

Potential of palmyrah (*Borassus flabellifer*) leaf powder as ruminant feed and its chemical and physicochemical properties

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Palmyrah (*Borassus flabellifer*) leaves are utilised as a supplementary animal feed in the Northern and Eastern provinces of Sri Lanka due to its nutritional value and availability throughout the year. However, palmyrah leaves are currently not utilised as storable animal feed, nor have there been any studies to determine the potential of using palmyrah leaf powder as animal feed. The objectives of this study were to determine the nutritional value and physicochemical properties of palmyrah leaf powder and to explore the potential of using powdered palmyrah leaves as an animal feed. Sundried, chopped and ground palmyrah leaves were sieved through a mesh (no 18) and the chemical composition and physicochemical properties of this powder were analysed using standard methods. Further, the economic viability of using this powder as ruminant feed was also assessed. The nutrient composition of palmyrah leaf powder was as follows (w/w percentages): crude protein 10.84 ± 0.45 , ether extract 5.36 ± 0.08 g and ash 7.04 ± 0.26 . The energy content of the powder was 17.65 KJ and it contained 7.47 ± 0.12 w/w % of moisture. Physicochemical properties of the powder are as follows; pH 5.67 ± 0.01 , total soluble solids 1.62 ± 0.01 Brix, inverted sugar 1.64 ± 0.01 , bulk densities 36.22 ± 2.75 g/cm³, water holding capacity 2.76 ± 0.06 g/1g dry sample, oil holding capacity 1.97 ± 0.08 g/1g dry sample and swelling capacity 61.66%. These results show that palmyrah leaf powder has potential as a feed resource and can be used to feed ruminants especially in the Jaffna peninsula.