

23. Garden Symphylans in High Tunnel Production (HortReport, July 2002)

Symphylans (Class Symphyla) are not insects but are more closely related to centipedes and millipedes, sometimes called the “garden centipede.” The garden symphylan is a serious pest of many vegetable and field crops and has been found to infest crops throughout Pennsylvania, with most problems occurring in the eastern half of the state. Recent evidence suggests that the garden symphylan (*Scutigerebella immaculata*) can be a very problematic pest in high tunnel production that utilizes high amounts of organic matter.

The first indication of a symphylan infestation is a relatively small area of stunted, unhealthy plants. They can feed on plant roots and root hairs preventing the development of a healthy root system. They are also decomposers that feed on decaying matter. High rates of raw to partially decomposed organic matter additions are the main stimulant to these pests

Life cycle

Mature symphylans are translucent to milky white, slightly less than ¼” (6 mm.) in length, with 12 pairs of legs and a pair of long-beaded antennae. The entire life cycle is spent in the soil. The eggs are laid in clusters of 10”-12” (240-300 mm.) below the soil surface. The first instar nymphs emerge from the eggs with 6 pairs of legs and 6 antennal segments. The second instar looks more similar to the adult. Each of the six subsequent molts results in the addition of a pair of legs.

Symphylans move very fast in soil. Too fragile to burrow their own tunnels, they appear to crawl through the soil in the trails of other soil dwellers.

Monitoring

There is no well-established economic threshold for garden symphylans. Oregon extension recommends that a definite problem exists if five symphylans per shovelful of soil are found from 30 samples.

Control measures for symphylans in greenhouses/high tunnels will be discussed in another issue.

Consult this website for pictures and further information:

<http://www.foodnotlawns.com/symphs.html>



Figure 18 Garden Symphylan.