



A healthy fuchsia, such as the one at left, is one of the most attractive and popular of flowering plants among California home gardeners and hobbyists. The recently discovered fuchsia gall mite disfigures plants, causing twisted and distorted leaves and swelling and reddening of tissues.

Fuchsia gall mite management

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Pruning plus chemical sprays are needed to keep susceptible plants healthy

In 1981, an eriophyid mite new to North America was discovered disfiguring fuchsias in San Francisco County. Identified by T. Kona, California Department of Food and Agriculture, as *Aculops fuchsiae* Keifer, this gall mite is believed to be native to Brazil. Over the next several years, the fuchsia gall mite spread quickly and is now reported from Mendocino to San Diego County.

This mite infests the growing points, young leaves, and blossoms of fuchsia. As a result of hormonal-like substances that the mites inject into plant tissue as they feed, infested growth becomes twisted and stunted, grotesquely swollen and blistered, and often reddened.

Biology

Attempts to rear the fuchsia gall mite under greenhouse conditions were mostly unsuccessful, suggesting that it responds preferentially to cool temperatures. This has been confirmed by the ease of inoculating plants with gall mites outdoors. The rapid spread of the mite coastally and lesser spread into the warmer inland

areas further suggest that this is a cool-weather species.

Like some other eriophyids that have been studied in greater detail, the gall mite probably is spread locally by wind, as well as by bees and hummingbirds that visit flowers. Movement of infested plants or cuttings also helps spread the mite. The popularity of fuchsias among home gardeners and hobbyists and the ease of their vegetative propagation virtually ensure widespread dissemination of foliar disorders of these plants.

The mites live and reproduce within the folds of galled tissue and among the plant hairs. As the plants grow, some mites leave the galls and move upward to attack new growth and blossoms, and in time can stop all new growth.

A predaceous mite, *Amblyseius californicus* (McGregor), has increasingly been found in association with the fuchsia gall mite. The future role of this native predator is uncertain. As with many newly introduced pests, however, it appears that fuchsia gall mite populations already are being dampened by this and other

predators taking advantage of a new food source.

Chemical control experiments

In a lathhouse at the Deciduous Fruit Field Station, San Jose, we conducted a series of five experiments to evaluate pesticides for fuchsia gall mite control. All experiments used the fuchsia cultivar Display, grown in 1-gallon nursery containers, in a randomized complete block design with single-plant plots, and all treatments were replicated four times.

Fuchsias were inoculated with mite-galled tissue placed on the plants. Several weeks later, after new galls began to form, the plants were sprayed to the point of complete coverage with a hand compression sprayer. Periodically thereafter, samples of galled tissue were pinched from each plant and the gall mites counted under magnification. When the mite count for any one gall sample reached 100, further counting of that sample was discontinued.

Although many of the common insecticides such as diazinon and malathion sup-