e-GRO Alert

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White Mold (Sclerotinia) on Coleus

Coleus plants with white cottony-like growth, stem and leaf rot, and small, hard, black sclerotia were observed. This Alert describes and provides photos of symptoms observed on coleus caused by white mold (Sclerotinia sp.) also referred to as Sclerotinia stem rot or cottony soft rot. To diagnose white mold, submit plant samples to your preferred diagnostic lab.

An eight-week-old coleus (*Solenostemon scutellarioides*) crop was inspected because individual plants found sporadically across the greenhouse had started wilting, exhibiting water-soaked lesions and stem rot (Fig. 1). Upon closer inspection, plants were found to be infected with white mold (Sclerotinia sp.). White cottony-like fungal growth (Fig. 2) formed a mycelium that was observed growing across the substrate and plant surfaces (Fig. 3). Small clumps of mycelia were observed on the plant stem and leaf tissues (Fig. 4). Small, hard, black sclerotia (Fig. 5) were observed on the outside and inside (Fig. 6) of the diseased coleus stems.

According to crop records, initial symptoms were observed during week six of the coleus crop cycle. By week eight, significant plant growth amassed and air flow between plants was limited. Overhead watering maintained constant leaf wetness resulting in humid conditions within the plant canopy and the greenhouse temperature was 68 °F (20 °C). Unfortunately, week eight of the crop cycle coincided with an extended period of cool, low-light, rainy outdoor conditions which favored disease progression in the coleus crop.

To prevent infection and mitigate disease spread, greenhouse growers should consider sources for pathogen introduction, carefully inspect shipments, and maintain a strict

Figure 1. Coleus (*Solenostemon scutellarioides*) plants exhibiting water-soaked lesions and stem rot. Photos by: W. Garrett Owen

Figure 2. White cottony-like mycelia of white mold (*Sclerotinia* sp.). Photo by: W. Garrett Owen.

Figure 3. White cottony-like mycelia growing across the substrate and coleus (*Solenostemon scutellarioides*) surfaces. Photo by: W. Garrett Owen.

sanitation program. Aim to maintain optimal greenhouse environmental conditions and implement best management practices so that spread is slow and infected plants can be rogued before healthy plants become infected. Venting and increasing air circulation within the crop will help. Drip irrigation is recommended, but if overhead irrigation is necessary, limit irrigation to early in the morning so that foliage has time to dry. If Sclerotinia sp. are introduced to the greenhouse, infected plants should be destroyed immediately and nearby plants should be monitored closely. Cultural practices such as cleaning and disinfesting all tools, surfaces, and equipment are essential. Avoid amending growing media with topsoil or reusing soilless media, as sclerotia of Sclerotinia can persist in soil and media undetected. Chemical control options can be used to protect healthy plant material, particularly when risk for infection is high due to

infected plants either within the crop or in weedy areas outside the greenhouse. Growers should consult with state greenhouse Extension specialist(s) or preferred diagnostic lab for options of registered fungicides.

To learn more, refer to e-GRO Alert 9-18: Preventing and Controlling White Mold (Sclerotinia) during Greenhouse Crop Production. For an identification guide to white mold of floriculture crops, download the "Sclerotinia" iBook here (Note: This book can only be viewed using iBooks 2 on an iPad. iOS 5 is required.)

Overall, proper cultural practices and environmental management can help mitigate white mold infections. Disease prevention is the best management practice, as plants cannot be cured once infected.

Figure 4. White mold (*Sclerotinia* sp.) mycelia (hyphae) aggregating into clumps on coleus (*Solenostemon scutellarioides*). Photo by: W. Garrett Owen.

Figure 5. White mold (*Sclerotinia* sp.) mycelia clumps mature forming small, irregular-shaped, hard, black sclerotia. Photo by: W. Garrett Owen.

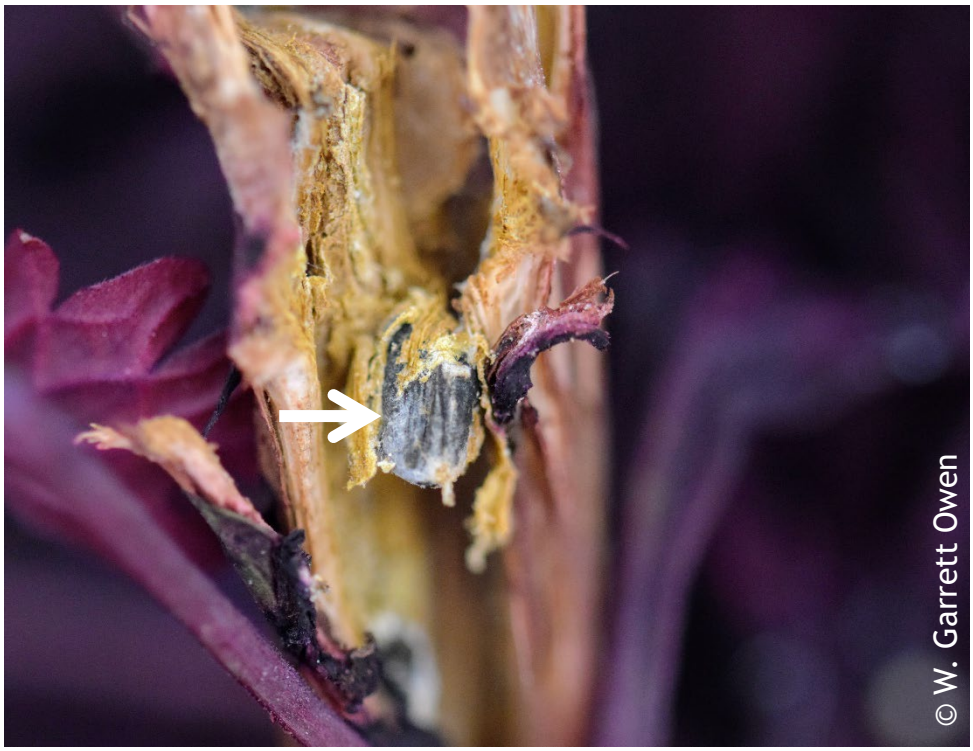

Figure 6. White mold (*Sclerotinia* sp.) sclerotia found inside the stem cavity of coleus (*Solenostemon scutellarioides*). Photos by W. Garrett Owen

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