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Coleus Stock Plants:

Don't Let Viruses, Foliar Nematodes or Downy Mildew Ruin Your Crop

Vegetatively propagated coleus plants are a very popular spring bedding plant. While there are many new patented cultivars available from all the plant breeders, many small to mid-sized greenhouse operations tend to retain stock plants of non-patented cultivars for their own use.

Coleus is one of my favorite plants, so I tend to scout the crop every time I visit a greenhouse. Over the past few years, it has been common to find a few stock plants infected with disease issues.

The most common viruses observed on coleus are impatiens necrotic spot virus (INSV) and tomato spotted wilt virus (TSWV). Both are spread by western flower thrips, but the virus can also be spread by taking cuttings from infected plants.



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Figure 1. Black ringspots are a common feature of viruses. In the case of coleus plants, while it may be observed, it is not the only symptomology possible.

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This visual guide will give you an indication if something might not be right with your stock plants. Based on the photos (Figs. 1-6), you will see that symptoms can vary widely. So to confirm the presence of a virus, submit a leaf sample to a plant diagnostic clinic.

Downy mildew (Figs. 7-8) is another common disease that occurs on coleus. It was highlighted in e-GRO Alert 5-14 by Dr. Nora Catlin. In addition, if the leaf spots are angular and tend to follow the leaf veins, one should be on the lookout for foliar nematodes (Fig. 9), as highlighted in e-GRO Alert 3-20.

Hopefully this e-GRO Alert will give you insight to the common symptomology observed with a foliar disease infection of coleus and help you determine if a problem might be lurking in your greenhouse.



Figure 3. Black patches are observed on this leaf and is observed with a virus infection.



Figure 4. Close up of the black patches on coleus.



Figure 2. Black bands of necrotic tissue commonly occur with a virus infection of coleus.



Figure 5. Necrotic lines on the leaf as a result of an Impatiens necrotic spot virus (INSV) infection



Figure 6. Close up view of ringspots associated with Impatiens necrotic spot virus (INSV) infection.



Figure 7. Leaf symptomology of downy mildew can mimic a virus infection. Fuzzy spores on the leaf underside can help diagnosis this disease (see Fig. 8) or submit a sample to a diagnostic clinic.



Figure 8. Downy mildew is a common disease observed on coleus. Usually fuzzy growth is observed on the underside of the leaf to help diagnose it. Submitting a sample to a diagnostic clinic may be needed to confirm the problem.

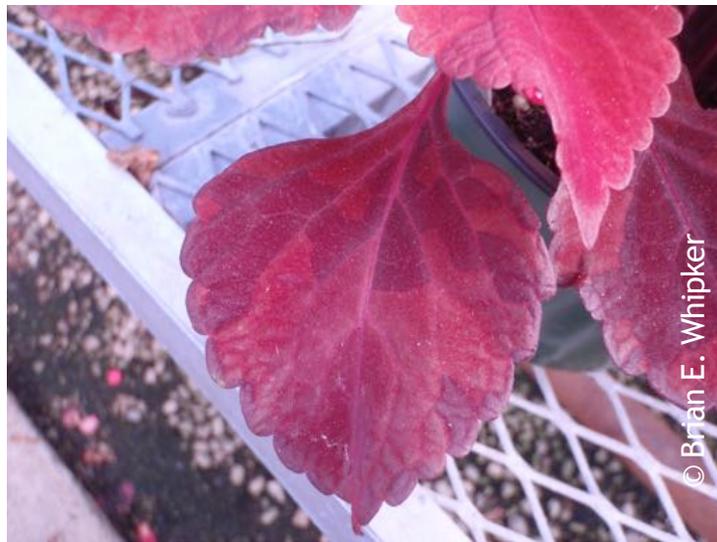


Figure 9. Foliar nematodes can also be problematic on coleus stock plants. The angular necrotic spotting that follows the veins will help diagnose the problem. Foliar nematodes can also be observed under a 100X microscope. Otherwise, submit a sample to a diagnostic clinic.



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