



## From Seeds to a Plant

### Temperature

Some seeds will germinate over a wide range of temperatures, others will have a narrow range. When germination temperatures are listed, they are usually optimum temperatures. Generally, 65 degrees F to 75 degrees F is best for most plants.

### Light

Light can stimulate or inhibit seed germination of some species. Seeds that require light for germination include: Ageratum, Begonia, Browallia, Impatiens, Lettuce, and Petunia. Other plants germinate best in the dark. Seed catalogs and seed packets often list germination and cultural information for particular plants. When sowing light, requiring seeds, sow them on a medium surface. Supplemental light can be provided by fluorescent fixtures suspended 6 to 12 inches above the medium for 16 hours a day.

### Media

The germinating media should be rather fine in texture and of uniform consistency, but still aerated and loose. Make sure it's of a low fertility and capable of holding moisture, but can also drain well. Purchase commercial seed starter mix containing fine particle pine bark, sphagnum peat moss, and perlite, or prepare a combination of equal parts of these materials. Do NOT use garden soil to start seedlings, it is not sterile and is too heavy, making it to where it doesn't drain well.

### Containers for Germination and Growth

Peat pellets, peat pots or expanded foam cubes can be used for producing seedlings.

### Sowing Seeds

Seedlings are often started indoors 4 to 12 weeks before the last spring frost. A common mistake is to sow the seeds too early and then attempt to hold the seedlings under poor environmental conditions (light and temperature). This usually results in tall, weak, spindly plants that do not perform well in the garden. When sowing seeds, fill the container within  $\frac{3}{4}$  inch of the top with moistened, growing medium. Sowing in rows improves light and air movement. Seedlings in rows are easier to label and handle at transplanting than those that have resulted from broadcasting seeds. Sow the seeds thinly and uniformly in the rows by gently tapping the packet of seed. Cover the seeds lightly, a suitable planting depth is usually about two to four times the minimum diameter on the seeds.

### Watering

Moisten the planting medium thoroughly before planting. After seeding, spray with a fine mist or place the containers in a pan or tray that contains about 1 inch of warm water. Avoid splashing or excessive flooding, which might displace small seeds. When the planting mix is saturated, set the container aside to drain. The medium should be moist but not overly wet. The seed flats must remain sufficiently moist during the germination period. Place the whole flat or pot in a clear plastic bag to maintain moisture. Keep the container out of direct sunlight; otherwise, the temperature may increase and injure the seeds. Be sure to remove the plastic bag or glass cover when the first seedlings emerge.



After the seeds have germinated, move the flats to a well-lighted location, the temperature in this location should be 65 to 70 degrees F during the day and 55-60 degrees F at night.

Seedlings must receive bright light after germination. Low light intensity will result in weak, spindly, pale green seedlings. Place them in a south facing window. If a large, bright location is not available, place the seedlings under fluorescent lights.

### **Transplanting**

As the seedlings grow, they will require more space. Plants not seeded in individual containers must be transplanted. A common mistake is to leave the seedlings in the flat too long. The ideal time to transplant young seedlings is when the first true leaves appear, usually 2 to 3 weeks after seeding.

Dig up the small plants carefully with a knife or plant label. Let the group of seedlings fall apart and pick out individual plants. Ease them apart gently, avoid root injury in the process. Handle small seedlings by their leaves, not their delicate stems. Punch a hole in the medium into which the seedling will be planted. Plant a seedling at the same depth it was growing in the seed flat. Firm the medium and water gently. Newly transplanted seedlings should not be placed in bright, intense light for a few days after transplanting; shading may be needed. Keep them away from sources of direct heat. Continue watering and fertilizing as the in the seed flats.

*Making the world beautiful  
one flower at a time.*

