

# Ch.#1

Wednesday, August 29, 2007  
3:45 PM

Selection  
Brding - A. I.  
Feeding  
Care - Animal Husbandry  
Mkting

Sheep - moufflons  
Asiatic Urials  
Kept - 10,000 - 20,000 yrs ago  
Brds - > 200

Big Horn Sheep

Goats - Pasang  
Markhors

Cattle - Bos taurus  
Bos indicus

Auruchs - Exotics  
Celtic SH - British Brds  
Neolithic Age

Swine - Sus scrofa  
Sus Vixtatus

4900 B.C.

Tamed - Chinese

1st major importation - 13hd  
1539 - Desoto

Horses - Eohippus

Draft -  
Gymkana

Poultry - Gallus gallus

Chickens + Turkeys  
1400 B.C.

Poultry Industry - Concentrated in South

Kingdom - Binomial System  
Linnaeus

Plants - Plantae      Genus - species  
Animals - Animalia  
Birds - Aves

Functions

Non-Ruminants - Single Stomachs  
Grain

Ruminants - Roughage

Tylophoda - 3 compartments  
Cecals, Cecas, Alpacas

o

..

Lecora - 4 comp.

11% Food prod. - human consumption

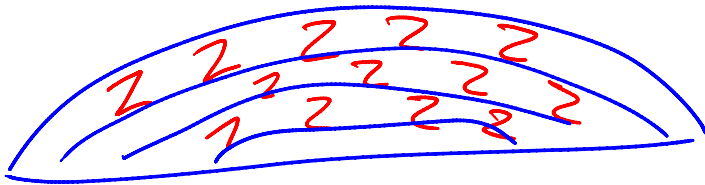
Animal consumption of Roughage -  
2% of Bwt.

Clothing

Power - Amish

Conservation

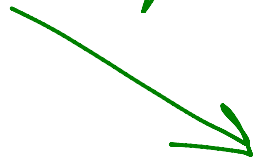
By-Products



Consumption

per capita

trend



Concerns

#1. Cholesterol

Feed ...

Fat + Sodium levels

Food Additive

Sugar content - Carbs

Artificial color

\$

2000 Ag Prod. <sup>\$</sup> 193 B. 11  
livestock > 99 ..

Farms w/ hogs

1970's - 1 mill

today 8,000

Feed Additives -

Prevent diseases

enhance growth

Feed efficiency

Withdrawal time

Uses of meat

| <u>Beef</u> | <u>Pork</u> | <u>Chicken</u>  |
|-------------|-------------|-----------------|
| Steak       | Chops       | strips          |
| HB          | Bacon       | Breast          |
| Roast       | Sausage     | Gizzard / L / A |
| Ribs        | loin        | Griller         |
| RMO         | T L         | Legs            |
|             | Lard        | ...             |

Rmo  
Tacos  
S J  
Chili  
Casavole  
H H  
S getti

1 L  
Lard  
Pepperoni

Legs  
Wings  
Fried  
eggs  
Sair fry

Biotechnology

Legislation

Animal ID

Branding  
Tattoos

Freeze - liquid N  
-320°F

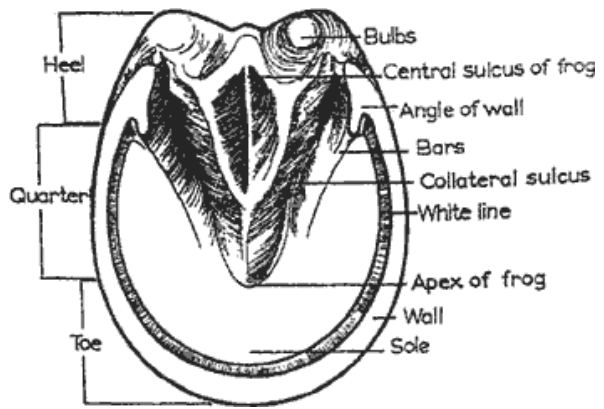
microchips

Hot-

Food Safety

Irradiation - cobalt-60

Endangered Species



Pasted from <<http://www.quartercrack.com/Images/Anatomy/sole.gif>>

1. Name 3 Aves
2. Name 3 mammalia
3. Who brought most of the Live stock to North America for the 1<sup>st</sup> time.
4. What year did #3 take place.
5. Where are most of the chickens raised for commercialized production?

# Ch 2

Wednesday, September 12, 2007  
4:08 PM

## Career Opportunities

> 300 careers in Ag.

18% of work force

### Categories

- |   |       |
|---|-------|
| 1. Prod + Service                           | 2.6%  |
| 2. Input Suppliers                          | .3%   |
| 3. Proc. + Mkt                              | 2.4%  |
| 4. Wholesalers + retailers<br>establishment | 10.2% |
| 5. Indirect Ag Bus.                         | .4%   |

## Choosing a Career

### Self-analysis

1. Ability - capacity to perform
2. Talent - natural aptitude
3. physical Make-up - strength, stamina, health
4. Previous experience



4. Previous experience-
5. Interests - holds your attention  
     short term                      long term
6. Ed. aspirations - Formal Ed needed
7. Attitude + values - how you think  
     about life
8. Self-concept - how you see yourself
9. Personality - how others see you
10. Flexibility - willingness to change

## \* Occupational Study

- a. activities
- b. duties
- c. responsibilities
- d. working conditions
  1. hrs
  2. location (inside/outside or local)
  3. physical activity
  4. travel
  5. tools or machines
  6. noise level
  7. dirt, dust, odor
  8. hazards
  9. interaction w/ others
  10. degree of supervision
  11. variety of tasks
  12. standard of living

Personality - social, energy, persuasiveness,  
 persistence

Most important - PA

Honest + Dependable

Working w/ others

Time Management + time on task

Safety

Comm. Skills - Talking, emailing, written  
grammar, spelling, punct., complete  
sentences

Computer usage

Appropriate Behavior

Citizenship

# Ch. 3

Friday, September 21, 2007  
1:48 PM

## Safety

2<sup>nd</sup> most dangerous

21 deaths / 100,000 workers

150,000 disabling accidents / yr

200 > children die / yr

## OSHA

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### Injuries

Cattle & hogs - men  
horses - equal

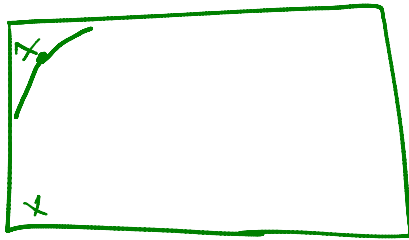
Cattle - 45 - 64 yrs of age  
horses - 5 - 25 " "  
hogs - 25 - 64 " "

#1 Environmental & Human Factors  
human error - tired, not paying attention,  
poor judgement

## Corral



Corral



## Chem. Safety

EPA -  
OSHA - MSDS

Rinsing Containers - triple rinse

Contamination - skin - dermal  
mouth - oral  
Breathing - inhalation

LD<sub>50</sub>

LD<sub>1</sub> - Dangerous

|          |   |                |
|----------|---|----------------|
| 0-50     | - | Dangerous      |
| 50-500   | - | Warning        |
| 500-5000 |   | Caution        |
| 5000 ->  |   | none - Caution |

tyvek - olefin

Storage - original container  
locked cabinet

Hazards -  
Solid Facilities

Foot candles = 10

Horses -

Approach 45°

Tying up - 2'

Bridal

Bit

Bosal

Hackamore

Animal Diseases

Zoonoses

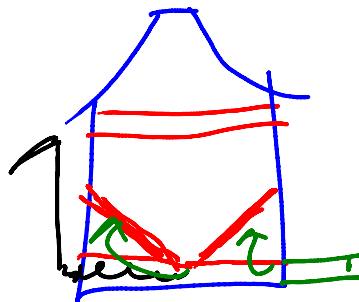
rabies, brucellosis, TB, Trichinosis,  
Salmonella, ringworm,

Facilities

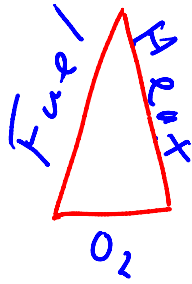
Silo -

gas

grain bridge



# Fire



70% of Farm fires - electrical

12-2 w/gr.

10-2



## Classes of Fire

A



paper, wood, trash

B



gas, kerosine oil

C



Electrical

D



Combustible metals

Sodium, potassium, Magnesium

# SAFETY EX. CR.

Tuesday, October 21, 2008

9:11 AM



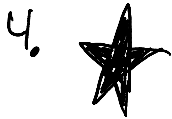
A - GAS, Kerosine, OIL



B - COMBUSTIBLE METALS



C - PAPER, WOOD, TRASH



D - ELECTRICAL

# Livestock + the Environment

Monday, October 22, 2007

11:08 AM

## Lawsuits

Water Pollution

Point Source  
Non-Point Source

BOD test

Algae Bloom

Animal Trespass

Stray

Negligance

Invitee

Licensee

Trespasser

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FEDERAL WATER QUALITY ACT OF 1965

PUBLIC HEARINGS

SOLID WASTE DISPOSAL ACT OF 1965

FEDERAL GUIDELINES FOR SOLID  
WASTE MGT

FEDERAL CLEAN AIR ACT

NATIONAL AIR QUALITY STANDARDS

FEDERAL WATER POLLUTION CONTROL  
ACT OF 1972

NATIONAL GOALS ON WATER QUALITY

ARMY CORPS OF ENGINEERS

PERMITS FOR FEEDLOTS OF 1,000  
HEAD OR MORE/YEAR

1,200 HEAD OF CATTLE CAN PRODUCE AS  
MUCH WASTE AS A TOWN OF 20,000

2 BILLION TONS OF MANURE PRODUCED  
EACH YEAR IN U.S

DIVERSIONS

DEBRIS BASIN - BUILT WITH A DECLINE,  
MANURE SHOULD NOT BE MORE THAN 1

FOOT DEEP

EPA's DEFINITION OF AN ANIMAL  
FEEDING OPERATION - LOCATION WHERE  
ANIMALS ARE KEPT FOR 45 DAYS OUT OF  
A YEAR

SHOULD NEVER APPLY ANIMAL WASTE  
WITHIN 200' OF SURFACE WATER & 150'  
OF A WELL

# Ch. 5

Wednesday, November 07, 2007

10:30 AM

## Anatomy, Physiology, Absorption

System - group of organs that work together

Mammal -

Aves -

Cartilage - connective tissue

Bones - Ca compound      tri-calc phosphate  
protein - ossein

replace cartilage to bone to  
Osteocytes

Funct. provides form, protection,  
support, strength

types - exoskeletal - outside  
Endo - inside

Haversian canal - blood vessels + nerves pass

Classification of bones  
long, short, flat, irregular

## Muscle System =

1. skeletal-meat-striated voluntary
2. smooth
3. cardiac



Smooth - unstriated involuntary

blood vessels, stomach, intestines, bladder

Cardiac - heart

muscular wall - myocardium

Respiratory System - process of  $O_2$   
brought  $CO_2$  removed.

Lungs - Alveoli - exchange of gases

Circulatory System -

Heart, Arteries, capillaries, veins

Capillaries - exchange of nutrients +  
 $O_2$  -  $CO_2$ ,  $H_2O$ , waste

Blood - transporting nutrients +  $O_2$   
of wastes  
control Body heat  
transport hormones  
Clot Vit K,  
protection - diseases

Nervous system -

Swine - PSE - PSS

Horses - HYPP

Y/Y

Y/N N/N

Digestive system - breaking down  
of feed into simple substances.

Ruminant - 1 stomach 4 compartments

Non-Ruminant - 1 stomach 1 compartment

> mouth -

Feed is palatable

> mouth.

Feed is palatable

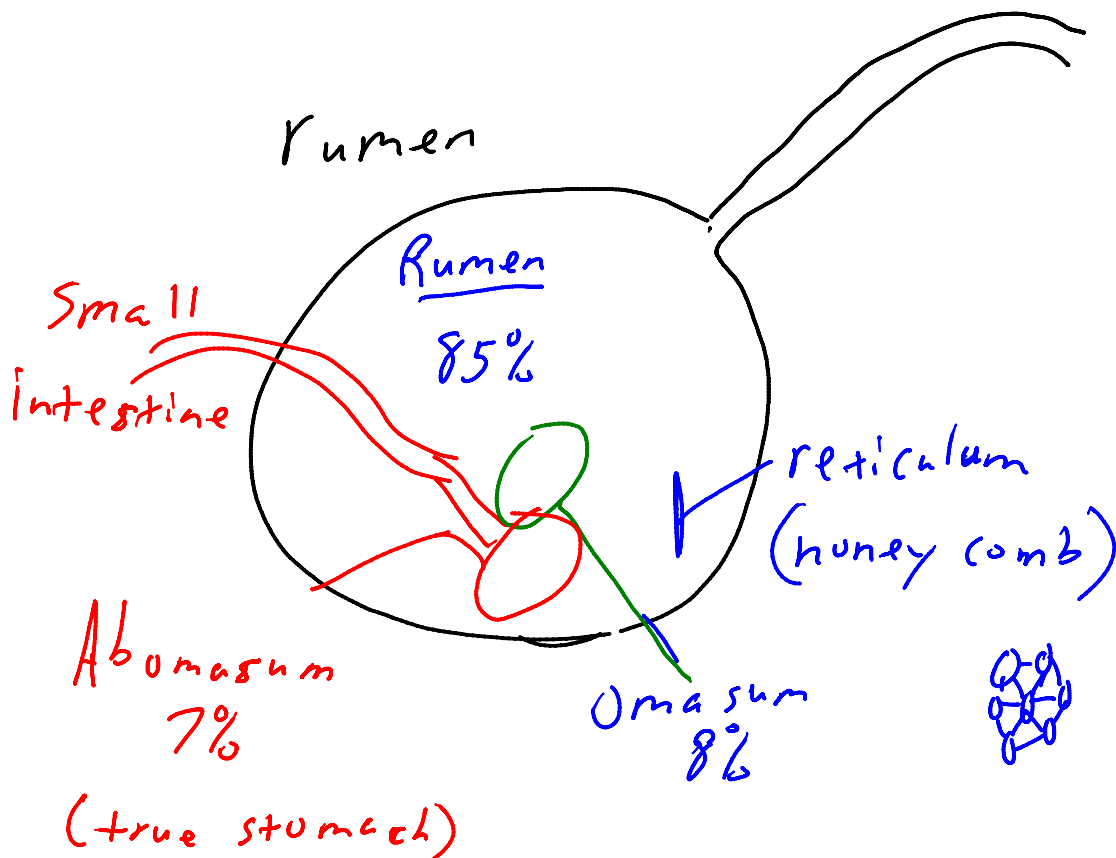
teeth - increase surface area

Enzyme - organic catalyst

Salivary amylase  $\Delta$  starch to malt sugars

Salivary maltase  $\Delta$  maltose to glucose

Cattle Chew cud 6-8 times/day  
5-7 hrs/day in rumination



Small Intestine - acid, semifluid, gray,  
pulpy - chyme

pancreatic juices -

Villi - fingerlike projections

Cecum - Blind gut



Lg Intestine - Absorb water

Poultry - Crop -  
Gizzard

Stomach Sizes

Digestion

Beef - 25-60 gal.

Horse - 3.5 gal.

Sheep - 6-8 gal.

Swine - 1.5 gal.

of roughage

44%

## Feed Nutrients

1. Protein
2. Energy nutrients  $\left\{ \begin{array}{l} \text{Carbs} \\ \text{Fats + oils} \end{array} \right.$
3. Vitamins - Organic
4. Mineral - inorganic
5. Water -

ADG - Avg Daily Gain

# days on feed

Starting wt

Ending wt



# NUTRIENTS

Tuesday, November 27, 2007  
10:43 AM

## ENERGY NUTRIENTS

### PROTEINS

### VITAMINS

### MINERALS

### WATER

## ENERGY NUTRIENTS - 1 - CARBS

### SIMPLE & COMPLEX

### SIMPLE - NFE - NITROGEN FREE EXTRACT

### COMPLEX - FIBER

### 2 - FATS & OILS

### 2.25 X MORE ENERGY THAN CARBS

## PROTEINS

# SUPPLY MATERIAL TO BUILD BODY TISSUE

GOOD PROTEIN - ANIMAL

POOR QUALITY - PLANT

ANIMAL PROTEINS - MEAT MEAL, FISH  
MEAL, DRIED WHEY

PLANT PROTIENS - SBM, (MEAL)

CRUDE PROTIEN - AMMONICAL N X6.25

UREA - SYNTHETIC

## VITAMINS - ORGANIC

FAT SOLUABLE - A, D, E, K

A - HEALTHY EYES, GOOD CONCEPTION  
RATES, DISEASE RESISTANCE

D - BONE DEVELOPMENT & MINERAL  
BALANCE

E - NORMAL REPROD & MUSCLE  
DEVELOPMENT

K - CLOTTING BLOOD

WATER SOLUABLE -

C - TEETH & BONE FORMATION,  
INFECTIONS

B COMPLEX - APPETITE,

MINERALS - MATERIALS FOR BONES, TEETH, &  
TISSUE

DEFICIENCIES - PIGS, 3 DAYS - COPPER/IRON  
SHOT - ANEMIA

RATIO OF CA:P

SWINE 1.5:1

RUMINANTS 7:1

GROUPS OF MINERALS  
MAJOR & TRACE

MAJOR - NaCl, Ca, P

TRACE - K, S, Mg, Fe, I, Cu, Co, Zn, Mn, B,  
Mo, F, Se

SALT & Ca - MONOCALCIUM PHOSPHATE,  
DICALCIUM PHOSPHATE,

WATER - 40% - 80%

TO DISOLVE NUTRIENTS THE ANIMALS EAT.

## FEED ADDITIVES & BALANCING RATIIONS

Monday, December 03, 2007

11:13 AM

### FEED ADDITIVES

ANTIMICROBIAL DRUGS - KILL OR SLOW  
DOWN GROWTH OF MICROORGANISMS

HORMONES & HORMONELIKE

ANTHELMINTICS - DEWORMER  
PYRANTEL TARTRATE  
IVERMECTIN

ANTIBIOTICS

IMPLANTS - RALGRO

WITHDRAWAL

### **BALANCING RATIIONS**

ROUGHAGES - >18% CRUDE FIBER  
HAY, GRASS, SILAGE

CONCENTRATES - < 18% CRUDE FIBER  
GRAINS

ENERGY FEEDS - < 20 % CRUDE  
PROTEIN

## PROTEIN SUPPLEMENTS - > 20% CRUDE PROTEIN

### CHARACTERISTICS OF A RATION

PALATABLE

SAFE

### FUNCTIONS

MAINTENANCE - BASAL METABOLISM

GROWTH

FATTENING

PRODUCTION

REPRODUCTION

WORK

### BALANCING

TP OR DP

2% BODY WT IN ROUGHAGE

78 lb lamb

668 lb heifer

1372 lb steer

139 lb. ewe

1073 lb gelding

491 lb sow

312 lb colt

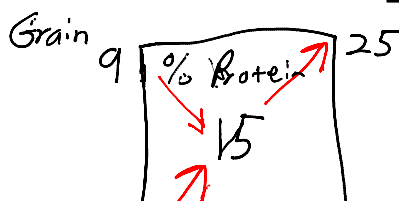
2255 lb bull  
 984 lb mare  
 1644 lb cow

|                 |   |       |   |         |
|-----------------|---|-------|---|---------|
| 78 lb lamb      | - | 1.56  | - | 1.5 lb  |
| 668 lb heifer   | - | 13.36 | - | 13.5 lb |
| 1372 lb steer   | - | 27.44 | - | 27.5 lb |
| 139 lb. ewe     | - | 2.78  | - | 3 lb    |
| 1073 lb gelding | - | 21.46 | - | 21.5 lb |
| 491 lb sow      | - | 0     | - | 0 lb    |
| 312 lb colt     | - | 6.24  | - | 6 lb    |
| 2255 lb bull    | - | 45.1  | - | 45 lb   |
| 984 lb mare     | - | 19.68 | - | 19.5 lb |
| 1644 lb cow     | - | 32.88 | - | 33 lb   |

PEARSON SQUARE

% PROTEIN NEEDED -  
 % PROTEIN IN GRAIN -  
 % PROTEIN IN SUPPLEMENT -  
 SIZE OF GRINDER - \_\_\_\_\_ TONS

% PROTEIN NEEDED - 15  
 % PROTEIN IN GRAIN - CORN 9  
 % PROTEIN IN SUPPLEMENT - SBM 40  
 SIZE OF GRINDER - 2 TONS



$$\begin{array}{r}
 .8065 \\
 31 \overline{) 25} \\
 \underline{.1935} \\
 .1935
 \end{array}$$

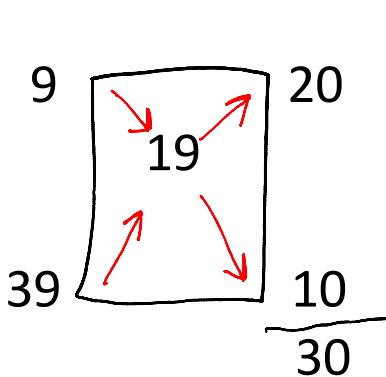
$$\begin{array}{r}
 .8065 \\
 +.1935 \\
 \hline
 1.0000
 \end{array}$$

$$SBM \ 40 \left[ \begin{array}{l} \text{needed} \\ \hline 6 \\ \hline 31 \end{array} \right] \quad 31 \overline{) 6}$$

$$\begin{array}{r} .8065 \\ \times 4000 \text{ lb} \\ \hline 3226 \text{ lb Corn} \end{array}$$

$$\begin{array}{r} .1935 \\ \times 4000 \\ \hline 774 \text{ lb SBM} \end{array}$$

% PROTEIN NEEDED - 19  
 % PROTEIN IN GRAIN - CORN 9  
 % PROTEIN IN SUPPLEMENT - SBM 39  
 SIZE OF GRINDER - 1.5 TONS



$$30 \overline{) 20} \quad .6667 \quad 30 \overline{) 20} \quad 66.67\%$$

$$30 \overline{) 10} \quad .3333 \quad 30 \overline{) 10} \quad 33.33\%$$

$$\begin{array}{r} .6667 \text{ Corn} \\ + .3333 \text{ SBM} \\ \hline 1.0000 \end{array}$$

$$\begin{array}{r} 66.67\% \\ 33.33\% \\ \hline 100.00\% \end{array}$$

$$\begin{array}{r} .6667 \\ \times 3,000 \text{ lb} \\ \hline 2,000.1 \text{ lb corn} \end{array}$$

$$\begin{array}{r} .3333 \\ \times 3,000 \\ \hline 999.9 \text{ lb sbm} \end{array}$$

$$56 \overline{) 2,000.1} \quad 35.72 \text{ bu.}$$

$$2000 \overline{) 999.9} \quad .49995$$

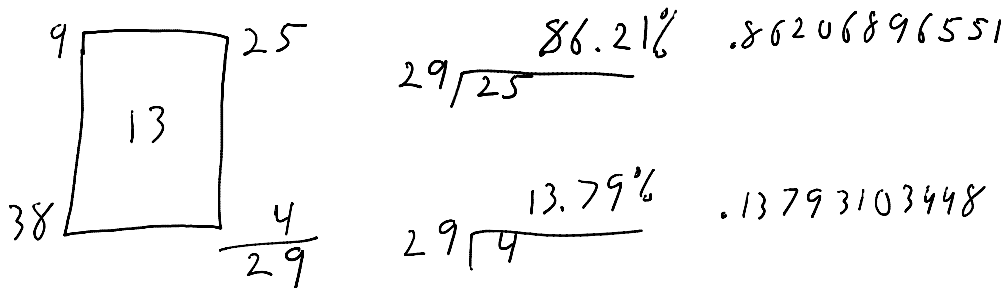
$$\begin{array}{r} 35.72 \\ \times 3.78 \\ \hline \$135.02 \end{array}$$

$$\begin{array}{r} .49995 \\ \times \$285/\text{ton} \\ \hline \$142.50 \end{array}$$



\$135.02  
 +142.50  
 -----  
 \$277.52

% PROTEIN NEEDED - 13  
 % PROTEIN IN GRAIN - CORN 9  
 % PROTEIN IN SUPPLEMENT - SBM 38  
 SIZE OF GRINDER - 2.5 TONS



5000  
86.21%  
 4310.5 lb Corn

5000  
13.79%  
 689.5 lb SBM

4310.5  
689.5  
 5000.0

% PROTEIN NEEDED - 15  
 % PROTEIN IN GRAIN - CORN 8.9  
 % PROTEIN IN SUPPLEMENT - SBM 36.4  
 SIZE OF GRINDER - 2 TONS

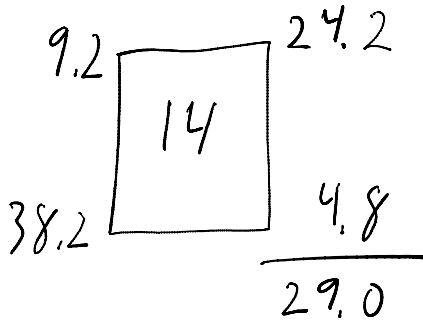
## 2 GRAIN RATIOS

% PROTEIN NEEDED - 14

% PROTEIN IN GRAIN - CORN 8.9  
 OATS 10.1  
 % PROTEIN IN SUPPLEMENT - SBM 38.2  
 SIZE OF GRINDER - 1.5 TONS

PARTS

$$\begin{array}{r}
 3 \text{ X CORN } 8.9 = 26.7 \\
 1 \text{ X OATS } 10.1 = 10.1 \\
 \hline
 4 \qquad \qquad \qquad \frac{36.8}{4} = 9.2
 \end{array}$$



$$\begin{array}{r}
 83.45\% \\
 29 \overline{) 24.2}
 \end{array}$$

$$\begin{array}{r}
 16.55\% \\
 29 \overline{) 4.8}
 \end{array}$$

$$\begin{array}{r}
 625.88 \\
 4 \overline{) 2503.5}
 \end{array}$$

$$\begin{array}{r}
 3000 \\
 83.45 \\
 \hline
 2503.5 \text{ lb} \\
 \text{Grain}
 \end{array}$$

$$\begin{array}{r}
 3000 \\
 16.55 \\
 \hline
 496.5 \text{ lb SBM}
 \end{array}$$

$$\begin{array}{r}
 625.88 \\
 \times 3 \\
 \hline
 1877.64 \text{ lb Corn}
 \end{array}$$

625.88  
16 Oats

# GENETICS

Thursday, January 03, 2008  
10:48 AM

GREGOR MENDEL

LINNEAUS - SWEDISH BOTANIST

BINOMIAL - Genus species

LATIN - Bos taurus

ADDITIVE GENE AFFECTS

NON-ADDITIVE GENE AFFECTS

LAW OF INDEPENDENT ASSORTMENT

GENES - SMALLEST UNIT OF BIOLOGICAL  
INHERITANCE

EVERY TRAIT IS CONTROLLED BY A  
MINIMUM OF 2 TRAITS

HERITABILITY

EPD - EXPECTED PROGENY DIFFERENCE

CULLING

MITOSIS - GROWTH

DIPLOID NUMBER -

CATTLE - 30

SWINE - 19

SHEEP - 27

GOATS - 30

CHICKENS - 39

RABBITS - 22

HORSE - 32

DONKEY - 31

MEIOSIS - REPRODUCTION

SEXUAL REPRO -

GAMETES - SEX CELL

OVA - FEMALE

SPERM - MALE

ASEXUAL - NO SEX CELLS

FERTILIZATION - EMBRYO

GENES - LOCUS

DOMINANT

Recessive

HOMOZYGOUS - SAME

HETEROZYGOUS - DIFFERENT

GENOTYPE - GENES

PHENOTYPE - PHYSICAL APPEARANCE

COMPLETE DOMINANCE

INCOMPLETE DOMINANCE

SEX LINKED GENES

PLUMAGE ON MALES, ANTLERS ON  
FEMALES

SEX DETERMINED GENES

|            |  |              |
|------------|--|--------------|
| MALES - XY |  | FEMALES - XX |
|------------|--|--------------|

MUTATION -

PUNNETT SQUARE



## ANIMAL REPRO

Tuesday, January 15, 2008

11:17 AM

### REPRODUCTION

SEXUAL - GAMETES

ASEXUAL -

COPULATION - MATING

FERTILIZATION - SPERM PENETRATES THE  
EGG

GESTATION - PREGNANCY

PARTURITION - ACT OF GIVING BIRTH

### MALE REPRO

SCROTUM - THERMAL CONTROL

TESTICLES - SPERMATOZOA PROD.

EPIDIDYMIS - STORES SPERM UNTIL

MATURE

CHRYPTORCHID / MONORCHID/  
RIDGLING

VAS DEFERENS -

SEMINAL VESICLES -

URETHRA -

PROSTATE GLAND -

COWPER'S GLAND - CLEANSSES &  
NEUTRALIZES THE URETHRA

PENIS -

SIGMOID FLEXOR

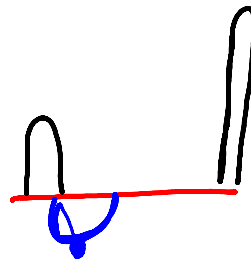
RETRACTOR

SHEATH

POULTRY

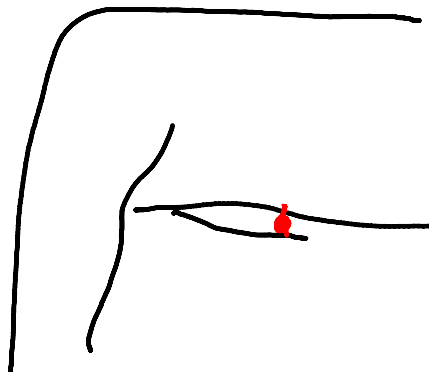
CLOACA - LG INTESTINE & ALIMENTARY  
CANAL MEET

PAPILLA -

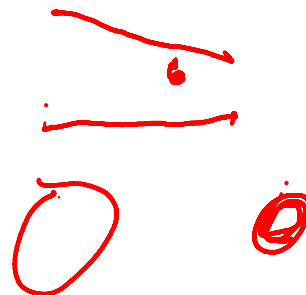


BEEF - GOMER BULLS - CHIN BALL

MARKER

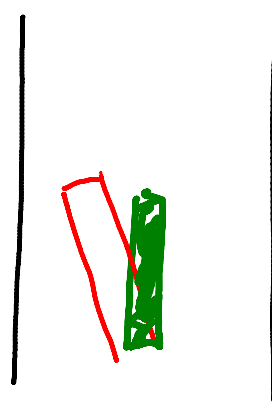
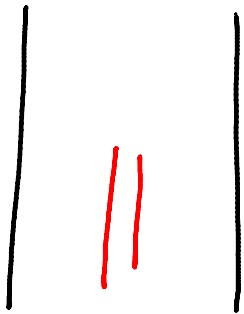


PENO-BLOC

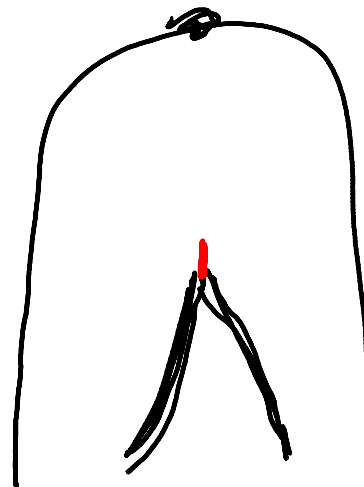
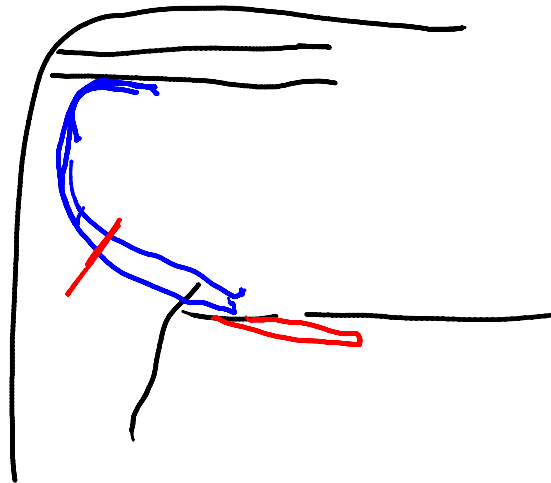




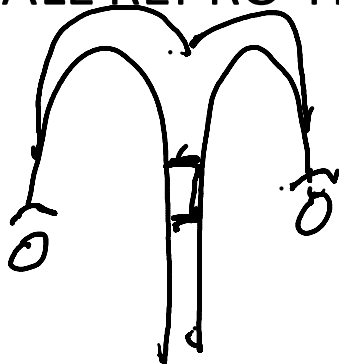
# SIDEWINDER



# TIE-BACK



# FEMALE REPRO TRACT



OVARIES - PRODUCE OVA

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FOLLICLE

OVIDUCTS/FALLOPIAN TUBE  
INFUNDIBULUM

UTERUS -  
2 HORNS, BODY

CERVIX - PREVENTS CONTAMINATION  
VAGINA - BIRTH CANAL  
VULVA - EXTERNAL OPENING

POULTRY -  
MAGNUM - SECRETES THICK WHITE OF  
THE EGG

ISTHMUS - PLACES CELL MEMBRANE

TO LAY AN EGG - 25 - 27 HOURS

ESTRUS CYCLE  
HEAT PERIOD OR THE TIME THE  
FEMALE ACCEPTS MALE

OVULATION - RELEASE OF THE EGG

FERTILIZATION -

SPERM CELLS - 24 - 30 HOURS

OVA - 12 HOURS

PARTURITION - BIRTH

COLOSTRUM - FIRST MILK

ANTIBODIES & NUTRIENTS

REPRODUCTIVE FAILURES

MONORCHID

CHRYPTORCHID

INFECTIONS

MALNUTRITION

OVER FLESHED

FREE MARTIN



# ANIMAL BREEDING SYSTEMS

Friday, January 25, 2008

11:10 AM

## BASIC 2 TYPES

STRAIGHT BREEDING

CROSS BREEDING

PURE BRED BREEDING - REGISTERED  
OF THE SAME BRD

INBREEDING -

LINEBREEDING -

CLOSEBREEDING -

IMPRESSIVE - HYPP

OUTCROSSING - DIFFERENT FAMILIES IN  
SAME BRD

GRADING UP - (CROSSBRDING)

CROSSBREEDING - BREEDING 2  
DIFFERENT PUREBRD BREEDS

ROTATIONS

# YORK X HAMP

HOUSING, EQUIPMENT

Thursday, March 06, 2008

11:11 AM

LAND, LABOR, MANAGEMENT, &  
CAPITAL

OPPORTUNITY COSTS

STRONG & STURDY

CORRALS -

## CATTLE BREEDS

Friday, February 01, 2008  
10:36 AM

### WHICH BREED DO YOU CHOOSE?

ALL BRDS HAVE STRONG & WEAK  
TRAITS

NO PERFECT BRD

SELECTION & BRDING PRACTICES  
ARE MORE IMPORTANT THAN WHAT  
BRD

MKT DEMAND

FOUNDATION BRD STOCK AT A  
REASONABLE PRICE

### BREEDS

### SELECTION

PUREBRED PROD. - \$\$\$\$\$\$\$\$\$\$

### FEEDERS

CONFORMATION - SKELETAL &  
MUSCLING

EPD - EXPECTED PROGENY DIFFERENCE

### CULLING



## 205 DAY ADJUSTED WEIGHT

$$\frac{\text{Actual wt} - \text{b. wt}}{\text{Age in days}} \times 205 + \text{b. wt} + \text{Cow's Adj} \times \text{Sex Adj}$$

| Cow's Age Adj- | Sex Adj:    |
|----------------|-------------|
| 2yr old +60    | heifer 1.05 |
| 3yr +40        | steers 1.00 |
| 4yr +20        | Bulls .95   |
| 5-10yr -0-     |             |
| > 11yr *20     |             |

## PEDIGREE - ANCESTORS

## SINGLE MOST IMPORTANT DECISION - HERD BULL SELECTION

## SELECTION

### MARKET OR REPRODUCTION

### TYPE

### MUSCLING

### FINISH - CONDITION

## CARCASS MERIT

### YIELD GRADE

1 - > 52.4%

2 - 50.1 - 52.3%

3 - 47.8 - 50.0%

4 - 45.5 - 47.7%

5 - < 45.4%

## FEEDING

FORAGE -

ROUGHAGES - HAY

STOCKS -

CARRYING CAPACITY

BIG ROUND BALES

## CREEP FEEDING

PURE BRED PROD.

OLDER

FEED LOT

POOR MILKER

POOR PASTURES

GRAIN PRICES LOW

CATTLE PRICES HIGH

1ST CALF HEIFERS

DRY LOT/CONFINEMENT

IMPLANTS - RALGRO

REPLACEMENTS - CHOOSE 15% MORE

## AGE OF BULLS

15 - 18 MONTHS - 10 COWS

18 - 30 MONTHS - 15 -18 COWS

➤ 30 MONTHS - 25 COWS

OFF FEED -

DEWORMER - PYRANTEL TARTRATE

BREEDING SEASON

45 - 60 DAYS LONG

A.I. -

SYNCHRONIZATION

BREEDING HEIFERS - WT (550 -750LB)

CALF BY AGE 2

CALVING SEASON 45 -60 DAYS LONG

WARM, DRY, & DRAFT FREE

CASTRATE - ALTER

DEHORN

BRAND - HOT & FREEZE

TATTOO

## PRECONDITIONING CALVES

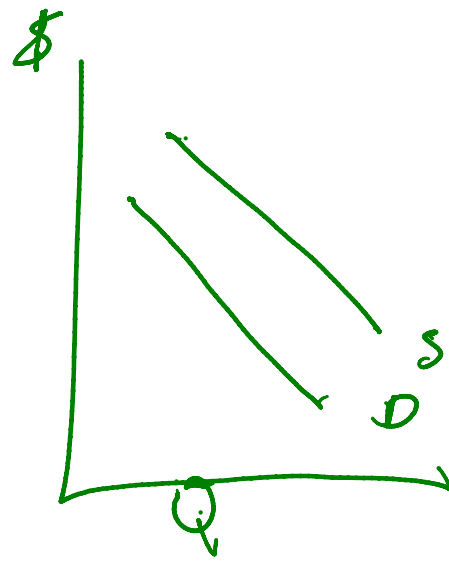
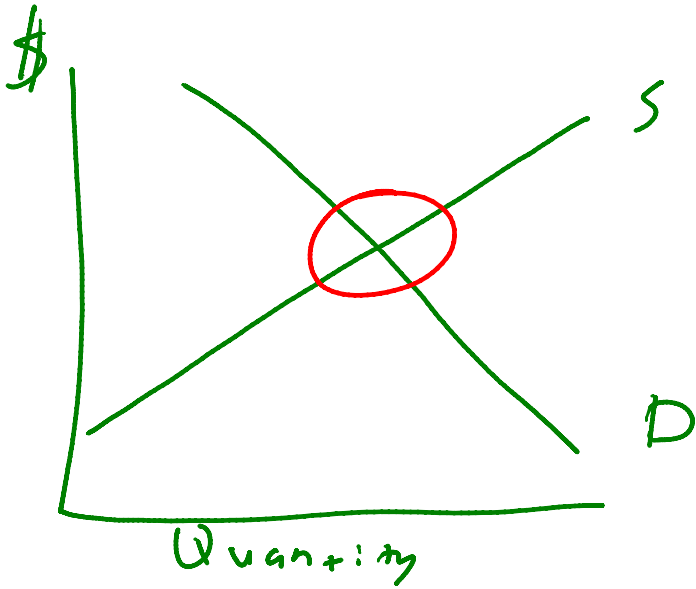
A 605lb heifer calf was born to a 3 year old cow 212 days ago. The calf weighed 79lb at birth.

# MKTING

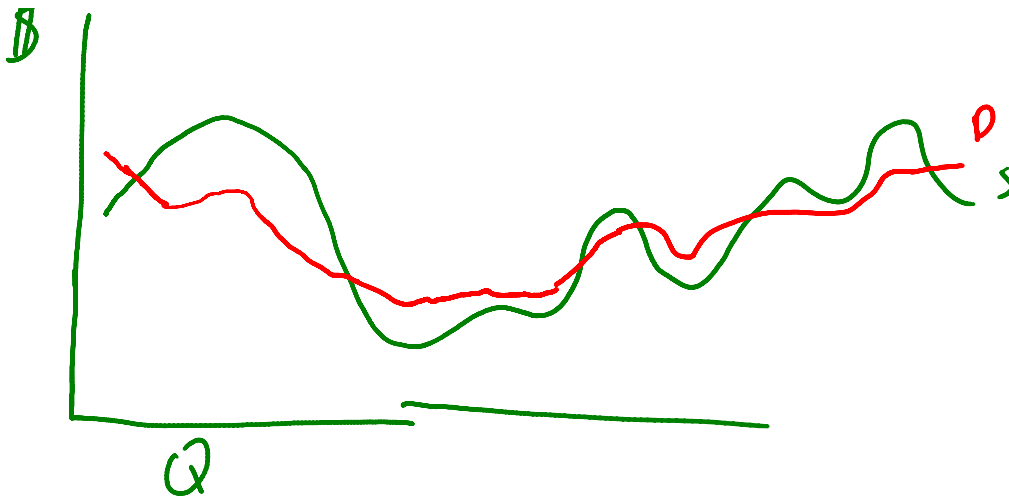
Tuesday, March 11, 2008

10:48 AM

## SUPPLY & DEMAND



11



TERMINAL MARKET - STOCKYARD  
 AUCTIONS -  
 DIRECT SALES

ELECTRONIC MARKETING

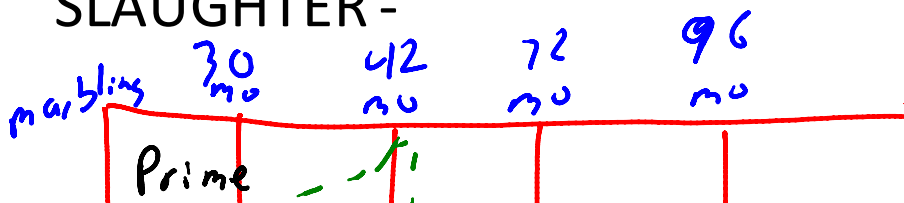
SELECTING A MKT

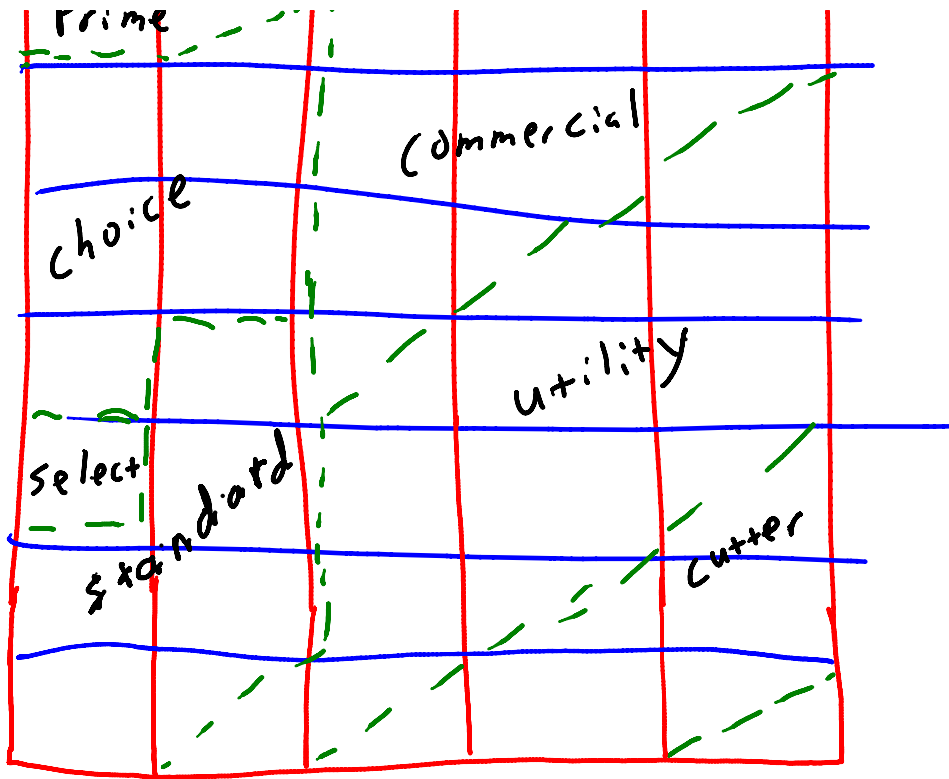
SHRINKAGE - 1 - 5%

ULTRASOUND - REAL TIME

VEAL -

SLAUGHTER -





# CATTLE FEEDING & DISEASE

Tuesday, March 04, 2008  
10:45 AM

## FEED

ROUGHAGES - FORAGES

DRY COWS VS. LACTATING (MILKING)

STEERS 10 - 15% MORE EFFICIENT

FRAME SCORES BASED ON AGE, BONE  
STRUCTURE, MUSCLING, & DEGREE OF FAT

SMALL FRAME - SMALL & SHORT

MEDIUM -

LARGE - TALL & LONG

BUYING FEEDERS

BREAK EVEN PRICE

FEEDS

PASTURE

HAY

GRAIN - GROUND FEED

CORN, OATS, CORN GLUTEN,  
MOLASSES



## PROTEINS

SBM, UREA

## WHEAT MIDDLING

BY-PRODUCT OF FLOUR MILLING

GOOD SUPPLY OF P & K

PROBLEMS WITH SPOILAGE

## DISTILLER'S GRAIN

BY-PRODUCT OF ETHANOL

PRODUCTION

GOOD SOURCE OF PROTEIN,

ENERGY & P

LOW IN CA & K

## MINERALS

NACL, CA, P

## VITAMINS

## ADDITIVES - WITHDRAWAL TIME

## IMPLANTS

## DISEASES

# PARASITES

## INTERNAL & EXTERNAL

## BREEDS OF SWINE

Tuesday, March 25, 2008  
11:04 AM

#1 - IOWA - 15,000,000 HD/YR

#2 - N. CAROLINA 9,500,000

#3 - MINNESOTA - 5,600,000

## ULTRASOUND

## ISOWEAN

<21 DAYS OLD WEIGH ABOUT 19LB

## SWITCHING FEED - GUT EDEMA

## PQA -

INTRAMUSCULAR

SUBCUTANEOUS

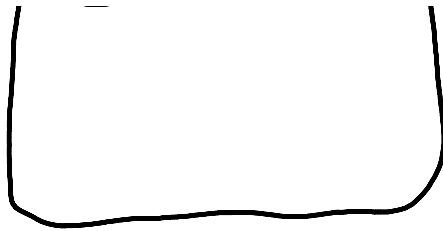
## HOG BUILDINGS

## WIND BREAKS

## ALLEY WAY - 20"

## HURDLES -





FEEDING EQUIP.  
EFFICIENT

## DISEASES

COST - DISEASES - \$5/HD  
PARASITES - \$3/HD

ABSCESSES

ATROPHIC RHINITIS

BRUCELLOSIS

SWINE DYSENTERY

SWINE EDEMA

ERYSIPELAS

MYCOPLASMAL ARTHRITIS - PPLO

MYCOPLASMAL PNEUMONIA

PORCINE REPRODUCTIVE & RESPIRATORY  
SYNDROME - PRRS

PSEUDORABIES

TRANSMISSIBLE GASTROENTERITIS - TGE

BLACK NIGHTSHADE

PARASITES

LICE

MANGE

INTERNAL - DEWORMER - PYRANTEL  
TARTRATE

PSS - PORCINE STRESS SYNDROME

PSE - PORCINE STRESS EXUDATE

FINISH RATION

BORROWS - 13%

GILTS - 14%

MKTING



# HORSES

Wednesday, April 16, 2008  
10:19 AM

750,000 - 1,000,000 HORSES IN IOWA

## SELECTING A HORSE

~~BIAS~~

FILLY - FEMALE <3YRS

MARE - > 3YRS

COLT - <4YRS

GELDING - ALTERED MALE

STUD -

STALLION - >4YRS

## USES

PLEASURE

BREEDING

WORKING

SHOW

SPORT

USED CAR SALESMAN

WHERE

AGE  
SEX  
BREED  
CONFORMATION  
BODY COLORS

VICES - BAD HABITS  
CRIBBING  
HALTER PULLING  
KICKER

GAIT  
3 - WALK - TROT - LOPE  
5 - WALK - JOG - TROT - LOPE - CANTER  
DRIVING - PARK & ROAD

PEDIGREE

\$\$\$\$\$\$\$\$\$\$\$\$

FEEDING AND CARE

FOALS

BOWEL MOVEMENT - 4 - 12 HOURS

MECONIUM

IMPRINTING

COLUSTRUM



# WEANING - MOON SIGNS

TWITCHING

GROOMING

TEETH - FLOATING



HOOF CARE - TRIM EVERY 6 - 8 WEEKS

BUILDING

|       |       |  |         |       |
|-------|-------|--|---------|-------|
| 10X10 | 12X12 |  | FOALING | 16X16 |
|       |       |  |         |       |

FENCES

DISEASES

COLIC

STRANGLES

ENCEPHALOMYELITIS - SLEEPING SICKNESS

LAMINITIS - FOUNDER

RABIES

TETANUS

POISONOUS PLANTS

EPM - OPPUSSUM POOP

PARASITES

BOTS  
STRONGYLS

TRAINING  
GYMKANA - GAMES ON HORSEBACK

# SHEEP

Thursday, May 15, 2008  
10:46 AM

## 6 CLASSES OF SHEEP

FINE WOOL

MEDIUM WOOL

LONG WOOL

CROSSBRED WOOL

CARPET WOOL

FUR WOOL

## RAISING OF SHEEP

PUREBRED

COMMERCIAL

## PREDATORS

ELIMINATION

## QUALITY GRADES & YIELD GRADES

## CUTS - LEG, LOIN, RIBS, SHOULDER

SHRINKAGE 3-5%

$$\begin{array}{r} 120 \text{ lb} \\ - .05 \\ \hline 6.00 \text{ lb} \end{array}$$

MKT - MARCH, APRIL, MAY

WOOL -  
COOPERATIVE

PRICES - APRIL, MAY, JUNE

GRADING WOOL - BASED ON DIAMETER,  
DENSITY, & LENGTH

TYPES - APPAREL & CARPET

MOHAIR - GOATS

# MEATS

Thursday, May 14, 2009

9:08 AM

MEAT IS MUSCLE

YOUNG IS TENDER & OLD IS TOUGH

ETHNIC MEATS - FROM DIFFERENT  
CULTURES