



Fresno County Vegetable Crops

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Thomas Turini begins as University of California's Vegetable Crop Farm Advisor in Fresno County

I am writing this introduction to let growers, pest control advisors, other agricultural professionals and any other potential clientele that I am presently in the Fresno County Vegetable Crops Advisor position and am enthusiastic about working with you. My responsibilities in Fresno County are to provide science-based information to improve profitability or to preserve the profitability of vegetable crops production. I am currently in

the process of developing an applied research program.

From 1999 to mid February this year, I was the University of California Plant Pathology Farm Advisor in Imperial County where I worked primarily with vegetable crops. There, I focused my research and extension program on control of lettuce diseases, such as drop, powdery mildew, downy mildew, and corky root; melon diseases, such as vine decline and pow-

dery mildew; and onion diseases, such as downy mildew and Iris yellow spot virus. I have conducted experiments to assess performance of lettuce and melon breeding lines and varieties under specific production conditions of importance in Imperial County. I also had a plant pathology laboratory on site and took samples and made field calls to diagnose production problems. I am currently identifying vegetable crop priority issues to

Cucurbit Yellow Stunting Disorder Virus Detected in Low Desert Areas of California and Arizona

Thomas Turini

In September and October of 2006, the presence of Cucurbit yellow stunting disorder virus (CYSDV) was first confirmed in the low desert production areas of southern California and Arizona. The first report in North America was by

Kao et al. (2000) who detected this virus in southern Texas and northern Mexico in stunted yellow cantaloupe plants in late summer 1999. CYSDV is a widespread virus of melons and related crops in the Middle East and

southern Europe. Cantaloupe and mixed melon, watermelon, cucumber and squash are reported as hosts. The symptoms begin as yellow areas between veins. Later, spots coalesce resulting in a light yellow leaf with green veins.

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New Vegetable Crops Advisor

be addressed in my program. Projects that I have involvement in or will be involved in include: 'Assessment of thrips populations and *Tomato spotted wilt virus* (TSWV) infection in processing tomato fields in the Central Valley of California and development of an IPM strategy for

thrips and TSWV in tomato', 'Evaluation of drip and foliar applied materials for control of garlic white rot in Fresno County', 'Improving the Understanding and Management of Cucumber Beetles' and 'Melon variety assessment under Fresno County conditions'. I invite you to

contact me regarding any specific production problems you are experiencing and to share your perspective of the vegetable crops industry in Fresno County and the research and extension needs of these commodities in this area.

Thomas A. Turini

The most likely means of CYSDV spread into the San Joaquin Valley, currently thought to be free of this virus, would be through movement of infected transplants into the area.

Cucurbit Virus Detected

The symptoms initially appear on the older leaves at the center of the vine, with younger leaves on the runners expressing symptoms at later stages of disease development.

CYSDV is not known to be seed borne; it is transmitted by the silverleaf whitefly, *Bemisia tabaci* biotype B, in a semi-persistent manner. The virus can be acquired in as little as 2 hours of feeding and transmitted in the same amount of time. The whitefly can retain the virus for up to 9 days.

Due to the potential

for the virus to survive on perennial wild cucurbits present in the low desert, the ability of the virus to survive in whiteflies for long periods and the widespread incidence in the fall 2006 melon crop, it is anticipated that CYSDV will ultimately reappear in the low desert production areas. However, it is not possible to predict when or if CYSDV will reappear during the 2007 spring season.

This virus is not known to be in the San Joaquin Valley. The most likely means of the spread of this virus into the San Joaquin

Valley would be through infected transplants.

Transplants should be from greenhouses in areas known to be free of CYSDV. Because as much as three weeks may pass between the time of transmission and symptom expression, plants without symptoms may serve as sources for transmission of this virus.

A. Celix, A. Lopez-Sese, N. Almarza, ML Gomez-Guillamon and E. Rodriguez-Cerezo. 1996. Characterization of cucurbit yellow stunting disorder virus, a *Bemisia tabaci*-transmitted closterovirus. *Phytopathology* 86, 1370-1376.

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Cucurbit Virus Detected

J. Kao, L. Jia, T. Tian, L. Rubio and B. Falk. 2002. First report of Cucurbit yellow stunting disorder virus (genus Crinivirus) in North America. *Plant Disease* 84, 101.

Y.-W. Kuo, M. R. Rojas, and R. L. Gilbertson and W. M. Wintermantel. First Report of *Cucurbit yellow stunt-*

ing disorder virus in California and Arizona, in Association with *Cucurbit leaf crumple virus* and *Squash leaf curl virus*. 2007. *Plant Dis.* 91:330.

G. C. Wisler, J. E. Duffus, H.-Y. Liu, and R. H. Li. 1998. Ecology and epidemiology of whitefly-transmitted closteroviruses. *Plant Disease* 82:

270-280.

W. M. Wintermantel (USDA, ARS Salinas). Personal communication. 23 Feb 2007.



Yellow areas on CYSDV infected cantaloupe leaves, Imperial County, November 2006.



Severe interveinal yellowing on CYSDV infected cantaloupes, November 2006.



Symptom development begins on older leaves toward the center of the plant, Imperial County, October 2006.



Advanced CYSDV symptom development, Imperial County, November 2006.

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