



## How to Manage Pests

### UC Pest Management Guidelines

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## Tomato Damping-Off

**Pathogens:** *Phytophthora*, *Pythium*, and *Rhizoctonia* spp.

(Reviewed 1/07, updated 1/07)

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#### SYMPTOMS AND SIGNS

Seedlings affected by damping-off fail to emerge or fall over and die soon after emergence. Stems usually have a dark, shriveled portion at the soil line. Damping-off is generally limited to areas where drainage is poor or where soil is compacted, but whole fields can be affected, especially in early plantings exposed to rain.

#### COMMENTS ON THE DISEASE

"Damping-off" is a general term for the death of seedlings, either before or after emergence, under damp conditions. It is mainly an early season problem, causing the greatest losses in cool, wet soils.

Fungi that cause damping-off occur in all soils where tomatoes are grown, and they infect tomatoes when the soil is wet. Infection is most common under cool conditions, although both *Phytophthora* and *Rhizoctonia* can also infect seedlings in warmer soils. Once tomato seedlings reach the 2- or 3-leaf stage, they are no longer susceptible to infection by *Pythium* or *Rhizoctonia*; however, *Phytophthora* can infect tomato plants at any stage. Damping-off due to *Pythium* may increase where green manures such as volunteer grain are worked into the soil just before planting. Damping-off does not necessarily carry over from one season to another in the same places but appears only when and where conditions favor infection.

#### MANAGEMENT

Proper field and seedbed preparation and good water management significantly reduce losses from damping-off. By using sprinklers for germination, you keep better control of water and lessen the chance of infection. If possible, avoid planting when the soil is cool; seeds germinate faster and seedlings are more vigorous when the soil is warm, so they are less likely to be damaged. The use of fungicide seed treatments can help prevent damping-off. When seedling loss is extensive, replanting may be necessary.

#### PUBLICATION



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Diseases

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