

Potato Co-product as a Feed Source for Beef Cows and Feedlot Cattle

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The North Dakota potato industry has developed to a point where the disposal of co-products is a concern. Ruminant livestock have the capacity to consume relatively large amounts of potato co-products in a variety of forms and moisture levels. Potato co-products contain substantial energy in the form of starch with low fiber levels. Product used in these trials consisted of equal amounts of fries, peels, and filter cake. Two trials have been completed that compared potato co-product-based diets to traditional diets for beef cows and finishing steers. Potato co-product is approximately 17% dry matter, 11.3% crude protein, 17.5% ADF, 24.7% NDF, 1.3% fat and only .2% phosphorous.

Experiment 1

Lactating beef cows were fed either potato co-product or corn silage as an energy source with the rest of the diet consisting of straw, alfalfa hay, wheat midds, and a vitamin/mineral premix. Dry matter intake between the two treatments was the same, however, the cows and heifers fed potato co-product had an advantage in average daily gain of 0.57 lb/day above the control treatment and body condition score. The cost/hd/day was lower for the potato co-product treatments by \$0.15. Calf performance was similar for the two diets.

Experiment 2

In the feedlot trial, potato co-product was fed at uniform levels to finishing steers in combination with barley, corn, and a corn-midds combination. Steers were initially offered only midds but the mush texture of the moist diet was not palatable and feed intake was dramatically reduced. Adding half corn to this treatment improved intake to normal ranges. Diets were formulated to meet the nutrient requirements of finishing steers with a concentrate/roughage ratio of 90/10. The potato co-product made up 23% of the diet dry matter. Steers gained 3.76, 3.68, and 3.88 lbs. per day, respectively, for the corn/midds, barley, and corn treatments with feed/gain calculated at 6.91, 6.83, and 6.64, respectively. Cost per pound of gain tended to favor the barley treatment although gains were numerically less. Feed barley is typically undervalued in the cash market in relation to its nutrient content.