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COMPARATIVE EVALUATION OF NATIVE DUCKS OF ORISSA, KHAKI CAMPBELL AND THEIR CROSSES IN EXTENSIVE SYSTEM OF REARING

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ABSTRACT

This study was undertaken to evaluate the production performance of native ducks of Orissa (Deshi), Deshi × Khaki Campbell cross and Khaki Campbell in extensive system of rearing. A total of 200 Deshi, 140 crosses of Deshi (male) × Khaki Campbell (female) (DK) and 160 Khaki Campbell ducklings produced in single hatch were distributed to the farmers, 20 number each at costal part of Cuttack district of Orissa. All the ducklings were brooded in deep litter system at farmer's field with normal brooding management and feeding. Body weights of the ducks at 2nd, 4th, 6th, 8th and 40th week of age obtained in three genetic groups revealed that crossbred (DK) perform better and grow faster than the Desi and Khaki Campbell in extensive system of rearing. Duck day egg production per bird at different age in crossbred is intermediate compared to Deshi and Khaki Campbell. The age at first egg of the flock and age at 50 % duck day egg production is better in the present study.

Key word : Khaki Campbell, extensive system, genetic group.

Ducks has been considered as an alternative poultry bird for both egg and meat especially in the coastal and NE states in India, where resources for duck farming is available. Reports on productive performance of indigenous ducks and their crossbreds are available in the literature[3,4] and the comparative performance of indigenous ducks of Orissa with Khaki Campbell and their crossbreds are also available[5,6,7,8]. However, till now the comparative performance of indigenous ducks of Orissa with Khaki Campbell and their crossbreds in extensive system has been assessed in scanty. So the present study was undertaken to evaluate the production performance of native ducks of Orissa (Deshi), Deshi × Khaki Campbell cross and Khaki Campbell in extensive system of rearing.

MATERIALS AND METHODS

A total of 200 Deshi, 140 crosses of Deshi (male) × Khaki Campbell (female) (DK) and 160 Khaki Campbell ducklings produced in single hatch were distributed to the farmers, 20 number each at costal part of Cuttack district of Orissa. All the ducklings were brooded in deep litter system at farmer's field with normal brooding management and feeding. The body weights of the individual birds in all the three genetic groups were recorded at 2nd, 4th, 6th, 8th weeks during growing period and

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at 40th weeks of age during laying period. Egg productions of each genetic group were recorded from the start of laying up to 72nd week of age. Egg weights also recorded at 40th week of age. Age of the flock at first egg and at 50% duck day (DD) egg production was recorded. Duck day egg productions per duck of each genetic group were calculated up to 40, 60 and 72 weeks of age as per the standard formula. Mortality percentage from 2 to 8 and 8 to 40 weeks were calculated. The egg production data and ages at different stages of production were measured in groups. The body weight and egg weight data were analyzed statistically[10].

RESULTS AND DISCUSSION

Body weight of Deshi, Deshi × Khaki Campbell (DK) and Khaki Campbell ducks in combined sex were presented in Table 1 and as well as in Fig.1. Body weights of the ducks at 2nd, 4th, 6th, 8th and 40th week of age obtained in three genetic groups were 269.2±14.20g, 657.8±19.15g, 1104.9±30.15g, 1448.1±36.61g, 1710.3±40.31g in DK; 245.1±4.71g, 438.2±9.08g, 657.3±14.85g, 974.9±17.90g, 1515.1±21.25g in Deshi and 240.8±3.52g, 350.4±7.12g, 600.1±9.45g, 950.3±13.20g, 1610.2±13.75g in Khaki Campbell. It is revealed that crossbred (DK) perform better and grow faster than the Desi and Khaki Campbell in both extensive and intensive system of rearing as reported by earlier workers[4,5,6,8,9]. Further, it was observed that the body weight of DK at 8th week of age was higher than reported by others[5] but in Deshi and Khaki Campbell it is lower. This may be due to different levels of feed available in the different farmer's field. It is revealed that DK ducks recorded significantly higher body weight than Deshi and Khaki Campbell except at 2nd week of age. Age at first egg of the flock was recorded at 126 days in both Deshi and DK, where as Khaki Campbell recorded 121 days which was higher than the earlier report[8,9] in intensive system of rearing. Age at 50% duck day egg production was obtained at 158 days in both Deshi and DK, however in Khaki Campbell recorded 154 days also higher than the earlier report[8] in intensive system.

Duck day egg production per bird at different age is presented in Table 2. Up to 40th week of age duck day egg production per bird was 50.31 eggs in Deshi compared to 54.44 eggs in DK and 62.12 eggs in Khaki Campbell. However, duck day egg productions per bird up to 60th week of age were 88.78 in Deshi, 97.77 in DK and 123.12 in Khaki Campbell. Corresponding duck day egg production up to 72nd week of age were 125.32 in DK, 103.14 in Deshi and 135.11 in Khaki Campbell. Egg weight at 40th week of age in both the genetic groups was 68g without much difference, where as in Khaki Campbell the egg weight was observed 62g, similar to the findings reported at 40th week of age by other workers[8] in intensive system rearing.

The age at first egg of the flock and age at 50 % duck day egg production is better in the present study in all the genetic groups than reported by some workers[2,1,4], however, the value is more than the report of other workers[6,8]. This may be due to difference rearing system and stocks difference. Duck day egg production per bird up to 40th, 60th and 72nd week of age obtained in the present study was lower than the earlier reports[3,4,6,8]. However, the production performance is better compared to the reports of workers[1] in field study. Further, it was agreed that the crossbred had better growth than the Deshi except at 40th week of age, where as Khaki Campbell produced more number of eggs compared to other genetic groups. Mortality % of all the three genetic groups from 2nd week to 8th weeks were 16.2 ± 3.14 and from 8th weeks to 40th week's 3.1±1.16 %. The results revealed that the mortality during early age was higher than the adult stage this is only due to predator.

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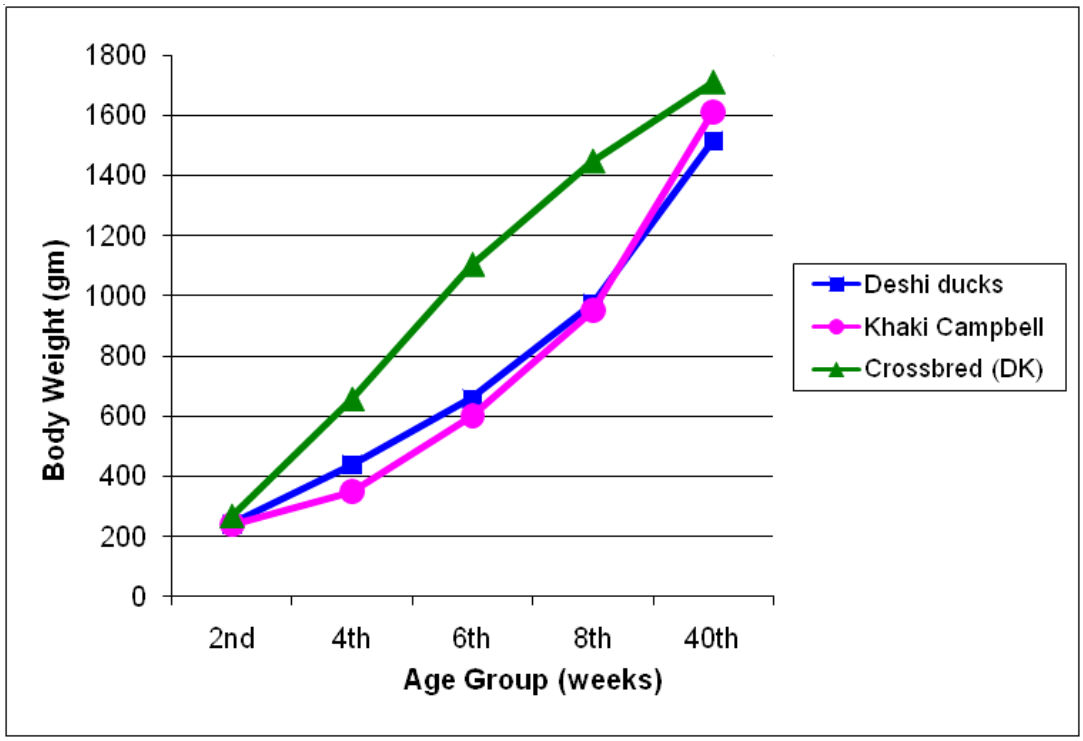
1800
1600
1400
1200
1000
800
600
400
200
0
Body Weight (gm)
2nd
4th
6th
8th
40th
Age Group (weeks)
Deshi ducks
Khaki Campbell
Crossbred (DK)

Fig. 1

CONCLUSION

The present study revealed that the performance of Deshi × Khaki Campbell crossbred ducks are better compared to Deshi and Khaki Campbell ducks in respect to growth. With respect to egg weight and age at sexual maturity they were equal in performance, but compare to egg production Khaki Campbell is better. These results indicated that Khaki Campbell can be reared in extensive system for better egg production.

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