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# VEGETABLE PLANT GROWING REMINDERS

By

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MICHIGAN STATE COLLEGE

EXTENSION SERVICE

EAST LANSING

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## GENERAL DIRECTIONS

**Seed Treatments**—Treat vegetable seeds to control seed-borne and soil diseases. For directions, use Michigan State College Extension Bulletin 200, "Controlling Vegetable Diseases in Seedbed and Coldframe."

**Soil for Starting Seeds** should be very friable so that the roots will come out easily without breaking. If soil is on the heavy side, it may be mixed with sand. Little fertility is needed in order to grow a plant to the pricking-off stage. Pure sand with a nutrient solution applied on emergence has given good results. For directions, see page 28, Michigan State College Extension Bulletin 20, "Hotbeds and Coldframes."

**Soils for Flats, Pots and Bands**—Nutrient supply should be moderately high and not excessive. Too much nitrogen, especially when phosphorus is low, encourages too succulent a growth. Excess applications of fertilizers may also produce a toxic condition in the soil and result in slow growth. Vegetable plants will make their best growth in a soil which has good tilth and which has the nitrate level at about 25 to 50 parts per million and the potassium level at about 15 to 20 parts per million in the soil. The phosphorus level should be about 3 to 5 parts per million. In addition to this fertility, the chloride and sulfate salts should be below 50 and 200 parts per million, respectively. The soil should be mildly acid to mildly alkaline with a pH within the limits of 5.5 to 7.5.

Plants will grow more rapidly in a friable soil. Generally, a soil should be less friable for cabbage, cauliflower, broccoli and brussel sprouts than for tomatoes, peppers, eggplant, melons, squash and cucumbers. The soil for plant growing should be stiff enough to keep the block of soil somewhat intact around the roots at transplanting.

**Hardening**—Excessive hardening either by direct exposure to sun or by withholding water should be avoided. The growth may be slowed down, but it should not be excessively checked by too much hardening. Over-hardening will reduce the yield on the early pickings of tomatoes.

**Leaf Diseases** on tomato and celery should be controlled by spraying or dusting with a copper compound. Tomato, eggplant and pepper plants may be sprayed with 2-2-50 bordeaux or a fixed copper spray used in one-half the strength recommended by the manufacturer for tomatoes grown under field conditions. This spray should be applied while the plants are in the cold frame. Celery plants may be sprayed with a 4-6-100 bordeaux which is half the strength used later for field control. **Flea Beetles** may cause trouble in open frames on tomatoes and some other plants. Control by using a spray mixed at the rate of 2 pounds of calcium arsenate in 100 gallons of half-strength bordeaux.

**Holding Plants**—Plants should be set in the field when they are ready. If it becomes necessary to hold them they should be kept at a cool temperature and the water should be withheld. Don't start seeds too early or plant too much at one time. Plant at successive dates to have plants available for the range of time in the field planting period.

For additional information on plant growing, write to the Bulletin Room, Michigan State College for Extension Bulletin 20, "Hotbeds and Coldframes." If this does not answer your questions, consult your county agricultural agent or write to the Department of Horticulture, Michigan State College, East Lansing, for further help.

Vegetable varieties suggested for Michigan home gardens*	No. of plants to expect per ounce of seed	Time needed to grow plants	Temperature needed	Spacing and size of container for plants	Time to set in field
<p style="text-align: center;"><b>TOMATO</b></p> <p><b>Early Chatham</b> for very short season areas. <b>Earliana</b> or <b>Victor</b> for the earliest crop or for short season areas. <b>Bonny Best</b>, <b>John Baer</b> or <b>Stokesdale</b> for the main crop. <b>Rutgers</b> is the best late variety but only good in long-season areas of the state.</p>	4000	3 weeks from seeding to pricking off and 3 to 4 weeks from pricking off until time for field setting.	Germinate seed in warm soil. Grow plants at a day temperature of 70°-80° F. and a night temperature of 60°-70° F.	Space in the flat at 2½"x2½". For large plants grow in 4" pots or bands for about 10 days additional time.	After the time of the last killing frost. In southern Michigan about May 15 to May 25.
<p style="text-align: center;"><b>PEPPER</b></p> <p><b>Harris Early Giant</b> for areas having a very short season. <b>King of the North</b> a good early variety. An early strain of California Wonder such as <b>Oakview Wonder</b> for the main crop in southern Michigan. <b>Hungarian Wax</b> is a hot yellow variety. <b>Long Red Cayenne</b> for a hot red pepper.</p>	1500	4 to 5 weeks from seeding to pricking off and 4-5 weeks more until time for field setting.			
<p style="text-align: center;"><b>EGG PLANT</b></p> <p><b>New Hampshire Hybrid</b> for an early variety. <b>Black Beauty</b> for the main crop.</p>	2500				

<b>HEAD LETTUCE</b> Great Lakes. If seed is unavailable, use Imperial 44 or Imperial 847.	10,000				From the time the soil is ready to early July.
<b>CABBAGE</b> Copenhagen Market, Golden Acre, Resistant Detroit (Yellows Resistant) or Jersey Wakefield for early cabbage. Hollander or Ballhead for June and early July setting for late cabbage and for storage. Mammoth Red Rock is best Red type and Chieftain best savoy type.	5000	3 weeks from seeding to pricking off, and then 3 to 4 weeks more in the flat.	Germinate seed in warm soil, 65°-75° F. Grow plants at a cool day temperature of 55°-70° F., and a night temperature of 45°-60° F.	Space in the flat at 2½" x 2½". Plants may also be grown in pots or bands for an additional 10 days.	First planting about April 10, followed by later plantings.
<b>BROCCOLI</b> Green Sprouting (early strain).	5000				May 5 to July 10.
<b>CAULIFLOWER</b> Snowdrift for the main crop. Early Snowball for extra early plants for summer harvest.	3000				Set in June. Early planting before June seldom successful.
<b>BRUSSELS SPROUTS</b> Catskill is the best variety for Michigan.	5000				
<b>MUSKMELON</b> Honey Rock is early and well suited for starting pots or bands. If a later variety is wanted Hearts of Gold is suggested.	500	Do not grow plants too large.	Germinate seed in warm soil, 75°-80° F.		
<b>WATERMELON</b> Northern Sweet and Harris Earliest are early and dependable. Dixie Queen and Kleckley Sweet are later in maturity but of better quality. They should be used only in southern Michigan.	250	3 to 4 weeks from seeding in pots or bands until field setting. Set with soil intact around roots.	Seed will decay in cold soil. Grow plants at day temperature of 70°-85° F., and a night temperature of 60°-70° F.	Single plants in 3" pots or bands. Two plants in a 4" pot or band.	When the danger of frost is past, and the soil is warm. Late May in southern Michigan.
<b>CUCUMBER (Slicing Type)</b> Straight 8 or A and C.	500				
<b>SUMMER SQUASH</b> Early Prolific Straightneck for yellow type. Dark Green Zucchini or Italian type.	250				
<b>CELERY</b> Summer Pascal is a popular green variety good for the home garden. Utah is best green type for late celery and for storage. Cornell 19 is a high quality self-blanching type. All of these varieties are of superior quality.	15,000	4 to 5 weeks from seeding to pricking off. 4 to 6 weeks more in the flat.	Grow in cool house at a day temperature of 55°-65° F., and a night temperature of 50°-55° F.	Space in flat at 2" x 2".	During May and June.
<b>ONION</b> Sweet Spanish is most popular for growing from transplants. Many people like a more pungent, better-keeping onion and some strain of Yellow Globe may be used.	4000	About 8 weeks from seeding or 10 weeks if held in frames.	Germinate in warm soil, 65°-75° F. Grow plants cool in days, 55°-70° F., and 45°-60° F. at night.	Plant in rows 2" apart. 50 seeds per row across the flat.	From the time soil is ready to late May. Early planting gives the best yield.

\*Commercial vegetable growers should use varieties recommended in Circular Bulletin 191, to be available about April 10.