

VEGETABLE GARDENING



Starting Seeds Indoors

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POINTS TO REMEMBER

Starting seeds indoors can be helpful because: transplants lengthen the growing season and planting transplants reduces some of the hazards (birds, insects, heavy rains, weed competition) common to seedlings.

Requirements for successful raising of transplants include:

- ✓ Disease-free growing medium
- ✓ Warmth and moisture for seed germination
- ✓ Adequate light for vigorous growth
- ✓ Adjustment of indoor plants to outdoor conditions.

VEGETABLE GARDENING WHEN AND WHERE TO START TRANSPLANTS

For most vegetables, transplants should be started in a sunny, warm room about 6 to 8 weeks before the recommended planting time. Germinating seeds need temperatures of between 60° and 75° F; seedlings between 50° and 65° F.

SOIL FOR SEEDLINGS

Soil for starting seedlings should be disease-free. You may purchase a commercial mixture at a local nursery or garden supply center, or you may mix it at home. A good soil mixture consists of equal parts of garden soil, sphagnum peat moss, and sand.

To protect seedlings from damping off (a fungus disease caused by disease organisms in the soil which make the seedlings rot before coming to the surface), sterilize soil before mixing. First preheat your oven to about 200° F, fill a container with the moist but not wet soil and bake. The soil should reach a temperature of at least 180° F for at least 30 minutes. An easy way to determine when the soil is done is to place a raw potato in with the mixture before placing in the oven. The soil will be done when the potato is cooked. Mix ingredients together and sift out lumps, rocks and other debris.

PLANTING CONTAINERS

Clay or plastic pots, nursery flats, commercially available peat pots, and metal pots may be used for planting seeds indoors. However, after soil is sterilized any introduced disease organisms will multiply

more rapidly than before. To avoid damping off, use pasteurized fiber seed flats or peat pots.

If you use wooden boxes, flats, clay flower pots, or metal containers, clean them thoroughly. A solution of 1 part chlorine bleach to 10 parts water can be used as a rinse. Place containers in the oven for sterilization at the same time as the soil.

If the containers don't have holes for drainage, drill at least four holes of not less than $\frac{1}{2}$ inch in diameter in the base sides of the containers.

PLANTING

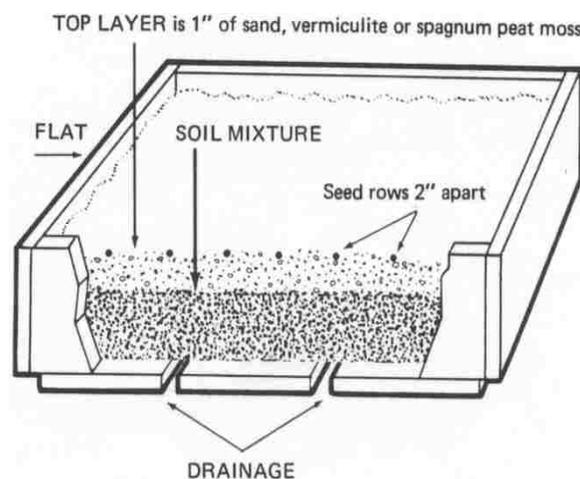
After you have prepared the soil mixtures and sterilized the container, fill the planting container with soil mixture to 1 inch from the top and firm the soil. Water thoroughly then add $\frac{1}{2}$ inch of vermiculite, sand or sphagnum peat moss to the container.

Sow seeds $\frac{1}{2}$ inch apart. If using commercially available peat pots, plant two seeds per pot. Cover seeds with a light covering of the planting medium and water gently (mist them, if possible). Label each container with plant name and planting date and cover with plastic film, (a plastic bag will do) or a piece of glass. Water only enough to keep the soil moist. Most seeds start best at 60° to 75° F. Don't place the covered containers in direct sunlight--heat accumulation can kill emerging seedlings. Once seeds have sprouted, take off the film and put the seedlings in a sunny window or under a fluorescent light. Room temperatures between 50° and 65° F are preferable.

The new seedlings will need water and fertilizer. Provide this by watering them with a solution of 1 tablespoon of soluble fertilizer in one gallon of water. Water seedlings thoroughly but carefully so that you don't wash them out of the soil.

After two sets of leaves have developed, transfer seedling to an individual peat pot or set in groups in larger flats, using more of the sterile soil mixture. To transfer, carefully dig up the small plants with a large knife, putty knife or spatula. Let the group of seedlings fall apart and pick out individual plants. Poke holes $2\frac{1}{2}$ inches apart in the soil mixture of the new container and set the seedlings in, taking care not to pinch the tender seedlings. Firm the soil and water gently. For seeds sown in individual pots, thin to one plant per pot.

Shade plants for a few days or replace under a fluorescent light where there is little or no heat buildup. Continue fertilizing and watering with the solution until the plants reach transplant size.



HARDENING, TRANSPLANTING

Before planting in the garden, plants should be gradually "hardened", or toughened. About 10 days before transplanting date gradually withhold watering--but don't let the plant wilt--and gradually expose them to outside temperatures and direct sun by setting flats or containers outside during the day. Avoid fertilizing during this period. Transplant seedlings in the ground as close as possible to the recommended date. Prepare the garden soil by adding 1 to 2 pounds of 5-10-5 fertilizer per 100 square

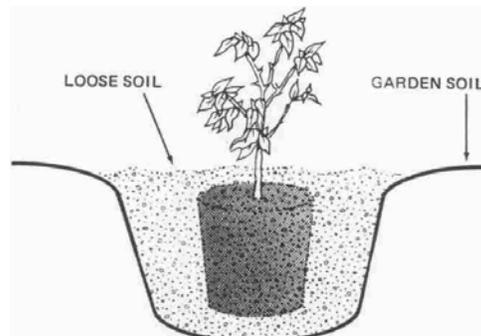
feet of garden area, scattering it on the surface. (The numbers refer to the respective percentages of nitrogen, phosphorus, and potassium within the fertilizer. Law requires that these percentages must be listed on the packages of all commercial fertilizer.) Then turn the soil 6 to 8 inches deep by spading, rototilling or plowing.

Immediately before transplanting, water the plants well.

Plants grown in fiber, plastic or clay pots should be removed from their containers before planting. Plants grown in peat pots can be transplanted intact, but you may wish to remove the container bottom to improve drainage. However, in extremely sandy soil the peat pot should be removed or it may act like a wick, evaporating moisture and causing seedlings to wilt or possibly die.

To transplant, dig a hole roughly twice the size of the individual plant soil ball. Then set the plant only slightly deeper than it was in the pot. Place soil loosely around the roots,

filling the hole to ground level and add one cup of starter solution (1 tablespoon of a fertilizer, 5-10-5 or 4-12-4, to 1 gallon of water). After the solution has soaked in, sprinkle some dry soil around the plant.



Protect young transplants for the first few days. If the two or three days following transplanting are sunny and hot, cover plants with newspaper "tents" to prevent wilting. Water as necessary. If the weather is cold, cover the transplants with hotcaps. If the weather is windy, cover the plants with either newspaper tents or hotcaps, depending on the temperatures.

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