

## The effect of cutting interval on yield and nutrient composition of different plant fractions of *Moringa oleifera* tree

### Abstract

An experiment was carried out to evaluate the effect of cutting interval on biomass yield and chemical composition of different plant fractions of *Moringa oleifera*. In a completely randomized block design experiment, an established *Moringa* plot was divided into 12 equal plots and subjected to three cutting intervals of 4, 6 and 8 weeks, each with four replications. The highest fresh and dry matter (DM) yields ( $t\ ha^{-1}\ cut^{-1}$ ) of total foliage, leaf and stem were obtained at the 8 weeks cutting interval followed by 6 and 4 weeks cutting interval. Effect of leaf to stem ratio was not significant ( $P > 0.05$ ) among harvesting intervals. The CP content of total foliage, leaf and stem was not different ( $P > 0.05$ ) over the harvesting intervals. The acid detergent fibre (ADF), neutral detergent fibre (NDF) and acid detergent lignin (ADL) of total foliage was significantly ( $P < 0.01$ ) lower in 4 and 6 weeks interval than 8 weeks interval. Ca and P contents of leaf and total foliage were not significantly ( $P > 0.05$ ) different among the treatments. The values of IVDMD and IVOMD ranges were from 772.0 to 802.0 and 761.0 to 798.0  $g\ kg^{-1}\ DM$ , respectively. Both yields and chemical compositions of *Moringa* foliage and leaf suggest that the optimum cutting interval was 8 weeks in rainy season from mature *Moringa* tree. These data suggest that the higher CP and lower fibre value in the leaf indicate a good protein source for poultry or other monogastric animals and *Moringa* foliage could be a potential protein source for ruminant livestock.

**Keyword:** Animal feed; Cutting interval; *Moringa oleifera*; Nutrient composition; Yield