

India's new pest-resistant GMO cotton uses gene from edible fern to resist whitefly

A new transgenic [cotton] variety is at India's doorsteps — this one developed by the country's own scientists.

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The new transgenic cotton is supposed to target whitefly ... whose infestation had been extremely serious ... and is emerging as a new threat to the crop.

...None of the insecticidal proteins used in genetically modified (GM) crop plants to date are effective against the whitefly.

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[A] team of scientists ... [identified] a protein from an edible fern... that kills the whitefly... They named the protein "Tma12".

In the next step, they cloned the gene encoding for this protein and... inserted it in the cotton plant to create the transgenic variety expressing the Tma12 protein.

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They report that all the transgenic cotton lines they produced were found resistant to whitefly infestation, "with no detectable yield penalty."

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According to the scientists, Tma12 targeted only the whitefly and did not affect the ladybird beetle... a beneficial insect.

The researchers point out that Tma12 was isolated from a known edible plant...

"Therefore Tma12 is a promising candidate gene that could be pyramided with Bt toxins to develop GM crops with resistance to whitefly and other herbivorous pests," the report said.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: [One more GM cotton on the way — this one's home-grown](#)