Managing the Breeding Flock

by Ronald Meijerhof

The efficient production of fertile hatching eggs, both for producing pullets for commercial egg layers and for producing broiler chicks, depends on continuous and skilled management of the breeder birds. Although both type of breeders are kept for the same purpose, the production of fertile hatching eggs, one must realize that the two types of birds are completely different. Commercial egg layers are genetically selected for egg production, and therefore the parent birds will have a genetic tendency to produce eggs. The main selection pressure on broilers is for growth and meat yield, and consequently their parents are genetically selected for growth and not for egg production.

Commercial egg layers can be further divided into white-egg layers (White Leghorns) and brown-egg layers (medium-size layers). Likewise, meat-type broiler breeder parents can be divided into normal or standard meat-type breeders and mini-type or dwarf-type breeders. For commercial production, the mini-type female is mated with a normal or standard male, thus producing standard broilers. Several different types of broilers are used in the industry over the world, depending on the local market situation.

34-A. HATCHERY PROCEDURES FOR BREEDER CHICKS

The management of a hatchery producing breeder chicks differs to some extent from a normal end-product (broiler or layer) hatchery. First, biosecurity and sanitation of the hatchery must be maintained at a high level, as well as the procedures concerning prevention of cross-contamination.
Any failure at this point can have major consequences due to the value of the breeder birds and their potential production capacity. For this reason, single stage incubation is often used for hatching breeding stock, as it allows better hygienic procedures.

1. **Number of Each Sex to Deliver**

If the primary breeder develops both male and female parent lines, the hatchery is responsible for hatching and delivering the required number of male-line cockerels and female-line pullets. During processing, males require more time and labor than females, and therefore are normally pulled first. Although it seems practical to set and hatch male lines in separate machines, the risk of machine failure should be considered. This can result in a total loss of all males for a particular flock. For this reason, it is advisable to divide the male line eggs over several machines.

The number of both sexes required at hatching is dependent upon the numbers of each sex needed at the onset of lay, the expected mortality during the rearing and laying periods, and any selection during rearing. The ratio of males to females to be delivered from the hatchery of the primary breeder will normally be: