PORK PRODUCTION EFFICIENCY OF CROSSBRED AND INDIGENOUS INDIAN PIG

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Summary

The present study has been undertaken to evaluate the pork production efficiency of Landrace (LR), Large while Yorkshire (LWY), Local, Landrace X local and large white york shire X local in tropical condition. Growth rate and feed conversion efficiency were studied at organised farm. In village condition only growth rate was recorded. Result suggested that Landrace and its crosses should be used at organised farms where as Large white yorkshire and their crosses with local had superiority over others in growth rate in village codition.

Introduction

Pig production has great scope for meeting our animal protein requirements as well as providing employment and income to the rural and urban poor population. There are more than one crore indigenous pigs in India. Indigenous pigs are poor in production performance compared to exotic pigs. In order to improve the economic traits of the indigenous swine introduction of exotic inheritance is necessary. The present experiment was undertaken to evaluate the growth performance of exotic breeds and their crosses with indigenous stock at the organised farms and in village condition with the objective to recommend suitable breed for grading up the indigenous pigs.

Materials and Methods

Data on growth rate at 4 weeks intervals (except at 26th week) from the birth to 30th weeks of age of 593 pigs belonging to 5 genetic group, viz. Landrace (LR), large white yorkshire (LWY), Local (L) and their halfbreds (LR x L and LWY x L) were collected at Government pig breeding farm, Kanke, Ranchi (Bihar). The piglets were weaned at 8 weeks of age. Against piglet anaemia iron injections were given intramuscularly on 4th and 14th day. They were vaccinated against swine fever before they were 8 weeks of age. Standard feeding schedules were followed. Feed contained maize, 64.0 parts, ground nut-cake 15.0 parts; wheat bran, 12.5 parts, fish meal, 6.0 parts; mineral mixture, 2.5 parts and required quantity of vitamins. Farm animals from each group were taken out at 8 weeks of age and transferred to village. They were provided almost the same feed in village condition but housing and manage ment practices were as per village condition. Feed efficiency performance were also recorded but only in farm raised animals. Statistical analysis was carried out according to Snedecor and Chochran (1968).

Results and Discussion

The growth rate of landrace (LR) and Large white yorkshire (LWY) pigs were almost similar upto 16 weeks of age. After 16 weeks the growth was faster in LR as compared to LWY. The growth rate of Local (L) pigs were inferior through out the period studied. The cross breds differed significantly from each other in growth rate during various periods. The body weight gain for 5 genetic groups for different periods are presented in Table 1. The table shows that crossbreds of LWY x L were superior to LR x L in body weight gain during the entrie growth period of 7 months.

Table 1 - Live weight in various periods in Farm Condition, Mean and S.E.

Age (week)	Overal mean of male and female live weight (kg) LR	LWY	L	LR x L	LWY x L
0	1.30 (181)	1.20 (116)	0.63 (70)	0.65 (132)	1.03 (94)
	±0.03	±0.02	±0.02	±0.02	±0.03
4	5.34 (156)	5.18 (109)	3.26 (65)	3.39 (121)	4.09 (86)
	±0.10	±0.09	±0.13	±0.09	±0.09
8	9.63(147)	9.79(108)	5.30 (60)	6.68 (117)	7.62 (82)
	±0.19	±0.16	±0.20	±0.17	±0.17
12	10.60 (134)	11.65 (97)	6.47 (50)	8.01 (106)	9.24 (72)
	±0.23	±0.25	±0.25	±0.21	±0.16
16	13.56(130)	14.04 (97)	8.16 (50)	11.09 (103)	12.41 (71)
	±0.30	±0.26	±0.35	±0.63	±0.24
20.	20.22 (130)	18.09 (96)	10.50 (44)	13.87 (100)	16.53 (71)
	±0.36	±0.34	±0.90	±0.30	±0.41
26.	32.14 (130)	25.75 (95)	15.26 (42)	19.79 (99)	24.08 (71)
	±0.45	±0.41	±0.191	±0.35	±0.52
30.	41.81 (130)	33.72 (95)	19.00 (42)	25.88 (99)	30.26 (70)
	±0.49	±0.43	±1.20	±0.30	±0.49

Figures in parentheses indicate the number of observations.

The differences in the growth of the 5 genetic groups could be due to the difference in genetic constitution. Similar trend of live weight gain in LWY and crossbred piglets were reported by [illegible] al. (1979). Singh et al. (1979) and Vardarajulu and Rao (1982). The present results in respect to L[illegible] and its half breds are in agreement with the findings of Sharma et al., 1989 and Kumar et al. (1990).

The body weight gains for 5 groups in village rearing are presented in Table 2. The [illegible] growth rate for all groups were almost similar as has been observed for farm condition. However, [illegible] gain per unit of time was inferior for all genetic groups in village condition. The crossbred of LWY x [illegible] significant better growth performance than other groups. This result has however, to be accepted with provision that the number of observations in village condition were small but the general trend was clear.

Efficiency of feed utilisation:

Significant effect of genetic group and age on efficiency of feed utilisation was observed. [illegible] pig showed significantly lowest efficiency (5:76:1) followed LWY (4.45:1) and LR (4:16:1). Among crossbreds the LWY X L (4:62:1) had better efficiency of feed utilisation as compared to LR x L (4.[illegible]). Singh et al. (1990) and Kumar et al. (1990) also reported similar observations for feed utilisation of [illegible] breeds.

Table 2 : Live weight in various period in village conditions - Mean and S.E.

week	Overall means of males and females Live weight (kg)			
LR	LWY	L	LRxL	LWYxL
9.60	9.60	5.30	6.66	7.60
±0.01	±0.12	±0.30	±0.21	±0.25
10.50	11.60	6.31	7.85	8.39
±0.05	±0.23	±0.25	±0.31	±0.31
13.00	14.00	7.75	10.55	11.48
±±0.10	±0.12	±0.18	±0.12	±0.28
17.35	18.00	9.50	12.30	15.13
±0.21	±0.25	±0.01	±0.55	±0.33
30.00	30.80	14.53	17.21	21.59
±0.22	±0.28	±0.28	±0.50	±0.25
34.71	33.60	18.12	23.33	26.81
±0.12	±0.18	±0.31	±0.35	±0.52

nclusion

It can be concluded that the landrace is superior for faster growth rate and efficiency of feed tilisation. For improvement of local pigs the crossing of LWY male with local females exhibited better erformance specially under unadequate management conditions.

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