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Comparative Performance of Cross Breed Hampshire and Local Pigs in Field Condition in Zunheboto District

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ABSTRACT

The present study was carried out in Akuluto block of Zunheboto district to study the comparative performance of crossbred Hampshire and local pigs at farmer's field. Data obtained from the study shows that there was significant difference ($P<0.05$) body weight gain per day was 176.79 ± 2.01 and 125.15± 1.96 for crossbred Hampshire and local pigs respectively. Average body weight at 15 months of age was 94.72 ± 0.66 and 60.70±1.02 kg respectively for crossbred Hampshire and local pigs which differed significantly ($P<0.05$). Average weaning weight was 7.20 ± 0.39 and 4.5± 1.05 respectively for crossbred Hampshire and local pigs. Farrowing age and age at sexual maturity was 480.66 ±9.41, 520.88±2.45; 355.335±3.38, 410.55±3.37days respectively for crossbred Hampshire and local pigs which differed significantly ($P<0.05$). Average Number of litter was7.44 ± 0.37 and 4.66±0.33 respectively for crossbred Hampshire and local pigs which differed significantly ($P<0.05$). The result showed that cross bred pigs have a better productive and reproductive character and can be adapted successfully by the farming community.

1. Introduction

In Nagaland where almost 100 percent population consumes pork, pig rearing has a significant role to play in improving the availability of pork as well as for improving the socio-economic status of the farming community. By default pig farmers in the district rear only two to three pigs in traditional system where kitchen waste along with some amount of concentrate mix is fed to the pigs. Pigs reared are almost of local breed which are less productive. Increase in demand of Pork has led to rearing of cross bred pigs where the farmer fetches more income than local pigs. However, till date we don't have much work done at farmer's field. In this experiment an attempt has been made to study the performance of Crossbred Hampshire pigs in comparison to local pigs in field conditions to find its productivity.

2. Materials and Methods

A total of 10 piglets obtained from ICAR, Jharnapani pig breeding arm of six weeks of age were selected for the study. Each farmer was provided with a pair of piglets. The pigs were reared in intensive system of rearing however, feeding of pigs were done in traditional system where locally available fodder, kitchen waste and small mixture of concentrate mix consisting of broken Maize, rice polish, wheat bran along with mineral mixture was fed. The pigs were kept at different location in the Akuluto block in pig sties constructed using locally available materials. Local pigs reared by the farmers were selected to study the local pigs. Deworming was done regularly and proper health care management was taken. During the experimental period data pertaining to growth rate, farrowing age, age at first sexual maturity and numbers of litter was collected at monthly interval. Statistical analysis was done using SPSS software. (SPSS 10.0.1, 1999).

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Table 1. Data on productive and reproductive performance of Hampshire cross breed and local pig at Farmer's field

Parameters	Crossbred Hampshire	Local
Av. Body weight at 15 months(kg)	94.72 ± 0.66[a]	60.70 ± 1.02[b]
Av. Body weight gain per day (g)	176.79 ± 2.01[a]	125.15 ± 1.96[b]
Av. Weaning weight (kg)	7.20 ± 0.39[a]	4.5 ± 1.05[b]
Av. Farrowing age (days)	480.66 ± 9.41[a]	520.88 ±2.45[b]
Age at sexual maturity (days)	355.335 ±3.38[a]	410.55 ±3.37[b]
Average number of litters	7.44 ± 0.37[a]	4.66 ±0.33[b]

Means with different superscript in a row differ significantly $P<0.05$

3. Results and Discussions

Growth rate

The result obtained has been presented in table 1, where it showed that there was significant difference ($P<0.05$) in average body weight, body weight gain of Hampshire cross to that of local pigs. Body weight gain of 176.79 grams and 125.15 grams was reported in the present experiment which is similar to reports by Kumaresan *et al.* (2006) and Chaurasia, R.K (2013). Average daily weight gain observed in this study is far below than the average weight gain of 500-600 grams per day in exotic breeds. The probable reason for the low body weight may be attributed to unconventional feeding systems (Sharda *et al.,* 1976) and reduced intake of energy levels.

Farrowing age

Data obtained in the present study too suggest (Kumarsean *et al.,* 2007) that average farrowing age is 14 months in Hampshire breed in village condition and showed a significant difference ($P<0.05$) in the farrowing age of Crossbred Hampshire to that of local pigs. Farrowing age and age at maturity depends upon the nutritive intake of the animals as well as genetic potential (Kumar *et al.,* 2009).

Litter Size

Litter size at birth showed a significant difference ($P<0.05$) between cross bred Hampshire and local pigs. Similar results were obtained by Kumaresan *et al.* (2007) which suggest that litter size in crossbred pigs is larger. From the above result we can conclude that crossbred Hampshire performed better than the local pigs in village condition and can be taken up by the farmers for maximizing their profits.

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