

Whitefly spreads emerging plant viruses

January 18 2007

A tiny whitefly is responsible for spreading a group of plant viruses that cause devastating disease on food, fiber, and ornamental crops, say plant pathologists with The American Phytopathological Society (APS).

According to Judith Brown, professor of plant sciences at the University of Arizona's Department of Plant Sciences, the whitefly, *Bemisia tabaci* (*B. tabaci*), is the exclusive insect vector (transmitter) for a large group of emerging plant viruses that infect several hundred plant species worldwide. "Once considered an obscure whitefly, *B. tabaci* is now among the most invasive and economically damaging insects to agriculture, spanning food and fiber crops, and certain nursery grown ornamentals, with the ability to infest more than 500 plant species," she said.

This whitefly and the plant viruses it transmits are no longer restricted to their native habitats or contained by natural geographic boundaries. "The increased importance of new and emerging plant viral pathogens is directly related to the adaptive capacity of *B. tabaci* and its ability to exploit agricultural systems," Brown said. *B. tabaci* has proven difficult to control partly because of its tendency to develop insecticide resistance.

"As the population levels of the whitefly *B. tabaci* continue to remain robust, new species of plant viruses will continue to emerge and cause damaging diseases in food and fiber crops," Brown said.

Early virus and vector detection, information about their distribution and

host range, and knowledge about the mode of virus transmission by this whitefly are essential for managing the emerging plant viruses and the vector populations. Continued research to learn more about the biology and genetics of both the plant viruses and the whitefly is also needed.

Source: American Phytopathological Society

Citation: Whitefly spreads emerging plant viruses (2007, January 18) retrieved 20 March 2024 from <https://phys.org/news/2007-01-whitefly-emerging-viruses.html>

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