



Pasture Management School & Field Day

Horse Behavior and Eating Preferences

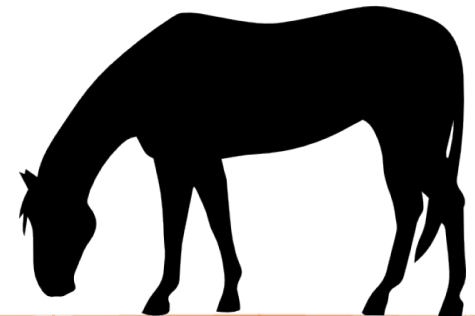
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Outline

- Why should we care about feeding behavior?
- Feeding behavior of the horse
- Selectivity
- Factors affecting feeding behavior
- Practical recommendations



Why should we care about feeding behavior?

- Eating is the predominant activity

Consumption patterns
and selection of feeds



Feed intake and
feeding management



Feeding Behavior of the Horse

- Feral and free-ranging horses
 - 10 – 17 hours per day
 - Nighttime eating = 20-50% of total
 - Several small meals/day

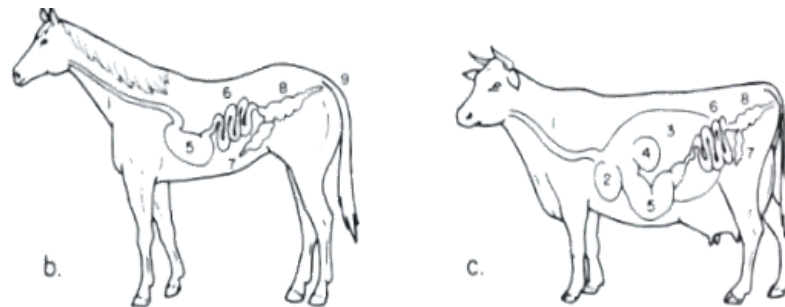


Figure 2.3. Stylized representation of the digestive anatomy and arrangement of (a) non-ruminant, (b) post-gastric fermenter, and (c) ruminant herbivores. 1, Esophagus; 2, Reticulum; 3, Rumen fermentation compartment; 4, Omasum; 5, Stomach (abomasum); 6, Small Intestine; 7, Cecum fermentation compartment; 8, Large Intestine; 9, Anus.

Retrieve from: Huston & Pinchal (1970)



Feeding Behavior of the Horse

- Foraging = grasses and others
 - 65% grasses and sedges
 - 25% Shrubs
 - Minor amounts of forbs



Feeding Behavior of the Horse

- Selectivity
 - Mobile lips, larger mouth, and upper incisor teeth



- Graze closer to the ground
- Greater plant part selectivity
 - Picking the leafy material from bushes, trees, or other plants.



Selectivity

- Spot grazers

Preferred plant communities are regularly visited and sampled.

(Fleurance et al., 2001)



Factors Affecting Feeding behavior

- Eating preferences
- Physiological state
- Social cues (single vs herd; group competition)
- Feeding experiences
- Nutritive value of the feed
- Feed availability
- Turnout time
- Weather



What is your favorite food?



Source: <http://www.djiugo.com/blog/diy-horse-treats/>

- Each animal has its own feed preferences
- Important role on feeding behavior



Eating preferences

- Grass vs. Legume
 - Often prefer grass (Gomes, 2004 Goodwin et al., 2005)



Selectivity

- Careful with pasture management
Disappearance of preferred forage and pasture degradation.



Eating preferences

Most reported forages

- Bermudagrass
- Bahiagrass
- Ryegrass
- Timothy
- Alfalfa
- Clovers

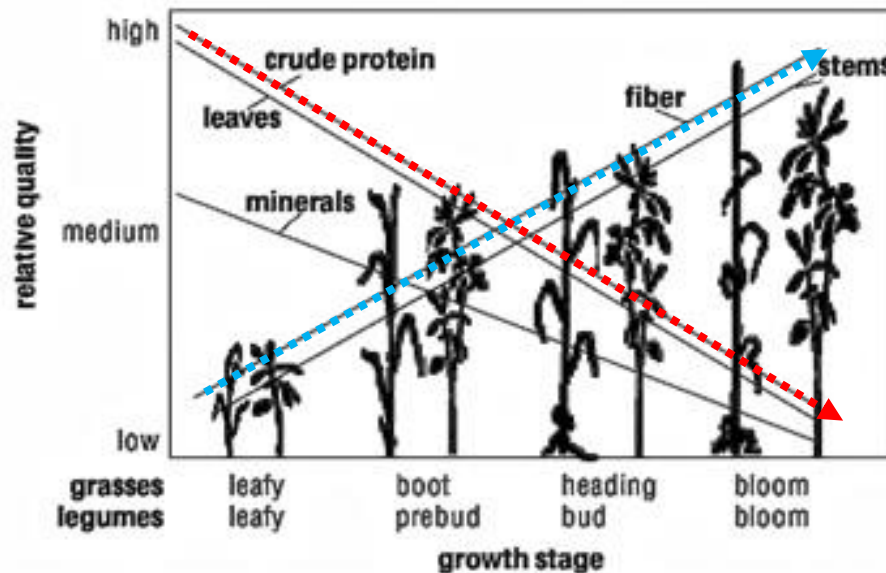
Inconsistency: Plant maturity and animal physiological state



Forage Maturity and Quality

- Nutrient composition

Effect of plant maturity on forage intake and digestibility



Source: Adapted from Blaser, R., R.C. Hammes, Jr., J.P. Fontenot, H.T. Bryant, C.E. Polan, D.D. Wolf, F.S. McClaugherty, R.G. Klein, and J.S. Moore. 1986. Forage-animal management systems. Virginia Polytechnic Institute, Bulletin 86-7.

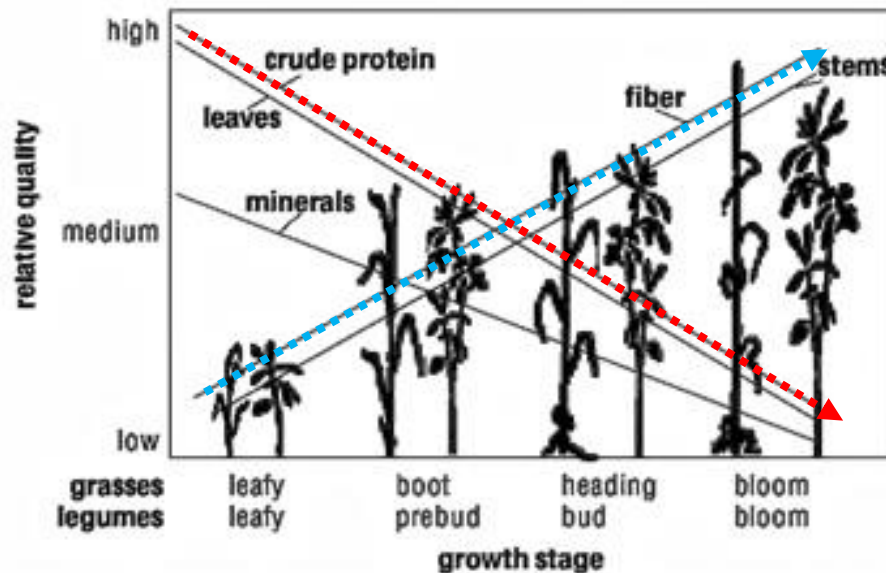
- Horses select forages based on their maturity rather than botanical species (Fleurance et al., 2001)



Forage Maturity and Quality

- Pasture height

Effect of plant maturity on forage intake and digestibility



Source: Adapted from Blaser, R., R.C. Hammes, Jr., J.P. Fontenot, H.T. Bryant, C.E. Polan, D.D. Wolf, F.S. McClaugherty, R.G. Klein, and J.S. Moore. 1986. Forage-animal management systems. Virginia Polytechnic Institute, Bulletin 86-7.

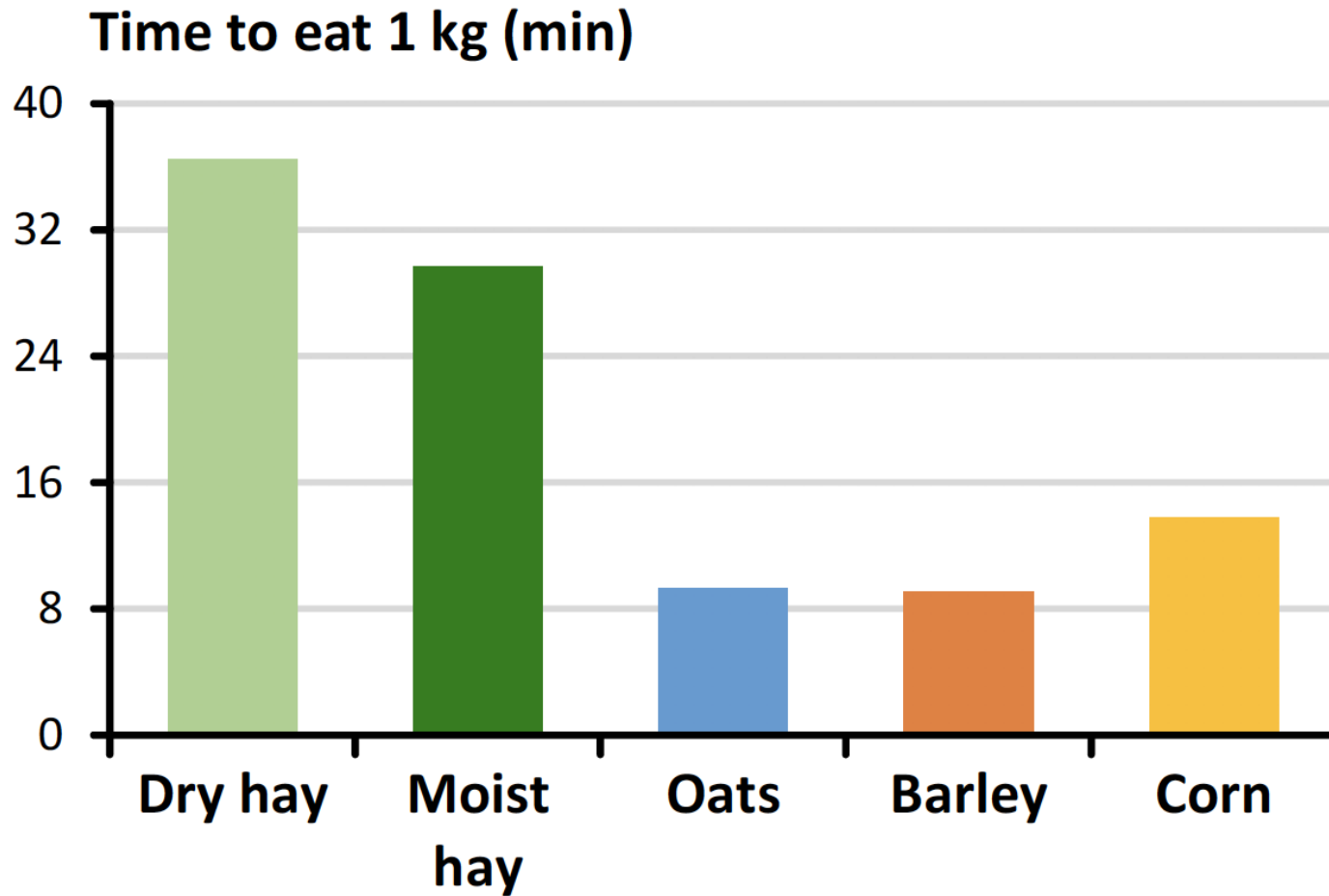


Animal Nutrient Requirement

- Fasting state
- Nutritional needs
 - Requirements ➔ grazing duration
- Mixed pastures vs. monoculture



Feed Composition



(Bergero and Nardi, 1996)



Practical Recommendations

Allows horse to eat continuously

- Gives horse opportunity to select his own diet
- Self-exercise stimulates gut motility
- Partial turnout better than no pasture at all



Practical Recommendations

Feed small, frequent meals

- Applies to hay and grain
- Increases times spent eating
- Decreases time between meals when horse is without food
- Supports better digestive health



Practical Recommendations

Implement strategies to slow feed intake

- Place hay in multiple locations
- Put hay in different containers (nets, buckets, tubs)
- Double-net hay
- Spread grain out in a shallow trough (vs. bucket)
- Put large objects in grain bucket (eg, bocce balls)
- Grazing muzzle (they're not just for pasture!)
- Slow feeders (small-mesh nets, troughed buckets)



Practical Recommendations



Questions?

An individual's feeding behavior influences feeding management

