

PREPARATION OF CATTLE FEED BLOCKS USING AGRICULTURAL WASTES

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Scarcity of high quality feeding materials is a major constraint in dairy industry, especially during droughts. This study was conducted to prepare a nutritious, conservable and cost effective cattle feed blocks incorporating different agricultural wastes. Four nutritionally diverse feed blocks (B1, B2, B3 and B4) were prepared using different proportions of rice straw, rice bran, coconut poonac, urea, different binders and mineral ingredients. Among the feed blocks, B3 contained 89.6% dry matter, 14.5% crude protein, 1.5% crude fat, 30.7% fiber, 0.9% calcium and 0.7% phosphorus. Five treatment diets; T1 (only fresh CO3 grass), T2, T3, T4 and T5 (each with 5 kg fresh CO3 + B1, B2, B3 and B4, respectively) were tested in an on-farm trial using fifteen Jersey x Sahiwal cross bred heifers to evaluate these feed blocks. Trial was conducted in a Complete Randomized Design with three replicates. Prepared diets were given according to their body weights. Daily feed intake and live weight gain of each animal were measured and recorded. Data were analyzed using one way Analysis of variance in SAS. Average daily dry matter intake and live weight gain of heifers fed with T2, T3 and T5 diets were higher ($p < 0.05$), compared to the heifers fed with the control diet (T1) and T4. The highest ($p < 0.05$) average daily feed intake (5.6 ± 0.5 kg/day) and live weight gain (0.5 ± 0.1 kg/day) were recorded in heifers fed with T3 diet. All feed blocks could be kept for 45 days under sealed polyethylene package conditions, without any quality deterioration. Thus, block 3 (B3) can be recommended as the best to be fed with fresh forages having protein and energy balance during roughage scarcity, at low cost.

Keywords: Agricultural wastes, Dairy, Feed block