

GROWERTALKS

Culture Notes

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Growers Talk Production

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A New Friend: The Hunter Fly

by Mark Berner

Pesticides are, without question, an integral part of our industry and have been for the past 60 years or so.

Personally, I've always looked at them as a necessary tool of the trade, a fact of life, a means of keeping the wolves at bay—a good thing. Frankly I've never been much of an IPM type of guy. Unfortunately when things get the busiest, the close intensive type of scouting that IPM hinges on is one of the first things that can slip. I was taught from the start that you spray everything at regular intervals whether you have insects or not, and I've taken every “hot spot” discovered over the years as a small failure on my part.

Recently though, a couple of interesting things have occurred here at our greenhouses that have made me pause and think about what we are doing. Like all greenhouses, we've seen our share of fungus gnats and shoreflies. We primarily produce young plants and most of our products are started from tissue culture, which we stick into small paper plugs. We've never really had much of a problem with fungus gnats and shore flies in these trays, I guess due to the small surface area of the plugs and the fact that they dry out quickly. However, we also produce some larger-cell 50-plug material, and these have always been more of a problem for the opposite reasons, and at times the populations of these two pests have been quite high in spite of what we've done to control them.

About a year ago, we switched from chemical controls and started using nematodes to control the fungus gnat larvae in the propagation area. This worked fine on the larvae, but we still had a lot of adults, of both species. Then, about six months ago we noticed a small fly showing up in large numbers on the sticky traps, especially in the propagation area. At the same time, the number of fungus gnats and shore flies observed on the cards went way down. Eventually, we saw very few of either pest greenhouse wide.

We didn't make any connection. At first we thought the fly might be a fruit fly, but after a search I found that it wasn't, and it clearly wasn't a shorefly or fungus gnat. Whatever it was, it was there for a reason and was definitely thriving. At the next opportunity, I took it over to the University of Florida Extension facility in Apopka, and the fly was immediately identified as a *Coenosia* fly. When I returned to the office I did a search on the fly and found that its full name is *Coenosia attenuata*, also known as the Old World hunter fly. It turns out the fly is native to Europe (our peat source) and has an enormous appetite for, you guessed it, fungus gnats and shoreflies. Also leafminers, fruit flies, moth flies, and leafhoppers, according to what I read. Whiteflies can probably be added to the list, as we've seen very few of these during the same period.

The hunter fly looks like a house fly, about a quarter of the size, and has large reddish eyes. The males are a little smaller and have yellow legs. The fly will only attack prey that are flying, even if the prey is nearby. The literature says they grab their prey midflight, dispatch it with their “dagger-like mouthpart, and consume their innards.” My kind

of fly.

One day recently, I stood in the propagation area observing a particular table, and on most of the tray tags there was a hunter fly perched, waiting for something to take flight. Occasionally, I'd see a fungus gnat working on the soil surface, but I didn't have the patience to wait around to witness a kill. I left the area feeling like my back was covered. The larval stage of the hunter fly is also predacious, feeding on other larvae (perhaps even the nematodes that we apply weekly). The material I read on the hunter fly was last updated in 2005, and at that time the fly had been observed in greenhouses in New York state; Ontario, Canada; and Los Angeles County, California. Apparently, it's spreading at a good pace.

So, here was a situation where by treating chemically for one pest, we were suppressing one of its natural enemies and allowing the target pest to flourish. Not a new concept in traditional farming, but one I hadn't thought of in a greenhouse environment. How many other opportunities are out there for us to allow and encourage nature to take care of our dirty business? Probably quite a few. I don't know for sure, but from now on I'm willing to look at a broader range of options.

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