

Ornamentals/ Plantes ornementales

Crop/Culture: Ornamentals

Location/ Emplacement: Ontario

Title/Titre: Update on the Incidence of Tomato Spotted Wilt Virus in Greenhouses

**Name and Agency/
Nom et Organisation:** B. Tehrani, W.R. Allen,
J.A. Matteoni
Agriculture Canada
Research Station
Vineland Station, Ontario.
LOR 2E0

METHODS: Diseased ornamentals were submitted to the Research Station by extension personnel, growers and sales representatives. Additional samples were collected during a greenhouse survey conducted this year throughout southern Ontario, including growers who have had a previous record of tomato spotted wilt virus (TSWV), (2). Diagnostic procedures for positive identification included ELISA and bioassay (1).

RESULTS AND COMMENTS: Tomato spotted wilt virus is present in many greenhouse operations throughout the Niagara peninsula and southern Ontario. It has caused considerable losses, repeatedly in some crops (Table 1).

The greatest losses were sustained during years 1985-1987. Intensive preventive measures taken to reduce populations of the vector, the western flower thrips Frankliniella occidentalis (Pergande), decreased crop losses in recent years. Eradication of the thrips has not been possible through chemical applications, but has been achieved through a break in the cropping cycle and thorough sanitation. A serotype of TSWV, originally detected in New Guinea impatiens, was also detected in gloxinia, begonia, and exacum.

REFERENCES: 1. Allen W.R. and J.A. Matteoni. 1988. Cyclamen Ringspot: Epidemics in Ontario greenhouses caused by the tomato spotted wilt virus. Can. J. Plant Pathol. 10:41-46. 2. Matteoni, W.R. Allen, and A.B. Broadbent. 1988. Tomato spotted wilt virus in greenhouse crops in Ontario. Plant Dis. 72:801

TABLE 1. Incidence of tomato spotted wilt virus in greenhouse ornamentals. ¹

Genus	Common name	Incidence in years	
		1983-88	1989
<u>Ageratum houstonianum</u> Mill.	Ageratum	1	-
<u>Anemone coronaria</u> L.	Anemone	1	-
<u>Antirrhinum majus</u> L.	Snapdragon	1	1
<u>Alstroemeria</u>	Alstroemeria	1	-
<u>Begonia X hiemalis</u> Fotsch.	Begonia	1	3
<u>Brassaia actinophylla</u> Endl.	Umbrella tree	1	-
<u>Browallia</u> L.sp.	Bush Violet	-	1
<u>Calceolaria crenatiflora</u> Cav.	Calceolaria	2	-
<u>Calendula officinalis</u> L.	Calendula	1	-
<u>Callistephus chinensis</u> (L.) Nees	China aster	1	-
<u>Capsicum</u> L.sp.	Ornamental pepper	1	2
<u>Catharanthus roseus</u> (L.) G. Don	Periwinkle	1	-
<u>Chrysanthemum X morifolium</u> Ramat.	Florist's chrysanthemum	7	3
<u>C. frutescens</u> L.	Marguerite	1	-
<u>C. X superbum</u> Bergman ex J. Ingram	Shasta daisy	1	-
<u>Cyclamen persicum</u> Mill.	Cyclamen	8	2
<u>Cymbidium</u> Swartz spp.	Cymbidium orchid	1	-
<u>Dahlia</u> Cav.sp. (=D. X pinnata X D. coccinea.)	Dahlia	2	-
<u>Dracaena fragrans massangeana</u> L. Ker. - Gawl.	Corn plant	-	1
<u>D. marginata</u> L.	Spiker	-	1
<u>Exacum affine</u> Balf F.	Persian violet	2	1
<u>Fuchsia</u> L.spp.	Fuchsia	2	-
<u>Gaillardia X grandiflora</u> Van Houtte	Blanket flower	-	1
<u>Gardenia jasminoides</u> L.sp. Ellis	Gardenia	-	1
<u>Gerbera jamesonii</u> H. Bolus ex Hook.f.	Gerbera	1	1
<u>Gypsophia elegans</u> Bieb.	Baby's breath	-	1

Crop/Culture: Ornamentals

Location/Emplacement: Ontario

Title/Titre: Update on the Incidence of Tomato Spotted Wilt Virus in Greenhouses

**Name and Agency /
Nom et Organisation:** B. Tehrani, W.R. Allen
J.A. Matteoni
Agriculture Canada
Research Station
Vineland Station, Ontario
LOR 2E0

<u>Hydrangea</u> L.sp. (= <u>Hortensia</u> Comm. ex Juss).	Hydrangea	-	1
<u>Impatiens walleriana</u> Hook.f.	New Guinea impatiens	19	8
<u>I. balsamina</u> L.	Sultana, bedding	1	-
<u>Kalanchoe</u> sp. Adans.	Balsam	-	1
<u>Lilium longiflorum</u> Thumb.	Kalanchoe	-	1
<u>Nolana</u> L.f. Dumort.	Easter Lily	-	1
<u>Pelargonium X hortorum</u> L.H. Bailey	Nolana	-	1
<u>Petunia X hybrida</u> Hort. Vilm.-Andr.	Geranium	-	1
<u>Primula vulgaris</u> Huds. (= <u>P. acaulis</u>)	Petunia	1	-
<u>Saintpaulia ionantha</u> H. Wendl.	Primula	1	-
<u>Salvia splendens</u> F. Sellow ex Roem. & Schlt.	African Violet	3	-
<u>Schefflera arboricola</u> H. Ayata	Scarlet Sage	1	-
<u>Schlumbergea bridgesii</u> (Lem.) Lofgr. (= <u>Zygocactus truncata</u> (Haw.) K. Schum.)	Dwarf schefflera	-	1
<u>Senecio X hybridus</u> (Willd.) Regel.	Christmas cactus	-	1
<u>Sinningia speciosa</u> (Lodd.) Harn.	Cineraria	5	1
<u>Stephanotis floribunda</u> Brongn.	Gloxinia	10	4
<u>Tagetes patula</u> L.	Stephanotis	1	4
<u>Yucca baccata</u> L. (= <u>Hesperoyucca</u> (Engelm.) Bak.)	Marigold	1	-
<u>Zinnia elegans</u> Jacq.	Yucca	-	2
	Zinnia	-	1
Total		80	47

¹ Tomato spotted wilt virus infection determined on the bases of ELISA and bioassay