Junior Stockman’s Club

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Nutrition: Facts About Cattle

- Cattle are known as having what type of digestive system? Monogastric or ruminants?
- How many compartments does a ruminant animal have? 2, 4, 6, or 8? Can you name them?
- What is the name of the largest stomach compartment?
- How much feed per day would you expect a 1,200 lb cow eat? 2 lbs, 10 lbs, 30 lbs, 90 lbs?
- How much would a 600 lb steer eat? 2-3 lbs, 5-7 lbs, 15-18 lbs, 25 lbs PLUS?
- What is the most common grain fed to feedlot cattle? Wheat, corn, milo, or oats?
- Name five things you can feed cattle.
Nutrition: Facts About Cattle

- Cattle are known as ruminants. Pigs, horses, dogs, cats, humans are known as monogastrics.
- There are four compartments in the ruminant digestive system: reticulum, rumen, omasum, and abomasum.
- The rumen is the largest compartment. Sometimes called the “paunch”, this allows the animal to break down and digest fiber (hay, grass, roughages).
- A 1,200 lb beef cow will generally eat 25 to 35 lbs of feed/day, but it depends upon the quality of the forage.
- A 600 lb steer should eat 15-18 lbs of feed per day.
- Corn, milo, oats, alfalfa, prairie hay, brome hay, straw, fescue, and any manner of other feeds like distiller’s grains, dried distillers grains, corn gluten feed, corn gluten meal, etc.
The Ruminant Digestive Tract

Largest compartment

Also known as the “honeycomb”

Also called “manyplies” or “bible”

The “true” stomach

http://www.intowes.com/healthycowinfo/ab75dairy.htm
The Ruminant Digestive Tract
Number 1 feed grain in the U.S. is #2 Yellow corn.

U.S. grows 12-15 billion bushels per year; Iowa #1 state followed by Illinois then Nebraska; Kansas is #6

Many uses: livestock feed, ethanol production, sweetener, co-product feeds

56 lbs per bushel; 8-10% protein, high in energy

Grown in every state in the union
Oats - cereal grain, planted in the early spring, harvested in early-mid-summer.

- 32 lbs per bushel; protein 11-14%
- Highly fibrous, good for horses, and growing calves; hull is 25-30% of the weight
- Low in energy than corn, milo, or wheat
- Most farms used to grow a few acres of oats; not many anymore
- South Dakota, Minnesota, Wisconsin top three states
Feed Identification - Wheat

- Hard red winter wheat
- Kansas #1 state in production
- 60# per bushel; 10-12 % protein, high energy; similar to corn
- Higher in protein than corn
- Used mostly for bread production
- Other types of wheat for noodles and pasta, other foods
- Fed to livestock in limited quantities
- Highly fermentable, can cause digestive upsets if fed in too high of quantities
Feed Identification – Milo or Grain Sorghum

- Milo, also known as grain sorghum is primarily used as feed for livestock and for ethanol production.
- Kansas #1 state in milo production by far, with Texas as a distant #2.
- 56 lbs/bushel.
- Hard seed coat, must be ground or flaked to be digested by livestock.
- 10% crude protein, similar to corn in energy content.
Feed Identification - Soybeans

- Generally do not feed soybeans whole to animals, but they can be.
- High in oil content (20%), which is used for cooking, baking, in biodiesel and in some plastics, paints, varnishes.
- Soybean meal (80%) is used as a protein supplement in beef and swine diets.
Feed Identification – Soybean meal

- Co-product of soybean oil production; used for cooking oil and food production
- High in protein; 44-48% protein
- Mixed with a lot of swine and beef cattle diets
- 85% of the soybean crop is crushed for oil and meal
Feed Identification – Dried Distillers Grains

- A by-product of corn or milo, usually
- Left over after alcohol is removed to make ethanol blended with gasoline
- Very palatable feed; fairly high in protein and in fiber
Feed Identification – Prairie Hay

- Prairie hay, or native hay consists of a mixture of native grasses
- Included: big bluestem, little bluestem, Indiangrass, sideoats grama, buffalograss, and switchgrass
- Low in protein, high in fiber, best suited for beef cow diets
Feed Identification - Bromegrass hay (Smooth brome)

- Bromegrass is a “tame” grass - cool season grass
- Needs nitrogen fertilization to produce well
- Waterways and hay meadows
- Hay best suited for beef cows and growing calves
- Higher protein than prairie hay
Alfalfa is planted (tame), but a perennial crop (3-5 cuttings per growing season)

- Legume hay, fixes nitrogen into the soil
- High in protein, higher than most other hays
- Most fed to dairy cattle, horses.
- Feeding straight alfalfa can be problematic in cattle