Biosafety News

Scientists Develop GM Citrus with Enhanced Resistance to Greening


(Photo Source: University of Florida)

Researchers from the University of Florida have developed genetically modified citrus trees with enhanced resistance to greening, and have the potential to resist canker and black spot.

The team led by Jude Grosser, professor of plant cell genetics at UF's Institute of Food and Agricultural Sciences Citrus Research and Education Center used a gene isolated from Arabidopsis to create new trees. They used sweet orange cultivars Hamlin and Valencia and created plants that defend themselves against pathogens using a process called systemic acquired resistance (SAR). The trees from their experiment showed enhanced resistance to greening, reduced disease severity, and several trees remained disease-free 36 months after planting in a field with a high number of diseased trees.

Approximately 45 percent of the trees expressing the Arabidopsis gene tested negative for greening, and in three of the transgenic lines, the greening bacterium was not detected at all. Control trees tested positive for the presence of greening within six months and remained positive for the entire duration of the study.

For more details, read the news release from the University of Florida.

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