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Do You Have Brown Soft Scale on Your Ferns?

They've been hiding all winter, but with the onset of rising ADT, and the vegetative push growers give ferns to make the spring market, brown soft scale populations seem to explode in late March. Once you have an infestation, it is the clean up, not the erradicating, that becomes the big headache. Scout those ferns now to avoid this nasty scale issue.

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With brown scale, especially on ferns, prevention is the only logical solution.

Brown Soft Scale, *Coccus hesperidum* Linnaeus, has just shown up in ferns in the South. Most commonly, we are seeing it in ferns that were held over and divided from last year's unsold plants. In a clean greenhouse, it is fairly unusual to see brown scale develop on ferns grown from commercially purchased plugs. If you have it, the increased ADT in the greenhouses has or will cause a very rapid reproduction rate. Scale insects are somewhat difficult to kill, and even harder to clean up. Do not kid yourself, consumers notice the scale, even if its dead. Your best bet is to take a few minutes once a week and scout your ferns. There is a special technique and you may need a hand lens and a portable, bright light source.



This time of year, you will more likely see young adult females that appear to be small jelly-fish like patches. Scan next to the veins of the fern pinnae, and main petiole. A strong light yields reflections that often give them away.

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What to look for:

Brown scale is an insect that at maturity is only 2-4 millimeters in length. They just happen to resemble the sori, or reproductive structures of many ferns and are often overlooked because of this. One very easy way to tell if you have scale is to look for shiny or sticky exudate on the leaves of the ferns. I have found that a sharply focused LED flashlight shining across the leaf surfaces lights up the dried sap remains from their feeding and frass and gives them away. Young crawlers and young adult females are translucent but shiny, and that same light, pointed into the leaves, reveals them quickly. Surprisingly, this works best after sunset.

Control:

Currently, the best control is also relatively inexpensive. With the release on the original patent, there are now many, many companies selling Imadicloprid formulations. The most common formulation is Marathon. One can also see control using EnstarII and Safari. It is best, given that ferns can be sensitive, to consult your local Extension office for specific rate recommendations for ferns. Temperature is an issue and there are huge differences between Miami and Minneapolis this time of year.



Brown scale feeds on the underside of the fronds near or on the vascular system of the fern. Look for the young and adults near the main midvein and the main vein of the pinnae. They are most commonly found in recently mature leaves, and middle-aged older leaves.

Resources:

- 1). Baker, J.R. Brown Soft Scale. Department of Entomology Insect Notes. North Carolina State University. pp.1-3
- 2). Day, E. Scale Insects. 2015 Department of Entomology Virginia Cooperative Extension Service Bulletin. pp 1-6



This unfortunate female was crushed during leaf sampling but gives us a rare look at the actual eggs that are usually protected within her shell. These will soon hatch into crawlers, which are almost transparent, but have clearly defined legs. As the crawlers mature, they become sessile nymphs, and begin to look more like adult brown scale. So look first for transparent crawlers and nymphs! By the time you see brown adults, its a significant inconvenience.

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