Tag-ology:
What a feed tag says (and does not say)
Amy Parker, M.S.

Have you ever looked at a feed tag or bag and wondered what the information means, and is it really necessary? Learning to interpret the feed tag can provide the horse caretaker with valuable information.

By law, commercial feeds must have certain information listed on the tag or bag. Each state has laws and regulations governing the sale of commercial feeds, including the definition of commercial feeds and items that are exempt. A typical feed tag will list product name, a guaranteed analysis, ingredient list, the name and address of the manufacturer or distributor, feeding directions and net weight.

Either because of individual state laws or manufacturer preference, the ways in which information is listed may vary. For instance, ingredients may be listed individually or by using collective terms. While some manufacturers list ingredients in order from greatest to least inclusion rate, this is not a requirement. Additionally, individual state laws govern whether certain nutrients can be included in the guaranteed analysis. A general understanding of the information contained on feed tags can help the horse owner or manager to make informed decisions when choosing a feed.

Guaranteed Analysis: What exactly does it mean?
Same on the outside does not mean same on the inside
Two feeds may have the same or similar guaranteed analyses, but the actual feeds may be very different. To understand this, one must understand what the guaranteed analysis is saying and perhaps more importantly, what it is not saying. The guaranteed analysis simply tells the guaranteed concentration of nutrients (protein, fat, fiber, minerals, etc.) in the feed. When a sample of the feed is tested, the level of nutrients must not be less than the minimum guarantee or more than the maximum guarantee. The guaranteed analysis does NOT tell anything about the ingredients, either their quantity or quality. Thus, two feeds may have the same guaranteed analysis, but contain very different ingredients. The example on page 3 shows three different formulas, each with the same guaranteed analysis.
Buzz-word nutrients

When a nutrient is included in the guaranteed analysis, the nutrient is not necessarily nutritionally significant or beneficial to the horse. A common example is biotin, a B-vitamin known to help improve hoof quality. Research has shown that 20 milligrams of biotin are needed per day to benefit the hoof of an average size riding horse (~1200 pounds). Some feeds have biotin listed in the guaranteed analysis at a concentration of 0.40 milligrams per pound (or a similar level). At this concentration, the horse would have to consume 50 pounds of this feed per day to obtain 20 milligrams of biotin. This feeding rate is unrealistic. Therefore, this concentration of biotin is of little to no benefit to the horse’s hooves. In fact, many other feeds may have the same or similar concentrations of biotin, but do not list it in the guaranteed analysis. Thus, consumer beware: make sure listed nutrients are necessary and in sufficient concentrations to benefit the horse.

Ingredients: Are you getting what you pay for?

Ingredient lists

Ingredients may be listed individually by specific name (e.g., oats, corn, barley) or by collective terms for the grouping of the ingredient (e.g., grain products). Collective terms may be used when trying to keep a formula or portion of the formula confidential due to the uniqueness of the product or ingredients. When asked, manufacturers will often tell the customer the main ingredient(s) in the feed and explain why collective terms are used. (See examples of collective feed terms prevalent in horse feeds on page 4.)

Other reasons for using collective terms are to shorten the ingredient list or when least cost formulating. Least cost formulating means the ingredients in the feed change with fluctuating ingredient costs. Part of the same philosophy usually means less interest in the quality of ingredients. Least cost formulating can occur whether the ingredient list uses individual or collective terms. Unfortunately, such practices are not in the best interest of the horse. In extreme cases, changing the concentration of ingredients due to least cost formulating is the same as switching to a new feed. It also means the horse’s digestive tract usually has little to no time to adjust to the “new” feed, which may lead to decreased feed intake, digestive upset, and/or colic.

When feeding a textured (sweet) feed, the consumer can easily tell when a manufacturer least cost formulates by noting the feed’s typical appearance. If the feed seems to change (e.g., have more corn one time and more oats another), this may mean the manufacturer least cost formulates. Unfortunately, detecting such changes in pelleted feeds is nearly impossible, as the ingredients are not obvious when looking at a pelleted feed. The horse may give an indication that the feed has nearly impossible, as the ingredients are not obvious when looking at a

When using the same grain, the quality can still differ. For instance, the major parameter of oat quality is bushel weight. This means that the heavier the bushel weight, the higher quality the oat (e.g., 44 lb/bushel weight oat is higher quality than a 38 lb/bushel weight oat). Visually, a white or nearly white, plump oat is considered higher quality than a thin, small, grayish colored oat. Of course, information regarding ingredient quality is not available or allowed on a feed tag; thus the consumer cannot distinguish product quality from the feed tag.

What are you paying for?

Using high quality ingredients usually means increased cost per bag of feed. However, one must consider the amount fed per day. Using higher quality grains can mean increased nutrient availability; therefore, the horse has to eat less to maintain a healthy body condition. In other words, the horse may need much less of a higher quality feed than costs more, and the long term cost will actually be less. (See the example below.)

Does this mean that a higher priced feed is always better quality? Not always. The price per bag of feed also reflects the other costs, such as production costs, profit margins, product advertising and sometimes freight rates. Ultimately, the horse shows the difference.

*Calculating the cost per day

<table>
<thead>
<tr>
<th>Feed A = $5.00/50 lb bag</th>
<th>Feed B = $7.00/50 lb bag</th>
</tr>
</thead>
<tbody>
<tr>
<td>= $0.10/lb</td>
<td>= $0.14/lb</td>
</tr>
<tr>
<td>= 10 lb/day = $1.00/day</td>
<td>= 6 lb/day = $0.84/day</td>
</tr>
<tr>
<td>= 300 lb/mo = $30/mo</td>
<td>= 180 lb/mo = $25.20/mo</td>
</tr>
<tr>
<td>= $360 per year</td>
<td>= $302 per year</td>
</tr>
</tbody>
</table>

Summary

Interpreting feed tags can be quite difficult. What is listed on the tag reveals very little about what is inside the bag, ingredient or quality-wise. Asking questions and researching grain quality and ingredients are the best tools to feeding a superior quality feed. When selecting feeds for horses, some important questions to ask include:

⇒ Does the horse need the nutrients listed?
⇒ Are the nutrient concentrations at a level beneficial to the horse?
⇒ Is the formula fixed, or does it fluctuate with ingredient prices?
⇒ Are the grains used the best available for horses? What quality of grains are being used?
⇒ What is my cost per head per day of feeding? Could I reduce the cost per day and have a healthier horse by feeding a higher quality feed?
Feed A
Feed for weanlings, yearlings, broodmares, stallions and performance horses

Guaranteed Analysis:
Crude Protein, min.....................14%
Crude Fat, min........................4%
Crude Fiber, max........................9%
Calcium, min................................0.70%
Calcium, max............................0.9%
Selenium, min................................0.40 ppm
Zinc, min...................................100 ppm
Vitamin A, min..........................4000 IU/lb
Vitamin E, min..............................100 IU/lb

Ingredients:
oats, soybean meal, brewers dried grains, beet pulp, alfalfa meal, canola meal, vegetable oil, calcium phosphate, calcium carbonate, salt, magnesium oxide, zinc oxide, manganese oxide, copper sulfate, ethylenediamine dihydriodide, cobalt carbonate, sodium selenite, vitamin A acetate, vitamin D3 supplement, vitamin E supplement, menadione sodium bisulfite complex (source of vitamin K activity), thiamin mononitrate, riboflavin supplement, niacin supplement, d-pyridoxine hydrochloride, chloride chloride, folic acid, calcium pantothenate and vitamin B12 supplement.

Feeding Instructions
Feed ½ to 1 ¾ pounds per 100 pounds of body weight per day. Feeding levels vary with the requirements for maintenance, pregnancy, lactation and the amount of work.

Manufactured by
McCauley Bros., Inc.
111 Broadway, P.O. Box 604
Versailles, KY 40383
(859) 873-3333

Net weight: 50 lb./22.7 kg.

Feed B
Feed for weanlings, yearlings, broodmares, stallions and performance horses

Guaranteed Analysis:
Crude Protein, min.....................14%
Crude Fat, min........................4%
Crude Fiber, max........................9%
Calcium, min................................0.70%
Calcium, max............................0.9%
Selenium, min................................0.40 ppm
Zinc, min...................................100 ppm
Vitamin A, min..........................4000 IU/lb
Vitamin E, min..............................100 IU/lb

Ingredients:
corn, wheat middlings, rice hulls, cottonseed meal, corn plant, canola meal, animal fat, calcium phosphate, calcium carbonate, salt, magnesium oxide, zinc oxide, manganese oxide, copper sulfate, ethylenediamine dihydriodide, cobalt carbonate, sodium selenite, vitamin A acetate, vitamin D3 supplement, vitamin E supplement, menadione sodium bisulfite complex (source of vitamin K activity), thiamin mononitrate, riboflavin supplement, niacin supplement, d-pyridoxine hydrochloride, chloride chloride, folic acid, calcium pantothenate and vitamin B12 supplement.

Feeding Instructions
Feed ½ to 1 ¾ pounds per 100 pounds of body weight per day. Feeding levels vary with the requirements for maintenance, pregnancy, lactation and the amount of work.

Manufactured by
Wemake Feed Inc.
123 Smith Road
Versailles, KY 40383
(859) 555-1234

Net weight: 50 lb./22.7 kg.

Feed C
Feed for weanlings, yearlings, broodmares, stallions and performance horses

Guaranteed Analysis:
Crude Protein, min.....................14%
Crude Fat, min........................4%
Crude Fiber, max........................9%
Calcium, min................................0.70%
Calcium, max............................0.9%
Selenium, min................................0.40 ppm
Zinc, min...................................100 ppm
Vitamin A, min..........................4000 IU/lb
Vitamin E, min..............................100 IU/lb

Ingredients:
grain products, processed grain by-products, rоughage products, molasses products, vegetable oil, calcium phosphate, calcium carbonate, salt, magnesium oxide, zinc oxide, manganese oxide, copper sulfate, ethylenediamine dihydriodide, cobalt carbonate, sodium selenite, vitamin A acetate, vitamin D3 supplement, vitamin E supplement, menadione sodium bisulfite complex (source of vitamin K activity), thiamin mononitrate, riboflavin supplement, niacin supplement, d-pyridoxine hydrochloride, chloride chloride, folic acid, calcium pantothenate and vitamin B12 supplement.

Feeding Instructions
Feed ½ to 1 ¾ pounds per 100 pounds of body weight per day. Feeding levels vary with the requirements for maintenance, pregnancy, lactation and the amount of work.

Manufactured by
Feed Emmore Inc.
123 Doe Boulevard
Versailles, KY 40383
(859) 555-5678

Net weight: 50 lb./22.7 kg.

Note that the ingredient list for Feed C (using collective terms) could represent either Feed A or Feed B or may be an entirely different formula. If these were pelleted feeds and the ingredients were listed as the Feed C tag, then the consumer would not be able to distinguish which is the better feed. Therefore, asking questions regarding the actual ingredients, grain quality and manufacturing practices would be imperative to choosing the best feed.

Without knowing the actual amounts of each ingredient or the exact ingredients used for Feed C, Feed A is likely to be the better feed. Feed A lists oats as the first ingredient and contains more desirable/digestible ingredients for horse feeds.
Omega Bran™ is a fully fortified and nutritionally balanced high fat supplement for horses. Because of its judicious blend of rice bran and flaxseed, adding Omega Bran to the diet will improve body condition, hair coat and skin condition of horses. By replacing part or all of the grain/feed portion of the diet, Omega Bran can reduce the starch and carbohydrate intake and therefore provides a safe alternative source of calories for older horses or horses suffering from nutritionally challenging conditions.

Due to the synergistic combination of ingredients, Omega Bran has a very desirable taste and is a naturally rich source of both omega-3 and omega-6 fatty acids, lecithins, gamma-oryzanol, tocopherols and tocotrienols. These natural components help to ensure optimum health, maximize immune function and prevent cellular damage. In addition, McCauley's Omega Bran is fully fortified and balanced for all vitamins and minerals, including calcium and phosphorus, making it safe for all ages and breeds.

**Guaranteed Analysis**

<table>
<thead>
<tr>
<th>Component</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude Protein</td>
<td>16.0%</td>
</tr>
<tr>
<td>Crude Fat</td>
<td>26.0%</td>
</tr>
<tr>
<td>Crude Fiber</td>
<td>9.0%</td>
</tr>
<tr>
<td>Calcium</td>
<td>1.0%</td>
</tr>
<tr>
<td>Calcium</td>
<td>1.5%</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>1.0%</td>
</tr>
<tr>
<td>Copper</td>
<td>40 ppm</td>
</tr>
<tr>
<td>Iodine</td>
<td>0.5 ppm</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.6 ppm</td>
</tr>
<tr>
<td>Zinc</td>
<td>130 ppm</td>
</tr>
<tr>
<td>Vitamin A</td>
<td>6000 IU/lb</td>
</tr>
<tr>
<td>Vitamin E</td>
<td>300 IU/lb</td>
</tr>
</tbody>
</table>

**Ingredients**

Rice bran, flaxseed, calcium carbonate, salt, magnesium oxide, zinc oxide, manganese oxide, copper sulfate, ethylenediamine dihydriodide, cobalt carbonate, sodium selenite, zinc polysaccharide complex, iron polysaccharide complex, manganese polysaccharide complex, copper polysaccharide complex, vitamin A acetate, vitamin D3 supplement, vitamin E supplement, menadione sodium bisulfate complex (source of vitamin K activity), thiamin mononitrate, riboflavin supplement, niacin supplement, pyridoxine hydrochloride, choline chloride, folic acid, d-calcium pantothenate, and vitamin B12 supplement.
### COLLECTIVE FEED TERMS

#### Animal Protein Products
May include one or more of the following:

- Animal Blood Dried
- Animal By-Product Meal
- Buttermilk, Condensed
- Buttermilk, Dry
- Casein
- Casein, Dried Hyrolyzed
- Cheese Rind
- Crab Meal
- Fish By-Products
- Fish Liver & Glandular Meal
- Fish Meal
- Fish Protein Concentrate
- Fish Solubles, Condensed
- Fish Solubles, Dry
- Fleshings Hydrolysate
- Hydrolyzed Hair
- Hydrolyzed Leather Meal
- Hydrolyzed Poultry By-Product Aggregate
- Hydrolyzed Poultry Feathers
- Leather Hydrolysate
- *Meat & Bone Meal Tankage

*Use of this ingredient, from mammalian origins, is restricted to non-ruminant feeds unless specifically exempted by 21 CFR 589.2000. Feeds containing prohibited material must bear the following label statement: “Do not feed to cattle or other ruminants”.

#### Plant Protein Products
May include one or more of the following:

- Algae Meal
- Beans, Dried
- Canola Meal
- Coconut Meal
- Cottonseed Flakes
- Cottonseed Cake
- Cottonseed Meal
- Cottonseed Meal, Low Gossypol
- Cottonseed, Whole Pressed
- Guar Meal
- Linseed Meal
- Peanut Meal
- Peas
- Rappeseed Meal
- Safflower Meal
- Soy Protein Concentrate

- *Meat & Bone Meal Tankage
- *Meat Meal
- *Meat Solubles, Dried
- Milk, Dried Whole
- Milk Protein, Dried
- Poutry By-Products
- Poutry By-Product Meal
- Poutry Hatchery By-Product
- Shrimp Meal
- Skimmed Milk, Condensed
- Skimmed Milk, Dried
- Skimmed Milk, Dried Cultured
- Whey, Condensed
- Whey, Condensed Cultured
- Whey, Condensed Hydrolyzed
- Whey, Dried

#### Grain Products
In any of the normal forms such as whole, ground, cracked, screen cracked, flaked, kibbled, toasted, or

- *Barley
- *Corn
- *Rice
- *Soybean Feed
- *Soybeans, Ground
- *Soybean Meal
- *Soybean Meal Kibbled
- *Soybean Heat Processed
- *Soy Flour
- *Soy Grits
- *Sunflower Meal
- *Sunflower Meal, Dehulled
- *Yeast, Active Dry
- *Yeast, Brewers
- *Yeast, Culture
- *Yeast, Dried
- *Yeast, Primary Dried
- *Yeast, Torula Dried
- *Potato Protein

*No official definition for the grain product

#### Forage Products
May include one or more of the following:

- Alfalfa Meal, Dehydrated
- Alfalfa Hay, Ground
- Alfalfa Meal, Suncured
- Coastal Bermuda grass Hay
- Corn Plant, Dehydrated
- Dehydrated Silage (Ensilage Pellets)

#### Processed Grain By-Products
May include one or more of the following:

- Aspirated Grain Fractions
- Brewers Dryed Grains
- Buckwheat Middlings
- Condensed Distillers, Solubles
- Condensed Fermented Corn Extractives W/Germ Meal Bran
- Corn Bran
- Corn Flour
- Corn Germ Meal
- Corn Gluten Feed
- Corn Grits
- Distillers Dried Grains
- Distillers Dried Grains Solubles
- Distillers Dried Solubles
- Flora
- Grain Sorghum Germ Cake
- Grain Sorghum Germ Meal
- Grain Sorghum Grits
- Grain Sorghum Mill Feed

*Should designate type of grain with flour. (e.g., corn flour)

#### Roughage Products
May include one or more of the following:

- Almond Hulls, Ground
- Apple Pectin Pulp, Dried
- Apple Pomace, Dried
- Bagasse
- Barley Hulls
- Barley Mill By-Product
- Beet Pulp, Dried
- Buckwheat Hulls
- Citrus Meal, Dried
- Citrus Pulp, Dried
- Citrus Seed Meal
- Corn Cob Fractions
- Cottonseed Hulls
- Flax Straw By-Products
- Husks

#### Molasses Products
May include one or more of the following:

- Beet Molasses
- Beet Molasses, Dried Product
- Beet Pulp, Dried, Molasses
- Cane Molasses
- Citrus Molasses
- Molasses Yeast Condensed Solubles
- Concentrated Separator By-Product

Extracted from American Feed Control Officials (2003, p. 239-241.)
To the McCauley Bros. Staff,

Please find the enclosed picture of Maverick. This horse was saved from destruction two years ago. He had founder with rotation in both front feet and laminitis in the left hind. Thanks for your amazing products and services he is not only alive but thriving. I was never very optimistic about a show career with him but with careful diet management, a great farrier (my husband!), and Dr. Ruggles he has become sound and stayed that way. It took a year, but he was finally sound and this year was our first year to show. We even managed an under saddle class, not bad for a green broke 7 year old! There will hopefully be many more years in the show ring.

Thanks to everyone for all you do... the guys for dropping feed off at work even when it's not on their way, the girls in the office for getting it on the truck when I call at the last minute, and Amy for helping figure out how to feed Maverick when he could barely walk and then how to feed him when he got sound.

Sincerely,

Julia Yontz

McCauley Bros., Inc.
111 Broadway, P.O. Box 604, Versailles, KY 40383
859-873-3333 / 800-222-8635 / fax 859-873-1020
www.mccauleybros.com / email: horsefed@mccauleybros.com

THE HORSE’S LIST OF NEW YEAR’S RESOLUTIONS...

1. I WILL put my ears forward and cooperate when it comes to photos.
2. My stall is NOT my litter box. When I have free access to my paddock, I will NOT go back inside to use the bathroom.
3. I will NOT roll in streams or try to roll when my human is on my back.
4. I will NOT leap over large non-existent obstacles when the whim strikes.
5. I will NOT walk faster on the way home than I did on the way out.
6. I promise NOT to swish my tail while my human is cleaning my back feet.
7. I promise also NOT to choose that particular time to answer nature’s call.
8. I will NOT confuse my human's blonde hair for really soft hay.
9. I will NOT wipe green slime down the back of my human's white shirt.
10. I will NOT blow my nose on my human.
11. I will NOT try to mooch goodies off every human within a 1 mile radius.
12. I will NOT leave when my rider falls off.
13. I will promise NEVER to dump the wheelbarrow of manure while my human is mucking my stall.
14. I will NOT have an attitude problem - I won’t, I won’t, I won’t!
15. I will NOT pull my new shoes off the very next day just to prove that I can.
16. I am neither a beaver nor a carpenter. I promise I WON’T eat or remodel the barn or the new fences.
17. I will NOT jump in the air and turn 180 degrees every time I see a deer.
18. I will NOT bite the butt of the horse in front of me during the trail ride just to say “Hi”.
19. I will NOT chase the ponies into the electric fence to see if it is on.