

**A-14: Comparative study to evaluate the reproductive performance of small-scale privately owned broiler breeder farms**

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There is a high demand for Day Old Broiler Chicks in Sri Lanka and the production in the country is insufficient to meet the demand. This is partly due to the low productivity and partly due to lack of interest among the local

farmers in poultry breeder management. One of the ways to increase the production of Day Old Chicks, is to encourage small-scale poultry farmers to venture into establishing breeder farms in association with established breeder farmers. Bairaha Farms ltd. started a project for the first time in Sri Lanka, involving a small-scale poultry farmer with a flock of Broiler Breeders to evaluate the reproductive performance with a view to rapid expansion of breeding facilities.

A flock (CF94) of 1000 Day Old Hybro Broiler Parent Breeder Chicks, (Euribrid, Holland) was reared under the management of a contract farmer at Weliveriya. The reproductive performance which included fertility, hatchability and hatch of fertiles of a batch (KF94) of the same age reared at Bairaha Farms ltd. at Katana was compared with those of CF94.

Both flocks were on the same feeding schedule. Vaccination programme recommended by Euribrid, of Holland for New Castle Disease (NCD), infectious bursal disease (IBD), infectious bronchitis (IB), viral arthritis (REO) and avian encephalomyelitis (AF) was followed for the 2 flocks with slight modifications to suit local conditions. Antibody titer levels of both flocks were monitored using IDEXX (USA) Enzyme Linked - Immunosorbent Assay (ELISA) technique throughout the rearing period to give the birds necessary protection against related diseases and to guarantee the effective immunity levels in the progeny. Eggs were hatched at Bairaha Farms ltd. Katana hatchery. The average reproductive performances of these flocks were also compared with those of overall world's industry average as well as with the best Company average.

The age of the 2 flocks exhibited a strong influence on reproductive performance. Both flocks had similar fertility, hatchability and hatch of fertiles and showed curvilinear relationship with age. Peak performance of the 2 flocks was observed in the age range between 34 and 45 weeks. Average hatchability, fertility and hatch of fertiles of CF94 were 85.35% 91.42% and 93.5% respectively while respective figures for those of KF94 were 83.74%, 90.61% and 91.80% during the production period (weeks 28 to 66).

CF94 flock had a better reproductive performance. This could be due to the effective management of the small CF94 flock size when compared with the

KF94 flock which included about 20,000 birds. CF94 flocks had performed above the world's industry as well as the best company's averages of fertility, hatchability and hatch of fertiles. The reproductive performance of KF94 was comparable with those of world's industry average as well as the best Company average. It could be concluded from the preset analysis, that breeder management by family units, with technical assistance, would increase production rapidly.