

Community Horticulture Fact Sheet # 7 Growing Transplants

USING TRANSPLANTS

Two tips for productive gardening are:

1. Always have plenty of young seedlings around to fill in empty spots in your garden. (For example, where carrots did not come up well or where slugs ate half of your spinach seedlings.)
2. Grow early and late (fall-winter) crops using varieties selected for these seasons.



The key to putting both of these secrets to work for you is to start as many crops as possible indoors in containers (or outside in a cold frame). Then transplant them into the garden when you need them. Using transplants gives you a two-week to two-month head start in the spring plus a big jump on succeeding crops, since you always have established plants to put into the garden instead of just seeds.

Also, you can grow the crops and varieties you like, including over-winter crops. (Stores offer only limited varieties of a few kinds of vegetables as transplants for just a few weeks a year. (See Community Horticulture Fact Sheet #8 for charts listing suggested timing for various crops.)

WHERE TO START SEEDS

Warmth and moisture are more important than direct light for sprouting most seeds. Once seedlings are up though, they should be moved to a place that gets at least six hours of direct sunlight a day. A large south window may work or plants can go into a cold frame, if the weather is not too cold. If plants lean dramatically towards the window and get spindly, fluorescent lights are the answer. A four-foot long, two-bulb fixture is adequate for two full nursery flats of plants. Inexpensive 40-watt cool white bulbs are as good as the more costly full-spectrum "plant light" bulbs for growing transplants.

These lights are not as strong as sunlight! They must be positioned 2-3 inches away from the plants' tops. (Mounting them with link chains allows easy movement.) They should be kept on 16-18 hours a day. (An appliance timer is a handy addition to your set-up.)



Ideal temperatures for most seeds are 65 to 75 degrees in the daytime and 5 to 10 degrees cooler at night. If the spot you have picked is cold, heating cables or pads may be placed under containers or in flats to maintain 70-degree temperatures.

SOIL AND CONTAINERS

Do not start seed in garden "dirt". The best seed starting mix is a 1:1 mix of coarse sand and sphagnum peat. (If you cannot get "coarse" sand, which

feels really gritty, two parts of finer sand can be used with one part peat.) Add about ¼ cup of 5:10:10 fertilizer or about ½ cup of complete organic fertilizer and 1/8 cup dolomite lime to each 2-3 gallons of mix. If you transplant the seedlings from a seed flat to larger pots, use one part well-decomposed sifted compost or manure in the mix to add more nutrients. You can kill most disease organisms in compost by baking it in a 2-3 inch layer at 200°F. until the center of the soil is 140°F. for 30 minutes. (This process will really stink up your kitchen and shouldn't be needed for transplanted seedlings.)

Anything that will hold soil and water and has holes in the bottom or lower sides to let water out is suitable for starting seeds. This is a great place for recycling. If you reuse plant pots make sure to scrub them out well. Containers about 3-4 inches deep are ideal. Shallower ones don't allow enough rooting depth and deeper ones make transplanting difficult. Plastic nursery flats are good for holding many smaller pots. Be sure to get the flats without holes, if you need to catch drainage water! Double up flats for strength.

SOWING SEEDS AND WATERING

Plant seeds 2-3 times as deep as they are wide. Most vegetable seeds started inside should be planted 1/8 to ¼ inch deep. Sow seeds in rows 1-2 inches apart. Smooth soil out after seeds are in place. You can also evenly scatter seeds over the soil and then sift a 1/8-inch layer of sand/peat mix over them.

Seeds must be moist to sprout, but the soil should not be kept wet or diseases may be a problem. To avoid uncovering the seeds, water gently. Make sure that the water goes all the way through the soil; don't just wet the surface.

A few tricks to maintaining moisture are:

- Place soil-filled containers (with holes in the sides near the bottom), into tubs containing an inch of water. Water will move up through the soil.
- Cover seed flats with glass or plastic. Keep the covering supported above the seedlings.



THINNING AND TRANSPLANTING

Once they are up, seedlings need room to grow. Most plants should be thinned to 1 or 1½ inches apart as soon as they sprout and then planted out when they become crowded. (Onions and leeks may be grown closer together.)

Seedlings, like tomatoes and peppers, that are going to be "grown-on" indoors, should be transplanted when they have one true leaf. If possible, use a soil mix with fertilizer and compost for transplants. Always handle young seedlings by the seed leaves only! Transplant them buried up to the seed leaves, 2-3 inches apart in flats or in individual 3-4 inch pots.

Cole crops (cabbage, broccoli) should be put into the garden with 3 to 5 true leaves. Tomatoes, peppers and celery should not go out until nights stay about 55°F. You may want to transplant these crops a second time into larger pots before putting them in the ground.