

## **1<sup>st</sup> lecture**

### **Introduction of commercial poultry husbandry, the basic management of poultry development & physical assessment of birds**

Poultry housing has been started at the end of the 19<sup>th</sup> and the beginning of the 20<sup>th</sup> century. Several types of house (broiler and layer breeder, broiler, layer houses) with different periods brooding, grower and layer houses have been built. An industry of this type requires a **high level of technology, both in the genetics** of the birds themselves, and in their **nutrition**.

Against this background, the control of diseases affecting poultry is of the essence: **Newcastle, Gumboro, Bronchitis, Pneumovirus, Salmonella and Coccidiosis** are the diseases that the industry has to deal with.

In addition, in recent times, the need to combine **animal welfare** measures and **antibiotic-free production** has changed the production process significantly, especially prevention strategies.

The poultry industry, with its production in the form of eggs, meat and for feathers, is of particular significance in providing a balanced diet for the human population. Proper management of poultry involves enhanced methods of rearing, hatching, housing, sanitation, prevention from diseases and a sound marketing arrangement. There are some important birds that are commonly farmed in poultry like chicken, turkey, geese and ducks, while other birds like guinea fowl and squabs are not that commonly farmed. It can be done from small to large scale

#### **What is included in poultry farm management?**

Poultry management usually refers to the husbandry practices or production techniques that help to maximize the efficiency of production. Management practices are very

essential to optimize production. Scientific poultry management aims at maximizing returns with minimum investment.

**The steps for optimal poultry management for the breeders are:**

1. Have a plan:
  - a. The reason of poultry rearing? (meat or egg)
  - b. Helps identify the best birds so they can be used as breeders
2. Only keep productive birds
3. Have a prediction of market requirements? for (the time and the benefit)
4. Know the source of the birds
5. Buy from a good farmer that takes good care of their birds
6. Are birds vaccinated?
7. Avoid buying birds at the market due to bring a lot of disease to your farm
8. Isolate any new birds for 2-3 weeks from the rest of your flock to make sure that they are healthy.
9. If you get young birds, keep them separate from the older birds
10. Older birds can spread disease to young birds
11. Get the best genetics possible
12. Try different breeds to determine which works best for your area
13. Try different hatcheries/farmers if the one you are using is not providing quality chicks find a new one.

**Male and female physical assessment**

The objective of this assessment is to ensure persistency of fertility and egg production by achieving optimum physical condition of males and females.

The physical assessment of birds within a flock involves monitoring a number of factors, including body weight, body condition (breast shape and degree of fleshing legs and feet), and skeletal frame size to get a good overall view of bird condition, muscle tone, health and reproductive potential.

## **Assessment of Male Condition**

Males that are in good physical condition will have good fertility. Physical assessment of male condition must be comprehensive and include:

- Alertness and activity. The flock observed alter during mating, feeding resting, immediately prior light out and during scratching litter during light period. Males should be alter and active, in case males not alter and active should be removed.
- Body condition (fleshing) - shape and softness or hardness of breast muscle tone. Breast shape or fleshing is a good indicator of bird condition and is particularly useful for males.
- Legs and feet - the legs should be straight with no bent toes, and the footpads should be free from abrasions.
- Head - males should have a uniform, intense red color around the comb, wattle, and eye area. Beaks should be uniform in shape.
- Feathering - a good quality male will exhibit some partial feather loss, especially around the shoulders and thighs.
- Vent - show some feather wear, large and moist, with red coloration.
- Body weight - according to the target weight means good uniformity\*.

\*Uniformity: Uniformity indicates the percentage of flock that falls within a certain range of the average flock bodyweight (mean). This certain range is usually  $\pm 10\%$  of the mean. So, the greater the uniformity, the less variable a flock is.

## **Assessment of Female Condition**

### **Physical condition**

1- Assessment of bird physical condition is based primarily on body- weight monitoring and skeletal size. However, it is also important to be aware of degree of fleshing, general health, alertness especially during oviposition, activity uniform growth and development of the females during rear is key to subsequent laying performance. If not identified could be led a poor flock uniformity.

## 2- Monitoring Pin-bone spacing

Measurement of the spacing between the pin (pelvic) bones is a useful management tool for determining the stage of sexual development in growing females. Under normal conditions, the spacing between the pin bones will gradually increase as the bird ages until it becomes maximal at point of lay. As a general rule, birds are at the point of lay when the distance between the pin bones is about 3 fingers. If pin-bone spacing does not develop as required, or if there is a big variation in pin-bone spacing within the flock, then light stimulation should be delayed.



## 3- Abdominal fat pad

In lay, monitoring fat pad deposition is another supportive management tool that can help provide a better overall assessment of bird condition.

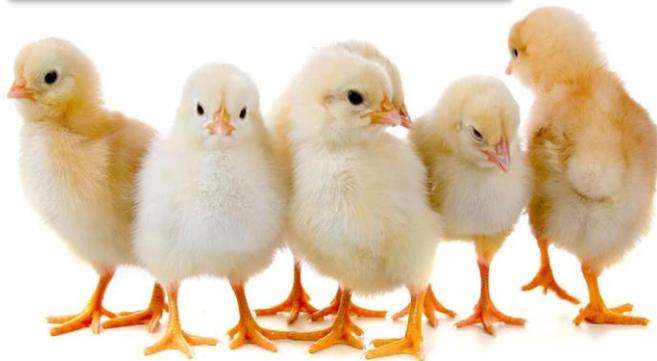
Broiler breeder farms raise parent stock which produce fertilized eggs. A broiler hatching egg is never sold at stores and is not meant for human consumption. The males and females are separate genetic lines or breeds, so that each line can be selected for optimal traits for productivity in either females or males.

### **Quality chicks should be:**

- a. Dry with long fluffed down
- b. Eyes should be bright and active
- c. Lively and alert
- d. Navels should be completely healed
- e. Legs should be bright and waxy to the touch
- f. Free of deformities.



**Abnormal chicks**



**Good quality chick**



