Soybean Vegetable Necrosis Virus

Soybean farmers should be aware of a new disease caused by soybean vein necrosis virus (SVNV). The virus has likely been in soybeans for some time, but was probably overlooked or misdiagnosed before recent detections. The disease has been detected across the United States (including many states in the North Central region) and in Ontario, Canada.

SVNV is a Tospovirus, a group of viruses capable of causing serious damage in many different crops. The long-term implications of this disease are not yet known, and we are currently working to better understand the disease and potential for yield loss in soybean. Accurately diagnosing SVNV is important, especially because it can easily be confused with other soybean diseases, disorders, or damage.

This publication examines the symptoms of SVNV, describes how SVNV differs from several other plant problems that may look like SVNV, and provides scouting information.

Symptoms

SVNV symptoms are typically randomly distributed throughout the canopy. SVNV lesions start as a yellowing (chlorosis) along the leaf vein. Over time, yellowing becomes red-brown, irregular-shaped lesions, and eventually leads to tissue death (Figures 1 and 2). The yellowing around the lesion may begin to spread beyond the vein but will typically be limited to the area within other major leaf veins. The symptoms are generally not uniform across the leaf.

Leaf tissue will die following chlorosis. Lesions typically spread along or from the edge of a vein. The lesions range from \( \frac{1}{4} \) to \( \frac{1}{2} \) inch (6 to 12 mm) but can be larger (Figure 3). In affected plants, the veins may appear clear, yellow, or dark brown. Vein discoloration may be especially noticeable on the undersides of leaves (Figure 4).