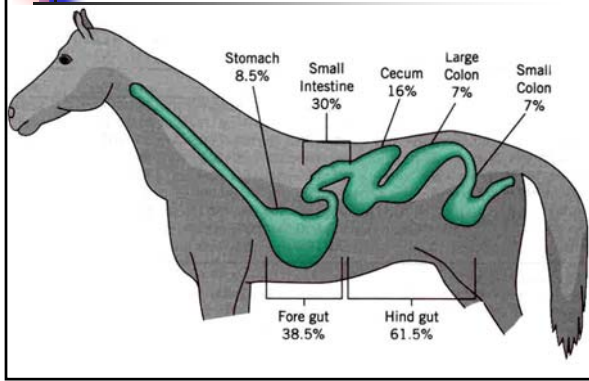


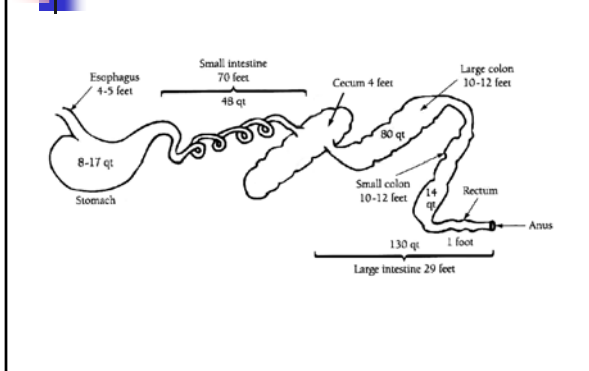
Horse Nutrition

S. P. Schmidt

Horse Digestive Tract



Horse Digestive Tract



Horse Digestive Tract

- Relatively small stomach
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- Small intestine
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Horse Digestive Tract

- Large hind-gut
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 -
 -
- Graze 15-20 Hours per day
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Feeding Horses

- Don't feed more than a few pounds of grain
 - System doesn't work well
 - Can't digest all the starch
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 -
 -
- Colic or founder could occur



Feeding Horses

- Rule of Thumb:
More than 6 lb of grain, split into 2 or more feedings spaced throughout day
- When measuring amount of feed use weight, not volume
 - Horse require a certain weight of nutrients based on body weight



Feeding Horses

- Colic (abdominal pain)

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-
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Feeding Horses

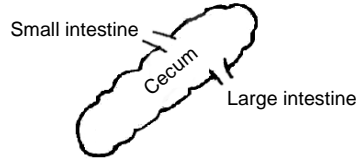
- Colic (abdominal pain)
 - Diet causes

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Feeding Horses -- Colic

- Odd design of the cecum
 - Feed enters at top & expelled at top
 - Entrance and exit only 2-3 inches apart



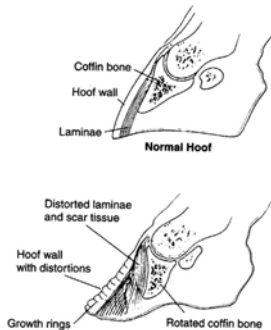


Feeding Horses

- Founder (also called laminitis)
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 -
 -
- Causes
 -
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Founder (Laminitis)



- Normal
 - Hoof wall and laminae are parallel
- Founder
 - Laminae distorted
 - Coffin bone rotated down
 - Pushes sole down
 - Horse lame (tender on feet)
 - Abnormal hoof growth (tip of hoof wall curls up)



Feeding Horses

- A horse should be shifted from one type of feed to another over a period of 2-3 wk
 - Gives microorganisms in cecum time to adapt
 - Example:
 - Period 1:
 - Period 2:
 - Period 3:
 - Period 4:
 - "Period" may be 3-4 days to a week



Feeding Horses

- Nutrition based on forages
 - Pasture
 - Good quality hay
 - Remember...horse cannot vomit to get rid of "bad" feed
- Limit grain
 - If needed, feed small amount several hours apart



What type of grain feed?

- Keep it simple
 - Expensive or complex feed not necessary
- For someone with few horses, can get by with just one feed
 - 12% protein if grass/grass hay fed
 - 10% protein if alfalfa used
 - Grains – oats or corn/oats mixture
 - Protein – soybean meal (linseed meal)
 - Ca & P from dicalcium phosphate & limestone
- Molasses? – reduce dustiness; palatability



Feed Allowances for Horses

- Normally consume 2-2.5% of BW (DM)
 - Weanlings & Yearlings may eat 3-3.5% of BW
- As grain intake ↑ total DMI ↓
- Frequency of concentrate feeding:

Amount of concentrate fed daily		
.5% BW	1.0% BW	1.5% BW
Frequency of feeding the concentrate		
1X per day	2X per day	3X per day



Feeding the Pleasure Horse

- Difficult to keep horses used for recreation in desired condition...
 - used irregularly & variable degrees of work
- Suggested daily feed allowance:

	Lb Daily/100 lb BW of Horse		
	Light use	Medium use	Hard use
Hay	1¼-1½	1-1¼	1-1¼
Grain	0 - ½	¾-1	1¼ to 1-1/3

Hay/pasture only is adequate most of the time, even light use.



Examples of Working Horses

- Light work
 - Western and English pleasure, bridle path hack, equitation
- Moderate work
 - Ranch work, roping, cutting, barrel racing, jumping
- Intense work
 - Race training, polo

