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Transgenic Corn Production Slowly Increasing in Ohio



Ohio State corn cropping systems researcher Professor Peter Thomison.

Of all the major corn-producing states in the country, Ohio ranks last in adopting biotechnology varieties, according to a U.S. Department of Agriculture survey. But with high-yielding hybrids and seed package incentives, the shift to transgenic corn production may be accelerating.

"We are the last major corn-producing state in the country that hasn't widely adopted transgenic traits for corn," said **Peter Thomison**, an Ohio State University Extension agronomist and professor in the Horticulture & Crop Science Department. "That will probably change dramatically in the next couple of years with the strong promotions of transgenic corn hybrids by seed companies."

Transgenics is the science of introducing a gene from one organism or plant into the genome of another organism or plant. In crop production, Bt corn to control European corn borer and rootworm, and Round-Up Ready corn and soybeans for enhanced weed control would be examples of transgenics.



The USDA National Agricultural Statistics Service surveys U.S. farmers every year regarding the adoption of crops that carry transgenic traits. According to the latest survey, over half of corn acreage in the United States is planted with biotechnology varieties. In Ohio, transgenic corn was planted on only 18 percent of the total corn acreage in 2005 -- 30 percent behind Indiana, its closest competitor, and 78 percent behind top-ranked South Dakota. Transgenic corn production in Ohio has slowly increased, however, from 9 percent in 2003.

"One of the things that is attractive to growers is that there have been major improvements in transgenic hybrids from the standpoint of agronomic performance and, more recently, a very attractive marketing promotion for seed containing transgenic traits," said Thomison, who holds a partial research appointment with the Ohio Agricultural Research and

Development Center. "For example, in the Ohio Performance Trials, eight of the top 10 high-yielding hybrids evaluated contain the Bt trait. It's been proven the traits work. The challenge has often been finding a reason to use them."

Thomison said in cases of Bt corn borer or rootworm corn transgenic hybrids, Ohio growers have been slow to plant them, because of a lack of serious insect problems throughout the state. In 2005, only 9 percent of the corn planted was insect resistant.



"There are some years where we have serious problems with European corn borer, but, according to our entomologists, only one or two years out of every 10 do we have any major statewide problems. In late planting situations where corn borer is more likely, Bt corns do offer definite economic benefits," said Thomison. "With rootworm, it's primarily been a problem in continuous corn acreage, but we have less than 20 percent of the crop in continuous corn."

The lower cost of Round-Up has been one reason why more Ohio growers are adopting Round-Up Ready corn. In 2005, 7 percent of the corn planted in the state was herbicide resistant. By comparison, 77 percent of soybeans planted in Ohio are Round-Up Ready.

"Round-Up Ready corn hasn't really taken off like Round-Up Ready soybeans because, until recently, conventional herbicide programs were cheaper and just as effective. There was less incentive for growers to grow Round-Up Ready corn when

they could grow conventional corn with conventional herbicides at cheaper costs," said Thomison. "That's all changing now with new pricing schemes, cheaper Round-Up, and the lower costs of Round-Up Ready corn. Plus, there are a lot of Round-Up Ready hybrids out there with good yield potential."

Convenience also is sparking interest in using more transgenic hybrids.

"A grower may not have a pressing need for the Bt corn borer or rootworm trait, but if he is getting the package for a similar cost than without the transgenic, then it might be an incentive to make the switch," said Thomison. "The grower is looking at it from a risk management perspective. He may not have problems every year, but the addition of the transgenic crop with built-in insect resistance, or one that offers herbicide resistance, will minimize those problems if he were to have them."

For some growers, noted Thomison, the use of transgenic crops is all about peace of mind.

Watch a narrated slideshow of this story with additional photos here: [Transgenic Corn Production Slideshow](#). Quicktime software required to view slideshow.

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Published May 08 2006 - <http://HCS.OSU.EDU>