



Effect of harvesting interval and cutting height on forage yield and proximate composition of hedge lucerne (*Desmanthus virgatus*) in *Cocus nucifera* based hortipasture system

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Abstract

The present study was conducted to find out the effect of harvesting interval and cutting height on the yield and nutrient composition of hedge lucerne (*Desmanthus virgatus*) grown under *Cocus nucifera* based hortipasture system by comparing three levels of harvesting intervals viz., 30, 40 and 50 days between harvests and three levels of cutting heights at 10, 20 and 30 cm, laid out in 3 x 3 factorial randomized block design, replicated thrice. At 75 days after sowing, all the plants were cut to 30 cm above ground level and the upper parts of the plants removed. The residual plants were then allowed to regrow and cut again after a further 30, 40 and 50 days, to the 3 cutting heights respectively of 10, 20 and 30 cm, above ground level to measure yield. Harvested leaf and stem samples were analyzed separately for crude protein (CP), crude fibre (CF), total ash (TA), ether extract (EE) and nitrogen-free extract (NFE). The results showed that across harvesting intervals and cutting height, CP and NFE content were significantly higher in leaves compared to stem whereas the CF was significantly higher in stem compared to leaves. The study revealed that significantly highest crude protein was observed at 10 cm cutting height in 30 days harvesting interval. Even though green fodder yield at shorter harvesting interval was low, the quality of fodder was good as observed from higher crude protein and lower crude fibre contents. Hence, it was recommended that harvesting of *Desmanthus virgatus* at 30 days interval at 10 cm cutting height above ground level could be advocated for production of protein rich fodder with higher nutritive value.

Keywords: Cutting height, *Desmanthus virgatus*, Fodder yield, Harvesting interval, Proximate composition