

TOBACCO RATTLE VIRUS FOUND IN HOSTA AND PEONY

In May 2021 members of KDA discovered six varieties of hostas at a commercial grower with symptoms resembling virus. They ranged from mottling and discoloration to ringspots. Symptoms were consistent with Tobacco Rattle Virus, but to be certain, they took leaf samples and submitted them for testing for Arabis Mosaic Virus, Tomato Ringspot Virus, Tobacco Streak Virus, and Tobacco Rattle Virus. All six varieties tested positive for Tobacco Rattle Virus (TRV).

A peony plant at a box store was also strongly suspected to have TRV but was not tested.

TRV has a wide host range, which includes, but is not limited to, hosta, peonies, astilbe, peppers, and potatoes. Symptoms of TRV typically include ring spots, discoloration, and mottling (Fig. 1). It is spread via nematodes which feed on root tissue, and mechanically via contact with contaminated tools or grafting. It can also be seed transmitted. Best management practices include removing infected plants as quickly as they are detected, and disinfecting tools in between plants.



Figure 1: TRV causes yellowing, ringspots, mottling, and discoloration. Pictures by Amy Jordan, KDA.

ROSE MOSAIC SUSPECTED ON BOX STORE ROSE BUSHES

This spring, during survey visits to box stores, I found numerous stores to have rose plants showing apparent symptoms of Rose Mosaic, a disease caused by several viruses-Prunus necrotic ringspot virus (PNRSV), apple mosaic virus (ApMV), and Arabis mosaic virus (ArMV). One of these or a complex of them can cause Rose Mosaic. Rose Mosaic virus complex has very distinctive symptoms, which include ring spots, chlorotic line patterns, watermarking, and leaf mottling (Fig. 2). As a result of finding these characteristic symptoms on the roses, the plants were destroyed promptly.

Rose Mosaic is most easily spread via grafting, and then spread systemically through the plant. It is less likely to be spread via contaminated tools than most viruses are. The most likely time of year to find symptoms is in the spring. However, as it gets hotter, new foliage is less likely to show symptoms and the symptomatic leaves are masked, making it harder to see if a plant is diseased. Prior to planting a new rose bush, inspect the foliage for the characteristic viral symptoms and if you find symptoms on an already planted bush, remove that bush. Pruning will not help, as the virus is present throughout the plant.



Fig. 2: Rose Mosaic virus complex causes ring spots, chlorotic line patterns, watermarking, and leaf mottling.

Plant Protection and Weed Control staff work to ensure the health of the state's native and cultivated plants by excluding or controlling destructive pests, diseases, and weeds. Staff examine and analyze pest conditions in crop fields, rangelands, greenhouses, and nurseries. Action taken to control potential infestations of new pests, whether they are insects, plant diseases, or weeds, is beneficial to the economy and the environment.

Our mission is to:

- Exclude or control harmful insects, plant diseases, and weeds;
- Ensure Kansas plants and plant products entering commerce are free from quarantined pests;
- Provide customers with inspection and certification services.

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