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Seedling Damping-Off

Once you have started your seeds, you may encounter an unexpected reality: the seedlings never came up (emerged), and if they did, they collapsed and died. In both cases, we are most likely dealing with damping-off, and most likely a fungal issue.

TYPES OF DAMPING-OFF

When a seedling is attacked by one or more fungi and does not emerge from soil or potting mix, it's called **pre-emergence damping off** (see Fig. 1).



Fig. 1. Pre-emergence damping-off

When a seedling emerges out of the ground and later wilts, collapses and dies, it is likely a result of **post-emergence damping-off** (See Fig. 2).



Fig. 2. Post-emergence damping-off

In both types of damping-off, several fungi can be involved. They may include: *Rhizoctonia* sp., *Pythium* sp., *Phytophthora* sp., *Thielaviopsis* sp. These fungi attack, consume, and rot the roots and stems (see Fig. 3). In the process, stems may turn black, reddish, or discolored. The roots will also be discolored but also soft.



Fig. 1. Picture showing a root being colonized and consumed by the fungus *Rhizoctonia solani*, which is observed as the spaghetti-like strands.

CONDITIONS FOR DAMPING-OFF

Moist soil is conducive for these fungi to manifest themselves. Cool weather may also be a factor as seedlings are stressed.

MANAGEMENT

- 1) Don't plant seed on soil too cold for germination.
- 2) Do not overwater. Have proper drainage.
- 3) If a seedling dies, discard it immediately.
- 4) Use sterile potting mix for growing transplants.
- 5) Use fungicide-treated seed or treat it yourself.
- 6) If using old seed, test it first for germination.
- 7) Soil can be oven-pasteurized at 155F for 30 min.
- 8) Consult your local county agricultural extension service office for further questions.

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