With the onset of the dry season in the semi-arid tropics, pasture quality declines rapidly. Previous studies (Lemerle et al. 1980) showed animal live weight change followed but lagged behind pasture digestible dry matter availability and pasture nitrogen content, suggesting that the animals' diet may have consisted of forage material in addition to that available from pasture, particularly browse species.

A study was undertaken to ascertain alternative feed sources, apart from pasture species, selected by cattle during the dry season compared with the wet season. Steers grazing tropical tallgrass native pastures at the James Cook University Research Station, Charters Towers, were monitored at one minute intervals throughout the daylight hours (0600 - 1700 hrs) on two consecutive days during the wet season (May 1980) and dry season (October 1980). Cattle were recorded as standing, lying, walking, drinking, grazing grass, grazing litter or grazing browse; time spent on each activity in the two seasons is shown in Fig. 1.

FIGURE 1 Total time spent by cattle on different activities during daylight hours in the semi-arid tropics

Grazing occurred in the early morning and late afternoon on all days. Total daylight grazing time was greater in the wet season than the dry season, and was concentrated into a shorter period of the day. Resting hours were longest during the dry season, mainly due to an increased time spent standing compared with the wet season. Browsing was observed only in the dry season, when pasture quality had declined. Species browsed were Parkinsonia aculeata, Atalaya hemiglauca, Jasminium lineare, Lysiphyllum carronii and Grevillea parallela.

The extent to which browse species make a significant dietary contribution needs further study, especially as one-third of total grazing can occur at night in the tropics (Schottler et al. 1975), an aspect not investigated here. Further investigations are also required on the nutritive value of native browse species. The large number of such species growing in the semi-arid tropics provides potential feed reserves for survival feeding in the dry season.


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