

MSU Product Center

For Agriculture and Natural Resources

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Corn Used for Ethanol - Overview

Products included in the product line

- Ethanol is defined as a gasoline substitute or fuel additive. The most common source of ethanol is distilled corn.

General Market Trends and Information

- From 1997 to 2004 ethanol production increased from 1.3 billion gallons to 3.4 billion gallons.
- There were several factors that has caused this increase. The first is the subsidy the federal government gives ethanol producers. The second is the elimination of methyl tertiary-butyl ether (MTBE) which was a common gasoline additive; ethanol is a substitute for MTBE and the elimination of MTBE has increased the demand for ethanol. The third reason for the increase demand for ethanol is the increase price of gasoline. As the price of gasoline increases, the viability of the ethanol industry improves.
- The recently passed energy bill also increases the demand for ethanol. The bill increases the demand for ethanol and biodiesel usage to 7.5 billion gallons. This is approximately 3.1 billion more than current ethanol production.
- Tax credits for the construction of ethanol plants, and consumers that purchase flexible fuel vehicles have also spurred production of ethanol.
- Ethanol has been successful in raising the price of corn. It has been estimated that ethanol production had been successful in the raising the price of corn by 5 to 10 cents a bushel in the area where the plant is located. However, if the plant is to be successful, it should be able to generate its own profits or at least generate losses equal to or less than the increase in the price of corn if the plant is owned by farmers.

Emerging trends

- Most ethanol facilities are located in the Corn Belt and northern plains; the passage of the energy bill creates additional opportunities in states east of the Mississippi.
- Many ethanol plants are following a business model of locating ethanol plants near large feedlots. Distillers dry grains and solubles (DDGS), a livestock feed, are a by product of ethanol production. If an ethanol plant is to minimize costs and maximize profits, it needs a market for the DDGS.
- International competition is an emerging threat. Cargill has announced that it will start importing ethanol made from sugar in Central America. It is less expensive to convert sugar into ethanol than corn. Ethanol is a bulk commodity, and if it becomes a global commodity, ethanol producers in the U.S. will face the same global pressures that are faced by other products that are traded internationally.
- While current oil and gasoline prices are high, they may not remain that way indefinitely. New sources of petroleum could be discovered which would put downward pressure on both oil and ethanol.

Manufacturing and distribution issues

- The supply chain for ethanol is very well established. Some of the largest firms in the world such as Cargill and Archer Daniels Midland are involved in the ethanol market. However, many cooperatives have been formed to produce and market ethanol.
- Since ethanol is a commodity, minimizing costs is important. As is the case with many commodities, ethanol production exhibits economies of scale.
- Ethanol producers need to be integrated fuel distribution system.

Overall assessment of opportunities

- Subsidies and the current state of the fuel market have created opportunities for additional ethanol plants. However, it is important to find a market for the DDGS and be integrated into a fuel delivery supply chain in order to be successful.

Sources

National Corn Growers Association.

Des Moines Register.

Sioux Falls Argus Leader.