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425 Effects of feeding of two rumen-protected methionine supplements on productive performance of lactating Holstein dairy cows.

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Ninety-four multiparous Holstein lactating dairy cows were divided in 3 groups to determine the effect of feeding rumen-protected methionine on milk production and composition. Treatments were a control (CTR) diet, and the same diet supplemented with 11.4 g of metabolizable methionine from either KESSENT® M (Kemin Animal Nutrition and Health) or Smartamine M (SMT, Adisseo). After 30 d of treatment, milk production and composition (milk samples taken 3 consecutive days) were determined in wk 6 and 10 postpartum. Cows were fed the same diet formulated to meet NRC recommendations (a corn silage-based diet 46:54 forage to concentrate diet; 17.5% CP, 28.4% NDF, 33.2% starch and 4.6% fat and balanced for Lysine) once a day and milked 3 times/d. Data were analyzed using the PROC GLM procedure of SAS as a completely randomized model. Milk yield (kg/d) was higher ($P < 0.002$) in KESSENT M (46.7) than CTR or SMT (43.9 and 44.5, respectively). The 3.5% fat-corrected milk (kg/d) was numerically higher in KESSENT M and SMT (51.3 and 50.6, respectively) compared with CTR (48.8), but did not reach significance ($P < 0.11$). Milk fat content (%) tended to be higher ($P < 0.06$) in SMT (4.38) than in CTR or KESSENT M (4.16 and 4.14, respectively). Milk protein content (%) was higher ($P < 0.04$) in KESSENT M and SMT (3.09 and 3.11, respectively) compared with CTR (3.04). Similar effects ($P < 0.02$) were observed for casein (%) (2.40, 2.43 and 2.45 for CTR, KESSENT M and SMT, respectively). Milk fat yield (kg/d) was similar among treatments (1.90), but protein yield (kg/d) was higher ($P < 0.01$) in KESSENT M (1.43) compared with CTR and SMT (1.33 and 1.38, respectively). Casein yield (kg/d) was also higher ($P < 0.01$) in KESSENT M (1.13) compared with CTR and SMT (1.05 and 1.09, respectively). Both rumen-protected methionine supplements improved dairy cow performance compared with control, but differences between the commercial supplements were also observed.

KEYWORDS:

rumen-protected methionine, dairy cow performance