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Effects of Agricultural By-Products in Feed and Feeding Regime on Early Stage of Dairy Buffaloes

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Abstract

This study investigates the nutritional composition of the agricultural by-products and the effects of feeding diets containing agricultural by-products on the productivity dairy buffaloes during the early lactation stage. Sample of rice-bran, soy waste, and palm kernel cake (PKC) were subjected for proximate analysis and has been formulated as a dairy buffalo feed. In this study, ten female Murrah buffalo were randomly allocate into two dietary experimental groups (n=5), treatment and control group. Buffaloes in the treatment group were fed with formulated agricultural-by product feed and Pennisetum purpureum meanwhile control group were fed with farmer's feed and Pennisetum purpureum. This experiment was held for three month which was considered as early lactation stage of dairy buffaloes. The result showed rice bran contain 11.4% crude protein, 5.3% crude fat, 4.3% crude fiber, 5.6% ash and 7.36% moisture. Palm kernel cake contain 16.65% of crude protein, 7.69% of crude fat, 12.11% of crude fiber, 2.8% ash and 7.36% moisture. Meanwhile, soy waste contains 11% of protein, 1.6% crude fat, 40.7% of crude fiber, 4.5% ash and 12.8% moisture. In production result, treatment group have significantly difference ($P < 0.05$) of body weight gain and milk yield compare to control group. The milk composition of buffalo in treatment group have better ($P>0.05$) fat, protein, solids-non-fat (SNF) compare to control group. In conclusion, agricultural by product could be used as dairy buffalo feed as to improve the growth performance and milk production without adverse effect.

Keywords: *agricultural by-product, dairy buffaloes, growth performance, nutritional composition*