Specialty soybeans of various types still need to be separated, oil and meal, to capture value of the specialty trait. Examples are any of the modified fatty acid soybeans, high protein or modified amino acid soybeans, and ultimately pharma/industrial soybeans should those ever become reality. Producer groups such as Innovative Growers or Iowa Quality Ag Guild are recognizing that they have to control and market the separation products if they are to share in the true added value of the trait. Currently over 95% of US soybeans, probably a similar percentage in Iowa, are solvent-extracted in large plants (capacity 40,000 bu/day - 100,000+ bu/day). These plants are generally operated by grain marketing firms, and the products, meal and oil, are traded as commodities in a similar manner as the input soybeans. For several reasons, some logistical and some business structural, it will be very difficult for producers to pass limited amounts of specialty soybeans through these plants and retain ownership of products. Increasingly, soybean oil from the commodity crush plants is going to biodiesel production, which is also affected by fatty acid profiles and other quality traits.

Innovative Growers, a producer LLC supported in large part by Iowa State University, has asked what alternative smaller scale technologies are available or are becoming available that could be applied to their situation. Ultimately it is likely that IG, and probably other groups as well, will want to construct plants in similar fashion to the producer ownership of the ethanol industry. There is no market research data on 1) the type and number of plants currently in existence (these are all expeller press operations) and 2) the economics and feasibility of newer technologies (SFE, cold solvent, etc) for oil extraction.

This project is currently being done. It was proposed for FY2006 along with the survey of ethanol processing. The project was carried over and actually begun in FY2007. To date, six interviews have been completed with biodiesel and crush operations. There are approximately 50 soy processing operations (not counting feed mills) of varying types and sizes in Iowa. Though it will likely be impossible to interview all of them, data for some in each category will help us to estimate the others. A database has been started with information available through industry publications and the Internet. Biodiesel plants, although an oil use, not a raw soybean use, were included in the survey because of the increasing dominance of this industry in oil consumption.

**Objectives for FY2008**

1. Describe current soybean processing capacity in Iowa as to type, location, capacity, ownership.
2. Describe current and emerging technologies for oil extraction in terms of product output quality, extraction efficiency, actual or projected cost per unit crushed, construction/size constraints, throughput capacity, and any other parameters necessary to make planning decisions.
3. Identify possible specialty marketing opportunities, if any, that could arise from the specific processing options.
FY2008 Expected Outputs

- Written report and accompanying Power Point presentation to summarize interview data. Report will be sent electronically to interviewees and other interested parties, and it will be posted on the VAAP and IGQI websites.
- Information from interviews will be available for use in the project to map the corn and soybean processing plants in Iowa against crop production by Crop Reporting Districts,