



Starting Seed Indoors

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Posted April 1997

The proper time for sowing seeds for transplants depends upon when plants may safely be moved outdoors in your area. This period may range from 4 to 12 weeks prior to transplanting depending upon the speed of germination, the rate of growth, and the cultural conditions provided. A common mistake is to sow seed too early and then attempt to hold the seedlings back under poor light or improper temperature ranges. This usually results in tall, weak, and spindly plants which do not perform well in the garden.

After selecting a container, fill it to within 3/4 of an inch from the top with moistened sterile medium. For very small seeds, at least the top 1/4 inch should be of a fine, screened mix or a layer of vermiculite. Firm the medium at the corners and edges with your fingers or a block of wood to provide a uniform, flat surface. For medium-to-large seeds, make furrows about 1 to 2 inches apart and 1/8 to 1/4 of an inch deep across the surface of the container using a narrow board or pot label. By sowing in rows, good light and air movement results and, if damping off fungus appears, there is less chance of it spreading. Sow the seeds thinly and uniformly in the rows by gently tapping the packet of seed as it is moved along the row. Lightly cover the seed with dry vermiculite or sifted medium if they require darkness for germination. A suitable planting depth is usually about twice the diameter of the seed.

Do not plant seeds too deeply. Extremely fine seed such as petunia, begonia and snapdragon are not covered but lightly pressed into the medium or watered in with a fine mist spray. If these seeds are broadcast, strive for a uniform stand by sowing half the seeds in one direction, then sowing the remaining seed at a right angle to the first.

Large seeds are frequently sown into a small container or cell pack which eliminates the need for early transplanting. Sow 2 or 3 seeds per unit and thin to allow the strongest seedling to grow.

After the seed has been sown, moisten the planting mix thoroughly. Use a fine mist or place the containers in a pan or tray which has about 1 inch of warm water in the bottom. Avoid splashing or excessive flooding which might displace small seeds. When the planting mix is saturated, set the container aside to drain. The soil should be moist but not wet.

To maintain moisture, slip the whole flat or pot into a clear plastic bag after the initial watering. The plastic should be at least 1-1 1/2 inches from the soil. Keep the container out of direct sunlight otherwise the temperature may rise to a point harmful to the seeds. Many home gardeners cover their flats with panes of glass instead of using a plastic sleeve. Be sure to remove the plastic bag or glass cover as soon as the first seedlings appear. Surface watering can then be practiced if care and good judgement are used.

Seedlings must receive bright light after germination. Place them in a window facing south, if possible. If a large, bright window is not available, place the seedlings under a fluorescent light. Use two 40-watt fluorescent tubes one cool white and one warm white or special plant growth lamps. Position the plants 6 inches from the tubes and keep the lights on about 16 hours each day. As the seedlings grow, the lights should be raised. Temperatures of 55 to 60 degree F at night and 65 to 70 degree F during the day will prevent soft, leggy growth and minimize disease troubles.

(Excerpted from [The Virginia Gardener Handbook](#), Department of Horticulture, Virginia Tech, Blacksburg, VA 24061-0327.)

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