

Look for Viruses Before Purchasing Hostas This Year

As you are shopping for new plants for your garden this year it is always important to check plants for disease before bringing them home. Look for any leaf spots, soft water soaked areas on stems and leaves, or cankers that might indicate disease problems. If you are looking for hostas this year, there are two important viruses to be aware of, Hosta Virus X and Tobacco Rattle Virus (TRV). These are two very different viruses.

The symptoms of Hosta Virus X vary depending on the cultivar. The very light colored 'golden' plants show symptoms of dark green spots and mottling. A streaking between veins that has an ink bleed look to it is also common. Some hostas show dried dead streaks or spots and others show no symptoms at all. Only a few cultivars have been shown to be resistant to the virus (ex. 'Bressingham Blue', 'Frosted Jane', 'Great Expectations', 'Love Pat', 'Sagae', and 'Elegans'). At the nursery look for symptoms on plants you wish to purchase. If there is a group of the same cultivar of hostas from the same nursery, some with symptoms and others without, don't buy any of them. Hosta virus X can be present in a plant without showing symptoms. If some plants in a group are infected and displaying symptoms it is likely the plants without symptoms are infected as well. Now that Hosta Virus X is becoming well known, many nurseries are testing their plants for Hosta Virus X. Be sure to ask at your nursery if their stock has been tested.



Figure 1: Hosta Virus X, photo by Dr. Lockhart U of MN

If a hosta begins to show symptoms after purchase, Hosta Virus X can easily be removed from your garden by taking out and destroying all infected hostas. This virus can only be transmitted from plant to plant by transferring infected sap from one plant to another on gardening tools or through other injuries. Once the infected plant is destroyed, Hosta virus X cannot live. Wait 1-2 weeks for any remaining roots to die before replanting in the same spot.

The symptoms of Tobacco Rattle Virus (TRV) include dark and light green mottling on the leaves, pale green spots that can die and become brown, necrotic spots. TRV is a European virus that is becoming more common in the United States as more and more ornamentals are sold internationally. Unlike Hosta Virus X, which only infects hostas, TRV has a wide host range including vegetables like beets, tomatoes, and spinach, as well as many ornamentals like tulip, daffodil, gladiolas, coral bells, bleeding heart, calendula, sunflower, and many more. TRV also infects common weeds like lambs quarter, black night shade, and pigweed.

Unfortunately TRV is much more difficult to control than Hosta Virus X. TRV is spread by a trichodoriid nematode, a microscopic worm-like creature that lives in the soil and feeds on plant roots. Through these nematodes the virus can be spread from plant to plant. Chemicals to kill these nematodes are highly toxic and not commonly available to homeowners. Once in the garden the virus may infect multiple plants and be very difficult to get rid of. Prevention is the best form of control for TRV. In the nursery, hostas are typically infected with TRV through an infected stock plant and will almost always display symptoms. If you avoid hostas with viral symptoms you have a good chance of avoiding TRV altogether.



Figure 2: Tobacco Rattle virus on hosta 'ananuma' photo by Dr. Lockhart U of MN

Buy only healthy symptom free hostas this year. Neither of the two viruses above can be cured. If you suspect that a plant you have purchased may be infected with either of these two viruses, send several fresh leaves to the plant diagnostic clinic at the University of Minnesota (<http://www.extension.umn.edu/distribution/cropsystems/DC3170.html>). There is a \$25 minimum charge for virus testing. If you suspect that the plant has Tobacco Rattle Virus, do not plant the hosta until you have confirmed its health.

References

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