

Final Report
Phase 1
Energy beet Project
April 10, 2012

Summary

Following the BBI and NDSU Economic Feasibility Study, the development project required additional testing, research, demonstrations and communications proving the concept of sugar beets for advanced biofuel feedstock.

Burn Test:

The commercial burn test, completed by Hurst Boiler Company, proved the stillage material would provide up to seventy percent of the internal energy required for the plant. This significantly reduces the amount of fossil fuel necessary for processing and increases the value of energy beets as a sugar based advanced biofuel feedstock.

Yield and Demonstration Trial Plots:

The trial plots proved energy beets could be economically produced in non-traditional production regions of North Dakota. NDSU, Syngenta Seeds and Betaseed have increased the number of seed plots from five to thirteen locations. The results of the yield information will provide information in establishing USDA Risk Management Insurance for growers. Production practices were also demonstrated to potential growers interested in growing energy beets.

Beet Juice Storage Life:

Extending the storage life of beet juice is necessary to maintain processing of sugar-based feedstock year round. It was determined juice could be stored for longer periods by applying best management practices in maintaining both the pH and Bx levels. Continuing research is needed to determine the economic threshold of these two areas.

Producer and Community Education Programs:

Introduction of a industrial crop to a new grow-out area, as well as processing, requires a considerable amount of information and education. The yield and demonstration plot program was the center for dissemination. A website was developed, two semi-annual reports were provided the Advisory Council and eighteen presentations were made to business and community groups. We began with five communities and now have sixteen communities interested in the production and processing of energy beets for advanced biofuels.