

ANOTHER GREENHOUSE PEST?

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Foliar nematode is a somewhat unusual pest to be found in Connecticut greenhouses. Nonetheless it has recently been found and confirmed. Although most nematodes known to enter foliage favor more southerly locations, three species of Pepperomia were recently found to be extensively infected (Figure 1).

The nematode believed to be responsible is Aphenlencoides ritzemabosi as identified by Dr. Gerald Walton of the Connecticut Agricultural Experiment Station, New



Figure 1--Necrotic areas on pepperomia leaves caused by foliar nematodes.

Haven. This nematode has been known to invade various species of flowering and foliage plants. It is primarily endoparasitic, but has occasionally been found wandering on the outside of plants in a thin film of water. A. ritzemabosi is most often reported in leaves, buds and growing points of plants, but has also been encountered in epidermal layers of stems.

Initially, nematode damage to foliage may resemble a bacterial or fungal leaf spot. Concentric rings of necrotic tissue are not uncommon. Spots first appear on the undersides of leaves. These spots soon become brown and eventually black. In early stages only small spots are present because leaf veins tend to confine each colony to a relatively small area. Later, the entire leaf may become involved, die, and drop from the plant. The fallen leaf carries many living nematodes with it. When moisture is present they will move back to the original plant or may colonize a new one. Nematodes will also move from plant to plant in water droplets or by crossing over leaves that are touching. In any event, moisture is the key factor in their mobility.

Under ideal temperature and moisture conditions the entire life cycle, from egg to adult, is about 14 days. However, adults may coil up in desiccated leaves and remain viable for up to three years. When favorable conditions return they revive and continue their life cycle.

Many nematologists agree that A. ritzemabosi is very similar to A. fragariae in almost every detail except size. A. fragariae is much smaller. A. fragariae is also notorious for invading a wide range of commercially important plants. A few of the plants known to be susceptible to invasion by some type of

foliar nematode are: Aster, Calceolaria, Chrysanthemum, Dahlia, Delphinium, Gloxinia, Lantana, Lilium (Easter lily included), Peperomia, Phlox, Pteris (ferns), Salvia, Saintpaulia (African violet), Verbena, and Zinnia.

Johnson and Gill (1975) reported excellent control of foliar nematode (A. fragariae) in "Fluffy Ruffles" Fern using either parathion or oxamyl. However, if these pests are suspected in a crop, contact an Extension agent for confirmation. Then, depending on the crop, an effective control can be recommended.

Why worry about one more pest that may never be seen? The answer is simple. Unattractive or unhealthy foliage on crop plants does not make a big seller.

References:

- Goodey, T. 1933. Plant Parasitic Nematodes. E.P. Dutton and Company, Inc., New York.
- Thorne, G. 1961. Principles of Nematology. McGraw-Hill Book Company, Inc., New York.
- Johnson, A.W. and D.L. Gill. 1975. Chemical Control of Foliar Nematode (Aphenlencoides fragariae) on Fluffy Ruffles Fern. Plant Dis. Repr. 59(9): 772-774.