



## Nutritional Notes

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Feb. 13, 2014 Question: From the Big Sky Region

We feed TC Growth and 30% supplement to our coming 2 y.o. I have 2 questions: 1) I soak the feed overnight. Do we lose vitamins this way? and 2) Is the molasses necessary in the Growth feed? It seems like we're feeding "sugar cereal" to our baby. (Although I've been searching for a similar feed that's not so sweet - that's available in our area - I still have not found anything better. It seems like the formula should be changed to fit current knowledge about glycemic index, etc.) We tried a sample of LMF super supplement (I think it's comparable to 30%?) and our horses much preferred the taste of LMF over TC, which made me want to buy it, but I stuck with TC 30% because it has the probiotics and hoof vitamins included and LMF does not. Thank you!

A: First, I'm not sure why you are soaking the feed overnight, but it is totally unnecessary. Yes, you will lose some effectiveness from the water soluble vitamins and would be more of a harm, in the long run, than any additional sugars you may leach out, if that is your intention. If you are soaking to reduce the chance for choking, adding water will help just 10 to 15 minutes before feeding time and feeding in a pan on the ground will help significantly. To your second

question, what you want to consider is total NSC (non-structural carbohydrates or starch + sugar). Glycemic indexes have not proven to be a good measure in horses because of erratic results between research trials. The total NSC for Growth is low at an average of 14% because it is primarily a fiber based feed even though it contains small amount of molasses. The majority of foal and mare diets are grain based (corn, oats and barley) with as high or higher NSC level and a much higher inclusion rate in the diet. The NSC of these feeds would probably average in the 25% to 35% range. Therefore, Growth, is ahead of the NSC curve on lower NSC feeds compared to the majority of the other diets on the market. You need to look at the NSC levels of the diet rather than looking at one specific ingredient.

Jan. 31, 2013 Question: The USPC Southwest Region asked "If one feeds a "Complete Feed" does one also need to feed a vitamin supplement?"

Answer: The term "Complete" in horse feed does not imply addition of the proper level of vitamins and minerals but that it contains enough fiber that it can supplement or replace the fiber portion of your diet (pasture and/or hay). Usually that requires a fiber guarantee of 14 percent or higher. However, most of these feeds also contain vitamins and minerals to meet NRC requirements as long as you feed the minimum amount listed on the feed tag. For instance, if the minimum to be fed to a 1000 lbs. horse is 6 lbs. per day and you are only feeding 3 lbs., then a vitamin and mineral supplement would be recommended. If you were feeding 6 lbs. or more, than no supplement would be recommended.

**Oct. 15, 2013 Question:** I have an older horse who is difficult to keep weight on. I recently switched her to senior feed. Is there another feed that might be a better choice?

**Answer:** Old age is not always the reason for horses to lose weight, so if this horse has always maintained her weight well and just started to have problems, the first thing I would do is consult your veterinarian. Have the vet confirm that there are not any other physical issues and to check and repair any dental issues. At some point, older horses become less efficient in processing fiber (hay and pasture) and horses need that fiber portion of the diet to thrive. All senior feeds are high in fiber, replacing that necessary portion of the diet. Where most of the senior feeds fail for horses having trouble maintaining weight is by not adding back enough calories. Therefore, since weight is an issue, I think you are on the right track going to a senior feed but I would switch to one where the fat guarantee on the tag is 8 percent to 10 percent.

**Oct. 15, 2013 Question:** With the winter months approaching, do I need to change my feeding program?

**Answer:** Winter can be different for everyone, especially if you live in Florida versus Maine, so there is no one answer to this question. Each horse has a calorie threshold on what it requires to maintain the body condition you desire. While NRC has specific energy guidelines, these are more of an average. The actual amount of energy required is a combination of the age, work load and metabolic condition of each horse. Everyone knows that horses of the same age, breed and amount of work may require different amounts of feed or hay. All that being said, winter is really no different than the rest of the year. Calorie intake is determined by the amount of pasture, hay and feed provided. In winter, we are reducing calories from pasture and relying more on hay. While more calories are required to maintain body heat, that may be offset by riding less. The net result is usually that more calories need to be provided by feed to make up for the loss of intake from pasture and the requirement to maintain body heat. While many owners seek fat supplements and various other concoctions, the simple answer is usually to just feed more.

**Aug. 20, 2013 Question:** How do I know if I'm feeding my horse enough? In the summer, when I don't feed very much, she maintains her weight well but loses some shine. In the winter, I need to feed more to keep her weight and her hair coat and hooves start to look better.

**Answer:** When you feed something from a bag, whether you call it feed or grain, you do it for 3 reasons: Additional protein, additional calories and additional vitamins and minerals. Not all horses need all three, so you need to choose a feed that fits your need. All feeds are required to list feeding directions. These feeding directions indicate how much you need to feed to meet certain National Research Council recommendations for protein, calories, vitamins and minerals making basic assumptions about the “average” horse. If there is an average horse out there, I’ve never met it. Everyone has a different set of circumstances based on the horse’s metabolism, amount of pasture, quality of hay, etc. The bottom line is that, for most normal feeds, you will need to feed 5 to 8 pounds per day to meet these requirements. However, we have a lot of overweight, mature horses that don’t need any more calories or protein. Then, you need to choose an option where vitamins and minerals are higher, or more concentrated in a feed with a lower feeding rate or 1 to 2 pounds per day. That is why your horse was losing some shine in the summer, because proper vitamin and mineral levels do not occur in hay and pasture and you were not feeding enough supplement those levels. In winter, when you fed more to provide more calories, you were also providing a higher level of vitamins and minerals, and therefore, you had a better coat and hoof condition. Always check the feeding directions and if you are not feeding enough, then you need to seek other options.

**Aug. 6, 2013 Question:** I don’t quite understand the whole carbohydrate thing. I know that lowering carbs in humans helps in losing weight, but I don’t want to reduce carbs in my horse’s diet and then have him lose weight. What is the real story?

**Answer:** Always remember one thing when comparing human nutrition to your horse, they are totally different. A horse is a herbivore and is designed to consume multiple, small meals of hay or pasture and breakdown the fiber through the use of a microbial population in the large intestine to create a source of energy. Humans cannot digest fiber in the same manner. Most all fiber sources are low in soluble carbohydrates (starch plus sugar referred to as NSC). Grains such as corn, oats, barley and wheat are high in soluble carbohydrates. So, with a horse, you can provide low carbohydrate pasture or hay, and they can do extremely well. As we “humanize” horses, we tend to restrict pasture time or don’t have enough availability to pasture or hay, so we learned to supplement with feed, or grain. Now, we are both increasing the normal level of NSC and providing meals rather than more of a consistent intake. So, while many horses have been doing well on grain based diets for years, my opinion is that as long as calories are the same, a fiber based lower NSC diet is healthier than a high NSC diet and helps reduce potential for colic and laminitis. The true answer is much more involved than space allows, so we have a number of articles explaining carbohydrates in a horse’s diet at [www.triplecrownfeed.com](http://www.triplecrownfeed.com) under “articles”.

**July 16, 2013 Question:** My older horse choked the other day. I'm feeding a pelleted senior type feed and someone told me that pellets were the cause because they swell up. What other options do I have?

**Answer:** Choking is not caused by the food source but by the horse eating too aggressively or poor dentition. If you put pellets in a bucket of water, they will swell, but they also get soft and fall apart. That process also takes time, so the swelling concept is not viable. However, just like people, if you take a big mouth of food, no matter what it is, and don't chew very well, swallowing will be a problem. This is especially true when your esophagus is a yard long. Horses that would be most prone to choking would be older horses where teeth may not be very efficient or missing, aggressive eaters in a herd that are trying to avoid another horse eating their feed, and horses that have not had anything to eat for a while, including hay or pasture. Horses have choked not only on feed, but also hay and pasture. The one redeeming factor is that, unlike humans, the esophagus and trachea are separate so they can still breathe during a choking episode.

So if you have a horse that has choked in the past or they fall into the category of a potential choke, here is what I would recommend. First, slow them up; feed hay first, put rocks or a salt block in the feed bucket, or any other way to not allow them to get a large amount in their mouth at one time. Second, feeding from a pan on the floor increases saliva production which is part of the swallowing lubrication process. Third, wet their feed with an amount of water to soften up the feed and help provide additional lubrication, just like additional saliva. Finally, if a choke happens, don't panic. It is distressful but typically not a life threatening event. Many chokes clear themselves but never hesitate to call a vet if the horse is in too much distress.

**June 18, 2013 Question:** I have a 20-year-old Morgan/Welsh cross mare who is partially retired due to a shoulder injury. She is OK with small (light riders) in the arena so she does not get a lot of conditioning work. She is also a very easy keeper. She is kept at grass and gets two cups of an

easy keeper pelleted feed once a day in which I mix her supplements. During the winter she is fed a great grass hay I buy from a neighbor plus her supplements. She is not obese, but she is not fit. Any suggestions for maintaining a healthy weight for her? She has never foundered or coliced in the 7 years I have had her.

**Answer:** Horses are like people in that they burn more calories with exercise and some horses (not necessarily always breed specific) require less to eat than other horses doing the same thing. You have both a combination of breeds that do tend to be easy keepers and you are reducing the amount of normal work. Maintaining weight means balancing everything a horse eats; pasture, hay and feed. In your case and in most every other case, the fiber part of the diet will provide the majority of the calories required. It sounds like you have a handle on maintaining weight with the reduced amount of weight. Just make sure our vitamins and minerals are balanced. Some "easy keeper feeds" and 30 percent supplement increase the level of vitamins and minerals reducing the feeding rate per day while others just have reduced calories but the feeding rate stays high.

Unfortunately your fitness problem is a function of exercise. Imagine how wealthy someone could become if they came up with a diet that keeps weight off and keeps you fit. I could certainly use that myself.

**June 4, 2013 Question:** I currently mix two different types of feed together, is this a good idea or not? Many people tell me that I unbalance the ration by doing this.

**Answer:** You are not alone, there are a number of horse owners that do this, but rarely is it necessary. Some reasons are "I've always done it this way;" "In my barn I use this feed and this