



# Vegetable Gardening Tips

Growing Information for the Home Gardener Series



## Squash and Pumpkins

Squash and pumpkins are among the most popular and productive warm-season vegetables in Louisiana. In many cases, a few plants will supply enough produce for an entire family. Squash and pumpkins belong to the gourd family called the “cucurbits.” They are believed to be native to Central America (especially pumpkins). Most types are good sources of vitamin A, but they are mainly desired for their flavor and texture. Squash and pumpkins can be combined with spices to create savory soups and soufflés or combined with cream and sugar to make pies and sweet breads. For gardeners on carbohydrate restricted diets, try using spaghetti squash or yellow and green zucchini sliced thick in place of noodles.

These crops thrive in warm weather. They will tolerate some low temperatures but are very frost sensitive. Seeds need a soil temperature of at least 60° F to germinate. Plant squash after the danger of frost has passed, and the soil has begun to warm. In south Louisiana, this is about mid-March. In north Louisiana, wait until early-April. Plantings can again be made throughout summer if the vegetables have enough time to mature before frost.



### Summer Squash

Summer squash generally grow in bush forms. The fruit are eaten young and tender. In general your fingernail should be able to easily penetrate the skin. Most chefs prefer to cook or prepare the squash fruit when it is still immature. Yellow types are generally harvested 6 inches in length or less. Green and yellow zucchini can be harvested up to 10 inches in length. Summer squash require 45 to 50 days from planting until harvest. If planted during the summer, squash mature in 35 to 40 days. Summer squash are typically planted March through August. Space summer squash 18 inches to 3 feet apart on a row.

Summer squash types typically grown in Louisiana include:

**Yellow Crookneck** – The fruit have a slender crooked neck; skin may be smooth or warty. Crooknecks become tough quickly, harvest young. Recommended varieties include Dixie, Supersett, Gold Star, Precious II, Gentry, Goldie, Destiny II, Prelude II and Sundance.

**Yellow Straightneck** – Straightneck squash types are mostly smooth skinned and have a tendency to stay tender longer than the crooknecks. Recommended varieties include Cheetah, Cosmos and Supersett. Other good choices are Multipik, Solstice, Sebring, Superpik, Goldbar, Sunbar, Seneca Prolific and Yellow Straightneck.

**Zucchini** – Most have green skins, but several yellows and golds have been developed such as Golden Delight and Enterprise. Recommended varieties include Revenue, Dividend, Seneca, Declaration II, Independence II, Embassy, Spineless Beauty, Senator, Tigress, Gold Rush (AAS) and Eight Ball (AAS).

**Scallop or Patty Pan** – These thin-skinned summer squash are flat-topped, round and fluted. Peter Pan and Sunburst are AAS (All-America Selection) winners. Scallop squash tend to be very prolific. Only a few plants are needed for an average size family.

### Winter Squash

Winter squash usually have a vining growth and their fruit are allowed to remain on the vine until fully matured as indicated by a hard rind (skin). Your fingernail should NOT easily penetrate the skin. Winter squash need around three to four months to mature and can be planted as soon as the soil warms. The term “winter

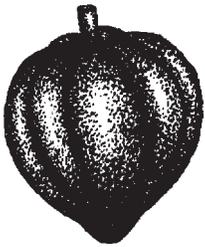
**Fig. 1**  
**Some Types of Winter Squash**



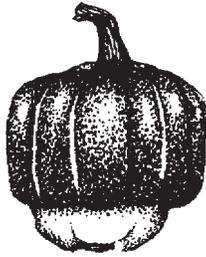
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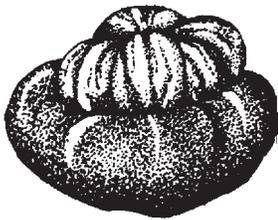
Banana



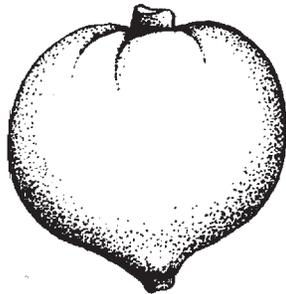
Acorn



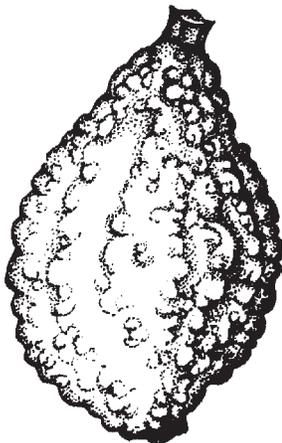
Buttercup



Turk's Turban



Delicious



Hubbard and Boston Marrow

squash” can be confusing, because they are actually grown in the summer. The best winter squash are those that mature in cool weather. The mature fruit stores well like a pumpkin, but has a finer-textured flesh. Plant winter squash mid-March through mid-May in south Louisiana and mid-April to mid-May in North Louisiana. Semi-vining types of winter squash should be planted 2-4 feet apart on wide rows or skip every other row. Vining types of winter squash should be spaced 4-5 feet apart in the row and again on wide rows or skip every other row. This class has numerous types with a variety of shapes, sizes and colors (Figure 1).

**Acorn squash:** Recommended varieties include Table Ace, Table Queen and Taybell PM.

**Butternut squash:** Recommended varieties include Early Butternut and Waltham Butternut.

**Spaghetti squash:** Recommended varieties include Vegetable Spaghetti, Primavera and Pinnacle.

## Pumpkins

Pumpkins are much like winter squash, but the flesh is often coarser and stronger. Pumpkins are more difficult to grow than winter squash and summer squash because of our climate. Pumpkins have a hard time thriving in hot, humid weather with severe disease and insect pressure. Although it is not impossible to grow pumpkins, it is labor intensive. Novice gardeners and gardeners with a *laissez faire* approach, take precaution growing pumpkins. Start with small size pumpkins and gourds, which generally produce better and are a bit more suited to our growing climate.

Pumpkins are typically planted as early as mid-March in south Louisiana and early April in north Louisiana, all the way through mid-September. However, most people want pumpkins for Halloween. If you are looking to produce pumpkins for this holiday, plant seeds or transplants late June through the first week of July. Pumpkins take up an enormous amount of space. These should be grown in large raised beds or in-ground gardens only. Plant each hill (2-5 seeds per hole) 3-6 feet apart from one another and skip every other row in the garden. For smaller bush type pumpkins space plants 2-3 feet apart on the row and plant on wide rows.

Miniature pumpkins have been bred for ornamental use. Varieties available include Jack-Be-Little, Baby Bear (AAS) and the white Baby Boo.

For a small size, choose Orange Smoothie\* (AAS), Spooktacular, Small Sugar, Spookie, Baby Bear (AAS), Sunlight (a small, round white to yellow pumpkin). Early Abundance is a small pumpkin that has bright orange skin. Darling is a small and tall dark skinned pumpkin. Trick or Treat\* or Triple Treat have edible, hull-less seeds.

Good medium-size pumpkins are Big Autumn, Jack-o-Lantern, Frosty\*, Casper (white), Peek a Boo and the AAS winner, Autumn Gold. Good large or Jack-o-Lantern types are Howden, Spirit\*(AAS), Gold Rush, Connecticut Field, Jumpin Jack and Aspen.\* Charisma is medium sized round shaped bright orange pumpkin.

\*Denotes compact vines.

Cushaws are large, long-necked pumpkins that have a meaty and finer-textured flesh.

For a jumbo pumpkin, choose Prize Winner, Atlantic Giant or Big Moon. To produce jumbo pumpkins for show or fall fairs, plant seed 120 days before the show date (early to mid-June). Allow plenty of space for the vines to run. Prune off the first few female flowers, then let only a few set to baseball size. Choose the best one, and remove all others. Turn the pumpkin several times to obtain a well-shaped fruit. Pumpkins normally mature in 70-99 days, producing several fruit per vine.

## Cultural practices

Squash and pumpkins may either be direct-seeded into the garden or may be transplanted to help obtain early production. Plant several seeds in a container two to three weeks before you anticipate transplanting. Thin to one plant per pot after transplanting. The less you disturb the roots during transplanting, the more likely the squash will survive. Later in the season, there is little advantage to transplanting, so the seed may be direct-seeded into the warm garden soil.

Squash and pumpkins need a sunny location and a well-drained soil. Build rows high to provide good drainage where drainage may be a problem.

Squash and pumpkins respond to organic matter in the soil. To increase organic matter, work considerable amounts of aged manure compost into the row. Before planting the rows, apply 1 - 1.5 pounds of a complete fertilizer like 13-13-13 or 8-24-24 per 20 feet of row. This is best done a couple of weeks before planting.

This group of plants responds to an additional sidedressing of nitrogen about the time the plants begin to vine or run. Summer squash should be sidedressed about two to three weeks after transplanting or about four weeks after seeding. To encourage a strong plant before fruit development, apply the sidedressing before fruiting begins.

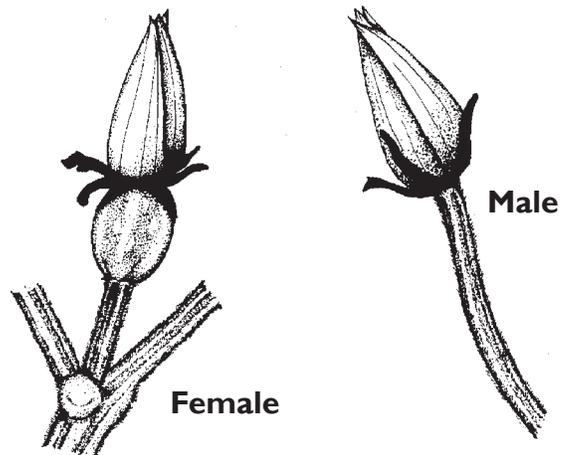
Over fertilization, especially with nitrogen, can cause problems by forcing excessive vegetative growth. This will lead to delayed yields and a greater hazard of fruit rot and foliage disease.

Black plastic mulch in larger gardens is beneficial with many spring vining crops. It conserves moisture and fertilizer, helps control weeds, reduces fruit rots and warms the soil early in the spring to stimulate early season growth and production. In smaller gardens mulch rows and row middles (walkways) with leaves, pine straw or hay.

Sufficient watering is important for good growth and fruit set. When the leaves begin to wilt, the blossoms will drop rather than set fruit. Even well-watered gardens can show some wilt during very hot, dry afternoons. When irrigating, a thorough soaking of the soil is much better than a light sprinkling. It is extremely important not to wet the foliage of squash and pumpkins when irrigating. Use soaker hoses and/or drip irrigation.

Blossom-end rot can be a problem on young squash fruit, especially where the soil pH or the calcium content of the soil is low. This problem is characterized by a browning and shriveling of the blossom end of the fruit, especially when the plants are exposed to stressful conditions such as dry weather. Try sidedressing with calcium nitrate if this disorder is visible in the field or if it has occurred in previous pumpkin and squash plantings.

**Fig. 2**  
Squash and pumpkin produce separate male and female flowers on the same plant.



## Pollination

Members of the cucurbit family produce separate male and female flowers on the same plant (Fig. 2). Pollen must be transferred from the male to the female flower to obtain fruit set and development. Pollen is transferred by bees, primarily honey bees. This is of concern to the home gardener for several reasons. Plantings made in late spring and summer produce male flowers first, but female flowers soon follow and set fruit. Since bees are necessary for pollination, it is best to apply pesticides early in the evening when bee activity is very low. Also try and plant flowers and herbs (allowed to go to seed) around the garden to attract pollinators.

## Harvesting

Squash and pumpkins are normally grown for their fruit, but their blossoms have long been eaten as a European delicacy. Blossoms may be dipped in batter and fried or sautéed in butter. Harvest blossoms early in the morning before they open for a longer shelf life.

Summer squash must be harvested while the fruit are still immature. The secret to delicious summer squash is to harvest the fruit before the skin begins to turn hard. You should be able to easily puncture the skin with your thumbnail. It's better to harvest the fruit a little too early than a little too late. Summer squash should be refrigerated and eaten within a week of harvesting. Continue to harvest to keep plants bearing vigorously. Over mature fruit that remain on the plant reduce total production. In peak harvest it is necessary to harvest every other day.

Winter squash and pumpkins are harvested when fully mature. The skin color will have darkened and developed to the color for that variety. The skin will also have become tough and hard to puncture with the thumbnail, and the ground spot will turn to color. These types of squash keep well in storage and are frequently kept for several months under conditions of low temperatures and moderate humidity. Harvest winter squash and pumpkins by cutting the mature fruit off the vine. Leave about 2 inches of stem on the fruit. This helps to prolong storage life.

## Pest Problems

Squash and most of the vine crops suffer from insect and disease problems that rob these crops of being the easiest crops to grow. Provide squash and pumpkins with ideal planting conditions, full sun, adequate moisture and proper spacing. Control weeds in and around the garden to prevent some damage from insects and disease. Always read all labels before you apply pesticides. Using these materials properly will be beneficial to you, your crop and the environment. Proper timing, application and the amounts used are essential for their safe use.

## Weeds

Since pumpkins are sensitive to herbicides, shallow cultivation during the developmental stages is best. Grasses such as crabgrass and bermudagrass can be controlled after they emerge with the active ingredient sethoxydim (Poast, Hi-Yield Grass Killer) without injuring the pumpkins. However, there are no herbicides available to control broadleaves that will not cause injury. Control broadleaf weeds with mulches and shallow cultivation.

## Insects

**Squash Vine Borer:** Perhaps the most widespread problem is the squash vine borer. This moth produces a larva which bores into the stems and leaf petioles of these crops. Once inside, it hollows out the stem and causes the plant to wilt and die. Although you may slice the stem and remove the larva (if you can find it), the best prevention is to protect the plant from its initial entry by using insecticides frequently or floating row covers. If insecticides are needed, sprays or dusts of the stem base will offer the best control. Initiate treatments when vines begin to run or when adult borers are detected. Applications may need to be repeated every 7-10 days with an insecticide such as carbaryl or pyrethroids. Floating row covers must be removed after flowering begins from proper pollination.

**Cucumber Beetle:** Cucumber beetles feed on the foliage and fruit of squash and pumpkins. They may transmit bacterial wilt so keep populations very low. Cucumber beetles can also damage rinds with their mouthparts in severe infestations. Cucumber beetles respond well to insecticides such as pyrethroids, malathion or carbaryl.



**Aphids:** Aphids feed on the undersides of the foliage and leave a sticky secretion that can sometimes grow black mold. Aphids can transmit viruses, and, if spotted in the garden, use light oils, horticulture soaps and insecticides to reduce aphid populations. Applications must be made every 5-7 days.

## Diseases

Bacterial wilt is usually brought in by the cucumber beetle. Infected vines suddenly wilt and die. To control this wilt, control the beetles. Clean up debris at the end of the season to discourage carryover of insects and pathogens.

Downy mildew is caused by a fungal-like microorganism and occurs during periods of moderate to warm, wet weather. Leaves show small, angular yellow spots on the upper surface and often produce a visible grayish, moldy growth on the lower surface, especially during periods of high humidity. Use copper fungicides for prevention.

Powdery mildew is a fungal disease that produce white talcum-like powdery growth on the upper leaf surface. Infection starts on the lower leaves and then progress upwards. Disease development is favored by dry conditions, but high relative humidity is required for infection and spore survival. Plant cucumbers in sunny locations with good air movement. Protect the plants with sprays of potassium bicarbonate, sulfur or other contact fungicides.

Several viruses affect squash and pumpkins. The symptoms vary with different strains of virus, but in general, the leaves and fruit take on a green and yellow mottling and may become distorted. Virus is spread by insects, especially aphids and whiteflies. Management practices include weed removal because they harbor both insects and plant viruses, managing insects with natural or synthetic insecticides or horticultural oils and removing and discarding diseased plants.

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