



PUTTING AN END TO FUNGUS GNATS

and their larvae

Fungus Gnat Info:

Fungus gnats become a nuisance indoors when adults emerge in large numbers as mosquito-like insects from potted plants or flower boxes containing damp soil rich in humus. Larvae or maggots, which feed in soil high in organic matter, can injure the roots of most plants. Plant symptoms may appear as sudden wilting, loss of vigor, poor growth, yellowing and foliage loss. Along with the larvae, fungus gnats get their name from bringing over fungal spores to a new root system, which they then infest, colonize and destroy.

Adult fungus gnats are about 1/8" to 1/10" (2.5 mm) long, grayish black, slender, mosquito-like and delicate with long legs, antennae and one pair of wings. Identification can be made by the vein patterns in the wings. Dark-winged fungus gnat adults have eyes that meet above the base of the antennae. Larvae are legless, thread-like, and white, with shiny black heads, up to 1/4" (5.5 mm) long and transparent.

Fungus gnats reproduce in moist, shaded areas in decaying organic matter such as leaf litter. The life cycle is about four weeks, with continuous reproduction in grow spaces where warm temperatures are maintained. Larvae not only feed on decaying organic matter, but on living plant tissue, particularly root hairs and small feeder roots. Brown scars may appear on the chewed roots. The underground parts of the stem may be injured and root hairs eaten off. Below we list some of the best methods to fight off and prevent this nasty little pest.

Yellow (not blue) Sticky Strips

The traps are designed to trap adult fungus gnats and whiteflies. Place anywhere that adult flies congregate. *Riddle the area with these!*

Azatrol:

This is a great way to deal with fungus gnats and their larvae. A routine spray, as well as a root drench through reg. feeding will certainly cut down on the population if not keep it all the way removed. Please see other **---Info Sheet---** on **Azatrol** and **Patrol** for more information.

Azatrol Application Rates:

- **Root Zone Dosage:** 1oz per 20 Gallons to be applied as a preventative. More about how to use this application on sep. "info sheet."
- **Quart size foliar application:** In a quart mix 3 tsp. of Azatrol and a few drops of wetting agent with RO water. Shake and apply. Wait 5 days and reapply by increasing dose to 4.5 tsp of Azatrol with wetting agent and water. If spraying indoors we recommend raising the lights or spraying while the lights are off (for at least a 3 hour period.) Outdoors spray early in the morning or at dusk. Use within 24 Hours.

Nematodes:

These microscopic worms are pretty awesome. They only effect soft-bellied insects like fungus gnat larvae (no animals - so don't worry!) Nematodes get sucked up into the guts of the larvae, and begin to colonize and multiply and multiply and multiply until they finally burst open the stomach of the larvae (dealing it out a very nasty death) and releasing more nematode colonies into the medium in the process.

Nematode Application Rates:

Apply 1 Million (1 packet) Nematodes per each "grow light" in your grow space. Each packet of nematodes is dropped and mixed into a 1 Gallon container of water (pH as normal) then hand applied to each plant. Then remove sponge and toss into reservoir.

Gnatrol Powder:

Comprised of *Bacillus thuringiensis*, a beneficial bacteria that rots out the gut of its prey (soft-bellied insects like the fungus gnat larvae.) Effective for 48 hours, reapplication may be necessary.

Gnatrol Application Rates:

Mix ¼ - ¾ tsp./Gal. Make sure to apply and let it soak in and then FLUSH out. Best used as a Drench. See other "info sheet" on Drenches.

Bonide Systemic:

This is the harshest stuff that we have found. Ut will kill larvae, root aphids, and just about anything else in the medium. Make sure you apply, then FLUSH 3-5 hours after application. *Apply to one plant first, then apply to rest of garden.*

Systemic killer Application Rates:

Mix 1oz. per 10 Gallons of solution or 1/2 oz. per 5 Gallons of Solution. After application, make sure to FLUSH 3-5 hours later.

GoGnats

Poison-Free pest control alternative for outdoor and indoor applications. This product kills larvae and flushes them out of media.

GoGnats Application Rate:

Mix 1 tsp. per Gallon of solution. (5mL / Gal.)

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