

AMINOPLUS

AMINOPLUS[®] Performance Proven in Independent Research

University of Wisconsin Study:

Objective: To compare the milk production and component response of AminoPlus[®], a soybean meal control (SBM), and two competitive bypass soybean products, non-enzymatically browned soybean meal (NESBM) and expeller soybean meal (EXPSBM). Forages fed were corn silage and alfalfa haylage. Ground corn, whole cottonseed and soy hulls plus mineral and vitamins made up the basal ration. Whole soybeans were utilized to maintain similar fatty acid profiles across the iso-nitrogenous/ iso-caloric rations. Rations were balanced to be positive for rumen degraded and un-degraded protein intake except for the SBM control which was negative for un-degraded protein intake. Design was a 4 X 4 Latin square, replicated 4 times with 21 day periods, with the last 5 days designated as the test period.

Ration Composition

<u>Ingredients</u>	<u>SBM</u>	<u>AminoPlus[®]</u>	<u>NESBM</u>	<u>EXPSBM</u>
	-----(% of ration on dry matter basis)-----			
Alfalfa silage	22.5	22.5	22.5	22.5
Corn silage	38.3	38.3	38.3	38.3
Corn grain, ground	14.2	15.0	15.0	15.1
Cottonseed, whole	4.7	4.7	4.7	4.7
Soybean hulls	7.3	6.4	6.4	6.3
Soybean meal	8.7	2.8	3.1	3.3
Soybean whole	2.4	2.4	2.5	-
EXPSBM	-	-	-	7.9
NESBM	-	-	5.6	-
AminoPlus	-	6.0	-	-
Mineral-vitamin premix	1.9	1.9	1.9	1.9

Analyzed chemical composition of diets

<u>Diet component</u>	<u>SBM</u>	<u>AminoPlus[®]</u>	<u>NESBM</u>	<u>EXPSBM</u>
	------(dry matter basis)-----			
Dry Matter, %	50.1	50.1	50.2	50.1
NE-L, Mcal/lb	0.72	0.72	0.72	0.72
Crude Protein, %	17.6	17.5	17.3	17.1
Neutral detergent fiber, %	29.9	29.2	29.4	30.0
Non-fiber carbohydrate, %	40.9	41.9	41.9	41.5
Fatty acids, %	4.7	4.6	4.7	4.5
Ash, %	6.9	6.8	6.7	6.9

Production Data

	<u>SBM</u>	<u>AminoPlus[®]</u>	<u>NESBM</u>	<u>EXPSBM</u>
Dry Matter Intake, lbs/day	50.7	51.6	50.0	52.2
Milk Yield, lbs/day	81.3	84.9	82.2	81.8

Response vs. SBM

+3.6 +0.9 +0.5

Milk Composition, %

Protein	2.93	2.89	2.89	2.91
Fat	3.74	3.72	3.72	3.74
Lactose	4.91	4.96	4.92	4.90

Component Yield, lb/day

Protein	2.38	2.44	2.37	2.38
Fat	3.03	3.15	3.06	3.06
Lactose	4.00	4.20	4.06	4.02

Cows fed the AminoPlus ration produced more milk than cows fed either of the competitive bypass soy products or soybean meal rations. Value of milk produced (\$/cow/day) was 7.92, 8.17, 7.94, and 7.95 for the SBM, AminoPlus, NESBM, and EXPSBM rations, respectively assuming \$1.18 per pound of fat and \$1.81 per pound of protein produced.