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Research Project: Aqueous Enzymatic Extraction of Corn Oil and Value-Added Products from Corn Germ Produced in New Generation Dry-Grind Ethanol Processes

Location: [Crop Conversion Science and Engineering](#)

Project Number: 1935-41000-069-00
Project Type: Appropriated

Start Date: May 03, 2004
End Date: May 02, 2009

Objective:

Develop new environmentally safe aqueous/enzymatic processes to extract the edible oil from corn germ (obtained from new-generation dry-grind corn-to-ethanol plants) and develop processes to fractionate the de-oiled germ into value-added protein and carbohydrate coproducts, to improve the overall economics of making fuel ethanol in new-generation plants.

Approach:

Corn germ from several new generation processes will be treated with mechanical (various forms of milling, homogenization and pressing), chemical (e.g. pH adjustment) and various enzymatic treatments, with the goal of causing the oil to coalesce and float upon centrifugation or other means of separation.

Project Team

- Moreau, Robert
- Dickey, Leland
- Parris, Nicholas
- Hicks, Kevin

Related National Programs

- Quality and Utilization of Agricultural Products (306)
- Bioenergy & Energy Alternatives (307)

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