

Monsanto tests biotech corn developed to deal with drought

By **BLAKE NICHOLSON**
Associated Press

BISMARCK, N.D. — Seed giant Monsanto Co. plans large-scale tests this year of the first government-approved biotech crop developed to deal with drought.

The new corn is being introduced as much of the U.S. remains abnormally dry and areas in the South and Southwest still face severe drought. Monsanto says the corn won't be a panacea for drought-stricken farmers but when combined with improved agricultural practices could help those in areas like the western Great Plains, where production without irrigation can be half as much as the national average.

The St. Louis-based company plans on-farm trials from South Dakota to Texas to quantify how well the corn works before releasing it commercially next year. Farmers in areas like western Kansas, which gets about half of the annual

rainfall enjoyed by the eastern half of the state, are eager for the results.

"We're not in a very wet country here," said Harvey Heier, who has a farm near Grainfield, Kan. "It would be a big plus ... if it works."

Monsanto developed the corn with a gene taken from a bacterium commonly found in soil and vegetation. The U.S. Department of Agriculture decided against regulating it late last year, essentially approving it for commercial release. The decision is notable because it marks the first time USDA's Animal and Plant Health Inspection Service has approved a product that has been genetically engineered to resist drought, rather than a pest or herbicide.

The agency says the corn is safe. Its analysis concluded the corn wasn't likely to harm the environment, people or animals and wouldn't boost corn production at the expense of grasslands and forest, said Michael Gregoire, deputy

administrator of APHIS's Biotechnology Regulatory Services.

Doug Gurian-Sherman, senior scientist for the Union of Concerned Scientists' Food and Environment Program, said there's no reason to think the corn might be unsafe, though he and Bill Freese at the Center for Food Safety say they wish there were more stringent testing and regulation of biotech crops. USDA said last November that it plans to speed up regulatory reviews of biotech crops even more by streamlining the process, cutting in half the average approval time of three years. New guidelines could be published as early as this month.

Officials in the corn and ethanol industries say drought-tolerant corn could help meet the dramatic increase in demand for the grain used to make both food and fuel. Public consumption of corn-based products has more than doubled in the past 30 years,

while the ethanol industry's demand for corn has doubled in the past five years, according to the USDA and Renewable Fuels Association.

It's not clear whether Monsanto's corn will actually boost production. The APHIS analysis prepared by Gregoire says field trial results showing more corn grown per acre under dry conditions aren't statistically significant but suggest the corn would do well in drought.

But the analysis also notes some conventionally bred varieties have drought tolerance and "to some extent, all U.S. corn varieties have been becoming more drought resistant over time."

Companies such as Pioneer Hi-Bred, a DuPont business, have introduced drought-tolerant corn developed through conventional and molecular breeding. No company but Monsanto has petitioned APHIS for approval of a genetically engineered

drought-tolerant trait, spokesman R. Andre Bell said.

While Monsanto touts the variety developed with German chemical company BASF as "the industry's first biotech drought solution," it's also been careful to limit expectations. The corn, which is being marketed under the name DroughtGard, is aimed at areas of the U.S. suffering moderate drought and is not currently part of the company's effort to help bring drought-tolerant corn to parched areas of Africa.

"This isn't a product that we're expecting to grow in the desert," Monsanto spokeswoman Danielle Stuart said. "You still need water and nutrients."

Mark Edge, Monsanto's drought marketing specialist, cautioned that while field trials were promising, they were limited. This year's tests, involving as many as

250 growers in six states, should provide better information about where and how well it works, he said.

"We don't see this as an end; this is a beginning to understanding how we can use the tools of biotechnology to interact in this complex arena of yield and (drought) stress," Edge said. "We expect that our pipeline will have many more (products) that we bring forward."

Gurian-Sherman predicted the corn will be "a Band-Aid, not a cure," providing "modest" benefit on only about one-fifth of the U.S. corn acres that are in areas of frequent drought.

"I don't think it's useless technology ... (but) we shouldn't have an expectation that this technology is going to solve our drought problems in the foreseeable future — at least severe droughts," he said.

Federal Investments in Local Food Boost Economic Growth

Recently the USDA released a comprehensive report on its Know Your Farmer, Know Your Food initiative, launched in 2009 to enhance coordination among federal programs that in various ways help to build local and regional farm and food systems.

"This is a very timely report," notes Helen Dombalis, Policy Associate with the National Sustainable Agriculture Coalition. "The ongoing revitalization of regional farm and food systems depends on the continuation of key 2008 Farm Bill programs whose funding expires later this year if Congress does not act."

The expiring farm bill programs range from Value-Added Producer Grants, which help farmers develop new products and markets while increasing their share of the consumer food dollar, to the Farmers Market Promotion Program, which helps create and expand venues for direct farmer-to-consumer sales of local foods.

Also up for farm bill funding renewal are the Rural Micro-Entrepreneur Assistance Program, National Organic Certification Cost Share Program, Beginning Farmer and Rancher Development Program, Outreach and Assistance for Socially Disadvantaged Farmers and Ranchers, Rural Energy for America Program, Organic Agriculture Research and Extension Initiative, and Specialty Crop Research

Initiative.

"Congress should renew and expand funding for these innovative programs in the 2012 Farm Bill," says Dombalis. "Local and regional agriculture is a major new driver in the farm economy. There are very significant emerging market and business opportunities, but major research, infrastructure, and technical assistance gaps need to be filled to reap the full benefit. We need all of the existing farm bill tools available in the future to grow rural jobs and to increase new farming opportunities."

Several bills pending in Congress, including the Local Farms, Food, and Jobs Act and the Beginning Farmer and Rancher Opportunity Act, include provisions to renew funding for these vital programs and to ensure our federal agriculture policy meets the

needs of local and regional producers. Both bills are aimed at inclusion in the 2012 Farm Bill and have the support of hundreds of farm, food, and rural organizations nationwide.

Report Contents and the Compass

Know Your Farmer, Know Your Food's primary goals revolve around better using federal resources to boost job creation through a modernization of local and regional farm and food economies. The report details a case study in northeastern Iowa where local food sales catapulted more than one thousand percent in just four years and another in Oklahoma where a group of producers are aggregating, labeling, and cooperatively marketing \$70,000 worth of food a month statewide to create an extra income stream.

Similar economic ripple effects to improve farm and rural income are found throughout the report.

Food access also plays prominently into the initiative's priorities, which include programs to localize food processing and distribution in ways that reach underserved communities. The USDA Farm to School team has helped spur programs that have increased students' fresh fruit and vegetable consumption by 25 to 84 percent, and Know Your Farmer has also coordinated research to support the development of new "food hubs" which facilitate growers' access to local markets and fair prices.

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