Feeding Effect of Garbage Compared to Supplementation of Concentrate Independently and in Combination with Mineral Mixture on Growth of Piglets

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Abstract
Food waste (garbage) is a cheap source of nutrition to pigs. High feed cost is a limiting factor for the development of pig industry in India. This paper examines the growth and production cost of piglets exclusively fed on garbage, compared to those fed on concentrate supplementation independently and in combination with mineral mixture along with garbage for a period of three months. Thirty six piglets of Yorkshire breed of 3 months of age were divided in to three groups with twelve piglets in each group. The first group of piglets was given garbage ad lib that served as the control (T-1). The second group (T-2) was given concentrate @ 300 g, 400 g, and 500 g in 1st, 2nd, and 3rd months of the experiment, respectively along with garbage. The third group (T-3) was given mineral mixture @ 10 g/day, besides concentrate mixture as given to T-2 animals along with garbage. The final body weight (kg) and the average daily gain (kg) of the piglets were 51.4±0.20 and 0.45± 0.02 kg respectively in T1 group, 56.2±0.41 and 0.49±0.01 kg respectively in T2 group, and 59.1±0.52 and 0.53±0.01 kg respectively in T3 group. The differences between the groups with respect to final body weight and average daily gain in body weight were statistically significant (P≤0.01). The auxiliary feed cost per kg live weight gain in T3 group (Rs. 95.30) was lower than in T2 group (Rs. 142.50). It is concluded that the growth of the piglets under ad lib solo feeding of garbage can be augmented with concentrate and mineral supplementation. The combination was more cost effective than either of the supplements alone.

Key words: Piglets, Garbage, Concentrate, Mineral mixture

Swine industry with relatively low profit margin, particularly due to high cost of feed, is still a difficult venture in India (Njuki et al. 2010). The feeding of food waste (garbage) to swine is a common practice throughout the world and is often concentrated around metropolitan centres, as it de-escalates the production cost. But, its low dry matter content (27%) retards the nutrient intake, thus limits productivity (Westendorf et al., 1999). This paper elucidates the growth performance and cost-effectiveness of piglets under garbage feeding, compared to supplementation of diet with concentrate independently and in combination with mineral mixture along with garbage.

Materials and Methods
The present study was carried on 36 Yorkshire piglets of 3 months of age of both sexes reared at Instructional Livestock Farm Complex (ILFC), TANUVAS, Chennai-51. The pigs were divided into three groups with 12 piglets in each group.

The first group of piglets was given garbage ad lib that served as the control (T1). The garbage obtained from hostels of Vellammal Educational Institute. The second group (T2) was given concentrate mixture @ 300 g, 400 g, and 500 g in 1st, 2nd and 3rd months of the experiment, respectively, along with garbage. The third group (T3) was given mineral mixture @ 10g/day, besides concentrate mixture as given to T2 animals along with garbage. The animals were maintained under the above feeding schedule for three months. The concentrate mixture contained 60% maize, 20% wheat bran, 17% soya, 2% mineral mixture and 1% salt and 2700 kcal/kg metabolizable energy (ME). The one kg of mineral mixture contained calcium-23%, phosphorus- 12%, magnesium-6.5%, iron- 0.5%, iodine- 0.026%, copper- 0.077%, manganese- 0.12%, cobalt- 0.012%, zinc- 0.38%, sulphur-0.5%, fluorine-0.07%, selenium-0.3ppm. The data on body weights and the additional cost per kg weight gain were statistically analyzed by the method described by Snedecor and Cochran (1994).
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