

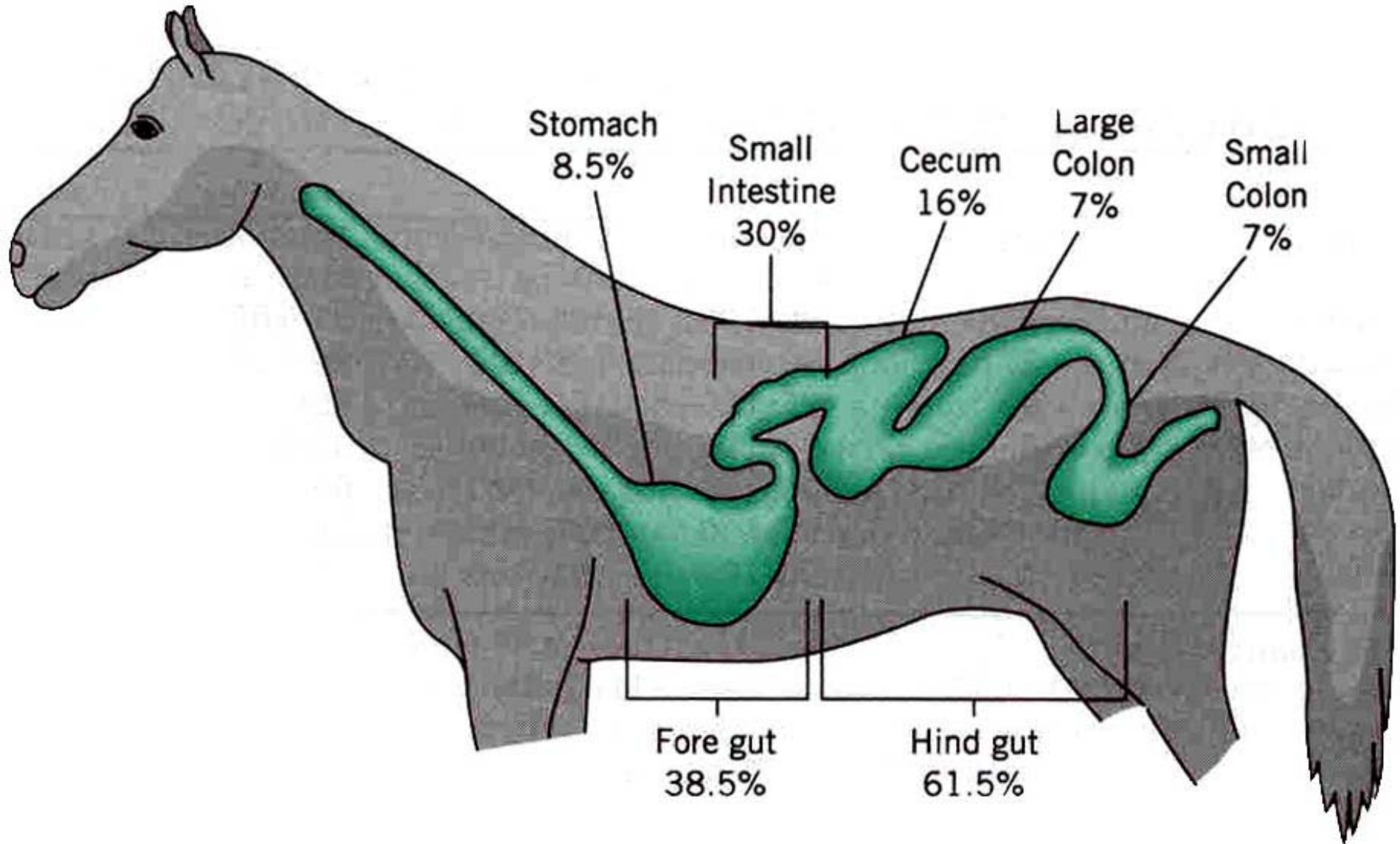


# Horse Nutrition

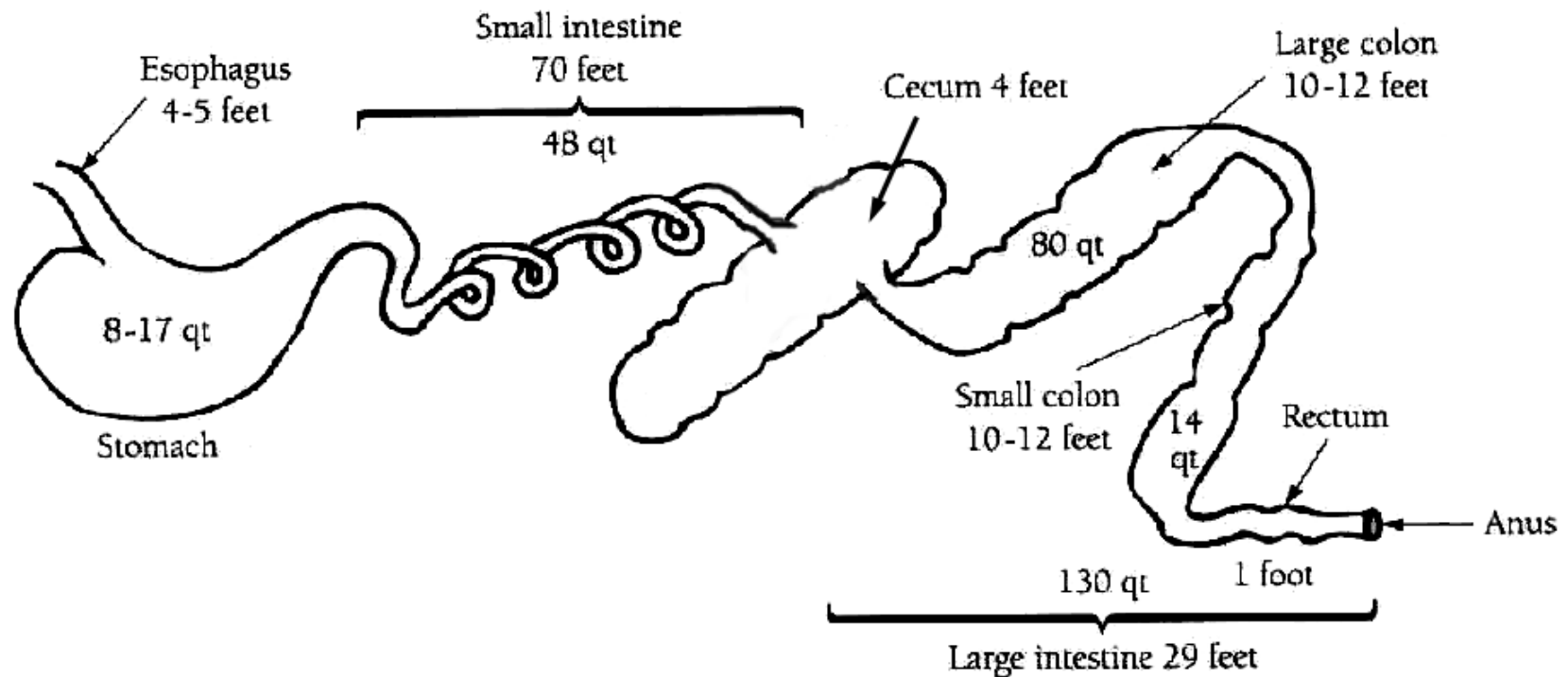
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S. P. Schmidt

# Horse Digestive Tract



# Horse Digestive Tract





# Horse Digestive Tract

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- Relatively small stomach



- Small intestine





# Horse Digestive Tract

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- Large hind-gut



- Graze 15-20 Hours per day





# Feeding Horses

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



# Feeding Horses

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- 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

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- Colic (abdominal pain)





# Feeding Horses

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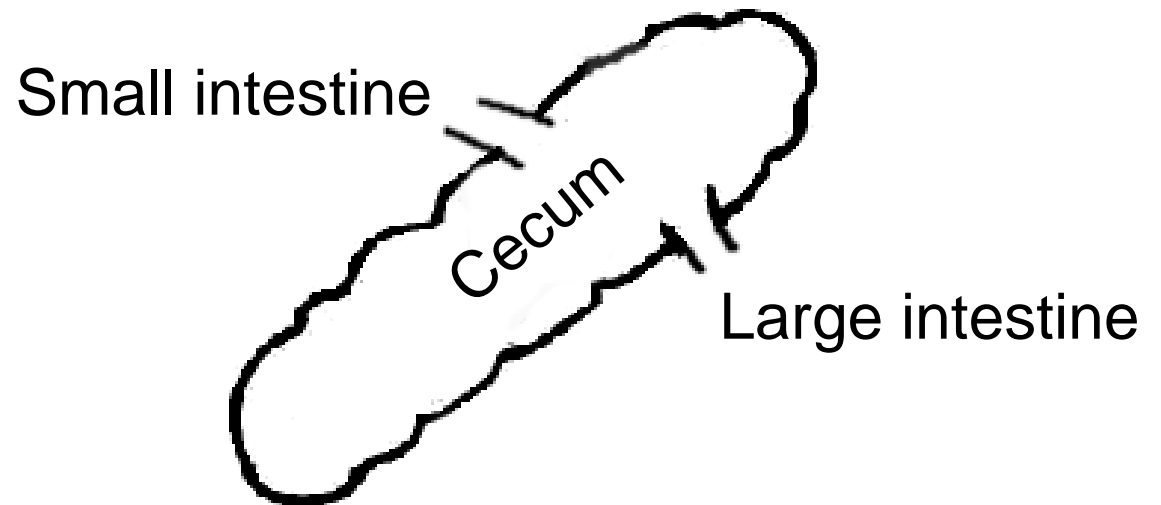
- Colic (abdominal pain)

- Diet causes



# 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

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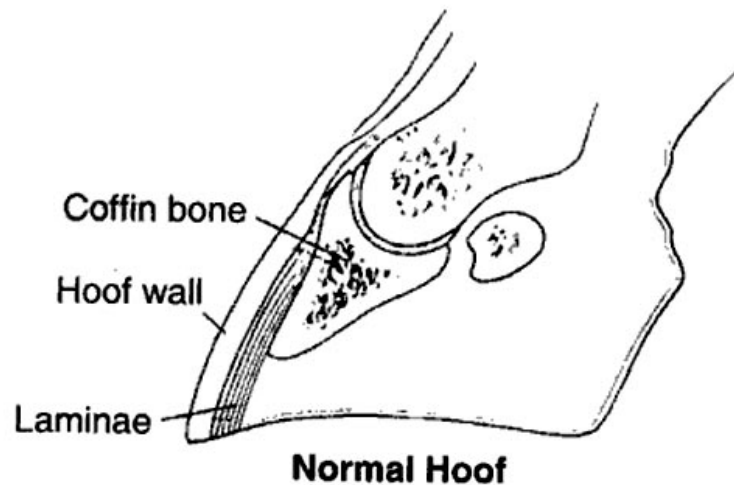
- Founder (also called laminitis)



- Causes



# Founder (Laminitis)

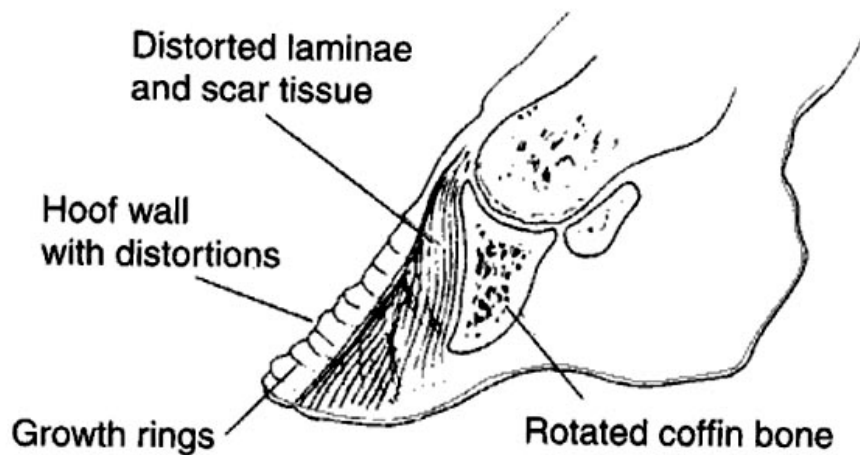


- Normal

- 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

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- 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

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- 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?

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- 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

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- 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

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

