

Utilization of oil palm frond - based diets for beef and dairy production in Malaysia

ABSTRACT

Oil palm fronds (OPF) are one of the main by-products of the oil palm industry in Malaysia. It contains about 38.5% crude fibre with ME values of about 5.65 MJ/kg dry matter. OPF has great potential to be utilized as a roughage source or as a component in a complete feed for ruminant animals. This paper briefly reviews the availability of OPF in Malaysia and its importance in the local beef and dairy industry. About 26 million metric tonnes of OPF are produced on dry matter basis annually during pruning and replanting operations in the plantations. The nutritive value of OPF and studies to improve its feeding value is highlighted. The optimum level of inclusion for ruminant feeding is 30% and improvement to intake and digestibility can be further enhanced with addition of other oil-palm by-products. Performances of beef and dairy cattle fed fresh OPF or as silage, pellets and cubes are shown. Good quality OPF silage can be produced without using any additive and the significant improvement on the rate of growth and milk yield were shown. With good formulations, OPF based diets can allow live weight gains of between 600-850 g/day and for local crossbred dairy animals, milk yield of about 11.1 to 20.3 liter/day can be obtained. Pellet based on ground OPF seemed to be less well utilized for ruminant feeding due to its smaller particle size. OPF based cubes which have longer particle size is more suitable for beef and dairy cattle. Long-term feeding of OPF based feeds have been shown to produce good quality carcasses, and the meat is safe for consumption.

Keyword: Beef cattle; Cube; Dairy cattle; Oil palm fronds; Pellet; Production; Silage