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| **How to Grow Asparagus | Guide to Growing Asparagus** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingasparagus.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/or/res/organicgardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Asparagus officinalis* **Varieties:** Mary Washington, Martha Washington, Waltham Washington | | | | | | | | |  | |  |  | |  | Among the earliest crops in spring, plantings of this hardy perennial can last for decades if well cared for, and the fine foliage makes it a natural for edible landscaping. The tender spears are tastiest when eaten as soon as possible after harvest. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 10 - 12 days, 70F to 77F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 3 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained, Acid, Droughty | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun, Part Shade | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 4" to 6" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 18" to 24" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 3 Years | | |  | |   Growing Guide GROWING NOTES Prefers loose, deep soils high in organic matter. Prefers pH near 7.0, but tolerates a wide range. Add lime and fertilizer before establishment.  Small, yellowish green. Older varieties such as Mary Washington have male and female flowers on separate plants. Male flowers are larger and longer than female.  Fernlike, finely dissected texture  Tall with fern-like fronds.   Must grow at least 2 years before harvest, 3 is recommmended  Will produce for about twenty years.  MAINTAINING Carefully consider site before planting this long-lived perennial. Test soil and apply phosphorus, potassium and lime as indictated before planting. Avoid frost pockets as late killing frosts will damage spears.  Plant crowns 4 to 6 weeks before average last frost, 18 to 24 inches apart in trenches 8 inches deep. (5 inches deep for Jersey series cultivars.) Spread roots in bottom of trench and cover with 1 to 2 inches of soil. Gradually cover with more soil as the plants grow.  Do not cut back ferns in fall until they die naturally.  For highest yields, plant all-male hybrids, such as the Jersey series from Rutgers University (Jersey Giant, Jersey King, Jersey Knight). If using older varieties, such as Martha Washington, you can identify the less productive female plants at flowering and replace them with male plants. The flowers on male plants are larger and longer than the female flowers, have six stamens and a small nonfunctional pistil. The female flowers have six small nonfunctional pistils and a well developed, three-lobed stamen.  Water during dry spells during the first year. Do not overwater as plants don’t tolerate water-logged soils.  To blanch asparagus, carefully hill soil over spears or grow under opaque buckets or row covers.  Midsummer mulching with hay, straw, leaves or grass clippings helps control weeds and keep soil from drying out. (Be careful not to bring in weed seeds with your mulch.) Regular applications of compost or well-rotted manure provide a steady source of nutrients.  Weeds can be challenging. Keep plantings well cultivated and mulched to prevent weeds from getting established. Mulch heavily around plantings to keep spreading weeds such as quackgrass from invading. While plants are salt-tolerant, the old practice of using salt to kill weeds is not recommended. With older varieties that are not all-male, weed out volunteer plants from females that set seed. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Asparagus Seed**](http://www.heirloom-organics.com/or/organicasparagusseed.html) | | [**Heirloom Asparagus Seed**](http://www.heirloom-organics.com/he/heirloomasparagusseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Once planted, the asparagus will have to grow for at least two years before you can harvest any spears from the plants.  After the asparagus is three years old,(two years if you started with crowns), you can begin to harvest your asparagus. Harvest asparagus spears from established beds for about 8 weeks. Do not harvest too soon from a new planting.  Harvest spears when they are 4 to 10 inches long. To prevent spears from becoming fibrous, harvest at least every other day. The fibrous condition is caused by overmaturity or inadequate fertility. Spears with loosely formed heads are overmature.  Cut asparagus spears 1 to 2 inches below the soil level. At least one-half the length of the spear should be above the ground. Never cut the spear within 2 inches of the crown to avoid damage to the developed buds. Never cut asparagus spears above the ground and allow stubs to remain. Discontinue harvest when spear diameter becomes less than 3/8 of an inch.  Some gardeners prefer white or blanched asparagus. This is grown by shading the spears with mounds of soil or mulch to exclude light.   Asparagus will produce for about twenty years.  SAVING SEEDS If you are going to save asparagus seeds you will need two miles separating different varieties as they easily cross pollinate. Day caging is a method for growing outbreeding varieties that normally cross pollinate when grown close together. This works for different varieties grown in the same garden or on the same allotment site. When the asparagus starts flowering place a cage over each variety. In the mornings remove one cage to allow insect pollination, replacing the cage at night. Repeat this process in rotation between all the cages and the varieties until the flowering ends.  The ripe berries need to be collected from the plants before they fall to the ground. The berries then need to be rubbed over a screen to release the six seeds, which then need to be washed in several changes of water. Leave the seeds to dry completely for several days and store the dry seeds in a marked envelope for up to five years. |  | | | |

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| **How to Grow Barley | Guide to Growing Barley** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingbarley.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/or/res/organicgardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Hordeum vulgare* **Varieties:** Steptoe | | | | | | | | |  | |  |  | |  | Nutritious, delicious and easy to cultivate, barley is a common sweet grain with loads of health benefits and a variety of purposes. Barley takes little time and energy, grows quickly and is quite cheap. Even black thumbs can successfully sprout this wholesome grain. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 1 - 2 days, 34F to 36F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 2 Years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 20 - 25 seeds sq. ft. | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 10" to 12" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 40 - 55 | | |  | |   Growing Guide GROWING NOTES Barley grows best in cool ground--ideal temperatures hover right around freezing.  For winter barley, October is the best time to plant. For spring barley, plant in January.  Sow the seeds in the rows, ensuring that there are 20 to 25 seeds per square foot of space.  Grow barley as you would wheat. Some varieties are spring planted and some are fall planted. Barley ripens sooner than wheat; spring-planted barley ripens in 60 to 70 days, fall-planted barley about 60 days after spring growth begins. Barley thus fits well into a double-cropping scheme and a variety of crop rotations. Be careful when planting barley with a drill because bearded varieties may cause planting tubes to clog.  Barley is harvested the same as wheat: cut, bundled and shocked to dry. Wear a shirt when harvesting barley as the awns can irritate your skin. Barley may be stored in the bundle and fed to stock without threshing.   MAINTAINING Keep out weeds by weeding by hand for a small crop. An application of herbicide may be necessary for a large crop to keep out the weeds.  Barley does not require too much watering. Too much watering can lead to decomposition. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Barley Seed**](http://www.heirloom-organics.com/or/organicbarleyseed.html) | | [**Heirloom Barley Seed**](http://www.heirloom-organics.com/he/heirloombarleyseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Barley has reached full harvest (or maturity) when it's golden in color and brittle. Barley moves easily in wind and resembles a wheat field. After you cut the barley plants, your next move depends entirely on your intended use. If you plan on using it as animal feed, chances are you have a machine to help with the cutting. If you are malting it (for beer, other alcohol and malted foods), it also may be a mass production for which you have helpful tools. For human food, cut the barley plants manually.  Harvesting is generally done manually by using sickle. Harvesting time of barley is depending on the time of sowing, cropping period and maturity. Generally cropping period of barley in the hills is varies from 6-7 month. So, rabi barley is harvested from the end of April to end of May and the summer barley is harvested by September – October. Barley is more prone to shattering. So, in a order to reduce this type of loss, barley crop should be harvested before being fully matured and in the morning hours.   SAVING SEEDS All varieties are out-crossing plants that are wind pollinated and will cross readily with one another. If you wish to save seed that will be strong for the long haul, you will need to plant it in large blocks of around 500 plants, save the best 100 cobs and mix the seed from those cobs, to take next years seed from. Hand pollination is possible. |  | |  |  |  | | | |  | |

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| **How to Grow Beans | Guide to Growing Beans** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingbean.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/or/res/organicgardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Names:** *Cicer arietinum, Phaseolus lunatus, Phaseolus vulgaris, Vigna unguiculata, Vicia faba* **Varieties:** [Black](http://www.heirloom-organics.com/guide/va/1/guidetogrowingblackbeans.html), [Black-eyed Pea](http://www.heirloom-organics.com/guide/va/1/guidetogrowingblackeyedpeas.html), [Black Turtle](http://www.heirloom-organics.com/guide/va/1/guidetogrowingblackturtlebeans.html), [Broad](http://www.heirloom-organics.com/guide/va/1/guidetogrowingbroadbeans.html), [Butter](http://www.heirloom-organics.com/guide/va/1/guidetogrowingbutterbeans.html), [Chickpea](http://www.heirloom-organics.com/guide/va/1/guidetogrowingchickpeas.html), [Cowpea](http://www.heirloom-organics.com/guide/va/1/guidetogrowingcowpeas.html), [Dark Red Kidney](http://www.heirloom-organics.com/guide/va/1/guidetogrowingdarkredkidney.html), [Fava](http://www.heirloom-organics.com/guide/va/1/guidetogrowingfava.html), [Garbanzo](http://www.heirloom-organics.com/guide/va/1/guidetogrowinggarbanzo.html), [Great Northern White](http://www.heirloom-organics.com/guide/va/1/guidetogrowinggreatnorthernwhite.html),  [Green](http://www.heirloom-organics.com/guide/va/1/guidetogrowinggreenbeans.html), [Kidney](http://www.heirloom-organics.com/guide/va/1/guidetogrowingkidney.html), [Lima](http://www.heirloom-organics.com/guide/va/1/guidetogrowinglima.html), [Navy](http://www.heirloom-organics.com/guide/va/1/guidetogrowingnavybeans.html), [Pinto](http://www.heirloom-organics.com/guide/va/1/guidetogrowingpinto.html), [Red](http://www.heirloom-organics.com/guide/va/1/guidetogrowingredbeans.html), [Red Kidney](http://www.heirloom-organics.com/guide/va/1/guidetogrowingredkidney.html), [String](http://www.heirloom-organics.com/guide/va/1/guidetogrowingstringbeans.html), [White](http://www.heirloom-organics.com/guide/va/1/guidetogrowingwhitebeans.html) | | | | | | | | |  | |  |  | |  | Beans are often categorized by two sets of criteria: type of growth and stage at which they're usually picked and eaten. The plants can grow either as [**bush**](http://www.heirloom-organics.com/guide/va/1/guidetogrowingbushbeans.html) or [**pole**](http://www.heirloom-organics.com/guide/va/1/guidetogrowingpolebeans.html) type beans, and are also categorized as [**snap**](http://www.heirloom-organics.com/guide/va/1/guidetogrowingsnapbeans.html), [**shell**](http://www.heirloom-organics.com/guide/va/1/guidetogrowingshellbeans.html) and [**dry**](http://www.heirloom-organics.com/guide/va/1/guidetogrowingdrybeans.html) ([**Drying**](http://www.heirloom-organics.com/guide/va/1/guidetogrowingdryingbeans.html)), depending on degree of development at time of harvest. All beans are easy to grow, and all need the same growing conditions - the prime one being plenty of warmth. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 8 to 10 days, 70F to 80F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 5 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | well-drained, slightly acidic | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 1" to 2" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 3" to 4" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 60 to 100 | | |  | |   Growing Guide GROWING NOTES Beans generally do not respond well to transplanting, and are usually direct sown around or just after the last spring frost. The most important point about growing beans is not to plant them too early. They will rot in cool, damp soil. Even so, many beans require a long growing season of 80 days or more. To get an earlier start, you can put down black plastic, to warm the soil.  Most beans should be sown with the eye of the been facing downward, 1-2" deep, approximately 4-6" apart, with 24" or more between rows. The ideal site will be sunny, well-drained, moderately fertile, and slightly acidic (pH 6.0-7.0). Additionally, bean plants should be well-ventilated to promote proper development and deter mildew or mold that can trouble plants. Beans should not be grown in the same spot more than once every four years, and can be mutually beneficial with corn, strawberries and cucumber. Avoid planting beans near onion or fennel.  Plant bush beans in either rows or blocks, with 4-6 inches between each seed. Plant the seeds 1-2 inches deep and be sure to water the soil immediately and regularly, until it sprouts. Pole beans will need some type of support to grow on. Be sure the trellis, teepee, fence or whatever is in place before you seed. Plant seeds at a rate of about 3-6 seeds per teepee or every 6 inches apart.  MAINTAINING BEANS When watering, try to avoid getting the leaves wet as this can promote fungus or other damaging conditions that beans can be susceptible to. Most types of beans are somewhat drought resistant, but check the surface of the soil frequently and water when the top layer has become dried out.  Once established, beans generally will not require fertilizing and will generate their own nitrogen. However, if the leaves of young plants are pale this is an indication of nitrogen deficiency and starts can be fertilized with with fish emulsion or other natural nitrogen rich fertilizer.  Bush beans begin producing before pole beans and often come in all at once. Staggered planting, every 2 weeks, will keep your bush beans going longer. Pole beans need time to grow their vines, before they start setting beans. The pole bean crop will continue to produce for a month or two.  Pole beans may need some initial help in climbing. Keep the bean plants well watered. Mulch helps keep their shallow roots moist. Long producing pole beans will benefit from a feeding or a side dressing of compost or manure about half way through their growing season. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Bean Seed**](http://www.heirloom-organics.com/or/organicbeanseed.html) | | [**Heirloom Bean Seed**](http://www.heirloom-organics.com/he/heirloombeanseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING Harvesting beans is an ongoing process. You can start to harvest anytime, but gardeners usually wait until the beans begin to firm up and can be snapped. They are generally about as think as a pencil then. Don't wait too long, because beans can become overgrown and tough almost overnight. Harvest by gently pulling each bean from the vine or by snapping off the vine end, if you are going to be using the beans right away.  Depending on whether the bean is a snap, shell, or dry variety will impact when and how the bean should be harvested.  **Snap beans** are harvested while the pod and enclosed seeds are still relatively immature. Compared to the other two types of beans, snap beans have the smallest window for an ideal crop. Beans that are harvested too early will not develop the proper flavor and texture. On the other hand, beans that are allowed to develop on the plant too long will be tough and somewhat unpalatable. Perhaps the best simple indicator for snap beans is the diameter of the pods. Generally, most varieties will yield the best snap beans with a diameter between ⅛-1/4". Maybe the best way to determine suitability for harvest is to sample a pod or two before making a complete harvest. It is worth noting that many varieties of snap beans that are allowed to develop completely also make good dry beans.  **Shell beans** are harvested at a later time than snap beans, once the pods have started to fill out and the enclosed seeds developing inside are apparent. Beans of such varieties are removed from pods and are often eaten fresh, but are sometimes dried.  **Dry beans** are not harvested until the pods and enclosed seeds have reached complete maturity, and will often require threshing to remove extraneous pod material. When growing dry beans, it is especially important that growing plants have plenty of space and ventilation so that pods will dry out. If experiencing a spell of rain late in the season once pods have matured, plants can be removed from ground and hung upside down indoors to allow dessication to continue.  SAVING SEEDS It is a suggested that you earmark a couple of plants at the beginning of the season for seed saving. Don't pick ANY pods from them to eat - just pick the crisp brown pods at the end of the season. Don't feed them, or water them unless it is very dry - as this can encourage leafy growth rather than pod development. There is no point in picking green pods as the seeds are not mature enough at this stage.  Did you know you can save the roots, overwinter in a frost-free place, and replant next year? Runner beans are perennial, but are frost sensitive, so die back in our climate. However, if the roots are dug up and kept in suitable conditions, the plants often get away early and crop faster. If you grow a lot of beans, this may not be a practical option, but you could try it with one or two plants perhaps. Store the roots in a frost-free place, buried in slightly moist sand or leafmould, or something similar. |  | |  |  |  | | | |  | | |

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| **How to Grow Broccoli | Guide to Growing Broccoli** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingbroccoli.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/or/res/organicgardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Brassica oleracea* **Varieties:** Atlantic, Green Sprouting, De Cicco, Purple Sprouting, Waltham 29 | | | | | | | | |  | |  |  | |  | Broccoli is a member of the cabbage family, and grown for its edible, immature flower heads. One of the most nutritious vegetables, it contains high levels of antioxidants.  This cool-season crop grows best when daytime temperatures are in the 60s F. Grow in both spring and fall, but avoid mid-summer crops as hot weather can cause premature bolting. Romanesco types are especially handsome choices for edible landscaping. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 4 to 7 days,45F to 85F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 3 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 6 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 12" to 20 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 55 to 60 | | |  | |   Growing Guide GROWING NOTES Can tolerate light shade but will slow maturity.  Prefers well-drained, fertile soil high in organic matter, pH 6.0 to 7.5. Can tolerate slightly alkaline soil. Needs plentiful, consistent moisture.  Biennial grown as an annual.  Requires good soil, timely planting and protection from pests.   Broccoli prefers cool temperatures. In many regions it can be grown as both a spring and fall crop. Choose varieties touted for their abundant side shoots to extend the harvest; once the central head is harvested, these side shoots will continue to produce small heads for weeks   PLANTING INSTRUCTIONS Select a site with full sun and well-drained soil. Prepare the garden bed by using a garden fork or tiller to loosen the soil to a depth of 12 to 15 inches, then mix in a 2 to 4-inch layer of compost.   Start spring transplants indoors five to seven weeks before the last spring frost date, or buy nursery transplants three weeks before the last spring frost date. Where the weather is warm, select a variety that is bolt resistant. Set out transplants three to four weeks before the last spring frost. Space plants 18 inches apart. Protect transplants from hard frosts with newspapers, plastic cones, paper bags, or baskets. Provide a windbreak to reduce transplant shock and moisture loss. For fall crops, direct seed the broccoli in the garden 85 to 100 days before the average first fall frost date.  Prefers well-drained, fertile soil high in organic matter, pH 6.0 to 7.5. Can tolerate slightly alkaline soil. Needs plentiful, consistent moisture.   MAINTAINING Sow seeds indoors 6 to 8 weeks before average last spring frost. Keep soil warm (about 75 F), until germination. Then keep plants around 60 F. Provide direct sun so plants don’t get leggy. When plants are 4 to 6 weeks old, transplant into garden 12 to 20 inches apart.  Use wide spacings if you want to harvest large central heads. Closer spacings will produce smaller central heads. But if you harvest secondary heads you will get a greater total yield from the closer spacings.  Larger, older transplants are more likely to bolt when exposed to cool temperatures in the garden. Transplant when plants have four or five true leaves.  Some cultivars will form small “button” heads when the weather turns warm following a 10-day stretch when high temperatures only reach the 40s F.  Can be direct-seeded as soon as you can work the soil. Will germinate at soil temps as low as 40 F. Plant ½ to ¾ inch deep, about 3 inches apart. Thin to final spacings.  Direct seed in midsummer for fall crop, or start transplants in late May and transplant in late June or early July.  In Zone 7 and warmer, fall broccoli crops will often overwinter.  Use low nitrogen fertilizer at planting. Too much nitrogen fertilizer may cause hollow stems.  Plants have shallow root systems. Avoid even shallow cultivation. Mulch to protect roots, reduce weed competition and conserve moisture.  Use floating row covers to help protect from early insect infestations.  To help reduce disease, do not plant broccoli or other cole crops in the same location more than once every three or four years. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Broccoli Seed**](http://www.heirloom-organics.com/or/organicbroccoliseed.html) | | [**Heirloom Broccoli Seed**](http://www.heirloom-organics.com/he/heirloombroccoliseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Harvest for peak quality when the buds of the head are firm and tight. If buds start to separate and the yellow petals inside start to show, harvest immediately.   SAVING SEEDS Gather seed stalks when seed pods are dry being careful to prevent losses due to shattering. Use a 1/8" screen to help with cleaning. Broccoli seed remains viable for 5 years under cool and dry storage conditions. |  | | | |

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| **How to Grow Brussels Sprouts | Guide to Growing Brussels Sprouts** |
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>>**](http://www.heirloom-organics.com/guide/va/guidetogrowingbrusselssprouts.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/or/res/organicgardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Brassica oleracea* **Varieties:** Evesham Special, Groninger, Long Island Improved, Mezzo Nano, Red Bull, Roodnerf, United | | | | | | | | |  | |  |  | |  | Brussels sprouts are slow-growing, long-season vegetables belonging to the cabbage family. The sprouts look like miniature cabbages and form where the leaves meet the stems. Freshly harvested, lightly steamed sprouts are a delight. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 5 to 8 days, 45F to 85F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 5 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 3" to 4 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 18" to 24 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 80 to 105 | | |  | |   Growing Guide GROWING NOTES Prefers well-drained, fertile soil high in organic matter, pH 6.0 to 7.5. Can tolerate slightly alkaline soil. Needs plentiful, consistent moisture.   Biennial grown as an annual.  Requires good soil, timely planting and protection from pests.  Foliage and sprouts have bluish cast.  MAINTAINING Grow in summer for fall harvest, similar to a fall cabbage or broccoli crop.  Direct seed about 4 months before expected fall frost. Plant seed 3 to 4 inches apart, ¼ to ½ inch deep in rows about 30 inches apart. Thin plants to about 18 inches apart.  Start transplants in late May and transplant in late June or early July. Space plants 18 to 24 inches apart.  Plants have shallow root systems. Avoid even shallow cultivation. Mulch to protect roots, reduce weed competition and conserve moisture.  Use floating row covers to help protect from early insect infestations.  To help reduce disease, do not plant Brussels sprouts or other cole crops in the same location more than once every three or four years. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Brussels Sprout Seed**](http://www.heirloom-organics.com/or/organicbrusselssproutseed.html) | | [**Heirloom Brussels Sprout Seed**](http://www.heirloom-organics.com/he/heirloombrusselssproutseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  It takes some time for sprouts to mature, so you will begin to harvest them about twenty weeks after sowing. Sprout formation will begin at the base of the stalk; to encourage development of the upper sprouts for uniform maturity, pinch out the growing tip of the plant in late summer when bottom sprout is as big as an average thumb. Or, harvest sprouts individually from the bottom of the stalk when they are about 1-1.5” in diameter. Fall planted Brussels sprouts will become sweeter after a few light frosts.   Once harvested sprouts can be stored in three ways. Either, leave them on the stem and hang them somewhere cool and dark, a shed is ideal. This way they will keep for up to a month. Alternatively, pick the sprouts from the stem, and keep them in your fridge. This way they will last about a week. If you want to freeze them, simply remove any dead or discoloured leaves, and using a sharp knife place an X in the base of each sprout. Blanch for a few minutes in boiling water, then plunge them into very cold water to cool. Stored in freezer bags they will keep for approximately six months.  SAVING SEEDS Harvesting the seed is done carefully when 60–70% of the pods have turned brown and most of their inner seeds are light brown and firm.  Harvested seed stalks are cured for 1–2 weeks. Pods are then threshed with sticks and sifted by hand. Seed is brittle and should not be crushed when handled. Seed is dried in partial sun, then cleaned and stored.  Dried seeds can be safely stored for at least three years. Place seeds in jars, manila envelopes, cloth or mesh bags, plastic containers, or foil envelopes. Protect seed from sunlight.  Store seeds in a cool (below 15 °C is ideal), dry location. Place the seeds in a refrigerator for longterm storage. For short-term storage, keep the seeds in a cool, shady and dry place. |  | | | |

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| **How to Grow Cabbage | Guide to Growing Cabbage** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingcabbage.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/or/res/organicgardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Brassica oleracea* **Varieties:** Brunswick, Chinese Michihli, Copenhagen Market, Danish Ballhead, Drumhead, Early Jersey Wakefield, Golden Acre, Mammoth Red Rock, Red Acre | | | | | | | | |  | |  |  | |  | This cool-season crop grows best when daytime temperatures are in the 60s F. Direct-seed or transplant spring crops for fresh use in summer. Plant fall crops for winter storage or sauerkraut. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 4 to 7 days, 45F to 85F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 5 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained, Fertile | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 1-1/2 " to 2 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 12" to 15 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 60 to 90 | | |  | |   Growing Guide GROWING NOTES Can tolerate light shade but will slow maturity. Light shade can be beneficial in warm weather.  Prefers well-drained, fertile soil high in organic matter, pH 6.0 to 7.5. Can tolerate slightly alkaline soil. This heavy feeder also needs plentiful, consistent moisture.   Biennial grown as an annual.   Requires good soil, timely planting and protection from pests.  Some green varieties have a bluish cast.  MAINTAINING Sow seeds indoors 6 to 8 weeks before average last spring frost. Keep soil warm (about 75 F) until germination. Then keep plants around 60 F. Provide direct sun so plants don’t get leggy. When plants are 4 to 6 weeks old, transplants into garden 12 to 24 inches apart, in rows 18 to 34 inches apart. Use closer spacings for smaller, early varieties, wider spacings for larger, late-season varieties.  Can be direct seeded as soon as you can work the soil. Will germinate at soil temps as low as 40 F. Plant ½ to ¾ inch deep, about 3 inches apart. Thin to final spacings.  Direct seed in summer for fall crop, or start transplants in late May and transplant in late June or early July.  Plants have shallow root systems. Avoid even shallow cultivation. Mulch to protect roots, reduce weed competition and conserve moisture.  Use floating row cover to protect crop from early pests.  When heads are mature, they are prone to splitting in response to any stress or a rain following a dry period. Avoid splitting by choosing varieties that resist splitting, spacing plants close together (8 to 12 inches for early varieties, 12 to 16 inches for later varieties), using shovel to sever roots on one side about 6 inches from the plant, or twisting plants after heads have firmed to break some of the roots.  To help reduce disease, do not plant cabbage or other cole crops in the same location more than once every three or four years.   When cabbages are 4 to 5 inches tall, thin or transplant to stand 18 to 24 inches apart. Apply a thick layer of mulch to retain moisture. Water plants during the summer if rainfall is less than 1 inch per week. Contact your local county extension office for controls of common cabbage pests such as aphids, root maggots, cabbageworms, and cabbage loopers. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Cabbage Seed**](http://www.heirloom-organics.com/or/organiccabbageseed.html) | | [**Heirloom Cabbage Seed**](http://www.heirloom-organics.com/he/heirloomcabbageseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Cabbage can be harvested anytime after the heads form. For highest yield, cut the cabbage heads when they are solid (firm to hand pressure) but before they crack or split. When heads are mature, a sudden heavy rain may cause heads to crack or split wide open. The exposed internal tissue soon becomes unusable. Harvest and salvage split heads as soon as possible after they are discovered.  In addition to harvesting the mature heads of the cabbage planted in the spring, you can harvest a later crop of small heads (cabbage sprouts). These sprouts develop on the stumps of the cut stems. Cut as close to the lower surface of the head as possible, leaving the loose outer leaves intact. Buds that grow in the axils of these leaves (the angle between the base of the leaf and the stem above it) later form sprouts. The sprouts develop to 2 to 4 inches in diameter and should be picked when firm. Continue control of cabbage worms and other pests. If this control cannot be maintained, remove and destroy or compost the stumps, because they serve as a breeding ground for diseases and insect pests.   SAVING SEEDS This is a two-year project, and also the chance that your prize cabbage variety will swap pollen with both other cabbages and cabbage family relatives. Keep plant intended for seed at least 300 feet from them. Use a loose mulch to help plant overwinter, or in colder zones, unearth the plant, roots and all, and keep them indoors on a cool, humid spot for setting out in the spring. In the second year, you can help the flower stalk to come forth by slashing an X in the top of each cabbage's head. Wait until the seed heads turn brown before collecting the seeds.  Once they start to dry, keep a close eye on them, as they tend to shatter and drop their seed. Its best to cut entire plants once most of the pods begin to look dry, and then leave them to mature further on a sheet indoors. Once they are thoroughly dry, the seeds will come out of the pods very easily; the simplest way is to trample the plants on top of a large sheet, and then sieve out the debris. |  | | | |

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| **How to Grow Cantaloupe | Guide to Growing Cantaloupe** |
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Cantaloupe >>](http://www.heirloom-organics.com/guide/va/guidetogrowingcantaloupe.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/or/res/organicgardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Cucumis Melo* **Varieties:** [Crenshaw](http://www.heirloom-organics.com/guide/va/1/guidetogrowingcrenshawmelon.html), [Hales Best](http://www.heirloom-organics.com/guide/va/1/guidetogrowinghalesbestcantaloupe.html), [Imperial 45](http://www.heirloom-organics.com/guide/va/1/guidetogrowingimperial45cantaloupe.html), [Iroquois](http://www.heirloom-organics.com/guide/va/1/guidetogrowingiroquoiscantaloupe.html), [Mushmelon](http://www.heirloom-organics.com/guide/va/1/guidetogrowingmushmelon.html), [Muskmelon](http://www.heirloom-organics.com/guide/va/1/guidetogrowingmuskmelon.html), [Persian](http://www.heirloom-organics.com/guide/va/1/guidetogrowingpersianmelon.html), [Rockmelon](http://www.heirloom-organics.com/guide/va/1/guidetogrowingrockmelon.html), [Top Mark](http://www.heirloom-organics.com/guide/va/1/guidetogrowingtopmarkmelon.html) | | | | | | | | |  | |  |  | |  | Cantaloupe generally refers to any melon with the familiar orange, juicy flesh. In times past, it referred only to those smooth, non-netted varieties native to Europe. As orange-fleshed melon began to increase in popularity, 'cantaloupe' came to be used somewhat interchangeably with other terms, among them muskmelon, rockmelon and others. Cantaloupe melons often range between 1-11 pounds in weight, and share many of the same growing preferences as other melons. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 3 to 5 days, 60F to 95F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 4 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | High Fertility | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 12" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 4' to 6' apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 65 to 86 | | |  | |   Growing Guide GROWING NOTES **Indoor Starting** As they require a long growing season, melons are best started indoors approximately 3 weeks prior to the last frost of the season. Sow seeds ½" deep in flats or small pots, sowing 3 seeds per pot. Keep medium moist while awaiting germination. Additionally, melon seeds will show better germination rates with heat. Keep the soil between 80-90 degrees, using a heat mat if necessary.  Once seeds start to germinate, lower soil temp slightly to the mid 70s, for 1-2 weeks, also decreasing water. Thin to one plant per cell or pot. Once the first set of true leaves has developed, reduce waterings once more, but do not allow plant to become desiccated.  Harden plant by gradually exposing to outdoor conditions. Transplant to permanent site in late spring after the last frost has passed. If possible, transplant on an overcast day to minimize wilting and create a more amenable environment for your young plant.  **Outdoor Starting** If you have long, hot growing seasons, melons can direct-seed into garden. To ensure ripening in areas with shorter growing seasons and cooler weather, choose fast-maturing varieties, start plants inside, use black or IRT plastic mulch to warm soil and use fabric row covers to protect plants.  Direct-seed 1 to 2 weeks after average last frost when soil is 70 F or warmer. Plant ½ inch deep, 6 seeds per hill, hills 4 to 6 feet apart; or 1 foot apart in rows 5 feet apart. Can plant at closer spacings if trellised. Thin to 2 to 3 plants per hill.  **Choosing a Site** Prefers warm, well-drained, soil, high in organic matter with pH 6.5 to 7.5. Consistent, plentiful moisture needed until fruit is about the size of a tennis ball. Soil temperatures below 50 F slow growth. Consider using black plastic and fabric row covers to speed soil warming. Sandy or light-textured soils that warm quickly in spring are best.  **Tender annual** In many areas, successful crops require starting plants indoors, using plastic mulch to warm soil, and fabric row covers to protect young transplants.  MAINTAINING For transplanting, sow seeds indoors ¼ inch deep in peat pots (2-inch square or bigger), 2 to 4 weeks before setting out. Plants should have one or two true leaves when transplanted.  Transplant at same spacings as direct-seeded crops - 2 to 3 plants per hill in hills spaced 4 to 6 feet apart, or 1 to 2 feet apart in rows 5 feet apart. Transplants are delicate and roots are sensitive to disturbance. If you need to thin, use scissors. Keep soil intact around plant when transplanting.  Mulch plants after soil has warmed to help maintain consistent moisture and suppress weeds.  If using fabric row covers, remove at flowering to allow pollination by bees. Good pollination is critical to fruit set.  Plants require consistent moisture until pollination. Once fruits are about the size of a tennis ball, only water if soil is dry and leaves show signs of wilting.  To prevent insect damage to developing fruits, place melons on pots or pieces of wood.  If growing melons on a trellis, support fruit with slings made from netting, fabric, or pantyhose. Trellising improves air circulation around plants and can help reduce foliar disease problems. Choose small-fruited varieties and reduce plant spacing.  For large plantings, leave a strip of rye cover crop every second or third row perpendicular to prevailing winds to protect plants from damaging wind.  To reduce insect and disease problems, avoid planting cucumber family crops (melons, squash, pumpkins) in the same spot two years in a row.  Do not let your melon plants get dried out during the growing season. They are not tolerant of drought. Additionally, be cautious not to over-water plants as this can negatively impact the taste and flavor later on. Keep soil moist but not soggy. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Cantaloupe Seed**](http://www.heirloom-organics.com/or/organiccantaloupeseed.html) | | [**Heirloom Cantaloupe Seed**](http://www.heirloom-organics.com/he/heirloomcantaloupeseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Generally, most of the fruits on an individual plant will ripen somewhat concurrently within a short amount of time. Once the first melon is ready to harvest, the others on that plant are likely soon to follow. An obvious sign of maturity in most melon varieties will occur when the rind changes color from green or grey to yellow. Additionally, once ripe the stem is easily separated from the vine by hand. Specific melon varieties can have show slightly different cues once they are ready for harvest.  Harvest muskmelon or cantaloupe when the stem pulls easily and cleanly from the fruit. If the stem has to be removed forcibly from the melon, it is not fully mature. In addition, mature muskmelons have a distinct, musky aroma and the end opposite the stem should be slightly soft. Honeydew will not slip from the stem when ripe. Harvest honeydew melons when the end opposite the stem softens and the skin takes on a creamy yellow color.  SAVING SEEDS Pick the fruit at the peek of ripeness. The seeds inside the melon will have matured by this time and can be harvested as you enjoy the outer fruit. Cut the melon with a sharp knife and carefully scoop out the inner seed lining and save them for processing the seeds. Place the seedy pulp into a bowl and remove as much of the pulp as possible by hand. Discard the pulp and add warm water to the bowl. You can then skim the surface of the water to remove seeds that will not produce plants, as they will be floating on the top. Rinse the rest of the seeds once more to remove any remaining sugar and pulp and place on a screen to dry. Allow these seeds to dry for about 3 days. Place the seeds in a bag and mark with type of seeds they are and when they were harvested. Place the bag in the freezer until next season. |  | |  |  |  | | | |

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| **How to Grow Carrots | Guide to Growing Carrots** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingcarrots.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/or/res/organicgardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Daucus carota* **Varieties:** Amstrong, Atomic Red, Campestra, Danvers, Gold King, Little Fingers, Lunar White, Mignon, Minicor, Royal Chantenay, Scarlett Nantes, Snow White, Solar Yellow | | | | | | | | |  | |  |  | |  | Careful attention to the soil makes these Vitamin A-rich roots a snap to grow. Plant in deep, stone-free soil (a raised bed is great) with a fine surface. Thin and weed carefully, and mulch to keep soil cool. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 7 to 21 days, 50F to 85F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 3 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 1-1/ 2 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 1" to 4 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 60 to 80 | | |  | |   Growing Guide GROWING NOTES Will tolerate very light shade.   Good quality roots require plentiful moisture and soil that is deep, loose, free of stones, and high in organic matter. Roots can become twisted and forked in heavy, stony soil. Prefers pH of 6.0 to 6.8 but can tolerate 5.5 to 7.5. Requires only moderate nitrogen. Too much can cause root branching.   Biennial grown as an annual.  Great crop for kids if planted in deep soil and site gets full sun.   MAINTAINING Plant in spring, 2 to 3 weeks before last frost, ½ inch deep, ½ inch apart, in rows 12 to 24 inches apart. Deeply worked soil with fine, weed-free seedbed will greatly improve chances of successful crop.   Carrots are slow to germinate (1 to 3 weeks), and often germinate unevenly over a period of several weeks. To speed germination, water lightly daily if soil is dry.   Thinning is critical to reduce competition from neighboring plants. Thin to 1- to 4-inch spacings (depending on size of root desired) before plants are 2 inches tall. Cutting rather than pulling reduces disturbance of the remaining plants.   To improve germination in dry weather: Make a small furrow, about 2 inches deep. Plant seed and cover with about ½ inch of soil. Cover furrow with a board to retain soil moisture until seeds germinate.   Tip: Sow radishes in the same row. They germinate quickly, break the soil crust, and mark the row. Thin and/or harvest radishes before they compete with carrots.   Use seed tape or pelleted seed for more even spacings and less thinning. Or mix seed in roughly equal proportions with sand, fine vermiculite, or dried coffee grounds.   Mulch to keep soil cool, conserve moisture and to keep exposed "shoulders" from turning green and bitter. Another option is to hill soil over the shoulders.   Make additional plantings every three weeks through midsummer for continuous supply and fall harvest. Sowing in very early spring is possible, but some varieties will bolt if temperatures are too cold. Plant crops for fall harvest about 10 to 12 weeks before first frost.  Root quality is best when soil temperatures are 60 F to 70 F. The shape of the root is determined within the first few weeks after germination when the new plant extends its taproot deep into the soil. If it encounters obstacles (such as rocks or high water table) or is damaged, shape and quality of the root will suffer.   To prevent diseases, don't plant carrots in the same spot more than once every 3 years. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Carrots Seed**](http://www.heirloom-organics.com/or/organiccarrotsseed.html) | | [**Heirloom Carrots Seed**](http://www.heirloom-organics.com/he/heirloomcarrotsseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Begin harvesting carrots when they turn bright orange (normally 60 to 80 days after planting, depending on the variety).  Because all sizes of carrots are edible they can be harvested over a long period of time. One of the main benefits of growing carrots is that they will remain fresh in the soil for many months, even after the tops have been killed by frost. If your garden soil is well drained you can keep carrots in the ground and covered with leaves or straw until the soil begins to freeze.  Picking a small amount of carrots for a family meal can be done with a small hand trowel being careful to stay far enough away from the plant as to avoid damaging the carrot itself. Harvesting carrots on a larger scale can be done by using a pitchfork or shovel and dig alongside the row. Be careful not to stab or cut the roots of the carrot. Pull the tops up and shake the soil off the roots. Storing carrots is easily done and if done properly they will stay fresh up to 3 to 4 months. Simply wash off all excess soil and place them in airtight containers or plastic bags.  SAVING SEEDS To harvest your carrot seed, keep an eye on the umbels of flowers, and cut them off with pruning shears as they start to turn brown and dry. If you have plenty of plants, just save seed from the first and second umbels of flowers to appear on each plant, as these will give the biggest and best seed. Dry the seed heads further inside, and then rub them between your hands or in a sieve to separate them. You will notice that the seeds have a 'beard' which is removed in commercial seed to make them easier to pack.  You can sieve the seeds further to remove more of the chaff, but there is no need to get the seed completely clean - just sow slightly more thickly to allow for the chaff mixed in.  Dried carrot seed is relatively short lived, but if it is stored somewhere cool and dry, it should give good germination for 3 years. Seeds can be safely stored for at least three years. Place seeds in jars, manila envelopes, cloth or mesh bags, plastic containers, or foil envelopes. The best containers are air-tight, such as a sealed glass jar, metal can, or foil envelope. Protect seed from sunlight.Store seeds in a cool (below 15 °C is ideal), dry location. Place the seeds in a refrigerator for long term storage. |  | | | |

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| **How to Grow Cauliflower | Guide to Growing Cauliflower** |
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Cauliflower >>**](http://www.heirloom-organics.com/guide/va/guidetogrowingcauliflower.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/or/res/organicgardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Brassica oleracea* **Varieties:** Galleon, Purple Cape, Rosalind, Self-Blanche, Snowball | | | | | | | | |  | |  |  | |  | The most finicky and difficult of the cole (cabbage family) crops to grow, cauliflower flourishes when temperatures are moderate. Purple, orange and yellow-green colored varieties make good addition to flower gardens. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 4 to 7 days, 45F to 85F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 5 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 2" to 3 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 15" to 24 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 68 to 71 | | |  | |   Growing Guide GROWING NOTES Can tolerate light shade but will slow maturity. Light shade can be beneficial in warm weather.  Prefers well-drained, fertile soil high in organic matter, pH 6.0 to 7.5. Can tolerate slightly alkaline soil. Needs plentiful, consistent moisture.  Biennial grown as an annual.   In addition to tying heads to blanch white-headed varieties, cauliflower requires good soil, timely planting and protection from pests.   Some varieties have white stems and veins.  MAINTAINING Most finicky of the cole (cabbage family) crops. Heads will not develop properly in hot or dry weather, so timing is crucial. Will tolerate cold as well as other cole crops in spring, but mature heads are not resistant to hard freezes.   Sow seeds indoors 4 to 6 weeks before average last spring frost. Keep soil warm (about 75 F), until germination. Then keep plants around 60 F. Provide direct sun so plants don't get leggy. When plants are 4 to 6 weeks old, transplant into garden 15 to 24 inches apart in rows 24 to 36 inches apart. Wait until soil temperature is 50 F or above and danger of frost is past before transplanting.   Larger, older transplants are more likely to bolt when exposed to cool temperatures in the garden. Transplant when plants have four or five true leaves.   Some cultivars will form small "button" heads when the weather turns warm following a 10-day stretch when high temperatures only reach the 40s F.  Direct seeding is more difficult than with other cole crops, especially in spring. For fall crops, plant seed in late-spring early summer ½ to ¾ inch deep, about 3 inches apart. Thin to final spacings. Or start transplants in late May and transplant in late June or early July.   Plants have shallow root systems. Avoid even shallow cultivation. Mulch to protect roots, reduce weed competition and conserve moisture.   To preserve the white color of the curd, use string or rubber bands to secure outside leaves over the head when it is about 2 to 3 inches in diameter. From tying to harvest may take less than a week in summer or as long as a month in fall.   Too much sun, heat or nitrogen fertilizer can cause "ricey" heads where the curd separates into small, rice-like grains. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Cauliflower Seed**](http://www.heirloom-organics.com/or/organiccauliflowerseed.html) | | [**Heirloom Cauliflower Seed**](http://www.heirloom-organics.com/he/heirloomcauliflowerseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  When the curd flower head is 2 to 3" in diameter, pull three or four large leaves over the curd and fasten with a rubber band at the tips to shade and blanch the curd. Normal blanching time is 3 to 4 days, but may take longer in the fall.  Self-blanching types do not require this type of curd covering process.  Plants started in midsummer for a fall harvest will withstand light fall frosts and develop superior quality produce with a milder flavor than those that mature in hot weather. Light frosts will control insect pests allowing for fewer insect problems upon harvest.  Cauliflower should be harvested while the curd is still firm. When it is over-ripe, it becomes grainy or "ricey." When pulling off the curd, don't pull off all of the leaves - leave a row of leaves around the curd to prolong storage quality.  SAVING SEEDS Cauliflower heads grown for seed should not be trimmed for consumption. If small amounts of seeds are wanted, allow individual pods to dry to a light brown color before picking and opening by hand. Lower pods dry first followed by those progressively higher on the plant. For larger amounts of seeds pull entire plant after a majority of pods have dried. Green pods rarely produce viable seeds even if allowed to dry after the plant is pulled. |  | |  |  |  | | | |  | |

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| **How to Grow Celery | Guide to Growing Celery** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingcelery.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/or/res/organicgardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Apium graveolens* **Varieties:** French Dinant, Giant Red, Golden, Tall Utah | | | | | | | | |  | |  |  | |  | Perhaps the most difficult vegetable to grow in many areas, this long-season crop must be started inside. Seeds are slow to germinate, and if transplanted outside too early, plants will bolt in response to cold. Also requires consistent moisture and dislikes heat. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 14 to 21 days, 70F to 75F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 5 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Damp, High Fertility | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun, Part Shade | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 2cm apart (indoors) | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 6" to 12 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 120 to 140 | | |  | |   Growing Guide GROWING NOTES Prefers full sun.  Prefers rich soil, high in organic matter with pH 6.0 to 7.0 and consistent, plentiful supply of moisture. Can tolerate soils that are less than well-drained because it was originally a wetland plant.  Seeds need to be started inside and are difficult to germinate. Cold weather after transplanting can cause bolting. Needs plentiful moisture and long season, but doesn't tolerate heat well.   MAINTAINING Start plants inside about 10 to 12 weeks before last frost. Plant several seeds per cell. Seeds need light to germinate, so don't cover seed deeply. Keep soil moist and warm (about 70 F to 75 F) until seeds germinate in 2 to 3 weeks. After germination, grow inside in a cool location (about 60 F to 70 F). Thin to one seed per cell.   Plants will withstand light frost, but 10 days with night temperatures below 40 and days below 55 F can cause bolting. So harden plants by reducing water, not lowering temperature.   Set out transplants 6 to 12 inches apart, rows 18 to 36 inches apart, about 2 weeks before average last frost.   Plants are shallow-rooted and require consistent moisture. Lack of water will make stalks fibrous and bitter. Mulch to retain moisture, suppress weeds and avoid disturbing roots when cultivating.   For a milder flavor, blanch by wrapping stalks two weeks before harvest with paper, a cardboard milk carton or other material. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Celery Seed**](http://www.heirloom-organics.com/or/organicceleryseed.html) | | [**Heirloom Celery Seed**](http://www.heirloom-organics.com/he/heirloomceleryseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Harvest celery when it has reached the desired size, cut the plant off above the soil line so that all stalks are still as one unit. Wash the stalk bulb in cold water and dry. Celery will keep in the fridge for a couple of weeks. Celery will blanch natrurally when in storage.  You can if you desire remove a few stalks at a time rather than harvesting the whole plant. If doing this remove the outer stalks first and let the less developed inner stalks continue in their development. Take care not to damage the rest of the plant if removing individual stalks.  SAVING SEEDS Celery's primary umbels mature first and often shatter before the secondary umbels are dry. It is best to hand harvest the umbels as they mature. The seeds can be separated easily as the umbels are harvested and will be fairly clean. Any remaining dust and debris can be removed by screening or winnowing.  "If further drying is necessary, the umbels can be dried in the sun below 95 degrees F. and then covered at night to protect from the dew." |  | |  |  |  | | | |  | |

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| **How to Grow Chili | Guide to Growing Chillies** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingchilis.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/or/res/organicgardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Capsicum* **Varieties:** [Anaheim](http://www.heirloom-organics.com/guide/va/1/guidetogrowinganaheim.html), [Ancho](http://www.heirloom-organics.com/guide/va/1/guidetogrowingancho.html), [Black Hungarian](http://www.heirloom-organics.com/guide/va/1/guidetogrowingblackhungarian.html), [Cayenne](http://www.heirloom-organics.com/guide/va/1/guidetogrowingcayenne.html), [Habañero](http://www.heirloom-organics.com/guide/va/1/guidetogrowinghabanero.html), [Jalapeño](http://www.heirloom-organics.com/guide/va/1/guidetogrowingjalapeno.html), [Large Red Cherry](http://www.heirloom-organics.com/guide/va/1/guidetogrowinglargeredcherrypepper.html), [Orange Habañero](http://www.heirloom-organics.com/guide/va/1/guidetogrowingorangehabanero.html), [Pimento](http://www.heirloom-organics.com/guide/va/1/guidetogrowingpimento.html), [Poblano](http://www.heirloom-organics.com/guide/va/1/guidetogrowingpoblano.html), [Red Cherry](http://www.heirloom-organics.com/guide/va/1/guidetogrowingredcherrypepper.html), [Red Habañero](http://www.heirloom-organics.com/guide/va/1/guidetogrowingredhabanero.html), [Serrano](http://www.heirloom-organics.com/guide/va/1/guidetogrowingserrano.html), [Small Red Cherry](http://www.heirloom-organics.com/guide/va/1/guidetogrowingsmallredcherrypepper.html), [Tabasco](http://www.heirloom-organics.com/guide/va/1/guidetogrowingtabasco.html), [Thai Hot](http://www.heirloom-organics.com/guide/va/1/guidetogrowingthaihot.html), [Yellow Wax](http://www.heirloom-organics.com/guide/va/1/guidetogrowingyellowwax.html) | | | | | | | | |  | |  |  | |  | Capsicum encompasses a wide array of flavorful peppers used in modern cuisines all over the world. Native primarily to equatorial regions of North and South America, the many varieties of sweet and hot peppers thrive on full sun, warm weather, well-drained soil and modest fertility. Special considerations must be taken if growing peppers in temperate regions. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 7 to 10 days, 70F to 95F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 2 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 1/4" deep in flats | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 12" to 24 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 65 to 95 | | |  | |   Growing Guide GROWING NOTES Pepper should be started indoor approximately 8 weeks prior to the last frost of the spring.  Sow ¼" deep in a well-drained starting medium. Seeds require lots of warm to germinate; medium should be between 80-85 degrees F. Using a heat mat, available at home and garden store and elsewhere, can help to ensure ideal conditions. Additionally, young starts will fare much better with additional light. Place in a window or sunny location that receives lots of southern or southwestern sun exposure. Consider supplementing with artificial lighting if possible.  Set plants out 2 to 3 weeks after average last frost when the soil has warmed and the weather has settled. Peppers can be temperamental when it comes to setting fruit if temperatures are too hot or too cool. Nighttime temperatures below 60 F or above 75 F can reduce fruit set.   Plant them 12 to 24 inches apart, in rows 24 to 36 inches apart, or spaced about 14 to 16 inches apart in raised beds. Do not rush to transplant your starts outdoors. Select a location that receives plenty of light and heat, and has not been used for tomatoes, potatoes or other members of this family for several years. Peppers will do best with soil that is fertile, lightweight, slightly acidic (pH5.5-7.0) and well-drained.  Wait until soil temperatures exceed 50 degrees F at all times before placing into the ground. Pepper plants should be fairly close to one another, so that there is slight contact between plants.  MAINTAINING Peppers need a steady supply of water for best performance. If fertilizing, be careful not to overdo it on nitrogen as this can deter fruit growth. Organic fertilizers and soil should be rich in phosphorus, potassium and calcium.  Mulching with black plastic or similar material is a good way to maintain heat and soil moisture. Additionally, floating row covers over your beds can help to protect against cold early in the growing season. Use caution with row covers not to overheat plants and cause them to drop their blossoms.  Stake tall varieties for earlier and heavier harvest. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Chili Seed**](http://www.heirloom-organics.com/or/organicchiliseed.html) | | [**Heirloom Chili Seed**](http://www.heirloom-organics.com/he/heirloomchiliseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Peppers will turn green when starting to approach maturity. They can be harvested at this point, or allowed to ripen on the plant. If collected early, plants will continue to flower and fruit more frequently, though this early collection might result in differences in flavor if using fresh.  Use a scissors or snip to cut branches and harvest peppers. Do not remove by hand as plants can be easily damaged.  HOW TO DRY CHILI PEPPERS The shelf life of your chili peppers can be extended many times over by drying your peppers and storing them in an airtight container. To expedite the process, a home food dehydrator can be used to safely take the moisture out of your peppers. Otherwise, place your fresh peppers onto a cookie sheet and 'baking' at the lowest setting (approximately 150F or lower)with the oven for several hours to gradually dry out the peppers. Turn peppers frequently, and make sure peppers are not being overheated.  If neither a food dehydrator or oven is available, peppers can be dried naturally in the sun or even in a well-lit window. This process may take several days, even with hot dry conditions. Peppers can be placed on a flat surface in a sunny location. Turn periodically to ensure that they dry out evenly. Once peppers are slightly brittle and tough, they can be stored in airtight containers and saved for future use.  SAVING SEEDS  Cut your favorite variety of pepper in half. All of the seeds inside are most likely viable and you can use them to grow the same variety of pepper in containers or in a sunny garden spot. Collect the seeds and lay them flat on a paper towel for 24 hours.  Label the plastic bag with the permanent marker with the name or variety of the pepper seeds. Place the seeds inside for planting.  Keep the seeds in a cool, but not cold, dark area until you are ready to start them in early spring. |  | |  |  |  | | | |

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| **How to Grow Corn | Guide to Growing Corn** |
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--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | How to Grow Corn | Guide to Growing Corn |  | | | Overview |  | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | |  | | --- | |  | | [Growing Corn >>](http://www.heirloom-organics.com/guide/va/guidetogrowingcorn.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/or/res/organicgardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  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Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Zea mays* **Varieties:** Bloody Butcher, Blue Hopi, Boone County White, Broom Corn, Country Gentleman, Golden Bantam, Hickory King, Japanese Hulless Popcorn, Moseby Prolific, Pencil Cob, Rainbow, Reid Yellow Dent, Silvermine, Silver King, Trucker's Favorite | | | | | | | | |  | |  |  | |  | Corn demands fertile soil, consistent moisture and warm weather. If you have those and plenty of garden space to spare, it’s not hard to grow great-tasting corn, and you won’t get it any fresher. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 4 to 7 days, 65F to 85F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 2 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | High Fertility | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 4" to 6 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 8" to 12 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 90 to 110 | | |  | |   Growing Guide GROWING NOTES Needs deep, well-drained, fertile soil, pH 6.0 to 6.8 and consistent, plentiful moisture.   Tender annual Requires excellent soil and consistent moisture.   Otherwise, it's not difficult to grow.   MAINTAINING Corn requires rich, fertile soil. Add compost or well rotted manure in fall. Consider planting a legume cover crop the season before corn to help meet the nutrient needs of this heavy feeder.  Make first planting after last frost date. Soil should be at least 65 F for fast germination. (Corn will not germinate if soil temperature is less than 55 F.) To speed increase in soil temperature, consider covering soil with black plastic for several weeks before planting.  Plant in blocks of at least 4 rows of a single hybrid (as opposed to fewer, longer rows) for good pollination and well-filled ears. (Some corn varieties need to be isolated from others. See variety information below.)  Plant seeds 1 inch deep and 4 to 6 inches apart in rows 30 to 36 inches apart. Thin to 8- to 12-inch spacings when plants are 3 to 4 inches tall. Increase seeding rates to ensure a good stand if soils are cold or you are using seed that has not been treated with fungicide. (Untreated seed has natural color. Treated seed is dyed.)  For a sequential harvest, make first planting using an early hybrid. Two weeks later, plant another block of an early hybrid, plus blocks of mid- and late-season hybrids. Continue making plantings until late June or early July, depending on the length of your growing season.  To save space, you can intercrop corn with early-harvested cool-season crops.  Corn plants have many roots close to the surface, so cultivate around them with care. You can hill soil up around the base of plants as they grow to bury small weeds in the row and give the corn a better foothold. After the soil has warmed, you can mulch corn to help suppress weeds and retain moisture.  It is not necessary to remove suckers (side sprouts growing from the base of the plant). Studies show that removing them may actually reduce yields.  Corn is a heavy feeder - particularly of nitrogen - and may require several sidedressings of fertilizer for best yields. Look for signs of nutrient deficiency. Purple-tinged leaves are a sign of phosphorus deficiency. Pale green leaves are a sign of nitrogen deficiency.  For miniature or baby corn, plant seeds 2 to 4 inches apart and harvest as silks emerge from the ear, or harvest secondary ears from normally spaced plantings, allowing the main ear to fully mature. Also try hybrids specifically bred for early baby corn harvest. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  | | --- | |  |   Harvesting Guide Of all the vegetables grown, corn is the one most often harvested too late. With corn, it is essential to pick it at the right time to get the best quality and flavor. Corn also starts to lose its quality quickly after it is harvested. Within 24 hours after being picked, most corn loses more than half its natural sugars by converting them to starch. Ideally, you should harvest your corn at the time you are ready to cook it.  Check sweet corn for ripeness when the the silks have turned brown but are still damp to the touch. Pull back the husk partially and puncture a kernel. If a clear liquid spurts out, the corn isn`t ready. If a milky liquid spurts out, it is ready and should be picked immediately! If no liquid emerges, the corn is past its prime.  Beware, however, that though pulling back the husks is a reliable method of checking for ripeness, it does have a major disadvantage if the corn is still immature when you do the checking. Once you open an immature ear, it becomes susceptible to insect and other pests, as it continues to ripen. Attack by birds also becomes more likely. With a little experience and practice, you'll be able to judge the ripeness of corn fairly accurately, just by feeling the ends of the ears and not have to worry about that problem. Good seed should be viable for at least two years.  SAVING SEEDS To save corn seed choose the earliest and the best-developed corncobs you can find. Cover them with a large enough paper bag to be able tie the top off to keep the bugs and grubs out. Do not use a plastic bag as the cob needs to breathe. Allow the cob to develop and dry out on the stalk as long possible. To store the cobs, remove them from the bag, pull back the husks, and hang in a dry area away from bugs or rodents, or you will end up with a dried out corncob with no seed. When the cobs are fully dried out, carefully break-off the seed, store in a paper bag, and keep in a cool place (the bottom of the fridge is a good spot) until springtime and you want to sow it. |  | |  |  |  | | | |  | |

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| **How to Grow Cress | Guide to Growing Cress** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingcress.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/or/res/organicgardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Lepidium* **Varieties:** [Watercress](http://www.heirloom-organics.com/guide/va/1/guidetogrowingwatercress.html) | | | | | | | | |  | |  |  | |  | The easiest of the cresses to grow, garden cress can be harvested in as little as two weeks after sowing. It’s peppery taste adds zing to salads, but hot weather makes this cool-season crop bitter and inedible. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 2 to 7 days, 55F to 75F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 5 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun, Part Shade | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 12-24 sq. in. patch | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 12-24 sq. in. patch | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 7 to 12 | | |  | |   Growing Guide GROWING NOTES Prefers part shade during hot summer weather.   Prefers moist, fertile soil with high organic matter and pH 6.0 to 6.7   Curly cress leaves have ruffled edges resembling parsley  MAINTAINING Plant in early spring as soon as you can work the soil. Broadcast seed and cover very lightly with soil or compost. A small patch (1- to 2-feet square) provides plenty of cress.  Make succession plantings every 2 to 3 weeks until weather warms. Start planting fall crops when weather cools in late summer.  You can intercrop cress with carrots or radishes, or mix it with other salad green crops.  Keep cress well watered and provide shade when weather warms.  Cover with fabric row covers if flea beetles or other pests are a problem. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Cress Seed**](http://www.heirloom-organics.com/or/organiccressseed.html) | | [**Heirloom Cress Seed**](http://www.heirloom-organics.com/he/heirloomcressseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING Cut or pinch out cress tips as needed, cut-and-come-again. Begin cutting plants when they reach 3 to 4 inches tall. Plants cut back to ½ inch will quickly regrow. Cress is most tender at the early seed-leaf stage; harvest cress well before it matures. Sprouts can also be used fresh.  SAVING SEEDS The seeds of Persian broadleaf press can be easily stored, the seeds grow in pods and one can easily detach a mature pod and place it upside down in a paper bag.9 After three months the seeds are properly dried and by shaking the bag they will fall out of the pod and should be kept in a tightly sealed jar. |  | |  |  |  | | | |

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| **How to Grow Cucumbers | Guide to Growing Cucumbers** |
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Cucumbers >>](http://www.heirloom-organics.com/guide/va/guidetogrowingcucumbers.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/or/res/organicgardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Cucumis* **Varieties:** Homemade Pickles, Marketeer, National Pickling, Straight 8 | | | | | | | | |  | |  |  | |  | Whether for pickling or slicing, cucumbers are easy to grow if you give them good soil, full sun and sufficient moisture, and wait for weather to warm before planting. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | 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http://www.heirloom-organics.com/images/insertbox/seeds.png | 2" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 8" to 15 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 50 to 60 | | |  | |   Growing Guide GROWING NOTES Well-drained, fertile soil, high in organic matter with near-neutral pH. Consistent, plentiful moisture needed until fruit is ripening. May develop bitter taste in dry sites. Cucumbers are heavy nitrogen feeders and require fertile soil.  Cucumbers are not hard to grow if you provide good soil, plenty of moisture and full sun, wait for soil and weather to warm before planting, and use fabric row covers if pests are a problem.  Vining varieties can climb up to 6 feet with support, or hug the ground if allowed to sprawl.   Bush varieties take up only 2 or 3 square feet, while unsupported vining varieties can run along the ground for 6 or more feet.   MAINTAINING Cucumbers are very sensitive to cold. They need warm soil and air, whether direct-seeded or transplanted. Don’t rush to plant too early. Seed will not germinate if soil temperature is below 50 F, and germinates only slowly at 68 F.  Direct-seed 1 to 1 ½ inches deep, either in rows (2 inches apart in rows 5 to 6 feet apart) or in hills (3 to 6 seeds per hill, hills spaced 3 to 5 feet apart).  Thin to 8 to 15 inches apart in rows or 2 to 3 plants per hill. Snip off plants when thinning to avoid disturbing the roots of nearby plants.  For early crops, use black plastic mulch and row covers or other protection to speed warming and protect plants. Direct seed into holes in plastic. Cucumbers seeded into black plastic usually produce larger yields, as well earlier ones.  For extra early crops, start plants inside 3 to 5 weeks before transplanting. Sow 3 seeds per pot in 2-inch pots. Thin to one or two plants per pot. Grow above 70 F during the day and above 60 F at night. Be careful when hardening-off plants not to expose them to cold temperatures.  Plants with one or two true leaves transplant best. Transplant into black plastic mulch or warm garden soil after danger of frost has passed and weather has settled. Be careful not to damage roots when transplanting. If using peat pots, make sure they are saturated before transplanting and completely buried. If using row covers, remove when flowers begin to blossom to assure good pollination.  For a continuous harvest, make successive plantings every 2 to 3 weeks until about 3 months before first fall frost date. About 1 month before first frost, start pinching off new flowers so plants channel energy into ripening existing fruit.  To save space, train vining cucumbers to a trellis. (Make sure the trellised plants don’t shade other sun-loving plants.) This also increases air circulation (reducing disease problems), makes harvest easier and produces straighter fruit. Set up trellis before planting or transplanting to avoid root injury. Space plants about 10 inches apart. Pinch back vines that extend beyond the trellis to encourage lateral growth.  Most cucumbers have both male and female flowers. The male flowers blossom first and produce pollen, but no fruit. Other varieties produce female flowers predominately or exclusively. Seed packs of these varieties include a few seeds (usually marked with dye) of another variety that produces male flowers to provide pollen. Make sure you don’t remove pollinator plants when thinning.  Cucumbers are heavy feeders and require fertile soil, nitrogen fertilizer, and/or additions of high-N organic matter sources. Pale, yellowish leaves indicate nitrogen deficiency. Leaf bronzing is a sign of potassium deficiency.  To reduce pest and disease pressure, do not plant cucumbers where you’ve grown them in the last two years. Choose resistant varieties to prevent many diseases and/or trellis vining varieties to encourage good air circulation. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Cucumber Seed**](http://www.heirloom-organics.com/or/organiccucumberseed.html) | | [**Heirloom Cucumber Seed**](http://www.heirloom-organics.com/he/heirloomcucumberseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING Generally the time to harvest for cucumbers is approximately sixty to seventy days from planting to harvest. Cucumbers can be picked at anytime there is fruit, of course depending on the cucumber variety and use of the fruit. Cucumbers should be picked early in the morning and refrigerated immediately. The larger a cucumber gets, the more of it's flavor is lost, becoming bitter and unpalatable. Cucumbers that have turned yellow are past their peak. Once the first cucumbers are ready to be harvested cut the vine about a half an inch above the fruit. Harvest all of the vegetables before maturity to ensure quality fruits and a higher yields. During harvest time, cucumbers should be picked at least every other day, with daily harvesting being ideal.  SAVING SEEDS Slice fruit lengthwise and scrape seeds out with spoon. Allow seeds and jelly-like liquid to sit in jar at room temperature for 3 or 4 days. Fungus will start to form on top. Stir daily. Jelly will dissolve and good seeds will sink to bottom while remaining debris and immature seeds can be rinsed away. Spread seeds on a paper towel or screen until dry. |  | |  |  |  | | | |  | |

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| **How to Grow Flax | Guide to Growing Flax** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingflax.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/or/res/organicgardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Linum usitatissimum* **Varieties:** Brown, Golden | | | | | | | | |  | |  |  | |  | Common flax was one of the first crops domesticated by man. Flax is thought to have originated in the Mediterranean region of Europe; the Swiss Lake Dweller People of the Stone Age apparently produced flax utilizing the fiber as well as the seed. Linen cloth made from flax was used to wrap the mummies in the early Egyptian tombs. In the United States, the early colonists grew small fields of flax for home use, and commercial production of fiber flax began in 1753. However, with the invention of the cotton gin in 1793, flax production began to decline. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 3-4 Weeks, 65F to 70F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 2 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Rich Soil | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 6" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 10" to 12" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 90 to 100 days | | |  | |   Growing Guide GROWING NOTES Management practices for oilseed flax are similar to that of spring oats. It is adapted to soils that are good for wheat or oats, but is not suited to poorly drained soils. Flax should not be grown in the same field every year, but instead should be rotated with other crops to reduce disease potential and improve yields.   Flax should be planted in early April in northern Missouri, or late March in southern Missouri. Although late frosts may occur after flax emergence, they are unlikely to damage flax. North Dakota researchers report that flax seedlings can survive temperatures down to 28°F. upon emergence, and can tolerate the low 20s after they reach the two leaf stage. Seed should be planted 1/2 to 1 inch deep, or up to 1 1/2 inches on coarser soils (such as sandy loams). A standard grain drill can be used with flax, planting it in narrow rows (preferably 6 inches or less).   Grow Flax in full sun. They prefer rich soil. Mix in compost when planting, if your soil is not rich. Keep the soil moist, not wet.  MAINTAINING Flax is easy to grow. As wildflowers, they require little care. In the home garden, mulch around them to help retain soil moisture, and to keep the weeds down. Prune plants to promote good air circulation. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Flax Seed**](http://www.heirloom-organics.com/or/organicflaxseed.html) | | [**Heirloom Flax Seed**](http://www.heirloom-organics.com/he/heirloomflaxseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Flax is not like a soybean plant that completely turns brown and drops its leaves before harvest. Instead, at the time when it is ready to be harvested, there will usually be a few flowers in bloom and a few green leaves on the plant. A rule of thumb is to harvest when 90% of the seed capsules are brown. In northern states, flax is normally direct combined, but sometimes is swathed and allowed to dry in the field before picking it up with a combine.   SAVING SEEDS |  | |  |  |  | | | |  | |
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| **How to Grow Goji Berry | Guide to Growing Goji Berries** |
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Berry >>](http://www.heirloom-organics.com/guide/va/guidetogrowinggojiberry.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/or/res/organicgardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Lycium barbarum* **Varieties:** | | | | | | | | |  | |  |  | |  | Dating back about 5,000 years, the goji berry can grow to reach a height of about 6 feet, with berries ranging in color from pale yellow to deep red and tasting like a cross between a cranberry & a raisin. It is said that a Chinese man named Li Qing Yuen consumed wolfberries daily & lived to the age of 252 years. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Perennial (zones 5-9) | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 7-14 days | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 2 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Moist, well-drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | Fruit | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 20-30' apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 2 years | | |  | |   Growing Guide GROWING NOTES Goji berry can grow to more than 6' tall, showing attractive blue flower from midsummer into fall.  Goji Berry can be started indoors approximately 4-6 weeks prior to the last frost of the spring. Once established, it can be tolerant to temperatures down to -15 degrees F, but almost all seeds needs water and some heat to germinate. Sow shallowly to a depth of approximately ¼-1/2" deep, providing plenty of moisture while awaiting germination. Once the start begins to break through the surface of the soil, moderate water.  MAINTAINING Goji berry requires lots of direct sun, but can be sensitive to excessive heat. If growing in higher zones, select a location with somewhat filtered light. Goji can be grown in many types of soil, including those with high clay or sand content. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Goji Berry Seed**](http://www.heirloom-organics.com/or/organicgojiberryseed.html) | | [**Heirloom Goji Berry Seed**](http://www.heirloom-organics.com/he/heirloomgojiberryseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Flowers will begin to mature into edible berries late in summer, and continue late into the fall. Berries can be collected once they begin to dry out, and should be collected with care. Goji berries can be very sensitive to touch, and if possible, harvested with direct handling. Harvest by placing a large bowl, or even a blanket, under the plant. Shake branch lightly to release fruits from tree. If berries do not readily fall, wait several day before trying again, or apply minimal pressure to release from plant.   SAVING SEEDS Goji seeds are very small and difficult to successfully extract from the fruit. However, the fruits themselves can be sown as normal seeds come sowing season. For optimum seed life, store in a sealed container in a cool location out of direct sunlight and with low humidity. |  | |  |  |  | | | |

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| **How to Grow Huckleberry | Guide to Growing Huckleberries** |
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Huckleberry](http://www.heirloom-organics.com/guide/va/guidetogrowinghuckleberry.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/or/res/organicgardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Solanum melanocerasu* **Varieties:** | | | | | | | | |  | |  |  | |  | These delicate translucent berries have been a source of food for generations of Northwest natives, animals and people alike. They are rich in vitamin C, available sugars and minerals like manganese. Not everyone enjoys their tangy-tart flavor. It is for this reason that the red huckleberries are usually combined with other berries, like the blueberry to add sweetness. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Annual (zones 9-11) | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 7-14 days | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 2+ years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well-drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | Fruit | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 24" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 75-80 days | | |  | |   Growing Guide GROWING NOTES Huckleberry can grow to more than 4' tall, and will produce many small white flowers which develop into dark purple berries late in the season.  Huckleberry is native to tropical regions, but can be grown successfully in cooler climates if started indoor in early spring and transplanted outdoors after the final frost of the spring once soil temperatures have reached 65 degrees or higher.  For best results, Huckleberry should be started indoors 4-6 weeks prior to the last frost of the season. Seeds should be sown at a shallow depth of ¼" and kept well-moistened until germination. Moderate water slightly once seeds begin to break through surface of the soil.  As seedling grows, transplant into a larger container one or more times as needed. Continue to grow in containers into early summer before transplanting.  MAINTAINING Garden Huckleberry requires lots of direct sunlight, and will grow best in well-drained soil that is of moderate fertility. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Huckleberry Seed**](http://www.heirloom-organics.com/or/organichuckleberryseed.html) | | [**Heirloom Huckleberry Seed**](http://www.heirloom-organics.com/he/heirloomhuckleberryseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  The ripe berries can be collected after they have turned black and begin to soften. Allowing the berries to stay on the plant longer will produce better, richer flavor.   SAVING SEEDS Seeds can be collected when the berries reach full maturity. Break open berries and place contents into a bowl. Continue to separate seeds from pulp, and seeds will sink to bottom.  Dry seeds and store in a sealed container in a cool location out of direct sunlight and with low humidity. |  | |  |  |  | | | |  | |

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| **How to Grow Lentils | Guide to Growing Lentils** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowinglentils.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Lens culinaris* **Varieties:** Baby Blue Lentils, Petite French Green | | | | | | | | |  | |  |  | |  | Lentils are annual plants producing lens-shaped seeds. A cousin of the bean, the lentil belongs to the legume family, or those with seeds that grow within pods. Lentils are quite rich in iron and have the highest levels of protein of any vegetable next to soybeans. Once you know the right soil and climate conditions you can grow your own lentils. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seed or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 10 days, 68F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 5 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Loose, Well Drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 1" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 4" to 5" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 80 to 110 | | |  | |   Growing Guide GROWING NOTES All beans and peas are legumes and benefit from "inoculating" with rhizobacteria. These bacteria do the work of taking gaseous nitrogen from the air and "fixing" or concentrating it in pink root nodules which then slough off, adding nitrogen to the soil in a form other plants can take up as a nutrient. Inoculating your beans and peas will increase germination, and the health of your plants, helping them growing large roots and thus healthier plants. Growing pole beans with corn provides an extra shot of nitrogen to the corn, a wonderful natural symbiotic relationship that the Native Americans understood very well. You will see a big difference in overall results. Healthy legumes should also be turned under the soil when production ends as they are excellent green manure for your next crops.  Lentils grow best at a soil pH of 6.0 to 8.0.  Once planted, seedlings tolerate light frost and can regrow from below the soil surface if the early frost damage is substantial.  MAINTAINING Keep lentils evenly moist. Lentils are more drought tolerant than other beans. Do not water lentils once pods have begun to dry. Add aged compost to planting beds before sowing. Side dress lentils with compost tea when plants are 5 inches tall and again at flowering.  Potatoes, cucumbers, summer savory are companion plants. Avoid planting lentils with onions or garlic.  Support lentils with a low trellis. Without a trellis, lentils should be set 5 inches apart to ensure ample air circulation. Protect early crops from pests and frost with row covers.  Aphids may attack lentils. Control aphids by pinching out infested areas or hose them off of the plant with a blast of water. Weevils may attack lentils; remove and destroy infested plants. Rotate crops to avoid repeat infestations. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Lentil Seed**](http://www.heirloom-organics.com/or/organiclentilseed.html) | | [**Heirloom Lentil Seed**](http://www.heirloom-organics.com/he/heirloomlentilseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Lentils are commonly used like dry beans or peas. For dried seeds, harvest pods when they have matured and hardened. Leave lentils unshelled until you are ready to use them. Dried lentils are ready for harvest 110 days after sowing. Lentil also can be used like snap beans; harvest these green about 70 to 80 days after sowing.  SAVING SEEDS It is a suggested that you earmark a couple of plants at the beginning of the season for seed saving. Don’t pick ANY pods from them to eat - just pick the crisp brown pods at the end of the season. Don’t feed them, or water them unless it is very dry - as this can encourage leafy growth rather than pod development. There is no point in picking green pods as the seeds are not mature enough at this stage. |  | | | |

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| **How to Grow Lettuce | Guide to Growing Lettuce** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowinglettuce.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Lactuca sativa* **Varieties:** [Bibb](http://www.heirloom-organics.com/guide/va/1/guidetogrowingbibblettuce.html), [Black Seeded Simpson](http://www.heirloom-organics.com/guide/va/1/guidetogrowingblackseededsimpsonlettuce.html), [Buttercrunch](http://www.heirloom-organics.com/guide/va/1/guidetogrowingbuttercrunchlettuce.html), [Butterhead](http://www.heirloom-organics.com/guide/va/1/guidetogrowingbutterheadlettuce.html), [Cos](http://www.heirloom-organics.com/guide/va/1/guidetogrowingcoslettuce.html), [Crisphead](http://www.heirloom-organics.com/guide/va/1/guidetogrowingcrispheadlettuce.html), [Green Leaf](http://www.heirloom-organics.com/guide/va/1/guidetogrowinggreenleaflettuce.html), [Head](http://www.heirloom-organics.com/guide/va/1/guidetogrowingheadlettuce.html), [Iceberg](http://www.heirloom-organics.com/guide/va/1/guidetogrowingiceberglettuce.html), [Leaf](http://www.heirloom-organics.com/guide/va/1/guidetogrowingleaflettuce.html), [Looseleaf](http://www.heirloom-organics.com/guide/va/1/guidetogrowinglooseleaflettuce.html), [Mesclun Greens](http://www.heirloom-organics.com/guide/va/1/guidetogrowingmesclungreens.html), [Oakleaf](http://www.heirloom-organics.com/guide/va/1/guidetogrowingoakleaflettuce.html), [Parris Island](http://www.heirloom-organics.com/guide/va/1/guidetogrowingparrisislandlettuce.html), [Red Leaf](http://www.heirloom-organics.com/guide/va/1/guidetogrowingredleaflettuce.html), [Red Salad Bowl](http://www.heirloom-organics.com/guide/va/1/guidetogrowingredsaladbowllettuce.html), [Romaine](http://www.heirloom-organics.com/guide/va/1/guidetogrowingromainelettuce.html) | | | | | | | | |  | |  |  | |  | With the variety of colors, shapes and flavors available, your salads may never be the same. Lettuce is adaptable to many growing conditions, but likes it cool - around 60 F to 65 F. Generally, better results will be obtained by growing during cooler portions of the growing cycle. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 7 to 14 days, 40F to 85F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 1 year | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun, Part Shade | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 1" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 12 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 50 to 75 | | |  | |   Growing Guide GROWING NOTES Lettuce grows best in full sun, though excessive heat can cause plants to bolt to seed, or leaves to wilt. For an early start, seeds can be started in flats 4 weeks prior to the last frost and transplanted outdoors in mid to late spring. If growing in summer, select a partially shaded location, or one that receives primarily eastward exposure to mitigate the potentially damaging effects of excessive heat upon lettuce.  Lettuce is tolerant of a wide range of soils, but prefers well-drained, cool, loose soil with plentiful moisture and pH 6.2 to 6.8. Sensitive to low pH. Lime to at least 6.0. To encourage tender and tasty growth, make sure location is rich in organic compost matter. Amend prior to planting if needed.  **Sowing** Direct seed or transplant in early spring, as soon as you can work the soil. To get an early start, prepare beds the previous fall by working in manure or compost and raking smooth to leave a fine seedbed. Seeds need light to germinate; sow at a very shallow depth by covering with a thin layer of growing medium.  **Direct-seeding**  Sow seed 1/8 inch deep, 1 inch apart in rows 12 to 18 inches apart. When plants have two or three true leaves, thin to 12-inch spacings for crisphead varieties, 6 to 10 inches for other types. You can also lightly broadcast seed (particularly of looseleaf varieties) in a patch instead of a row.  **Transplants**  Sow in 1-inch cells 3 to 4 weeks before transplanting outside. Harden seedlings by reducing water and temperature for 3 days before transplanting. Hardened plants should survive 20 F. Space crisphead transplants 12 inches apart in rows 18 inches apart. Space other varieties 6 to 10 inches apart in rows 12 to 18 inches apart.  MAINTAINING Use row covers to protect very early plantings from cold, to protect young plants from insects, and (supported by hoops) to shade crops when warm weather arrives.  Make succession plantings every week or two, and grow several varieties with different maturity dates for a continuous supply. Moisture, stress, and high temperatures, particularly at night, encourage bolting. As the season progresses, plant more bolt-resistant varieties. Locate plants where they will be partially shaded by taller nearby plants, latticework or other screen.  Lettuce has a shallow root system. Keep soil moist to keep plants growing continuously. Mulch to retain moisture and suppress weeds (unless slugs are a problem). Fertilizing can be helpful to promote faster growth, especially a fish emulsion type that is not high in nitrogen that can cause greens to become bitter. Water lightly but consistently.  For fall crops, time maturity around time of first expected frost. Mature plants aren't as tolerant of freezing as seedlings. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Lettuce Seed**](http://www.heirloom-organics.com/or/organiclettuceseed.html) | | [**Heirloom Lettuce Seed**](http://www.heirloom-organics.com/he/heirloomlettuceseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING Many varieties of lettuce can be harvested as microgreens, baby greens, leaves, or entire plant. Ideally, greens should be collected early in the day, before the onset of midday sun, to prevent wilting.  [**Microgreens**](http://www.heirloom-organics.com/guide/va/guidetogrowingmicrogreens.html) are usually harvested within 2 weeks after germination by cut entire plant just above the ground, once it is around 3-4" tall.  [**Baby greens**](http://www.heirloom-organics.com/guide/va/guidetogrowingbabygreens.html) are collected when between approximately 28-35 days after germination, and are collected. Looseleaf, butterhead and romaine types can typically be harvested as baby greens, while iceberg lettuce is not suitable as baby greens.  '**Mature leaves**' can be harvested from all type of lettuce except for iceberg any time in the growing cycle, until a central stem begins to form. This indicates the plant is preparing to bolt to seed, and greens collected from such plants are often too bitter for consumption.  **Entire plants** can be harvested in mid-development while the leaves are still plump and tender, but before a stem has started to form. Many varieties of looseleaf lettuce can be harvested numerous times during a single growing season after being cut approximately 1" above the ground.  **Some other general guidelines when collecting the entire plant:**  Leaf lettuce can be cut as soon as it is large enough to use, usually in 50 to 60 days from planting. Cutting every other plant at the ground will give remaining plants more space for growth.  Romaine and Butterhead lettuce can be harvested in about 60 to 70 days from planting.  Iceberg (crisphead) varieties take longer and should be harvested as soon as a head develops but before outer leaves turn brown. If seed stalks appear, pick the lettuce immediately and store in the refrigerator to prevent bitterness. To store lettuce first wash it well by immersing in water and swishing it around. Place it in a colander and rinse then drip dry. Do this especially if you have used chemicals on your crop. When it is dry place it in a plastic bag in the refrigerator or wrap in paper towels and place in a bowl in the refrigerator. It keeps best at 32 degrees with 96% humidity. Avoid storing lettuce with apples, pears or bananas as they release a natural ripening agent that will cause brown spots and the leaves will decay quickly.  SAVING SEEDS Rubbing separates the plumes and chaff from the seeds. When completely dry, shake the flower stems in the bag. Rub the seed heads between your hands to release more seeds. Put the seed through a fine mesh sieve that allows the seeds through but retains the chaff and plumes; this will give relatively clean seed. Winnowing is difficult because seeds and chaff are about the same size and weight. For extra cleaning use reverse screening, with a smaller mesh that retains the seed but lets small pieces or chaff and plume through. The dust produced during cleaning causes irritation to the lungs and eyes. If cleaning large amounts use a mask and goggles or clean outdoors. |  | |  |  |  | | | |  | |

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| **How to Grow Melons | Guide to Growing Melons** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingmelons.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Cucumis Melo* **Varieties:** Banana Melon, Crenshaw, Eden Gem, Green Flesh, Hales Best, Hearts of Gold, Honey Rock, Imperial 45, Iroquois, Orange Flesh, Osage Muskmelon, Planter's Jumbo, Plum Granny, Rocky Ford, Schoon's Hardshell, Small Persian Muskmelon, Tam Dew, Top Mark Muskmelon | | | | | | | | |  | |  |  | |  | Heat-loving melons can be a challenge to grow in cooler regions. To increase success, choose short-season varieties, start them inside, warm soil with black plastic or IRT mulch, and protect young plants with fabric row covers. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 3 to 5 days, 60F to 95F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 4 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | High Fertility | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 12" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 4' to 6' apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 65 to 86 | | |  | |   Growing Guide GROWING NOTES Prefers warm, well-drained, soil, high in organic matter with pH 6.5 to 7.5. Consistent, plentiful moisture needed until fruit is about the size of a tennis ball. Soil temperatures below 50 F slow growth. Consider using black plastic and fabric row covers to speed soil warming. Sandy or light-textured soils that warm quickly in spring are best.  Tender annual.   In many areas, successful crops require starting plants indoors, using plastic mulch to warm soil, and fabric row covers to protect young transplants.  MAINTAINING If you have long, hot growing seasons direct-seed into garden. To ensure ripening in areas with shorter growing seasons and cooler weather, choose fast-maturing varieties, start plants inside, use black or IRT plastic mulch to warm soil and use fabric row covers to protect plants.  Direct-seed 1 to 2 weeks after average last frost when soil is 70 F or warmer. Plant ½ inch deep, 6 seeds per hill, hills 4 to 6 feet apart; or 1 foot apart in rows 5 feet apart. Can plant at closer spacings if trellised. Thin to 2 to 3 plants per hill.  For transplanting, sow seeds indoors ¼ inch deep in peat pots (2-inch square or bigger), 2 to 4 weeks before setting out. Plants should have one or two true leaves when transplanted.  Transplant at same spacings as direct-seeded crops - 2 to 3 plants per hill in hills spaced 4 to 6 feet apart, or 1 to 2 feet apart in rows 5 feet apart. Transplants are delicate and roots are sensitive to disturbance. If you need to thin, use scissors. Keep soil intact around plant when transplanting.  Mulch plants after soil has warmed to help maintain consistent moisture and suppress weeds.  If using fabric row covers, remove at flowering to allow pollination by bees. Good pollination is critical to fruit set.  Plants require consistent moisture until pollination. Once fruits are about the size of a tennis ball, only water if soil is dry and leaves show signs of wilting.  To prevent insect damage to developing fruits, place melons on pots or pieces of wood.  If growing melons on a trellis, support fruit with slings made from netting, fabric, or pantyhose. Trellising improves air circulation around plants and can help reduce foliar disease problems. Choose small-fruited varieties and reduce plant spacing.  For large plantings, leave a strip of rye cover crop every second or third row perpendicular to prevailing winds to protect plants from damaging wind.  To reduce insect and disease problems, avoid planting cucumber family crops (melons, squash, pumpkins) in the same spot two years in a row. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Melon Seed**](http://www.heirloom-organics.com/or/organicmelonseed.html) | | [**Heirloom Melon Seed**](http://www.heirloom-organics.com/he/heirloommelonseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Harvest muskmelon or cantaloupe when the stem pulls easily and cleanly from the fruit. If the stem has to be removed forcibly from the melon, it is not fully mature. In addition, mature muskmelons have a distinct, musky aroma and the end opposite the stem should be slightly soft. Honeydew will not slip from the stem when ripe. Harvest honeydew melons when the end opposite the stem softens and the skin takes on a creamy yellow color.  SAVING SEEDS Pick the fruit at the peek of ripeness. The seeds inside the melon will have matured by this time and can be harvested as you enjoy the outer fruit. Cut the melon with a sharp knife and carefully scoop out the inner seed lining and save them for processing the seeds. Place the seedy pulp into a bowl and remove as much of the pulp as possible by hand. Discard the pulp and add warm water to the bowl. You can then skim the surface of the water to remove seeds that will not produce plants, as they will be floating on the top. Rinse the rest of the seeds once more to remove any remaining sugar and pulp and place on a screen to dry. Allow these seeds to dry for about 3 days. Place the seeds in a bag and mark with type of seeds they are and when they were harvested. Place the bag in the freezer until next season. |  | |  |  |  | | | |

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| **How to Grow Millet | Guide to Growing Millet** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingmillet.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** Setaria Italica **Varieties:** Pearl, Foxtail | | | | | | | | |  | |  |  | |  | The millets are a group of small-seeded species of cereal crops or grains, widely grown around the world for food and fodder. They do not form a taxonomic group, but rather a functional or agronomic one. Their essential similarities are that they are small-seeded grasses grown in difficult production environments such as those at risk of drought. They have been in cultivation in East Asia for the last 10,000 years.  “Millet” is a name that has been applied to several different annual summer grasses used for hay, pasture, silage and grain. The millets most commonly cultivated in Kentucky, pearl millet and foxtail millet, are grown primarily as a forage for temporary pasture. If properly managed they can provide high yields of good quality forage in a short period, without the risk of prussic acid poisoning.   Pearl millet is higher yielding than foxtail millet and regrows after harvest if sufficient stubble is left. Dwarf varieties, which are leafier and more suited for grazing, are also available.  Foxtail millet is a lower-yielding grass that will not regrow to produce another harvest. Because it is shorter and finer-stemmed, it is easier to harvest as hay. It can serve as a good smother crop to be used before no-till seeding of other crops, such as fescue or alfalfa. Foxtail millet is also used as a wildlife planting to produce food and cover for various wild birds. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Direct | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 68 and 86°F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 2-4 Years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 2" Apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 2" - 3" Apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 60-90 days | | |  | |   Growing Guide GROWING NOTES Millet is one of many seed grasses that can be used as a food source. The grain, similar in nutrient composition to corn, is richer in protein and fiber. Millet has been cultivated for thousands of years and is believed to be one of the first grains harvested by humans for food. Millet prefers hot, extended summers and does well growing in the southern states below the Mason-Dixon line.   Prepare the plot for planting. Work in organic compost or a nitrogen-rich fertilizer.  Plant the seed, spacing each individual seed approximately 2 inches apart. Make your rows at least 1 foot apart. Cover with at least 1 inch of soil.  Add additional compost to the plot as the millet grows. Like corn, millet draws a lot of nitrogen from the soil.  Mulch the plot with straw or other covering if desired. This can help the soil retain water and cut down on pests.  Harvest the millet when the grasses and seed heads have turned golden brown. Millet can be harvested either by hand or with the use of a mechanical thresher.  Tips & Warnings  Millet was first brought to the United States in 1874 and first planted in Southern California. Millet grains were found entombed with the pharaohs of Egypt. Millet is a classed as grain sorghum and is a popular ingredient in birdseed. Millet can be planted in any soil that can produce corn. Millet is being studied as a possible source for ethanol production. Millet can be cooked as porridge, a side dish similar to rice or ground to make flour or meal.  MAINTAINING Normal average rainfall should take care of watering requirements to enable the grass to reach optimum growth. In the meantime, as the grass grows, it attracts more wildlife with the cover it affords. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Millet Seed**](http://www.heirloom-organics.com/or/organicmilletseed.html) | | [**Heirloom Millet Seed**](http://www.heirloom-organics.com/he/heirloommilletseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Harvest the millet when the grasses and seed heads have turned golden brown. Millet can be harvested either by hand or with the use of a mechanical thresher.  SAVING SEEDS To save seeds cut the mature seed cluster from the stem....the mature seeds will be swollen and release easily from the cluster by simple rubbing. They are very small, roundish with pointed ends and light wheat color. Allow the seed head to dry for a few days to facilitate easy removal of the seeds. Once the seeds are released from the stem allow them to dry for a few more days before packing. |  | |  |  |  | | | |  | |

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| **How to Grow Oats | Guide to Growing Oats** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingoats.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** Avena Sativa **Varieties:** Drummond | | | | | | | | |  | |  |  | |  | Oats have numerous uses in food; most commonly, they are rolled or crushed into oatmeal, or ground into fine oat flour. Oatmeal is chiefly eaten as porridge, but may also be used in a variety of baked goods, such as oatcakes, oatmeal cookies, and oat bread. Oats are also an ingredient in many cold cereals, in particular muesli and granola. Oats may also be consumed raw, and cookies with raw oats are becoming popular.  Oats are also occasionally used in several different drinks. In Britain, it is used for brewing beer. Oatmeal stout is one variety brewed using a percentage of oats for the wort. The more rarely used Oat Malt is produced by the Thomas Fawcett & Sons Maltings and was used in the Maclay Oat Malt Stout before Maclay ceased independent brewing operations. A cold, sweet drink made of ground oats and milk is a popular refreshment throughout Latin America. Oatmeal caudle, made of ale and oatmeal with spices was a traditional British drink and a favorite of Oliver Cromwell.  In Scotland a dish called Sowans was made by soaking the husks from oats for a week so that the fine, floury part of the meal remained as sediment to be strained off, boiled and eaten (Gauldie 1981). Oats are also widely used there as a thickener in soups, as barley or rice might be used in other countries.  Oats are also commonly used as feed for horses - as plain whole or rolled oats or as part of a blended food pellet. Cattle are also fed oats, either whole, or ground into a coarse flour using a roller mill, burr mill, or hammer mill. Oat straw is prized by cattle and horse producers as bedding, due to its soft, relatively dust-free, and absorbent nature. The straw can also be used for making corn dollies. Tied in a muslin bag, oat straw was used to soften bath-water.  Oat extract can also be used to soothe skin conditions, e.g. skin lotions. It is the principal ingredient for the Aveeno line of products. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Direct | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 5° and 25°C | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 2 Years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Partial | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 25-30cm | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 25-60cm | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 45 Days | | |  | |   Growing Guide GROWING NOTES Seeds should be grown outdoors, sow the seeds of wild oats at a depth of 6mm at the beginning to middle of spring. Seedlings of wild oats can be purchased; annual varieties should be planted in the early spring, whereas perennial varieties can be planted either in the early spring or in autumn. Depending on the variety wild oats seedlings should be planted 25 to 30cm apart (small) or 45 to 60cm apart (larger varieties of oat). They should be planted in an area that receives full sunlight in a dry soil with a pH of 6 to 7.5. MAINTAINING Keep the ground moist to allow the seeds to germinate. Continue to do so as the plants begin to grow. The compost or manure should help the oats retain moisture, but it will be necessary to water them periodically whenever the soil begins to dry out. If the area you live in gets plenty of rain, however, you may not need to water your oats at all. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Oat Seed**](http://www.heirloom-organics.com/or/organicoatseed.html) | | [**Heirloom Oat Seed**](http://www.heirloom-organics.com/he/heirloomoatseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING Modern harvest technique is a matter of available equipment, local tradition, and priorities. Farmers seeking the highest yield from their crop time their harvest so that the kernels have reached 35% moisture, or when the greenest kernels are just turning cream-color. They then harvest by swathing, cutting the plants at about 10 cm (4 inches) above ground, and putting the swathed plants into windrows with the grain all oriented the same way. They leave the windrows to dry in the sun for several days before combining them using a pickup header. Finally, they bale the straw.  Oats can also be left standing until completely ripe and then combined with a grain head. This will lead to greater field losses as the grain falls from the heads and to harvesting losses as the grain is threshed out by the reel. Without a draper head, there will also be somewhat more age to the straw since it will not be properly oriented as it enters the throat of the combine. Overall yield loss is 10–15% compared to proper swathing.  Historical harvest methods involved cutting with a scythe or sickle, and threshing under the feet of cattle. Late 19th and early 20th century harvesting was performed using a binder. Oats were gathered into shocks and then collected and run through a stationary threshing machine.  SAVING SEEDS Seed collection is very easy. Wait for the seed clusters to turn brown and strip them from the plant. Allow them to dry on a plate for a few days and either crumble or pick apart the seed heads to separate the seeds. Allow the separated seeds to dry a few more days before packing. |  | |  |  |  | | | |

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| **How to Grow Okra | Guide to Growing Okra** |
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Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Abelmoschus esculentus* **Varieties:** Clemson Spineless | | | | | | | | | |  | |  |  | |  | Okra, or "Gumbo", has its roots in Northeast Africa. Cultivation spread into the eastern Mediterranean regions. It has been used for thousands of years. A member of the mallow family, it is closely related to flowering hibiscus. One of the earliest accounts of okra is by a Spanish Moor who visited Egypt in 1216. It was introduced to Brazil in the mid-1600s and it is likely that the French colonists of Louisiana introduced it to America. Popular in the Southern United States it can be served breaded and fried, or as a component of a recipe such as soups, stews or relishes. Okra is a typical ingredient of Cajun and Creole dishes. Because it is considered too gooey, it is rarely served alone. Four to six plants are usually enough for most families; way too many for others. | |  | |  |  | |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png |  | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png |  | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png |  | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png |  | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png |  | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png |  | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png |  | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png |  | | |  | |   Growing Guide GROWING NOTES Okra likes fertile, well-composted soil and needs moisture and warmth to thrive. Soak seeds for overnight before directly sowing into warm soil or started indoors three to four weeks prior to your last expected frost. You must be careful not to damage the roots during transplanting. Although okra typically has no problems with disease or pests, it is very sensitive to frost. Okra easily cross-pollinates so if you are planning to save seed, either plant only one variety or separate by up to one mile.   MAINTAINING The key to maintaining okra production continuously throughout the summer is to harvest regularly. Only 3 to 4 days are required from the time the okra flower opens until the pod reaches harvest maturity. For this reason, okra must be harvested at least every other day during the growing season. Failure to remove mature pods from the okra plant will cause reduced yield and quality of pods which set on the plant later. The pods are either cut or broken from the plant and should be refrigerated or used as soon as possible after harvest. | |  | |  |  | |  | |  |  | |  | |  |  | |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Okra Seed**](http://www.heirloom-organics.com/or/organicokraseed.html) | | [**Heirloom Okra Seed**](http://www.heirloom-organics.com/he/heirloomokraseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING Harvest the pods young before they are too large, usually at two to four inches long. After that they become fibrous. Harvest often to increase production. Okra should be used as soon as it is harvested; Consume, can, freeze or dry.  SAVING SEEDS Although the flowers are perfect and self-pollinating, the flowers also are large and will attract insects. Isolation by up to one mile, caging the whole plants, or bagging the flowers is required to maintain purity. The pods are simply left to reach full maturity and then broken open to remove seeds. The pods cause skin irritation in some people so gloves may be desirable. | |  | |  |  | |  | | | |  | |

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| **How to Grow Onion | Guide to Growing Onions** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingonions.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Allium* **Varieties:** Tokyo Long White, White Sweet Spanish, Yellow Sweet Spanish Utah | | | | | | | | |  | |  |  | |  | Whether harvested early for scallions (green onions), for summer meals, or winter storage, onions need rich, well-drained soil and good weed control. Tightly spaced green onions fit well in ornamental plantings. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 4 to 5 days, 45F to 95F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 1 year | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained, High Fertility | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 1/2" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 4" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 65 to 75 | | |  | |   Growing Guide GROWING NOTES Well-drained, rich soil, high in organic matter, neutral pH. Optimum pH is 6.2 to 6.8. Requires plentiful, even moisture for good yields.   Biennial grown as annual.  Easy if you have rich well-drained soil and good weed control.   Usually does not flower unless grown from sets that are too large (more than ½ to ¾ inches in diameter), or young plants (direct seeded or transplanted) are stressed by abnormally cold weather.  MAINTAINING Can be direct-seeded, grown from transplants started inside, or from sets -- small bulbs about ½-inch in diameter grown from seed the previous season.  Choose a weed-free, well-drained location. Raised beds are ideal. Onions are good for intercropping with other garden plants, especially early-maturing spring greens. Do not plant where other onion family crops have been grown in the past 3 years.  Direct-seeding in the garden may not allow enough time for long-season varieties to mature, but is fine for shorter-season varieties or for scallions - onions harvested before the bulb forms.  Direct-seed in spring when the soil reaches 50 F. Plant seed ¼ inch deep, ½ inch apart, in rows 12 to 18 inches apart. Thin to 4-inch spacings for large bulbs, 2-inch spacings for smaller bulbs but higher yields, or 1-inch spacings for scallions.  Start transplants inside about 8 to 10 weeks before last frost date. Plant 4 or 5 seeds in each cell, or seed in flats ¼ inch deep and ½ inch apart. If tops grow too tall and begin to droop, trim back to about 3 inches tall with scissors. After hardening off, transplant 2 to 4 weeks before last frost date. Space 4 inches apart for large bulbs, 2 inches apart for smaller bulbs, or 1 inch apart for scallions.  From sets: Choose bulbs no larger than ¾ inch in diameter. Large bulbs are more prone to bolting. Plant sets about 1 inch deep 2 to 4 weeks before last frost date. Space 4 inches apart for large bulbs or 2 inches apart for smaller bulbs.  Onions have shallow root systems and need consistent moisture and good weed control. Water weekly if weather is dry, and mulch to retain moisture and suppress weeds. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Onion Seed**](http://www.heirloom-organics.com/or/organiconionseed.html) | | [**Heirloom Onion Seed**](http://www.heirloom-organics.com/he/heirloomonionseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING You can always tell when onions have stopped growing. The leaves will lose their color, weaken at the top of the bulb and flop over. Each year a few new gardeners watch the leaves die and wonder, "What's wrong?" There's nothing wrong; it's Nature's plan. The leaves' job is done - they've put the last of their energy into the bulbs.  Let most of your onion tops fall over by themselves - maybe 80% or 90% of them - then bend over the rest of the tops. Once they're down, leave the bulbs in the ground for another 10 days to two weeks to mature fully. It's not good to leave the onions in the ground for longer than two weeks after the tops die because they become open to organisms that can cause rot in storage, or they might even start growing again.  Pull your onions up on a sunny day if you can, then let them sit in the sun for another day or so to dry (in hot climates this usually takes just a few hours). This drying kills the root system at the bottom of each bulb. The roots will be like little brittle wires when they're dry.  Picking the right day to pull the onions can determine how well the onions will keep. If you harvest them after some rainy weather they'll have a lot more moisture in them and won't dry out as well.   SAVING SEEDS  Seed-producing onions are biennial and it will take two growing seasons to get onion seed. This article explains the seed-to-bulb-to-seed method.  Purchase onion seed and plant as you normally would in the spring. When purchasing seed, only buy open-pollinated or heirloom seeds. Hybrids and other types of seeds are not true seed and your results may be mixed. Some great places to buy these types of seeds are Seed Savers Exchange and Pinetree Garden Seeds.  You should order and grow enough onions so you have some for eating and some dedicated for seed saving. Onions can cross, so it's best to start with one variety at a time.  Plant your onion seed and do not pick or eat the ones you intend to harvest for seed.  At the end of the growing season when the onion tops are brown, drying and bent over, harvest the onion bulbs. This should be done before the first frost. Do NOT wash the onions, however you can shake the dirt off. Leave the tops on for braiding later.  Choose only the best bulbs for seed saving. Discard or eat others that may not overwinter well.  Spread onions out in a dry location, not touching one another, on a board or screen. If it looks like rain, you will have to move them to a location where they will not get rained on. Try to use a platform that allows air to circulate around the onions well.  Avoid drying the bulbs in direct sunlight in temperatures that are above 75 degrees. This can cause the bulbs to spoil or sunburn. Dry and cure the onions for 10-12 days before braiding.  After curing, you can braid the tops so the onions hang one above the other (not in clumps) and then hang them in a dark, dry storage area until spring.  A barn, potting shed or greenhouse are usually good places to hang them. Protect from the frost and do not store at room temperature. They should keep about 3-6 months and just begin sprouting come planting time in the spring. Sprouting times vary among different varieties.  In spring, when it's time to plant onions again, remove each onion by untwisting the braid and removing the dead, dried up tops. You will probably notice small green sprouts starting at the tops of the bulbs.  Plant the bulbs in your garden. It is interesting to watch the large, tube-like seed stalks grow bigger every day. Then one day you will notice tiny white flowers have formed--the flower head. They are about the size of a softball and remind one of popcorn balls. They are quite dainty and beautiful.  When the seeds form, the onion plant begins to dry. The flower head will begin to darken, turning almost solid black the seeds are dry and ready to harvest.  Using a brown paper bag, bend the onion stalk over and snip the entire flower head into the bag.  Store in a dry area out of direct sunlight to finish drying process. To completely remove the seeds from the flower head, you can shake the bag to allow the loose seeds to drop into bag.  Any remaining seeds can be removed by other techniques; including, threshing, using wire screens to rub them over or stepping on the seed heads to break open the pods.  Screen any debris from your onion seed using seed screens or other screens from home. Nice seed screens can be purchased from some of the seed companies listed in the resource links.  Place onion seed in a sealed glass canning jar or freeze in freezer bags to lengthen the life of the seed. If using the jar method, store in a dry, cool dark area without extreme temperature fluctuations.  Now that you know how to harvest and save onion seed, get involved with other like-minded gardeners who are building their seed banks. One day our country's future may depend on those who have the talent to save seeds and pass this knowledge on to others.  Tips & Warnings • Onion seed generally keeps for about 2 years under ideal conditions • Start your own seed bank using quality, open-pollinated or heirloom seeds only. Look in the catalog index to see which symbol they use to identify these types of seeds. • Join a seed saving group, like South Sound Seed Stewards in Yelm, WA (link) • Subscribe to magazines to learn more about self-sustainable lifestyles • Three great farm, garden and self-sustainable topic magazines are: Mother Earth News, Backwoods Home and Countryside & Small Stock Journal (links) • Avoid using hybrid and genetically modified or engineered seeds for seed saving projects. |  | |  |  |  | | | |

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| **How to Grow Pea | Guide to Growing Peas** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingpeas.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Pisum sativum* **Varieties:** Alaska, Alderman, Dwarf Grey, Lincoln, Little Marvel, Perfection, Oregon Sugar Pod | | | | | | | | |  | |  |  | |  | Like sweet corn, peas are at their tastiest immediately after harvest. Whether you choose shell or edible-pod peas, they grow best during spring and early summer when temperatures are between 60 F to 75 F. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 9 to 13 days, 40F to 85F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 3 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun, Part Shade | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 1" to 4 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 1" to 4 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 54 to 72 | | |  | |   Growing Guide GROWING NOTES Yields best in full sun.   Prefers well-drained soil, average fertility, high in organic matter with pH 6.0 to 7.0. Widely adapted, but prefers cool, damp weather. Good soil structure is important. Avoid compacting soil by working it when it’s still too wet.   Leafless varieties have particularly fine texture.  MAINTAINING Sow seed in spring as soon as you can work the soil - as early as late March or early April depending on how quickly the soil warms and dries. Peas planted in cold soil (40 F) are slow to germinate. Later plantings made when the soil is warmer (60 F or more) often catch up quickly with earlier plantings. Use raised beds if your soil is slow to drain.  Make additional plantings through early- to mid- May, or plant varieties with different maturity dates to increase the harvest period.  Plant seeds 1 to 2 inches deep, 1 to 4 inches apart in rows 18 inches apart. Or sow about 1 inch apart in a 3-inch-wide band (about 25 seeds per foot). Shallow planting is best when soils are cool and wet. Plant deeper if soil is dry. A quick way to seed is to make a furrow or trench with a hoe, place seed in the furrow, cover and firm. Do not thin.  Erect trellis for tall-growing, vining types at planting using chicken wire, brush or other suitable trellis material. If trellising, increase row spacing to 4 to 6 feet.  Keep soil moist, but avoid heavy watering during flowering, which can interfere with pollination.   Intercrop peas with fast-growing cool-season crops such as spinach or radishes. After final harvest, follow with late squash plantings or fall-harvested cool-season crops such as broccoli, leeks or potatoes.  Sow fall crops about 8 to 10 weeks before first frost date. Fall crops can be disappointing if hot weather persists. Powdery-mildew-resistant varieties are best for fall crops.  Do not use high-nitrogen fertilizers. Too much nitrogen will result in lush foliage but poor flowering and fruiting. Inoculation with rhizobia bacteria may be beneficial if peas have not been grown in the past.  Do not plant peas in the same place more than once in every 4 years. Avoid planting where in places where peas have suffered before from root rot. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Pea Seed**](http://www.heirloom-organics.com/or/organicpeaseed.html) | | [**Heirloom Pea Seed**](http://www.heirloom-organics.com/he/heirloompeaseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Pea pods usually measure anywhere from 1-3/4 and 6 inches. They are best harvested when they are slightly immature as this will give you the sweetest taste. The peas that are ready first will be located at the bottom of the plant and once they are ready start picking because this will encourage the plant to produce more. You will know they are ready when the pod looks green, shiny, and puffy and you pinch the pod you can feel fully formed round fruit. Another way to check is to look at the seam on the sides of the pods. Rip peas will change from a convex to a concave shape. To pick peas hold on to the pod with one hand and vine with the other and tug it off. They tend to want to hold on to the vine so make sure you don’t tug the vine out of the ground.  If you are growing snap peas make sure to pick them before the peas inside the pod fill out as their sweetness diminishes as the seed grows. Snow peas should be harvested when the pods are still flat.  Peas quickly loose their sweetness after harvesting so make sure to use them immediately. If you don’t need them right away make sure to freeze them to preserve their flavor.  SAVING SEEDS Save pea seeds by allowing the pods to ripen on the plants until they’re dry and starting to turn brown, with the seeds rattling inside. This may be as long as a month after you would normally harvest the peas or beans to eat. Strip the pods from the plants and spread them out to dry indoors. They should dry at least two weeks before shelling, or you can leave the seeds in the pods until planting time. |  | |  |  |  | | | |  | |

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| **How to Grow Peanuts | Guide to Growing Peanuts** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingpeanuts.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Arachis hypogaea* **Varieties:** Runner, Spanish, Valencia, Virginia | | | | | | | | |  | |  |  | |  | The peanut is native to South America and is currently cultivated throughout the world. It's a member of the pea family and may grow up to 1.5 feet tall. Peanuts are typically grown from seed and are a popular choice for home gardeners due to the edible seed. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 10 days, 65 F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 5 Years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Loose, Well Drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 6" to 8" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 24" to 36" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 120 to 150 | | |  | |   Growing Guide GROWING NOTES Peanuts prefer a light sandy soil with a lot of compost and manure.   Loosen the soil to a depth of several inches deep and ensure that it will drain well.  You may need to create elevated rows to ensure adequate drainage.  MAINTAINING Put them in individual pots two to four weeks before the last expected frost if you're planting them indoors. Plant the peanuts after the last expected frost if you're planting them outdoors. Sow the seeds 1 to 2 inches deep and space them 6 to 7 inches apart. The rows should be 3 feet apart.  Keep the soil moist without over watering the peanut plants. This can be challenging as the sandy soil will dry out quickly. Cover to protect them from frost, if needed. You can harvest the peanuts after the first frost. Pull the plant out by the roots and allow the peanuts to dry naturally. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Peanut Seed**](http://www.heirloom-organics.com/or/organicpeanutseed.html) | | [**Heirloom Peanut Seed**](http://www.heirloom-organics.com/he/heirloompeanutseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Harvest the peanuts when the foliage begins to yellow in late summer or early fall. Dig up the plants with a spading fork and carefully shake off the loose soil. Cure the peanuts by hanging the plants in a warm, dry shed or garage. Beware of mice. After the plants have dried for 1 or 2 weeks, shake off any remaining soil and pull the peanut pods from the plants. Continue to air dry the peanuts for an additional 1 or 2 weeks. Once dried, place the peanuts in mesh bags and store them in cool, well-ventilated place until roasted.   SAVING SEEDS Raw peanuts may be left in the shell and saved for replanting the following spring. Once dried, place the peanuts in mesh bags and store them in cool, well-ventilated place. |  | |  |  |  | | | |

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| **How to Grow Pepper | Guide to Growing Peppers** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingpeppers.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Capsicum* **Varieties:** [California Wonder](http://www.heirloom-organics.com/guide/va/1/guidetogrowingcaliforniawonder.html), [Yolo Wonder](http://www.heirloom-organics.com/guide/va/1/guidetogrowingyolowonder.html) | | | | | | | | |  | |  |  | |  | Capsicum encompasses a wide array of flavorful peppers used in modern cuisines all over the world. Native primarily to equatorial regions of North and South America, the many varieties of sweet and hot peppers thrive on full sun, warm weather, well-drained soil and modest fertility. Special considerations must be taken if growing peppers in temperate regions. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 7 to 10 days, 70F to 95F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 2 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 1/4" deep in flats | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 12" to 24 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 65 to 95 | | |  | |   Growing Guide  GROWING NOTES Pepper should be started indoor approximately 8 weeks prior to the last frost of the spring.  Sow ¼" deep in a well-drained starting medium. Seeds require lots of warm to germinate; medium should be between 80-85 degrees F. Using a heat mat, available at home and garden store and elsewhere, can help to ensure ideal conditions. Additionally, young starts will fare much better with additional light. Place in a window or sunny location that receives lots of southern or southwestern sun exposure. Consider supplementing with artificial lighting if possible.  Set plants out 2 to 3 weeks after average last frost when the soil has warmed and the weather has settled. Peppers can be temperamental when it comes to setting fruit if temperatures are too hot or too cool. Nighttime temperatures below 60 F or above 75 F can reduce fruit set.   Plant them 12 to 24 inches apart, in rows 24 to 36 inches apart, or spaced about 14 to 16 inches apart in raised beds. Do not rush to transplant your starts outdoors. Select a location that receives plenty of light and heat, and has not been used for tomatoes, potatoes or other members of this family for several years. Peppers will do best with soil that is fertile, lightweight, slightly acidic (pH5.5-7.0) and well-drained.  Wait until soil temperatures exceed 50 degrees F at all times before placing into the ground. Pepper plants should be fairly close to one another, so that there is slight contact between plants.  MAINTAINING Peppers need a steady supply of water for best performance. If fertilizing, be careful not to overdo it on nitrogen as this can deter fruit growth. Organic fertilizers and soil should be rich in phosphorus, potassium and calcium.  Mulching with black plastic or similar material is a good way to maintain heat and soil moisture. Additionally, floating row covers over your beds can help to protect against cold early in the growing season. Use caution with row covers not to overheat plants and cause them to drop their blossoms.  Stake tall varieties for earlier and heavier harvest. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Pepper Seed**](http://www.heirloom-organics.com/or/organicpepperseed.html) | | [**Heirloom Pepper Seed**](http://www.heirloom-organics.com/he/heirloompepperseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING Make sure the bell peppers are firm and shiny with a crisp texture. Use garden shears to clip the fruits from the plant instead of pulling them off.  Pick bell peppers when they are smaller in the beginning of summer. They may be taken when they are the size of a golf ball and frequent picking will encourage near-continuous fruit production. Immature bell peppers are soft and pliable with thin pale walls.  Take fully mature bell peppers when they are four to five inches long and have full, well-formed lobes. The older the fruit is, the thicker the skin will be.  Allow the bell peppers to ripen to their final color later in the season to get fruit of different colors. Ripe bell peppers may be yellow, red, orange or purple, depending on the variety. You can continue to harvest bell peppers until the first frost.  Store bell peppers at 50 degrees and at least 90 percent humidity, if possible. They should be stored away from other fruits and vegetables because they are sensitive to ethylene gas, which causes them to age faster.   HOW TO DRY PEPPERS The shelf life of your chili peppers can be extended many times over by drying your peppers and storing them in an airtight container. To expedite the process, a home food dehydrator can be used to safely take the moisture out of your peppers. Otherwise, place your fresh peppers onto a cookie sheet and 'baking' at the lowest setting (approximately 150F or lower)with the oven for several hours to gradually dry out the peppers. Turn peppers frequently, and make sure peppers are not being overheated.  If neither a food dehydrator or oven is available, peppers can be dried naturally in the sun or even in a well-lit window. This process may take several days, even with hot dry conditions. Peppers can be placed on a flat surface in a sunny location. Turn periodically to ensure that they dry out evenly. Once peppers are slightly brittle and tough, they can be stored in airtight containers and saved for future use.  SAVING SEEDS  Cut your favorite variety of pepper in half. All of the seeds inside are most likely viable and you can use them to grow the same variety of pepper in containers or in a sunny garden spot. Collect the seeds and lay them flat on a paper towel for 24 hours.  Label the plastic bag with the permanent marker with the name or variety of the pepper seeds. Place the seeds inside for planting.  Keep the seeds in a cool, but not cold, dark area until you are ready to start them in early spring. |  | |  |  |  | | | |

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| **How to Grow Potatoes | Guide to Growing Potatoes** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingmelons.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Solanum* **Varieties:** Canola, Red Dale, Rose Gold, Caribe | | | | | | | | |  | |  |  | |  | A nutritional mother lode, potatoes are easy to grow as long as they have full sun, moderate temperatures, and light, rich, acidic, well-drained soil. Try varieties with colors, shapes and flavors you won't find in the supermarket. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png |  | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png |  | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png |  | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png |  | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png |  | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png |  | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png |  | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png |  | | |  | |   Growing Guide GROWING NOTES Requires at least 6 hours of sun each day.   Prefers well-drained, light, deep, loose soil, high in organic matter. Unlike most vegetables, potatoes perform best in acid soil with pH 4.8 - 5.5. (Scab is less of a problem at low pH. If pH is more than 6.0, use scab-resistant varieties.) Needs plentiful, consistent moisture.  An herbaceous perennial grown as an annual in areas that receive frost. Late spring frosts can damage foliage, but growth will usually rebound quickly from underground parts.  Growing is easy if you have the right site and soil. Pests aren't usually as bad in garden settings as in commercial fields. Fun to grow with kids, especially if you use the deep mulching method.  Flowers relatively inconspicuous.  MAINTAINING Potatoes perform best in areas where summers are cool (65 F to 70 F), but are widely adapted.   Potatoes require well-drained soil. (They will rot under prolonged cold, wet conditions.) If your soil is poorly drained or a heavy clay, consider using raised beds. Adding organic matter (compost, cover crops, well-rotted manure or leaves) is a good way to improve soil before growing potatoes. Go easy on organic matter sources high in nitrogen (such as manure) and nitrogen fertilizer as too much nitrogen can encourage lush foliage at the expense of tuber production.  Unlike most vegetables, potatoes perform best in acid soil with pH 4.8 - 5.5. Use scab-resistant varieties with pH above 6.0. Because most other garden vegetables perform best at near-neutral pH, it’s usually not feasible to grow potatoes in their preferred pH range, unless you dedicate one section of your garden to growing just potatoes in rotation with cover crops.  Buy certified disease-free seed potatoes from garden centers or through online or mail-order catalogs for best results. If you save your own seed potatoes, discard any that show any signs of disease. Avoid planting potatoes from the supermarket because they may have been treated with sprout inhibitors. They may also be less vigorous and more prone to disease. If you must use supermarket potatoes, use round, white Maine-grown potatoes, not russets or long white potatoes grown in California or Idaho. To see if they'll sprout, take three potatoes and put them in a paper bag and place the bag in a warm location (about 70 F). They should sprout in two weeks if they haven't been treated with sprout inhibitors.  Cut seed potatoes that are larger than a chicken egg into pieces about 1 inch across or slightly larger. Each piece should have at least one “eye” (the bud where the stem will grow from) -- preferably two eyes. Egg-sized and smaller tubers can be planted whole.  Traditionally, cut seed potato pieces are allowed to cure for a few days to a few weeks before planting. This is because the cut potatoes need high humidity, plenty of oxygen and temperatures between 50 F and 65 F to heal quickly. If you have excellent, well-drained soil that meets those conditions, you can plant the seed pieces without curing. But if conditions are not right, the seed potatoes will rot in the ground. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Potato Seed**](http://www.heirloom-organics.com/or/organicpotatoseed.html) | | [**Heirloom Potato Seed**](http://www.heirloom-organics.com/he/heirloompotatoseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING Ensure the tubers are always covered with soil. Light will cause the tubers to produce chaconine and solanine which can make the potatoes bitter and is poisonous in higher concentrations.  Remove a small new potato on each plant if you don't wish to reduce the overall yield. Harvest the entire plant if you want more than one potato per plant.  Harvest potatoes for storage through the winter after the tops have died. These potatoes will have a thicker skin than new potatoes that were dug before the tops died. The thicker skin is needed for a long storage and you will know the skin is thick enough if it does not slough off easily when you rub it.  Leave the potatoes in a shady spot to dry for a few hours before storing them in a dark place. Peel off all the green portions when preparing potatoes for a meal.  SAVING SEEDS Like many root vegetables, potato plants can be grown from cuttings of the seed tuber, more commonly known as the potato. The tuber contains growth eyes, from which the potato plant will spring in the early summer when planted. As the plant grows, the tubers multiply underground, creating more potatoes. Most gardeners cut seed potatoes into sections that contain 2-3 eyes per seed, maximizing the possibility for a successful plant. Seed potatoes must be stored carefully to prevent rotting, which will prohibit the plant from seeding in the next planting season.  Select small potatoes from the garden, or purchase seed potatoes from a nursery or garden supply store. Clear the potatoes of surface dirt with a dry towel.  Inspect seed potatoes for discoloration of the flesh or skin, rough scars in the exterior of the potato, or abnormal bumps on the skin. Discard any potatoes with these blemishes, as they can produce a diseased potato crop.  Handle seed potatoes carefully to avoid scraping of skin or bruising the flesh, and place them into a bin for storage. Bruised or cut potatoes may rot in storage, and may not produce once planted. Place the potato container in a basement or cellar.  Take care to cover any windows or sources of light, or drape a thin, opaque sheet over the potatoes. Do not seal container completely as potatoes need adequate airflow to prevent rotting.  Store the potatoes in temperatures no higher than 40-45 degrees Fahrenheit, as higher temperatures will induce secondary growth of the potato plant. Do not allow the potatoes to freeze as this will damage the potato and may cause rotting.  Maintain humidity by storing in basements or cellars, but do not allow potatoes to get wet. Wet seed potatoes will rot or grow mold. Spread water or place water containers near the potatoes if the climate is particularly dry, as water will evaporate and keep the air in the vicinity moist.  Store potatoes for three to five months in these conditions, checking and rotating them once or twice a week. Discard any potatoes that appear moldy or rotten immediately to prevent decay of neighboring seeds.  Bring potatoes to temperatures of 50-55 degrees Fahrenheit seven to ten days before planting. Move potatoes outdoors in an opaque container, such as a trash can, once spring temperatures have reached 50-55 degrees. Temperature change will help the potatoes to heal from storage and to begin the growth process. |  | |  |  |  | | | |  | |

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| **How to Grow Pumpkin | Guide to Growing Pumpkin** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingpumpkin.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Cucurbita pepo* **Varieties:** Atlantic Giant, Baby Pam, Big Max, Cinderella, Connecticut Field, Jack Be Little, Small Sugar, Spookie Pie | | | | | | | | |  | |  |  | |  | With fertile soil and a long enough growing season, it's easy to grow your own Jack-o-lanterns -- if you have enough space. Choose varieties bred for flavor if you want to make pies. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 5 - 10 days, 60F to 105F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 6 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained, High Fertility | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun, Part Shade | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 2" to 6" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 6" to 12" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 90 to 120 | | |  | |   Growing Guide GROWING NOTES Prefers well-drained, fertile, loose soil, high in organic matter with pH between 5.8 and 6.8. Plentiful and consistent moisture is needed from the time plants emerge until fruits begin to fill out.  Tender annual.  If you have plenty of space, good soil and a long enough growing season, pumpkins are easy to grow.   Most varieties grow on vines that spread 8 feet or more. Even smaller bush types spread 5 feet or more.   MAINTAINING Pumpkins like warm soil and are very sensitive to frost. So don’t be in a rush to plant early in spring. Wait until danger of frost has passed and soil has warmed to about 70 F, or about 2 weeks after the last frost date.  Unless you are trying to grow a long-season variety in an area that gets early frosts, there’s really no need to start pumpkins inside. Instead, direct seed 1 to 1 1/2 inches deep into hills (which warm and drain earlier in the season) or rows. Sow 4 to 5 seeds per hill. Space hills about 4 to 8 feet apart, depending on the size of the vine. (Even some of the mini-fruited pumpkins grow on very large vines.) When the plants are 2 to 3 inches tall, thin to 2 to 3 plants per hill by snipping off unwanted plants without disturbing the roots of the remaining ones. In rows, sow seeds 6 to 12 inches apart in rows 6 to 10 feet apart. Snip off plants to thin to one plant every 18 to 36 inches.   If you need to start plants early, plant inside in 2- to 3-inch pots or cells 3 to 4 weeks before transplanting outside. Sow 3 or 4 seeds per pot and thin to one or two plants by snipping off the weaker plants to avoid damaging the roots of those that remain. Harden off by cutting back on water and reducing temperature before transplanting. Plant transplants out in the garden at the same final spacings above after all danger of frost has passed.  Black plastic mulch can speed growth, especially in cool, short-season areas. At the end of the season, remove or till in vines to reduce mildew. Use row covers to protect plants early in the season and to prevent insect problems. Remove before flowering to allow pollination by insects or when hot weather arrives.  Mulching plants helps retain moisture and suppress weeds. Mounding soil around the base of the plants can discourage squash borers from laying eggs. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Pumpkin Seed**](http://www.heirloom-organics.com/or/organicpumpkinseed.html) | | [**Heirloom Pumpkin Seed**](http://www.heirloom-organics.com/he/heirloompumpkinseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  A pumpkin should be left on the vine until its desired color is reached. Once the pumpkin is picked, the color stops developing.  You can tell if a pumpkin is ripe by thumping the pumpkin and by examining its skin. If it makes a hollow sound when thumped, the pumpkin is ready to be picked. Additionally, the pumpkin is ripe is if the skin feels hard, almost like a shell. When you press your fingernail into a ripe pumpkin, it should resist puncture.  When harvesting a pumpkin use a sharp knife or scissors to cut the fruit from the vine. When cutting, be sure to leave a long handle on the pumpkin.  To ensure the pumpkin lasts for a long time, clean it, using a 10 percent bleach solution. The pumpkin can be sprayed with the bleach solution or dipped in it.  Curing involves elevating storage temperatures to 80 to 85 F with 75 to 80 percent relative humidity for approximately 10 days. Curing heals wounds, helps ripen immature fruit, enhances color, and ensures a longer post-harvest life.  After curing, the pumpkin can be coated in edible grade food wax if it is going to be eaten or with shellac if it will not. Store the pumpkin on its end out of direct sunlight. Following these simple steps, a pumpkin can be stored for two to three months.  SAVING SEEDS Remove the pulp and seeds from inside the pumpkin. Place this in a colander. Place the colander under running water. As the water runs over the pulp, start picking out the seeds from the pulp. Rinse them in the running water as you do. Do not let the pumpkin pulp sit in non-running water. There will be more seeds inside the pumpkin than you will ever be able to plant, so once you have a good amount of seeds rinsed, look over them and choose the biggest seeds. Plan on saving 3 times more pumpkin seeds than the number of plants you will be growing next year. Larger seeds will have a better chance of germinating. Place the rinsed seeds on a dry paper towel. Make sure they are spaced out otherwise the seeds will stick to one another. Place in a cool dry spot for 1 week. Once the seeds are dry, store pumpkin seed for planting in an envelope. |  | |  |  |  | | | |  | |

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| **How to Grow Rice | Guide to Growing Rice** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingrice.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** Oryza Sativa **Varieties:** Japanese Rice (Koshihikari), Brown Rice | | | | | | | | |  | |  |  | |  | Rice, most believe, is one of the oldest foods on the dinner table. Archaeologists can trace it back to about 5000 BC and historians note that it was mentioned in relation to China, where they held annual rice ceremonies, as early as about 2300 BC. They believe that the plant was also native to India and Thailand. Rice came to the West via explorers, soldiers, and traders. It thrived in many climates but not so well in others. Because the plant requires much rainfall shortly after it’s planted in the ground, followed by plenty of hot, sunny weather, some countries – like England - are just not cut out for rice growing. The American South – growing started in the Carolinas, though Arkansas is currently the largest producer - has had much success with cultivating rice as have European countries where the climate is ideal, like parts of Italy and Spain. Many cultures continue to hold rice in high regard. In Japan and Indonesia, it has its own God. The Chinese devote a whole day of their New Year celebration to the crop. In some Asian cultures, it’s considered a link between Heaven and Earth. India believes rice is important to fertility, and its link to such resulted in the long-standing tradition of throwing rice at a wedding. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Direct | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png |  | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 1-2 Years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Very Wet | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Sunny | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png |  | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png |  | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 160 Days | | |  | |   Growing Guide GROWING NOTES  Growing Rice in a Container Garden Rice is an unusual and fun plant to grow in your garden or on your porch. The secret to growing rice is that you have to recreate the flooded rice paddy for the rice to thrive in.  Collect all of your clean plastic buckets and empty plastic laundry soap buckets to work in. You do not want to use any container that has holes in the bottom that would let the water out.  Buy some long-grain brown rice from the bulk bins at the grocery store or in a bag. Organically grown rice will reproduce better than some long-grain brown rice, but most kinds seem to have some grains that sprout. Your goal is to find brown long-grain rice that is as close to untouched by machines and chemicals as possible. White rice will not work because it has been processed. Or, you can buy a package of your favorite rice seed from a gardening supply outfit.  Fill your buckets with about 6" of dirt or potting soil. Add water until it is about 2" above the soil level and toss a small handful of your store bought long-grain rice into the bucket; they will sink so that they are lying on top of the dirt under the water.  MAINTAINING Rice likes a warm climate, keep your bucket in a sunny area and move it if necessary to a warm place at night. Keep your water level at about 2 inches above the dirt until the rice is growing strong.  When your plants are up to about 5-6 inches, increase your water level to about 4 inches deep. After that, let the water level lower in the bucket slowly over a period of time. You will want the plants just about dry of standing water by the time you are ready to harvest.  Rice is mature somewhere in its fourth month if conditions are right. The stalks will change from green to gold in color when they are ready. To harvest, cut your stalks and let them dry in a warm place, wrapped in a newspaper for 2-3 weeks.  Roast your rice in a very low heat (under 200) for about an hour, and then remove the hulls by hand. You are now ready to cook with your own long-grain brown rice. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Rice Seed**](http://www.heirloom-organics.com/or/organicriceseed.html) | | [**Heirloom Rice Seed**](http://www.heirloom-organics.com/he/heirloomriceseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Harvesting It is the process of gathering a crop. For rice, this generally refers to the cutting and gathering of panicles attached to the stalks. Once the plants have reached full growth (approximately three months after planting) and the grains begin to ripen-the tops begin to droop and the stem yellows-the water is drained from the fields. As the fields dry, the grains ripen further and harvesting is commenced. Depending on the size of the operation and the amount of mechanization, rice is either harvested by hand or machine. The different harvesting systems are as follows :  Harvesting Systems Manual harvesting makes use of traditional threshing tools such as threshing racks, simple treadle threshers and animals for trampling or by hand using sharp knives or sickles. Manual harvesting and machine threshing Rice is manually threshed, then cleaned with a machine thresher.   Machine reaping and machine threshing  A reaper cuts and lays the crop in a line. Threshing and cleaning can then be performed manually or by machine.  Combine harvesting - The combine harvester combines all operations: cutting, handling, threshing and cleaning. SAVING SEEDS To prevent your seed from spoiling, remember to follow these steps:  Select the healthy panicles and save only clean and sorted grains.  Keep seed in airtight containers, and never in gunny sacks or polythene bags.  If the container is an earthenware pot, you can seal its pores with paint or cooking oil inside and outside to make it airtight. Before storage wash and dry the container well.  Fill the container up to the brim. If you don't have enough seed to fill the pot, add very dry sand or puffed rice to fill the empty space. Or light a candle to consume oxygen, so insects won't survive.  You can add dry neem, tobacco or other insect repellent leaves to control insects in storage. Close the container tightly.  Raise the container off the floor to prevent the grains from getting damp and damaged. Don't forget that correctly stored seed is good seed, and good seed contributes to a good harvest. |  | |  |  |  | | | |  | |

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| **How to Grow Rye | Guide to Growing Rye** |
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[Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural 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Domesticated rye occurs in small quantities at a number of Neolithic sites in Turkey, such as PPNB Can Hasan III, but is otherwise virtually absent from the archaeological record until the Bronze Age of central Europe, c. 1800-1500 BC.[1] It is possible that rye traveled west from Turkey as a minor admixture in wheat, and was only later cultivated in its own right. Although archeological evidence of this grain has been found in Roman contexts along the Rhine Danube and in the British Isles, Pliny the Elder is dismissive of rye, writing that it "is a very poor food and only serves to avert starvation" and wheat is mixed into it "to mitigate its bitter taste, and even then is most unpleasant to the stomach" (N.H. 18.40).  Since the Middle Ages, rye has been widely cultivated in Central and Eastern Europe and is the main bread cereal in most areas east of the French-German border and north of Hungary. Claims of much earlier cultivation of rye, at the Epipalaeolithic site of Tell Abu Hureyra in the Euphrates valley of northern Syria, remain controversial. Critics point to inconsistencies in the radiocarbon dates, and identifications based solely on grain, rather than on chaff. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Direct | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png |  | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | Several Months | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Moist | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png |  | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png |  | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png |  | | |  | |   Growing Guide GROWING NOTES Rye is one of the easiest crops to grow. Recommended seeding rates vary from 60 to 200 pounds per acre, depending on whom you ask. In the course of my research on cover crops in North Carolina and Virginia, I drilled rye at 90 pounds of seed per acre at 1 to 1½ inches deep and had excellent stands. The Virginia Extension Service recommends planting between two weeks before and four weeks after the first killing frost.  Planting of the grain can begin late August thru early March for temporary fast coverage. Cereal Rye grain produces dense fibrous roots and will readily sprout in cool temperatures. Broadcast seed on surface and lightly till or drag to provide 1/4” - 1/2” covering of soil. Roll or pack to firmly make seed to soil contact. Seed will germinate with 1” rain or supplemental irrigation.  MAINTAINING If a wet, mild winter season occurs, cereal rye may grow rapidly on warm days. Cut excess growth no lower than 6” as required to maintain desired heights. If a harsh or dry winter occurs or on thin infertile soils, no additional management may be needed. If left un-mown, cereal rye has similar growth characteristics as whole grain winter wheat.   Preparing for Native Seeding: In late winter / early spring scalp cereal rye cover crop as short as possible to suppress growth. Rake and remove excess thatch as required. No-till drill final native seed mix directly into remaining rye stubble. The rye grain root mass will continue providing erosion control. With the cereal rye canopy of top growth removed, final native seed sprouting can begin with the warming spring time soil temps and the beneficial spring rains. Following these steps can bring a successful establishment of native prairie plants |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Rye Seed**](http://www.heirloom-organics.com/or/organicryeseed.html) | | [**Heirloom Rye Seed**](http://www.heirloom-organics.com/he/heirloomryeseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Rye can be harvested and threshed in one operation with a combine, or swathed and later threshed. To reduce shatter loss when direct combining, begin harvest at about 22% moisture and follow by drying. Moisture content needs to be below 15% to avoid discounts at elevators. Sprout damage can occur during harvest or storage in some years. Some buyers have used the "falling number" test to check for sprouted grain and have discounted grain with a low value. SAVING SEEDS Grasses form their flowers in spikes called inflorescences. Seed collection is easy. Do not remove the flowering spikes, seeds will develop in the inflorescences. After a period of time you can notice a changing of color in the seed spike, usually it will lighten in color. Mature seeds can be brown to light tan depending on species.  It is important to note for collection that seeds will not come readily off the spike if they are immature. For collection grasp your hand around the base of the mature inflorescence and in a clasping motion pull upwards and strip the seeds from the spike. Ripe seeds come off very easily.  Allow the seeds to dry in a large open bowl for several days, small seeds will need a few days to dry, larger seeds may require more time, especially in damp weather. It is important to assure that the seeds are thoroughly dry before storing them.  Their will be a good amount of chaff with the seeds, it is not always easy to remove. Some seeds, such as pennisetum, have narrow catching/hooking spear-like protrusions attached. Their purpose is part of the dispersal means of the plant. As an animal passes close by and brushes against the inflorescence the seeds are snagged onto the coat and can stay attached for some distance, the seed eventually breaks from its hooks and falls to the ground where it might germinate. Seeds are usually traded with the chaff, for sowing rub both seeds and chaff into the surface of moist soil and press in well. |  | |  |  |  | | | |  | |

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| **How to Grow Spinach | Guide to Growing Spinach** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingspinach.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Spinacia* **Varieties:** Bloomsdale, Nobel Giant | | | | | | | | |  | |  |  | |  | This easy-to-grow, nutritious, cool-season crop is among the first greens ready to harvest. But plant it early because it’s quick to turn bitter and go to seed (bolt) as the weather warms and the days lengthen. Dark green color and handsome texture of savoyed varieties are great for edible landscaping. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 6 to 10 days, 40F to 75F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 2 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun, Part Shade | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 1" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 2" to 6 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 50 to 60 | | |  | |   Growing Guide GROWING NOTES Well-drained, fertile soil, high in organic matter. Plentiful, consistent moisture. Tolerates slightly alkaline soils but is sensitive to acid soils. pH should be at least 6.0, but preferably in the 6.5 to 7.5 range.  Must be planted early and grown when temperatures are cool. Needs consistent moisture. Will go to see (bolt) if too dry, or when days lengthen and temperatures warm.  Varieties with savoyed (curly) leaves add interest for edible landscaping.  MAINTAINING As soon as you can work the soil in spring, sow seed ½ inch deep, 1 inch apart in rows 12 to 18 inches apart (or broadcast seed across a wider area). Thin to 2- to 6-inch spacings. Closer spacings can stress plants and cause them to go to seed (bolt) sooner.  Early planting is critical as dry soil, heat and lengthening days also encourage bolting. Later plantings benefit from some light shade from other crops. Follow early plantings with warm-season crops such as tomatoes or beans.  Make succession plantings every week or two until average last frost date. Use bolt-resistant varieties for later plantings. Sow again in mid- to late summer for fall harvest. Seeds do not germinate well in warm soil, so increase seeding rate to compensate. Or pre-germinate seeds by placing them between sheets of moist paper towel in a plastic bag and refrigerating until they sprout.  Spinach seedlings are difficult to transplant. For spring crops, start inside only if your garden stays too wet in spring to allow direct seeding. Start transplants inside about 3 to 6 weeks before last frost.  Spinach is shallow-rooted and requires consistent moisture to prevent bolting. Water to keep soil moist. Mulch after plants are well established to maintain moisture and suppress weeks. Use floating row covers to prevent insect damage.  Do not overfertilize with nitrogen. Only apply supplemental fertilizer if leaves are pale green. Add lime to make sure pH is at least 6.0. You should suspect that your soil is too acid if germination is poor and leaf tips and margins are yellow or brown.  Plant in fall and mulch heavily for early spring crop. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Spinach Seed**](http://www.heirloom-organics.com/or/organicspinachseed.html) | | [**Heirloom Spinach Seed**](http://www.heirloom-organics.com/he/heirloomspinachseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING Spinach is ready for use as soon as it is edible size and it must be harvested before there is extensive yellowing, breakage and other leaf deterioration or the development of seed-stalks. Spinach for market is usually cut below the crown with a knife, taking care to keep the plants clean and to prevent undue breakage or bruising of the leaves. Spinach should be sorted to remove all yellow or damaged leaves before packing into baskets. If spinach is slightly wilted when packed, it will be less subject to breakage. Usually, spinach is washed, repacked, and iced at a central packing shed if it is to be shipped.  SAVING SEEDS Wind pollinated. Spinach varieties must be isolated by 1/4 mile to prevent cross pollination by wind. Physical barriers such as tree lines, buildings or woods may make it possible to use a shorter distance. Allow plants to bolt and set seed. Some staking may be necessary as plants may reach 3' in height. When seeds are dry, harvest the entire plant and thresh on a tarp. A 1/2 " screen on top of a 1/4" and 1/8" is helpful for cleaning. Spinach seed remains viable for 3-5 years under cool and dry storage conditions. |  | |  |  |  | | | |  | |

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| **How to Grow Squash | Guide to Growing Squash** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingsquash.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Cucurbita* **Varieties:** Crookneck, Golden Hubbard Winter, Green Hubbard, Grey Zuccini, Imp. True Green Hubbard, Straightneck, Table Queen Acorn, Vegatable Spaghetti Winter, Waltham Butternut, Winter Butternut | | | | | | | | |  | |  |  | |  | Summer squash comes in a variety of shapes and colors. Bush varieties take up relatively little space, and if kept picked will keep producing right up to frost.   Winter squash are easy to grow -- if you have room. In addition to the familiar butternut and acorn squash, varieties come in a staggering diversity of fruit size, shape and color. Choose bush varieties if space is tight. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 5 to 10 days, 60F to 105F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 6 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained, High Fertility | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 4" to 12 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 18" to 36 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 50 to 60 | | |  | |   Growing Guide GROWING NOTES Prefers well-drained, fertile, loose soil, high in organic matter with pH between 5.8 and 6.8. Plentiful and consistent moisture is needed from the time plants emerge until fruits begin to fill out.  Most varieties grow on vines that spread 6 feet or more. If space is tight, choose smaller bush or semi-bush varieties.   Most summer squash grow on compact vines, in contrast to the sprawling vines of most winter squash and pumpkins.  Some varieties have interesting "water marks" on their foliage.  Most summer squash varieties form a compact, bushy vine.  MAINTAINING Squash like warm soil and are very sensitive to frost. So don’t be in a rush to plant early in spring. Wait until danger of frost has passed and soil has warmed to about 70 F, or about 2 weeks after the last frost date.  **Winter Squash** Unless you are trying to grow a long-season variety in an area that gets early frosts, there’s really no need to start winter squash inside. Instead, direct seed ½ to 1 inch deep into hills (which warm and drain earlier in the season) or rows. Sow 4 to 5 seeds per hill. Space hills about 4 to 8 feet apart, depending on the size of the fruit. (The larger the expected size of the squash, the larger the vine and the farther apart you should space the hills.) When the plants are 2 to 3 inches tall, thin to 2 to 3 plants per hill by snipping off unwanted plants without disturbing the roots of the remaining ones. In rows, sow seeds 6 to 12 inches apart in rows 4 to 8 feet apart. Snip off plants to thin to one plant every 18 to 36 inches.  If you need to start plants early, plant inside in 2- to 3-inch pots or cells 3 to 4 weeks before transplanting outside. Sow 3 or 4 seeds per pot and thin to one or two plants by snipping off the weaker plants to avoid damaging the roots of those that remain. Harden off by cutting back on water and reducing temperature before transplanting. Plant transplants out in the garden at the same final spacings above after all danger of frost has passed.  If you need to start plants early, plant inside in 2- to 3-inch pots or cells 3 to 4 weeks before transplanting outside. Sow 3 or 4 seeds per pot and thin to one or two plants by snipping off the weaker plants to avoid damaging the roots of those that remain. Harden off by cutting back on water and reducing temperature before transplanting. Plant transplants out in the garden at the same final spacings above after all danger of frost has passed.  Mulching plants helps retain moisture and suppress weeds. Mounding soil around the base of the plants can discourage squash borers from laying eggs.  **Summer Squash** Direct seed ½ to 1 inch deep into hills (which warm and drain earlier in the season) or rows. Sow 4 to 5 seeds per hill. Space hills 3 to 4 feet apart. When the plants are 2 to 3 inches tall, thin to 2 to 3 plants per hill by snipping off unwanted plants without disturbing the roots of the remaining ones. In rows, sow seeds 4 inches apart in rows 4 to 5 feet apart. Snip off plants to thin to one plant every 12 to 24 inches.  For extra early crops, start inside in 2- to 3-inch pots or cells 3 to 4 weeks before transplanting outside. Sow 3 or 4 seeds per pot and thin to one or two plants by snipping off the weaker plants to avoid damaging the roots of those that remain. Harden off by cutting back on water and reducing temperature before transplanting. Plant transplants out in the garden about 1 to 2 feet apart after all danger of frost has passed.  To hasten first harvest by as much as 2 weeks, use black plastic mulch to warm soil before direct seeding or transplanting. Early fruits are sometimes wrinkled, turn black or rot due to poor pollination.  At the end of the season, remove or till in vines to reduce mildew. Use row covers to protect plants early in the season and to prevent insect problems. Remove cover before flowering to allow pollination by insects or when hot weather arrives.  Mulching plants helps retain moisture and suppress weeds. Mounding soil around the base of the plants can discourage squash borers from laying eggs. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Squash Seed**](http://www.heirloom-organics.com/or/organicsquashseed.html) | | [**Heirloom Squash Seed**](http://www.heirloom-organics.com/he/heirloomsquashseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING Summer - 60-70 days. These squash are picked immature before they are fully formed. The skin should be soft and tender, otherwise the squash will be overripe and of poor quality.   Check squash plants almost daily when they start to flower, as the fruit will develop in 2 or 3 days in hot growing weather. The vines must be kept picked or the plants will stop producing.  Winter - 90-120 days. When the stems turn a light green yellow color, the squash should be fully ripe. The rind will be thick and tough. Cut, do not pull, the ripe fruit from the plant. Two to three inches of stem must remain for proper storing. This may increase the sugar content.  SAVING SEEDS Insect pollinated. Take caution unless you are hand pollinating, as many summer squash varieties are the same species as many pumpkins and winter squashes. 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 summer squash the same as usually done for winter storage of squashes and pumpkins, allowing summer squash varieties to grow to a large size with a hard outside skin. 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 seeds remain viable for 6 years under cool and dry storage conditions |  | | | |

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| **How to Grow Strawberries | Guide to Growing Strawberries** |
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Strawberries >>**](http://www.heirloom-organics.com/guide/va/guidetogrowingstrawberry.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Fragaria* **Varieties:** [Alexandria](http://www.heirloom-organics.com/guide/va/1/guidetogrowingalexandriastrawberry.html), [Alpine](http://www.heirloom-organics.com/guide/va/1/guidetogrowingalpinestrawberry.html) | | | | | | | | |  | |  |  | |  | The fragrantly sweet juiciness and deep red color of strawberries can brighten up both the taste and aesthetics of any meal; it is no wonder they are the most popular berry fruit in the world. Although strawberries have become increasingly available year-round, they are at the peak of their season from April through July when they are the most delicious and most abundant. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 2 to 8 weeks, 65-75�F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 2 Years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Loose, Well drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 1/4" | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 1' to 2' apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 30 to 45 days | | |  | |   Growing Guide GROWING NOTES The small seeds should not be buried too deeply-when sowing cover with a light dusting of soil, approximately ⅛" or less. Keep the soil well-moistened and moderately warm (between 60-75 degrees F), which should occur between 14-21 days.  **Choosing a Site**  Well drained, sandy loam with a pH from 5.8 to 6.2 is ideal.  Don't plant where tomatoes, potatoes, peppers or eggplant have been grown recently (Verticillium Rot)  Strawberries require a loose, loamy, slightly acidic soil (pH 6.0-6.5) and full sun to achieve peak berry quality, but they will tolerate a variety of soil conditions as long as they have adequate drainage. Prepare your strawberry beds by turning under 1/2"-1" high quality, animal manure or plant residue-based compost. Compost composed of cedar or redwood is not an acceptable substitute for high quality compost. Also it is a great idea to lay mulching film on the soil as it greatly reduces the need for weeding.  Planting Strawberries If you are not ready to plant your strawberries when they arrive, you can store them in a refrigerator for a few days, keeping them damp (but not soggy!). When you are ready to plant, put the transplants in a bucket of water for a few minutes to rehydrate them and to keep them from drying out in the wind and sun.  Dig each hole deep enough so that the transplant roots will not be bent or "j-rooted" when covered with soil. Next, prepare a soil cone at the bottom of the hole for the roots to rest upon when buried, keeping the roots as straight as possible. Finally, fill the hole with loose soil, keeping the upper crown bud at or slightly above the soil line, as plants will die if the crowns are completely covered. Once planted, strawberries will spread by producing "runners" where leaf cluster tips touch the ground.  MAINTAINING Give all strawberry varieties 1" of water per week, preferably using drip-type irrigation to minimize berry spoilage and keep the beds thoroughly weeded! After the first frost, mulch beds with straw or agricultural fabrics. Where snow remains on the ground throughout the Winter, no mulching is required. When the ground warms in Spring, remove any organic mulches, but leave agricultural fabrics on until the first flowers appear; fabrics will speed growth but prevent pollination if left on during blossoming.  All strawberry varieties are prone to diseases caused by overly moist soil conditions and overcrowding. Soil must be kept loose and well drained, plants must be properly spaced and ripe or moldy fruit picked daily. Snails and slugs can be a significant problem, but are contrulled using traps and copper strip-barriers. Netting, scare ballons and flash tape work very well against birds.  Spring Bearers generally produce a single large crop in Spring to early Summer, as early as March in warmer regions such as Southern California and Florida. They are prolific producers for 3 to 4 weeks, and are a good choice for growers who want to limit their growing season for marketing or home processing reasons.  Since Spring Bearers spread their runners very rapidly, many growers consider the "matted row method" to be the most effective means of propagation. Rows are spaced 1'-2' apart with berry plants spaced at 1'. Plants are then allowed to "runner" freely in all directions, creating larger rows centered on the original mother plants, all flowers are removed for the first 4 months of growth to allow for maximum runner spread. A post-harvest regime of mowing plants down to 2-1/2" and tilling to within 1" of the original row will extend bed life for up to 3 years. Tilling up the original row, and leaving second or third generation plants to form new rows can extend bed life even longer.  Ever Bearers are most productive in northern areas where Summer brings extended daylight hours. These varieties are not as prolific as Spring Bearers but are especially suitable for growers who wish to harvest a constant supply of berries throughout the Summer.  Space Ever Bearing varieties in rows 30" apart with plant spacing at 12". Remove the 1st set of flowers after planting, and pull up all runners throughout Spring and Summer to increase fruit production. Keeping these varieties trimmed of old, decaying foliage will allow better air circulation across the bed and result in high berry quality. Allow runners to develop in the second season to establish a new generation of plants; production of the original mother plants will decrease after the second season. After the second year's harvest, pull out the mother plants, leaving only new plants spaced on the original bedding plan.  Day Neutral (Ever Bearing) strawberries bear fruit from late Winter until early Fall in temperate areas, and from early Summer until the first frost in cold climates. These varieties are very prolific but are also more temperamental about their growing conditions than the other varieties; they fare poorly against heat, dry soil and competition from weeds. Growers willing to pamper Day Neutral berries will be rewarded with months of production. Since Day Neutral varieties send out few runners, they should be propagated the same way as Ever Bearers. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Strawberry Seed**](http://www.heirloom-organics.com/or/organicstrawberryseed.html) | | [**Heirloom Strawberry Seed**](http://www.heirloom-organics.com/he/heirloomstrawberryseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Strawberries are their sweetest when fully ripened on the plants. For most varieties this means leaving the berries on the plant for a day or two after they are fully colored. The only way to know for sure is a taste test.  Strawberries bruise easily. Be gentle when pulling them from the plants. Snap the stem directly above the berry rather than pulling on the berry itself. Keep harvested berries in a cool, shady location.  SAVING SEEDS Strawberry seeds are easily separated from ripe fruit by placing them in a household blender with a cup of water and blending at high speed for just a few seconds. (Not too long, or the seeds may be damaged). The good seeds will settle to the bottom, and the fruit pulp and unripe seeds will float. Wait a minute or so for the seeds to settle, and pour off the liquid. The seeds can then be rinsed or scraped out and allowed to dry on a paper towel. |  | |  |  |  | | | |  | |

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| **How to Grow Tomato | Guide to Growing Tomatoes** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingtomato.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Solanum lycopersicum* **Tomato Varieties:** [Amish Paste](http://www.heirloom-organics.com/guide/va/1/guidetogrowingamishpaste.html), [Beefsteak](http://www.heirloom-organics.com/guide/va/1/guidetogrowingbeefsteak.html), [Black Krim](http://www.heirloom-organics.com/guide/va/1/guidetogrowingblackkrim.html), [Brandywine](http://www.heirloom-organics.com/guide/va/1/guidetogrowingbrandywine.html), [Cherokee Purple](http://www.heirloom-organics.com/guide/va/1/guidetogrowingcherokeepurple.html), [Cherry](http://www.heirloom-organics.com/guide/va/1/guidetogrowingcherrytomato.html), [Currant](http://www.heirloom-organics.com/guide/va/1/guidetogrowingcurranttomato.html), [Green Zebra](http://www.heirloom-organics.com/guide/va/1/guidetogrowinggreenzebra.html), [Marglobe](http://www.heirloom-organics.com/guide/va/1/guidetogrowingmarglobe.html), [Mortgage Lifter](http://www.heirloom-organics.com/guide/va/1/guidetogrowingmortgagelifter.html), [Ponderosa](http://www.heirloom-organics.com/guide/va/1/guidetogrowingponderosa.html), [Roma](http://www.heirloom-organics.com/guide/va/1/guidetogrowingroma.html), [Rutgers](http://www.heirloom-organics.com/guide/va/1/guidetogrowingrutgers.html), [Siberian](http://www.heirloom-organics.com/guide/va/1/guidetogrowingsiberian.html), [Strawberry](http://www.heirloom-organics.com/guide/va/1/guidetogrowingstrawberrytomato.html), [Tomatillo](http://www.heirloom-organics.com/guide/va/1/guidetogrowingtomatillo.html), [Yellow Plum](http://www.heirloom-organics.com/guide/va/1/guidetogrowingyellowplum.html) | | | | | | | | |  | |  |  | |  | The most popular garden vegetable crop, tomatoes come in a wide range of sizes, shapes and colors. Choose determinate varieties for early harvest or cool conditions. Compact varieties are also good choices for containers and planting in flower beds. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 6 to 12 days, 60F to 95F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 4 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 1/8" deep in flats | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 12" to 36 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 65 to 80 | | |  | |   Growing Guide SOWING NOTES Tomatoes require a long growing season, and are best started indoors 6 weeks before the anticipated transplanting date (after the final frost of the spring). For best results, sow seeds ½" deep in a well-drained, soilless starting mix. Seeds require warm soil between roughly 65-90 degrees F. Warmer soils will promote faster germination. Keep soil moist, but not soggy while awaiting germination. Moderate watering slightly once seedlings break through the soil.  SOIL & GROWING NEEDS Tomato plants prefer well-drained, fertile soil, high in organic matter. Fertile clays and loams produce the highest yields, but lighter soils that drain and warm quickly can produce earlier harvests. It can tolerate slightly acidic soils, and is most productive with pH 6.0 to 6.8.  Tomato is a heavy feeder and should be fertilized with an organic blend rich in phosphorus and potassium, and containing moderate nitrogen.  Tomatoes need at least 8 hours of direct sun daily, and will develop faster with increased exposure. If possible, grow on a slight slope with southern or southeastern exposure. Tomatoes are native to tropical regions, and have the greatest light needs of any standard garden vegetable.  Staked and pruned plants can grow to well over 6 feet tall in favorable growing seasons, can be trained to narrow spreads. If space is limiting, use smaller determinate varieties.  Tomato is very labor intensive if you stake, prune or use plastic mulch and row covers.  Maintaining  TRANSPLANTING YOUR STARTS OUTSIDE  Once the last frost has passed and temperatures do not drop below approximately 50 degrees F at night, you can begin to consider transplanting. Don't rush to transplant. Cold soil and air temperatures can stress plants. Wait at least a week or two after the last frost. When considering candidates for transplanting, look for sturdy, short, dark green plants. Avoid plants that are tall, leggy, or yellowish, or have started flowering. Transplants that are too mature often stall after transplanting while younger, smaller plants pass them by, producing earlier and more fruit.  Harden off plants before transplanting by reducing water and fertilizer, not by exposing to cold temperatures, which can stress them and stunt growth. Transplants exposed to cold temperatures (60 F to 65 F day and 50 F to 60 F night) are more prone to catfacing. This (misshapen, deformed fruit) is caused by incomplete pollination, usually due to cold weather. Don't rush to transplant until weather has stabilized and soil is warm.  Unlike most plants, tomatoes do better if planted deeper than they were grown in containers. Set them in the ground so that the soil level is just below the lowest leaves. Roots will form along the buried stem, establishing a stronger root system.  To reduce root disease risk, don't plant on soils that have recently grown tomatoes, potatoes, peppers or eggplant for at least two years.  Use black plastic mulch to warm soil and/or row covers, hot caps or other protection to keep plants warm early in the season. Remove covers whenever temperatures exceed 85 F.  SPACING & COMPANION PLANTING CONSIDERATIONS  Depending on the nature of your starts, recommendation on spacing vary slightly:  12 to 24 inches apart for determinate varieties  14 to 20 inches apart for staked indeterminate varieties  24 to 36 inches apart for unstaked indeterminate varieties  Tomatoes can be cultivated in close proximity to carrots, onions, chives, garlic, asparagus, roses, and nettle. In some cases, tomatoes will help to deter parasites or other harmful conditions to the above-mentioned plants.  Avoid planting tomatoes near cabbage, kale, horseradish, broccoli, turnip, rutabega, arugula, cress, radish, mustard, kohlrabi, cauliflower, or any other members of the Brassicaceae family. Also keep tomatoes away from corn, potatoes and fennel herb.  MULCHING, STAKING & PRUNING TOMATO PLANTS  Mulch plants after the soil has warmed up to maintain soil moisture and suppress weeds. A reflective mulch, such as red plastic that will reflect light, can be help to promote more complete development if light conditions are not ideal. Tomatoes need a consistent supply of moisture. If it rains less than 1 inch per week, water to make up the difference.  Many factors (in addition to your choice of variety) affect total yield, first harvest and fruit quality. Raised beds, black plastic mulch and providing consistent moisture by watering or through drip irrigation are good ways to improve all three.  How you provide support to plants can also affect performance. Determinate varieties do not need staking. But staking and pruning indeterminate varieties can hasten first harvest by a week or more, improve fruit quality, keep fruit cleaner, and make harvest easier. Staking and pruning usually reduces total yield, but fruits will tend to be larger. Staked and pruned plants are also more susceptible to blossom end rot and sunscald. Allowing indeterminate varieties to sprawl reduces labor, but takes up more space and plants are more prone to disease.  Wooden tomato stakes are typically about 6 feet long and 1 ½ inch square, but you can use similar materials. Drive stakes at least 8 to 10 inches deep at or soon after transplanting so as not to damage roots.  Prune tomatoes to one or two vigorous stems by snapping off "suckers" (stems growing from where leaf stems meet the main stem) when they are 2 to 4 inches long. Tie stems to stake with soft string, twine or cloth, forming a figure-8 with the stem in one loop and the stake in the other. This gives the stem room to expand without being constricted. Start about 8 to 12 inches above the ground and continue to tie at similar intervals as the plant grows. As an alternative to using individual stakes, grow several plants in a row between heavy-duty stakes or posts spaced about 4 feet apart, and use twine to weave in and out around posts and plants.  Growing tomatoes in cages is a good compromise between labor-intensive staking and just letting them sprawl. You can purchase tomato cages at your local garden center, or simply bend a 6-foot-long piece of 4- to 6-inch wire mesh into a cylinder about 22 inches in diameter. (Cattle fencing or concrete reinforcing wire mesh work well for this.) Place cage around plants soon after transplanting and anchor with stakes.  FERTILIZING & WATERING TOMATOES  Avoid excessive N applications, which can cause excessive foliage and poor fruit set. Also avoid using fresh manure or high nitrogen fertilizers (those with three or more times nitrogen than phosphorus or potassium). Poor fruit set can also be caused by heavy rainfall or temperatures that are either too high (above 90 F) or too low (below 55 F).  On most soils, you can sidedress about 1/2 cup of 5-10-5 per plant and work shallowly into the top inch of soil when fruits are about 1 inch in diameter and again when harvest begins.  Keep soil evenly moist to prevent blossom end rot. This can also help prevent cracking when fruit absorbs water too fast after heavy rain following dry conditions.  CROSS POLLINATION If tomato varieties are planted in close proximity, pollen from one variety can land on the female part of a blossom, the stigma, of a different variety and lead to some or all hybrid seeds being formed in that fruit. This is commonly referred to as a "cross-pollination" or simply as a "cross." When cross-pollination occurs, the fruit will look perfectly normal in the current season; however, the resulting seeds carry genes from each parent and will produce varying progeny in subsequent generations.  If you are not interested in saving seeds, then you can safely ignore cross-pollination issues. Tomato varieties will produce fruit consistent with the varieties planted. Again, any crossing in the current season affects the seeds within the fruit, not the fruit flavor or structure.  If you are attempting to save seeds and maintain a pure tomato variety, some efforts must be taken to avoid cross-pollination. The extent and seriousness of your efforts will depend on the importance of the variety and its intended usage. If the variety is typical, widely available, or intended for home use, then you may welcome a cross as an interesting diversion. However, if the variety is a rare family heirloom, or intended for distribution as a specific named variety, then crosses must be actively avoided.  If you want to be absolutely sure that your tomato seed line remains pure, then you will want to provide a physical barrier to prevent foreign pollen from being introduced. The technique most often used by home growers is called "bagging." It is quite simple but it also is limited with regard to seed production.  To "bag" a tomato means to cover the blossoms before they open. Various materials can be used. Some use floating row cover, others use tulle (bridal veil fabric), pieces of nylon stockings, sheer tricot or other lightweight fabric, or bridal favor bags. Depending on the size of the bags used, the bags must be monitored and removed after pollenization so that the tomato can grow to full size without restriction. After removing the bag, mark the fruit with yarn or a string to identify it when it has reached proper maturity for saving seeds.  It is difficult to collect large quantities of seed using bagging. Fruits do not always form inside the bag. High temperatures and the lack of mechanical movement can hamper pollenization. Lack of mechanical movement is easily corrected by shaking the bagged trusses.  If you are really serious, and you want a large amount of seed that is 100% pure, you could build isolation/screening cages as large as required to house the number of plants you desire.  There are no hard and fast rules to follow with regard to isolation. If you are knowledgeable about the pollinating insects in your locality, you may be able to design a system that reduces natural cross-pollination to a very low level with a small amount of isolation. If you lack specific knowledge about your locality, the following guidelines may be useful.  Generally, tomato varieties should be isolated 20 to 25 feet, and they should have a pollen-producing crop planted between. The objective of the inter planted crop is to divert insects away from the tomatoes. The amount of natural cross-pollination will depend on the factors previously discussed. Generally, organic gardening methods result in many more pollinating insects than would be present in a area where pesticides and tilling have been extensively used.  To obtain 100% seed purity by isolation distance, very large separations are required, possibly a 1/4 mile or more. Obviously, these resources and geography are difficult to achieve. Also, tomato volunteers from previous seasons could remain undetected within the isolation perimeter. Again, if you desire 100% seed purity, look to the physical isolation as provided by bagging or caging.  If you rely on isolation distances, it's best to grow several plants of the same variety and if in a row, harvest fruits from the inner plants and if in a square area, from the interior plants. If only a few plants, it's best to harvest several fruits from each of the two or three plants for seed saving so as to minimize the chance of getting nothing but crossed seed if you chose only one or two fruits. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Tomato Seed**](http://www.heirloom-organics.com/or/organictomatoseed.html) | | [**Heirloom Tomato Seed**](http://www.heirloom-organics.com/he/heirloomtomatoseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Fruit that is fully ripened on the vine has a much fuller flavor than fruits that are picked early and then allowed to ripen. Many cherry tomatoes, however, have a tendency to crack if they stay on the plant, so they should be picked at the peak of redness, or even a tad before.  Watch the bottoms carefully; that's where tomatoes start to ripen. Some varieties, primarily large heirloom types, ripen before they reach full color. Pick tomatoes when the skin still looks smooth and waxy, even if the top hasn't turned its mature color (whether red, purple, pink or golden yellow).  Cut off the top of the plant, or remove all new flower clusters about a month before the first expected frost. That way, you'll direct the plant's energy into ripening existing tomatoes rather than producing new ones that won't have time to mature.  When daytime fall temperatures are consistently below 60 degrees Fahrenheit, fruit will no longer ripen on the vine, so it is time to bring all mature green fruits indoors, either on the vine or off.  SAVING SEEDS Saving tomato seeds is a fairly simple process. Every tomato seed is covered in a gelatinous sack which contains chemicals that inhibit seed germination. This prevents the seeds from sprouting whilst inside the tomato fruit. In nature the fruit drops from the plant and slowly rots away on the ground. This is the natural fermentation process and it is during this that the gelatinous sacks are destroyed. To save tomato seeds yourself you need to duplicate the fermentation process. This will not only remove the gelatinous sack but also kills any seed borne tomato diseases.  Firstly cut the tomato fruits across the middle and then squeeze the tomato seeds and the gel into a container, making sure that you label the container with the tomato variety. The container of tomato seeds then needs to be put to one side to ferment for about three days. During this time the container of seeds will smell horrible and will go mouldy. When the mould has covered the top of the container add water and stir the mixture. The good seeds will sink to the bottom of the container and the mould and hollow seeds can then be poured off. Add more water and continue the progress until only clean seeds remain. You can also put the mould and seeds into a sieve and wash under running water until just the clean seeds remain.  Next spread out the seeds on a glass or ceramic plate to dry, which can take about 12 days, making sure that you label the plate with the tomato variety. The dried seeds can then be put into a labelled envelope. Saved seeds should store for 5 - 10 years if kept in the right conditions. |  | |  |  |  | | | |

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| **How to Grow Turnips | Guide to Growing Turnips** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingturnips.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Brassica* **Varieties:** Purple Top, White Egg | | | | | | | | |  | |  |  | |  | Fast-growing spring turnip crops are best harvested while the weather is still cool. The flavor of fall crops is improved by light frost. Don’t forget the greens which are delightful raw or cooked. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 4 to 7 days, 40F to 85F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 4 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun, Part Shade | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 1" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 4" to 6 " apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 50 to 60 | | |  | |   Growing Guide GROWING NOTES Prefers well-drained, fertile soil high in organic matter, pH 6.0 to 7.5. Can tolerate slightly alkaline soil. Needs plentiful, consistent moisture. Loosen soil deeply or grow in raised beds to encourage good root development. Will tolerate less-than-ideal conditions, but poor soil will slow growth and hurt quality and flavor.   Biennial grown as an annual.  MAINTAINING From early spring to late summer, sow seeds ¼ to ½ inch deep, 1 inch apart in rows 12 to 18 inches apart. Thin plants to 4- to 6-inch spacings.  Plant every 2 weeks for continuous harvest. Quality and flavor are best if harvested when whether is cool.  Use floating row cover to protect crop from early pests.  To help reduce disease, do not plant turnips or other cole crops in the same location more than once every three or four years. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Turnip Seed**](http://www.heirloom-organics.com/or/organicturnipseed.html) | | [**Heirloom Turnip Seed**](http://www.heirloom-organics.com/he/heirloomturnipseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING These tasty and hardy cool-season vegetables epitomize fall root crops. Harvest rutabagas from three to four months after sowing seeds, while turnips can be harvested from one to two months after sowing seeds. Harvest turnip leaves for greens before the roots are ready.  Cut the outer leaves, then refrigerate, unwashed, and use as soon as you can. Leave some greens on top to keep root alive.  Loosen the soil around turnip roots when they reach 2 to 3 inches wide. Pull roots from the soil and twist off the tops, leaving about 1/2 inch of stem.  Use a garden fork to dig up rutabaga roots once they reach 3 inches wide.  Serve cooked turnips and rutabagas as side dishes.  Store turnips in a cool damp place, unwashed, for up to three months. Rutabagas will keep in a cool, damp location for up to four months and can also be frozen.  SAVING SEEDS Turnips grown for seed should not be trimmed for eating. Chinese cabbage can be lightly trimmed for eating without affecting quality seed production. If small amounts of seeds are wanted, allow individual pods to dry to a light brown color before picking and opening by hand. Lower pods dry first followed by those progressively higher on the plant. For larger amounts of seeds pull entire plant after a majority of pods have dried. Green pods rarely produce viable seeds even if allowed to dry after the plant is pulled. |  | |  |  |  | | | |  | |

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| **How to Grow Watermelon | Guide to Growing Watermelon** |
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Watermelon >>**](http://www.heirloom-organics.com/guide/va/guidetogrowingwatermelon.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Citrullus lanatus* **Varieties:** [Black Diamond](http://www.heirloom-organics.com/guide/va/1/guidetogrowingblackdiamondwatermelon.html), [Jubilee](http://www.heirloom-organics.com/guide/va/1/guidetogrowingjubileewatermelon.html), [Sugar Baby](http://www.heirloom-organics.com/guide/va/1/guidetogrowingsugarbabywatermelon.html) | | | | | | | | |  | |  |  | |  | Heat-loving watermelons can be a challenge to grow in cooler regions. To increase success, choose short-season varieties, start them inside, warm soil with black plastic or IRT mulch, and protect young plants with fabric row covers. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 3 to 5 days, 60F to 95F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 4 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | High Fertility | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 12" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 4' to 6' apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 65 to 86 | | |  | |   Growing Guide GROWING NOTES **Indoor Starting** As they require a long growing season, watermelons are best started indoors approximately 3-4 weeks prior to the last frost of the season. Sow seeds 1/4" deep in flats or small pots, sowing 3 seeds per pot. Keep medium moist while awaiting germination. Additionally, watermelon seeds will show better germination rates with heat. Keep the soil between 80-90 degrees, using a heat mat if necessary. Seed should begin to germinate within 3-10 days.  Once seeds start to germinate, lower soil temp slightly to the mid 70s, for 1-2 weeks, also decreasing water. Thin to one plant per cell or pot. Once the first set of true leaves has developed, reduce waterings once more, but do not allow plant to become desiccated.  Harden plant by gradually exposing to outdoor conditions. Transplant to permanent site in late spring after the last frost has passed. If possible, transplant on an overcast day to minimize wilting and create a more amenable environment for your young plant.  **Outdoor Starting** If you have long, hot growing seasons, melons can direct-seed into garden. To ensure ripening in areas with shorter growing seasons and cooler weather, choose fast-maturing varieties, start plants inside, use black or IRT plastic mulch to warm soil and use fabric row covers to protect plants.  Direct-seed 1 to 2 weeks after average last frost when soil is 70 F or warmer. Plant 1 inch deep, 6 seeds per hill, hills 4 to 6 feet apart; or 1 foot apart in rows 5 feet apart. Can plant at closer spacings if trellised. Thin to 2 to 3 plants per hill.  **Choosing a Site** Prefers warm, well-drained, soil, high in organic matter with pH 6.5 to 7.5. Consistent, plentiful moisture needed until fruit is about the size of a tennis ball. Soil temperatures below 50 F slow growth. Consider using black plastic and fabric row covers to speed soil warming. Sandy or light-textured soils that warm quickly in spring are best.  In many areas, successful crops require starting plants indoors, using plastic mulch to warm soil, and fabric row covers to protect young transplants.  MAINTAINING For transplanting, sow seeds indoors ¼ inch deep in peat pots (2-inch square or bigger), 2 to 4 weeks before setting out. Plants should have one or two true leaves when transplanted.  Transplant at same spacings as direct-seeded crops - 2 to 3 plants per hill in hills spaced 4 to 6 feet apart, or 1 to 2 feet apart in rows 5 feet apart. Transplants are delicate and roots are sensitive to disturbance. If you need to thin, use scissors. Keep soil intact around plant when transplanting.  Mulch plants after soil has warmed to help maintain consistent moisture and suppress weeds.  If using fabric row covers, remove at flowering to allow pollination by bees. Good pollination is critical to fruit set.  Plants require consistent moisture until pollination. Once fruits are about the size of a tennis ball, only water if soil is dry and leaves show signs of wilting.  To prevent insect damage to developing fruits, place melons on pots or pieces of wood.  If growing melons on a trellis, support fruit with slings made from netting, fabric, or pantyhose. Trellising improves air circulation around plants and can help reduce foliar disease problems. Choose small-fruited varieties and reduce plant spacing.  For large plantings, leave a strip of rye cover crop every second or third row perpendicular to prevailing winds to protect plants from damaging wind.  To reduce insect and disease problems, avoid planting cucumber family crops (melons, squash, pumpkins) in the same spot two years in a row.  Do not let your melon plants get dried out during the growing season. They are not tolerant of drought. Additionally, be cautious not to over-water plants as this can negatively impact the taste and flavor later on. Keep soil moist but not soggy. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Watermelon Seed**](http://www.heirloom-organics.com/or/organicwatermelonseed.html) | | [**Heirloom Watermelon Seed**](http://www.heirloom-organics.com/he/heirloomwatermelonseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Harveting watermelons is not as straight forward as many other vegetables when it comes to deciding exactly when to harvest. One of the reasons is that they do not slip off the vine like cantaloupes when ripe. This makes it is necessary to look for other indicators. Rolling the melon over and looking at the ground spot where the melon was laying is probably the best method. If that portion of the watermelon is a pale yellow color, the melon should be ripe. You can also look at the tendrils (short, curly, stem-like vine) next to the melon. The tendrils are close to the area where a leaf is attached to the main vine. When the first tendril next to the fruit looks dead and dried up, the melon closest to that tendril should be ripe. Watermelons will store longer than other melons and should be refrigerated, especially after cut.  SAVING SEEDS Scoop out the seeds from a ripe melon and put them into a wire mesh sieve, then with running water over the seeds rub them gently against the mesh, using it to loosen and remove the stringy fibers. Next place the cleaned seeds in a bowl of water, stir it a few times. Some seeds will float to the top....these are immature or sterile melon seeds, they are hollow and/or light-weight and will float to the top of the water. Skim away these bad seeds and discard them. Stir a few more times and repeat the process until no more sterile seeds float to the the top. Drain the water from the remaining seeds.  Afterwards, line a heavy plate or baking pan with waxed paper, spread the seeds out in a single layer onto the waxed paper and place it in sunny spot to air-dry.  Stir the seeds occasionally during the next few hours to make sure all sides are exposed to fresh air, this facilitates even drying. After a day in the sun bring the seeds into the house where they continue to dry for another week or two, stir them daily so they dry evenly. If you've got rainy weather the increased humidity can prolong the drying process another week or so.  Melons have thick seeds so be sure they are thoroughly dry before packing them for storage. |  | |  |  |  | | | |  | |

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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingwheat.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** Triticum Aestivum  **Varieties:** Soft White | | | | | | | | |  | |  |  | |  | Wheat is one of the world's most important food crops. It is believed that wild relatives of wheat first grew in the Middle East. Wheat was one of the first plants to be cultivated. It was grown about 11,000 years ago.  Enormous changes in people's lives occurred because of wheat being grown. People began growing their own food and no longer needed to wander in search of food. Permanent settlements were established because wheat provided people with a stable food supply. Soon people grew enough wheat to feed people from other lands. Once there was extra wheat available, trade between various cultures developed.  By 4,000 B.C. wheat farming had spread to Asia, Europe and North Africa. New species of wheat developed because early farmers probably selected kernels from their best wheat plants to use as seeds for planting the following year's crop. That way, only the best wheat qualities were passed from one generation to the next. Soon wheat became an important world wide crop |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | Heirloom Amaranth Seed | | |  |  | | --- | --- | | Heirloom Amaranth Start | Direct | | |  | | |  |  | | --- | --- | | Heirloom Amaranth Seed Germination | 4-5 Days | | |  | | |  |  | | --- | --- | | Heirloom Amaranth Seed Life | 30+ Years | | |  | | Planting Heirloom Amaranth Seeds | |  | | |  |  | | --- | --- | | Heirloom Amaranth Soil | Adequate | | |  | | |  |  | | --- | --- | | Heirloom Amaranth Sunlight | Full | | |  | | |  |  | | --- | --- | | Heirloom Amaranth Seed Spacing |  | | |  | | |  |  | | --- | --- | | Heirloom Amaranth Seedling Spacing |  | | |  | | |  |  | | --- | --- | | Heirloom Amaranth Days to Harvest | 120 | | |  | |   Growing Guide GROWING NOTES Prepare the area selected to grow wheat. If the field has been previously used for farming purposes, smooth the soil with a rake. Dig long trenches using a shovel or rent a commercial wheat drill attached to a tractor to plow the field and dig long narrow furrows.  Use a moderate quantity of a natural manure to fertilize the soil and ensure proper growth of the wheat stalks. Throw wheat seeds in the furrows using a semi circular movement of your wrist or attach a grain drill to a tractor to plant the seeds. For a dry area, sprinkle a small quantity of seeds. A heavily cultivated wheat uses up the water in the ground more quickly.  Water the field two to three times during a dry summer season. Winter wheat crops require water only when the seeds are planted. Wheat grows best in a dry climate; however, check the soil moisture of the winter crop at the start of spring and water if the wheat stems look parched and unusually dry. Consider irrigating the cultivated land by using commercial sprayers on wheels.  Apply a light insecticide/pesticide spray to the harvested field if you spot any infestation on the crop. Discuss appropriate products with an agricultural expert and read the manufacturer's instructions carefully before administering any spray.  Monitor the wheat field regularly. Use a scythe to cut the wheat kernels once the wheat stems turn yellow and the kernels are fully dried up. Or use a "combine" machine to cut off the crop in a neat quick manner.  MAINTAINING Water the wheat seeds immediately after planting and once each month during the growing season. If your area gets a lot of rain, you might not need to water the plants at all.  Place several plastic flags or streamers throughout your wheat patch. The noise made by the plastic blowing in the breeze deters birds from landing and scares off any birds that are already in the field. This will prevent birds from eating the wheat seeds before they have an opportunity to sprout.  Nourish the wheat with an all-purpose fertilizer twice during the growing season. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Wheat Seed**](http://www.heirloom-organics.com/or/organicwheatseed.html) | | [**Heirloom Wheat Seed**](http://www.heirloom-organics.com/he/heirloomwheatseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING  Check to see if the wheat is mature enough to harvest. Wheat is usually harvested from spring to early summer, depending on the weather. To test the crop, rub the wheat head between your fingers and chew on a piece of grain. If the grain cracks in your mouth and becomes soft as you chew, it is ready to be harvested.  Prepare a place for your harvested wheat before you begin the harvest. If you plan to keep it on the farm, choose a location away from livestock that is weather resistant. Clear away anything that is left over from the last crop that was stored in the area. Keep the area cool and dry to maintain the wheat's freshness and keep away pests.  Adjust the combine that you use to harvest the wheat. Read the owners' manual that came with the combine to see how to adjust the settings for your wheat crop. Check the sickle and make sure it is sharp enough for a clean cut.  Plan to harvest the highest quality wheat first. Save the fields that have many weeds for last, as the wheat yield is much lower.  Take the freshly harvested wheat to a local grain elevator as soon as possible after harvest.  SAVING SEEDS Collect seed heads as they dry on the plants and store in closed paper bags to finish drying (many of the seeds  will shed naturally). Chaff easily blows away after seed heads are crumbled (watch for thorns or prickles in some  plants). |  | |  |  |  | | | |  | |

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| **How to Grow Zucchini | Guide to Growing Zucchini** |
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>>](http://www.heirloom-organics.com/guide/va/guidetogrowingzucchini.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | [**Seed Starting Guide**](http://www.heirloom-organics.com/guide/seedstarting.html) | | | [Seed Starting A-Z](http://www.heirloom-organics.com/guide/seedstartingaz.html) | [Calendar](http://www.heirloom-organics.com/guide/seedstartingcalendar.html) | | [Transplanting](http://www.heirloom-organics.com/guide/transplantingseedlings.html) | [Videos](http://www.heirloom-organics.com/guide/seedstartingvideos.html) | | [**Growing Guides**](http://www.heirloom-organics.com/guide/organicgrowingguides.html) | | | [Growing Vegetables](http://www.heirloom-organics.com/guide/guidetogrowingvegetables.html) | [Growing Herbs](http://www.heirloom-organics.com/guide/guidetogrowingherbs.html) | | [Growing Tomatoes](http://www.heirloom-organics.com/guide/guidetogrowingtomatoes.html) | [Seed Saving](http://www.heirloom-organics.com/guide/guidetoseedsaving.html) | | | |  | |  | | --- | |  | | [Gardening Resources](http://www.heirloom-organics.com/guide/gardeningresources.html) | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | [**Organic Vegetable Gardening**](http://www.heirloom-organics.com/guide/organicvegetablegardening.html) | | | |  | | | | [Urban](http://www.heirloom-organics.com/guide/urbangardening.html) | [Garden Zones](http://www.non-hybrid-seeds.com/res/gardeningzone.html) | [Tips](http://www.heirloom-organics.com/guide/gardeningtips.html) | | [Greenhouse](http://www.non-hybrid-seeds.com/res/greenhousegardening.html) | [Container Gardening](http://www.non-hybrid-seeds.com/res/containergardening.html) | | | [**Natural Pest Control**](http://www.heirloom-organics.com/guide/naturalpestcontrolguide.html) | | | |  | | | | [Companion](http://www.heirloom-organics.com/guide/companionplanting.html) | [A-Z Pests](http://www.heirloom-organics.com/guide/gardenpests.html) |  | | [Sprays](http://www.heirloom-organics.com/guide/naturalpesticide.html) | [Beneficial Pests](http://www.heirloom-organics.com/guide/gardenbugs.html) | | |  | | | | | |  | | |  | | --- | |  | |  | | **Binomial Name:** *Cucurbita* **Varieties:** Black Zucchini, Black Beauty, Cocozelle, Vegetable Marrow White Bush | | | | | | | | |  | |  |  | |  | Summer squash comes in a variety of shapes and colors. Bush varieties take up relatively little space, and if kept picked will keep producing right up to frost. |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | http://www.heirloom-organics.com/images/insertbox/seedstitle.png | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/start.png | Seeds or Seedlings | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/germ.png | 5 to 10 days, 60F to 105F | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/life.png | 6 years | | |  | | http://www.heirloom-organics.com/images/insertbox/planting.png | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/soil.png | Well Drained, High Fertility | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/light.png | Full Sun | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seeds.png | 4" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/seedlings.png | 12" to 24" apart | | |  | | |  |  | | --- | --- | | http://www.heirloom-organics.com/images/insertbox/harvest.png | 47 to 52 | | |  | |   Growing Guide GROWING NOTES Prefers well-drained, fertile, loose soil, high in organic matter with pH between 5.8 and 6.8. Plentiful and consistent moisture is needed from the time plants emerge until fruits begin to fill out.  Tender annual   Most summer squash grow on compact vines, in contrast to the sprawling vines of most winter squash and pumpkins.   Some varieties have interesting "water marks" on their foliage.  Most summer squash varieties form a compact, bushy vine.  MAINTAINING Squash like warm soil and are very sensitive to frost. So don’t be in a rush to plant early in spring. Wait until danger of frost has passed and soil has warmed to about 70 F, or about 2 weeks after the last frost date.  Direct seed ½ to 1 inch deep into hills (which warm and drain earlier in the season) or rows. Sow 4 to 5 seeds per hill. Space hills 3 to 4 feet apart. When the plants are 2 to 3 inches tall, thin to 2 to 3 plants per hill by snipping off unwanted plants without disturbing the roots of the remaining ones. In rows, sow seeds 4 inches apart in rows 4 to 5 feet apart. Snip off plants to thin to one plant every 12 to 24 inches.  For extra early crops, start inside in 2- to 3-inch pots or cells 3 to 4 weeks before transplanting outside. Sow 3 or 4 seeds per pot and thin to one or two plants by snipping off the weaker plants to avoid damaging the roots of those that remain. Harden off by cutting back on water and reducing temperature before transplanting. Plant transplants out in the garden about 1 to 2 feet apart after all danger of frost has passed.  To hasten first harvest by as much as 2 weeks, use black plastic mulch to warm soil before direct seeding or transplanting. Early fruits are sometimes wrinkled, turn black or rot due to poor pollination.  At the end of the season, remove or till in vines to reduce mildew. Use row covers to protect plants early in the season and to prevent insect problems. Remove cover before flowering to allow pollination by insects or when hot weather arrives.  Mulching plants helps retain moisture and suppress weeds. Mounding soil around the base of the plants can discourage squash borers from laying eggs. |  | |  |  |  | |  |  |  | |  |  |  | |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | |  | | [**Seed Resources**](http://www.heirloom-organics.com/or/res/organicseedresources.html) | | [**Organic Zucchini Seed**](http://www.heirloom-organics.com/or/organiczucchiniseed.html) | | [**Heirloom Zucchini Seed**](http://www.heirloom-organics.com/he/heirloomzucchiniseed.html) | | |  | | --- | | [**Organic Seeds**](http://www.heirloom-organics.com/or/organicseeds.html) | | [Organic Vegetable Seeds](http://www.heirloom-organics.com/or/organicvegetableseeds.html) | | [Organic Herb Seeds](http://www.heirloom-organics.com/or/organicherbseeds.html) | | [Organic Sprouting Seeds](http://www.sprouting-seeds.com/) | | [**Heirloom Seeds**](http://www.heirloom-organics.com/he/heirloomseeds.html) | | [Heirloom Vegetable Seeds](http://www.heirloom-organics.com/he/heirloomvegetableseeds.html) | | [Heirloom Herb Seeds](http://www.heirloom-organics.com/he/heirloomherbseeds.html) | | [**Seed Catalogs**](http://www.non-hybrid-seeds.com/res/gardenvegetableseedcatalogs.html) | | [Heirloom](http://www.non-hybrid-seeds.com/res/heirloomseedcatalogs.html) [Organic](http://www.non-hybrid-seeds.com/res/organicseedcatalogs.html) | | |   Harvesting Guide HARVESTING Zucchini squash, summer crookneck and patty pan are the most common varieties of squash grown in the summer garden. These members of the squash and pumpkin families are prolific producers. They normally begin to produce about 50 days after germination, and it's important to know when to harvest to ensure that you have a steady supply, throughout the summer. Expect to begin harvesting your summer varieties of squash when they are immature. Winter varieties mature on the vine and develop a tough skin to facilitate better winter storage, but summer squash allowed to grow until large and gourd-like isn't good to eat. It's best to discard them or add them to the compost pile.  Check your squash as soon as you notice it blooming. Squash grows very  fast, and some squash is ready to pick a few days after it blooms. Check your garden every 1 to 2 days after that, because once it starts to producing, it continues steadily throughout the growing season. The more you pick, the more it will produce. For this reason, you may want to consider having only a few plants of each variety, unless you intend to feed the whole neighborhood.  Harvest the elongated varieties of squash, such as zucchini and yellow squash, when they are about 6 inches long and 2 inches in diameter. The patty pan squash is best if picked when it's 4 inches or less in diameter. If you miss a day or two, and end up with larger squash, grate it and make bread or scoop it out and fill it with your favorite stuffing to bake.  Remove the squashes by cutting them from the vine with a sharp knife. They have very thin skins and bruise easily, so handle them gently. Wearing gloves is advisable, as the stalks may scratch or irritate your hands.  Store your squash in the refrigerator, unwashed. Moisture encourages decay of fresh vegetables, so place them in a plastic bag in the vegetable crisper. If you have a large amount, place them in a plastic bag and handle them as little as possible to prevent bruising the delicate skin. They'll stay fresh for 3 to 5 days, under the proper storage conditions.  Scan for summer squash enemies while you are in the garden. The cucumber beetle and the squash bug are the two most common ones to look for. The cucumber beetle usually appears late in the growing season and may damage the mature fruit. Squash bugs begin to infest the vines as soon as the blossoms appear. They are usually in large groups and can damage the plant and the mature fruit. Check with your local gardening supply store for the proper course of treatment for these pests, because the sooner you get rid of them, the healthier your squash plants will be.  Consider harvesting squash blossoms, which are completely edible and are used in a variety of recipes, as well as eaten raw in salads. Use your sharp knife to harvest the blossoms or pick small squash with the blossom attached for an added treat. Gather them when the petals are open, leaving about an inch of stem intact. Use them within a day because they deteriorate rapidly once picked. They may last a few days longer if you rinse them and store them in ice water in the refrigerator.  SAVING SEEDS Although best picked and enjoyed at their smallest possible size, “zukes” must be allowed to grow quite large to produce viable seeds. Other summer (non-storage) squashes, like summer crookneck, should also be left on the vine long past complete ripeness. Then cut them open, rinse the seeds well, and dry them in an airborne strainer or on a plate (not paper).When sample seeds can be snapped in half, store them in your envelope. Compost the remains. |  | | | |

**Cool Season Vegetables**

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|  | **Zones** | | | | | | | | |
| **Vegetable** | **A1 - A3** | **1,2** | **3** | **4,5** | **6** | **7** | **8,9** | **10** | **11** |
| [Beets](http://www.2bseeds.com/beetindex.shtml) | Late May - June | April - June | March - July | March - June / July - Aug | March - June | Feb - May / Aug - Sept | Feb - March / Aug - Sept | Feb - Apr / July - Aug | Feb - Mar / Sept |
| [Broccoli](http://www.2bseeds.com/broccoliindex.shtml) | Late May - June | April - June | April - July | March - June / Aug - Sept | March - August | March - April / Aug - Sept | Feb - March / Aug - Sept | Feb - Mar / June - July | Feb / Sept |
| [Brussels Sprouts](http://www.2bseeds.com/brussellssproutsindex.shtml) | Late May - June | April - June | April - July | March - June / August | May - July | March - April / Aug | Feb / August | Late May - Early June | Feb / Sept |
| [Cabbage](http://www.2bseeds.com/cabbageindex.shtml) | Late May - June | April - June | April - July | March - June / July - Aug | April - June / Aug | March - April / Aug | Feb - March / Aug - Sept | Feb - Mar / June - July | Feb / Sept |
| [Carrots](http://www.2bseeds.com/carrotindex.shtml) | Late May - June | April - June | March - July | March - June / Sept - Oct | May - July | March - May / Aug - Sept | Feb - April / Aug - Sept | Jan - Mar / June - Aug | Feb - Mar / Sept |
| [Cauliflower](http://www.2bseeds.com/cauliflowerindex.shtml) | Late May - June | April - May | April - July | March - June / August | April - July | March - April / Aug - Sept | Feb - March / Aug - Sept | Feb - Mar / June - July | Feb / Sept |
| [Lettuce](http://www.2bseeds.com/lettuceindex.shtml) | Late May - June | April - August | Feb - August | Feb - August | April - August | March - May / Aug - Sept | Feb - March / Aug - Sept | Dec - Mar / July - Aug | Feb / Sept |
| [Onions](http://www.2bseeds.com/onionindex.shtml) | Late May - June | May - June | Feb - April | March - May / Aug - Oct | March - May / Aug - Oct | Feb - April | Dec - Feb / Sept - Oct | Jan - Mar / October | Sept - Oct |
| [Peas](http://www.2bseeds.com/peaindex.shtml) | Late May - June | April - June | March - June | March - August | March - May | Feb - April / Aug - Oct | Feb - March / Aug - Nov | Jan - April | Sept - Oct / Feb - Mar |
| [Radishes](http://www.2bseeds.com/radishindex.shtml) | Late May - June | April - July | March - Sept | March - August | March - Sept | Feb - April / Sept - Oct | Feb - April / Aug - Oct | Feb - April | Feb - Apr / Sept - Oct |
| [Spinach](http://www.2bseeds.com/spinachindex.shtml) | Late May - June | April - July | Feb - March / Sept | Feb - March / August | April / Sept | Feb - April / Sept - Oct | Sept - April | Jan - Mar / Aug - Sept | Feb - Mar / Sept - Oct |

**Warm Season Vegetables**

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|  | **Zones** | | | | | | | | |
| **Vegetable** | **A1 - A3** | **1,2** | **3** | **4,5** | **6** | **7** | **8,9** | **10** | **11** |
| [Beans](http://www.2bseeds.com/bushbeanindex.shtml) | June | May - June | May - June | May - June | May - July | April - June | March - Aug | April - May / July - Aug | March - April |
| [Corn](http://www.2bseeds.com/sweetcornindex.shtml) | June | May | May | May | April - June | April - June | March - July | April - July | March - April / July - Aug |
| [Cucumbers](http://www.2bseeds.com/cucumberindex.shtml) | June | May - June | Late Apr - June | May - June | May - June | April - June | March - June | April - June | March - August |
| [Eggplant](http://www.2bseeds.com/eggplantindex.shtml) | June | May | May | May | May | April - June | April - June | April - May | March - May |
| [Melons](http://www.2bseeds.com/melonindex.shtml) | June | May | May | May | May | April - May | March - June | April - June | March - June |
| [Peppers](http://www.2bseeds.com/pepperindex.shtml) | June | May | May | May | May | May - June | April - June | April - May | March - April |
| [Summer Squash](http://www.2bseeds.com/summersquashindex.shtml) | June | May - June | Late Apr - May | May - June | May - June | April - July | March - July | April - July | March - June |
| [Winter Squash](http://www.2bseeds.com/wintersquashindex.shtml) | June | May | Late Apr - May | May | May | May - June | April - June | April - May | May - June |
| [Tomatoes](http://www.2bseeds.com/tomatoindex.shtml) | June | May | April - May | May | May | April - June | March - July | April - May | March - April |

**Asparagus** (crowns)

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| **Indoor Sowing** **Time needed to reach transplant size:** -  **When to transplant to garden:** 2-4 weeks before last spring frost (soak the crowns in lukewarm water for a few hours before planting) | **Other Sowing Guidelines** **Approx. germination time:** -  **Germination temp.:** -  **Sowing depth:** -  **Days to maturity:** 2 years from crowns |
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Guide to Growing Asparagus**Asparagus** (seed)

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| **Indoor Sowing** **Time needed to reach transplant size:** 12-14 weeks  **When to transplant to garden:** 4 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 10-14 days  **Germination temp.:** 60-85 degrees F.  **Sowing depth:** 1/2 inch (soak the seeds in water overnight before planting)  **Days to maturity:** 3 years from seed |
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http://www.heirloom-organics.com/guide/ss/limasm.png**Lima Beans** (bush)

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| **Indoor Sowing** **Time needed to reach transplant size:** 3-4 weeks **When to transplant to garden:** 1-2 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 6-18 days  **Germination temp.:** 65-85 degrees F.  **Sowing depth:** 1 inch  **Days to maturity:** 60-85 days |
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http://www.heirloom-organics.com/guide/ss/limasm.png**Lima Beans** (pole)

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| **Indoor Sowing** **Time needed to reach transplant size:** 3-4 weeks **When to transplant to garden:** 1-2 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 6-18 days  **Germination temp.:** 65-85 degrees F.  **Sowing depth:** 1 inch  **Days to maturity:** 60-85 days |
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Guide to Growing Bean**Snap Beans** (bush)

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| **Indoor Sowing** **Time needed to reach transplant size:** 3-4 weeks **When to transplant to garden:** after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 6-12 days  **Germination temp.:** 65-85 degrees F.  **Sowing depth:** 1 inch  **Days to maturity:** 50-60 days |
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Guide to Growing Bean**Snap Beans** (pole)

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| **Indoor Sowing** **Time needed to reach transplant size**: 3-4 weeks **When to transplant to garden:** after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 6-12 days  **Germination temp.:** 65-85 degrees F.  **Sowing depth:** 1 inch  **Days to maturity:** 60-70 days |
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Guide to Growing Beet**Beets**

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| **Indoor Sowing** **Time needed to reach transplant size:** 4-6 weeks **When to transplant to garden:** 2 weeks before last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 5-16 days  **Germination temp.:** 50-85 degrees F.  **Sowing depth:** 1/2 inch  **Days to maturity:** 50-70 days |
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Guide to Growing Broccoli**Broccoli**

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| **Indoor Sowing** **Time needed to reach transplant size:** 6-8 weeks **When to transplant to garden:** 4 weeks before to 2 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 4-20 days  **Germination temp.:** 45-85 degrees F.  **Sowing depth:** 1/4 inch  **Days to maturity:** 50-80 days from transplant |
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Guide to Growing Brussels Sprout**Brussels Sprouts**

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| **Indoor Sowing** **Time needed to reach transplant size:** 6-8 weeks **When to transplant to garden:** 4 weeks before to 3 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** -  **Germination temp.:** -  **Sowing depth:** 1/4 inch  **Days to maturity:** 85-95 days from transplant |
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Guide to Growing Cabbage**Cabbage**

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| **Indoor Sowing** **Time needed to reach transplant size:** 6-8 weeks **When to transplant to garden:** 5 weeks before to 2 weeks after last spring frost date | **Other Sowing Guidelines** **Approx. germination time:** 4-14 days  **Germination temp.:** 45-95 degrees F.  **Sowing depth:** 1/4 inch  **Days to maturity:** 50-100 days from transplant |
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Guide to Growing Bok Choy**Chinese Cabbage**

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| **Indoor Sowing** **Time needed to reach transplant size:** 4-6 weeks **When to transplant to garden:** 4 to 6 weeks before last spring frost date | **Other Sowing Guidelines** **Approx. germination time:** 4-14 days  **Germination temp.:** 45-95 degrees F.  **Sowing depth:** 1/4 inch  **Days to maturity:** 60-90 days from transplant |
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Guide to Growing Carrot**Carrots**

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| **Indoor Sowing** **Time needed to reach transplant size:** -  **When to transplant to garden:** -no info shown | **Other Sowing Guidelines** **Approx. germination time:** 6-18 days  **Germination temp.:** 85 degrees F.  **Sowing depth:** 1/2 inch  **Days to maturity:** 62-90 days |
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Guide to Growing Cauliflower Seeds | Seeds of Life**Cauliflower**

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| **Indoor Sowing** **Time needed to reach transplant size:** 6-8 weeks  **When to transplant to garden:** 4 weeks before to 2 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 4-20 days  **Germination temp.:** 45-85 degrees F.  **Sowing depth:** 1/4 inch  **Days to maturity:** 60-80 days from transplant |
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Guide to Growing Celery**Celery**

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| **Indoor Sowing** **Time needed to reach transplant size:** 10 weeks **When to transplant to garden:** 3 weeks before to 4 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 7-21 days  **Germination temp.:** 60-70 degrees F.  **Sowing depth:** 1/4 inch  **Days to maturity:** 120 days from transplant |
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Guide to Growing Collard**Collards**

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| **Indoor Sowing** **Time needed to reach transplant size:** 6-8 weeks **When to transplant to garden:** 4 weeks before to 2 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 4-14 days  **Germination temp.:** 45-95 degrees F.  **Sowing depth:** 1/2 inch  **Days to maturity:** 55-80 days |
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Guide to Growing Corn**Corn** (Sweet)

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| **Indoor Sowing** **Time needed to reach transplant size:** 2-4 weeks **When to transplant to garden:** 0 to 2 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 4-12 days  **Germination temp.:** 60-95 degrees F.  **Sowing depth:** 1 inch  **Days to maturity:** 60-100 days |
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Guide to Growing Cucumber**Cucumbers**

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| **Indoor Sowing** **Time needed to reach transplant size:** 3 to 4 weeks **When to transplant to garden:** 1 to 2 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 3-6 days  **Germination temp.:** 65-95 degrees F.  **Sowing depth:** 1 inch  **Days to maturity:** 50-70 days |
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Guide to Growing Eggplant**Eggplant**

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| **Indoor Sowing** **Time needed to reach transplant size:** 8-10 weeks **When to transplant to garden:** 2 to 3 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 5-10 days  **Germination temp.:** 75-90 degrees F.  **Sowing depth:** 1/4 inch  **Days to maturity:** 62-90 days from transplant |
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Guide to Growing Kale**Kale**

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| **Indoor Sowing** **Time needed to reach transplant size:** 6-8 weeks **When to transplant to garden:** 5 weeks before to 2 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 4-14 days  **Germination temp.:** 45-95 degrees F.  **Sowing depth:** 1/2 inch  **Days to maturity:** 50-65 days |
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http://www.heirloom-organics.com/guide/ss/headlet.png**Lettuce** (head)

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| **Indoor Sowing** **Time needed to reach transplant size:** 4-6 weeks **When to transplant to garden:** 2 weeks before to 3 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 2-14 days  **Germination temp.:** 40-80 degrees F.  **Sowing depth:** 1/8 inch  **Days to maturity:** 57-80 days |
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Guide to Growing Lettuce**Lettuce** (leaf)

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| **Indoor Sowing** **Time needed to reach transplant size:** 4-6 weeks **When to transplant to garden:** 2 weeks before to 3 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 2-14 days  **Germination temp.:** 40-80 degrees F.  **Sowing depth:** 1/8 inch  **Days to maturity:** 40-58 days |
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Guide to Growing Cantaloupe**Muskmelons**

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| **Indoor Sowing** **Time needed to reach transplant size:** 3-4 weeks **When to transplant to garden:** 2 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 3-10 days  **Germination temp.:** 75-95 degrees F.  **Sowing depth:** 1/2 inch  **Days to maturity:** 75-110 days |
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Guide to Growing Okra**Okra**

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| **Indoor Sowing** **Time needed to reach transplant size:** 4-6 weeks **When to transplant to garden:** 2 to 3 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 6-18 days  **Germination temp.:** 70-95 degrees F.  **Sowing depth:** 3/4 inch  **Days to maturity:** 50-75 days |
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Guide to Growing Onion**Onions**

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| **Indoor Sowing** **Time needed to reach transplant size:** 4-6 weeks **When to transplant to garden:** 6 weeks before to 2 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 4-14 days  **Germination temp.:** 50-95 degrees F.  **Sowing depth:** 1/4 inch  **Days to maturity:** 75-150 days |
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Guide to Growing Parsnip**Parsnips**

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| **Indoor Sowing** **Time needed to reach transplant size:** 4-6 weeks **When to transplant to garden:** 4 weeks before to 4 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 14-26 days  **Germination temp.:** 50-70 degrees F.  **Sowing depth:** 1/4 inch  **Days to maturity:** 100-120 days |
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Guide to Growing Pea**Peas**

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| **Indoor Sowing** **Time needed to reach transplant size:** 4 weeks  **When to transplant to garden:** 4 weeks before to 3 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 6-36 days  **Germination temp.:** 40-75 degrees F.  **Sowing depth:** 1 inch  **Days to maturity:** 50-80 days |
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Guide to Growing Peppers**Peppers**

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| **Indoor Sowing** **Time needed to reach transplant size:** 6-8 weeks **When to transplant to garden:** 2 to 3 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 8-12 days  **Germination temp.:** 65-95 degrees F.  **Sowing depth:** 1/4 inch  **Days to maturity:** 60-100 days from transplant |
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Guide to Growing Potato**Potatoes** (seed potatoes)

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| **Indoor Sowing** **Time needed to reach transplant size:** -  **When to transplant to garden:** 2-4 weeks before last spring frost (plant whole, egg-sized seed potatoes; or, plant small pieces with 2-3 eyes each, but let them dry for a few days before planting) | **Other Sowing Guidelines** **Approx. germination time:** -  **Germination temp.:** -  **Sowing depth:** 2 inches  **Days to maturity:** 56-70 days |
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Guide to Growing Pumpkin**Pumpkins**

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| **Indoor Sowing** **Time needed to reach transplant size:** 3-4 weeks **When to transplant to garden:** 2 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** -  **Germination temp.:** 70-95 degrees F.  **Sowing depth:** 3/4 inch  **Days to maturity:** 75-100 days |
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Guide to Growing Radish**Radishes**

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| **Indoor Sowing** **Time needed to reach transplant size:** -  **When to transplant to garden:** - NO INFO SHOWN | **Other Sowing Guidelines** **Approx. germination time:** 3-12 days  **Germination temp.:** 45-90 degrees F.  **Sowing depth:** 1/2 inch  **Days to maturity:** 25-35 days |
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http://www.heirloom-organics.com/guide/ss/soy.png**Soybeans**

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| **Indoor Sowing** **Time needed to reach transplant size:** -  **When to transplant to garden:** not recommended | **Other Sowing Guidelines** **Approx. germination time:** 6-12 days  **Germination temp.:** 65-85 degrees F.  **Sowing depth:** 1 inch  **Days to maturity:** 75-110 days |
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Guide to Growing Spinach**Spinach**

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| **Indoor Sowing** **Time needed to reach transplant size:** 4 to 6 weeks **When to transplant to garden:** 3 to 6 weeks before last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 5-12 days  **Germination temp.:** 45-75 degrees F.  **Sowing depth:** 1/2 inch  **Days to maturity:** 40-50 days |
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Guide to Growing Squash**Summer Squash**

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| **Indoor Sowing** **Time needed to reach transplant size:** 3-4 weeks **When to transplant to garden:** 2 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** -  **Germination temp.:** 70-95 degrees F.  **Sowing depth:** 1 inch  **Days to maturity:** 50-70 days |
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Guide to Growing Squash**Winter Squash**

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| **Indoor Sowing** **Time needed to reach transplant size:** 3-4 weeks **When to transplant to garden:** 2 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** -  **Germination temp.:** 70-95 degrees F.  **Sowing depth:** 1 inch  **Days to maturity:** 85-120 days |
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Guide to Growing Chard**Swiss Chard**

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| **Indoor Sowing** **Time needed to reach transplant size:** 4 to 6 weeks **When to transplant to garden:** 3 to 4 weeks before last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 5-16 days  **Germination temp.:** 50-85 degrees F.  **Sowing depth:** 1/2 inch  **Days to maturity:** 50-60 days |
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Guide to Growing Tomato**Tomatoes**

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| **Indoor Sowing** **Time needed to reach transplant size:** 6-8 weeks **When to transplant to garden:** 1 to 2 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 6-14 days  **Germination temp.:** 60-85 degrees F.  **Sowing depth:** 1/4 inch  **Days to maturity:** 53-90 days from transplant |
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Guide to Growing Turnip**Turnips**

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| **Indoor Sowing** **Time needed to reach transplant size:** 3-4 weeks **When to transplant to garden:** 4 weeks before last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 1-3 days  **Germination temp.:** 60-105 degrees F.  **Sowing depth:** 1/4 inch  **Days to maturity:** 35-60 days |
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Guide to Growing Watermelon**Watermelon**

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| **Indoor Sowing** **Time needed to reach transplant size:** 3-4 weeks **When to transplant to garden:** 2 weeks after last spring frost | **Other Sowing Guidelines** **Approx. germination time:** 3-12 days  **Germination temp.:** 70-95 degrees F.  **Sowing depth:** 1 inch  **Days to maturity:** 75-100 days |

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| Zone | First Freeze Free Date | Last Freeze Free Date |
| 2 | July 30 | August 15 |
| 3 | July 15 | September 1 |
| 4 | June 15 | October 15 |
| 5 | May 30 | October 1 |
| 6 | May 15 | October 15 |
| 7 | April 15 | October 30 |
| 8 | March 15 | November 15 |
| 9 | February 1 | November 30 |
| 10 | Rare | December 15 |

To get the most out of your vegetable garden, you need to do a little planning. Knowing when to start your seeds and transplant them outdoors will help to maximize your harvest. There are no hard rules for this, it is dependant on the climate for your particular area, as well as the weather at the time.

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These charts were created as a guidelines, a starting point if you will. You should adjust the planting dates relative to your particular area, and the specific variety of vegetables going into your garden. The exact values may be slightly off (~2 weeks) for your particular zone. See the chart on right to view the average dates of first and last freeze (32 Degrees Fahrenheit) If you don't know what zone you live in, you can check the zone below, or you can find more specific location at the following website from the 