

Just What Are Those Pellets in the Sweet Feed?

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Not too many years ago, the average textured “sweet” feed was made by mixing various whole and processed grains (oats, corn, barley), a mechanically ground protein source, usually soybean meal, and a dash of loose vitamins and minerals. The inclusion of the finely ground protein plus the loose vitamins and minerals resulted in a mix that contained an abundance of fines. Molasses was used in these mixes to stick the ingredients together, manage the dust associated with the fines and prevent sifting and separation of ingredients. Anyone who has ever fed one of these early sweet feeds can attest to the ability of horses to sort the mix and eat the ingredients they find most acceptable. Unfortunately, what horses determine to be the most acceptable ingredients are not always the ingredients they require to balance the diet. This became clear to this author while in graduate school at the University of Kentucky. In an experiment attempting to modify nutrient intake as a means of influencing growth, the horses would have nothing to do with the experimental ingredient mixed into their feed. They simply sorted the ingredient with intricate nose and lip movements, conveniently leaving it at the bottom of the feed tub.

New Technology

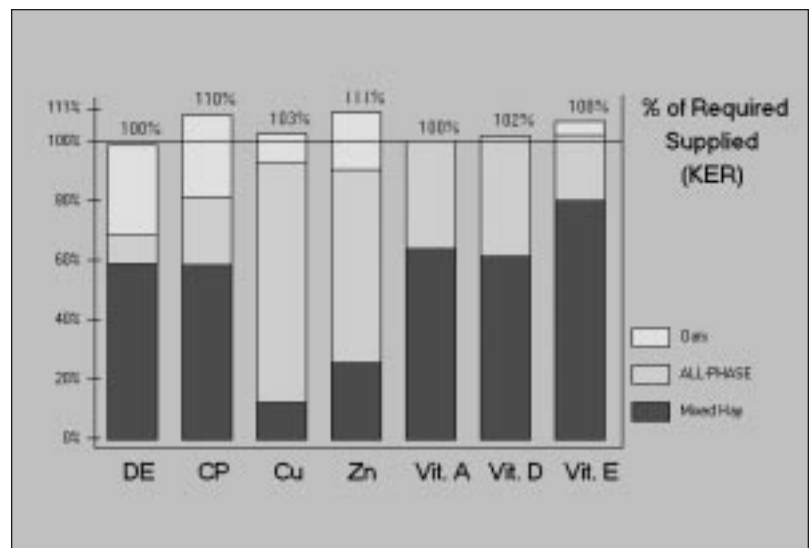
Somewhere a progressive feed mill manager, no doubt motivated by customer complaints over fines, came up with a better system. Modern textured feeds combine protein, vitamins and minerals in a pellet that is ultimately added to the grains. Less molasses is needed in the mix since the loose materials are safely tucked away inside the pellet. This mixing pellet system, although tremendously simple, enhanced the ability to deliver essential nutrients to the horse. Mixing pellet use in sweet feeds has virtually eliminated fines and the sifting of loose ingredients. Consumption of the pelleted portion of the mix is guaranteed with the use of readily acceptable nutrient carriers including flavors.

With mixing pellet technology, the level of protein, vitamin and mineral fortification is controlled by the number of pellets added to the mix, as the sources of these nutrients are found in the pellets. Sweet feeds designed for maintenance

of mature horses tend to have low levels of pellet inclusion. These feeds are typically low in protein and essential vitamins and minerals. On the other hand, feeds designed for growing horses or broodmares typically contain more pellets, driving both protein and nutrient fortification to recommended levels.

The Next Step

The use of mixing pellets in sweet feed was a great idea. However, the nutritional effectiveness of the sweet feed is determined by the proper inclusion of pellets and by the horse owner feeding the proper type and amount of feed. In many instances, horse owners want to buy the attractive looking sweet feed, but if their horse were fed the recommended amount of feed it would become fat. Most horse owners opt simply to feed less sweet feed. This would guarantee the horse getting the proper number of calories to control body weight, but would result in a diet poorly fortified with essential vitamins and minerals. A solution to this problem would be to pick the important protein,



vitamin and mineral pellet out of the sweet feed mix and provide it to the horse without the fattening grain and molasses. By feeding the horse a small amount (less than two pounds per day) of mixing pellet without the additional grain, a diet food of sorts is created.

This diet food scenario has proven very effective when feeding broodmares in late pregnancy. Most

mares will sail through pregnancy in good body condition and can be fed the recommended amounts of sweet feed to provide essential protein, vitamins and minerals. However, many mare owners have overweight mares that simply do not need the extra calories the grain portion of the feed provides. The risk of fetal growth problems due to not providing the mare with adequate diet fortification in late pregnancy is simply not an option. Overweight broodmares can be fed a small volume of the nutrient dense mixing pellet without having to feed the many pounds of sweet feed necessary to get the same diet fortification. For example, depending on the fortification level in the pellet, two pounds of mixing pellet can replace the protein, vitamins and minerals of eight pounds of sweet feed. Feeding small quantities of mixing pellet to overweight broodmares is a viable management option.

A similar practice has been used for feeding foals with special needs. When some foals go through a spurt of rapid skeletal growth they show an increased sensitivity or swelling in the growth plate of the bones. This inflammation or swelling of growth plates is called epiphysitis and is often temporary but should not be ignored as more severe bone deformities can result if the condition is allowed to progress. The nutritional goal during this time should be to limit excessive body weight gain but to support the rapid bone growth. Starving the foal of nutrients will not slow bone development but reducing the body weight gain will reduce the load the newly formed soft bone tissue must carry. The folklore solution to get these foals through the growth spurt was to “pull ‘em off grain.” This is not the best solution because, while reducing the caloric intake to limit weight gain, this diet also robs the body of the nutrients needed to support proper bone development. A better solution is to remove the calories that are not needed but feed the nutrients that are. A mixing or supplement pellet works well. The excess calories from grain are removed but the protein, vitamins and minerals are supplied by the supplement pellet.

Another situation that may call for feeding the fortified portion of the diet (i.e. the mixing pellet) separately from the grain or calorie source is at large boarding facilities. Many times these facilities house horses of many different sizes with a tremendous range in nutrient requirements. Finding a single prepared grain that can be fed in minute quantities to overweight “lesson” horses and in large volumes to competition horses is nearly impossible. A single grain concentrate often under-fortifies the horses on a low grain intake and over-fortifies horses being fed a large volume of grain. Feeding the fortified mixing pellet separately from the grain is an easy solution. Each horse can get the recommended amount of mixing pellet per day dictated by nutrient requirement. For horses requiring additional calo-

ries (hard keepers or horses in intense training) unfortified grains such as oats, corn or barley can be added to satisfy energy requirements. Thus, the 700 pound lesson pony may get less than one pound of mixing pellet per day with no additional grain, while the 1100 pound competitive show horse gets two pounds of mixing pellet plus six pounds of whole oats. The beauty is each horse gets a balanced diet, tailored for its specific energy requirements. The barn owners/managers have two feed ingredients: a protein, vitamin and mineral source (mixing pellet) and an unfortified grain (calorie) source.

A final example of mixing pellet use is with competitive show horses. Many show schedules dictate these horses must be on the road for extended periods of time. In these situations, it is easy to run low on space to haul the entire grain ration for each horse. Unfortunately, buying the same fortified grain from state to state or from country to country is nearly impossible. If the horse owners hauled just the concentrated protein, vitamin and mineral source (mixing pellet), they could save valuable space. The generic unfortified calorie source (oats) could be purchased on an as-needed basis on the road. This feeding system guarantees the horse a consistent means of diet fortification without the problem of dragging the entire prepared grain ration.

Kentucky Equine Research and its team member mills offer a mixing pellet bagged separately as a means of low-calorie diet fortification. These pellets are commonly referred to as supplement pellets and assume many different names in various areas of the world. Some of the common names include All-Phase, Forti-Phase, Equibalance, Super Supplement and others. The difference between these pellets is their concentration of protein, vitamins and minerals. The most concentrated of the group are Forti-Phase and Super Supplement. These pellets are designed to be fed at one pound per 1000 pound horse per day. These highly concentrated supplement pellets are excellent sources of vitamins and minerals, but due to the low intake are not a complete source of protein. Thus, these pellets are best suited for mature performance horses that have low protein requirements. All-Phase and Equibalance are two supplement pellets that are less concentrated with respect to vitamins and minerals. These supplement pellets were designed to be fed at a rate of two pounds per 1000 pound horse per day. With their higher intake, they provide an excellent source of protein and amino acids along with vitamins and minerals and are well-balanced for broodmares and growing horses. If you have questions regarding Kentucky Equine Research supplement pellets, please contact the KER office or any KER Team Member. ☺☺