Horse Digestive Tract

- Relatively small stomach
- Small intestine

Horse Digestive Tract

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

Feeding Horses

- 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

- 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)
  - Diet causes
    - •
    - •
    - •
    - •
    - •

---

Feeding Horses

- 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

- 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

- 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:

<table>
<thead>
<tr>
<th>Amount of concentrate fed daily</th>
<th>.5% BW</th>
<th>1.0% BW</th>
<th>1.5% BW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of feeding the concentrate</td>
<td>1X per day</td>
<td>2X per day</td>
<td>3X per day</td>
</tr>
</tbody>
</table>

Feeding the Pleasure Horse

- Difficult to keep horses used for recreation in desired condition...
  - used irregularly & variable degrees of work

- Suggested daily feed allowance:

<table>
<thead>
<tr>
<th>Lb Daily/100 lb BW of Horse</th>
<th>Light use</th>
<th>Medium use</th>
<th>Hard use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hay</td>
<td>1½-1¹/₂</td>
<td>1-1¼</td>
<td>1-1¼</td>
</tr>
<tr>
<td>Grain</td>
<td>0 - ½</td>
<td>¾-1</td>
<td>1½ to 1-1/3</td>
</tr>
</tbody>
</table>

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