day. With probiotics, often only one or two strains of beneficial bacteria are added where a minimum of six or seven are needed by the horse's intestinal track. This doesn't necessary rule out such products, but additional supplementation with specialty products will be needed.

What about starches and sugar?

A low starch/sugar diet is extremely important for the easy-keeper breeds who may be prone to Insulin Resistance as well as Cushings horses. However, the "better safe than sorry" approach may be appropriate with most horses. If grain use is warranted such as with high competition



horses, feeding a small amount of high quality whole oats is much better than lower quality, over-processed grain materials.

Ingredients which contribute to starch and sugar in feeds include grains as well as molasses which can wreck havoc on the horse's glucose levels. Molasses is often added to concentrate products to make it palatable to the horses and is high in sugar as well as over-taxing the liver. A new strategy by some companies who are targeting the low starch/sugar diet include inferior grain ingredients such as middlings or hulls which although low in starch are also low in nutritional value. Quality companies are using rice bran, flaxseed and/or beet pulp.

What effect does over-processing and storage have?

Most concentrated feed products are highly processed mechanically and by heat, which destroys beneficial enzymes as well as some vitamins and minerals originally added to the product. A decrease in these nutrients can further happen over time (shelf life) and interacting with all the other ingredients.

Tip Crude protein does not mean digestible protein. If the protein sources are inferior and have a low digestibility, the horse will not be able to use that as a protein source. This is especially important for growing horses.

How to compare products

With so many choices and so many variations in formulas between them, it's easy for any horse owner to throw up their hands in frustration. There is no easy answer and there is no miracle product which will be appropriate for every horse. Numerous factors come into play such as age, discipline, other feedstuffs, environment and even the horse's individual metabolism type.

You need common measurements

One common practice in the feed/supplement industry which makes it hard to compare products are the units of measure used in the guaranteed analysis. Some minerals are listed

as a percentage, some as ppm (parts per million), grams or milligrams. To further complicate this problem, these can be based per pound, ounce or serving size. In order to compare various products or to look at key ratios, common measurements must be used.

Basic Conversion Table

1 lb=16 oz=453.6 grams	1 mg=1000 mcg
2.2 lbs=1 kg=1000 grams	1 oz=28.35 grams
1 gram=1000 mg	ppm=mg/kg

Basic Conversion Formulas

Below formulas based off guaranteed analysis per pound (common measurement) resulting in mineral measurement in milligrams per ounce.

Percentage per pound to milligrams per ounce using 7% phosphorus

1) % to Lbs of Phosphorus	% divided by 100	7/by 100= .07 lbs phosphorus per 1 lb mix
2) Lbs to Grams Phosphorus	Lbs x 453.6 grams	.07 lbs x 453.6= 31.75 grams phosphorus per 1 lb mix
3) To Grams per Oz	Grams divided by 16 oz	31.75 gms/ by 16= 1.98 grams per Oz of mix
4) To Mg per Oz	Grams x 1000	1.98 grams x 1000= 1980 mg Phosphorus per Oz of mix

Parts per million (ppm) per pound to milligrams per ounce using 1500 ppm copper

1) ppm to Lbs of Copper	ppm divided 1,000,000	1500 ppm/ by 1,000,000= .0015 lbs copper per 1 lb mix
2) Lbs to Grams Copper	Lbs x 453.6	.0015 lbs x 453.6= .68 Grams copper per 1 lb mix
3) To Grams per Oz	Grams divided by 16 oz	.68 grams/by 16= .04 Grams copper per oz of mix
4) To Mg per Oz	Grams x 1000	.04 grams x 1000= 40 Mg copper per Oz of mix

Tip If feeding amount is 3 oz per day, the above total is multiplied times three for daily intake.

Be aware of key ratios

Mineral balance is a very complex issue as so many minerals interact with each other. For instance, an excess of one can lower the absorption of others such as with calcium and magnesium. When reading a guaranteed analysis, be sure to look at the following key mineral ratios, aiming for a close but not often a perfect match. Horses are tolerant of small variances in these ratios so perfection is not necessary and can be tweaked if needed.

- Calcium:Phosphorus:Magnesium 2 :1:1
- Copper:Zinc:Manganese 1:3:3

- Copper:Iron 1:6
- Pottasium:Sodium 4:1

Hint the presence of imbalance in these ratios in a Hair Mineral Analysis can indicate stress, metabolism type, sensitivity to stress/sugar and immune system levels.

Are natural sources different from man-made?



**Natural Source Nutrients:
Dolomite (ca & mg), Garlic &**

The subject of whole food sources compared to human-produced vitamin and mineral forms also comes into play which further complicates matters. Many holistic experts agree that the more natural source or basic forms of nutrients are assimilated and metabolized in the body more efficiently than the synthetic counterparts. Pat Coleby from Australia, author of numerous books on eco-farming and holistic health for animals states in *Natural Horse Care*, “1 mg of organic selenium (as in kelp) is equal to 4 mg inorganic selenium in terms of utilization.”

Therefore, if more natural sources are used in a supplement, the guaranteed analysis may seem low compared to one containing synthetic or chelated minerals. The results then rest on the horse, his physical state and perhaps through a Hair Mineral Analysis on whether this is true.

Equine Nutrition is such an important aspect to have a happy, healthy balanced horse but it is still lacking for far too many. Without the proper nutrients given in the correct amount and ratio, no horse is able to reach his full potential. By having the basic tools to read a feed or supplement label, you can make an informed decision based on fact, not fancy packaging or multi-million dollar marketing.

Lisa Ross-Williams is a natural horse care consultant, clinician and host of the “If Your Horse Could Talk” webcast available at www.naturalhorsetalk.com. She is a seasoned writer and former Senior Editor of Equine Wellness Magazine. Along with her husband, Kenny, they share their small Arizona ranch with their beloved animals.

Lisa has dedicated herself to extensive research, as well as an exploration of hands-on experiences which included clinics, seminars and courses covering natural horsemanship, hoof care, dentistry,

bodywork, homeopathy, iridology, essential oils and nutrition. Since then, she has earned her degree in Environmental Plant Science and has completed the Basic Homeopathy Veterinary course through the British Institute of Homeopathy.

Known to colleagues and friends as one who “walks her talk,” Lisa has positively influenced thousands of horse owners and grateful horses, sharing her knowledge of natural and holistic horse care.



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