

Growing Winter Tomatoes

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Gardeners, who enjoy growing new vegetable varieties, have recently been excited to see 'Winter Tomatoes' offered for sale in seed catalogs and at retail nurseries. After a summer of picking tasty, vine ripe tomatoes from the garden, the prospect of again eating those flavorless, tough red balls from a supermarket, can entice any gardener to try growing a new tomato that promises a winter harvest. You may wonder, though, how 'winter tomatoes' differ from other varieties and what you should do to obtain the best results if you grow them.

The tomato is a warm season plant that originated in Central America. Most varieties grow best here during warm weather from mid-spring to early fall. Transplants set out in spring usually ripen most of their fruit by late summer. The best way to extend the harvest season into fall is by making a second planting of tomatoes in early to mid-summer. A longer harvest season can be obtained by planting varieties with an indeterminate growth habit that continue to grow and flower under favorable conditions. Plants may survive into winter if frost does not occur, but the quantity and quality of fruit begin to decline as temperatures cool in fall.

Gardeners now have another way to extend their tomato harvest later into the year. They can plant 'winter tomatoes' which are varieties developed for cooler and more northern regions. Some are open-pollinated, heirloom varieties introduced from countries in northeastern Europe. 'Glacier' from Sweden, 'Stupice' from Czechoslovakia and 'Siberia' from Russia, are examples of tomatoes selected for their ability to produce fruit during a short summer growing season with relatively cool temperatures. The flowers on some Russian varieties are said to pollinate and set fruit at temperatures as low as 38° F, and the plants grow well at temperatures from 50-60° F.

Other winter tomatoes are hybrid varieties developed by Oregon State University at Corvallis and the University of Idaho at Moscow. 'Legend' and 'Oregon Springs' were developed in Oregon and 'Prairie Fire' was developed in Idaho. The researchers selected genetic characteristics adapted to the local climate to create varieties that can ripen fruit in 55 to 60 days.

If you want to try growing winter tomatoes, it's best to buy seed of the variety you want from a catalog, or you can visit a nursery and see what transplants are available when you are ready to plant. Order seed early so you will have them to plant in late August or early September. Seed can be sown directly in the garden where plants will grow, or sown in small containers using a seed starter mix or good potting soil (not garden soil). It takes 5 to 6 weeks to grow a seedling large enough to transplant and they should be set out in the garden by early October.

Most winter tomatoes have a determinate growth habit which produces compact plants that stop growing when they flower and set fruit. The short vines can be tied to stakes to keep ripening fruit off of wet soil where they may rot. If plants are allowed to sprawl, spread straw on the ground around them. Plants can be covered with a lightweight row cover fabric to accelerate growth and for protection from frost and hail.

Catalogs and seed packets usually list the number of days from planting to harvest for each tomato variety. Be aware that this time interval is for plants grown under ideal conditions. Cool temperatures

in fall can increase the amount of time required for growth and fruit production. 'Winter tomatoes' developed for cooler regions may grow better in our area in fall than standard varieties developed for warmer regions. Try growing different varieties at the same time to see how they perform in your micro-climate.

Gardeners who are serious about growing tomatoes may gain a better understanding of the crop from the following information excerpted from IPM For Tomatoes Fourth Edition by University of California, Division of Agriculture and Natural Resources. "Temperature is the main factor that determines how fast a plant grows. Growth occurs only when the temperature is above a certain minimum level called the developmental threshold. As the temperature increases beyond the threshold, the growth rate first increases, then levels off in an optimal range, and finally declines as temperature approaches an upper limit..."

"The developmental threshold in tomatoes is about 50° F, the upper limit for growth is 109° to 111° F and the optimal range is about 79° to 90° F. Temperatures below 57° F retard (seed) germination and emergence, exposing seedlings to injury from insects and soil borne fungi. Most tomato varieties lose flowers if temperatures remain above 104° F for as few as 4 hours. A certain combination of daytime and nighttime temperatures - usually with nighttime temperatures in the range of 55° to 75° F - is needed for good fruit set in most varieties. Plants often survive limited exposure to temperatures outside the growth range, although exposure may cause such problems as chilling injury, frost damage and sunscald of fruit."