

## GROWING PLANTS FROM SEEDS

### MATERIALS YOU WILL NEED:

#### 1) Medium

Seedling medium should be sterile, light, and free of weed seeds. Many are available ready mixed, which is the most convenient. My favorites include Whitney Farms Seed Starting Mix, which is available in sizes ranging from 2 quarts to 2 cubic feet, and Pro Mix # 3, which comes in 3.8 cubic foot compressed bales like peat moss. If you are planning on keeping the plants in the same container for some time, you can use potting soil amended with slow release fertilizer in the bottom half of the pot. Pure vermiculite is also sometimes used. If you would like to mix your own, here are a couple of recipes:

Territorial Seed Company Mix (good for seeding flats outside and for larger seeds. Not recommended for fussy or very small seedlings).

2 parts garden soil

1 part peat moss or coco peat

Add to each cubic foot of mix:

1 cup dolomite lime

1 pint alfalfa meal or fish meal

1 cup bone meal

1 cup kelp meal

Cornell Peat-Lite Mix (This recipe makes a lot but can, of course, be cut down. Excellent for all types of seedlings.)

8-9 cubic feet peat moss

8-9 cubic feet vermiculite

5# dolomite lime

1# superphosphate

12# 5-10-5 fertilizer

Finally, you may want to invest in some "No Damp Off" finely milled peat moss to sprinkle on top of your flats. This creates a sterile barrier to help prevent seedling damp-off disease.

2) Pots, Trays, and Lids:

All of these should be as clean as possible. If reusing materials, it's a good idea to wash them in a mild soap and bleach solution.

**Pots:** Pots come in a variety of types. Drainage is the most important consideration. Plastic cell-paks are good, but be sure to use ones large enough to accommodate the size plant you are growing. 2-4" plastic pots are also good. Peat pots and Jiffy peat pellets are useful for plants with delicate root systems—they eliminate transplant shock. Recycled materials such as milk cartons, egg cartons, etc. can also be used if well cleaned and provided with drain holes.

**Trays:** Small trays are good when seeds need cold treatment prior to germination. Be sure to use trays with and without drainage for the proper purpose. Large trays are used under cell-packs to allow you to water and transport the plants more easily.

**Lids:** Lids ensure that moisture levels are kept constant—very important! Purchased plastic lids fit well over standard seedling trays. You can also make for trays with 1X1s and clear or black plastic. For smaller containers, you can just enclose the pot(s) in a plastic bag. Note: be sure to remove the lids or bags as soon as seedlings sprout.

**Miscellaneous starting units:** These include kits, windowsill greenhouses, etc—they are easy to use and make good use of space.

3) Heat:

Most seeds need soil temperatures of approximately 70° F for strong germination. The best way to control this is by using a heating mat or heating cables.

4) Light

With our cloudy spring weather, windowsill light is usually not sufficient to grow sturdy seedlings. Supplemental light can be provided by grow lights (spot or tube). Keep the light close to the seedlings—move it as they grow. The more intense the light, the faster the growth.

5) Fertilizer

Fertilizer is not needed until the plants get their first set of true leaves. Then use a weak solution of water-soluble high phosphorus fertilizer every week to 10 days until transplanting.

## SEED STARTING BASICS

- 1) There are many different avenues for starting seed. The easiest method of all is to start your seeds directly outdoors in the ground. Many seeds, including most vegetables (when the time is right), hardy annuals, and other flowers can be successfully started that way. Sowing in flats or containers allows you better control over germination conditions and is recommended for rare or delicate seeds. Some seeds can only be started indoors; for example, tender plants or plants that need to reach a large size before transplanting out like tomatoes and peppers. Other plants can be started indoors for an earlier start or succession harvests.
- 2) Time your seed starting! If you start your tomatoes in January, they'll be leggy before they can be transplanted out. Most seed packages have recommendations based on the "last frost date", which in the Seattle area is generally held to be April 15<sup>th</sup>. Be careful, though—if you live on a west-facing waterfront property, or a north-facing shaded lot in the foothills, your last frost can be several weeks earlier or later.
- 3) Premoisten your medium before sowing, and provide some method of keeping the seed evenly moist until germination (with lids, etc).
- 4) Know any special requirements your seed may have prior to sowing (e.g. chilling, scarifying, presoaking, etc.) Most seed packets will tell you or you can consult a good seed-starting book (see list at end). For example, sweet peas, garden peas, and beans all germinate best if soaked 24 hours before planting.
- 5) Harden off your seedlings before transplanting outdoors!
- 6) Use care when transplanting! Be careful not to disturb the roots and handle seedlings by the cotyledons (the fleshy "leaves" that first appear) rather than by the stems.
- 7) Use a good transplanting solution such as Superthrive.

### Recommended Reading:

The Maritime Northwest Garden Guide, by Seattle Tilth. Contains a month-by-month planting calendar tailored to the Puget Sound region, plus an abundance of additional (organic) cultural information. If you're serious about seed starting, get this book!

The New Seed Starters Handbook, by Nancy Bubel. Detailed discussions of every aspect of seed starting: different soil media, germination temperatures, special sections on starting wildflowers or trees from seed.... Also includes information on saving seeds from your own plants.

Growing Vegetables West of the Cascades, by Steve Solomon. The "bible" for Northwest organic vegetable gardeners—devotes a full chapter to vegetable seed starting.