

Nutrient intake and digestibility of fresh, ensiled and pelleted oil palm (*Elaeis guineensis*) frond by goats

ABSTRACT

Oil palm frond (OPF) is a new non-conventional fibrous feed for ruminants. Evaluation on the nutritive values and digestibility of OPF was carried out using goats. In a completely randomised design, 20 local male goats were assigned to evaluate fresh and different types of processed OPF. A 60 day feeding trial was done to determine the digestible nutrient intake of fresh, ensiled and pelleted OPF and its response on live weight gain of goat. The pelleting of OPF increased ($p<0.05$) intake compared to fresh or ensiled OPF. The OPF based mixed pellet (50% OPF with 15% palm kernel cake, 6% rice bran, 6% soybean hull, 15% molasses, 2% fishmeal, 4% urea, 1.5% mineral mixture and 0.5% common salt) increased ($p<0.05$) nutrient intake, digestibility and reduced feed refusals. The mixed pellet also increased digestible dry matter intake (DDMI) and digestible organic matter intake (DOMI) at 80% and 63% level respectively than the fresh OPF. The increased digestible nutrient intake on the OPF based mixed pellet, resulted in increased live weight gain of goats. Furthermore, OPF has a good potential as a roughage source when it is used with concentrate supplement. OPF based formulated feed in a pelleted form could be used as a complete feed for intensive production of goat and other ruminants.

Keyword: Digestibility; Ensiled; Fresh; Goats; Nutrient intake; Oil palm frond; Pelleted