Gladiolus Leaf Diseases

Purdue University Cooperative Extension Service

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GLADIOLUS LEAF DISEASES

There are several diseases that may attack the leaves of gladiolus, resulting in ragged, unsightly foliage but rarely causing death of infected plants. The most common foliage disease of gladiolus in Indiana is Botrytis leaf spot. This disease may occur on most varieties and is generally a problem in periods of excessively wet weather during the spring and early summer months. Botrytis leaf spot will appear in May or June as light brown round or oval spots approximately 1/4 inch wide and 1/2 inch long, surrounded by a dark brown border. In wet weather, the spots will become covered with masses of powdery, grayish spores of the fungus Botrytis gladiolarum which causes the disease. Occasionally this disease will attack flower petals causing a browning of the petal margins. Botrytis leaf spot, or gray mold, is especially prevalent on dead florets and may be detected easily when the leaves are wet with dew.

The Curvularia leaf disease will attack all parts of the plants and usually becomes destructive during warm, rainy weather in late June or early July. The Curvularia disease may be identified by the tan to brown spots on leaves, stems, and in some cases, petals of infected plants. Diseased spots are oval and 1/2 to 1 inches long, with a central tan area ringed by a dark, reddish-brown zone and surrounded by a pale green or yellow halo. In wet weather, the central portion of the diseased area will become covered with masses of powdery black spores. The curvularia disease is caused by the fungus Curvularia lunata.

The third common leaf disease of gladiolus is Stemphylium leaf spot, which will attack the leaves of some varieties, causing them to turn yellow and brown. Leaves may be killed by this disease early in the season, resulting in reduced flowering and corm production. Generally, this disease becomes a problem after flowering, killing leaves prematurely and reducing corm size. Stemphylium leaf spot is easy to distinguish from other gladiolus leaf diseases since it causes yellow spots with red or brown dots in the center, that usually are most prevalent at the tips of the leaves. Stemphylium leaf spot is caused by the fungus Stemphylium sp.

A fourth leaf disease of gladiolus is bacterial scab caused by the bacterium Pseudomonas marginatum. Leaf infections of bacterial scab appear as very small reddish-brown, slightly raised specks that may be confused with thrip damage. Bacterial scab may appear on any part of the leaf but is usually most prevalent on the fleshy basal portion. Ultimately, leaf infections of bacterial scab will result in extensive dead areas on the leaves, causing them to turn yellow and die prematurely.

The removal and destruction of all leaf-spot-infected foliage is important in the prevention of these troubles. As soon as the first evidence of leaf spot troubles appear, gladiolus should be sprayed with

a. Zineb (Parzate, Dithane Z-78) using 1 1/3 table-spoonfuls per gallon water OR

b. Captan (Orthocide 50-w. Captan) using 1 1/2 table-spoonfuls per gallon of water

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OR

c. General Purpose Flower Formulations containing Captan at manufacturer's directions.

Three sprays of any of the above materials at 10-day intervals will prevent serious damage from any of the gladiolus leaf diseases. Since the foliage of gladiolus is waxy and hard to cover uniformly with spray material, the addition of 1 teaspoonful of Liquid Lux, Joy, Glim, Wisk or any liquid soap in 3 gallons of any of the suggested fungicides will improve leaf spot control.

For more detailed information, request Extension Bulletin 381, "Gladiolus for the Amateur".

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