

Synergy of Using Field Peas as an Ethanol Feedstock

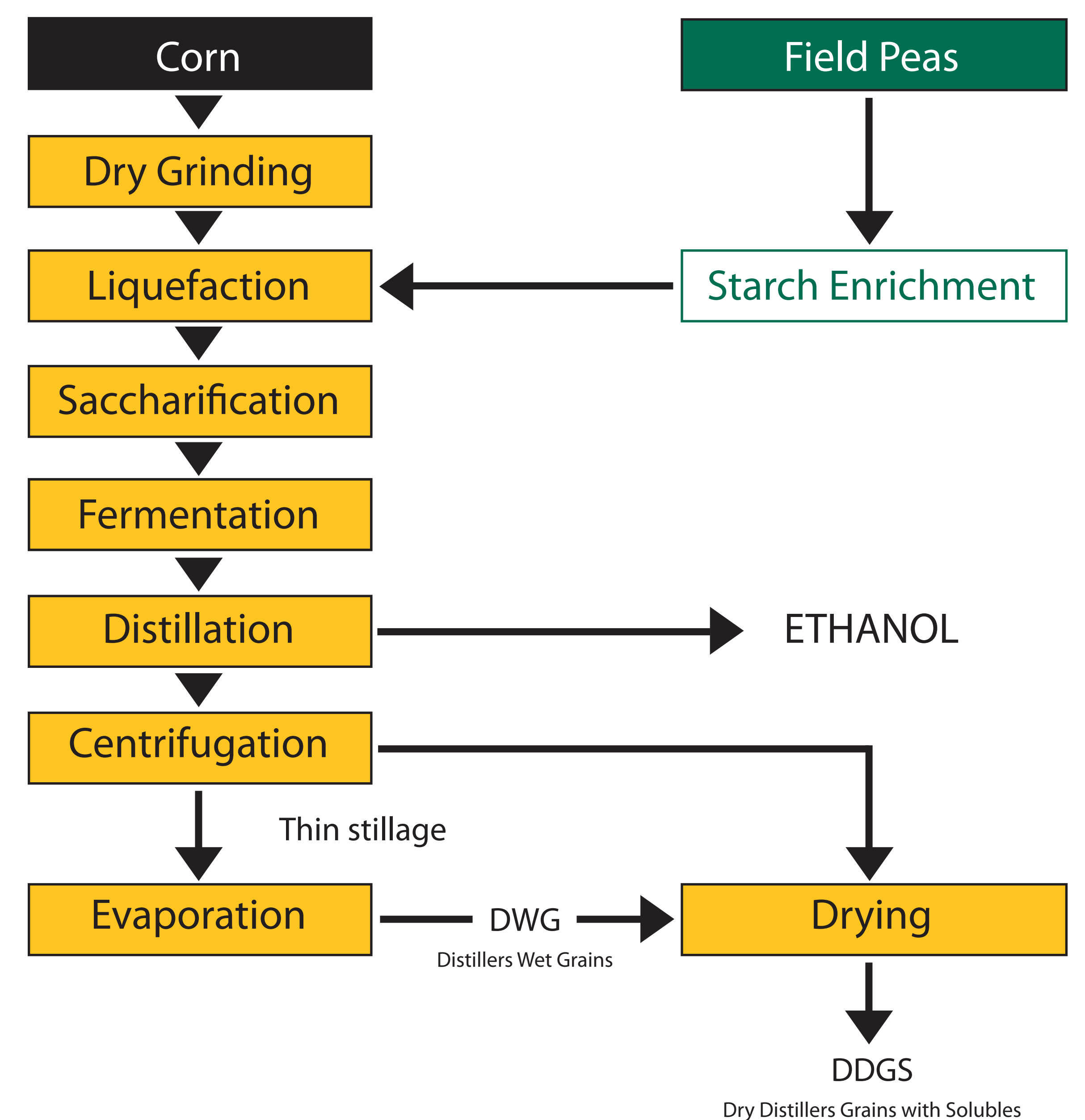
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Project Goal: Determine the technical and economic feasibility of using field peas as a supplemental ethanol feedstock in North Dakota



Specific objectives are:

- 1) Investigate technical feasibility and logistics of using pea fractions in North Dakota ethanol plants
- 2) Determine economic feasibility of North Dakota farmers increasing pea production, including assessment of agronomic and economic risk/returns
- 3) Access synergies of vertically integrating pea fractionation with existing and potential ethanol production activities in North Dakota

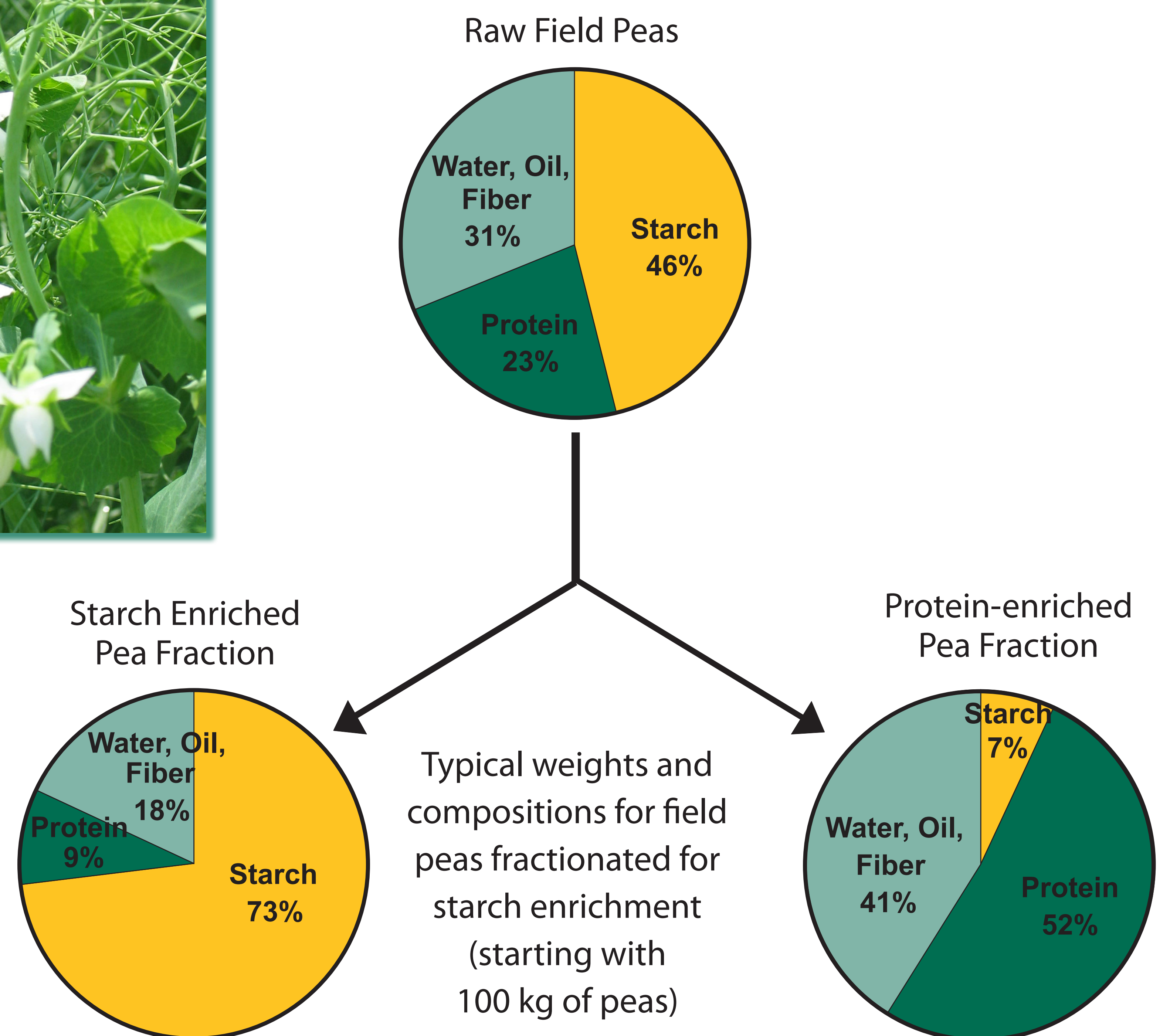
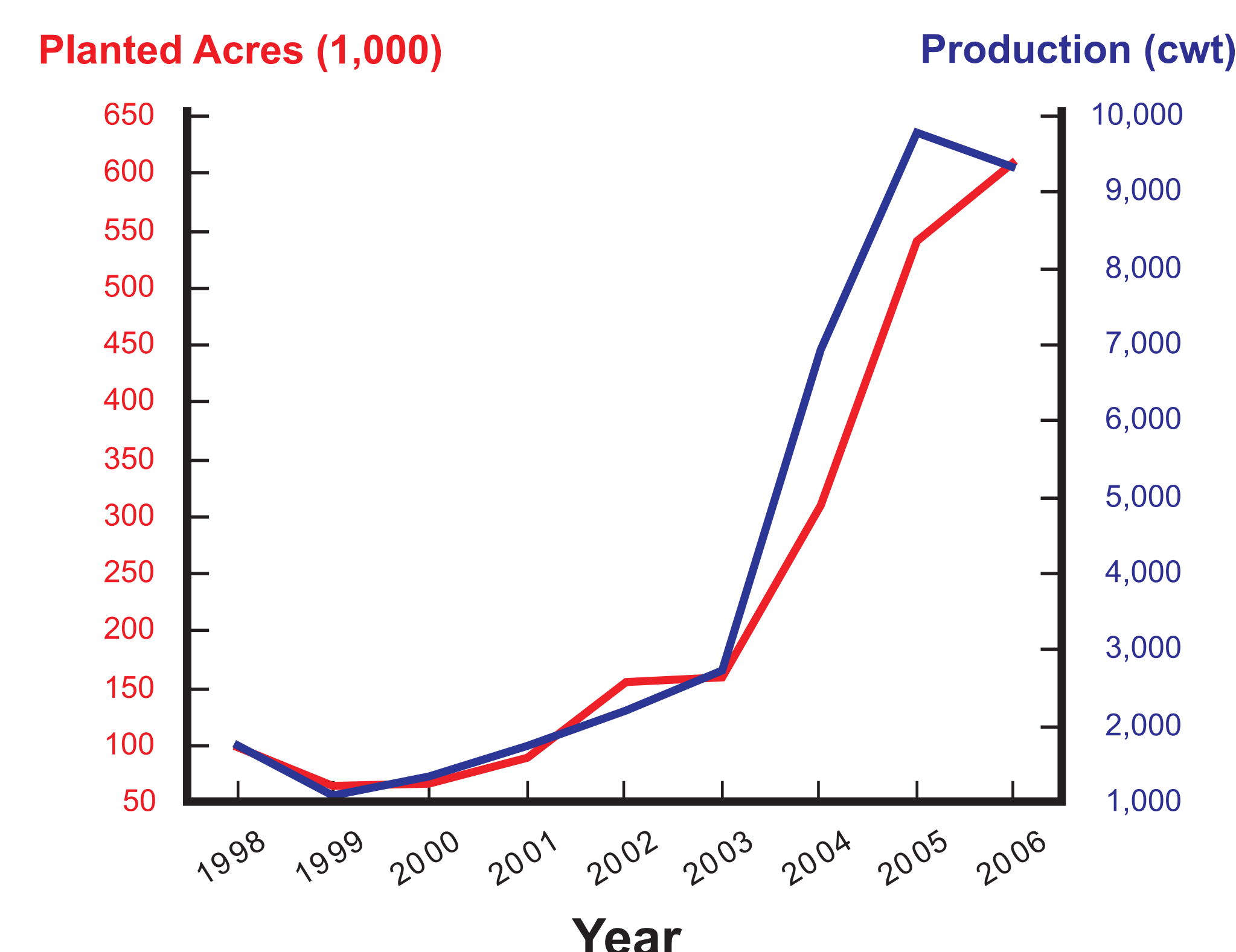


Project Motivations

- North Dakota has two operating ethanol plants, four plants in various stages of construction and several other projects under consideration.
- Not enough corn is raised in the state to meet the demand of these plants.
- Increasing the state's corn acreage enough to meet this need is unlikely because of the region's arid climate and limited irrigation potential.
- Field peas provide a nitrogen credit of 40 pounds per acre of N for the next crop.
- Field peas grow well in parts of ND not well-suited for corn.
- Pea utilization would allow a greater share of ND producers to directly benefit from the starch ethanol industry expansion



Field Pea Production



Results

Results from this technical and economic feasibility study show that use of field pea starch results in higher conversion rates and greater ethanol production. The distillers grain co-product also has higher protein.

At the time of the study, these advantages were not sufficient to offset the cost differential between peas and corn. However, with recently high corn prices, peas are now economically viable.