

Director's Digest



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New Protein Sources for Ruminants

Feathermeal may be a valuable but previously overlooked source of protein in supplementary cattle rations. Professors W. M. Beeson and T. W. Perry of Purdue University, who conducted feeding trials with grant support from the Fats and Proteins Research Foundation, found that feathermeal can replace at least one-third of the supplemental protein formerly supplied by soybean meal.

Prior to these studies feathermeal had not been evaluated extensively as a source of supplemental protein for ruminants. Recently, however, recognition of the inherent high protein content of feathermeal (85%) and of the fact that ruminants are not sensitive to amino acid balance and quality suggested that feathermeal might be a valuable and economical source of protein for supplementing cattle rations.

Two lots of 34 steers were each fed a basal ration of high moisture ground ear corn plus 1.8 lb. per head daily of a soybean meal supplement or a supplement in which feathermeal provided one-third of the protein. Each supplement contained about 32% protein. A parallel feeding trial was conducted in which the ration of each of two lots of 34 steers was also fortified with 0.4 lb. per head daily of feeding fat.

After 185 days the animals receiving the feathermeal-containing supplement showed a slight improvement in both daily weight gain and in feed efficiency over steers receiving the soybean meal supplement without feathermeal. The daily addition of 0.4 lb. of fat per steer caused a small reduction in daily gain and in feed consumption but improved feed efficiency slightly. A somewhat similar but unrelated experiment by Prof. D. C. Church of Oregon State University also indicated good utilization of feathermeal in cattle receiving protein-supplemented straw diets.

From the Purdue trials it can be concluded that the protein of feathermeal is equal in nutritional value to that of soybean meal when one-third of the supplementary protein is furnished by feathermeal. On a cost basis, with feathermeal (85% protein) at \$155./ton and soybean meal (44% protein) at \$135./ton, equivalent to a cost of \$0.09/lb of feathermeal protein and \$0.14/lb of soybean protein, it is apparent that feathermeal offers important economic advantages as well.