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Authors: [Kumar, Uttam \(/browse?type=author&value=Kumar%2C+Uttam\)](/browse?type=author&value=Kumar%2C+Uttam)

Advisor: [Bhakt, R. \(/browse?type=author&value=Bhakt%2C+R.\)](/browse?type=author&value=Bhakt%2C+R.)

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Abstract: Present investigation was carried out on the utilization of Niger seed cake as unconventional protein rich feed ingredient in Cross-bred and Desi pigs. For this purpose, study was carried out on 21 Cross-bred and 27 Desi growing piglets. The piglets of both the genetic groups were randomly divided into three groups having 7 in one group of Cross-bred and 9 in Desi pigs. Pigs of all the three groups were fed iso-caloric and iso-proteinous diets as per NRC (1988) recommendation. Pigs of control group (T1) were fed a standard concentrate mixture (with GNC) whereas 50 percent GNC of T1 diet was replaced by NSC in T2 and 100 percent in T3 diet. Body weight of pigs, digestibility of nutrients, plane of nutrition, balances of N, Ca & P, feed conversion efficiency and economics of feeding found in the present experiment are as under. 1. Initial average body weight of Cross-bred pigs in groups T1, T2 and T3, were 15.92 ± 0.52 , 15.92 ± 0.79 and 15.92 ± 0.55 kg, respectively. The corresponding values in Desi pigs were 6.65 ± 0.52 , 6.73 ± 0.58 and 6.65 ± 0.55 kg, respectively, The differences among different treatment groups in both the genetic groups were non significant. 2. After 98 days of experimental feeding the final body weight of Cross-bred of group T1, T2 and T3 were 51.85 ± 1.36 , 57.36 ± 2.16 and 55.42 ± 1.64 kg, respectively and the same for Desi pigs were 15.72 ± 1.85 , 19.50 ± 2.07 and 19.16 ± 1.21 kg, respectively. 3. The overall weight gain during the whole experimental period was recorded to be 35.92 ± 1.36 , 41.42 ± 1.59 and 39.50 ± 1.48 kg in Cross-bred of group T1, T2 and T3 and those of Desi pigs were 9.06 ± 1.41 , 12.76 ± 1.61 and 12.51 ± 0.72 kg, respectively. 4. Treatment had non significant influence on body weights at all the age under study. The 50% and 100% replacement groups gains more body weight than the control group. The better effect on growth observed in 50% replacement group. 5. In Cross-bred and Desi pigs general digestibility co-efficient was found to be superior in group T2 followed by groups T3 and T1, however, digestibility coefficient of CF was higher in group T1 followed by groups T2 and T3 in both the genetic groups. The differences among the three treatment groups were statistically non-significant. 6. There was non-significant difference in DM, CP, DCP, TDN, DE and ME intake in pigs of groups T1, T2 and T3 of both genetic groups. 7. Balances of N, Ca and P were positive in all the three groups. The N, Ca and P balances were higher in group T2 than T3 and lowest in control group (T1) in both the genetic groups. 8. The feed conversion efficiency ratio were calculated to be $3.53 \pm 0.13:1$, $3.28 \pm 0.21:1$ and $3.27 \pm 0.12:1$, respectively in groups T1, T2 and T3 for Cross-bred pigs. The corresponding values in Desi pigs were $5.08 \pm 0.37:1$, $4.03 \pm 0.34:1$ and $3.95 \pm 0.36:1$, respectively. The differences among all the groups were non-significant in both the genetic groups. 9. The cost of feed per kg gain in live weight was lowest in pigs maintained on T3 diet (Rs. 40.81 and 48.98) followed by T2 diet (Rs. 42.74 and 52.51) and highest on T1 diet (Rs. 47.93 and 68.98), in Cross-bred and Desi pigs, respectively during experimental period. **CONCLUSION** The results, in general suggest that niger seed cake, which is extensively produced in Jharkhand and is cheaper than groundnut cake can completely replace in pig grower ration. The present studies indicated that unconventional niger seed cake is useful for feeding of growing pigs to cut down the cost of feed. It can most successfully and economically be used in pig feeding systems. Replacement of GNC with NSC had beneficial effects on growth, digestibility of all major nutrients, intake of protein and energy, retention of nitrogen, calcium and phosphorus and feed efficiency ratio.

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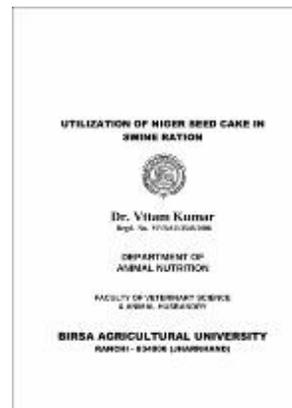
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