

# Unit C: Poultry Management

## Lesson 2: Feeding, Management and Equipment for Poultry

# Terms

- Grit
- Palatability

- I. Properly feeding poultry will supply all of the nutrients the birds need to adequately grow and thrive.
  - A. Chicken feed rations need to provide the six nutrients- protein, carbohydrates, minerals, vitamins, water, and fats.
  - B. Most of the energy in poultry diets is supplied by grains and fats.
    - 1. Chickens do not have the ability to process high amounts of fiber.
    - 2. The feed ration should be composed of about 50 to 80% grains.
  - C. When grains are used in the feed, they should be ground.
    - 1. Corn should be coarsely ground
    - 2. Oats, barley, and millet should be finely ground.
    - 3. Wheat should be processed through a roller mill.

- D. Fats should be no more than 10% of the ration.
1. Fats help increase the **palatability**, or the taste, of the ration, decrease dustiness and improve the texture.
  2. Rations containing fat may become rancid in hot weather unless they have been chemically stabilized.

- E. Proteins supply the essential amino acids needed by chickens.
1. The most commonly needed amino acids are arginine, glycine, lysine, methionine, and tryptophane.
  2. Common sources of protein for chicken rations come from soybean meal, meat scraps and fish meal.
  3. If the ration is balanced based on amino acid needs, this will ensure the nutritional needs are met.

F. Water is the most important nutrient and makes up the largest portion of the bird's body.

1. The age of bird will determine the water consumption.
  - a. Daily consumption per 1000 broilers ranges from 20 liters at one week of age to 380 liters at 8 weeks of age.
  - b. Per 1000 pullets, 20 liters are consumed at one week of age and 170 liters at twenty weeks of age.
  - c. Breeding and laying hens consume about 189 liters per day per 1000 birds
2. Temperature increase will also increase water consumption.
  - a. Birds may consume as much as three times the water on a hot day compared to a cool day.

## G. Many feed rations are supplemented with minerals.

1. Mineral requirements of poultry include calcium, phosphorus, manganese, iodine, sodium, chlorine, and zinc.
2. It is recommended that calcium make up 3.4% of the ration for laying hens.
  - a. Calcium is of significant importance to laying hens as it is crucial in the formation of eggshells.

H. Other components like grit are added to help the gizzard in grinding feed since chickens do not have teeth.

1. Grit comes in small, medium, and large sizes.

a. Small size should be given to chicks and larger size to hens.

b. Feed grit to young chicks by sprinkling it on the feed twice a week.



II. Feeding rations to the flock depends upon the species and age of the birds.

A. Feeding turkeys

1. Poults (young turkeys) must be fed and watered as soon as possible after hatching.
  - a. If watering and feeding is delayed beyond 36 hours, the poult will have problems learning how to eat.

- b. Start the poult's on a pre-starter ration that contains 28% protein and use it for about a week.
- c. From four to eight weeks of age the starter should contain 26% protein and a higher energy level.
- d. Daily water consumption per 1000 turkeys ranges from 38 liters at one week of age and 360 liters at eight weeks of age.

2. Growing turkeys are moved to range at eight to ten weeks of age.
  - a. The range should contain forage and/or grain crops.
  - b. Growing turkeys should be separated by sex as toms have a higher protein requirement.
  - c. Turkeys generally give better feed conversions when fed complete mixed rations.

- i. Male turkeys at eight to 12 weeks of age and females at eight to 11 weeks of age should be given a ration of 22% protein.
- ii. Rations for male turkeys 12 to 16 weeks of age and female turkeys at 11 to 14 weeks of age should have a protein content of 19%.
- iii. Male turkeys 16 to 20 weeks of age and females 14 to 17 weeks should have a protein content of 16.5%.

- iv. A feed ration for male turkeys 20 to 24 weeks of age and female turkeys 17 to 20 weeks of age should have a protein content of 14%.
- v. Male turkeys are generally harvested at 24 weeks of age and female turkeys at 20 weeks of age.

d. The daily water consumption for 1000 turkeys ranges from 435 liters at nine weeks of age to 757 liters at 20 weeks of age.

3. Breeding turkeys should be selected at about 16 weeks of age for the breeding flock.
  - a. Female breeding turkeys from 16 to 30 weeks and males from 16 to 26 weeks receive a holding diet of about 12% protein.
  - b. A breeding ration containing 14% is then fed.
  - c. Males are fed a breeding ration at 26 weeks of age which will control their weight while females are fed all they can eat.

III. Ducks and geese have similar requirements for feeding.

A. For the first two weeks, feed a starter ration with about 22% protein and provide all that the birds can eat.

1. Geese should be allowed to roam on pasture during the day after they are two weeks old.
  - a. Geese should also be given a supply of insoluble grit in addition to the feed.
  - b. Geese will begin eating grass when only a few days old and can live entirely on pasture when five or six years old.
    - i. While doing this, a growing ration is recommended.
  - c. If the pasture is not of good quality additional grain should be fed.

2. After geese are allowed to forage, they are fed grain for the last two to three weeks up to 18 weeks when they are generally harvested or marketed.

- B. Ducks can be raised in either total confinement or in a growing house.
1. Ducks should be provided with an area to swim or wade which provides exercise.
  2. A starter diet of about 22% protein is given to ducks for two weeks.
  3. After the starter diet they are given a diet containing 18% protein and finished on a diet containing 16% protein.

4.Ducks are usually ready for market in seven to eight weeks.

5.Ducks will eat some green feed but are not as good at foraging as geese.

a. Pasture is not necessary for ducks.

C. Both ducks and geese should be supplied fresh water that is accessible at all times.

1. Ducks and geese consume large amounts of water.
2. The water provided should be designed so that the ducks and geese cannot swim in the water.

IV. The equipment used to provide the feed, water and comfort to the poultry is very important and will increase the production of the poultry operation.

- A. Clean water needs to be provided at all times.
  - 1. An automatic waterer placed in the coolest area of the pen or house is the best for small flocks.
    - a. Automatic waters will work best for large size flocks and will reduce the amount of time needed to water the birds.
  - 2. If manual waterers are used, the number of waterers required and frequency of refilling should be taken into account.
  - 3. The type of waterer will also depend upon the type of bird being fed.
    - a. Ducks and geese will have a tendency to swim in their waterers so they should be provided a waterer which will discourage or prevent swimming.

Common Poultry Waterer



Automatic Poultry Waterer

B. Housing for poultry is common across all species.

1. Poultry housing should be easy to clean and disinfect.
2. All houses should provide adequate ventilation to prevent excessive dampness.
3. For small chicks, a heat lamp or some type of warmth needs to be provided to keep the chicks from becoming too cold.

C. Depending upon the size of the poultry operation, automatic feeders and waterers are sometimes present.

1. These need to be cleaned regularly as well as maintained.
2. Portable waterers and feeders are used for smaller flocks.























## Review/Summary

1. What are feed rations like for chickens?
2. What are feed rations like for turkeys?
3. What are feed rations like for ducks and geese?
4. What is some equipment used to manage poultry?