
Foliar Nematodes



Foliar nematodes (*Aphelenchoides fragariae*, *A. ritzemabosi*, and *A. besseyi*) also known as leaf and bud nematodes affect over 250 plant species in 47 families. They prefer moist conditions and moderate temperatures. Foliar nematodes cause damage by direct feeding on the foliage. Because they destroy the aesthetic value of the plants, there is no acceptable level of infection. Strawberries, ferns, foliage plants, and vegetatively propagated potted ornamentals are important hosts. Reported ornamental hosts include *Begonia* species, *Dahlia* hybrids, African daisy, *Pelargonium* species, cineraria, primrose, African violet, *Hibiscus*, *Hydrangea*, and *Gloxinia*.

Foliar nematodes cause angular, vein limited chlorotic to brown to purple or black, water soaked lesions and blotches. Lesion appearance can vary with light intensity, host plant, and the age of the lesion. Young leaves may exhibit distorted growth. Affected leaves eventually shrivel, but often remain attached to the plant. Association of foliar nematodes with fungal or bacterial pathogens can result in severe blight. They can survive in the soil for a few months in association with plant debris, but they persist in a dehydrated state in plant tissue for up to three years. Foliar nematodes migrate by swimming up stems or along the surface of wet plant parts. Spread within a greenhouse is most often with splashing irrigation water. They enter the plant either through the stomates or by direct penetration and reproduce within the leaves. Their entire life cycle can be completed within 14 days, resulting in very rapid development. The most likely source of infestation is through infected but asymptomatic plants or cuttings.

There are no registered chemicals for control of foliar nematodes. Avoidance of infected cuttings, seedlings, or vegetative propagation material is the most important means of control. Common hosts should be regularly inspected, especially when new plants are introduced into the greenhouse. Affected plants should be discarded. Many common weeds are hosts, so eradicate weeds within and adjacent to the greenhouse. Reduce leaf and stem wetness by proper plant spacing and subirrigation. Hot water treatment for 5 minutes at 50°C (122°F) can

eliminate the nematodes, but some plants may be injured by this process. Easter lily bulblets can be dipped in hot water at 52°C (125°F) for 10 minutes prior to planting. Hot water treatment must be performed very carefully because the potential for plant injury is high.
