

BACKGROUND

Distiller's Dried Grain

Distiller's Dried Grain is a cereal by-product of a distillation process, traditionally from brewers and more recently, ethanol plants. When making ethanol only the starch from wheat is used. The remaining nutrients - protein, fiber and oil - are the by-products used to create livestock feed called distillers dried grain (DDG).

In North America, corn has been used as the main cereal grain in ethanol production and the resulting DDG extensively evaluated as a feedstuff. Due to climatic considerations, ethanol production in most of Canada will be derived from wheat, and there is a scarcity of information on the nutritive value of wheat-based DDG.

The Project

Research will be conducted by the Faculty of Agricultural and Food Sciences at the University of Manitoba to develop practical and economic uses for wheat-derived DDG.

The chemical characterization of wheat-based DDG will be examined and evaluated to determine its nutritional value as livestock feed. Further research will focus on improving animal performance through supplementing the DDG with enzymes to improve nutrient utilization and minimize waste products that animals cannot digest.

The project enhances the viability of the emerging grain-based ethanol industry in Western Canada and also supports the Government of Canada and Province of Manitoba's commitment towards the development of alternative energy and production and use of biofuels such as ethanol.

The project is also designed to increase the efficiency of operations of ethanol plants through improved use of wheat components within the ethanol production process.

This project is one component of a comprehensive biofuels research program at the University of Manitoba that was established in 2005 with significant support from Husky Energy Inc.

Ethanol Production in Manitoba

The *Biofuels Act* will be proclaimed when there is sufficient ethanol production capacity in the province to meet the demand of a 10-per-cent blend.

Husky Energy Inc. has announced that it will construct a 130-million-litre plant at Minnedosa to replace the current facility with \$10.4 million in support under the Federal Ethanol Expansion Program. The new plant, which is estimated to cost \$145 million, is expected to employ 35 full-time staff on an ongoing basis. The plant will require 350,000 tonnes per year of locally grown wheat and will produce approximately 125,000 tonnes per year of distillers dried grains for livestock feed.