

## Pumpkins and Squash

These two crops are grouped together because their culture is similar and also because both belong to the genus *Cucubita*.

### Soil Preparation

Pumpkins and squash can be grown successfully on almost any good soil where they will receive full sunlight throughout the day. Sandy soils high in organic matter are best because the soil will warm up fast and drain quickly. If the soil is heavy (clay), it might help to add sand and organic matter. Organic manure may be added by plowing under green manure crops, compost or manure.

### Lime and Fertilizing

Pumpkins and squash prefer a pH range of 6.0 to 6.8. Strongly acid soils should be limed according to recommendations. Have your soil tested by the UMass Soil and Tissue Testing Lab ([www.umass.edu/soiltest](http://www.umass.edu/soiltest)) and follow the recommendations given. Lime (if needed) is most effective when worked into the soil in the fall.

Pumpkins and squash have very extensive root systems and respond to thorough soil preparation and the application of 3 to 4 pounds of 10-10-10 fertilizer per 100 square feet. Fertilizer should be broadcast evenly and worked into the top two to three inches of soil prior to seeding.

When summer squash begins to bear, sidedress each plant with a total of ½ cup of 10-10-10 fertilizer. With vine types, apply the fertilizer just before the runners start to spread. Sidedressing 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 Fertilizers

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

### Planting

Squash and pumpkins are frost tender and should not be planted until the soil is warm and the danger of frost is past.

Squash and pumpkins may be started by direct seeding after the soil has warmed up or by setting transplants after the danger of frost is past. (To favor good germination, seeds should be planted at a depth of one inch). If transplants are to be used, start seeds indoors two to three weeks prior to planting outdoors.

Note: In resetting squash or pumpkin transplants in the field, it is very important that the soil is not disturbed around the roots and that they are not planted deeper than they were in their original containers.

The following steps may be used for planting squash and pumpkins:

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

Spacing will depend upon whether the plants have a bush habit or vine habit. Follow these suggestions for spacing:

*Bush:* Rows four to six feet apart; single plants fifteen to eighteen inches apart in the row.

*Vine:* Rows six to twelve feet apart; single plants twelve to eighteen inches apart. If planted in hills; use spacing six feet or ten feet by four feet depending on variety, leaving two plants per hill. The soil at each hill may be mounded or left level with the rest of the area.

Note: A hill is a spot containing a group of plants or seeds. It does not mean the soil has to be mounded. Large squashes (Hubbard type) and pumpkins (Jack-O-Lantern types) often do best with wide spacing.

### **Weed Control**

Cultivation should be shallow when the weeds are small to avoid damaging plant roots. A mulch material such as compost or straw can be used to suppress weeds and hold moisture. Only mulch a moist soil.

### **Watering**

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

### **Pests**

The principal insect pests are squash vine borers, aphids and squash bugs.

### **Other Problems**

**Problem:** Lots of flowers on squash but little fruit set.

**Cause:** Squash plants produce both male and female flowers. There are about ten male flowers to each female flower per plant. When weather conditions or other factors keep the bees away, the female blossom can wither before being pollinated. Also, weather conditions may dictate the number of female blossoms produced.

**Problem:** Newly formed summer squash rotting at end furthest from stem.

**Cause:** Blossom end rot; caused by calcium deficiency due to uneven water supply. Usually occurs during drought conditions.

**Problem:** Summer squash does not develop properly.

**Cause:** Poor pollination.

**Harvesting:**

Summer squash, which is consumer in the immature state, is best harvested when three to six inches long. At this stage, summer squash is tender, crisp and has good flavor. It should be harvested two to three time per week, depending on the weather. Summer squash is best when eaten fresh but can be kept a few days in the refrigerator.

Winter squash can be tested for maturity using the pressure from the thumbnail on the fruit exterior. If the skin is hard and impervious to scratching, the fruit is mature.

Pumpkins are usually allowed to remain in the garden until frost destroys the vines or the vines deteriorate.

Pumpkins and winter squash can be stored for several months if properly cured. This means the fruit should be mature and carefully handled at harvest. After harvest, they should be placed in an area with temperatures of 80 to 85°F for ten days then transferred to a cool dry place preferably with temperatures of 50 to 60°F and relative humidity of 50 to 60 percent. In storage, the fruit must be well ventilated, not piled on each other.

Note: Acorn Squash does not require the treatment for ten days at 80 to 85°F and they usually don't store for more than 40 days.

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