

A comparison between the digestibility of hay by donkeys and ponies

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The donkey plays a very important part in the rural domestic economy of the Mediterranean area. In order to get more information on its digestion, we compared the digestibility of 2 cocksfoot alfalfa hays given alone (I: CF = 32 and CP = 20% DM; II: CF = 39 and CP = 15% DM) to 3 adult male donkeys (250 kg) and 3 adult male ponies (180 kg). After a 15 d adaptation period during which the animals ate *ad libitum*, digestibility was measured over a period of 6 d. There was then a new period of adaptation to limited quantities of food (40 g digestible organic matter ingested (DOMI)/kg W^{0.75}) followed by a second 6 d period of measurement.

In general, donkeys seem to digest dry matter, organic matter and nitrogen better

than ponies (table I). Donkeys' feed refusal contains more cellulose and less nitrogen than ponies' feed refusal. The results seem less variable (with a reduced standard error) for donkeys when they are given good quality hay. These preliminary results, which need to be confirmed, agree with the observations made by Wolter and Velandia (1970) and by Merritt and Pearson (1989).

Merritt JB, Pearson RA (1989) Voluntary food intake and digestion of hay and straw diets by donkeys and ponies. *Proc Nutr Soc in press*

Wolter R, Velandia J (1970) *Rev Med Vet* 146, 141-152

Table I. Donkey and pony hay digestibility.

Diet or hay	Dry matter	Organic matter	Crude fiber	Total nitrogen	DOMI g/kg LW ^{0.75}
I ^a donkeys	62.6 ± 1.4	64.0 ± 1.5	59.7 ± 3.1	76.5 ± 3.8	27.0 ± 3.4
I ^a ponies	57.7 ± 2.6	58.7 ± 2.6	52.9 ± 3.9	71.9 ± 2.1	26.8 ± 2.7
II ^b donkeys	61.2 ± 0.3	62.1 ± 0.2	51.6 ± 0.3	77.6 ± 0.1	32.4 ± 4.4
II ^b ponies	57.1 ± 1.0	58.3 ± 1.1	51.8 ± 1.4	72.7 ± 0.7	26.8 ± 2.7
II ^a donkeys	52.9 ± 3.2	54.5 ± 3.4	42.0 ± 4.2	69.1 ± 3.2	43.3 ± 4.7
II ^a ponies	50.9 ± 1.5	51.9 ± 0.8	40.6 ± 3.0	65.4 ± 2.3	48.0 ± 4.3
II ^b donkeys	52.1 ± 5.0	53.2 ± 4.7	41.5 ± 3.9	72.5 ± 4.5	40.4 ± 4.6
II ^b ponies	48.1 ± 4.0	51.3 ± 3.9	43.1 ± 6.1	66.7 ± 1.6	39.6 ± 5.1

^a *Ad libitum*. ^b Limited quantities.