

BACKGROUND AND PERFORMANCE

- Bt COTTON

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Abstract

Cotton growers have to manage a vast array of insect pests in order to produce a crop. One of the most important pest complexes they face is the lepidopteran or worm pests. In response to this problem, companies have developed a large number of insecticides to control these pests. Across the belt in 1991-94, these pests averaged over \$200M annually in insecticide control costs and still managed to reduce yields by almost \$100M per year. With increasing insect resistance and environmental concerns, new control methods are needed. Over 15 years ago, several companies anticipated that need and began to develop cotton that produced its own insecticide. They identified the genetic material in *Bacillus thuringiensis* (*Bt*) that codes for its insecticidal protein, and moved that gene into cotton so the toxin could be expressed inside the plant. After receiving government registration in 1995, one company, Monsanto Co., is beginning to market their product under the Bollgard™ gene trade name. Six years of field testing in more than 300 trials have demonstrated that the Bollgard gene can control growers most troublesome worm pests - tobacco budworm, cotton bollworm and pink bollworm. Growers will now be able to manage their worm pests in a new way - by planting seed containing the Bollgard gene. Data generated by producers on their farms have demonstrated the real value in insecticide costs and yield protection. This product and other genetic advances in cotton hold great promise to help growers manage production problems, minimize environmental impact and maintain profitability.