

Technology Licensing Opportunity

Non-Confidential Summary



Protein Extraction from Oilseed Using Waste Solutions from Fermentation

ROI# 07-008

Opportunity:

Researchers at the University of Saskatchewan have developed an integrated process to improve the energy and water efficiency for the businesses of bioethanol production and protein extraction from oilseed meals.

Background:

The process of stillage fermentation in both the bioethanol and protein extraction industry is a very energy demanding. In order to recover the nutrients, excess water in the thin stillage must be evaporated. Improvement of the energy efficiency can significantly increase the profit of bioethanol production and nutrients extraction.



Invention:

In the current art an integrated process has been developed to use thin stillage, a waste from ethanol plant, which contains salts, protein and carbohydrates, to extract protein from oilseed meal. The high salt content of distiller grains is used to facilitate the precipitation of proteins from oil seed meal. The suspension pH can be adjusted using the bio-diesel byproduct glycerol. The stillage from the protein extraction process goes through the same stillage processing in order to recover all the nutritional materials from both resources.

Impact

The current process provides 1) improved water efficiency and increased protein yields for the protein extraction businesses; 2) Improved energy efficiency on stillage processing for both bioethanol and protein extraction businesses; and 3) increased WDG yields or DDGS yields for the bioethanol businesses.

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Researcher profile:



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Research interests:
Oil seed processing, vegetable oil chemistry

Patent Status:

U.S. Patent application No. 61/318,017
Canadian Patent application No. 2,698,080

Development Stage:

Ready for commercialization

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