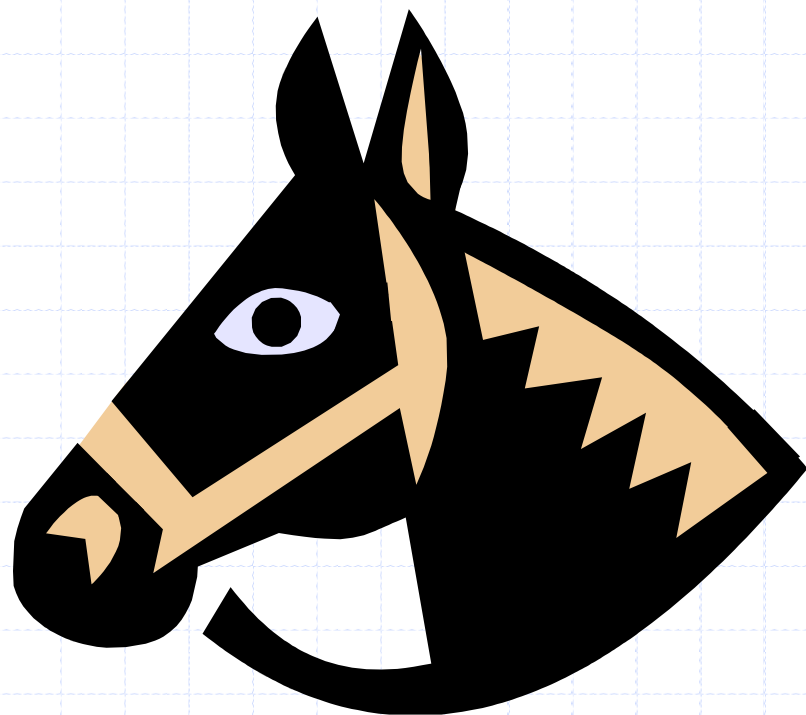
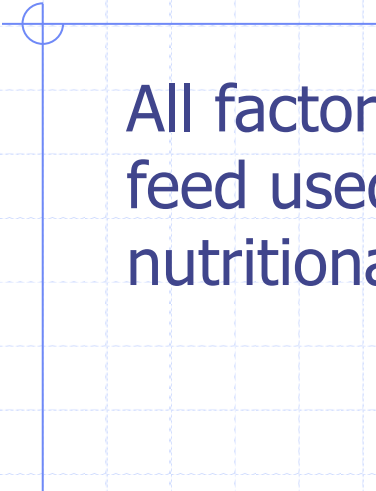


# Nutrient and Feed Requirements



# What Affects An Animal's Nutritional Requirements?

1. The Specific Animal and Their Age
2. The Animal's Use and Function
  - Light/Moderate/Heavy Work
  - Maintenance
  - Breeding Stock, Lactating, Stage of Gestation
  - Etc.
3. Environmental Conditions:
  - Temperature, Wind
  - Environmental Stress Factors
4. Quality and Availability of Feed



All factors need to be considered in determining feed used in ration to meet the animal's nutritional needs.

# Nutrient Requirements for Body Maintenance

1. Body Maintenance: Requires nutrients to supply the body to sustain normal operations.
2. There is no gain or loss in weight or production.
3. Maintenance feed formulas provide nutrients for:
  1. Body tissue repair
  2. Control of body temperature
  3. Energy for vital organs
  4. Water balance maintenance
4. Feedlot animals may use 30-40% of their nutrients for maintenance.
5. Mature breeding animals may need 90% of their feed for maintenance.

# Nutrient Requirements for Growth

Important Nutrients Required for Growth:

1. Energy
2. Protein- Essential in muscle development
3. Minerals
4. Vitamins

# Nutrient Requirements for Reproduction

Two Categories:      1. Gamete Production  
                                 2. Fetal Growth in Uterus

1. Nutrients required by a growing fetus are much greater in the last trimester of pregnancy.

-Similar requirements as a young animal after birth

2. Females can temporarily withdraw nutrients from their body to support the fetus. But this will lower their reproductive ability.

# Nutrient Requirements for Lactation

Milk Production requires:

1. Protein
2. Minerals
3. Vitamins
4. Energy

Calcium and phosphorus are the two most important minerals needed for lactation.

# Nutrient Requirements for Work

1. The primary requirement is **energy**

## Research Each Situation:

- Each animal's situation determines its nutritional needs.
- Nutritional charts/information are available