D0038

UW Plant Disease Facts

Extension
UNIVERSITY OF WISCONSIN-MADISON

Provided to you by:

Damping-Off

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What is damping-off? Damping-off is a common and fatal disease that affects all types of plant seedlings. The disease is most prevalent when seeds are germinated in cool, wet soils. Fortunately, seedlings are susceptible to damping-off for only a short period following emergence. As plants age, their susceptibility to damping-off declines.

Lower stem collapse of *Zinnia* seedlings due to damping-off.

What does damping-off look like? Seedlings killed by damping-off initially are healthy but shortly after emergence become infected at or just below the soil line. The lower stems of the seedlings collapse, and the seedlings fall over onto the soil surface. The seedlings subsequently die.

Where does damping-off come from? Damping-off is caused by several soil-borne water molds and fungi, including (but not limited to) *Pythium* spp., *Rhizoctonia solani* and *Fusarium* spp. These organisms readily survive and are moved in soil or on soil-contaminated items such as pots, tools and workbenches.

How do I save seedlings with damping-off? Seedlings with damping-off will die and cannot be saved. Proper prevention is the only way to avoid problems with this disease.

How do I avoid problems with damping-off in the future? When planting seeds, make sure that work areas, tools and pots are pathogen-free. Decontaminate tools and workbenches by treating them for at least 30 seconds with 10% bleach or (preferably due to its less corrosive properties) 70% alcohol (e.g., rubbing alcohol or certain spray disinfectants). Decontaminate pots by washing them with soapy water to remove bits of old soil, soaking them for at least 20 minutes in 10% bleach, and then rinsing them thoroughly to remove bleach residues. DO NOT reuse plastic pots if you have had problems with damping-off or root rots (see UW Plant Disease Facts D0095, *Root Rots in the Garden*, for details) in the past, as they are difficult to decontaminate.

When planting, use a well-drained, pasteurized potting mixture. DO NOT use garden soils as they often contain damping-off pathogens. DO NOT plant seeds too deeply, and germinate seeds at high temperatures, so that seedlings rapidly grow out of the stage where they are susceptible to damping-off. DO NOT overwater as damping-off organisms are more active in wet soils. If the techniques described above do not work, then consider using fungicide-treated seed. In particular, plants grown from captan-treated seeds tend to have fewer problems with damping-off.

For more information on damping-off: Contact the University of Wisconsin Plant Disease Diagnostics Clinic (PDDC) at (608) 262-2863 or pddc@wisc.edu.

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A complete inventory of UW Plant Disease Facts is available at the University of Wisconsin-Madison Plant Disease Diagnostics Clinic website: https://pddc.wisc.edu.

Submit additional lawn, landscape, and gardening questions at https://hort.extension.wisc.edu/ask-a-gardening-question/.

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