

NUTRITIVE VALUE OF GRASS SPECIES PALATABLE TO SAMBAR DEER (*Rusa unicolor*) IN HORTON PLAINS NATIONAL PARK

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Sambar deer (*Rusa unicolor*) is classified as a browser since it secretes viscous saliva and consists of the relatively less stratified rumen. However, they often gathered in herds for communal grazing in Horton Plains National Park (HPNP) grasslands dominated by native *Chrysopogon zeylanicus* and introduced *Pennisetum cladestinum* and *Pennisetum glabrum* species. The present study investigated the nutritional value of more palatable grass species for sambar in HPNP grasslands. Grazing sambar was observed along a transect from Pattipola entrance to Ohiya in HPNP at three observation circles (100 m radius) from 6:00 to 8:00 hours and 15:00 to 18:00 hours on three consecutive days of every month during 2020. The grass patches where sambar grazed in higher numbers were assumed to contain more palatable grass species. In each observation circle, those grass patches were marked, and the species composition was recorded using a quadrat ($n = 6$). The most common grass species was *P. cladestinum* followed by *P. glabrum*, *C. zeylanicus*, *Garnotia exaristata*, and *Andropogon lividus*. Edible plant matter of the most common five grass species was collected ($n = 6$), and proximate composition, organic matter digestibility (OMD), and metabolizable energy content (ME) were estimated. The most palatable *P. cladestinum* had the highest ($p < 0.05$) crude protein (CP) percentage (10.46 ± 0.37), followed by *P. glabrum* (8.27 ± 0.57). The CP percentages of less palatable *C. zeylanicus*, *G. exaristata*, and *A. lividus* (7.46 ± 0.23 , 6.60 ± 0.15 , and 6.73 ± 0.14 , respectively) were lower than *P. cladestinum* ($p < 0.05$). The native grass species in HPNP, *C. zeylanicus* had the lowest ($p < 0.05$) OMD ($33.51 \pm 1.43\%$) and ME (4.9 ± 0.21 MJ/kg). The results suggested that high CP percentage in *P. cladestinum* caused sambar in HPNP to shift from browsing to grazing, and further studies are needed for confirmation.

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