Know How Media Day - Corn Uses

KNOW HOW
What We Know, Who We Know, How We Deliver

Food and Other Industrial Uses of Corn

Producing a Crop That Feeds and Fuels the World

How many times a day does the average American consumer use a product derived from corn? You may fill your car up with ethanol-blended fuel. That soda at lunch - sweetened with a corn sweetener. Maybe you have a pillow or comforter made from corn fiber.

And the pot roast for dinner - most likely corn-fed beef.

For many, the first use of corn that comes to mind is a foodstuff - corn flakes, chips and other products. In actuality, human consumption is just a small percentage of overall corn use.

Regardless of market, producers around the world continue to explore value-added opportunities for corn. One of the most successful efforts has been the growth of the ethanol market.

Eleven percent of U.S. corn production goes into ethanol, while another 19 percent or 1.9 billion bushels is exported. The balance of the crop is used for food, seed and industrial uses. Thousands of products are derived from corn. The emerging bioproducts industry creates new uses for corn and its byproducts. Solvents, cleaners, deicers and plastics are just a handful of the hundreds of renewable, corn-based products we use every day.

Further refining corn separates it into various components - starch, oil, protein and fiber - and converts it into higher-value products. More than 1.4 billion bushels of corn are refined annually into a wide variety of food, industrial and feed products.

Finding New Uses for Corn

We all read labels for nutritional information, but have you ever wondered what plastic forks or deli trays are made from? Of the many new uses for corn, perhaps none has had such impact on the bioproducts industry as the development of polylactic acid, or PLA. A corn-derived polymer, PLA is used to create synthetic fibers and biodegradable plastics that offer consumers and the industry a 100 percent renewable alternative.

PLA packaging is used every day in consumer goods such as floral wraps, food packaging for bakery and deli goods and serviceware such as dishes and cutlery. But PLA's promise extends beyond plastics. It also is also being used in a synthetic material that offers many traits of natural fibers. Man-made fibers from 100 percent renewable resources are already available at home stores throughout the United States. They can be found in clothing, bedding and carpeting.

Biotechnology Improves Production While Reducing Stress

on the Environment

New technology has allowed producers to take a more active role as stewards of the land. Biotechnology offers farmers tools to protect their crops from disease, weeds and insects.

Current biotechnology crop offerings have reduced the amount of pesticides used in U.S. production by 46 million pounds. As additional biotechnology-derived crops are introduced, more than 163 million pounds of pesticides could be eliminated from current cropping practices. Many of these crops also eliminate the need for tilling the soil, thereby preserving valuable topsoil and reducing runoff into rivers and streams.

The world population is projected to top 8 billion by 2030, meaning farmers around the globe will need to produce enough food to feed an additional 2 billion people. The United Nations Population Fund estimates farmers will need to produce 75 percent more food per acre to meet the demand. Biotechnology brings with it the potential to increase crop yields, while lessening environmental and cultural impact on land in production.

A 2002 study by the National Center for Food and Agricultural Policy found that six biotechnology crops grown in the United States - soybeans, corn, cotton, papaya, squash and canola - produced an additional 4 billion pounds of food and fiber on the same acreage as their traditional counterparts.

Fueling the World with Ethanol

Ethanol is an agriculture success story. In the United States, corn-based ethanol plays three major roles in our economy:

1. It offers energy security by replacing $2 billion worth of imported fuel with a renewable, domestic fuel.
2. It's good for the environment, reducing pollution and contributing to cleaner air.
3. It's good for the economy, creating new business opportunities for corn growers and communities.

Ethanol production is energy efficient, also, because it has a positive net energy balance, meaning it takes less energy to produce ethanol than the product ultimately created. Additionally, an ethanol byproduct - distillers' dried grains with solubles - is a nutritious livestock feed.

Ethanol-blended fuels account for 18 percent of all automotive fuels in the United States. Ethanol has a 113-octane rating, making it the highest-performing fuel on the market. And because ethanol-blended fuels don't leave gummy deposits, they keep automobile fuel systems clean and also help serve as gas-line antifreeze in winter.

Sources:

- The National Corn Growers Association
- The World of Corn 2004

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