

Improving the Growth Performance of Beetal Goat Kids Weaned at Various Stages with Various Levels of Dietary Protein in Starter Ration under High Input Feeding System

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Abstract : Poor feeding management during pre-weaning period is one of the factors resulting in compromised growth of Beetal kids fattened for meat purpose. The main reason for this anomaly may be less milk offered to kids and non-serious efforts for its management. This study was planned to find the most appropriate protein level suiting the age of the weaning while shifting animals to high input feeding system. Total of 42 Beetal male kids having 30 (± 10), 60 (± 10) and 90 (± 10) days of age were selected with 16 in each age group. They were designated as G30, G60 and G90, respectively. The weights of animals were; 8 ± 2 kg (G30), 12 ± 2 kg (G60) and 16 ± 2 kg (G90), respectively. All animals were weaned by introducing the total mix feed gradually and withdrawing the milk during the adjustment period of two weeks. The pelleted starter ration (total mix feed) with three various dietary protein levels designated as R1 (16% CP), R2 (20% CP) and R3 (26% CP) were introduced. The control group was reared on the fodder (Maize). The starter rations were iso-caloric and were offered for six-week duration. All animals were exposed to treatment using two-factor factorial (3×3) plus control treatment arrangement under completely randomized design. The data were collected on average daily feed intake (ADFI), average daily gain (ADG), gain to intake ratio, Klieber ratio (KR), body measurements and blood metabolites of kids. The data was analyzed using aov function of R-software. The statistical analysis showed that starter feed protein levels and age of weaning had significant interaction for ADG ($P < 0.001$), KR ($P < 0.001$), ADFI ($P < 0.05$) and blood urea nitrogen ($P < 0.05$) while serum creatinine and feed conversion had non-significant interaction. The trend analysis revealed that ADG had significant quadratic interaction ($P < 0.05$) within protein levels and age of weaning. It was found that animals weaned at 30 or 60 days, on R2 diet had better ADG (46.8 gm/day and 87.06 gm/day, respectively) weaned at 60 days of age. The animals weaned at 90 days had best ADG (127 gm/day) with R1. It is concluded that animal weaned at 30 or 40 days required 20% CP for better growth performance while animal at 90 days showed better performance with 16% CP.

Keywords : average daily gain, starter protein levels, weaning age, gain to intake ratio

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