

Squash

Squash come in two main types: summer squash and winter squash. While there's not much difference among the tastes and textures of summer squashes, winter squashes offer a wide array of flavors.

Summer squash (*Cucurbita pepo*) produces prolifically from early summer until the first frost. This group includes both green and yellow zucchini, most yellow crookneck and straightneck squash, and scallop (or pattypan) squash. Most summer squash are ready to pick 60 to 70 days after planting, but some reach harvestable size in 50 days. You can use them raw for salads and dips or cook them in a wide variety of ways, including squash "french fries" and such classics as zucchini bread.

Summer squash blossoms, picked just before they open, are delicious in soups and stews, or try them sautéed, stuffed, or dipped in batter and fried. (You'll want to use mostly male flowers for this purpose, though, and leave the female flowers to produce fruit.) Summer squash keep for only a week or so in the refrigerator, so you'll probably want to freeze most of the crop.

Winter squash (*C. maxima*, *C. mixta*, *C. moschata*, and *C. pepo*) is a broad category that includes butternut, acorn, delicious, hubbard, banana, buttercup (or turban), and spaghetti squash. Pumpkins are also in this group, but their flesh is often less sweet than other winter squash. Most winter squash take 75 to 120 days to mature.

Steam the young fruits, or harvest and bake the squash when they're fully mature. Dry and roast the seeds. Winter squash are even more nutritious than their summer kin, but the sprawling vines, which can grow 10 to 20 feet long, require more space. If you have only a small garden, try one of the bush or semibush cultivars.

Butternuts produce fruits up to 1 foot long with tan skins and orange flesh. Acorn squash have dark green to yellow fruits that are round and usually furrowed; they generally weigh 1 to 2 pounds. Acorns don't store as well as most winter squash, but they are very productive.

Delicious squash can take more than 100 days to mature, but the wait is worth it; the wide-spreading vines produce wonderfully sweet fruit. Hubbards are best for storing, but standard cultivars can weigh up to 30 pounds, which is a lot of squash to eat. Pink-skinned banana squash can grow up to 75 pounds. Buttercup, or turban, squash have a sumptuous taste that makes them a winter squash favorite.

Planting

These sun lovers are sensitive to cold, though winter squash tolerate light shade and cooler nighttime temperatures better than summer squash.

Both types of squash are heavy feeders and need a light and well-drained but moisture-retentive soil. You can give them exactly what they need by planting them in specially prepared hills. See the Melon entry for details on creating super-charged planting hills. Space the hills 3 feet apart for summer squash; vining winter squash need 6 to 8 feet between hills.

Summer squash can cross-pollinate with various cultivars of both summer and winter squash, as well as with several types of pumpkins. This won't affect the current season's fruit, but if you want to save seed, be careful not to let crops cross-pollinate. Otherwise, the seed won't be true to type, and the following season's crop will potentially be strange-looking or-tasting hybrids.

A week after the last frost date, or when the soil temperature is at least 60°F and the weather has settled, sow six seeds 1/2 inch deep in a circle on the top of each hill. Thin to the two strongest seedlings per hill.

If planting in rows instead of hills, space vining cultivars 3 to 4 feet apart in rows 8 to 12 feet apart; space bush types 2 to 3 feet apart in rows 4 to 6 feet apart. To conserve space in small gardens, train squash vines on a tripod. Tie three long poles together at one end, stand them upright, and spread them out to form the tripod; plant a squash seed at the base of each pole. You can also grow vining types on fences and well-supported growing nets.

In areas with short growing seasons, sow the seeds indoors a month before the last frost date. Plant two seeds per 3-or 4-inch pot, using potting soil enriched with extra compost. Clip off the weaker seedling after seedlings emerge. Water well just before transplanting, and disturb the roots as little as possible. Full-grown plants can tolerate cold weather, but seedlings are very cold sensitive. Use hotcaps or cloches to protect them until the weather turns hot.

Summer squash will produce more heavily than winter squash. In either case, unless you plan to preserve or store a great deal of your crop, two vines of either summer or winter squash are probably adequate to feed four people. Unused seeds are viable for 4 to 5 years as long as you store them properly. To spread out the harvest, start a second crop about 6 weeks after the first planting; it will begin to produce fruit about the time your first planting has peaked and the plants are declining.

Growing guidelines

Give seedlings lots of water and keep the planting area moist throughout the growing season. To avoid such diseases as mildew, water the soil, not the foliage, and don't handle plants when they are wet. Dig weeds by hand until the squash vines begin to lengthen, then spread a thin layer of compost and top it with a thick mulch of hay, straw, or chopped leaves.

About 6 weeks after germination, male blossoms will appear, followed by the first of the female flowers. Squash depend on bees and other insects for pollination; female blooms that drop off without producing fruit probably weren't fertilized. You can transfer pollen from the male stamen to the female pistil by hand, using a soft paintbrush. Or simply pluck a male flower, remove the petals, and whirl it around inside a female flower.

If your garden soil is less than ideal, side-dress plants with compost or a balanced organic fertilizer or drench them with compost tea when the first fruits set. Learn how to make compost tea.

When vines grow to about 5 feet, pinch off the growing tips to encourage fruit-bearing side shoots. By midsummer, winter squash will have set all the fruit they will have time to mature; remove all remaining flowers so the plant can put its energy into ripening the crop. To avoid rot, keep maturing fruit off the soil by setting them on a board or flat rock or by spreading a thick mulch. This is particularly important with winter squash, which take a long time to ripen.

Problems

Well-cultivated squash will be trouble free as long as you protect young plants with a floating row cover to keep out insect pests. Remove the cover when the plants start to flower to allow for pollination. The two pests most likely to attack are squash vine borers and squash bugs.

Squash vine borers, which are most damaging to winter squash, look like 1-inch-long white caterpillars. They tunnel into stems and can go undetected until a vine wilts. Keep a constant lookout for entry holes at the base of the plants, surrounded by yellow, sawdustlike droppings. Cut a slit along afflicted stems and remove and destroy the larvae inside, or inject the stems with Btk (*Bacillus thuringiensis* var. *kurstaki*). Hill up soil over the stem wounds to encourage the plant to sprout new roots there.

To prevent borer damage, keep an eye out for the adult borer, a wasplike orange-and-black moth; it lays eggs at the base of the stem in late June or early July in the North, or in April to early summer in the South. During these times, check the base of the stems and just below the surface of the soil regularly for very tiny red-and-orange eggs. Rub the eggs with your finger to destroy them.

Squash bugs are grayish brown bugs up to 3/4 inch long; nymphs are similar, but do not have wings. Feeding by adults and nymphs causes leaves to wilt and blacken. Hand pick them and drop them in a container of soapy water. Also destroy their red-brown egg clusters on the undersides of leaves. To trap adults, lay boards on the soil at night; the squash bugs will tend to congregate beneath them, and you can destroy the pests the next morning. Planting radishes, nasturtiums, or marigolds among your squash plants may help repel squash bugs. If plants are heavily infested with young squash bugs, try spraying insecticidal soap or neem as a last resort to save your crop.

Striped and spotted cucumber beetles may also attack squash plants. These 1-inch-long black-headed beetles with green or yellow wings can transmit bacterial wilt as they feed. Since these are spring pests, you can avoid them by planting squash later in the season, when cucumber beetles are less prevalent. Hand pick daily first thing in the morning when the beetles are sluggish. To make the vines less appealing to the beetles, spray them with kaolin clay as often as twice a week.

In most cases, you can avoid squash diseases by choosing resistant cultivars, rotating crops, and choosing planting sites with good air circulation. Here are some diseases to watch for:

- Anthracnose, a soilborne fungus, causes leaves to develop hollow, water-soaked spots that eventually grow large and brown.
- Bacterial wilt is a disease that causes plants to wilt suddenly; infected plants usually die quickly.
- Downy mildew produces yellow-brown spots on leaf surfaces and downy purple spots on the undersides. These spots eventually spread, and the leaves die.
- Mosaic, a viral disease that results in rough, mottled leaves, stunted growth, and whitish fruit, is spread by cucumber beetles and aphids. Reduce the chance of disease by controlling problem insects.
- Powdery mildew causes fuzzy white spots on leaves. Affected leaves are distorted, and the plant may appear stunted.

Immediately remove and destroy vines afflicted with any of these diseases, or place them in sealed containers and dispose of them with household trash.

Harvesting

Pick zucchini and crookneck cultivars at a tender 6 to 8 inches long; round types are best when they're 4 to 8 inches in diameter. Summer squash will continue setting buds until the first frost, but only if you pick the fruit before it matures—that is, just as its blossom drops off the tip. If you allow even one fruit to mature, the plant's overall productivity may decline. Enjoy summer squash fresh, or preserve them by canning or freezing; they can also be dried, pickled, or turned into relish.

Winter squash will taste bland and watery and won't store well unless you allow them to fully ripen on the vine. Wait until the plants die back and the shells are hard. A light frost can improve the flavor by changing some of their starch to sugar, but it will also shorten their storage life. It's better to pick all ripe fruits before an expected frost and cover any unripe ones with a heavy mulch. You can even carefully gather the vines and fruit close together and protect them with tarps or blankets.

Harvest during dry weather. Use a sharp knife or pruners to cut the fruit from the vine, leaving 2 to 3 inches of stem on the fruit. Pulling the fruit off may damage the stem, and the whole fruit may soon rot from that damaged end. (For that same reason, never carry squash by their stems. If a stem breaks off accidentally, use that fruit as soon as possible.) Clean your harvesting knife between cuts to avoid spreading diseases. Handle squash carefully, because bruised fruit won't keep.

Never wash any winter squash that you intend to store. Dry all types in the sun until the stems shrivel and turn gray; the exception is acorn squash, which doesn't need curing. If placed in a cool, dry area with temperatures of 45° to 50°F and with 65 to 70 percent humidity, winter squash will keep for up to 5 months. Acorn squash needs a slightly cooler and moister storage area.

