

Don't Dilute! The Pitfalls of Cutting Feeds with Cereal Grains and Protein Supplements

Feeding practices among horsemen are as diverse as the horses that are fed. Some owners follow feeding instructions to the letter while others mix feedstuffs haphazardly with little regard to guidelines set forth by feed manufacturers or equine nutritionists. One common practice is the **addition or substitution of ingredients to commercially prepared feeds**. Cereal grains and protein supplements are often used to “cut” or dilute the ready-made preparations.

The most common example of cutting feeds is the **addition of oats to a grain mix or fortified feed**. This is typically done to decrease the energy concentration of the ration. Replacing one-half of the grain allotment with oats can **reduce the energy density** of many rations by 10%. Depending upon the feed, the substitution of oats may also **affect protein quantity and quality (the amino acid balance)** of the ration.

The principal disadvantage of diluting feed with oats is the **negative influence on mineral balance, primarily calcium and phosphorus levels**. If too many oats are fed, for example, calcium levels may drop as phosphorus levels rise. This would be particularly detrimental to growing horses.

Reducing the energy concentration of a diet is most simply achieved by decreasing the amount of fortified feed offered. If the amount needed to maintain optimal body condition falls below that recommended on the feed tag, owners should be directed to **purchase a different feed** that would be more appropriate for the given horse.

A second reason for cutting commercially prepared grain mixes with oats stems from the desire to **increase fiber consumption**. There are, however, more efficient ways of introducing fiber into the diet. Traditional fiber sources such as **hay and hay cubes** can be offered, or horses can be allowed **more time to graze** on well-established pasture. If these feedstuffs are limited, horsemen can offer “**super fibers**” such as **beet pulp and soybean hulls** to their charges. With the inclusion of super fibers in the ration, actual grain intake may drop somewhat. *For information on super fibers, consult Equine Review article N05.*

Some horsemen add **corn** to grain mixes in an effort to **boost the energy concentration** of a ration. Corn is an inexpensive source of energy, but replacing part of a ration with it will likely **upset the nutritional balance** of the diet. If, for example, one-third of the recommended amount of grain mix is supplanted with

corn, the energy density will increase but only at the expense of protein quantity. When energy is abundant and protein insufficient, a higher incidence of bone growth disorders has been reported.

Protein supplements are frequently added to commercially prepared feeds. These additives are especially popular in the nutrition management of young horses such as weanlings and yearlings. Protein supplements generally contain a **wide array of essential amino acids**. If a young horse is consuming a low-end grain mix with poor-quality protein sources, supplementation may be beneficial. Protein supplements usually contain minerals such as calcium and phosphorus. As expected, **concentrations of calcium and phosphorus** in the entire ration would change.

Protein supplementation can be a costly endeavor. **Switching to a higher quality fortified feed** will likely be more economical than doling out store-bought protein additives.

Random blending of whole grains or protein supplements with commercially manufactured feeds can **skew the nutritional balance of feeds and induce growth problems in young horses**. The best way to ensure sound nutrition and thus favorable growth, performance, and production is to **choose a fortified feed that best complements the nutritional profile of the intended forage and the proposed use of the horse**.