

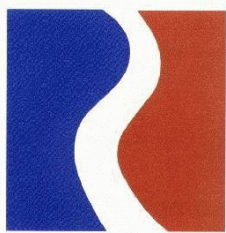
## **Comparison of Low-moisture Molasses Blocks and Loose Dry Mineral Mixes as Delivery Systems for Supplementing Trace Minerals to Rangeland Cattle.**

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A study was conducted to evaluate low moisture molasses blocks (LMMB) and conventional dry mineral mixes (CDM) as delivery systems for providing supplemental trace minerals to cows on rugged rangeland pastures. Four pastures (127 or 166 ha) were classified into moderate and difficult terrain based on slope and distance to water. Either LMMB or CDM was placed on moderate or difficult terrain for 1-week periods during autumn. Cows were tracked with Global Positioning System (GPS) collars for 2 to 4 days each week to determine if they visited LMMB or CDM (within 10 m). Visits and time near LMMB or CDM was compared using a statistical model that included pasture, delivery system, terrain and interactions. Intake of trace minerals was greater ( $P < 0.05$ ) from CDM than LMMB when placed in moderate terrain, but not ( $P > 0.05$ ) in difficult terrain. The proportion of cows that did not visit LMMB (26%) tended to be less ( $P = 0.07$ ) than for CDM (45%). More cows ( $P = 0.002$ ) did not visit LMMB or CDM when placed in difficult terrain (50%) than in moderate terrain (20%). Cows visited LMMB more frequently ( $P = 0.005$ ) than CDM. Cows spent more time ( $P < 0.05$ ) within 100, 200, 400 and 600 m of LMMB than within similar distances from CDM. If grazing distribution is an important management objective, LMMB appears to be a superior method for supplementing trace minerals because LMMB was a greater attractant for cows and because individual animal variation in visits to LMMB was less than observed with CDM.

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