Cyclamen Mites

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Many types of mites are common on horticultural crops including two- spotted mites, cyclamen mites and broad mites. Mites feed by piercing plant tissue with their mouthparts and sucking out cell contents.

Growers are often unaware of cyclamen mites until they see the feeding damage because the mites cannot be seen with the naked eye. Damage may be concentrated near the buds or occur on the entire plant. Cyclamen mite damage can include inward curling of the leaves; puckering or crinkling of the leaves. Pit-like depressions may form that give leaves a wrinkled appearance. Leaves may also become brittle. Foliage may become darker, and appear streaked. Flower buds may not open or flowers can become shriveled or become discolored.

The cyclamen mite has a broad host range. Some of the more commonly infected plants include: African violet, cyclamen, dahlia, gloxinia, ivy, snapdragon, chrysanthemum, geranium, fuchsia, begonia, petunia, and azalea to name a few. Recently cyclamen mite damage has been especially noted on snapdragons, kalanchoe, exacum and hydrangea. Outdoors, this mite can attack delphinium, aconite, dahlia, chrysanthemum, verbena strawberry and viola. Damage to delphinium is particularly severe, as flower stalks become twisted and gnarled and buds turn black and do not open. This past summer, cyclamen mite damage on garden mums was particularly severe in isolated incidences. Cyclamen mites tend to prefer a temperature of 60°F, so may be more damaging during the fall and winter months. Damage from a closely related mite, the broad mite is frequently confused with the cyclamen mite. However, the broad mite is more active at temperatures between 70°F and 80°F. This mite also tends to feed on the lower leaves causing a downward puckering of the leaves. Broad mite feeding may result in terminal buds being killed but there is little distortion of the flower buds.

Life Cycle and Biology

Cyclamen mites were first reported as a pest in the United States in 1898. The adult mites are very small, less than 1/100 of an inch

long so they cannot be seen without the aid of a microscope. The adults are shiny, tinted orange to brown and elliptical in shape. They prefer to hide in buds or deep within the flowers. Adult females can lay from two to three eggs per day for up to two to three weeks. The eggs are deposited in moist dark places at the base of the plant and in crevices. The majority of the eggs will develop into females. The young larvae are highly active for about one week. Cyclamen mites complete their life cycle from egg to adult in about two weeks at a temperature of 60°F. Outside, the adult female can overwinter in protected locations such as the leaf sheaths in old crowns of strawberries as far north as Canada.

Management

Prevention and sanitation are important components of a management program because chemical control with pesticides is difficult. If detected early, it may be feasible to discard a small number of infested plants. Mites can be easily spread from infested to non-infested plants on workers hands and clothing. During scouting and other routine greenhouse tasks, enter the area last to avoid spreading the mites to healthy plants. Baker (1997) suggests a hot water treatment to kill the mites. Infested plants may be dipped into water held at a temperature of 110°F for 15 minutes to destroy the mites without damaging the plants. Growers should try this technique on a small scale first, because different plant species and cultivars may vary in their sensitivity to this treatment. If a small number of plants need to be treated, badly injured plant leaves can be trimmed off before dipping the plants. Dipping the entire plant and pot into the water is suggested. How successful this treatment is depends on careful control of the water temperature. Certain miticides such as Kelthane and Thiodan may be used against cyclamen mites.

References

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