

Energy utilization models of cattle grazing in oil palm plantations II. validations of models

ABSTRACT

This study showed that models of energy utilization (EU) developed for grazing cattle in oil palm plantations is valid as the simulated results shows an agreement with actual data of calves and cows body weight changes collected from Brahman x Kedah-Kelantan herd on Pengeli Timor Plantation. Simulation runs on EU models demonstrated that the growth pattern of male and female calves and the weight changes of cows are similar and showed slight variation from the actual data but with no significant difference ($p>0.05$). Parameter values such as metabolizability (q), dry matter digestibility (DMD) of herbage and voluntary intake of grazing cattle (NIG) and faecal output/body weight ratio (F) of the animals which were collected from the field are essential in bearing the pattern of body weight changes of the calves production system. The EU models is suitable for determining the metabolizable energy requirements and to predict the production of grazing cattle according to quality of the feed on offer.

Keyword: EU models; Validation; Calves; Cow; Grazing; Plantations