

Plant Pathology Fact Sheet

Oedema

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Oedema is a non-parasitic disorder which, under the right environmental conditions, can affect a wide variety of herbaceous plants. We most frequently observe this problem on indoor plants, such as dracaena, geranium and schefflera. Oedema tends to be more of a problem in greenhouses, but it may also occur on plants grown in homes and offices. Field and garden grown crops, such as cabbage, may also be affected.

Cause and Symptoms

Oedema results when there is a physiological upset in the water balance in a plant. It is likely to develop when the soil is moist and warm and the air is moist and cool. These conditions are likely to exist in homes and greenhouses during periods of prolonged cool, cloudy weather in winter and early spring. A drop in air temperatures after several warm, muggy days provides ideal conditions for oedema to develop in the field. In these situations the plant absorbs water from the soil more rapidly than is lost through the leaves through transpiration. Water pressure builds up in the leaf cells, causing them to swell and to protrude as small bumps on the lower leaf surface. The



OEDEMA ON THE UNDERSIDE OF A SCHEFFLERA LEAF

cells eventually burst, giving a water-soaked appearance to the swollen areas. These swellings later become tan or brown and corky. In severe cases the corky, wart-like areas can also form on petioles and stems. If injury continues, the leaves will turn yellow, droop and fall from the plant.

Control

Oedema can be controlled in homes and greenhouses by following proper cultural practices. Overwatering, high humidity and low light intensities promote the development of oedema. Therefore, avoid overwatering plants, especially during periods of cloudy weather. Improving the airflow around plants by providing adequate spacing and by regulating ventilation will help to reduce humidity. Increasing the plant's exposure to light will also be beneficial. Affected plants usually recover under favorable growing conditions. (Revised 8-04)