

## SYMPHYLANS

Have you noticed slender, white pests resembling tiny centipedes in your soil that have damaged your small vegetable plants? They are symphylans. They are also known as garden symphylans (*Scutigera immaculata*). They have eight to twelve pairs of legs depending on their maturity. The body has 15 segments and the adults are less than 1/8" long. The time from egg to maturity is about three months, and there are multiple generations.

Symphylans damage your plants by eating the fine roots so that the plant absorbs less water and nutrients. Symphylans sometimes tunnel through stems harming or killing the plant. Germinating seeds and plant parts above ground, which are in contact with the soil, are also targets for symphylans. Plant or seedlings that survive are usually stunted and produce poorly.

Symphylans lay clusters of white eggs about twelve inches deep in the soil. The immature young have six legs and short antennae and adults may have 12 legs. Their life expectancy is four to five years.

There is very little research on the control of symphylans. The most effective method to control symphylans may be prevention rather than eradication. Prevention is challenging since symphylans are a natural component of most gardens. They are almost always present in low numbers.

### SPREAD OF SYMPHYLANS

Some movement of the population is natural. They can be moved mechanically through plowing, harrowing, disking, rototilling, etc. The most common "spread" is through manure, mint straw or compost. Compost is a natural attractant for symphylans as they are decomposers.

When organic matter is spread, symphylans are drawn to it, from deeper levels beneath the ground. The organic matter is a great warm food source, so the symphylans naturally come up and enter the organic matter.

Step one: Before you import or spread compost or manure, check it for the presence of symphylans or other unwelcome insects. Dig through it and spread samples on black plastic to check for these photophobic, fast-moving creatures.

Step two: To prevent infestation from your own compost, construct your compost heap on top of plastic or concrete to keep symphylans from coming up from the ground into the compost.

Step three: Heat compost to temperatures of 160° F as this kills most of the unwelcome guests. There may still be some infestations on the periphery. Both warm and cool compost piles are attractive to symphylans.

## CONTROL

Symphylans are attracted to moist soil that is high in organic matter. If the soil gets too dry and warm or too cold, they may dive down twelve inches for friendlier conditions.

1. Diazinon mixed in the soil is a control, but it is only partially effective. This treatment may need to be repeated. Be sure that plants in the soil you are treating are listed on the insecticide label. Diazinon has a relatively short-term effect. Follow label directions.
2. Add “lots” of organic matter to the soil to provide an alternative meal other than the roots and seeds.
3. Planting larger seedlings rather than little ones will help prevent the loss of root hairs.
4. Let the ground lay fallow for a year. Do not water it.
5. Create a basic change in the flora of the area by substituting a non-susceptible crop. Plant barley in the spring or other alternative crops such as oats and wheat, which are not conducive to symphylans.
6. In June, remove the soil to a depth of six inches and spread it out on plastic. The symphylans will dry out and die within 48 hours. If your plot or field is too large to dig up, plow the area to fallow in the fall.
7. Allow the field to flood in the winter.

## LIVING WITH SYMPHYLANS

If eliminating symphylans in your garden or greenhouse is not practical, consider planting large-rooted plants such as green beans or corn. Another suggestion would be to convert your garden to a spring or winter one when the symphylans are deep in the ground.

## MONITORING

To determine whether or not your garden has a destructive level of symphylans, dig up a shovel full of soil in April, May and June and look for symphylans. Do it again in August. If you see white pests that you think may be symphylans, bring a sample to the Extension office and ask for a Master Gardener.



Ross Penhallegon, Horticulture Faculty  
Pat Patterson, Horticulture Program Assistant  
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Photo courtesy of the OSU Integrated Plant Protection Center