

Relative value of solvent and expeller soybean meal for lactating dairy cows

This study consisted of three trials evaluating SoyPLUS® vs. solvent meal in diets for lactating dairy cows. The results from trial 1 confirmed that the protein of SoyPLUS was more resistant to ruminal degradation than that from solvent meal. Rumen ammonia and branched-chain volatile fatty acid levels were reduced, and 64% more protein escaped the rumen when cows were fed SoyPLUS.

In trial 2, rations supplemented with either SoyPLUS or solvent meal, averaging 16.4% protein, were fed to 12 cows in a crossover study. Cows fed SoyPLUS had a significant improvement in milk to feed ratio when compared to cows fed solvent meal. In trial 3, 20 cows were assigned to one of four treatments: 6.3% solvent meal, 4.1% SoyPLUS, 10% solvent meal, or 6.6% SoyPLUS.

Milk production was greatest on the diet containing 6.6% SoyPLUS at 77.6 pounds per day. As a comparison, cows fed the ration containing 10% solvent meal produced 73.4 pounds per day. Milk to feed ratio was equal and greatest on diets containing 6.6% SoyPLUS and 10% solvent meal.

This indicates comparable utilization of the SoyPLUS diet, even though it contained only 60% as much supplemental protein.

Broderick, G. A. 1986. Relative value of solvent and expeller soybean meal for lactating dairy cows. J. Dairy Sci. 69: 2948-2958. U.S. Dairy Forage Research Center, U.S.D.A. Agricultural Research Service, University of Wisconsin, Madison, WI 53706.