What I Feed My Steer…

Affects My Placing in the Quality Class

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Shoshone, ID – January 23, 2010

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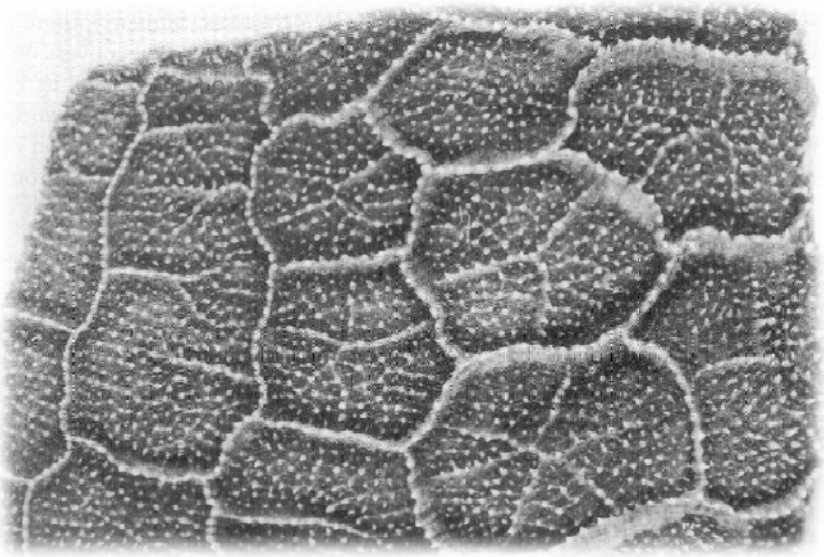
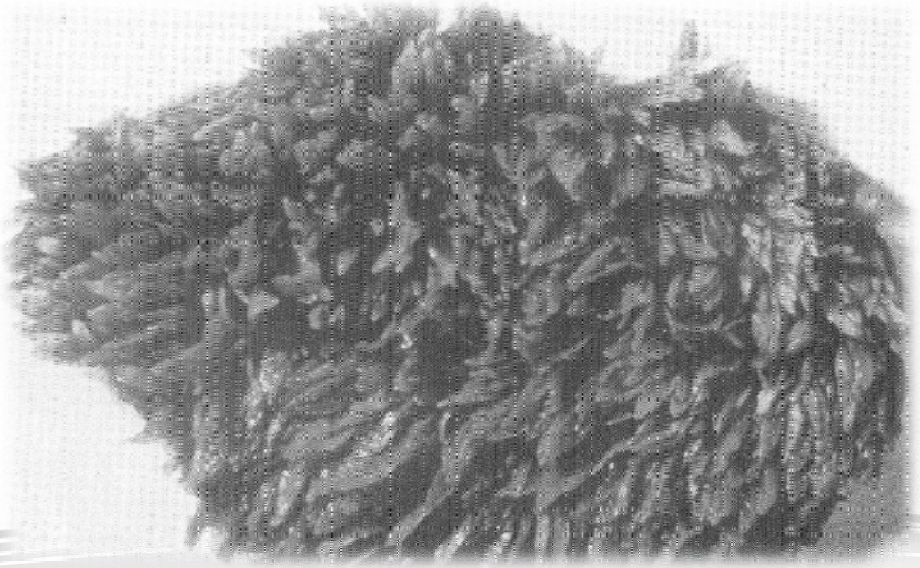
Overview

- Digestive System
- Nutrients
- Tips and Example Rations
- Feed ID Exercise





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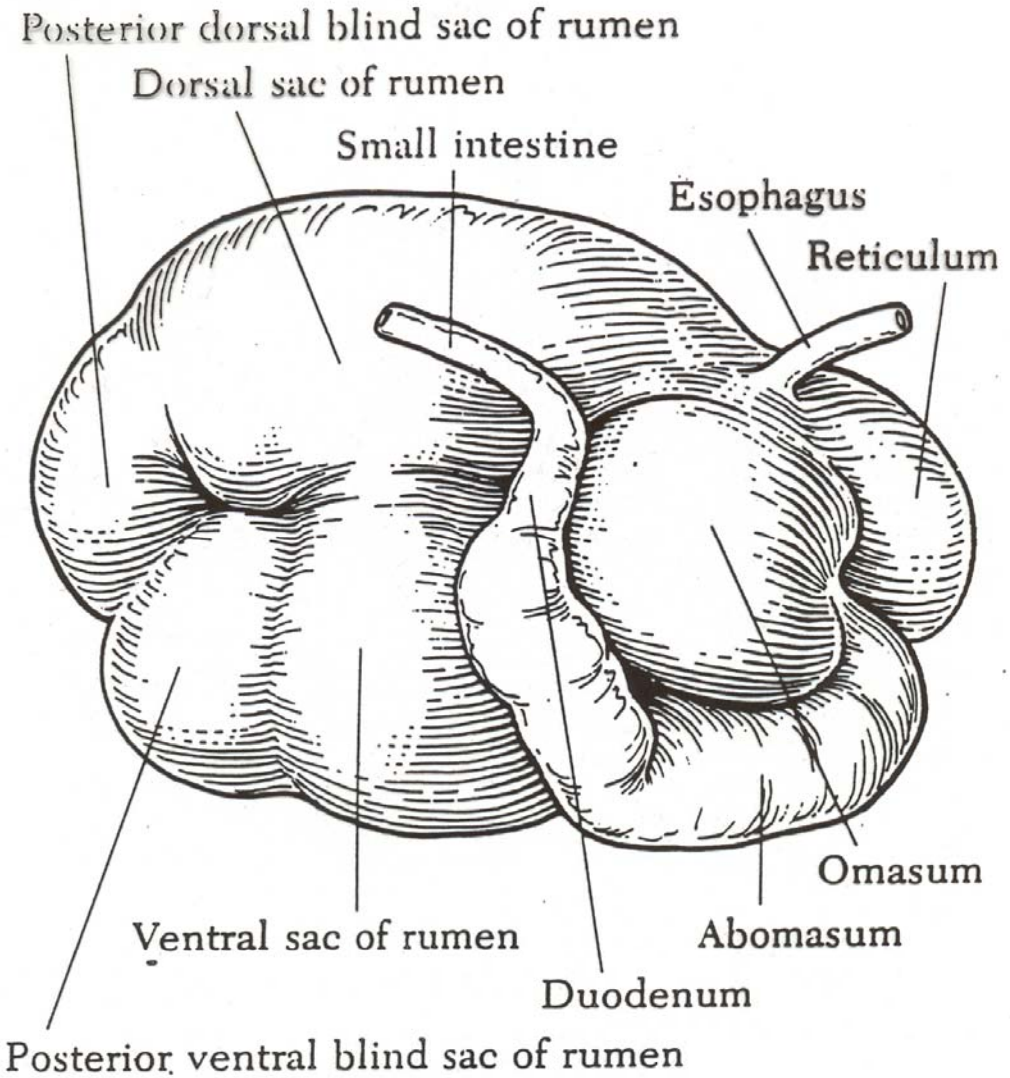
Digestive System



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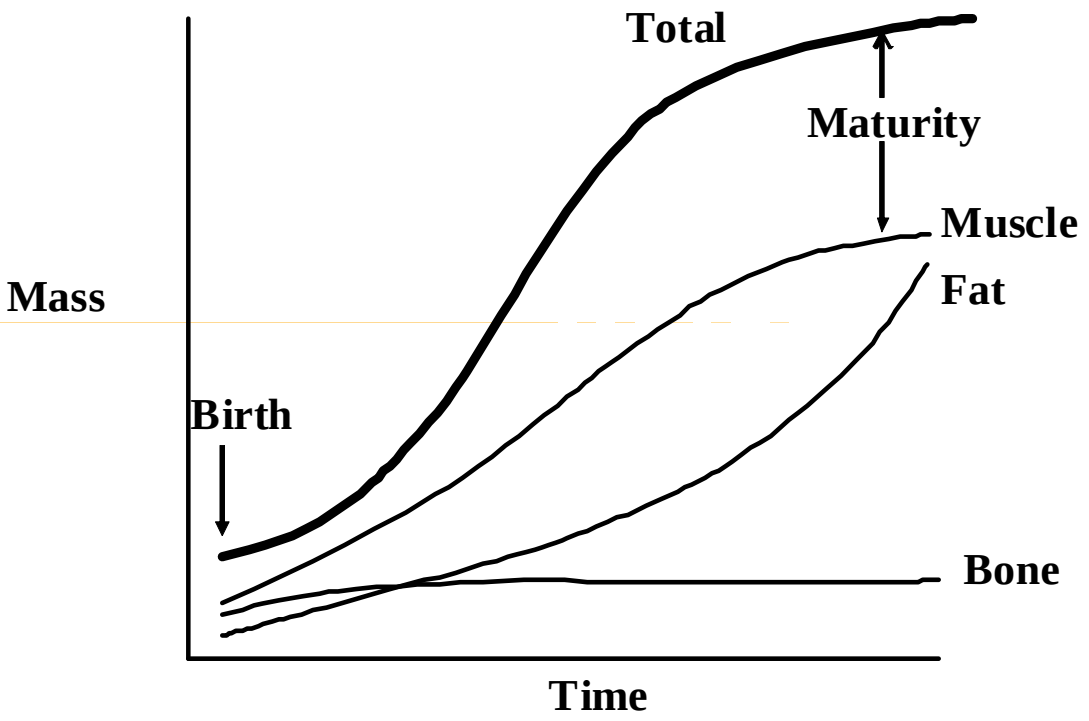
Nutrients

- What is a nutrient?
  - Any substance that is found in feed that provides support for life and production
- What are nutrients used for?
  - Maintenance*
  - Growth*
  - Fattening*
  - Gestation
  - Lactation

Normal postnatal growth curves of bone, muscle, and fat.



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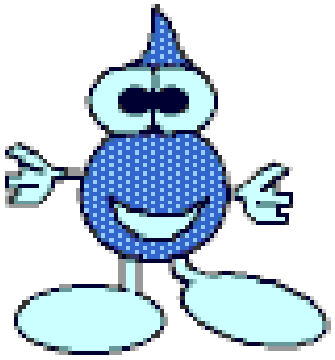
Five Essential Nutrients

- Water
- Energy
- Protein
- Minerals
- Vitamins



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Water

- Extremely important
- Animals can live longer without food than without water
- Helps keep the body cool
- Carries other nutrients throughout the body
- Helps get rid of waste
- About 70% of lean body mass
- Need to have fresh, clean water available for your animal at **all times!!!**
- Water intake drives feed intake, therefore affecting performance

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Water Requirements

TABLE 6-1 Approximate Total Daily Water Intake of Beef Cattle[a]

Weight		Temperature in °F (°C)[b]											
		40	(4.4)	50	(10.0)	60	(14.4)	70	(21.1)	80	(26.6)	90	(32.2)
kg	lb	Liter	Gal	Liter	Gal	Liter	Gal	Liter	Gal	Liter	Gal	Liter	Gal
						Growing heifers, steers, and bulls							
182	400	15.1	4.0	16.3	4.3	18.9	5.0	22.0	5.8	25.4	6.7	36.0	9.5
273	600	20.1	5.3	22.0	5.8	25.0	6.6	29.5	7.8	33.7	8.9	48.1	12.7
364	800	23.0	6.3	25.7	6.8	29.9	7.9	34.8	9.2	40.1	10.6	56.8	15.0
						Finishing cattle							
273	600	22.7	6.0	24.6	6.5	28.0	7.4	32.9	8.7	37.9	10.0	54.1	14.3
364	800	27.6	7.3	29.9	7.9	34.4	9.1	40.5	10.7	46.6	12.3	65.9	17.4
454	1,000	32.9	8.7	35.6	9.4	40.9	10.8	47.7	12.6	54.9	14.5	78.0	20.6
						Wintering pregnant cows[c]							
409	900	25.4	6.7	27.3	7.2	31.4	8.3	36.7	9.7	—	—	—	—
500	1,100	22.7	6.0	24.6	6.5	28.0	7.4	32.9	8.7	—	—	—	—
						Lactating cows[d]							
409	900	43.1	11.4	47.7	12.6	54.9	14.5	64.0	16.9	67.8	17.9	61.3	16.2
						Mature bulls							
636	1,400	30.3	8.0	32.6	8.6	37.5	9.9	44.3	11.7	50.7	13.4	71.9	19.0
727	1,600+	32.9	8.7	35.6	9.4	40.9	10.8	47.7	12.6	54.9	14.5	78.0	20.6

[a]Winchester and Morris (1956).

[b]Water intake of a given class of cattle in a specific management regime is a function of dry matter intake and ambient temperature. Water intake is quite constant up to 40 °F (4.4 °C).

[c]Dry matter intake has a major influence on water intake. Heavier cows are assumed to be higher in body condition and to require less dry matter and, thus, less water intake.

[d]Cows larger than 409 kg (900) lbs are included in this recommendation.

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Energy

- Main use of energy is in chemical reactions, which means conversion of feed to meat
- Corn, barley, oats, and wheat are examples of carbohydrates
- Tallow and whole oil seeds are examples of fat

Protein

- Used to build muscle, hooves, and other tissues
- Alfalfa (legumes) and soybean meal are examples of feeds with a high level of protein
- Non-protein nitrogen (NPN)-urea

Minerals

- Needed to build strong bones, muscle, blood, and for many other processes
- Macro minerals

  Ca, P, K, Na, Cl, S, Mg
- Micro minerals

  Fe, Co, Cu, F, I, Mn, Mo, Se, Zn
- Free choice minerals

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Vitamins

- Ruminants can produce vitamins B, C, and K
- Vitamins A and E are usually available from feed
- When animals are in the sun they produce vitamin D

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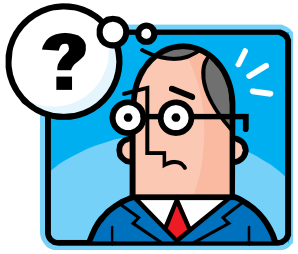

Tips

- Provide the animal clean, fresh water
- Feed at the same time everyday
- When changing a ration do it gradually
- Do not grind feed too finely
- Keep fresh feed in the bunk, don’t let old feed accumulate
- Provide access to minerals

Ration

- Start out by knowing what the requirements are of your animal and what your feeds provide
  - Formulas
  - Computer programs
  - Commercial feeds available that meet the requirements of your animal

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Ration

- Receiving Your Steer

  ~find out what your steer was eating and mix with your feed ingredients

  ~may want to only start with about 1 lb grain per cwt live, and then increase the amount by .25-.5 lb a day over the next 3-4 weeks

  ~rest equals roughage (plus mineral and water)

- Finishing Ration

  ~can reach about 70-80% concentrate in their ration or even higher

Sample Winter Rations for Steers*

Creep Ration
(Calves 200-600 lbs.)

60.0 %	rolled or whole oats
20.0 %	cracked corn
20.0 %	wheat bran

Growing Ration
(Calves 500-800 lbs.)

50.0 %	rolled corn
25.0 %	rolled oats
18.0 %	protein supplement
5.0 %	molasses
2.0 %	limestone

Growing Ration
(Calves 500-800 lbs.)

25.0 %	rolled corn
25.0 %	ground barley
25.0 %	rolled or ground oats
18.0 %	protein supplement
5.0 %	molasses
2.0 %	limestone

Show Ration
(Over 800 lbs.)

40.0 %	rolled corn
30.0 %	rolled or ground oats
10.0 %	beet pulp soaked with molasses and water till covered
10.0 %	protein supplement (pellets preferred)
7.0 %	wheat bran
1.5 %	limestone
1.5 %	molasses

Finishing Ration
(Over 800 lbs.)

50.0 %	rolled corn
30.0 %	ground barley
10.0 %	protein supplement
7.0 %	ground oats or wheat (can substitute as corn)
1.5 %	limestone
1.5 %	molasses

* It is assumed that some hay is also available.

Table 7.16

Feed ID

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Questions?

Thank You!

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