Principles of Diet Formulation

Lab Next Week...
- Will be held in ASTL
- Bring a calculator
- Also be prepared to dissect GIT
- Pictures...

Help Needed....
- Dr. Richert will be collecting carcass data on the following dates, and could use help in 2 hr blocks in the mornings or early afternoons:
  - 1/17
  - 1/24
  - 1/31
  - 2/7
  - 2/9 (Friday)
  - 2/14
  - 2/21

Conversion factors...
- Pounds to grams, kilograms to pounds, etc..
- You need to know these conversions!!!!

http://www.cleavebooks.co.uk/scol/index.htm#convert

Conversion factors...
- \( \_\_\_ g = 1 \text{ lb} \)
- \( \_\_\_ \text{ lb} = 1 \text{ kg} \)
- \( \_\_\_ \text{ kg} = 1 \text{ lb} \)
- \( \_\_\_ \text{ lb} = 1 \text{ ton} \)
- \( \_\_\_ \text{ kg} = 1 \text{ ton} \)
- \( \_\_\_ \text{ mg} = 1 \text{ g} \)
- \( \_\_\_ \text{ mg} = 1 \text{ kg} \)

Diet Formulation
- Things you need to know:
  - Nutrient requirements
  - Ingredients available
  - Nutrient content of available ingredients
  - Bioavailability of nutrients from ingredients
**Nutrient Requirements**

- Information needed:
  - Nutrient requirements for the group of animals that the diet is being formulated for
  - Individual animal requirements vary, but it is not practical to formulate individual diets

- Since it is not practical to individually formulate diets, diets must be formulated for groups of animals
  - The more uniform the group, the more accurately the nutrient requirements of the individual can be met

**Factors Affecting Nutrient Requirements**

- Age/weight
- Reproductive status
- Work expectations
- Expected performance
- Environment
- Genetics
- Health Status

**Ingredients**

- Availability
- Cost
- Nutrient content
- Bioavailability of nutrients

Which should be fixed at a given level?
- Which need a minimum placed on them?
- Which need a maximum set?
- Which need a range?

CWG _______min _______max
Nutrients

- Which nutrients need consideration?
- Which should be fixed at a given level?
- Which need a minimum placed on them?
- Which need a maximum set?
- Which need a range?

Ca: _min_ _max_

Diet Formulation

- When you formulate based on CP only, other nutrients may be deficient.