RATE OF FEED INTAKE AND HORSE HEALTH

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Harper (1925) reported that heavy working draught horses fed grain mixed with chopped hay had fewer digestive problems than horses fed long hay and grain separately. In another study Fuller and Arneson (1920) mixed chopped hay with grain to retard grain intake and improve grain utilization but no significant benefit was found.

Chopped hay is widely used in combination with concentrates for rations for light horses used for riding. This study was conducted to establish the rate at which concentrate intake could be retarded by mixing with chopped hay and to establish if mixing hay and concentrate was a useful procedure for the prevention of digestive problems associated with rate of feed intake of horses housed in stables.

Six stabled Thoroughbred geldings were fed timothy hay each morning and one of three diets on eighteen consecutive afternoons. The sequence of diets fed to each horse (Table 1) was repeated on six occasions. Diets were randomised to avoid an effect by the previous diet on the subsequent diets. The times taken for complete ingestion of each diet were recorded and rate of feed intake was subjected to analysis of variance. Horses were observed for evidence of impacted colic.

Table 1 Rate of intake of 3 diets

	Diet	Rate of diet intake (g/min)	S.E.
A	2kg oats, maize, soyabean meal	129[a]	5.0
B	2kg chopped timothy hay	29[b]	1.3
C	2kg chopped timothy hay plus 2kg oats, maize, soyabean meal	46[b]	1.8

[a,b] Means with different superscripts differ significantly ($P<0.05$).

The mixing of concentrates with chopped hay (Table 1) retarded intake from 129 to 46g/min. Despite the rapid intake of diet A, none of the horses showed any evidence of digestive upset nor was there any evidence of impacted colic on diets B or C.

In this study, with lightly exercised horses fed 2kg of concentrate daily, no advantage to horse health resulted from the reduced rate of concentrate intake but it remains possible that there are advantages of mixing chopped hay with grain in the diets of working horses fed larger amounts of grain daily.

FULLER, J.G. and ARNESON, N.E. (1926). Wisconsin Ag. Exp. Sta. Res. Bull. 388.
HARPER, M.W. (1925). Cornell Agr. Exp. Sta. Res. Bull. 437.

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