

Potential of feeding beef cattle with whole corn crop silage and rice straw in Malaysia

ABSTRACT

The potential of using whole corn crop silage and rice straw as an alternative feed for the beef cattle based on the intake and growth performance were evaluated. Using randomised completely block design, nine adult Mafriwal cattle were blocked into three groups and treated with three different forage diets supplemented with 20% pelleted palm kernel cake on dry matter basis. The treatments were 100% rice straw (RS), 100% corn silage (CS) and an equal mixture of rice straw and corn silage (MIX) fed ad libitum. The animals were housed in individual pens, and the feeding trial was conducted for 12 weeks with 2 weeks of adaptation period. The results showed that CS had the best feed nutritive composition with the lowest concentration of highly indigestible fibre and the highest concentration of organic matter and energy. The CS also had the highest intake, and the corn silage inclusion in MIX managed to improve the intake on par with CS in terms of the dry matter intake of body weight (DMI of BW), voluntary intake (VI) and crude protein (CP) intake. Cattle fed with CS gave the highest and most stable BW gain with an average daily gain (ADG) of 808 g/day rivalling cross-bred cattle fed with high amount of concentrates. The all straw diet (RS) supplemented with PKC recorded a positive ADG of 133 g/day while the MIX gave 383 g/day matching total Napier grass diet.

Keyword: Beef cattle; Corn silage; Digestibility; Growth performance; Intake; Rice straw