



GROWING VEGETABLE TRANSPLANTS FOR THE HOME GARDEN

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The growing media chosen to grow vegetable transplants should be sterilized to prevent seedlings from being killed by the fungi that causes damping-off disease. A growing mix well suited for growing transplants can be prepared by using one part loamy garden soil, one part shredded peat moss, and one part sand. Sterilize this soil-peat-sand mix by baking it in an oven for about 1 hour at 210°F.

Other types of growing media can be purchased at local garden centers or from seed and garden supply catalogs. The most widely available and relatively inexpensive seed-starting medium is vermiculite. Seedlings cannot be grown in vermiculite for very long because there are no nutrients in it. Seedlings grown in vermiculite must be given a water-soluble fertilizer regularly or transplanted to sterile soil when the second pair of true leaves form. Vermiculite is sterile when purchased.

There are many containers suitable for sowing seeds. Wooden flats and plastic trays are recommended for starting a large number of seedlings in a limited work area. They save space compared to seeding directly into individual pots. Other commonly used transplant containers are pots made of compressed peat, disks of pressed peat that swell to potlike cylinders when soaked in water, and peat cubes. Some of the simplest containers for starting seed can be found right in the kitchen. Aluminum foil frozen-food trays are among the best. Drainage holes should be poked in the bottom of these trays with a knife after they have

been cleaned. Cottage cheese dishes, bottom halves of milk cartons, ice cream cartons, egg cartons, and paper cups are other handy starter containers. Remember, all must have drainage holes to allow the excess water to run off. Also, prior to seeding, the containers should be clean, sturdy, and fit into the space available for growing plants in the home.

Once the seeds have germinated, they must be given sufficient sunlight to insure the development of healthy, stocky plants. To accomplish this place them in a sun porch or a window with a southern exposure if possible. If bright sunlight is not available, an alternative is to use fluorescent lights. A fixture containing two 40-watt cool white fluorescent tubes spaced 3-4 inches apart is sufficient. Place seedlings about 6-8 inches from the tubes, and leave the light on for 14-16 hours each day. Be sure to raise the lights to prevent leafburn as the plants grow. The growing area must be warm. Generally, temperatures should be between 60-65°F at night and 70-75°F during the day. However, certain vegetable transplants grow better at different temperatures (Table 1).

The soil should be checked daily to make sure it is moist. Watering on the basis of touch is best. But be sure to check daily so overwatering does not occur.

Fertilization of vegetable seedlings can be done by using a water-soluble house plant fertilizer such as 20-20-20 sold in most garden centers. The first fertilization should

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be a few days after the seedlings have emerged. Seedlings that begin to look yellow and thin are associated with needs for fertilizer. The first application of fertilizer should be applied at half-strength of the manufacturer's recommendation. Depending on the fertilizer used, about 1-2 teaspoons per gallon of water applied once every two weeks should be adequate. If seedling growth is too fast and large, growth can be slowed by watering less often.

The plants should be "hardened-off" before setting them into the garden. "Hardening-off" is the process whereby plant tissues are toughened to withstand the outside environment. This should be done over a two-week period. Harden the plants by setting them outside

in partial shade to receive lower temperatures during the day and bringing them in at night. The transplants should be left outside longer each day during the hardening-off period. Take precautions so transplants are not killed by frost.

When purchasing vegetable transplants, the best are not necessarily the largest and tallest available. For example, tomato plants which have flowers should be avoided since the flower's presence indicates the plant's growing under stress. Generally, good quality transplants can be selected by their stocky, healthy appearance, medium-size, deep green color, and freedom from insects and diseases.

Table 1. TEMPERATURES AND TIMES REQUIRED FOR GROWING PLANTS FOR TRANSPLANTING INTO THE GARDEN₁

VEGETABLE	DAY ₂ (°F)	NIGHT (°F)	TIME (WEEKS)
ASPARAGUS	70 - 80	65 - 70	8 - 10
BROCCOLI	60 - 70	50 - 60	5 - 7
BRUSSELS SPROUTS	60 - 70	50 - 60	5 - 7
CABBAGE	60 - 70	50 - 60	5 - 7
CAULIFLOWER	60 - 70	50 - 60	5 - 7
SWEET CORN	70 - 75	60 - 65	3 - 4
CUCUMBER	70 - 75	60 - 65	3 - 4
EGGPLANT	70 - 80	65 - 70	6 - 8
LETTUCE	55 - 65	50 - 55	5 - 7
MUSKMELON	70 - 75	60 - 65	3 - 4
ONION	60 - 65	55 - 60	10 - 12
PEPPER	65 - 75	60 - 65	6 - 8
SUMMER SQUASH	70 - 75	60 - 65	3 - 4
TOMATO	65 - 75	60 - 65	5 - 7
WATERMELON	70 - 80	65 - 70	3 - 4

₁The above table was taken from Knott's Handbook for Vegetable Growers.

₂Select the lower temperature on cloudy days.