

SUPPORTING SMALL FARMERS IN UTAH CSI STYLE

DYING TOMATO PLANTS

- Utah's tomato acreage is small. Most farms are small and sell their produce at local farmers markets and roadside stands. For them, tomatoes are a high value crop and their livelihood. At a farmers market or roadside stand, producers can charge \$3-4 per pound of tomatoes resulting in over \$11 million in revenue.
- In 2014, a local farmer contacted the Utah Plant Pest Diagnostic lab (UPPDL) about symptoms in their tomato plants.



INVESTIGATING THE CRIME SCENE



- The lab scientists visited the farm and diagnosed Tomato Spotted Wilt Virus. Once a plant is infected with this virus there is no cure and the fruit is unmarketable.
- The virus had already attacked tomatoes and peppers in the greenhouse and in the field. The farm was isolated from other farms, and grew their own vegetable transplants, so where was the infection coming from?
- What followed was a CSI style investigation throughout the farm to find the source of virus. They collected samples from the surrounding weeds, vegetables, and even the family's flower garden and brought them to the lab for testing.
- The culprit was found in a blanket flower that the family had brought several years earlier. The flower garden was about 200 feet away from the greenhouse and the vegetable field. Flower thrips had moved the virus from the blanket flower to the tomatoes.

MYSTERY SOLVED

- Once the culprit was identified, the farmers removed the flower and other infected plants and haven't had a problem with the virus since then.

CSI: Vegetable field. NPDN funds allowed us to purchase the ELISA test kit for Tomato Spotted Wilt Virus and have it on hand if needed. - Claudia Nischwitz, UPPDL Director
