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Chrysanthemum Diseases

Purdue University Cooperative Extension Service


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CHRYSANTHEMUM DISEASES

There are several diseases of garden chrysanthemums that may become destructive and cause concern to home owners. The diseases described below are the most frequent problems although there are a number of other diseases that occasionally may be destructive.

Leaf Spots

The two common leaf spot diseases of chrysanthemums in Indiana commonly cause premature defoliation. Septoria leaf spot is probably the most common of the two leaf spot diseases. Septoria leaf spot starts in August on leaves at the base of the plant and appears as small brown spots which soon run together and destroy extensive leaf areas. If these spots are examined closely, small black fruiting bodies of the causal fungus will be seen in the affected leaf areas. Septoria leaf spot will cause premature defoliation and will quickly spread upwards causing serious leaf loss by blooming time.

The other leaf spot disease is caused by the fungus Cylindrosporium chrysanthemi. It can be identified by the dark blotches 1/2-3/4 inches in diameter that appear in August and September on the lower leaves. This disease will quickly destroy leaves which shrivel and cling to the stem.

Both leaf spot diseases can be easily prevented by spraying with ferbam or captan or with general purpose flower spray formulations containing these chemicals. Spray applications should start when the plants are 6 inches tall and should be continued at 7 to 10 day intervals until the flower buds are formed. Use 2 1/2 level tablespoonsfuls of ferbam or captan per gallon of water for this spray.

After the buds are formed use 1-1/3 tablespoonsfuls of zineb (Parzate, Dithane Z-78) in 1 gallon of water. Applied at 10 day intervals, four to five sprays will usually control these diseases. In wet summers 1 to 2 additional sprays of zineb at 10-day intervals around August 15 may be necessary. With all of the above sprays care should be taken to thoroughly cover the foliage with spray especially at the base of the plants.

Powdery Mildew

In wet years powdery mildew is also certain to occur on chrysanthemums
in most home gardens. Frequently mildew will not appear until late fall when plants are in full bloom. Mildew is caused by the fungus *Erysiphe cichoracearum*. In severe cases, leaves and blossoms will become covered with the white powdery growth typical of powdery mildew. Severe outbreaks of powdery mildew will also cause a stunting, twisting and deformity of the leaves. During the mildew weather in late August and early September home owners should avoid sprinkling the entire plant with water and should water only the soil surface at the base of the plant. A wise precaution in most years is to apply weekly applications of sulfur dust starting around August 15 or 2 tablespoonsfuls of wettable sulfur per gallon of water should be added to the ferbam or captan sprays recommended for leafspot control. Mildex or Karathane, 2 level teaspoonsfuls in 3 gallons of water, is also an effective spray for powdery mildew control.

**Fusarium Wilt and Stem Rot**

This disease is caused by the soil borne fungus *Fusarium* sp. Infected mums will first exhibit a yellowing of the lower leaves which is quickly followed by wilting and ultimate death of the entire plant. The lower portion of stems of plants infected with this disease usually turns black on the surface and when examined in cross section will show a discoloration of the internal woody tissue. Once the disease becomes established in the garden nothing can be prescribed for its cure. All diseased plants should be removed and destroyed as soon as they appear and a new bed should be established in a new location using disease-free plants.

**Yellows**

Frequently mums will produce sickly green flowers, or part of the flower will be normal in color and the remaining portion green. This is caused by a virus disease known as "yellows". Infected plants may produce both normal-colored and green-colored blossoms. The leaves of infected plants are usually slightly yellow with burned or scorched edges. Virus infected mums never produce normal seed. Virus diseases such as chrysanthemum yellows cannot be cured once they are present in the garden. The only effective control is to carefully inspect the garden when the plants are in bloom and remove and destroy all plants showing symptoms of the disease. Cuttings for propagation should be taken only from healthy plants and control of insects such as aphids, thrips and leaf hoppers is important in preventing spread of chrysanthemum yellows (See Purdue Mimeo E-70, "Insect Pests of the Flower Garden").

![Symptoms of leaf spot](image)