NUTRITIVE VALUE OF PULSE CROP RESIDUES FOR SHEEP

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Throughout the cropping regions of southern Australia, the stubbles of pulse crops consisting of vine residue and waste grain are commonly used to finish prime lambs. Growth rates on such stubbles are variable. While the nutritional value of the legume grains is known to be high, the value of the vine residue and its contribution to intake are unknown.

The residues of faba beans (*Vicia faba*) and chickpeas (*Cicer arietinum*) were sampled at one, two and three months' after harvest while being grazed by lambs at 5/ha. Sampling method was adapted from Cayley and Bird (1991). Five quadrats were used at each sampling point, and the quadrat with the median quantity of residue was harvested. Quantity of residue ranged from 3.1 - 4.1 t/ha for faba beans and 4.7 - 8.5 t/ha for chickpeas at the commencement of grazing.

The dry matter (DM) degradability of the vine residue (Table) was determined using the nylon bag technique described by Orskov et al. (1980). Bags were removed at 8, 24, 48, and 96 hours.

Residue	Months post harvest	a (%)	b (%)	c (/h)	P (%)
Faba beans	1	38.3	25.0	0.031	46.3
	2	43.0	20.7	0.025	49.1
	3	35.6	25.8	0.026	43.3
		39.3 (± 2.9)	23.7 (± 2.1)	0.027(±0.005)	46.5 (± 2.9)
Chickpeas	1	29.0	34.0	0.043	46.6
	2	34.2	29.2	0.041	45.9
	3	39.1	23.9	0.037	47.5
		34.1 (± 2.4)	29.3(± 2.3)	0.040(±0.005)	46.7(±2.3)

Faba beans tended ($P<0.1$) to have a higher solubility (a), lower potentially degradable but insoluble fraction (b), and lower rate constant of degradation (c) than chickpeas. The effective degradation (P) of the residues, and the degradation characteristics at different times of sampling did not differ significantly. The low degradability of these pulse residues limits their value as feedstuffs for lambs. The growth rates of lambs grazing pulse stubbles will be influenced by quantity of residual grain in the stubble.

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