

GRAZING BEHAVIOUR OF HORSES ON S.E. QUEENSLAND PASTURES

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It has been reported by Kiley-Worthington (1987) that when compared with horses at pasture some stabled horses are unable to fulfill their evolutionary time for eating because they are fed a limited amount of hay. Time spent eating may be as little as 36 hours daily and extended periods of inactivity may lead to stable vices including crib biting, wind sucking and weaving. It was the object of this study to determine under Queensland grazing conditions the time that horses spend eating as an aid to the nutritional management of stabled horses.

The daily grazing behaviour of six mature Thoroughbred type horses was recorded in a ten hectare paddock at the University of Queensland veterinary farm at Pinjarra Hills. The pasture association in this paddock consisted of blue couch grass (*Digitaria didactyla*), lotononis (*Lotononis bainessi*), white clover (*Trifolium repens*) and setaria (*Setaria anceps*). Pasture available was 1.9t DM/ha and its organic matter and nitrogen contents were 913 and 13.6 g/kgDM respectively.

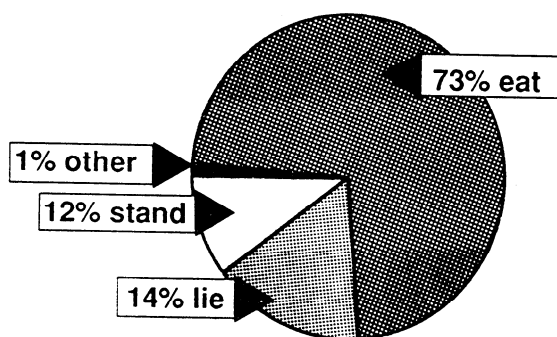


Fig. 1 Time budget for horses grazing Queensland pastures

It is shown in fig. 1 that the horses spent 17.3 hours eating and the remainder of the day resting, standing, drinking and defaecating. This period of eating was sufficient to supply the horses' nutrient requirements since Gallagher and McMeniman (1988) reported that the digestible energy and digestible nitrogen intakes of these animals satisfied recommendations of the National Research Council for pregnant and non pregnant mares. The present study also confirmed overseas results of Kiley-Worthington (1987) and Carson and Wood-Gush (1983) that grazing horses spend at least 16 hours eating each day.

In contrast, Duncan (1980) observed that even when stabled horses were fed hay and straw ad libitum they only ate for 11.2 hours daily. Behavioural problems associated with long periods of inactivity suggest the need to provide a daily period of grazing for stabled horses. The nutritional management of the stabled horse also differs from the pasture fed horse in that usually rapidly consumed concentrates are included in the ration. Extension of eating time when concentrates are fed can be achieved by mixing them with chopped hay (Gallagher and Hintz 1988) or by feeding extruded feeds rather than pelleted or unprocessed grain (Hintz et al. 1985).

Carson, K. & Wood-Gush, D.G.M. (1983) *Appl.Anim.Eth.* 10, 179-190.

Duncan, P. (1980) *Behav.* 72, 26-47.

Gallagher, J.R. & McMeniman, N.P. (1988) *Equine Vet.J.* 20 (6), 414-416.

Gallagher, J.R. & Hintz, H.F. (1988) *Proc.Aust.Soc.Anim.Prod.* 17, 399.

Hintz, H.F., Scott, J.K. Hernandez, T. & Shewokis, L. (1985) *Cornell Nut.Conf.* 81-85

Kiley-Worthington, M. (1987) 'The behaviour of horses: in relation to their training and management. Allen and Co. London.

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