



Potential Economic Impact of a Soybean Crush and Biodiesel Facility near Crookston, Minnesota

Soybean Production in Northwest Minnesota

Northwest Minnesota farmers planted 1,813,000 acres of soybeans in 2017. This area includes the counties of Becker, Clay, Clearwater, Kittson, Mahnomen, Marshall, Norman, Pennington, Polk, Red Lake and Roseau.



State Biodiesel Production

Minnesota Department of Agriculture estimates current biodiesel production will provide 53% of Minnesota's mandate for B20 biodiesel, creating the perfect opportunity for profitable investments in Minnesota's clean-air future.



Economic Impact of Proposed Facility in Crookston

During Facility Construction



The construction of a soybean crush and biodiesel facility in Polk County will generate \$134.0 million in economic activity and support 820 jobs.

During Facility Operation



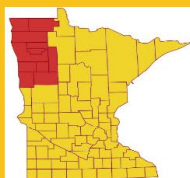
Operation of a soybean crush and biodiesel facility in Polk County will generate \$322.8 million in new economic activity and support 330 new jobs.

Effect on Soybean Basis in the Crookston Area



When fully operational, a soybean crush and biodiesel facility in the Crookston area will narrow the discount (and raise the basis) by an estimated \$0.10 to \$0.20 per bushel.

Economic Impact of Proposed Facility in Northwest Minnesota



Operation of a new crush and biodiesel plant will generate \$323.9 million of new economic activity in the 11-county region. The 11-county region includes Becker, Clay, Clearwater, Kittson, Mahnomen, Marshall, Norman, Pennington, Polk, Red Lake, and Roseau counties.



EXECUTIVE SUMMARY: POTENTIAL ECONOMIC IMPACT AND BASIS ANALYSIS OF SOYBEAN CRUSH AND BIODIESEL FACILITY NEAR CROOKSTON, MINNESOTA

On May 1, 2018, Minnesota's state mandate on biodiesel increased to 20 percent (B20) during the summer months. Soybeans are the primary source product for biodiesel and Minnesota is a leading soybean producing state. Minnesota, however, does not currently produce enough biodiesel within the state to meet the mandate's demand. Investors in Crookston, Minnesota have identified the potential for a new soybean crush and biodiesel plant, primarily using soybeans grown in Northwest Minnesota. University of Minnesota Extension, on behalf of the Crookston Housing and Economic Development Authority (CHEDA), completed an analysis of the economic impact of the new plant.

Soybean Production and Biodiesel Demand: Polk County farmers planted 326,000 acres of soybeans in 2018, the highest acreage of any Minnesota county. Soybean production in Northwest Minnesota has more than tripled since 1997. Meanwhile, the Minnesota Department of Agriculture estimates current biofuel production will only provide 53 percent of the biodiesel required to meet the Minnesota B20 market demand. Thus, Crookston is ideally located with both supply for a crush and biodiesel plant and with demand for its product.

Effect on Soybean Basis: From August 2015 through August 2018, soybean bids in Crookston and Argyle averaged 53 cents per bushel less than bids in Fairmont and Savage. When fully operational, a soybean crushing plant in Crookston will lower the basis by an estimated 10 to 20 cents per bushel.

Economic Impact of Soybean Crush and Biodiesel Plant Construction: In total, the construction of the plant will generate \$134.0 million of economic activity in Polk County. This includes \$43.1 million in labor income. The plant construction will support 820 jobs in the county. The industries experiencing the largest employment impacts include food and drinking places, wholesale trade, and professional and technical services. These impacts will be short-term, dissipating when construction is complete.

The direct output associated with the plant construction is \$106.7 million. The model estimates there will be 590 people employed directly in the construction process. They will be paid \$35.1 million.

Economic Impact of Soybean Crush and Biodiesel Plant Operations: Operations of the plant in Polk County will generate \$322.8 million of new economic activity. This includes \$17.2 million in labor income. The plant will support 330 new jobs. In addition, soybean purchases will support 180 farm-related jobs. Soybean purchases will also support \$58.9 million in farm-related output, including \$12.2 million in labor income. The industries feeling the highest impacts include agricultural support services, real estate, and food and drinking places.

Economic Impact In 11-County Region: Operations of a new crush and biodiesel plant will generate \$323.9 million of new economic activity in the 11-county region. This includes \$18.1 million in labor income. The plant will also support 330 new jobs. In addition, soybean purchases will support 980 farm-related jobs and \$257.8 million in farm-related output, including \$67.3 million in labor income. The 11-county region includes Becker, Clay, Clearwater, Kittson, Mahnomon, Marshall, Norman, Pennington, Polk, Red Lake, and Roseau counties

Notes on the Economic Impact Analysis: The data, analysis, and findings described in this report are specific to the geography, period, and project requirements of the proposed plant.