

Tomato Spotted Wilt Virus Alert

UNIVERSITY PARK (Centre Co.) — Tomato spotted wilt virus (TSWV) has a wide host range and is a serious threat to many greenhouse crops. The chances of having TSWV infection in your greenhouse may be greater in the spring than at any other time simply because you are growing more susceptible plants coming from a number of different places.

More than 175 plant species can be infected with TSWV. The chart below lists a number of these. There is no cure for infected plants. Infected plants should be destroyed.

The western flower thrips is the chief TSWV vector in greenhouses, although nine thrips species have been identified as vectors, according to John Sanderson, Dept. of Entomology, Cornell University. Prevention of TSWV depends on control of western flower thrips.

Only a larval stage of thrips can become infected with the disease, and transmission is almost always by adult thrips. Adults do not transmit TSWV to their offspring. Overlapping generations account for the continuous spread of the disease. Plants may develop the disease within 5 days of infection.

There is no cure for the disease which spreads rapidly in the greenhouse and has been a particularly serious problem with gloxinias and tomatoes. Fortunately the disease has not yet been found in geraniums, poinsettias, or roses, our three major greenhouse crops in Pennsylvania. Prevention of thrips infestation is the only method of control. Since plants already have the disease by the

Potted crops	Cut Flowers	Bedding Plants	Perennials	Vegetables
African Violet	Anemone	Ageratum	Aster	Bean
Amaryllis	Calendula	Begonia	Campanula	Cauliflower
Calceolaria	China Aster	Calendula	Columbine	Celery
Calla Lily	Chrysanthemum	Coleus	Coreopsis	Cowpea
Christmas pepper	Cosmos	Dahlia	Dahlia	Cucumber
Chrysanthemum	Dahlia	Dusty Miller	Delphinium	Eggplant
Cineraria	Delphinium	Forget-Me-Not	Evening Primrose	Endive
Cyclamen	Gerbera	Impatiens	Gaillardia	Lettuce
Exacum	Gladiolus	Marigold	Lobelia	Pepper
Geranium	Gypsophila	Morning Glory	Lupine	Potato
Gerbera	Peony	Nasturtium	Peony	Spinach
Gloxinia	Snapdragon	New Guinea Impatiens	Phlox drummondii	Tomato
Hydrangea	Stephanotis	Petunia	Poppy	
Nonstop begonia	Stock	Salvia	Tiger lily	
Primrose	Zinnia	Snapdragon		
Ranunculus		Verbena		
Rieger begonia		Zinnia		
Sinningia				

time you spot the symptoms, early detection is critical.

Management of TSWV

- Deep seed and vegetatively propagated plants separate. The virus is not seed transmitted, but assume that cuttings from infected plants are infected.

- Inspect new material for signs of thrips feeding injury with TSWV infection. Destroy any infected plants. Individual flowers can be checked by tapping a blossom over a piece of paper and inspecting what falls out. Thrips are particularly fond of white and yellow flowers.

- Try to break the thrips infestation between fall and spring.

- Eliminate and discard weeds; most harbor thrips.

- Monitor the insect population with sticky cards.

- Blue sticky cards seem to be more effective in attracting thrips populations than the standard yellow or white.

- Placement should be just above the pant canopy at the ends of benches, walls, doors and vents.

- Use from 1-3 cards/1000 square feet.

- Weekly counting of thrips on each card will aid greatly in timing and distribution of control procedures.

- 10 thrips per card per week is the suggested threshold guideline for the application of control.

- Chemical control should be monitored carefully.

- Rotate materials among chemical classes every 3 weeks.

- Repeat applications will probably be necessary, consistent with label directions for the chemical use.

TSWV symptoms

Symptoms vary with species and may also vary with cultivar. Some plants don't exhibit symptoms. The most common symptoms are yellow or brown ringspots or other line patterns; black

streaks on petioles or stems; necrotic leaf spots; and tip dieback.

These common symptoms may not always occur, and some plants will exhibit symptoms unlike those listed. When you discover plant material with unusual symp-

oms isolate the plants immediately and, if necessary for positive identification of the problem, consult your county cooperative extension office or have the plants analyzed by the Penn State Disease Clinic, Buckhout Lab, University Park, Pa. 16802.

W. Va. Conserves Soil

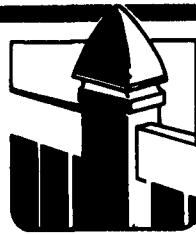
MORGANTOWN, WV — West Virginia soil conservation districts approved plans in the last four years to conserve highly erodible soil in crop fields on 3,583 farms, according to Rollin N. Swank, state conservationist at the U.S. Department of Agriculture's Soil Conservation Service (SCS).

The conservation plans were for 84,214 acres of highly erodible cropland so that farmers could remain eligible for USDA programs and benefits. Under the 1985 Food Security Act, they

were given until Dec. 31, 1989, to make the plans.

During the fiscal year that ended Sept. 30, 1989, SCS assisted with conservation land treatment on 62,182 acres, 27 percent more than in 1988. The soil saved from new measures was up by 13 percent to 266,121 tons per year.

SCS soil scientists mapped 362,615 acres in 1989 to extend modern soil surveys to 13 million acres, or 83 percent of the state. Surveys have been published for 35 counties.



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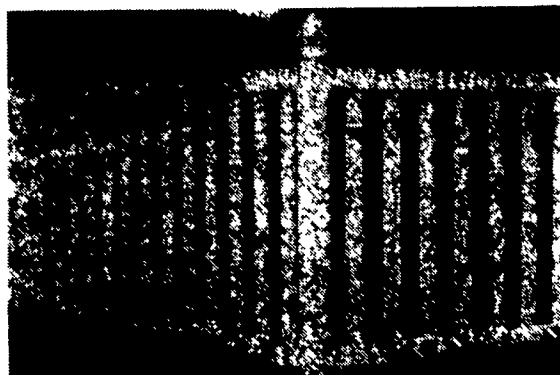
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