



## **Aqueous Enzymatic Extraction of Corn Oil and Value-Added Products from Corn Germ Produced in New Generation Dry-Grind Ethanol Processes.** Project Number: 1935-41000-069-00D.

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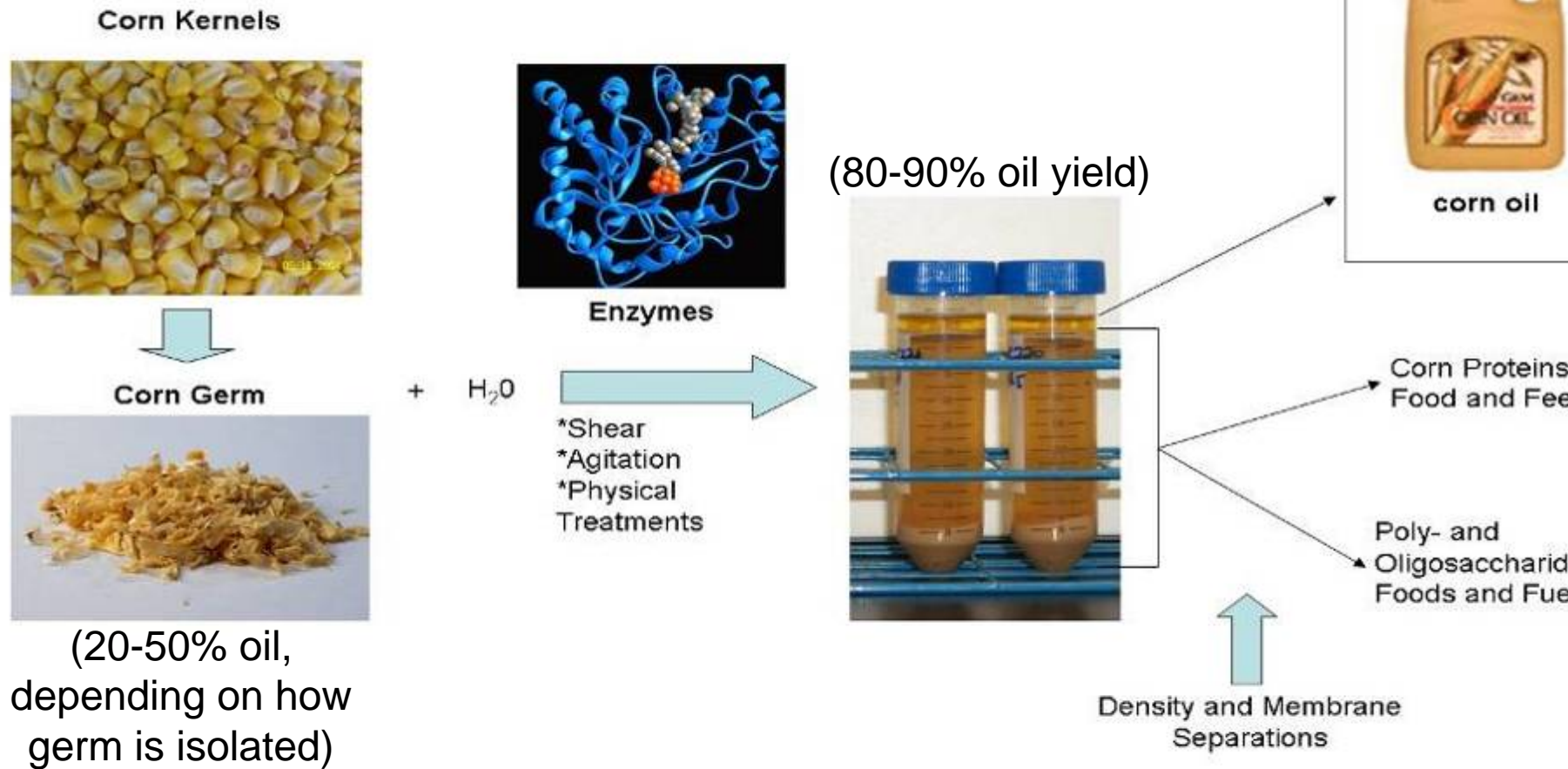
### **Objective:**

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.

# Aqueous Enzymatic Oil Extraction- Extracting Corn Oil without Pressing and without Hexane!



Moreau, R.A., D.B. Johnston, M.J. Powell, and K.B. Hicks, A Comparison of Commercial Enzymes for the Aqueous Enzymatic Extraction of Corn Oil from Corn Germ, J. Am. Oil. Chem. Soc. 81;1071-1075 (2004).