

Plant-parasitic nematodes: The hidden killer of home garden plants

Most people know that fungi, bacteria or viruses can cause diseases in plants. However, not very many people are aware of nematodes that can do the same thing. Nematodes are microscopic animals that live in soil, fresh water, ocean, plants, animals and human beings. They have many different species, but only a small part of them can cause diseases on plants, animals or human beings. While human diseases caused by nematodes are well controlled in most parts of the world, nematode problems on agricultural and horticultural plants are becoming more and more serious. The estimated agricultural losses caused by nematodes worldwide exceed \$80 billions every year.

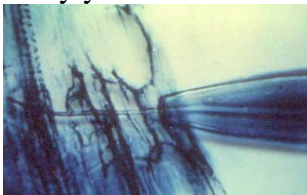


Fig.1. Nematode feeds root tissue of a plant.

Nematode problems are very common in ornamental plants, especially in

plants growing in home yards or landscape areas. When a new home is built, it is unlikely to have those harmful nematodes unless the home site has once been cultivated as an agricultural land. However, nematodes are often unintentionally brought to home yards by homeowners through planting nematode-infected grasses, shrubs or trees. Because most species of nematodes have broad host range, which means that one species can attack different kinds of plants, and a single introduction of a given nematode species may finally result in infection of all plants in the yard.



Fig. 2. Root-knot on tomato roots.

The most common problems on home yard plants caused by nematodes are root damage by feeding (Fig. 1), root-knot (Fig. 2), and root cyst (Fig. 3).

These symptoms occur on root system, and people usually do not notice them. During late stage, however, symptoms such as yellowing, defoliation, stunting, wilting, growth decline or death of plant can be seen above ground. Nematode syndrome is often mistaken as a nutrient deficiency or water problem because of the similar symptoms.

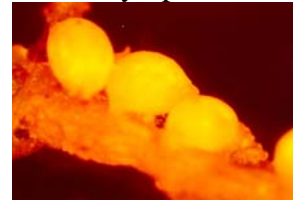


Fig. 3. Cyst nematodes on a clover root

Control of nematode problems in home yards can be achieved by planting healthy nematode-free nursery stocks, frequent sanitations, and application of nematicides if applicable. Please note, it is extremely difficult to eradicate nematodes from the soil. Prevention is always the most important and effective control method.