

**Some plants in my garden were not doing so well right off the bat in the spring and when I pulled some of them up to take a look I noticed that the roots are not very developed and seem to be sort of stubby. I see some small multi-legged centipede-like animals running around the roots too. Are these insects the problem and what can I do about them?**

It is quite likely what you are describing are garden symphylans. They are about a quarter of inch long, have 10-12 pairs of legs and run around quickly when exposed to light. They are neither insects nor centipedes and belong to their own class in the phylum Arthropoda. They feed on decaying matter in the soil and plant roots. The feeding on plant roots results in what you describe; a plant which does not grow well, with stunted (“stubby”) roots that are few in number.

Garden symphylans tend to be more numerous in fine textured soils such as clays, especially those with a large amount of undecomposed organic matter. Symphylans need tunnels to move about, and the heavier clays support this sort of structure. On the other hand, loose soils such as sands and loams are less amenable to tunnels, and have consequently fewer problems with symphylans.

Outside of avoiding the infested area completely, one approach to controlling symphylans is to disturb the soil to break up the structure in which they move around. Compacting the soil to crush symphylans does control them, but this generally can't be recommended because compacted soils are not very good for plant growth. However, growers may work up the soil by plowing and spading, destroying the structure and tunnels. The more the soil is disturbed, the more symphylan numbers will be reduced.

Since it is symphylan feeding on the roots that is stunting the plants, it is suggested that growers use more established plants if possible when planting into infested soils. For example, rather than direct seeding tomatoes, it would be better to use transplants, since it already has a significantly developed root system and would be able to sustain some symphylan feeding without being too detrimental to the plant.

The above has been a brief guide to managing garden symphylans in gardens and fields. Please contact Mark Bolda at UCCE Santa Cruz if you have more questions on this topic or any other topics concerning blackberry, raspberry or strawberry production.



Garden symphylan.