

BACTERIAL STEM ROT OF POINSETTIAS

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Bacterial stem rot, caused by Erwinia carotovora var. chrysanthemi, usually appears at two different times during poinsettia production. It may first appear during cutting production or shortly thereafter. Many years ago this disease appeared in the greenhouse of one of Connecticut's largest propagators. Within 24-48 hours thousands of cuttings were killed.



Figure 1. Soft, watery rot of poinsettia cuttings caused by bacterial stem rot.

During propagation, the bacteria invades the cuttings through the base or a leaf scar. Since the bacteria are motile, a soft, watery rot develops quite rapidly. This results in a complete disintegration of the stem. The bacteria are favored by high temperatures and can spread rapidly through the medium. Propagation in individual units may reduce spread.

The second period this disease hits is during the last part of the growing season. At that time the plants may be tender. Bacterial exudate may ooze from stem cracks or in spots on the bracts. This differs from crud because it stays gooey while crud becomes hard. Affected stems may become limp, dark, and the leaves appear water-soaked. The stems may disintegrate and topple over. Entire plants or single stems may be affected. If only one stem is diseased, it may be removed without detriment to the rest of the plant.

These bacteria are easily spread on the cutting knife, hands, cutting carrier or anything that they



Figure 2. A poinsettia that succumbed to bacterial stem rot after being panned.

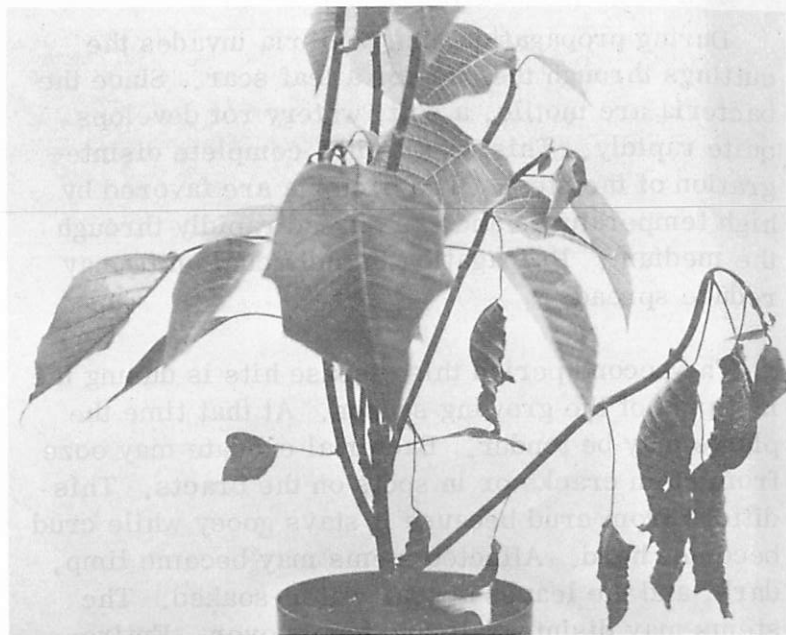


Figure 3. In later states of growth, bacterial stem rot may be expressed by rotting of a branch or two.

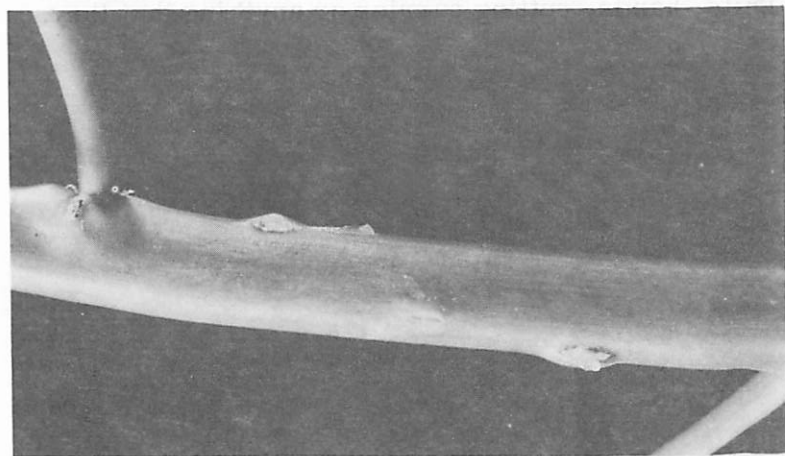


Figure 4. At times, bacterial stem rot may cause a systemic infection and appear as a sticky exudate on stems.

touch. Dipping the cuttings in water is not recommended since soaking can spread the disease. Thus, one diseased stock plant could infect many others.

Presently, the only control measure is a good sanitation program on stock plants and during propagation. Ideally, a freshly sterilized knife should be used for each stock plant.

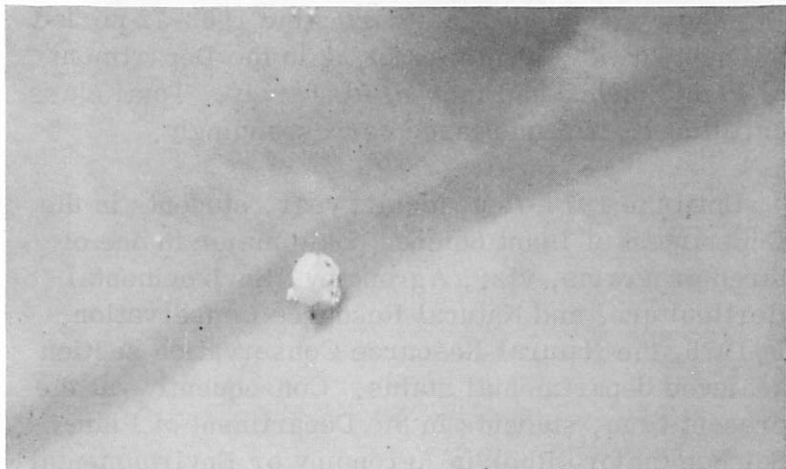


Figure 5. Bacterial ooze of Erwinia caratovora var. chrysanthemi on midrib of poinsettia bract (Rathmell photo).