Growing Peppers and Chiles

Chiles are thought to have originated in an area bordered by the mountains of Brazil and Bolivia in South America. Over thousands of years chiles were spread by birds and native peoples to south and central America, Mexico and southwestern U.S. The ancient wild chiles had small, round, erect, bright red fruits that made them very attractive to birds, and birds are unable to sense the pungency associated with hot chiles.

Chiles are usually hot and peppers are usually sweet. Hotness of chiles is determined by the amount of capsaicin present. The heat scale most commonly used is measured in Scoville Units. Wilbur L. Scoville was a pharmacologist with Parke Davis: a drug company that used the compound capsaicin in its muscle salve called "Heet". The amount of capsaicin is still measured in Scoville Units (pure capsaicin equals 16,000,000 Scoville Units). Bell peppers have 0 Scoville Units.

New Mexico chiles, such as NuMex Big Jim, Sandia, and New Mexico 6-4, range from 500 to 2,500 Scoville Units. These are the chiles roasted green and used in green chile. The ancestors of these chiles were first grown in the 1600's and were introduced to North America by Spanish explorers. New Mexico State University has developed many of the commercial varieties available today. These chiles turn red as they ripen and, when dried, are ground into chile powder and used to make ristras.

Pasilla chiles have dark brown pods and are sometimes called chile negro. Pasilla means "little raisin". These chiles range from 1,000 to 1,500 Scoville Units. Pasillas are thought to be the immediate predecessors of the New Mexico type. They are often used to make mole sauces.

Jalapeno chiles range from green to purple in color and range from 2,500 to 5,000 Scoville Units. They are used in fresh salsa, are pickled and canned or bottled, and are smoked to produce chipotle. Jalapenos have a unique balance of flavor and heat that make them popular in many mainstream American foods such as salsa, poppers, and nachos.

Serrano chiles are dark green and narrower than jalapenos. They often ripen to red, orange, or yellow and range from 10,000 to 23,000 Scoville Units. Serranos are popular in Mexico and are gaining popularity in the United States.

Chiltepin chiles are wild ancestors of today's commercial varieties. They start at 70,000 Scoville Units and go upward from there. They are small, round, red fruit that bear profusely. The Tarahumara Indians of Sonora believe that these chiles protect them from sorcerers.

Habanero chiles have 200,000 to 300,000 Scoville Units. These are the hottest commercially available chiles in U.S. markets. The habvanero chile is of South American origin and seeds have been found in Peru that dated from 6500 B.C. Seed catalogs list many trendy hot chiles that are popular with some gardeners.

Cultural practices are identical for both chiles and peppers. The garden space should receive at least eight hours of direct sun. Ideal soils are well-drained, loamy and neutral to slightly basic (pH 7 to 7.5). Adding organic matter, such as aged manure, compost, or alfalfa pellets to the soil is a good practice for all garden crops. Clayey and sandy soils require greater amounts of organic matter. If soil tests indicate phosphorus deficiency, additions of phosphorus fertilizer will encourage vigorous plants and improve yields.

You may find many common chile and pepper plant varieties for sale at nurseries and garden centers, but real aficionados grow their own transplants from seed starting them in March/April. Early June is usually an acceptable time for setting out transplants in north central Arizona. To set fruit, chiles require daytime temperatures between 65 and 80 degrees F and night temperatures above 55 degrees F. Fruit will not set when night temperatures remain above 86 degree F. The best crops are usually produced in late summer and fall when it cools down. Proper irrigation is critical in chiles. Chiles can be irrigated either by flooding or drip system as long as the water is allowed to soak in deeply.

Crop rotation is critical to garden success, so divide your garden into three or four growing areas in which crop families can be rotated. Plant your solanaceous crops (tomatoes, peppers, potatoes, eggplant) in one, cucurbits (cucumbers, melon, squash) in another, and brassicas (cabbage, broccoli, etc.) in another, and then rotate your planting order in the years to come. Take note each year of which crops/varieties were grown and where.

Bell peppers (*Capsicum annuum*) come in a variety of colors, have sweet flavor, and should not be the least bit hot (Gerald Holmes, Strawberry Center, Cal Poly San Luis Obispo, Bugwood.org).

Serrano chiles (*Capsicum annuum*) are hotter than Jalapeno chiles.(Gerald Holmes, Strawberry Center, Cal Poly San Luis Obispo, Bugwood.org).

Habanero chiles (*Capsicum chinense*) are usually very hot and care should be taken when handling them (M.E. Bartolo, Bugwood.org).

Additional Resources

The following links include pest and disease controls.

University of Minnesota Extension
Growing Peppers in Home Gardens

New Mexico State University College of Agricultural, Consumer, and Environmental Sciences
Growing Chiles in New Mexico,

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