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|  | Conclusion  A horse's digestive system is designed for the digestion of forage (pasture/hay), which consequently is the main focus of their diet. Fortified grains and supplements are only secondary and should be provided for essential nutrients not present in appropriate amounts in the forage portion of the diet. Too much supplements can also be dangerous. Through our survey, we found that most horse owners base the main diet of their horses on alfalfa and oat/wheat hay due to low availability of quality grass.  Through observation, we found that the quality of pasture was indeed limited. For example, we found that some areas had nitrogen and potassium deficiencies. The symptom of nitrogen deficiencies can be determined by spindly growth and by yellowing of leaves, which certainly is a problem in the summer because the transpiration rate of the plants are so high that the grass enters a dormant stage in growth. Potassium deficiency can be observed mainly during the winter in the Pleasanton/Livermore area because of the increased amount of rainfall (not to mention, El Niño!). The symptoms of potassium deficiency are poor root growth and red or purple coloration of the foliage, which affect growing points. Also, selenium deficiency was one of the problems in this area. The quality and quantity of grass are affected by, and therefore cannot sustain the total diet of a horse unless a huge acreage is available.  From the survey, we found that the most common types of horses around this area are trail and lesson horses. Most of the horse owners had their horses on pasture, but it was not sufficient, so they had to give supplements to the horses. In contrast with Belgian horses, of whom the diet is based on grass hay and pasture combined with a mixture of grains, the horses in Pleasanton/Livermore are primarily fed with alfalfa hay because of its high contents of protein, calcium, phosphorus, zinc, and copper (see graph).  As you can see, alfalfa hay seems to be the most desirable feed for a horse; however, the efficiency of alfalfa hay as the sole component of a horse's diet or as a combination with other supplements depends on the soil where it is grown, its level of fertilization, and availability of land.  There are different theories on when alfalfa hay should be fed; some people feed alfalfa hay in the morning, while others prefer to feed it at night.  Reason why some people feed alfalfa hay in the Morning:  -Alfalfa hay provides energy for the activities during the day.  Reasons why some people feed alfalfa hay at Night:  -It gives the animal enough time for the hays' mastication and digestion.  -It provides heat for the horse at night.  Let's consider three categories of horses that differentiates their diets!  Average Age Horses (Trail/lesson horses)  Horses consume approximately 2% of their weight each day (excluding water). So the typical 1,000 lb horse needs a total combination of 20 lbs of good quality grass/alfalfa hay, pasture (or oat/wheat hay, depending on availability of pasture), supplements, and/or alternatives of grains. Cob is a popular combination of corn, oat, and barley for working horses.  Young Horses (0-4 yrs. Old)  Young horses must have a protein and calcium-rich diet in order to grow. Therefore, we recommend a combination of alfalfa hay and oat hay with a possible addition of Purina for young horses.  Old Horses (20yrs.+)  Since older horses have a lowered ability to digest protein, fiber, and phosphorus, a general recommendation is to: increase overall crude protein levels from 10% to 12%, reduce hard-to-digest fibers (hay), ensure .3% phosphorus and .3% calcium. Feeding smaller amounts and more frequently also helps. We suggest to use Equine Senior, which is extruded "Pre-cooked" nutrient pellets containing quality protein along with polyunsaturated fat and other essential nutrients easily absorbed in the digestive tracts of older horses. This can be fed by itself or with pasture/hay. |

*This Web Site is Best viewed with 256 or more colors.*

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