

HA Nutrition Flashcards – Protein & Fats

What are proteins made up of?

22 amino acids
10 essential
12 non-essential

What are the 10 essential amino acids?

Arginine, lysine, leucine, isoleucine, Histidine, methionine, phenylalanine, threonine, tryptophan, valine

What are proteins used for?

To make: blood proteins (albumin, antibodies etc), hair, hooves, muscle, organs (such as heart/lungs, kidney liver etc), skin, milk, enzymes, cell walls – almost everything in the horse's body.

What is the average % of protein in Grade 1 oats?

12%

What % of horse's body weight is made up of protein?

22%

HA Nutrition Flashcards – Protein & Fats

What % protein is recommended for:

- Weanlings
- Lactating mares
- 2 year olds
- Pregnant mares
- Mature horses in light work
- Mature horses in no work

- Weanlings = 14-16%
- Lactating mares = 14%
- 2 year olds = 10-12%
- Pregnant mares = 8-13%
- Adult horses light work = 7-8%
- Adult horses no work = 7-8%

What is the general % of protein in mid-bloom alfalfa?

17%

What is general % of protein in grass/oat hays?

Hays (grass/oat) 8-8.5%

What is the general % in pasture grass?

Pasture grass 2.8-3%

What might you expect a horse to look like if he were deficient in protein?

Hair loss with thinning mane and tail
No Energy

What problems can excessive protein lead to?

Kidney or liver damage

HA Nutrition Flashcards – Protein & Fats

Fats should compose what % of a horse's daily ration?

2-3%

List in order highest fat content to lowest alfalfa, rice bran, corn oil, oats, flax seed, corn

Highest to Lowest:
corn oils (100%)– rice bran (20%)– flax seed (18%)– oats (4.5%) – corn (3.5%)– alfalfa (2.5%)

Fats are essential for:

- Aid in absorption of fat soluble vitamins
- Provide energy (9 cal/gm of fat)
- Store energy
- Spare protein being metabolized for energy
- Important source of energy in mare's milk
- Increases tastiness of food supplements
- Increases stamina in performance horses