

Texas Dairy Matters

Higher Education Supporting the Industry

FEEDING DISTILLERS GRAINS

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Current economic conditions have forced dairy producers to consider alternative feeds, such as distillers grains (**DG**). Although DG have been available for more than 100 years, larger quantities are available today as a result of the push to increase production of ethanol for incorporation into gasoline.

Most of the DG available today is distillers grains with solubles or **DGS**. In a recent review average nutrient content for DGS was reported as 30.8 % crude protein, 39.0 % neutral detergent fiber, 16.1 % acid detergent fiber, 11.2 % ether extract (fat), 0.05 % calcium, 0.79 % phosphorus, and 0.31 % magnesium.

The amount of solubles added, varies from plant to plant. The solubles are typically higher in fat, phosphorus and sulfur. In addition they are lower in protein. Thus it is important to know the source of the DG and to determine a plant specific nutrient profile.

Following are some general observations regarding feeding distillers grains:

- When properly balanced, 20 % of the ration dry matter in the diet can come from DG. Milk production is similar to that of cows fed conventional diets.
- When feeding more than 20 % DGS, excess protein or phosphorus may be fed, which could be an environmental concern.
- Milk composition is usually unaffected by feeding DGS, provided the total fat in the diets is the same.
- Although DGS is high in neutral detergent fiber, because of its small particle size it is not a very effective fiber source.
- The milk production response to wet and dry DGS is very similar. Compare the cost of the two products on a dry matter basis. Consider any spoilage that may occur with the wet product.

- When feeding wet DGS and other high moisture feeds (i.e. corn silage, wheatlage, etc.) check that ration DM remains above 50 %.
- Distillers grains can also be fed to calves, heifers and dry cows; provided the ration is balanced.

Some of the concerns when feeding distillers grains include:

- There can be variability from load-to-load and plant-to-plant. Variations in protein, fat and phosphorus content make it difficult to formulate rations.
- Excess phosphorus may be fed, increasing the number of acres required for proper use of the nutrients in the manure.
- High levels of sulfur can be an issue, particularly if more than 30 % of the diet is from DGS.
- Mycotoxins and molds are potential contaminants. Ask about quality control measures to control these and other contaminants.



In general, distillers grains can be a valuable feed ingredient when rations are formulated to meet the nutrient needs of the animal. Although they are a good source of protein and energy, feeding too much can result in excess P being excreted.