

## Genetics and breeding of chicken

### **Selection birds for meat production:**

1. Daily gain weight, Studies (Guilt 1974) have shown that a better conversion rate in breeders influences on dairy weight gain (GDP) in the next generation.
2. Weight at 10, 20, 30 days. Fox studies (1954) show that food consumption in breeders influences the weight of the next generation.
3. Food efficiency. Thomas studies (1958) show that the conversion rate between 4 and 10 weeks in breeders influence the conversion rate in the next generation.
4. Carcass yield and breast performance.
5. Viability.
- 2.6. Bone density.
- 2.7. Feather: coverage and speed.
- 2.8. Heat adaptation (stress tolerance).
- 2.9. Disease resistance.

## **Selection birds for eggs production:**

1. Egg production marketable per bird.
2. Persistence of laying without broodiness.
3. Egg weight.
4. Conversion egg per kg of egg.
5. Sexual precocity.
6. Internal egg quality (Haug units).
7. Shell quality (strength and thickness).
8. Itching absence.
9. Acceptance laying in nests.
10. Disease resistance.
11. Visual sexing.

\* This objective must adapt to the changing demands of the poultry industry and consumers. It is considered that genetics should work 5 years in advance.

\*The mating can be carried out in group breeding or directed in cages by couple or by artificial insemination.

\*The using selection method is carried out among siblings, through family averages, which will be used for the evaluation of each individual. If the pressure is high, the selection is accelerated, but variability is lost. If the pressure is low, selection speed is lost. The rule of prudence is to select 25% of individuals (never less than 20 or more than 30).