e-GRO Alert


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Volume 13 Number 27 May 2024

Greenhouse Adventures:

Focusing on Scouting

This spring has been relatively low key for greenhouse production issues. This Alert highlights some of the scattered problems observed during the past few weeks of grower visits. In most instances only a few plants were affected. In many cases, a multi-page Alert already has been posted on the e-GRO website.

Figure 1. Spray phytotoxicity on angelonia. (Photo: Brian Whipker)

Species: Angelonia

Symptoms/Signs: Scattered necrotic spotting on the leaves (Fig. 1).

Probable Cause: Leaf damage occurred when higher volumes of insecticide spray were applied to the plants closest to the aisle. Generally, spray phyto can be diagnosed based on spray records, the quick onset of symptoms after the chemical application, and the pattern of leaves [protected (covered) lower leaves without damage, the upper foliage with damage, and then after a few days the new foliage developing normally].

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Figure 2. White mold on angelonia. (Photo: Brian Whipker)

Species: Angelonia

Symptoms/Signs: White, cottony-like mold along the soil line. A black mass (sclerotia) typically develops after 5 to 7 days of the start of an infection (Fig. 2).

Probable Cause: White mold or Sclerotinia is commonly observed late in the production cycle when the weather turns cool and overcast so that humidity is elevated and plant growth has resulted in denser leaf canopies. This makes the perfect conditions for white mold spores to germinate and start to grow. The long term survival structures (black mass) called sclerotia make it easy to diagnose this disease.

Figure 3. Chimera on gerbera. (Photo: Brian Whipker)

Species: Gerbera

Symptoms/Signs: Mottled leaf on plant (Fig. 3).

Probable Cause: Genetic mutations in the form of changing leaf patterns (chimera) commonly occur. This is a non-infectious situation. In contrast, viral infections normally have a ringspot pattern and insect vectors (thrips) that need to be addressed.

Figure 4. White mold on gerbera. (Photo: Brian Whipker)

Species: Gerbera

Symptoms/Signs: White, cottony-like mold at the base of the plant. A black mass (sclerotia) develops after 5 to 7 days of the start of an infection (Fig. 4).

Probable Cause: White mold (Sclerotinia) commonly occurs in late March or early April if we have a cloudy, humid week of weather. Two sclerotia are easy to see at the base of the plant and can be used to help diagnose the problem.

Figure 5. White mold on petunia. (Photo: Patrick Veazie)

Species: Petunia

Symptoms/Signs: White, cottony-like mold at the base of the plant with a black mass present (Fig. 5).

Probable Cause: White mold or Sclerotinia occurs during late spring. In the case here the infection was worse in plant growth regulator overdosed plants that had denser leaf growth than more open canopy plants when the rate was optimal.

Figure 6. Low EC meltdown on petunia. (Photo: Brian Whipker)

Species: Petunia

Symptoms/Signs: Center of basket with leaves that are overall yellow and then turn brown (Fig. 6).

Probable Cause: Petunias are heavy feeders. For vigorous cultivars their fertility needs are higher and if the levels are too low, the older leaves will turn yellow and then brown. Adding slow release fertilizer to each pot as a supplement will help augment the higher nutritional needs of petunias and still allow the overall lower fertility program (100 to 150 ppm N) to be used which better matches the needs of most other species being grown in the greenhouse.

Figure 7. Model B John Deere tractor. (Photo: Brian Whipker)

Species: John Deere, Model B

Symptoms/Signs: Old tractor with steel wheels (Fig. 7).

Probable Cause: Tractor purchased to add to a greenhouse grower's retail display.

Figure 8. Pentas with water stress. (Photo: Brian Whipker)

Species: Pentas

Symptoms/Signs: Leaf tips of the upper foliage turn darker green (Fig. 8a) and then brown (Fig. 8b).

Probable Cause: Pentas are sensitive to water stress and will quickly develop leaf tip burn if dried out.

Figure 9. Pentas with possible Rhizoctonia. (Photo: Brian Whipker)

Species: Pentas

Symptoms/Signs: Plant collapse (Fig. 9a) with the overall root system still good. At the soil line a fine webbing can be observed (Fig. 9b).

Probable Cause: The presence of webbing will help diagnose if Rhizoctonia is present. Send a sample to a diagnostic clinic to confirm.

species being grown in the greenhouse.

Figure 10. Plant stall (left) on pentas. (Photo: Brian Whipker)

Species: Pentas

Symptoms/Signs: An individual small stunted plant (Fig. 10). The roots were white, but limited.

Probable Cause: This situation is difficult to diagnose. With only one plant affected, a few possible causes included a mutant plant that does not grow, a plug that had less root development and it never did flourish - so that it got overwatered, or a plug with injured roots. Once a plant stalls, it is difficult to avoid a cascading effect of overwatering and poor growth occurring.

Figure 11. New Guinea impatiens bloom with mottling. (Photo: Brian Whipker)

Species: New Guinea Impatiens

Symptoms/Signs: Mottling of flowers (Fig. 11).

Probable Cause: An INSV infection can affect the leaves, stems and flowers. The blotchy coloration can occur if symptoms develop on the flowers. Viral signs on the flowers are not typically observed.

Figure 12. New Guinea impatiens bloom with water stress tip burn. (Photo: Brian Whipker)

Species: New Guinea Impatiens

Symptoms/Signs: Tip burn of upper leaves (Fig. 12). Note the symptoms begin at the leaf tip and moves towards the base.

Probable Cause: Drought stress can occur if the plant is missed during hand watering.

Figure 13. Curling due to broad mites. (Photo: Brian Whipker)

Species: New Guinea Impatiens

Symptoms/Signs: Upper foliage with curling leaves (Fig. 13). Note the symptoms were only on one cultivar and were isolated in 3 small pockets.

Probable Cause: Leaf curling is the typical symptom of broad mites. Earlier this year broad mite problems of New Guinea impatiens were highlighted. Broad mites are small and require 100X magnification to observe them.

Figure 14. New Guinea impatiens flower curl due to heat stress. (Photo: Brian Whipker)

Species: New Guinea Impatiens

Symptoms/Signs: Flowers with curled flower petals (Fig. 14).

Probable Cause: Heat stress when greenhouse temperatures spiked to 115 F when an exhaust fan failed.

Figure 15. White catkins from aphids. (Photo: Brian Whipker)

Species: New Guinea Impatiens

Symptoms/Signs: White masses on the leaves of plants (Fig. 15).

Probable Cause: Aphid catkins from a heavy infestation. Live aphids observed on the leaf underside.

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