

INTAKE OF DRY LICK SUPPLEMENT IS INFLUENCED BY SUPPLEMENT PALATABILITY BUT NOT PREVIOUS EXPERIENCE

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In the northern cattle industry urea and mineral supplements are usually fed *ad libitum* as dry licks or blocks. However, it is often difficult to achieve target intakes, and a proportion of cattle may not consume any supplement (Dixon and Doyle 1996). An experiment examined the effect of previous experience of cattle with such supplements on voluntary intake of two types of dry lick supplement.

Bos indicus x Shorthorn (Fn) heifers (120) initially 13 to 15 months of age and 216 (s.d.±16) kg mean liveweight were used. All heifers had been fed molasses-based supplements for 7 to 14 days while being held in yards at weaning nine months previously. Sixty of the heifers had no other experience of supplements, and 60 had been fed a dry lick supplement based on urea, salt and cottonseed meal for five months post-weaning. The heifers were allocated by stratified randomization to 12 paddock groups, and these were allocated to four treatments in a 2x2 factorial design. The factors consisted of previous experience of dry lick supplements and low or high palatability dry lick supplements. Palatability was considered to be the relative acceptability of the feed. The low palatability dry lick contained 45% salt, 31% calcium phosphate (Kynophos), 22% urea and 1.5% elemental sulphur. The high palatability dry lick contained 33% cottonseed meal, 30% salt, 21% calcium phosphate, 15% urea and 1% elemental sulphur. Supplements were fed from early-February until mid-June 1996. A lithium marker technique (Suharyono 1992) was used to measure supplement intake by individual heifers after 7, 11 and 17 weeks.

Table 1. Intake (g DM/head/day), proportion of non-consumers (%) and coefficient of variation (c.v.%) of intake of dry lick supplements

Measurement	Low palatability		High palatability		Significance			
	Naive	Experienced	Naive	Experienced	S	E	SxE	
Supplement intake	51	37	85	74	**	ns	ns	
Non-consumers	Week 7	2	28	0	1	ns	ns	ns
	Week 11	1	54	0	1	ns	ns	ns
	Week 17	7	47	5	2	(-)	ns	ns
coeff. var.	Week 7	67	70	60	97	ns	ns	ns
	Week 11	68	73	55	58	ns	ns	ns
	Week 17	72a	150b	93a	66a	(-)	ns	*

S, type of supplement; E, degree of experience; ns, not significant; (-) P<0.10; * P<0.05; **P<0.01

Intake of the dry lick supplement was increased by inclusion of cottonseed meal in the mixture (79 and 44 g DM/head/day) (Table 1). Thus heifers offered the high palatability dry lick consumed 30% and 50% more supplementary P and N respectively. The proportion of non-consumers of supplement (average 12%) and the c.v. of supplement intake (average 77%) were generally not affected by the treatments. However, both the proportion of non-consumers and the variability in supplement intake within groups were inversely related to the intake of lithium-labelled supplement. When average intake by a paddock group exceeded 50 g/day the proportion of non-consumers was always less than 5%, but at lower intakes the proportion of non-consumers averaged 34% (range 7 to 54%). In conclusion including cottonseed meal in the dry lick increased voluntary intake of supplement. Also the proportion of non-consumers and the variability of supplement intake were highest when average supplement intake by groups was low.

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 SUHARYONO (1992). Masterate Thesis, The University of New England.