

Figure 5. Early leaf wilting in tomatoes.

infected plant that moves infectious sap to another plant can serve as a method of transmission. Mechanical transmission does not appear to be a major method of spread for TSWV in commercial situations when compared to spread by thrips. However, one should avoid contact with infected plants where field operations such as suckering, topping, tying, and transplanting are used. It may be beneficial to have separate individuals rogue infected plants before other field operations that require plant contact are conducted.

Seed transmission of TSWV has not been documented with certainty. Clonally propagated plants from shoots, suckers, bulbs, stems, and tubers are likely to be infected with TSWV if the mother plant is infected because, as with most viral diseases, infections become systemic to some degree. Transplants of infected plants have been a source of TSWV and many other diseases.

Symptoms

Probably no other plant pathogen causes such an array of symptoms as TSWV. Some plants or varieties of crops may be infected without expressing symptoms. Until you become familiar with the common symptoms of TSWV associated with specific crop species, it is recommended that laboratory diagnoses be relied upon.

Symptoms caused by TSWV are variable. Several strains of TSWV have been identified around the world and each strain may cause different symptoms in different crop species and varieties of crop species. Symptoms in certain crops are evident only under certain environmental conditions (e.g., no symptoms in *Stephanotis* during hot temperatures). In tobacco, fewer lesions and later-development of lesions occurred at 60°F (15°C) when compared to 68°F (20°C). Usually, as plants become older, infection results in progressively reduced symptoms. For ex-

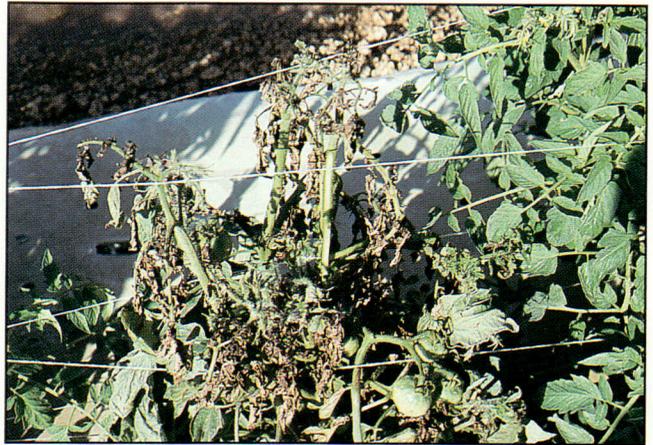


Figure 6. Severe leaf wilting in tomatoes.



Figure 7. Petiole (leaf stem) and leaf discoloration in tomato.



Figure 8. Brilliant leaf discoloration in tomato.

ample, the degree of stunting in tobacco is less if older plants are infected. Also, tomato fruit may not express severe symptoms when infection occurs after those fruit are set.

Symptoms may develop from 3 to 14 days after inoculation, but in some situations symptoms may not occur for weeks. An array of symptoms are pictured in Figures 2-24. Other symptoms can occur