

family  
**Vegetable  
Garden**  
series

EXTENSION BULLETIN E-824 (15)

# Starting Plants at Home

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## WHY START PLANTS EARLY?

Some vegetables, like tomatoes, take a long time to grow. If you seed them outdoors, you may not get fruit before the first frost. Other vegetables, like broccoli, are "cool-season" crops and must mature before the weather gets warm.



TOMATO

These take  
a long time.

EGGPLANT



PEPPER

So start these vegetables early indoors or buy transplants. Plant them outside on the dates shown on page 2.

(For a fall crop of cool-season vegetables, plant seeds outside May 20 to June 10.)



BRUSSELS  
SPROUTS



BROCCOLI

CABBAGE

These  
need  
cool  
weather.

## BEFORE YOU START—

You can usually buy better transplants than you can grow yourself. However, by starting your own you can grow varieties not sold at local garden stores.

When buying transplants:



**THIS!**

Check for signs of insects or disease. Avoid wilted or spindly plants. Pick a variety that grows well in Michigan (see Extension Bulletin E-760(a)).



**NOT THIS!**

## WHEN TO START — (based on conditions in southern lower Michigan)

Don't start plants too early. They get tall and spindly and may die outside.

Vegetable	Time to Plant Seeds Indoors	Date to Transplant into Garden
Broccoli	Feb 20 - Mar 20	Mar 20 - Apr 20
Brussels sprouts	Mar 1 - 20	Apr. 1 - 20
Cabbage	Mar 1 - 20	Apr. 1 - 20
Cauliflower	Mar 1 - 20	Apr. 1 - 20
Eggplant	Mar 20 - Apr. 1	May 20 - June 1 (after last frost)
Onions	Feb 20 - Mar 20	Mar 20 - Apr 20
Peppers	Mar 20 - Apr 1	May 20 - June 1 (after last frost)
Tomatoes	Apr 20 - May 1	May 20 - June 1 (after last frost)

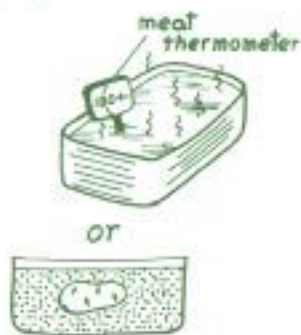
Start melons and winter squash indoors 2 weeks before planting outdoors to insure harvest before frost.

## BEGIN WITH BASICS

**Seed:** Buy varieties recommended for Michigan. Use new seeds or last year's if stored properly (old seeds may not grow as well). Do not use seeds saved from last year's plants (bean, pea and tomato seeds might be saved if the plants weren't hybrids).

**Soil:** Use a sterile, light-weight soil mix. Buy a prepared one or mix your own. Combine equal parts of:  
garden soil  
peat moss  
sand, vermiculite or perlite

If you mix your own, sterilize it. Put soil in pan, moisten and cover with aluminum foil. Place in a 300°F oven. When meat thermometer in soil reaches 180°F, bake for 30 minutes more. Soil is also ready when a potato in the middle of soil is fully cooked.



**Containers:** Use containers with small compartments so plant roots don't grow together — peat pots or pellets, plastic egg cartons, paper cups, clay pots, etc. Punch holes in the bottom of each pot or compartment, so water can drain out. Sterilize clay or plastic ones: mix 1 part chlorox to 9 parts water; leave clay or plastic containers in solution overnight.



## TO GROW YOUR OWN TRANSPLANTS —

① Moisten soil in containers. Plant 3 seeds in each compartment at depth recommended on seed packet. Gently sprinkle water over seeds or stand container in water until saturated. Put clear plastic wrap over containers. Do not water until after seeds sprout, since plastic holds in moisture.

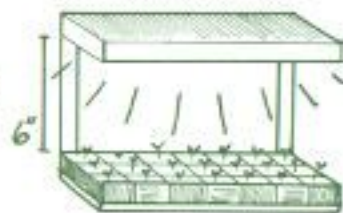


② Place containers in warm area (65-75°F) — not in sun, or seedlings may burn. After most sprout, place in cooler area.



③ If more than one seed in a container sprouts, pinch off all but the strongest one. Remove plastic as soon as most seeds sprout.

④ Place seedlings in BRIGHT LIGHT, or they will get tall and spindly. Use a south window, a cool white fluorescent light or grow-light (4-bulb fixture). You can buy these at garden or hardware stores. Place light 6 inches above seedlings. Leave on 16 to 18 hours a day.



⑤ Water plants as soon as soil starts to dry out, before seedlings wilt.

⑥ Fertilize seedlings when they begin to grow with 1 tbs. houseplant fertilizer in 1 gallon of water. Fertilize again when seedlings are 3 and 5 weeks old.

⑦ Harden off plants before placing in the garden. This means slowly getting plants used to the weather outside. To harden, water plants less and put them in a cooler area 2 or 3 weeks before transplanting. Move plants outdoors on warm days and bring in when it gets cold.



- 8 If your plants are growing in one container without divisions, separate them with a sharp knife a week before planting.



- 9 Set plants in garden at recommended time. Pick a cloudy day or plant in the evening so plants won't wilt.



- 10 Plant  $\frac{1}{2}$  to 1 inch deeper than in container. Press soil down around plant. Set tall tomato plants deep in soil at an angle. Roots will form along stem.



middle number  
is phosphorus



- 11 Water well, preferably with a starter fertilizer solution high in phosphorus such as 10-55-10 (can be bought from garden center, seed catalogs, etc.). Follow directions on container. This helps root growth when the soil is cool (see No. 3 in this series Planting).

## PROBLEMS ?

If seeds sprout, then suddenly wilt and die, it may be due to a disease called "damping off." **THROW AWAY** seedlings, soil and containers and **START AGAIN**. Make sure you sterilize soil and containers!



KEYS  
TO  
SUCCESS

- Use quality seed.
- Plant recommended varieties.
- Start at right time - not too early!
- Place in lots of light.
- Harden off plants.

Other bulletins in this series provide additional information on vegetable gardening.

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