DISEASES OF FOLIAGE PLANTS

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Foliage plant diseases can cause severe losses under the right environmental conditions. However, here in Connecticut these conditions are not often satisfied with the result being that few plants are lost due to diseases. Also, bouquets should go to southern producers as very few foliage plant diseases have been shipped into the state.

The following is a brief description of some of the more common foliage plant diseases.

FUNGAL DISEASES ATTACKING FOLIAGE

1. Alternaria Blight (Alternaria actinophylla)

Susceptible plant: Schefflera

The disease appears as brown to black leafspots usually circular at first but often enlarging to cover most of the leaf. A yellow halo is often seen around the margin of the spot and when severely infected, the affected leaves drop from the plant.

2. Cephalosporium Leaf Spot (Cephalosporium cinnamoneum)

Susceptible plants: Dieffenbachia, Nephthytis

Symptoms begin as small reddish-brown spots that usually have a yellow border. On Nephthytis, numerous lesions may be present on infected tissue and is often called "The Shotgun Fungus Disease."

3. Cercospora Leaf Spot (Cercospora spp.)

Susceptible plants: Peperomia, Ficus, Schefflera and Cordyline

On Ficus, minute, slightly raised, circular areas appear on the leaf undersurface. These are dark green and have a chlorotic margin. Infected leaves may turn yellow often with healthy green leaves above them. On Peperomia, infections appear initially as pinpoint swellings on the leaf undersurface which enlarge progressively into noticeable pimple-like growths, then to very prominent raised areas which appear dark green with a limited amount of necrotic tissue at the apex. On the upper leaf surface the infected areas may be seen as chlorotic (yellow) spots.

4. Dactylaria Leaf Spot (Dactylaria humicola)

Susceptible plants: Philodendron oxycardium (cordatum) and other Philodendrons

Only young leaves are attacked and symptoms appear initially as pinpoint, water-soaked spots. Spots occur on both leaf surfaces but generally are more numerous on the lower. As the leaves mature, the spots enlarge slightly and become yellowish-green to yellow in color often with a brown water-soaked center. The most prominent symptom, however, is the collapsed scooped-out appearance of the infected area which is responsible for its being mistaken for thrip injury.

5. Fusarium Leaf Spot (Fusarium moniliforme)

Susceptible plants: Dracaena, especially D. marginata; Pleomele and Sansevieria

Infection only occurs down in the young growing point often resulting in its complete rot and collapse. Infection is facilitated and assisted in this area by

the water that collects there from rainfall or overhead irrigation. The leafspots in all three groups mentioned generally initiate as pinpoint, watersoaked spots that enlarge and usually take on a reddish color. Under conditions conducive to active disease development the cream-colored infective spores of the fungus may be seen within the infected areas.

6. Brown Leaf Spot (Leptospharia spp.)

Susceptible plant: Dieffenbachia

Spots may be very numerous on the affected leaves and appear yellowish to a more grayish-brown color. The spots may vary in size and may occur also on leaf midveins, petioles and the flower spathe. Often, severely affected leaves become chlorotic and die.

7. Rhizoctonia Foliar Blight (Rhizoctonia solani)

Susceptible plants: Ferns, Syngonium, Philodendron, Schefflera seedlings

Infection usually initiates within the center of the plant at the tips of the leaflets. Under wet, humid conditions the fungus spreads rapidly within and among plants causing a wet brown-black rot. Positive identification of the disease may be made by observing the prominent spider web-like reddish-brown threads of the pathogen that grow among and between the affected leaflets and fronds.

8. Phytophthora Leaf Spot (Phytophthora spp.)

Susceptible plants: Philodendron oxycardium and Dieffenbachia

Initially it appears as a water-soaked spot which may enlarge to encompass a good portion of the leaf. In later stages, it becomes brown and may change to tan in color.

CONTROLS:

Alternate weekly sprayings of mancozeb (Dithane M-45), benomyl (Benlate) and daconil will control most of these pathogens. Use at rates recommended on the label.

Cultural practices are generally sufficient to control these diseases in northern greenhouses and interior landscapes. The low humidity generally keeps disease infection at a minimum.

FUNGAL PATHOGENS ATTACKING STEMS AND ROOTS

1. Rhizoctonia spp.

Susceptible plants: Schefflera seedlings and young plants, Philodendron oxycardium cuttings, Dieffenbachia cuttings and young plants, Nephthytis seedlings and cuttings, Scindapsus pictus cuttings, Philodendron selloum seedlings, Hoya cuttings and young plants, Gynura "Purple Passion" cuttings and many others.

Wet and crowded plants, cuttings or seedlings are extremely susceptible to this pathogen. The disease should be suspected when rapid rot and collapse of leaves touching the soil surface occur or when plants fall over and show a distinct brown lesion right at the soil line. Seedlings attacked by this pathogen often will be matted together and will be difficult to pull apart. In most cases the prominent reddish-brown, spider web-like threads of the fungus may be observed either on the leaves or stems and often can be seen growing on the soil media.

CONTROL: PCNB (Terraclor) or benomyl (Benlate) drench

2. Sclerotium rolfsii

Susceptible plants: Schefflera seedlings and young plants, Philodendron oxycardium cuttings, Nephthytis seedlings and cuttings, Dracaena godseffiana cuttings, Peperomia cuttings and other plants.

This disease is generally called "Southern Blight" but is more commonly referred to as the disease caused by the "web fungus." It may be identified by the prominent, thick, white threads of the fungus usually found on the infected plants and the soil surrounding them. Usually tan to brown, mustard seed-size resistant structures (sclerotia) of the fungus are also present.

CONTROL: PCNB (Terraclor) drench

3. Pythium spp.

Susceptible plants: Philodendron, Aglaonema, Maranta, Dieffenbachia, Schefflera seedlings and young plants, and many others.

Damping-off of young seedlings may occur but most often this pathogen attacks propagative cuttings and roots of growing plants. The rot it produces on tissue other than roots is usually a wet brown to black collapse of infected tissue. In root infections, the color may vary from a water-soaked gray to brown to black. Occasionally only the root tips are affected but most often a wet rot occurs which results in the sluffing off of the covering of the root leaving only the thin inner core.

CONTROL: Dexon or Truban drench

4. Phytophthora spp.

Susceptible plants: Dieffenbachia, Peperomia, Zygocactus and others.

This pathogen is closely related to Pythium and causes disease under similar conditions. Phytophthora, however, often attacks mature plant stems whereas Pythium usually restricts its attack to more immature tissue such as roots and young seedlings. Attack of the plant tissue usually results in a rapid, wet rot that may vary from a normal water-soaked appearance to a brown or black in color.

CONTROL: Dexon or Truban or mancozeb (Dithane M-45) drench

BACTERIAL DISEASES ATTACKING LEAVES AND STEMS

1. Bacterial Leaf Spot and tipburn of Cordatum (Xanthomonas dieffenbachiae)

Susceptible plants: Philodendron oxycardium, Dieffenbachia

This disease is presently the most important foliar problem occurring in the foliage plant industry. It is characterized generally by a marginal yellowing of the leaf, occasionally with yellow spots or streaks within the interior of the leaf. As the disease progresses, the leaf turns yellow and drops from the stem.

2. Erwinia blight of foliage plants (Erwinia chrysanthemi) and Erwinia spp.

Susceptible plants: Philodendron, Nephthytis, Pothos, Aglaonema and others.

This pathogen causes a very rapid wet, mushy rot of leaves, stems and cuttings. Its speed of attack and the mushy, water-soaked appearance is a dead giveaway for this disease.

3. Bacterial leaf blight of Syngonium (Xanthomonas vitians)

Susceptible plants: Syngonium and Aglaonema

It is characterized by water-soaked lesions along the leaf margin which are initially dark green, gradually turning yellow to brown. The affected tissue eventually dies and appears papery thin. The lesions are often bordered by a bright yellow zone and white flakes of the dried bacterial cells are often visible on the lower surface of the leaf.

CONTROL: Bacterial diseases can be kept under control with weekly sprays of streptomycin.

This article was adapted from "Suggestions for the Control of Some Common Diseases of Foliage Plants" by J.F. Knauss, Agr. Res. Center, Apopka, Fla.