



6 Things to Know about *Fungus gnats*

Fungus gnats also called *Sciaridae* or *Mycetophilidae* is one of the most present pest in greenhouses in term of numbers. It is usually not the one that create the most damage but it is worth controlling it especially in early stages of the plants.

1- How to recognize them?

We can describe them as Black/grey less than 5mm flies with one pair of clear wings and long legs like mosquitoes. They are poor flyer.

The larvae are 5mm worm with clear to white body and shiny black head
Larvae thrive in damp soils and feed on roots (hairs) fungi and organic elements.



2- LifeCycle

The cycle is depending on temperature but usually full cycle is 17 days (faster if warmer temperature)

Adults live a 7 days and laying 300 eggs

Egg stage for 4 days

Larvae stage during 10 days

Pupal stage for 4 days

3- Best way to monitor Fungus gnats :

Adults are best monitored with yellow sticky cards but also presence of hunter flies like *Conosia spp* indicates presence of fungus gnats.

Larvae can be monitored with chunks of row potato as a trap during your scouting (cut side down on the soil).

4- Presence is sign of overwatering or too high humidity

The reason of it is because larvae stages are feeding on rotting soil elements and fungi more likely to be present in soaked and overwatered soil.

Again, the key is to keep plant growth even over the block because if you cannot differentiate the watering, small plants won't drink as much as big healthy plants. This results in overwatered areas contributing to fungus gnats development.

5- Symptoms and damages

The symptoms are wilting plants (in wet soil) and/or yellowing, also growth is slow because of root damage (plant uses energy to fight for its roots)

Regarding damages, Adults are not much a nuisance except leaving frass on the leaves and their ability to disperse spores of known fungi as *Botrytis*, *Pythium*, *Fursarium* in your facility.

Larvae are much more and issue feeding on roots (hairs) of the plant.

6- Strategy to keep control

Fungus gnat is easy to control but is usually not taken seriously because of not important damages. It is a mistake especially on seedlings and young plants which are weak and building their roots

Fungus gnats have a short lifecycle meaning that you have all the stages present at the same time and you will need multiple applications to clean the greenhouse. The best way is to cut the cycle by targeting immature stages.

Your solutions are :

- Control soil moisture : avoid over watering and efficient drainage (allow soil surface to dry between waterings)
- Soil quality : Choose pasteurized soil media and avoid organic fertilizers
- Biological control:
 - Nematodes (most efficient is *Steinernema feltiae* see our article at (<https://www.bug-vision.com/download/newsletter-1-steinernema-feltiae.pdf>)
 - Hypoaspis miles*
 - Bacillus thuringiensis* to kill larvae
- Chemicals
 - Hydrogen peroxide (3%) in water

Conclusion :

Fungus gnats is not a major pest but as it is easy to control, it is good to control it to increase the quality and the growth speed especially in younger stages.

Comment or questions?

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