

GERANIUM BLACK LEG — Bacterial Blight or Pythium

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Black Rot or Black Leg--Both of these diseases caused the death of many geraniums in Connecticut last year. With the increasing costs of production, growers cannot afford losses, either large or small. The following is a description of each and suggested control measures.

Black Rot--Bacterial Stem Rot and Leaf Spot, or Bacterial Blight are one and the same and caused by Xanthomonas pelargonii. Leaves infected by this organism exhibit two types of symptoms. The first is small round or angular water spots on the underside of the leaf. After 2 to 3 days, well-defined, sunken and then necrotic spots develop about 2 to 3 mm in diameter. Wilting and death of the leaf usually follows. The bacteria from these spots may spread to other leaves, if watered overhead, or may move through the petiole into the stem and throughout the entire plant.

The second leaf symptom is wilting. The wilt occurs at the margin of the leaf while the petiole remains turgid. Infected areas of the leaf rapidly die in angular or pie-shaped areas bounded by veins. The affected leaves may drop off immediately or hang on the plant for a week or more.

The stem rot symptom is where the disease gets its common name. It is called "black rot" by many growers. The vascular bundles in the stems and branches, if infected, turn brown to black. The bacteria then infect the pith and cortex of the stem

causing a black, sharply limited discoloration. The stem rapidly blackens and shrivels into a dry rot leaving the fibers and epidermis intact.

CONTROL: There is no known chemical control for this disease. If it appears in the greenhouse, the infected plant should be removed immediately to limit the spread of the disease. A report in the Ohio Florist Association Bulletin (1/74) makes four suggestions which may be helpful: (1) Only cultured indexed cuttings should be used, (2) Night temperatures above 71°F predispose them to infection, (3) White fly will spread the infection, and (4) Watering with spaghetti tubes and keeping the foliage dry will greatly reduce and may eliminate any spread.



Pythium Black Leg on geranium.

Black Leg--This disease is caused by a fungus, Pythium sp. While more devastating in the cutting bench, it can also attack young plants. The young plants are attacked first at the base of the plant which rots rapidly. The rot soon spreads to the branches and leaf petioles and the affected parts blacken, shrivel and rot. Pythium produces a soft stem rot in contrast to the dry stem rot produced by X. pelargonii. Stems attacked by Pythium usually are a shiny coal-black color.

CONTROL: Pythium is spread primarily through the use of infested media in the cutting bench and potting soil. Pasteurize all mixes and materials used in producing this crop. If Pythium appears on the plants after potting, apply a drench of Truban or Dexon, used according to manufacturer's directions.