

It is better to make several gentle watering passes over starts than attempt a one-pass soaking. Experience will give you a sense of how to read soil in your flats, and the confidence, over time, to develop an original watering regimen that suits your location & style of watering plants.

DISEASE: Hereabouts, recently, the most common forms of seedling disease are 'damping off', mildew, and aphid infestation. Flowers seem more disease-prone than veggies.

Damping off is not one disease but several similar ones. The first sign of it comes when a few seedlings out of a large group collapse. Brassicas, toms and peppers seem most susceptible. The green leaves are still intact, but the base of the stems at the soil line are dark and have rotted. Remove the affected seedlings & examine those around them. If a tray is affected, quarantine it.

Damping off is a typical symptom of too-crowded seedlings / poor air circulation and, most likely, overwatering. If the disease appears systemic, your soil mix is probably a factor. Sphagnum moss is a natural damping-off agent. Removing affected plants, improving air circulation, and adjusting watering practices usually suffices to stop the problem in its tracks.

Downy mildew appears on the underside of leaves, usually lettuce or brassicas (it is powdery mildew we see on cucurbits). Compost tea sprays work well to prevent & address the problem. Again, it is a disease associated with excessive moisture or humidity. The disease is spore-driven and can spread quickly. Quarantine or compost affected plants.

Aphids multiply furiously, but are delicate creatures highly susceptible to water/soap/organic sprays. One or two applications will usually suffice.

TIMING: A simple calendar, such as the one in the back of the Territorial Seed Catalog; in "Growing Your Own" - the OSU Extension Service guide; or the remarkably extensive example in Seattle Tilth's "The Maritime Northwest Garden Guide"; and the one included here, will provide beginning to intermediate gardeners with a basic, if formulaic action plan for seeding. Observe and compare: there is great variation in recommended timings.

Last year, a local farmer, after many years of paying no attention to planetary cycles, began timing their seeding according to the phases of the moon. They were astounded by the results. Across the board, they noticed plants germinating more easily and strongly, and a tendency for the robustness to continue into seedling growth. Because living organisms contain so much water, they respond to the moon in a similar way to the tides. In general, the waxing moon helps to draw water into the plants. The most favorable time to seed is in the second quarter and, in particular, the days immediately preceding the full moon. If you choose, you can refine the approach. The Oregon Biodynamics Group website provides insights into how seeding (and other horticultural activities) can be tailored to suit.

When seeding, make notes and, importantly, add follow up notes, describing germination / seedling growth and other details which strike you as pertinent. Effective note-taking will have a significant impact on your timing practices in forthcoming seasons.



(Pennyroyal). *Mentha pulegium*
Macer's De virtutibus herbarum.
Baquetier, c.1510.

SEASON EXTENSION WITHOUT A GREENHOUSE: (JUST HOW BIG IS THAT WINDOW SILL?)

LIGHT: You want to grow up transplants that are thick stemmed & stocky. Plants that have too little light become leggy and fragile as they stretch upward toward the sun or another light source. For seedlings grown up in full natural light in greenhouses or cold frames or hot frames, this is generally not an issue. For plants germinated inside a house, lack of light makes 'legginess' a given unless supplemental light is provided.

The usual, well-proven arrangement makes use of the 4' shop brackets that hold 2 x 40 watt fluorescent tubes - standard tubes suffice, a combo of cool white & warm white is best. They work just fine for the first 4-6 weeks of a plant's life.

Plants need a period of darkness each day. The pros suggest 14-16 hours of light is optimal, using a timer to keep things regular. Ambitious space hogs will run two different sets of seedlings for 12 hours, each day. By no means optimal, but give it a go if you must.

Beware of graphics (in every gardening book I have encountered) which show fluorescent lights hanging a foot or so above the seedlings. The light tubes need to be as close as possible to the plants, short of touching the leaves to the glass. Four to six tubes make growing up plants easier to manage (the strongly illuminated area is greater). At no juncture do you want the lights more than 3-4" above the plants. It is easier to lower flats than raise lights, especially when different plants get tall at different rates. Such lighting, in a warm basement, is entirely sufficient to grow up plants. Watering plants close to your partner's favorite rug can get messy.

RAISING THE ROOF

One of the most sophisticated season extension tools available to a home gardener is a hot frame (a traditional cold frame - essentially a large box, on the ground, with a glass lid - supplied with extra warmth). In some key respects (such as managing the affects of frosts, for example) hot frames actually have advantages over greenhouses. With ready, healthy access to outside light and ventilation, but with the addition of a heat mat, early Spring germination and growth rates pick up markedly.

The most pressing management issue surrounding hot frames relates to ventilation. A sunny spell will turn a closed up frame into an oven, within minutes. You can open and close the lid manually, with a reliable prop stick, in response to the daily weather, or remove the chore completely by installing an automatic opener to the frame window. These are designed expressly for the purpose, run without external power, and lift and lower the window as temperature demands. (About \$60 from Territorial).

A 3' x 6' frame is spacious enough to grow up a wide range of transplants for a large family garden. They are simple to make: construction plans are commonplace. The season-extending strengths of a hot mat/automatic opener combo, in a hot frame, cannot be understated.

► Recommended reading: "Gardening Under Cover"
by William Head, Sasquatch Books, 1989