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Home Gardening Series

Pumpkins

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Vegetables

Environment

Light – sunny
Soil – well-drained, sandy
Fertility – medium
pH – 5.8 to 7.2
Temperature – warm
Moisture – average

Culture

Planting – seed, early June
Spacing – 4 feet x 8 feet
Hardiness – very tender
Fertilizer – medium to heavy

Pumpkins – *Cucurbita pepo, Cucurbita maxima*

Pumpkins are gourd fruits belonging to the genus *Cucurbita*. Present evidence indicates they are of American origin. Pumpkins have never been found in a wild state and have been important in primitive agriculture for centuries. They were possibly grown in Peru as early as 2000 B.C. and were definitely cultivated by Native Americans at this time.

Pumpkins are warm-season vegetables that can be grown throughout Arkansas. In addition to being used as jack-o-lanterns at Halloween, pumpkins are also common ornamental and culinary elements. Also, the seed of the naked-seeded varieties do not have seed coats and can be roasted in the oven or sautéed for snacks.

Cultural Practices

Planting Time

Pumpkin is a very tender vegetable. The seeds will not germinate in cool soil, and seedlings are injured by frost. Do not plant until all danger of frost is past. Plant pumpkins for Halloween in early June. If pumpkins are planted too early, they may rot before Halloween.

Spacing and Depth of Planting

Vining pumpkins require a minimum of 50 to 100 square feet per hill. Plant seed 1 inch deep (4 to 5 seeds per hill). Allow 5 to 6 feet between hills. When young plants are well established, thin each hill to the best two plants per hill. Allow 4 feet between hills and 8 feet between rows.

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Pumpkin Cultivars

Crop	Cultivar	Days to Maturity	Seed Per 100 Feet of Row	Remarks
Miniature (1 pound or less)	Jack B Quick, Jack B Little, Wee B Little (AAS winner), Baby Boo, Baby Bear	95	1 ounce	True pumpkins, do not over fertilize with nitrogen
Small and Pie Pumpkins (3 to 6 pounds)	Baby Pam, Pam, Orange Smoothie (AAS winner), Hijinks (AAS winner), Mystic Plus (PM)	100	1 ounce	Pumpkins for pies or carving and decorating
Jack-O-Lantern Medium (10 to 20 pounds)	Spirit (AAS winner), Autumn Gold (AAS winner), Big Autumn, Magic Lantern (PM)	100	1 ounce	Jack-o-lantern types for carving and decorating
Jack-O-Lantern Large (20 to 40 pounds)	Gold Medal, Gold Rush, Howden, Connecticut Field, ProGold 510, Aladdin (PM), Gladiator (PM)	100	1 ounce	Large jack-o-lantern types
Giant (100+ pounds)	Dill's Atlantic Giant, Big Moon, Prize Winner, Big Max	120	1 ounce	Giant pumpkins; 2010 world's record weighed 1,810 pounds
Specialty Types	Casper, Full Moon, Lumina, Jarrahdale, Goose Bumps II, Long Island Cheese, Dickinson, Rouge Vif d'Etampes (Cinderella)	100	1 ounce	Red, white, tan and blue pumpkins
Cushaw (*C. mixta)*	Green Striped, White	110	1 ounce	

Abbreviation: **AAS**: All-American Selection®; **PM:** Powdery Mildew Resistant

Plant bush varieties 1 inch deep (one to two seeds per foot of row) and thin to a single plant every 3 feet. Allow 7 to 12 feet between rows.

Care

An application of well-rotted or composted manure to the garden will aid the growth of pumpkins. Broadcast 2 pounds of 10-10-10 fertilizer per 100 square feet of garden preplant. When the plants are 12 to 15 inches tall and the vines have started to run, side-dress with another 2 pounds of fertilizer per 100 square feet of garden.

Keep pumpkin plants free of weeds by hoeing and shallow cultivation. Irrigate if extended dry periods occur in early summer.

Bees, which are necessary for pollination of squash and pumpkins, are killed by insecticides. If insecticides are used, apply in late afternoon or early evening, when bees are not visiting the blossoms.

Harvesting

Pumpkins can be harvested whenever they are a deep, solid color (most varieties are orange) and the rind is hard. Harvest in late September and October before frost. Cut pumpkins from the vines carefully, leaving 4 to 5 inches of stem attached. Pumpkins without stems usually do not keep well.

Avoid cuts and bruises when handling. Fruit that is not fully mature or that has been injured or subjected to heavy frost will not keep. Store on wood or straw in a dry building where the temperature is above 55 degrees F.

Common Problems

Powdery mildew causes a dusty white mold growth on the upper surface of the leaves. It can also cause shriveled, twisted stems. This growth can kill the leaves prematurely. Apply a suggested fungicide if powdery mildew appears before the fruit is fully grown. Use powdery mildew resistant cultivars.

Cucumber beetles attack seedlings, vines and both immature and mature fruit. They can be controlled with a suggested insecticide. Be alert for an infestation of cucumber beetles and squash bugs in late August because these beetles can damage the mature fruits.

Crossings Between Pumpkins and Squash

Pumpkins and squash are members of the vine crop called "cucurbits." The name is derived from their botanical classification *Cucurbita*. The varieties within a botanical species (whether they are referred to as pumpkins or squash) will cross-pollinate. For example, zucchini will cross with Connecticut field

pumpkins or acorn squash (a winter squash) because they are all members of the same botanical species (*C. pepo*). However, cross-pollination will not affect the taste, shape or color of the fruits unless the seeds are saved and grown the following year.

Frequently Asked Questions

Q. The first flowers that appeared on my pumpkin plant did not form fruits. Why not?

A. This condition is natural for cucurbits (cucumber, gourd, muskmelon, pumpkin, squash, watermelon, etc.). The first flowers are usually male. They furnish pollen for bees to pollinate the female flowers and then drop off the plant. Small fruits are visible at the base of the female flowers. There is no swelling at the base of the male flower stems. If the female flowers are pollinated on the day they open, the flower will close and the young fruit will start to grow. If the flower is not pollinated, it closes and drops off. There are usually 10 to 20 times more male flowers than female flowers present.

Q. When I raise pumpkins in the fall, the foliage becomes covered with a white, powdery, dusty material. What can I do to prevent this?

A. This is powdery mildew, which grows on the outside layer of cells of the leaf. It is caused by an airborne fungus and can be controlled with sprays of benomyl if applied early and on a regular schedule. If the disease is not controlled, it can kill the plant. If possible, grow cultivars that are powdery mildew resistant.

Q. How can I grow very large pumpkins?

A. Use one of the jumbo varieties such as 'Dill's Atlantic Giant.' Plant in mid-May and allow 150 square feet of area per hill. Thin to the best two plants. High fertility, proper insect control and shallow cultivation are essential. Remove the first two or three female flowers after the plants start to bloom so the plants will grow larger before setting fruit. Allow a single fruit to develop on each plant, then pick off all the female flowers for the next couple of weeks. As the fruit gets larger, reposition the fruit closer to the main vine to minimize stress to the vine. During the rest of the summer, irrigate, fertilize and control pests on the pumpkin plant. Many growers of large pumpkin place the fruit on a raised support that keeps the bottom of the pumpkin dry and free of rot. **If you wish to break a world's record for pumpkin, it will have to weigh more than 1,810.5 pounds, the 2010 world record from New Richmond, Wisconsin**.

Q. My grandmother made pies with a green-striped, long-necked pumpkin. Is this variety still available?

A. Yes. The variety is green-striped cushaw. Because of its coarse texture, some cooks prefer it for custards and pies.

Q. What causes my pumpkin to produce very few fruit?

A. Poor fruit set on pumpkin is commonly caused by the plants being too thick. Like other members of the cucurbit family, pumpkins require bees for pollination. They produce male and female flowers, and pollinating insects must transfer the pollen from the male to the female flowers for fruit set to occur. Also, wet, cloudy conditions that slow insect activity will greatly reduce fruit set. Excess nitrogen applications may prevent development of fruit.

Q. Will pumpkins cross with squash, cucumbers or watermelons resulting in off-type fruit?

A. Pumpkins are found in four different species: *Cucurbita pepo*, *Cucurbita maxima*, *Cucurbita moschata* and *Cucurbita mixta*. All four of these species will readily cross with other members of the same species, which may be squash or pumpkin. It is quite difficult for members of two different species, such as *C. pepo* and *C. maxima*, to cross. Even if they do cross, the results will not be apparent until the next generation if the seed were saved from this year's fruit.

Q. What are "pepitas"?

A. The word *pepita* is Spanish for pumpkin seed. Pumpkin seeds can be gathered and roasted from any pumpkin cultivar. They are used in candy, pipian (a Mexican sauce), for cooking and may be pressed for the high-quality oil of the seed. Certain cultivars of pumpkins with "naked seeds," seeds lacking a hard seed coat, are usually grown for production of confectionary and roasting seeds.

Q. Did Native Americans grow and eat pumpkins?

A. Yes. Pumpkins, squashes or marrows are an important part of Native American agriculture as one of the "three sisters" – corn, beans and squash. These crops have been grown in Mesoamerica for over 10,000 years and spread to the rest of the Americas. Two heirloom cultivars that can still be found are 'Lakota' and 'Arikara' squash.

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