

GMO insect-resistant Bt tomatoes could control leaf miner pest, reduce insecticide use

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A promising [insect] control method is the use of a bacteria-derived protein to protect plants from insect attack and damage. *Bacillus thuringiensis* (Bt) is a soil bacterium that produces insecticidal crystal proteins which bind to receptors in the insect's gut. ... An alternative to external application of Bt crystal proteins is genetic engineering of the crop plant to produce the protein itself using Bt crystal protein (*cry*) genes.

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Work in our lab was aimed at determining if the expression of a Bt *cry* gene in tomato could provide control of the leaf miner *Tuta absoluta*.

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In our research, the *cry1Ac* gene was introduced into tomato plants. ... Up to 100% of leaf miner larvae died after feeding on leaves producing crystal proteins. Moreover, gallery formation by the insect was reduced by 57 to 100%, ensuring that the leaves suffered limited damage and that marketable fruits could be produced. These results indicate that, if adopted, Bt tomato could reduce the use of insecticides for the control of leaf miner and potentially other insects.

These findings are described in the article entitled [Cry1Ac-mediated resistance to tomato leaf miner \(*Tuta absoluta*\) in tomato](#), published in the journal [Plant Cell Tissue and Organ Culture](#).

Read full, original post: [Using Genetic Engineering To Control Leaf Miner Insects In Tomato Plants](#)