

Damping-off (047)

Summary

- Worldwide distribution. On many kinds of fruit and vegetable seedlings in the nursery, with beans, cabbage, carrot, lettuce, onion, and tomato especially susceptible. Important diseases.
- Mostly caused by soil fungi and water moulds, oomycetes. Damping-off is of two kinds: (i) death before emergence; and (ii) death after emergence.
- Spread in water splash, on tools, and in potting mixes.
- Cultural control: nursery hygiene: pasteurise soil or soilless mixes, monitor; if outbreaks in seed beds, move to different sites; do not use pond or stream water; do not over-water; ensure boxes have good drainage; avoid soil splash: raise seed boxes above ground (> 1 m) to avoid rain splash.
- Chemical control: seed – captan, thiram, or mancozeb. Treat seed boxes with 1% bleach for 5 min, then rinse.



Photo 1. Onion seedlings attacked before emerging through the soil and afterwards. An example of pre- and post-damping-off. (Germination of the seed was high!)

Common Name

Damping-off

Scientific Name

Commonly, *Pythium* and *Rhizoctonia* are involved, but *Fusarium* and *Phytophthora* may also cause similar diseases. Note, *Pythium* and *Phytophthora* are not fungi but water moulds or oomycetes, related to algae.



Photo 2. Cabbage seedlings have been attacked at the junction of stem and soil, a case of post-emergence damping-off.

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Information from Grabowski M (2018) How to prevent seedling damping-off. University of Minnesota Extension. (<https://extension.umn.edu/solve-problem/how-prevent-seedling-damping>); and DAF (2014) Damping off. Queensland Government. (<https://www.daf.qld.gov.au/business-priorities/agriculture/plants/fruit-vegetable/diseases-disorders/damping-off>); and from Damping off. RHS. (<https://www.rhs.org.uk/advice/profile?pid=151>).

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Photo 3. Damping-off in Chinese cabbage. When plants are sown thickly like this it encourages spread of the disease.

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