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Distillers Grains in Dairy and Livestock Diets

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With an operating ethanol plant in Oshkosh and one under construction near Cambria, distillers grains are becoming increasingly available as a reasonably priced, high quality feed for dairy and other livestock in Columbia County.

The state-of-the-art ethanol plants being built today consider distillers grains as a co-product of the ethanol production process. For every bushel of corn used, 2.7 gallons of ethanol, 18 pounds (dry weight) distillers grains and 18 pounds of CO2 are produced. All three products play a role in the profitability of the plant.

The distillation process utilizes the starch in the corn kernel. The resulting feed is thus low in starch, but high in fat, protein, and fiber. Feeding distillers grains in place of corn may help reduce the incidence of acidosis in beef and dairy cattle. Average nutrient values for distillers grains (DG) are listed in Table 1.

Table 1. Average nutrient content of Distillers grains (data summarized from several sources).

COMPONENT	RANGE
Crude Protein	26-36%
Oil	8-12%
Acid Detergent Fiber	5.4-23%
Neutral Detergent Fiber	39-62%
Calcium	0.15%
Phosphorus	0.43-0.83%
Total Digestible Nutrients	88%
Net Energy for Lactation	0.92 Mcal/lb DM

Dairy specialists recommend feeding DG at about 20% of the ration or 10 to 13 pounds per cow per day. For beef cattle, up to 30% of the ration or 7 to 15 pounds per day can be DG. Recommendations for swine are no more than 5% for nursery pigs, 15% for grower/finisher pigs, 10% for lactating, and 40% for gestating swine.

As a protein source, distillers grains may need to be balanced with other protein sources to ensure an appropriate ratio of methionine and lysine (it is high in methionine and low in lysine) as well as balancing rumen degradable and undegradable proteins.

If feeding a low fiber diet, you need to keep in mind that the neutral detergent fiber in DG is not a source of long fibers and producers may need to provide an alternative source if forage NDF is marginal.

Types of distillers grains available.
Distillers grains are produced in three forms: wet, modified wet, and dry. Wet distillers grains average 65 to 70 moisture and can be stored for approximately a week. It can be ensiled if mixed with other forages. Modified

wet DG has been partly dried down to about 50% moisture and has a proportionally longer storage life and lower transportation costs associated with it. Dry distillers grains average 10 to 12% moisture and can be stored indefinitely if kept dry.

The cost of distillers grains averages about 10% more than the price of corn on a dry matter basis.