

New Biotech Corn Could Knock Out Rootworm

ST. LOUIS, Mo. — While scientists have developed new biotech plant varieties that resist several pests, corn rootworm has continued to munch its way across cornfields.

Rootworms thrive on the roots of corn plants, leaving the plants so weak that they don't grow or produce as much as they should.

Without a healthy mass of roots to anchor them, the crippled stalks fall to the ground. And if the corn still manages to live and produce ears, rootworms that mature into beetles can devour the kernels and silk. The insect can grow from egg to adult within one year, and do some extensive damage along the way.

These hungry and hearty in-

sects cost corn producers about \$1 billion each year in yield losses and control measures, according to the Agriculture Department. Now, producers may have a new weapon in their arsenal against the corn pest.

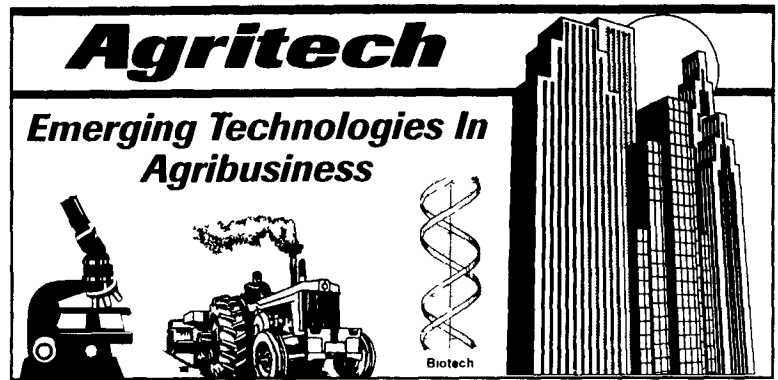
If government regulators approve the new YieldGard™ rootworm-protected corn, developed by Monsanto, farmers across the Corn Belt could cut back on their use of insecticides and get season-long control of corn rootworm regardless of weather and soil conditions.

The company is in the final stage of registering the product with the Environmental Protection Agency.

Monsanto's field trials are promising. They show that the new product is significantly

more effective and consistent than the leading insecticides in controlling rootworm. YieldGard™ rootworm corn was 100 percent consistent in controlling rootworm damage, compared to 93 percent for the best performing insecticide. Monsanto estimated that an economic threshold of 3 on a scale of 1 to 6 was the point at which it is cost-effective to use some form of rootworm control. On that scale, the YieldGard™ product achieved a rating of 1.7, compared to 2.3, 2.5 and 2.6 for the leading rootworm insecticides.

Monsanto's YieldGard™ rootworm-protected corn is just the latest arrival in a growing family of successful biotechnology products that are helping farmers win the battle against



crop- and profit-eating insects and diseases. Its older siblings include corn that resists the European corn borer; cotton that is protected against cotton bollworms, pink bollworms and tobacco budworms; potatoes that resist the Colorado potato beetle; tomato plants that resist certain viruses; and sunflowers, soybean canola and wheat that are protected against various caterpillar and beetle pests.

Like the corn borer-protected

corn approved in 1997, the new corn variety contains bacillus thuringiensis (Bt) genes, which produce a protein that is toxic to several insects. Application of Bt to protect against rootworm will be a boon to corn growers in the Corn Belt that stretches across the Midwest, where rootworm is a bigger problem than corn borer.

U.S. corn producers are expected to embrace the new Monsanto product as soon as it is approved for sale and planting in the United States. USDA reported in March that U.S. farmers are increasing their plantings of biotechnology crops, with biotech corn plantings increasing to 32 percent of all corn planted in 2002. The rootworm-protected corn is likely to prove even more popular than existing biotech varieties of corn. Monsanto's market research shows that three-quarters of corn producers surveyed are interested in using rootworm-protected corn.

Producers who have resisted planting biotech varieties because of their higher price tag may decide that now is the time to make the investment. Application to control corn rootworm is the leading use of insecticides in the U.S.

In 2000, more than 90 million pounds of insecticide were applied on more than 15 million acres of corn nationwide, according to Doane Market Research. But early planting and overly wet or dry soil conditions can compromise the effectiveness of insecticides. Producers who want to protect the environment and themselves from exposure to chemicals while gaining more consistent control over corn rootworm may jump at the chance to plant the new YieldGard™ variety.

While Monsanto is the first company out of the gate with a rootworm-protected variety of corn, other companies are expected to come out with their own similar products in the near future.

— May 13, 2002
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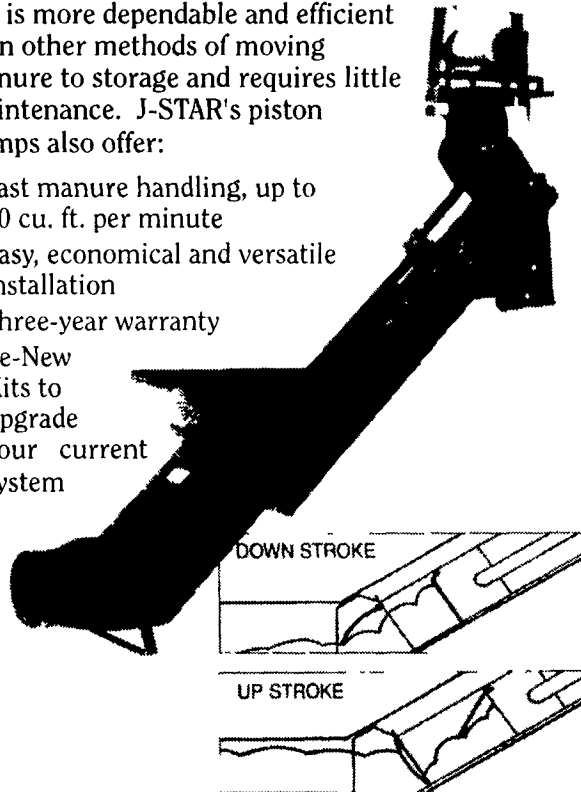
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