Patricia D. Hastings

From: "Patricia D. Hastings" <hastings@AESOP.Rutgers.edu>
To: "NJinPAS Vegetable" <NJinPASvegetable@AESOP.Rutgers.edu>
Sent: Monday, April 23, 2007 7:21 PM
Subject: First report of Sweet potato chlorotic stunt virus in North Carolina, United States

Posted to the North American Plant Protection Organization's (NAPPO) Phytosanitary Alert System. (Warning: The following pest reports have not yet been confirmed with the appropriate National Plant Protection Organization. They are provided solely as an early warning to NAPPO countries, and all National and Regional Plant Protection Organizations should use this information with caution.) Source: http://www.pestalert.org

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Subject: First report of Sweet potato chlorotic stunt virus in North Carolina, United States
IDENTITY/Name: Sweet potato chlorotic stunt virus
Taxonomic Position: Closteroviridae
Common Names: SPCSV
Significance: Sweet potato chlorotic stunt virus (SPCSV) was detected for the first time in North Carolina, United States. Sweet potato chlorotic stunt virus when found in association with Sweet potato feathery mottle virus (SPFMV) causes Sweet potato virus disease (SPVD), a serious disease originally described in Africa in the 1970's. Sweet potato chlorotic stunt virus is the whitefly transmitted component of the disease. Sweet potato feathery mottle virus is transmitted by aphids. The only other U.S. report of SPCSV was from a single accession in the USDA Sweet Potato Germplasm Repository. No other detections of SPCSV have been reported in the United States. In both cases of U.S. SPCSV detection, SPFMV was also present.

Two isolates of SPCSV were collected in North Carolina in 2001 and 2003. The isolates were collected from separate fields of cultivar Beauregard sweet potatoes; however, they differed by only six nucleotides and were identical at the amino acid level. Additional molecular work suggests this U.S. population is not a recent introduction.

Symptoms of the infected plants were typical of SPVD, including stunting, leaf narrowing and distortion, vein clearing, and chlorotic mosaic.

Issues of Concern: When in association with SPFMV, SPCSV can cause serious yield losses in susceptible cultivars. Control measures are limited to using clean planting material and the use of resistant or tolerant cultivars.
Pathways: Can be moved by infected planting material and grafting but is not seedborne or likely to be transmitted by contact between plants.
Hosts: Ipomoea batatas
Vector(s)/Dispersal: Bemisia tabaci and Trialeurodes abutilonea

References:

1. Abad, J. A., E. J. Parks, and S. L. New. 2007. First Report of Sweet potato chlorotic stunt virus, a Component of Sweetpotato Virus Disease, in North Carolina. Plant Disease. 91: 327.
2. CABI. 2006. Crop Protection Compendium. CAB International. Wallingford, UK

Source: Phytosanitary Alert System; Pest Alert www.pestalert.org; Prepared on: 04/11/2007.

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