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Feed and Management Interventions for Increased Milk Production in Zebu Cattle at Ibadan

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Abstract

Milk production in Zebu cattle is limited by their low genetic potentials, poor nutrition and poor management practices. In Nigeria, cattle are grazed extensively on low quality native pastures which have low protein content and poor digestibility. This is further complicated by poor water supply, endemic parasite infestation, heat stress and scarcity of forage during the dry season. Under these conditions, productivity of Zebu cattle is predictably low. In order to minimise the negative effects of poor nutrition and stressful environment, different feeding and management interventions were introduced at the University of Ibadan, to improve milk production and general performance of Zebu cows or heifers. These include fodder cropping, silage production, tick control measures and evaporative cooling of cows. Fodder cropping, particularly, elephant grass (*Pennisetum purpureum*) was found to be suitable for silage-making and fresh-cut feeding of cattle. Introduction of silage into the diet improved growth rate of Zebu heifers by 100 % (400–800 g d^{-1}) and milk yield of cows by about 125 % (average of 2.0–4.50 kg d^{-1}). Tick control measures and evaporative cooling of heifers during hot weather also enhanced growth rate by an average of 121 % (av. 300–663 g/d^{-1}) and 64 % (av. 380–643 g/d^{-1}) respectively. Evaporative cooling also enhanced animal comfort and dry matter intake of Zebu heifers in the hot environment. Rectal temperature of heifers dropped from 39.3°C to an average of 38.3°C in the afternoon when cooling measures were applied while dry matter intake increased from 2.08 to 3.78 % of body weight. These interventions when adopted have great potentials to enhance productivity and milk output from Zebu cattle in Nigeria and other tropical countries.

Keywords: Evaporative cooling, milk yield, silage, tick control, Zebu cattle

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