

COTTONSEED HULLS AS A FEED FOR SHEEP

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Cottonseed hulls, that part of the cottonseed head that is left after the cotton and meat have been extracted, is normally considered to be a very low quality feed for ruminants. The results of two recent trials have shown that it is capable of supporting moderate growth rates in sheep (see Table) . When a small amount of bypass protein was added to the diet of cottonseed hulls\urea\50g lucerne and vitamin\minerals the growth rate of lambs exceeded 130 g/d.

Liveweight (**Lwt**) change, feed intake, feed conversion efficiency (**FCE**) and wool growth rate of lambs given a diet of cottonseed hulls with or without bypass protein

Supplement	Lwt change (g/d)	Feed intake (gDM/d)	FCE (g/g)	Wool growth (g/d)
Expt 1. (6 sheep/treatment)				
nil	75	970	15.5	6.1
bypass protein*	138	1050	7.6	9.1
Expt 2. (12 sheep/treatment)				
nil	100	1005	10.2	
bypass protein*	132	1070	8.4	

* 50g/day HCHO Casein

Investigation of the **rumens** of these animals showed that protozoa were either eliminated (**Expt 1**) or in very low population densities (**Expt 2**). It has been shown (**Bird 1988**) that reducing protozoa numbers has a significant positive effect on the availability of microbial protein and on liveweight change and wool growth rates. These could be reasons why cottonseed hulls support such reasonable growth rates even without supplementation with bypass protein. Intake of cottonseed hulls by sheep is higher than would be expected of a 40% digestible feed and this is possibly associated with a rapid breakdown of the indigestible material in the **rumen**.

BIRD, S.H. (1988) In *The Roles of Protozoa and Fungi in Ruminant Digestion*. (1988) [J.V. Nolan, R.A. Leng, D.I. Demeyer, editors]. Armidale NSW 2351, Australia: **Penambur** Books.

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