

Cucumbers

Soil and climate conditions in Massachusetts are ideal for the production of excellent quality cucumbers (*Cucumis sativas*) for both picking and table use.

Varieties

There are primarily two types of cucumbers, slicing and pickling.

Soil Preparation

Cucumbers can be grown successfully in almost any good soil. They need to receive full sunlight throughout the day. For early crops and high yields, a warm, fertile, well-drained loam soil is best. Well rotted manure, compost, green manure crops or similar materials will improve the water holding capacity of the soil and is recommended for best production. Three to four bushels of well rotted manure or similar material per 100 feet or row would be adequate when worked into the soil prior to planting.

Liming and Fertilizing

Cucumbers are sensitive to acid soil conditions. The soil should be tested each year and limed to a pH of 6.0 to 6.5. Have your soil tested by the UMass Soil and Tissue Testing Lab (www.umass.edu/soiltest) and follow the recommendations given. Lime (in needed) is most effective when worked into the soil in the fall, but can also be applied in the spring.

Apply three pounds of 10-10-10 fertilizer per 100 square feet. Fertilizer should be broadcast evenly and worked into the top two or three inches of soil prior to seeding.

Just before runners start to spread, sidedress each plant with a total of one half cup of 10-10-10 fertilizer. This is especially important on light, sandy soils. Apply the fertilizer six to eight inches away from plants along each side. Watering at this time would also be beneficial.

Natural Fertilizer

Natural fertilizers can be very effective when the right choice is made from the many types available.

Planting

Cucumber seeds germinate very poorly at soil temperatures below 50F and plants are frost tender. Therefore, planting should be delayed until the soil is warm and the danger of frost is past. Cucumbers can be planted using two different methods.

Hill method: Sow six to eight seeds in hills spaced from 4 to six feet apart each way. Cover the seeds to a depth of about one half inch. Thin seedlings to leave three to four plants per hill. The soil at each hill should be left level with the rest of the area. Note: A hill is a level spot containing a group of plants or seeds. It does not mean the soil is mounded.

Row method: Sow one half ounces of seed per 100 feet of row covering the seed with one inch of soil. Rows should be spaced four feet apart with seedlings thinned to six inches apart in rows.

For early harvest, cucumbers can be started indoors three weeks prior to planting outdoors. In resetting cucumber transplants in the field, it is important not to disturb the soil around the roots, and not to plant the seedlings deeper than they were in their original containers.

For selling at a roadside market, growers should make several plantings beginning with transplants, and direct seeding at weekly intervals up until about June 15 depending on your location. The following steps may be used for planting cucumbers.

- Prior to planting, apply three to four bushels of organic matter such as well rotted manure or compost per 100 square feet.
- Apply recommended amounts of lime.
- Rotoill into the soil.
- Broadcast recommended amounts of fertilizer and work into the soil.
- Plant.

Using Black Plastic Mulch

For an early crop, cucumbers can be grown on a strip of black agricultural plastic which comes in a variety of widths. (A three foot or four foot plastic width would work fine.) Black plastic will warm the soil for good growth. Be sure there is ample soil moisture before putting the plastic down. After fertilizer is applied, lay the plastic strip, burying the edges with soil to hold it in place. Punch holes in the plastic with a trowel and plant seeds using the hill method. If plastic mulch is used, there is usually no need to sidedress with fertilizer during the growing season.

Weed Control

Cultivation should be shallow when the weeds are small to avoid damaging cucumber roots. If the ground is kept well weeded (between the rows of plastic) while the vines are spreading, cucumber vines, when well established, will choke out weeds.

In addition to warming the soil, black plastic mulch will help to suppress weeds and maintain soil moisture. Other mulch materials such as straw or compost can be used and should be applied around seedlings when the soil is warm and moist.

Watering

For good growth, cucumbers require at least one inch of water per week. (One inch of water per thousand square feet equals 620 gallons of water). If water is needed, irrigate thoroughly early in the morning until the soil is moistened 8 to 12 inches deep. If rainfall is deficient, it may be necessary to water once a week, and perhaps two times per week in sandy soil.

Pests

The principal insect are aphids, seed corn maggots, cucumber beetles and cutworms. Common disease include spots, bacterial wilt, powdery mildew, scab, mosaic and fusarium wilt. Scab and mosaic can be controlled by using resistant varieties.

Other Problems

Problem: Bitter flavor

Cause: Growing conditions such as low moisture, low fertility or unusually hot or cool temperatures; old vines which have been picked several times; some varieties are simply more bitter than others.

Problem: Cucumbers not developing properly

Cause: Inadequate pollination; unfavorable weather when flowers are setting; lack of bees; or old vines which have been picked sever times.

Harvesting

A 100 foot row of cucumbers will yield approximately 120 pounds depending on the variety. Harvest slicing cucumbers when they are medium sized, well formed and dark green color. Slicing cucumbers are best when eaten fresh, but can be kept a few days in the refrigerator.

For pickling, cucumbers of various sizes are desirable but none should be large, over mature or showing any indication of yellow color. Pickling cucumbers should be harvested two or three times per week, depending on the weather. Fruit should not be allowed to ripen on the plant and if any are missed and turn yellow, they should be removed. Pickling cucumbers can be eaten fresh or kept a few days in the refrigerator or preserved using one of the many pickle recopies available.

UMass Extension Agriculture and Landscape Program 4/12

UMass Extension is an equal opportunity provider and employer, United States Department of Agriculture cooperating. Contact your local Extension office for information on disability accommodations. Contact the State Extension Director's Office if you have concerns related to discrimination, 413-545-4800 or see www.extension.umass.edu/civilrights/.