IN VIVO DIGESTIBILITY OF MATURE ANNUAL LEGUMES

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In a previous study (Li et al. 1992), we found that *Trifolium resupinatum*, cv. Kyambro had higher contents and lower digestibilities of nitrogen, mannose and galactose than *Trifolium subterraneum*, cv. Junee and *Medicago murex*, cv. Zodiac. It was suggested that the lower nitrogen digestibility might be associated with the presence of galatose and mannose in Kyambro. In a subsequent study, mature Junee and Kyambro were fed to nine Merino wethers, in a cross over experiment in which digesta flows were measured and faeces and urine were collected for seven days. Diet contents and digestibilities of nitrogen, galactose and mannose are given in the table.

	Junee	Kyambro	SEM
Nitrogen			
content (g/kg)	24.3a	17.7b	0.05
digestibility (%)	47.7a	33.8b	1.43
balance (g/day)	0.15a	-0.56b	0.206
Galactose			
content (g/kg)	20.6a	23.3a	0.71
digestibility (%)	76.6a	76.6a	0.77
Mannose			
content (g/kg)	10.7a	13.5b	0.22
digestibility (%)	84.4a	79.6b	1.00

a,b: means within rows with different letters differ ($P<0.05$)

The nitrogen content of Kyambro was much lower than in the previous study, and that of Junee was similar. As in the previous study, nitrogen digestibility and balance were lower for Kyambro than for Junee. However, in contrast to the previous study, differences in contents and digestibilities of mannose and galactose were small. Further study is required to determine factors responsible for the lower digestibility of nitrogen in *T. resupinatum*, cv. Kyambro.

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