

Starting Seeds Indoors Part Two: Damping Off

Damping off causes the weakening and wilting or the swift collapse of seedlings (with a symptomatic darkening at the stem base or roots); or the rotting of seeds just before they should be emerging as seedlings. Caused by soil- or waterborne fungi, this common disease is difficult if not impossible to remedy. Consequently, it is essential to understand the key elements of how to **prevent** it.

Use a fresh, uncontaminated, soil-less germinating medium designed specifically for seed starting. The components are less likely to carry the culprit fungi; soil-less media drain better than soil-based media; and they usually have very little or no nitrogen, the presence of which may stimulate damping-off disease. Soil-less media which contain properly made **composted** fir or pine bark may help in the prevention of damping off.

Keep all previously-used containers, tools, watering cans, work surfaces, cold frames, etc. scrupulously clean. Scrub them with hot sudsy water to remove all debris; then rinse them. Follow the cleaning with a drench or soak in a laundry bleach solution of one part bleach to 9 parts water, ideally for 30 minutes. Always use fresh chlorine bleach-water solutions.

Use only fresh, clean, room temperature water when moistening the germinating medium and doing any subsequent watering. Avoid any temptation to use surface water (such as that from a pond or rain barrel). Water containers from below, drain them immediately and thoroughly, and keep the media on the dry side, especially when growing plants which are particularly susceptible to damping off. Don't over-water, in any case. Seedlings grow deeper and stronger when the surface of the media dries out between waterings, but there is still some moisture beneath, for the roots.

Plant fresh seeds, because they will sprout rapidly and grow fast. Healthy seedlings resist disease better than weak spindly ones.

Plant seeds shallow in a warm medium.

Cover just-planted seeds with a **thin** layer of a sterile media such as finely milled sphagnum moss or a fine grade of perlite, which dries out fairly rapidly. (Avoid the use of vermiculite for the reasons indicated in part one.)

Provide good air circulation where seedlings are growing: Keep the soil level high in the containers; employ a fan; sow seeds thinly, and thin seedlings promptly to prevent overcrowding.

If growing seedlings in a cold room under grow-lights, use bottom heat and make tents of foil around the seedlings to increase the temperature as much as 20 degrees. Monitor seedlings frequently for any sign of disease.

Feed seedlings only after they have three sets of true leaves. Nitrogen may make seedlings grow faster and more succulent, but it does not help them mature sufficiently to fight off the fungi which cause damping off. Fertilize carefully to avoid burning tender roots.

Watch for more guidance on seed-starting in our next issue...