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Feeding the Endurance Horse

1. The **1st** nutritional requirement of the horse is water, the **2nd** is roughage (fiber), the **3rd** is energy—carbohydrates (grain) or fats (unsaturated vegetable oil). They are of importance in that order; that is the order in which a lack will cause problems up to and including death.
2. A horse should consume approximately **2%** of its body weight in feed per day—so a 1000 lb horse needs 20 lbs of feed. At least **50%** (and preferably **60%**) should be roughage, so at least 10 lbs of hay, the rest grain. i.e, for a 1000 lb horse, grain should never exceed 10 lbs/day, and should ideally be less, with more hay or grass. Protein is not particularly necessary to the adult horse—10% dietary is sufficient.
3. Grass has more Calcium (Ca) than Phosphorus (P). Since the horse evolved eating grass, we consider this ratio “ideal”. Grain has more P than Ca, therefore the ratio of hay to grain needs to keep the diet balanced. Nutritionists are now recommending a ratio of 1.5-2 Ca/1 P. The various feed types need to be fed in a proportion that sustains this balance.

	Grass	Alfalfa	Oats	Corn	Beet Pulp
Ca:P	1.2 : 1	5:1 to 8:1	1:3	1:9	7:1
Protein	4-as%	15-22%	11-12%	8-9%	10%

4. Grass is much higher in Potassium (K) than Sodium (Na), so the equine kidney evolved to retain Na at the expense of K. This is why most endurance horses ‘in trouble’ due to electrolyte imbalance require increased K—it is fed in equal amounts as Na, but not retained as well by the body.

Submitted by T. O'Brennan