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EFFECT OF FREQUENCY OF DEFOLIATION ON YIELD AND FEEDING VALUE OF CLONE-13 GRASS (HYBRID NAPIER)

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Mid country of Sri Lanka is a potential area to improve the small holder dairy industry however, due to the land scarcity, the animals are being fed with poor quality mature Guinea "A" grass and forages harvested from roadsides and common property. Concentrate feeding is also not possible due to their high prices therefore, high yielding Napier grasses especially Clone-13 (*Pennisetum purpureum* * *Pennisetum americanum*) could play an important role. Clone-13 is a hybrid Napier introduced to Sri Lanka from Kenya in recent years. Unlike the parents, most of the hybrids have high productivity and could stay a longer period under vegetative phase. The grass can grow well in eroded lands and can be used under SALT system. However, yield and feeding value of clone-13 under local conditions are lacking. Therefore, objectives of the present study were to find out the effect of frequency of defoliation on dry matter yield and feeding value of clone-13 grown in marginal tea lands.

Clone-13 was established in plots (2 * 3 meters / plot, 9 plots) in a marginal tea land at Uda Peradeniya. It was a randomized complete block design with 3 replicates. Three frequency of defoliation, namely 45, 60 and 75 days after harvesting were used and, fresh matter yield per plot at a given frequency was measured. Sub samples from individual plots were taken and used to measure the dry matter percentages. Using dry matter percentages, dry matter yields were calculated. Dried sub samples were used in laboratory analysis (crude protein, crude fibre and ash). Repeated cuttings were taken from each frequency for a period of 8 months. Data were statistically analyzed and means were compared using DMRT.

Highest mean total dry matter yield was observed with 60 days frequency of harvesting while 45 days of harvesting showed the lowest. Crude protein content was decreased whereas, crude fibre was increased with the maturity of forages. According to the results, frequency of harvesting of 45 days is not suitable for the survival of plants under no fertilizer application. Frequency of harvesting of 60 days gave the highest dry matter yield with an average quality.