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Effect of grazing on botanical composition and stratification of natural herbage in a coconut land

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Herbage in a coconut land is subjected to changes in botanical composition, stratification and dry matter content. The objective of this study was to determine the changes occurred in the herbage in a coconut land under grazing and non-grazing conditions. The experiment was conducted in a coconut land in Kamburugamuwa in Matara district. Twelve cross bred heifers of mean age of 18±6 months and weighing 155±6.6 kg were randomized into six paddocks, each of 0.4 ha. The treatments were namely coconut without cattle (T_1); coconut with fertilizer without cattle (T_2); coconut with cattle fed with natural herbage (T_3); coconut with cattle fed with natural herbage + tree fodder + low cost concentrates (T_4). The experimental design was a randomized complete block design with three replicates. Pasture sampling was done at bimonthly intervals. Dry matter yield, botanical composition and crude protein content of pasture were determined. Percentage of grass species has been increased in grazing treatments (around 80 %) and has been decreased in non-grazing treatments (lower than 5 %). Common grass species available are *Axonopus affinus* and *Axonopus compressus*; both are edible to cattle. Percentage of species other than grasses and legumes has been increased in non-grazing treatments (60-70 %) and has been decreased in grazing treatments (around 15 %). Common examples are *Euphatorium odoratum*, *Ocimum tenuiflorum*, *Urena lobota*, *Lantana camera*; they are non edible weeds. Lower stratum of herbage (15 cm >) has become dominant in grazing treatments, while it has been suppressed in non-grazing treatments. The reason for this suppression is mutual shading by upper layer of herbage. Upper stratum of herbage (15 cm <) has become dominant in non-grazing treatments, while it has been suppressed in grazing treatments. Grazing reduces the cost of weeding considerably. In T1 and T2, weeding had to be done four times a year and the weeding cost was Rs 5000/ha/yr while in T3 and T4, once a year was enough and weeding was required only to remove non-edible weeds. Therefore, the cost was only Rs 1250/ha/yr. The results revealed that grazing positively improved the botanical composition of herbage as indicated by the higher grass percentage in grazing treatments. These results suggest that the yield and quality of natural herbage under coconut could be improved through grazing.

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