

# Canola Meal.

It's doing amazing things for dairy rations.



## Effects of replacing soybean meal with canola meal for lactating dairy cows fed three different ratios of alfalfa-to-corn silage.

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Previous research suggested that crude protein (CP) from canola meal (CM) was used more efficiently than CP from solvent soybean meal (SBM) by lactating dairy cows. We wished to test whether CM was more effective than SBM on different ratios of alfalfa-to-corn silage. Forty-eight lactating Holstein cows were blocked by DIM and parity into 4 pairs of blocks of 6 cows each in a 3 x 2 arrangement of treatments in a cyclic changeover design trial with 6 experimental diets. Cows within blocks were randomly assigned to the experimental diets and fed for 4-wk periods before switching treatments over a total of 16 weeks.

Treatments were 3 ratios of alfalfa-to-corn silage ratios (1:5, 1:1 and 5:1; dry matter [DM] basis), each supplemented with protein from SBM or CM. Diets contained (DM basis)

60% forage, 8-15% high-moisture corn, 2-5% soy hulls, 1.3% mineral-vitamin premix, 16.5% CP and 31-33% NDF. Data from the last week of each period were analyzed using the mixed procedure in SAS. Least-squares means are reported in the table. When CM replaced SBM, improved yield of milk and milk protein (P = 0.03) and SNF (P = 0.05) was observed. There also was a trend for increased lactose yield (P = 0.07). Moreover, MUN decreased (P < 0.01) when CM replaced SBM. No significant interaction of protein source and forage source was observed. Production of milk and milk components was improved as alfalfa silage was replaced by corn silage.

### KEYWORDS

Alfalfa silage, Canola meal, Soybean meal

**TABLE 1. PRODUCTION DATA**

ITEM	PROTEIN SOURCE		ALFALFA-TO-CORN SILAGE RATIO			P-VALUE	
	SBM	CM	5:1	1:1	1:5	Protein Source	Forage Source
DMI, kg	23.5	23.8	23.7	24.0	23.4	0.4	0.42
Milk yield, kg/d	36.4	37.3	34.6	37.2	38.7	0.03	< 0.01
ECM, kg/d	35.6	36.1	33.9	36.4	37.2	0.24	< 0.01
Milk N/N intake, %	27.3	27.5	25.1	27.2	29.9	0.66	< 0.01
Fat, %	4.0	3.94	4.09	3.99	3.82	0.25	< 0.01
Fat, kg/d	1.45	1.46	1.41	1.49	1.47	0.69	0.02
Protein, %	3.02	3.02	2.96	3.02	3.07	.092	< 0.01
Protein, kg/d	1.1	1.12	1.02	1.12	1.19	0.03	< 0.01
Lactose, %	4.85	4.84	4.81	4.86	4.87	0.86	0.03
Lactose, kg/d	1.77	1.81	1.66	1.81	1.89	0.07	< 0.01
SNF, %	8.75	8.74	8.64	8.76	8.83	0.63	< 0.01
SNF, kg/d	3.19	3.26	2.99	3.26	3.42	0.05	< 0.01
MUN, mg/dL	14.0	12.9	13.8	13.2	13.4	<0.01	0.03

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