

## Pest evolves resistance to GM crops

By Steve Connor, Science Editor  
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It is believed to be the first documented example in the wild of an insect pest becoming resistant to this particular type of GM crop, which was thought to be immune from the problems that have plagued conventional pesticides. The bollworm moth is one of the most destructive pests of cotton crops. The resistant form of the moth's caterpillar was found in a dozen fields in the southern states of Mississippi and Arkansas between 2003 and 2006, when the surveys were conducted.

The GM cotton was developed by inserting a gene into the plant that is normally found in a bacterium called *Bacillus thuringiensis* (Bt). The bacterial gene produces a protein toxin that is poisonous to certain insects, but normally harmless in other animals.

Bruce Tabashnik of the University of Arizona, who led the research team, said: "What we are seeing is evolution in action. This is the first documented case of field-evolved resistance to a Bt crop."

In the case of the GM cotton crop, the bollworm insect developed resistance because of the huge area of land in America and elsewhere where GM crops modified with Bt genes are now grown. This has generated one of the largest forces of natural selection for insect resistance that the world has ever known, according to the researchers, whose study will be published in the journal *Nature Biotechnology*.