Damping-off of Seedlings

When seedlings of vegetables or annual flowers die soon after germinating, the cause is often one of several pathogens that lead to damping-off disease. Seeds may rot before they germinate, shoots may decay before they emerge, or stems of seedlings may rot at the soil line. Damping-off is most common when soil is compacted and conditions are wet and cool. To manage damping-off, plant at the right time, germinate seeds indoors in disease-free soils, and follow planting practices that reduce disease risk.

Plant when temperatures are favorable for rapid seedling growth.

✦ Don’t plant seeds or transplants into cold, wet soil.
✦ If you want to start plants earlier, plant seeds indoors and transplant later.
✦ Shallow planting will speed up germination outdoors if conditions are marginal.
✦ If planting potato seed pieces, be sure soil is at least 50°F.

Reduce waterlogging in planting beds by improving drainage.

✦ Use raised beds.
✦ Add soil amendments such as redwood shavings, peat moss, or bark.
✦ Avoid using unfinished or green compost, which holds water and promotes disease development.

Apply good cultural practices for seedling plants.

✦ Don’t overwater.
✦ Thin plants after they emerge to improve air circulation.
✦ Don’t overfertilize with nitrogen.
✦ Rotate crops to avoid planting the same crops in the same place year after year.

Employ good sanitation practices.

✦ Use clean pots.
✦ Remove and discard diseased plants.
✦ For plants grown in pots or cold frames, use steam-treated soil or pasteurized potting mix.
✦ Outdoors, consider solarizing soil before planting, a method that uses the sun’s heat and clear plastic to kill soil-borne pests.
✦ Use the highest quality seed available.

See Pest Notes: Damping-off Diseases in the Garden at ipm.ucanr.edu for more details.

In the photo above, damping-off has killed the left-hand spinach seedling. Seedlings damaged by damping-off pathogens (left) usually have a dark, shriveled area on their stems or roots, especially near the soil line. Shoots may also rot before they emerge.

Minimize the use of pesticides that pollute our waterways. Use nonchemical alternatives or less toxic pesticide products whenever possible. Read product labels carefully and follow instructions on proper use, storage, and disposal.

For more information about managing pests, contact your University of California Cooperative Extension office listed under the county government pages of your phone book or visit the UC IPM Web site at ipm.ucanr.edu.

What you use in your landscape affects our rivers and oceans!