Organic Winter Squash:

Growing and Seed Saving Information

100% organic seeds from an independently-owned, farm-based seed company

Types of Winter Squash

Winter squashes (Cucurbita spp.) are warm season tender annuals in the *Cucurbitiacea* family, which includes cucumbers, summer squash, melons, and gourds.

Soil and Nutrient Requirements

Plants need loose, fertile, well drained soil with plenty of organic matter and nitrogen and a pH 5.8-6.8. Fertilize seedlings with fish emulsion if leaves yellow.

Position

Full Sun

Seeding Depth

Seed depth: 1/2-1”

Seeding Rate

Direct seeding: 2-3 seeds/18-36”, thin to one plant per spacing;

Plant Spacing

Plant spacing: for bush varieties 18-24”, for vining 24-36”;

Row Spacing

Row spacing: for bush, semi-bush and short vine types is 6’, for vigorous vining types use 9’. Plants can also be planted in hills of 3-5 plants in rows 3-5’ apart (bush types provide less weed suppression so are typically planted closer than vining types) for easier tractor cultivation

When to Sow

Days to maturity are from direct seeding, subtract 2 weeks if transplanting. Winter squash has a long season, requiring 90-120 frost free days to reach maturity, so it is usually transplanted in northern climates. It can also be direct seeded once danger of frost has passed and soil temperatures reach 70°F. Start transplants indoors 3-4 weeks before last risk of frost. Optimal soil temperature for germination is 85-95°F.

Other Considerations

Black plastic mulch can be used to increase soil temperature for earlier planting.

Frost Tolerant

No. Frost damaged fruit will not store well.

Drought Tolerant

No

Heat Tolerant

Yes

Seed Specs

Acorn and Butternut- 280-375 seeds/oz (312 avg), 4,500-6,000 seeds/lb (5,000 avg); Buttercup and Spaghetti- 135-200 seeds/oz (155 avg), 2,200-3,200 seeds/lb (2,500 avg); Hubbard- 90-125 seeds/oz (105 avg), 1,500-2,000 seeds/lb (1,700 avg); Delicata/Dumpling- 425-590 seeds/oz (470 avg), 6,800-9,500 (7,500 avg). M=1,000

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Seeding Rate

Acorn and Butternut- 7,500 seeds/acre (1.5 lbs.), using 2 seeds/30", 6' row spacing; Buttercup and Spaghetti- 7,500 seeds/acre (3 lbs.), using 2 seeds/30", 6' row spacing; Hubbard- 7,500 seeds/acre (4.4 lbs.), using 2 seeds/30", 6' row spacing; Delicata/Dumpling- 7,500 seeds/acre (1 lb.), using 2 seeds/30", 6' row spacing.

Harvest

Harvest when fruits are full size and have a deep rich color and hard rinds that can't be easily dented with a finger nail. Changing color of the "ground spot" from yellow to cream, gold or orange is another general indicator of ripeness. To harvest, cut stem at least 2" from the fruit: a short or broken stem can lead to rot. Cure after harvest by keeping in a warm, dry location for a few days then

Storage

Store at 50-55°F with 55-75% relative humidity and good air circulation. Delicata and acorn squash do not need curing, but will not store as long as other varieties.

Pest Info

- Striped Cucumber beetle feeding can damage young leaves so extensively that plants either die or are stunted in growth. Dipping or spraying seedlings with kaolin clay can significantly deter infestations. Combine clay with insecticidal soap (such as Safer Brand™, see Supplies) or neem (such as Ahimsa Neem Oil). Use of a trap crop preferred by cucumber beetles, such as blue hubbard squash, lures beetles away from main crop. Crop rotation, removal of crop debris to discourage overwintering populations, and use of floating row cover can be effective in controlling cucumber beetles.
- Squash vine borer will cause plants to look wilted even when moisture is plentiful. Slice open stem and remove and destroy.
- Squash bugs can be controlled by handpicking. Bury or compost plant residues at the end of the season.

Disease Info

- Powdery mildew can be checked by providing good air circulation. Give plants wide spacing and eliminate weeds, especially milkweed, marshcress and yellowrocket. Choose resistant varieties.
- Fruit rots such as anthracnose, scab, and fusarium fruit rot are common under wet conditions. Space plants apart, avoid wetting foliage and water early in the day so that leaves can dry.
- Fusarium Wilt is caused by the fungus *Fusarium oxysporum f. sp. Melonis (Fom)*, and can be seed and/or soil borne.
- Bacterial Wilt and Cucumber mosaic virus should be controlled by removing and destroying infected plants.

Other Known Issues

Insect pollinated. Take caution unless you are hand pollinating, as many winter squash varieties are the same species as many summer squash and pumpkins. Different varieties of the same species need to be isolated by 1/4 mile to prevent cross-pollination. Barriers such as tree lines, woods or buildings existing between the fields can reduce this distance. Treat winter squashes the same as usually done for winter storage. After all squashes have reached this stage, harvest and let them sit for a period of after-ripening for 3-6 weeks or up to several months. Remove the seeds, rinse in water and dry. Use of a 1/2" and 1/4" screen can help with cleaning. Squash seed remains viable for 6 years under cool and dry storage conditions.