Fire or Botrytis Blight of Tulip

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Fire or Botrytis Blight is by far the most common and destructive disease of tulips, especially when they are grown in the same area year after year. The disease is caused by the fungus Botrytis tulipae.

SYMPTOMS: Lesions or spots appear on the leaves. They first appear as minute, yellowish spots, somewhat elongated in the direction of the leaf veins, and surrounded by a darker, water-soaked area. The lesions are slightly sunken and give the leaf a speckled appearance. As they enlarge, the areas become more depressed, the color changes to a whitish gray with a brownish tinge, and a translucent or water-soaked area appears about the margin. At this stage the margins of the lesions are quite definite. The lesions may enlarge and coalesce, frequently involving the entire leaf. When an infection occurs on the margin of the leaf near the tip, there is a characteristic wrinkling and bending of the leaf to one side. A gray growth of the causal fungus develops on the dead areas during humid weather. On the flowers, infections appear as minute lesions or spots that are whitish to light brown. The color is bleached from the flower. After the lesions enlarge, they turn a deeper brown and may involve an entire segment of the perianth which then becomes dry and wrinkled. Blighting may take place when the flower is still in the bud, preventing it from opening.

Lesions on the stalks resemble those on the leaves but are more longate and more depressed. A lesion may extend through the stem, causing it to weaken and break over at the point of the attack.

Small black bodies the size of a pinhead often are found on the brown outer bulb scales. These are the sclerotia or resting bodies of the fungus. If the outer scales are removed, deep-yellow or brown, usually circular, lesions may be seen. These lesions are usually on the sides of the bulbs but may occur at the nose or at the base of the bulb. The lesions rarely penetrate to the inner white scales.
DISEASE CYCLE: The fungus produces abundant quantities of spores on the dead areas of the flowers. These spores may be blown to unopened flower buds resulting in blighting and preventing buds from opening.

CONTROL: Once a tulip planting has experienced blighting the area should be considered infested, and the disease will become more serious with each succeeding tulip crop. An area should be planted to tulips no more often than every third year. It is best to dig the bulbs not later than 3 weeks after the petals fall. To prevent the fungus from spreading to the scales, remove stems from the bulbs as soon as they are dug. Examine the bulbs carefully before planting, and discard the diseased ones. Careful handling of the bulbs is important since infection occurs more easily on injured bulbs than on uninjured ones.

When the tulips come up in the spring, remove and destroy all infected plant parts as soon as they are noticed. Clean up and destroy all plant debris as soon as blooming ceases. Refer to Pest Management Guide 7 for information on chemical control.