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Lactation performance of cows fed soybean meal or canola meal supplements.

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Performance of mid-lactation Holstein cows fed diets with 17.3% crude protein (CP) based on soybean meal (SBM) or canola meal (CM) was determined.

Sixty-four cows were housed in a free-stall barn equipped with 32 Insentec electronic feeding gates (RIC systems; Insentec BV, Marknesse, the Netherlands). Each gate allows access by one or more selected cows and record individual daily dry matter intake (DMI). The SBM diet was assigned randomly to 16 gates, and 32 cows (16 multiparous and 16 primiparous) were assigned randomly to these 16 gates. The additional 32 cows were assigned to the other 16 gates and fed CM. Cows within a diet had access to all 16 gates with that diet, and "cow" was considered the experimental unit. For 21 d, all cows received a common diet, and covariate measurements were obtained. Cows were then fed their treatment diet for the next 63 d. Treatment diets (dry-matter basis) were 25.7% alfalfa haylage, 31.6% corn silage, corn grain (24.0% for CM diet, 27.2% for SBM diet), and either 16.5% CM or 13.3% SBM. Cows were milked

twice daily, and yields were recorded for 84 d. Cows were weighed weekly. Milk composition was determined for two consecutive milkings weekly. Covariately adjusted data were analyzed as a complete randomized block design with cow within treatment and parity as the subject for weekly repeated measurements. Cows fed CM had greater intake (28.4 vs 23.6 kg DM/d), and yield of milk (39.0 vs 36.2 kg/d), milk fat (1.44 vs 1.36 kg/d), milk protein (1.24 vs 1.15 kg/d) and milk lactose (1.93 vs 1.78 kg/d), but observed feed efficiency was lower for cows fed CM (1.38 vs 1.55 kg milk yield/kg intake; all $P < 0.05$). Body weight increased across weeks ($P < 0.05$), but diet-by-week interaction was not significant ($P = 0.678$) and condition score observations did not reveal an obvious energy balance difference due to diet. The predicted undiscounted TDN for the CM and SBM diets were 71% and 73%, and energy-allowable 3.5% fat-corrected milk was 47.2 and 39.4 kg/d for CM and SBM. The measured intake differences are larger than expected, even considering the greater milk yield and lower predicted energy density of the CM diet.

Contact your feed supplier about complementing your herd's ration with a balanced, efficient source of protein: canola meal.

