

A COMPARISON OF CRUSHED OATS VERSUS WHOLE OATS FOR MILK PRODUCTION IN DAIRY COWS.

ALLISON HODGE\*, MARIA GINAL\*\*, M. MAGUIRE\*\*\* G. ROGERS\*

Toland (1976) showed that when oats were fed to steers there was a small improvement in digestibility from dry-rolling. These oats were fed as a supplement to hay at total intakes of 6 kg DM/day rather than as a supplement to pasture at higher levels of intake. We have compared crushed and whole oats fed to dairy cows grazing pasture to determine whether using crushed oats in the diet affected milk production.

Forty-five Friesian x Jersey cows in their eighth month of lactation were assigned to 3 groups matched on the basis of liveweight, condition score and production during a period of common grazing. For the next 3 weeks the cows were rotationally grazed on winter pasture (dry matter digestibility 60%, Nitrogen 2.6%). The pasture offered to all groups was restricted to provide 50% of requirements; no supplement was offered to the control group. The supplemented cows received 4.4 kg DM of whole or crushed oats. Apparent energy and nitrogen digestion coefficients were determined in sheep.

Table I Effects of crushing oats on milk production, liveweight, condition score and feed quality

	CONTROL	CRUSHED OATS	WHOLE OATS	LSD (P=0.05)
Milk Yield L/d	5.29 a	8.57 b	8.48 b	0.9
Fat Yield g/d	304 a	371 b	448 c	48
Protein Yield g/d	205 a	317 b	311 b	29
Milk Fat Content g/kg	59 a	44 b	53 c	4
Milk Protein Content g/kg	37	36	38	2
Liveweight	451 a	464 b	468 b	9
Condition Score	4.3	4.5	4.4	0.2
DM Digestibility %		72.3	69.5	10
N Digestibility %		49.9 a	46.5 b	4
Metabolizable Energy MJ/kg DM		12.7	12.2	2

Means with different letters differ significantly, P<0.05

As pasture availability was low, both supplements significantly increased milk, fat and protein yields, and liveweight (Table I). Both supplements decreased milk fat content although the effect was greater with crushed oats. As a result the yield of milk fat was significantly less with crushed oats than whole oats. Crushing had little effect on feed quality as measured by digestibility and metabolizable energy content.

These results show that there was no benefit to either milk yield or milk fat production from crushing oats.

TOLAND, P.C. (1976). Aust. J. Exp. Agric. Anim. Husb. 16:71.

\* Department of Agriculture, Dairy Research Institute, Ellinbank, Vic. 3820.

\*\* Department of Agriculture, Warragul, Vic. 3820.

\*\*\* Department of Agriculture, Maffra, Vic. 3860.