



Feed Tag Information for Commercial Feeds for Horses

David W. Freeman
OSU Extension Equine Specialist

Labeling standards for feeds sold on a commercial basis are controlled by national and state regulations. In addition, the Association of American Feed Control Officials (AAFCO) provides guidelines that assist feed manufacturers in providing uniform information on feed tags.

As with all commercial feeds, those formulated for horses must be labeled with a feed tag. This tag must contain a list of ingredients and the guaranteed levels of certain nutrients contained within that feed. There are several reasons for purchasers to understand feed labels:

- The tag should direct you to select feeds which are most closely balanced to the needs of your horse.
- The tag will help you in cost comparisons of similar products.
- The tag may provide guidelines on feeding directions.
- By assessing the ingredient information on the tag, the tag can provide an indication of quality of the mix, and the need for additional supplementation.

Helpful Definitions Concerning Purchased Feeds

Terms defined by the AAFCO and the Uniform State Feed Bill are included on feed tags as well. A **feed** is defined as edible material which is consumed by animals that contribute energy and/or nutrients to the animal's diet. A **commercial feed** is all materials which are distributed for use as feed or for mixing for feed. By definition, commercial feed does not include unmixed whole seeds, such as oats, or physically altered entire unmixed seeds, such as cracked corn. A **formula feed** is two or more ingredients that are mixed and processed in proportions meeting certain specifications. The slang terms 'mixed' feed, pellets, and 'sweet' feed have been used to characterize commercial and formula feeds.

A **concentrate** is a feed used with another nutrient source to improve the nutritive balance of the total ration. Concentrates are intended to be further diluted and mixed to produce a supplement or a complete feed. For example, most commercial feeds marketed for horses are concentrates because they are formulated to be fed with a source of forage from pasture or hay.

There are a small number of commercial feeds formulated for horses to be a complete feed. A **complete feed** is a nutritionally adequate feed intended to be fed as the sole ration without any additional substance being consumed except water. Complete feeds are not intended to be combined with

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forage. Because of benefits of managing horses on long stem forage, most feeds are formula feeds intended to be fed as a concentrate rather than a complete feed.

A **customer-formula feed**, commonly called a custom mix, does not require the same labeling as commercial feeds. A customer-formula feed is a mixture of commercial feeds and/or feed ingredients which are manufactured according to the specific instructions of the final purchaser. Customer-formula feeds are most common on farms with large numbers of horses. In the case of customer-formula feeds, the farm owner or manager supplies the ingredient list to the feed manufacturers. To be cost effective, custom formulas need to be purchased in large quantities, generally not less than several tons. As such, most owners find that reputable feed companies will produce commercial feeds that fit most requirements and production constraints.

Labeling Guide for Commercial Feeds

Commercial feeds, other than customer-formula feeds, should be labeled with the following information:

- Brand Name, if any, and Product Name (e.g. Bluebird 12% Textured Horse Feed)
- The word "Medicated" if a chemotherapeutic agent is included (currently, there are no medicated feed additives for horses).
- Purpose Statement, containing the specific species and animal class(es) for which the feed is intended.
- Guaranteed Analysis
- List of Ingredients
- Directions for use and any warning or caution statements
- Name and Address of the Manufacturer
- Quantity Statement

Feed tags on commercial feeds formulated for equine will supply a large amount of information for the purchaser. Information follows the same format of commercial feeds formulated for other species of animals in that the tag will provide a purpose statement, guaranteed analysis, ingredient list, directions for use, weight, and manufacturer information.

Purpose Statement

The purpose statement indicates which class or classes of horses that the feed is intended. Feeds formulated for horses

should indicate the purpose to one of the following classes of horses: Foal, Mare, Breeding, or Maintenance. As such, you may find the purpose statement to read: For Growing Foals or For Maintenance of Mature Horses.

Guaranteed Analysis

The guaranteed analysis provides the levels of specific nutrients. As such, purchasers can use the guaranteed analysis to select commercial feeds which provide nutrient levels that meet recommendations for nutrient requirements and balance with other sources of nutrients. At a minimum, the guaranteed analysis on complete feeds formulated for equine will list the following nutrients:

- **Minimum percentage of Crude Protein**

Horses require certain amounts of dietary protein to meet needs such as maintenance and development of muscle, and synthesis of enzymes and hormones. For example, a twelve hundred pound mature horse in the maintenance stage may need the total ration to supply 1 1/2 to 1 3/4 pounds of protein per day to meet such needs.

The percentage crude protein is the portion of the total weight of the feed that is crude protein. You can determine how much crude protein you are supplying by multiplying the amount of feed by the percent crude protein. For example, 10 pounds of a commercial feed that is 14% crude protein supplies 1.4 pounds of crude protein (10 lb. X 14% crude protein = 1.4 pounds of crude protein). It is typical for crude protein percentages of commercial feeds for horses to range from 8% to 16% crude protein. Because of the need for more protein, feeds formulated for growing horses and horses in production will have higher percentage crude protein than feeds formulated for maintenance of mature horses.

- **Minimum percentage of Crude Fat**

Fat is one energy source that horses use to supply the fuel for body processes. The percentage crude fat is the portion of the total weight of the feed that is crude fat. The higher the minimum percentage of crude fat, the higher the energy content of the feed can be expected. The higher the energy content, the less pounds of feed that are needed to meet energy requirements. Percentage fat may range from as little as 1 to 2% in feeds with no added fat, to 8% or more in formulations using plant or animal fat as an added ingredient.

- **Maximum percentage of Crude Fiber**

Feedstuffs vary in the amount of crude fiber. Fiber provides energy, but in less digestible amounts when compared with carbohydrates or fat. Grains are relatively low in fiber and hays and forages higher in fiber. However, grains are relatively high in carbohydrates as compared to the levels found in forages and hays. Further, differences can also be expected between grain sources. Grains higher in fiber are lower in carbohydrate levels. For example, oats can be expected to be higher in fiber and lower in carbohydrates than corn or wheat which are lower in crude fiber and higher in carbohydrates. As such, a relationship of fiber and energy content can be developed for many of the feeds formulated with commonly fed grains.

For many formulations, low crude fiber concentration is associated with high energy concentration, and high crude fiber concentration is associated with lower energy concentration. Higher energy concentration means a lesser

amount of feed is required to meet energy demands. Crude fiber percentages of formulated feeds for equine typically range from 7% to 8% to highs of 12% to 15%. Some feeds that are high in fiber are an excellent source of energy, because the relationship of fiber concentration with concentration of energy does not follow normal expectations. Products that utilize soybean hulls, dried beet pulp, and alfalfa meal are examples of excellent sources of fiber that also contribute significantly to energy. These products are generally pelleted, and tend to be popular economical additions to formula feeds.

- **Minimum and maximum percentage of Calcium**

Calcium is one of the most important minerals of concern for balanced diets, especially in diets for growing horses. Horses in production and growth require more calcium than mature horses at maintenance. Consequently, feeds formulated for these classes of horses will typically have greater percentages of calcium.

Recommendations for total dietary amounts of calcium are 1 to 2 times greater than phosphorus. Grains typically have more phosphorus than calcium, hays more calcium than phosphorus. To ensure this desired calcium: phosphorus ration is met, it is a common practice to add a source of calcium to the formulation. Percentage calcium in concentrates formulated for equine typically range from 0.3% to 0.4% to highs of 1.0%.

- **Minimum percentage of Phosphorus**

Phosphorus is also one of the major minerals of concern for a balanced diet, especially in diets of growing horses. Phosphorus is required in greater amounts for horses in production and growth than horses at maintenance. Because of these greater needs, feeds formulated for these classes of horses typically will contain greater percentages of phosphorus. Recommendations for total dietary amounts for phosphorus are less than calcium. Even though grains have more phosphorus than calcium, requirements of many classes of horses support supplementation of phosphorus. As such, sources of phosphorus are commonly found in the tag's list of ingredient. Percentage phosphorus may range from 0.25 to 0.6% or greater.

- **Minimum Copper in parts per million (PPM)**

Concentration of copper is a relatively new addition to the feed tag for commercial feeds formulated for horses. Similar to calcium and phosphorus, copper is important for growth; however, requirements are much less. Because of the small amount needed, levels are expressed as parts per million (PPM). One part per million is synonymous to one pound in a million pounds. Copper requirements call for recommendations of 10 parts per million of total ration for all horses. Due to the variation of copper content in hays and forages, commercial feeds are commonly formulated with additions of small amounts of copper to insure adequate intakes.

- **Minimum Selenium in parts per million (PPM)**

Selenium is another micro-mineral required by horses. Some areas of the United States have selenium deficient soils, whereas other areas are extremely high. Selenium is needed in smaller amounts than calcium and phosphorus, and toxic levels are much smaller. Selenium requirements for all horse rations are recommended at 0.1 PPM of the total ration. Commercial feeds will typically range from

0.1 PPM to 0.5 PPM.

- **Minimum Zinc in parts per million (PPM)**
Concentration of zinc is also a relatively new addition to the feed tag. Zinc requirements are much lower than calcium or phosphorus, and are indicated in parts per million. Zinc requirements call for recommendations of 40 PPM of total ration for all horses. As with copper, zinc content in hays and forages are variable; thus commercial feeds are formulated with additions of small amounts to insure adequate zinc intake.
- **Minimum Vitamin A, other than the precursors of Vitamin A, in International Units per pound (if added).**
Vitamin A is required in large amounts as compared with other vitamin needs for horses. Requirements call for 14 to 30 International Units (IU) per pound of body weight, which relates to 14,000 to 30,000 IU's for a 1,000 pound horse, depending on its production and growth statements. These amounts may be met by access to green forage. However, because of the variability of Vitamin A sources in hays, sources of vitamin A are routinely added to commercial feeds. Commercial feeds typically range between concentrations of 1,000 IU/Lb. to 4,000 IU/Lb. Even though not required, you may find that other ingredients such as Vitamins D and E are also listed on the tag to provide feed purchasers more information about the feed. The amounts of Vitamins D and E required by the horse are much less than Vitamin A requirements.

Ingredient List

Feeds may contain a variety of ingredients including grains, grain products and by-products, high protein feeds, fiber sources, sources of minerals and vitamins, and feed additives. The ingredient list indicates all ingredients in the commercial feed, with grains listed first, and minerals and vitamin containing-compounds at the end of the list. Grains may be listed by name (oats, corn), or the tag may indicate grain products. Grain products are grains which have received some type of chemical or physical processing (e.g. ground, cracked, flaked) before formulation. Plant protein products are used to increase the concentration of protein. Processed grain by-products are secondary products produced by processing grain that provide a variety of nutrients, and include ingredients such as wheat middlings and bran. Similarly, roughage products are produced from processing roughage and can supply a variety of ingredients. Roughage products include ingredients such as soybean hulls and beet pulp.

Other Information Found on Feed Tags

To better serve feed purchasers, it is becoming a common practice to add additional information on feed tags. Purchasers may find feeding directions which suggest the amounts to feed, recommendations on feeding management, and whether or not to feed in combination with a high quality source of forage. Feeds should be fed only according to specific directions. This

practice allows the product to perform as designed, and meet the nutritional needs of the horses being fed. Additionally, tags will have the manufacturer's name and address, as well as the guarantee on the net weight of the feed contained in the bag.

Related OSU Publications

- CR-3969 The Effects of Adding Grain and Supplements to Commercially Available Grain Mixes for Horses
- CR-3982 Alternatives In Grain Selection For Horses
- ANSI-3973 Feeding Management of the Equine
- ANSI-3997 Nutrient Needs of Horses
- ANSI-3928 Evaluating Rations for Horses

Figure: Example Feed Tag

**BLUEBIRD 12% TEXTURED HORSE FEED
FOR MAINTENANCE OF MATURE HORSES**
Guaranteed Analysis

Crude Protein (Min).....	12%
Crude Fat (Min).....	3.0%
Crude Fiber (Max).....	12.0%
Calcium (Min).....	1.0%
Calcium (Max).....	.5%
Phosphorus (Min).....	1.0%
Copper (Min).....	20 PPM
Zinc (Min).....	40 PPM
Selenium (Min).....	0.1 PPM
Vitamin A (Min).....	2,000 IU/LB

Ingredient Statement
Grain Products, Plant Protein Products, Processed Grain By-Products, Molasses Products, Roughage Products 25%, Vitamin A Supplement, Vitamin D₃ Supplement, Vitamin E Supplement, Vitamin B₁₂ Supplement, Riboflavin Supplement, Pyridoxine Hydrochloride, Folic Acid, Biotin, Thiamine, Calcium Carbonate, Salt, Dicalcium Phosphate, Manganous Oxide, Ferrous Sulfate, Copper Oxide, Magnesium Oxide, Zinc Oxide, Ethylenediamine Dihydroiodide, Cobalt Carbonate, Potassium Chloride.

Feeding Directions: Feed 1/2 lb. of feed per 100 lb. of body weight for the maintenance of mature horses. Feed good, clean hay at the rate of 1 to 1 1/2 Lb. per 100 lb. body weight daily. Provide fresh, clean water at all times, except to hot, tired horses.
Important: Feed hay along with this ration, as per directions.

Manufactured by
BlueBird Feed Mill
Anytown, Oklahoma 77777
50 Lb. Net Weight (22.68 kg)

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