

Performance of Growing Black Bengal Goat Fed Compound Pellet of Different Diameters

Abstract

An experiment was conducted at Animal Nutrition Laboratory, Bangladesh Agricultural University, Mymensingh to observe the effect of different diameters of pellet diet on the performance of Black Bengal goat. Three diameter of a compound pellet diet such as D10, D8 and D6 (D10-10mm, D8-8mm and D6-6mm) were prepared according to NRC (1981) nutrient requirement and fed to goats of three groups. Insignificantly highest weight gain was observed in D10. Total Dry matter intake (kg), total crude protein intake (kg), metabolizable energy (MJ) intake (total, 100kg-1 LW d-1, kg-1W.75 d-1) and MEI/LWG (MJ/kg) were gradually increased with the decrease of pellet diameter but the difference of the parameters among the treatment groups were not significant ($p>0.05$). Both DM and CP intake (100kg-1LW d-1, kg-1W.75 d-1) were also increased with the decrease of diameter where D6 showed significantly ($p<0.01$) higher than other two groups. Insignificantly better FCR and PCR was observed in larger diameter pellet group. Digestibility of DM, OM, CP, EE, NFE, NDF and ADF was increased with the increase of pellet diameter where D10 and D8 showed significantly higher ($p<0.05$) DM, OM, NDF and ($p<0.01$) EE, NFE and insignificantly higher ($p>0.05$) CP and ADF digestibility value than D6. Digestibility of CF was highest in D8 but both D10 and D8 showed higher ($p<0.01$) digestibility than D6. Similarly nutritive value of CF, EE, NFE and TDN was significantly higher ($p<0.01$) in D10 and D8 and insignificantly higher ($p>0.05$) CP and D value in D10 and D8 than D6. Though nitrogen intake, outgo in feces and excretion in urine was highest in D6 and nitrogen retention was highest in D10 but the difference among the treatments was not significant ($p>0.05$). Dressing percentage, meat yield, price of meat, total sale price was insignificantly higher ($p>0.05$) in D10 and D8 and feed cost, total rearing cost, cost per kg weight gain and per kg meat yield was insignificantly higher ($p>0.05$) in D6. Highest profit was found in D10 and lowest in D6 and the difference was huge (Tk. 262.51) but did not differ

significantly. It can be said that pellet with 10mm diameter may be used for economic goat production in stall feeding system.