

ANIMAL NUTRITION AND FEEDS



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What is Nutrition!

Nutrition is the science of dealing with the utilization of food by the body processes which transforms food into body tissues and energy.

Why is Nutrition *Important!*

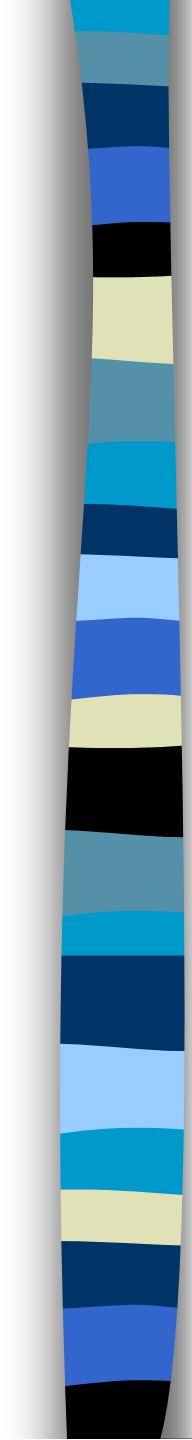
To obtain and utilize surplus or unusable feed stuffs
And convert them to desirable products such as meat,
milk, eggs, fiber and work.





What is a Nutrient?

A single class of food or group of like foods that aids in the support of life and makes it possible for animals to grow or provide energy for physiological processes.



Digestible Nutrient

The portion of the nutrient which may be broken down (digested) and absorbed and used by the body.

The Six Nutrients Needed



- Protein
- Carbohydrates
- Fats
- Minerals
- Vitamins
- Water



PROTEINS

- ❖ Needed for growth and repair
- ❖ Helps form muscles, internal organs, skin, hair, wool, feathers, hoofs and horns
- ❖ Contain carbon, hydrogen, oxygen and nitrogen



EXAMPLES OF PROTEINS

- 1. MEAT AND BONE MEAL**
- 2. FISH MEAL**
- 3. SOYBEAN MEAL**
- 4. COTTONSEED MEAL**
- 5. DRIED SKIM MILK**
- 6. AMINO ACIDS**



CARBOHYDRATES

- Furnish energy for body functions, growth and reproduction
- The largest part of the animals food supply and usually the fibrous part of the diet
- Include sugars, starch and cellulose
- Are made of carbon, oxygen and hydrogen



FATS

- Furnish a concentrated source of energy, up to 2.25 times as much energy as carbohydrates do
- Form cholesterol, steroids and other body compounds
- Found in every cell in the body
- Affect the condition of skin and hair
- Are made of carbon, oxygen and hydrogen, but contain much larger proportions of carbon and hydrogen than carbohydrates do
- They also provide energy reserves, protection for vital organs, and they insulate the body

MINERALS

- Primarily found in bones and teeth
- Important in blood for the carrying of oxygen
- Regulates heartbeat with K, Na & Ca

Example: Calcium Formation
Found in rocks





VITAMINS

- Are only needed in small amounts
- Are essential for life and health
- Provide a defense against disease, promote growth and reproduction
- Contribute to the general health of the animal

WATER

- Accounts for 70% or more of the composition of most plants and animals





FEED CLASSIFICATIONS

1. Roughages
2. Concentrates
3. Supplements

ROUGHAGES

- High in Fiber and relatively low in digestible nutrients

Examples of roughages:

1. Alfalfa
2. Clover
3. Soybean
4. Oat hay
5. Corn Silage



CONCENTRATES

- Are low in fiber and high in digestible nutrients

Examples of concentrates:

1. Corn
2. Cottonseed
3. Barley
4. Oats
5. Sorghum



SUPPLEMENTS

- Supplements are extras that supply the body with additional nutrients.
- Some of the supplements are minerals salt, copper, iodine and iron
- Vitamin A and D are also very important to ruminant animals



Salt



Copper



Iron



Review....

1. What is nutrition?

Nutrition is the science of dealing with the utilization of Food by the body processes which transform food into body Tissue and activities.

2. Why is Nutrition important?

The utilization of unusable feed stuffs and convert them to desirable products such as meat, milk and eggs.

3. What are the six nutrients needed?

Protein, carbohydrates, fats, minerals, vitamins and water