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Early Blight of Tomatoes



One of the most common foliage diseases of tomato and potato is early blight. The fungus was first found on potato leaves in 1882. It causes a leaf spot, fruit rot and stem lesions on tomato and can be very destructive under some environmental conditions.

Foliage Symptoms:

Under field conditions, the first symptoms of early blight usually appear on the older leaves and consist of small, irregular, dark brown to black dead spots ranging in size from a pinpoint to 1/2 inch in diameter. As the spot enlarges, concentric rings may form as a result of daily growth by the organism in the leaf tissue. This gives the lesion a target-board or "bullseye" appearance. There are target-board lesions, usually a narrow chlorotic (yellow) zone around the spot which fades into the normal green. When spots are numerous, the general effect is such as to make the infected leaflet turn yellow and die. Spotting of the leaves may occur early in the season, but usually the greatest leaf injury appears after the fruit is well set.

Seedling and Stem Symptoms:

Early blight causes small, dark, slightly-sunken areas on the stem that enlarge to form circular or elongated spots with light centers that occasionally show concentric markings similar to those on leaves. Early symptoms can be confused with bacterial spot.

When large spots appear on stems or seedlings at the ground line, partial girdling known as collar rot appears. Such plants may die when set in the field or the stem is so weakened that it breaks over early in the season, thus forcing the plant to depend on a reduced root system that may develop above the canker. Such plants produce few or no fruits. When older plants are infected in the field, lesions with light brown centers and darker margins appear and may cover the entire system.

Fruit Symptoms:

Spotting of fruit stems and blossom drop, along with loss of young fruit may occur when early blight attacks plants in the flowering stage. On older fruits it causes dark, leathery sunken spots at the point of attachment to the stems. These spots may enlarge to the extent that they involve the whole fruit, and may show concentric markings like those on the leaf. The affected areas may be covered with a velvety black mass of spores on the surface of the lesions. Fruits can be infected in the green or ripe stage and through growth cracks and other Fruit Symptom wounds. Infected fruits may drop before they reach maturity.

Control:

1. Practice crop rotation by locating new plants in a part of the garden different from the previous year's location. If that is not possible, remove infested soil and replace with fresh soil.
2. When watering, avoid wetting foliage, if possible. Water early in the day so leaves will dry quickly.
3. Improve air circulation by spacing plants widely and eliminating weeds in and around the garden.
4. When the first fruit appears, spray either mancozeb (wait 5 days before harvesting) or chlorothalonil. Repeat weekly through growing season as needed.
5. In autumn, rake and dispose of all fallen or diseased leaves and fruit.

Every effort has been made to provide correct, complete, and up- to-date pesticide recommendations in this publication. Nevertheless, changes in pesticide regulations occur constantly, and human errors are still possible. These recommendations are not a substitute for pesticide labeling. **Please read the label before applying any pesticide.**

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