Evaluation of the Effect Of Artificial Insemination (Ai) on Hatchability in Indigenous Chicken at Central Poultry Research Station, Karandagolla

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Introduction

The poultry farming is considered as one of the main livestock sector in Sri Lanka where indigenous chicken farming provides a promising house hold income for people in rural areas of Sri Lanka. (Buvanendran,1976).They can get high quality and quantity of day old chicks and eggs for daily consumption by rearing indigenous chicken.(Kushanthi *et al.*, 2003) Introduction of Artificial Insemination (AI) program for indigenous chicken can be used for selection, upgrading and development of several suitable indigenous chickens for back yard poultry farming in Sri Lanka (De Silva, 1964).

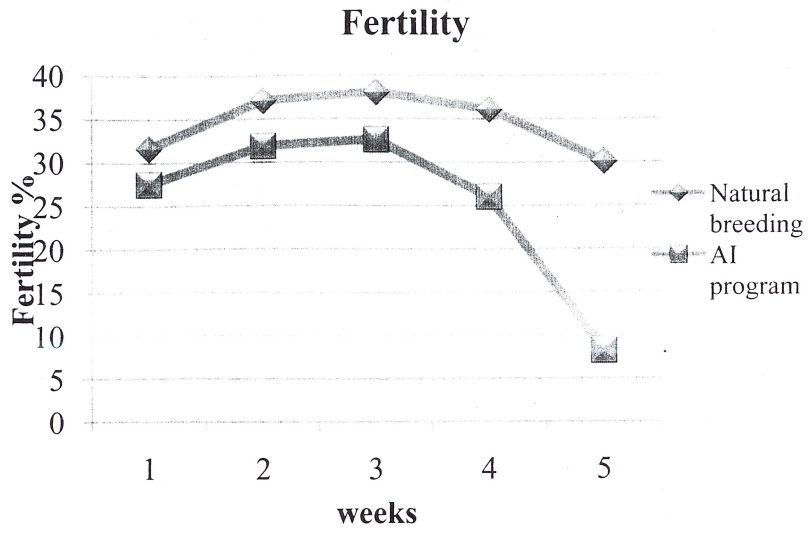
This experiment was carried out at the Central Poultry Research Station, Karandagolla under the supervision of staff of Veterinary Research Institute, Gannoruwa. The study was conducted to evaluate the effect of the Artificial Insemination on hatchability in indigenous chicken and to supply increased number of indigenous chicks to farmers by improving hatchability through AI which is the best method for breeding while increasing hatchability. .

Methodology

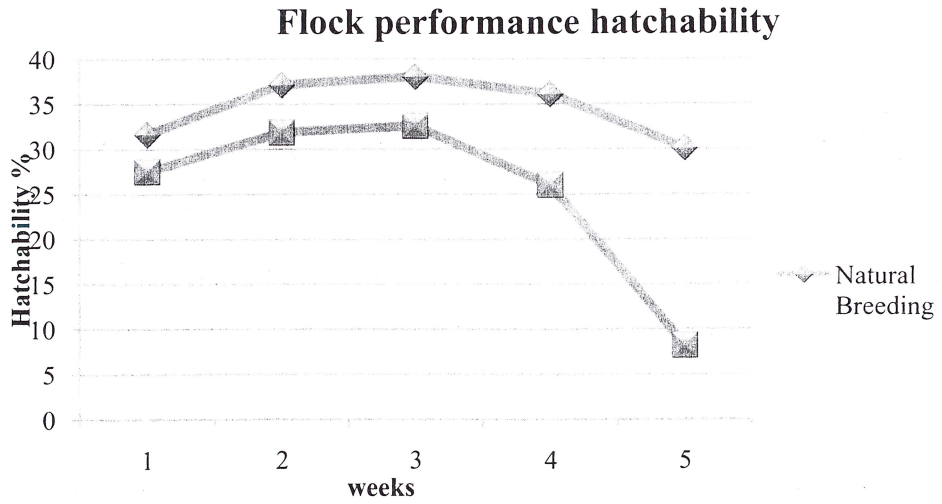
The study was conducted between 6th of March 2011 to 6th of August 2011,at the Central Poultry Research Station, Karandagolla, Kundasale located in the mid country intermediate zone in Sri Lanka under the administration of Veterinary Research Institute. Two samples and two replicates were prepared by conducting Artificial Insemination for one group and conducting Natural Breeding for one group. For Artificial Insemination program 6 male birds were used for semen collection and 40 female birds used for receiving semen. For natural breeding program 4 male birds and 40 female birds were used for better mating performance. All the other management factors feeding, water was given constantly for both groups. After eggs were collected those were incubated in the same conditions. After 18th day the candling data were collected and after 21st day hatching data were collected. Incubator parameters were monitored daily. egg breakout analysis were done after every candling and hatching. Finally, data were analyzed using SPSS 18 version statistical package. Paired t test was performed for comparisons of the data considering the difference between the groups at 5% level of significance.

Results and discussion

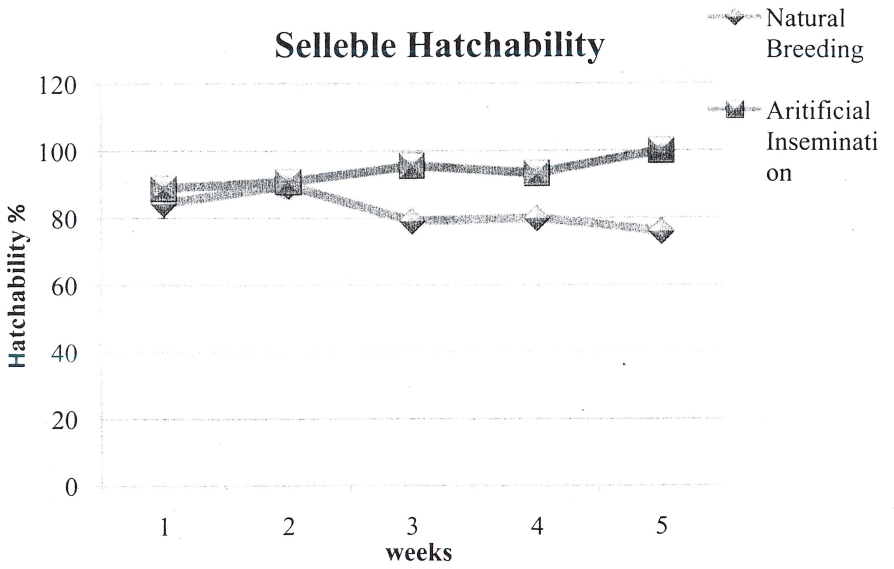
The mean fertility in the Artificial Insemination Program was significantly lower (25.26) than the mean fertility in Natural breeding program (34.62) ($P<0.05$).



The mean Flock performance hatchability (27.60) in Natural breeding program is higher than the mean. Flock performance hatchability (23.44) in Artificial Insemination program. There was no significant difference P>0.05 between Flock performance hatchability in Natural Breeding with the flock performance hatchability in Artificial Insemination in indigenous chicken.



The mean of the sellable hatchability in the Artificial Insemination Program is 93.74, while the mean of the sellable hatchability in Natural breeding program is 81.84. There was a significant difference (P<0.05) between sellable hatchability in Natural Breeding with the sellable hatchability in Artificial Insemination in indigenous chicken.



The study revealed that the Natural breeding Program is better than artificial insemination program for breeding of indigenous chicken. Further studies are needed to confirm these findings, since Artificial Insemination improves hygienic condition and also can be used for breeding indigenous chicken in Sri Lanka.

References

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