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## **Ethanol fuels Novozymes growth**

## Franklinton plant to expand, add workers

Sabine Vollmer, Staff Writer

Surging demand for ethanol is spurring Novozymes to a multimillion-dollar expansion at its U.S. headquarters in Franklinton.

The Danish company, which employs more than 4,000, including 450 locally, is the world's largest producer of enzymes. That makes it a crucial supplier to U.S. ethanol producers, which use enzymes to turn corn kernels into fuel alcohol. More than half of their enzyme supplies are generated at Novozymes' sole U.S. production plant in Franklinton.

"Ethanol is a growth machine," said Thomas Nagy, head of Novozymes in Franklinton. "As more and more ethanol plants come on stream, we need more people."

U.S. ethanol production rose to nearly 5 billion gallons last year, eclipsing top-ranked Brazil, according to the Renewable Fuels Association. Still, the U.S. imported an additional 672 million gallons, mostly from Brazil.

By 2009, the association projects that U.S. ethanol production will more than double, to nearly 11 billion gallons, as new and expanded biorefineries come on line.

All ethanol on the market today is made from corn. Enzymes break down the starch in the kernels. The result is glucose, the type of sugar that goes into SweeTarts and other candies. Yeast turns glucose into a crude beer containing up to 50 percent alcohol, which can be blended with gasoline.

But increasing demand for ethanol is pushing up corn prices. Hog and cattle farmers are crying for help, and consumers have seen the price of milk and meat increase.

To reduce ethanol producers' reliance on corn, Novozymes scientists at the company's research lab in Davis, Calif., have developed a super enzyme that is particularly good at turning cornstalks, straw and wood chips into ethanol. The process is known as biomass conversion

## Crucial enzymes

Novozymes plans to scale up production of the super enzyme at the lab it is expanding in Franklinton, Nagy said.

The expansion is needed because the Franklinton plant supplies other businesses that need enzymes, which are essential in brewing beer, baking bread, treating wastewater and making detergents.

Construction of the \$4 million to \$5 million expansion is expected to start before the end of the year and be completed next year, he said.

In addition, Novozymes will hire as many as 60 employees. Many of those positions will be for scientists who will work in the expanded lab. The company is also creating positions in marketing, sales and customer service.

Novozymes might also expand elsewhere. The company is considering a second enzyme production plant that would exclusively supply ethanol producers.

Novozymes is scouting for land for that plant in the five Midwestern states where the bulk of the more than 100 existing U.S. biorefineries are. Nagy said he expects that most ethanol producers will switch to biomass conversion once the technology makes commercial sense.

No decision has been made on the size of the second plant and when to build it, Nagy said.

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