DISEASE MANAGEMENT:
Gray Mold on Tomato and Ghost Spot on Pepper

Botrytis cinerea

SIGNS & SYMPTOMS:

- Symptoms on leaves first appear as a brown, blighted area and progress up the petiole and into the stem.
- Blossoms turn brown and die.
- Infected fruit turn gray-white, soft and rot.
- Fruit may develop light, white halos called 'Ghost spots' which occur from airborne spore infection.

DISEASE CYCLE & EPIDEMIOLOGY:

- The fungus has a very wide host range and spores can be blown from other hosts.
- The fungus survives saprophytically on leftover plant debris.
- Small, black resting bodies (called sclerotia) may be produced, particularly in rotted fruit, which allows survival of the fungus during adverse conditions.
- Conidia from infected tissue are dispersed by wind and by splashing rain.
- The fungus is considered a weak pathogen that typically enters the plant through wounds or aging tissue.

ENVIRONMENTAL CONDITIONS:

- The disease typically begins in cooler weather.
- Disease development is greatest under moderate temperatures of 65-75°F.
- The disease is favored by sufficient humidity in the canopy and, on tomato, is most severe on plants in acidic, sandy soils with high soil moisture.

FIELD SIGNATURE:

- Symptoms appear first on older leaves and then move up the plant to younger leaves.
- A gray, fuzzy mold grows out of the dead tissue and, after periods of high humidity, clouds of spores are released when tissue is shaken.

PHOTOS:

Figure 1. Typical foliar symptoms of gray mold on older leaves of tomato. Photograph by: Phyllis Gilreath.

Figure 2. Dieback of leaflets, petiole and stem on tomato plant. Photograph by: Phyllis Gilreath.

Figure 3. Tomato fruit with white, soft rot symptoms of gray mold. Photograph by: Phyllis Gilreath.

Prepared by: Dr. Pam Roberts

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CULTURAL CONTROLS:

- Since the signs of this fungus may be confused with other saprophytic fungi which colonize dead tissue, the presence of *Botrytris* by microscopic examination should be confirmed.
- Plants should be supplied adequate calcium by liming acidic soils and maintaining uniform soil moisture.
- A calcium-to-phosphorus ratio of 2 or higher in leaf petiole tissue decreases plant susceptibility.

Figure 4. Ghost spot symptoms on pepper fruit. Photograph by: Phyllis Gilreath.

CHEMICAL CONTROL:

- Chlorothalonil, chlorothalonil plus mefenoxam, pyraclostrobin (suppression only), and boscalid are fungicides labeled for field application of gray mold on tomato.
- Also labeled for use on tomato are Pyrimethanil and *Bacillus subtilis* strain QST 713. Both of these compounds should be applied with an appropriately labeled fungicide.
- On pepper, Pyraclostrobin and *Bacillus subtilis* strain QST 713 are labeled for this disease.

RESISTANCE MANAGEMENT:

- Resistant management strategies on fungicide labels (e.g., boscalid and pyraclostrobin) such as tank mixing with another fungicide, rotation of applications, and maximum rate use per application and per season should be followed.

RESISTANT CULTIVARS:

- Resistance in commercial cultivars is not available.

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