

Two-Spotted Spider Mites and Edema on Geranium

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Geraniums showing chlorosis and necrosis on the foliage were seen, and on some leaves these symptoms were wedge-shaped. Wedge-shaped chlorotic and necrotic patches typically bring worries of Xanthomonas blight. However, when the leaves were further inspected, symptoms of edema as well as a healthy two-spotted spider mite population were found on the undersides of the leaves.



Edema symptoms as a result of feeding by two-spotted spider mite.

Spider mite feeding injury typically results in a faint chlorosis or stippling on upper leaf surfaces, eventually large populations can result in unsightly masses of mites and webbing. However, on some plants, spider mite feeding can result in symptoms of edema. Edema symptoms as a result of spider mite feeding are commonly seen on geranium, ivy geranium, and ipomoea.

Remember that edema symptoms are most often a result a physiological condition, usually explained as

a rupturing of plant cells as a result of roots absorbing more water than can be expelled by transpiration. Symptoms are typically small blisters, bumps, or warts, which are most often seen on the undersides of leaves but can also occur on stems, flowers, and fruit. These blisters can at first appear water soaked, then darken or ap-

pear corky, and severely affected leaves may become yellowed or drop. Edema occurs when growing media is warm and moist, and the greenhouse environmental conditions are such that transpiration is reduced (cool, humid, cloudy conditions).

Because it is assumed that when



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edema is observed it is a result of environmental conditions, not as a possible result of spider mite feeding, mites often go unnoticed on geraniums until their population is large. If you see a mild chlorosis on the upper leaf surface and edema on the undersides of the leaves, especially if the edema is hugging the leaf veins, look closely for mites, castskins, or webbing. Magnification can be helpful for finding mites, a 10X handlens is usually sufficient.



Slightly chlorotic foliage from two-spotted spider mites.



Edema symptoms as a result of feeding by two-spotted spider mite.

In cooperation with our local and state greenhouse organizations

