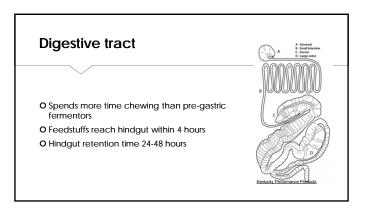
# Hay-based diets for horses: Matching horse type to hay type

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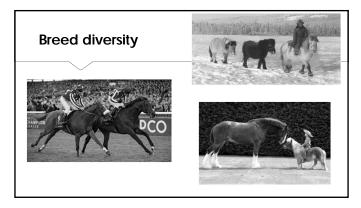


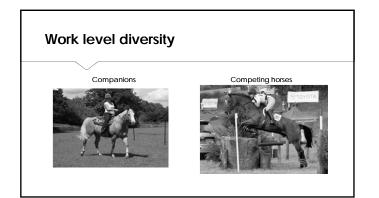
Topics

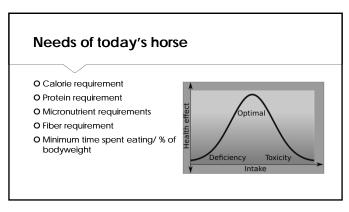
O Horse biology and diversity within the species
O Importance of forage in a horse's diet
O Types of hays
O Matching hay with nutrient needs

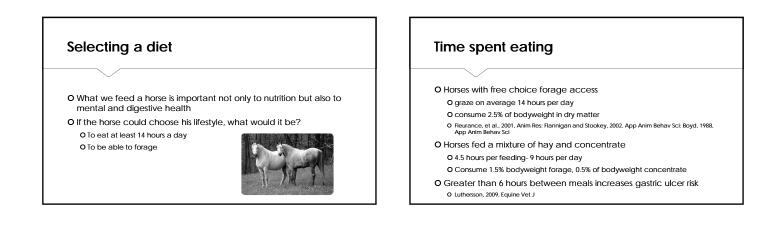
# Grazing behavior O Foraging O Consuming forage O Seeking out forage O 12.114 hours per day, when access unlimited

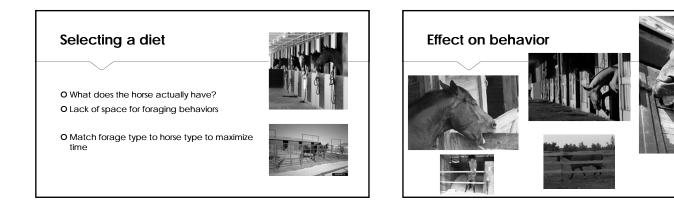








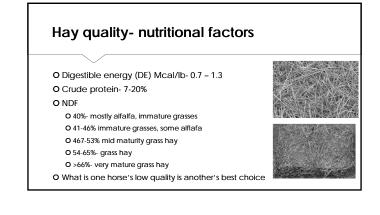


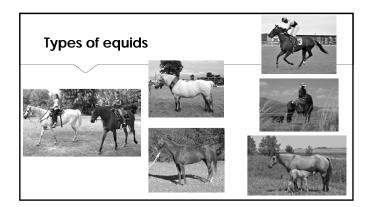


### The bottom line

O Feed a forage based diet and use supplemental concentrates to balance protein and micronutrients.

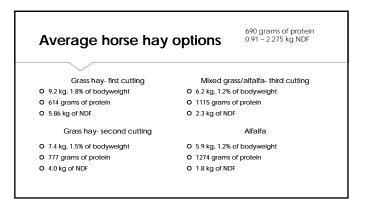
O A few examples to follow

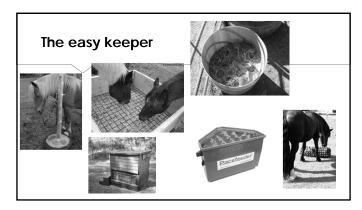




Hays	
Grass hay- first cutting	Mixed grass/alfalfa- third cutting
O 0.83 Mcal/lb	O 1.2 Mcal/lb
O 7.35 % crude protein	O 19.27% crude protein
O 70.15 % NDF	O 40.22 % NDF
Grass hay- second cutting	Alfalfa
O 1 Mcal/lb	O 1.3 Mcal/lb
O 10.5 % crude protein	O 24% crude protein
O 54.1 % NDF	O 34 % NDF







### The hard keeper

O Usually have higher calorie requirements, but not a corresponding increase in protein

O Most higher calorie hays are alfalfa based O Immature grass hays can reach ~1 Mcal/lb O Haylage

O Owners have to test...

O Other fiber sources

- O Beet pulp
- O Additional concentrate or fat



### **Racehorse requirements**

- Major concerns
- O Lack of time
- O Poor appetite
- O High rate of gastric ulcers
- O 24 hour/day confinement
- O Belief that high grain diets are necessary (45-55% grain)
  - O Racing Standardbreds perform as well on forage only diets (Jansson et al., 2012, animal)

**Racehorse hay options** 

Grass hay- first cutting

Grass hay- second cutting

O 15.6 kg of hay, 3.1% of bodyweight

O 1294 grams of protein

O 1638 grams of protein

O 12.4 kg NDF

O 8.4 kg NDF



Requirements O 32 Mcal/day O 932 g CP/day O 2.84 kg-5.68 kg NDF

## 932 g CP/day 2.84 kg-5.68 kg NDF

Mixed grass/alfalfa- third cutting

- O 19.4 kg of hay, 3.9% of bodyweight O 13 kg of hay, 2.6% of bodyweight O 2339 grams of protein
  - O 4.9 kg NDF

- Alfalfa O 12.4 kg of hay, 2.5% of bodyweight
- O 2678 grams of protein
- O 3.8 kg of NDF

### The easy keeper



O No good estimate on calorie/day requirement

- O Anecdotal- 1% of bodyweight, low calorie grass hay O NRC- 11 Mcal for 800 pound pony, actual- 6.6 Mcal O Consumption time <4 hours
- O 0.6% of bodyweight to induce weight loss (Van Weyenberg, 2008, J Anim Physiol
- O Higher NDF/lower calorie hay, straw mixture O Protein requirements met with forage balancer

