THE UTILITY OF FAECAL PILE SCORING FOR NUTRITIONAL MANAGEMENT OF AUSTRALIAN CATTLE FEEDLOTS

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The feedlot industry in Australia uses faecal assessment as a guide to the metabolic status, with very loose unformed piles indicating a potential metabolic upset. However, faecal assessment alone can be misleading. The objective of this paper is to outline the interaction of feed intake with faecal assessment.

In the study, 144 Angus and Angus X weaner steers were allocated to 6 dietary treatments replicated 3 times in a randomised, complete block design. Treatments were: T1 – basal feedlot ration, no ionophore, T2 – basal feedlot ration with ionophore, T3 – feed additive A, T4 – feed additive Ax2, T5 – feed additive B and T6 – feed additive B in combination with T2 ionophore. Steers were fed for 84 days on a dry rolled wheat based ration at the Department of Primary Industries and Fisheries (Qld), Brigalow Research Station feedlot facility. Daily pen intakes were recorded and fresh faecal piles were assessed each morning and assigned a score on a 9 point scale ranging from A1- (hard and particulate) through to A3+ (watery and frothy). The proportion of faecal pile scores in each category were compared using chi-squared analysis for contingency tables while dry matter intakes were analysed by ANOVA.

The proportion of faecal piles in each category within the 9-point scale was influenced ($P<0.001$) by dietary treatment, whether measured in the first 30 days or for the whole 84 days in the feedlot (Table 1). Cattle on treatments, T3, T4 and T5 had similar scores to those on the basal diet, T1. Those on diets T2 and T6 had a higher proportion of A1 scores (firm) and a lower proportion of A2+ and A3- scores (soft and loose) across both periods. The proportion of high scores (A3/A3+) was low for all treatments and, in combination with low plasma D lactate (mean of 0.457 across all treatments), suggested an absence of acidosis.

Table 1. The proportion (%) of observed faecal piles from each treatment in each category and dry matter intake (DMI, kg/hd/d)

Treatment	*n*	% in each faecal score category							DMI*
		A1-/A1	A1+	A2-	A2	A2+	A3-	A3/A3+	(kg/hd.day)
First 30 days in feedlot									
T1	759	5	19	27	30	13	5	1	7.3[a]
T2	705	12	30	27	21	8	2	0	6.5[b]
T3	808	4	21	27	27	13	6	2	7.2[a]
T4	780	5	18	26	30	14	5	2	7.0[a]
T5	793	4	20	28	30	10	5	3	7.2[a]
T6	719	12	26	27	25	6	2	2	6.5[b]
Total period in feedlot (84 days)									
T1	2110	3	10	22	41	14	6	4	8.0[a]
T2	1971	6	17	24	37	10	3	3	7.5[b]
T3	2148	2	11	20	40	16	7	4	8.1[a]
T4	2136	2	10	19	41	17	7	4	8.0[a]
T5	2136	2	11	19	41	15	7	5	7.8[ab]
T6	1961	7	16	25	37	8	4	3	7.4[b]

*Means with different superscripts within the DMI column are significant at $P<0.05$

Cattle on the T2 and T6 treatments had lower dry matter intakes (DMI) for both periods than the other cattle suggesting that low dry matter intakes and firm faecal piles may be related. In contrast, the higher DMIs of cattle on T1, T3, T4 and T5 did not have a high proportion of very loose faecal piles. Faecal pile assessment such as described in this study has the potential to assist in the management of commercial feed bunks if used in conjunction with data for DMI per pen. This is particularly so when intakes are low and may indicate the absence of acidosis. We conclude that faecal assessment alone should not be recommended for commercial bunk management.

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