

# Symphylans Cited As Growing Crop Pest

**Editors Note:** The following report on symphylans was recently submitted as a special report to Lancaster Farming by Gibbs & Soell, Inc., New York City public relations firm. The article was reviewed by Arnold G. Lueck, associate Lancaster County ag agent, who emphasized that while the garden symphylan is a common insect pest it is still not believed to be an economically major one in Lancaster County.

"To date," Lueck reported, "we've found three widely scattered infestations of symphylans in Lancaster County. Two were in corn fields and one in a field of processing tomatoes. Each area was treated with an insecticide and is now back in production."

The report is for educational purposes to alert farmers to the nature of the insect and to prepare him for battling it if it should crop up in his own fields.

Corn growers have had a lot to worry about in recent seasons — outbreaks of rootworm and leaf blight, the cost-price squeeze.

Now there's another warning being sounded about a "new" crop pest called symphylans which attack a variety of field and truck crops.

They look a lot like one of their more well-known relatives, the

common centipede, and they've probably been around for just as long.

What is new, however, are the heavy infestations currently reported in Pennsylvania and bordering counties in New York and New Jersey.

In Pennsylvania where the problem is most serious, for example, infestations in some counties are severe enough to kill a crop, according to Penn State University entomologist Stan Gesell.

"Heaviest infestations are in the lighter soils of eastern and southeastern Pennsylvania," Gesell reports. "But they are everywhere now — even along the western boundary, and they're in just about every variety of cultivated field crop from corn to strawberries."

Symphylans are especially difficult to deal with, Gesell points out, because they're hard to see even when infestations are advanced.

"Symphylans start slowly and may take years to build up to an economic infestation," he says. "You won't see them unless you know what to look for and symphylan crop damage is often confused with soil nutrient deficiencies or rootworm injury," Gesell says.

"The problem is currently severe enough for us to sound a



Progressive damage of corn roots by symphylans is shown. Healthy corn plant and root system is at far right.

grower alert and urge greater control efforts."

The eggs usually hatch in May and June, generally right after corn seed starts germinating, Gesell reports. As soon as soil temperatures reach about 45 to 50 degrees, they start attacking seedling roots and continue all season.

According to Ohio State extension entomologist Dr. B. D. Blair, who has observed the pest for many years, affected plants initially will resemble plants damaged by nutrient deficiencies. Growers may note dwarfing, stunted growth, or purpling or yellowing of leaves and stalks.



Symphylans range in size up to an inch long with 12 pairs of legs and two antennae.

"If attack is severe enough the plant will never mature thoroughly and will not produce an ear," he warns.

"Often an apparently healthy field of knee-high corn will wilt almost overnight following a period of dry weather," Dr. Blair reports. "Later in the season, affected plants may discolor, then die."

Symphylans usually do not attack an entire field uniformly, but concentrate on patches or "hot spots." These may vary in size from a few square yards to much larger areas. Such spots can expand from 10 to 30 feet every year until the entire field is overtaken.

In some areas symphylans tend to attack the highest yielding areas of a field, apparently because of a preference for richer, heavy textured soils, Blair indicates.

To detect economic infestations, Gesell recommends taking soil samples during or after the growing season "Dig up a root system and quickly lay it on paper. An average of five symphylans per shovelful indicates a control problem," he says.

The insect looks like a small centipede varying in size up to one-third of an inch long. Adults are narrow bodied, stark white in color with 12 pairs of legs and two long antennae.

Even if no insects are visible, a simple examination of the plant's root system can also signal an infestation. If root tips show damage, have no root hairs, or if the roots tend to grow in tight clusters near the base of the plant or are discolored — symphylans can be the cause.

Growers with minor but still crop-damaging infestations often

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