

# Rabbit performance is affected by fibre source in the diet

A. Harries<sup>1</sup>, M. Choct<sup>1</sup> and P. Pittolo<sup>2</sup>

<sup>1</sup>Animal Science, University of New England, Armidale NSW 2351

<sup>2</sup>Millmaster Feeds, PO Box 281, Merrylands NSW 2160

The degree of carbohydrate fermentation in the gut has a major effect on the production level and health of the rabbit and is influenced by the level and the type of fibre present in the diet (Sakaguchi 1992). It appears that soluble and insoluble NSPs may have opposite effects because diets high in acid-detergent fibre (insoluble) promote better performance and health in rabbits than those high in neutral detergent fibre (partly soluble) (De Blas *et al.* 1995). We examined the effects of six fibre sources on the performance of meat rabbits at two ages in a 5-week experiment. One group was introduced to the diets at five weeks of age and another at 8 weeks. Feed intake and liveweight gain were measured and feed conversion ratio calculated. The moisture content of the faeces was also determined during weeks 3 and 5. The performance data are shown in Table 1.

Fibre source had no effect on feed intake, weight gain and feed conversion. Older rabbits ate more feed and converted it less efficiently. There was a significant Diet x Age interaction showing that older rabbits had

difficulty handling fibre from *angustifolius* lupin, which contained the highest level of soluble NSP (5%) among the fibre sources tested. Rabbits fed the diet containing copra meal had the wettest faeces (51% moisture), whereas those fed oat hulls had the driest faeces (38% moisture), indicating that fibre that is good for performance is not necessarily good for faecal consistency. Consistent and dry faeces are important for coprophagy and the overall hygiene of the shed environment.

De Blas, J.C., Taboada, E., Mateos, G.G., Nicodemus, N. and Mendez, J. (1995). Effect of substitution of starch for fibre and fat in isoenergetic diets on nutrient digestibility and reproductive performance of rabbits. *Journal of Animal Science* **73**, 1131–1137.

Sakaguchi, E.I. (1992). Fibre digestion and digesta retention from different physical forms of the feed in the rabbit. *Comparative Biochemistry and Physiology* **102A**, 559–563.

**Table 1** Effect of fibre source on feed intakes and liveweight gains of rabbits and feed conversion ratios (FCR).

Rabbit age	Fibre source	Weekly intake (g)	Weekly gain (g)	FCR
5 weeks	Albus lupin	882	274	3.22
	Copra meal	910	253	3.60
	Rice pollard	822	237	3.47
	Oat hulls	902	233	3.87
	Lucerne meal	851	266	3.20
	Angustifolius lupin	830	264	3.15
8 weeks	Albus lupin	908	226	4.02
	Copra meal	920	205	4.49
	Rice pollard	866	228	3.80
	Oat hulls	909	232	3.91
	Lucerne meal	868	185	4.70
	Angustifolius lupin	790	147	5.36
Probability (P = )	Diet	0.29	0.35	0.68
	Age	0.71	0.00	0.00
	Diet x Age	0.98	0.04	0.15