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### Some Like 'em Hot!

By Jennifer M Carson CC,CHE

Chiles are a member of the *Capsicum* genus, and the *Solanaceae* family. They are also a member of the nightshade family. (All parts of the plant are poisonous, except the fruit itself). The chile is classified as fleshy berry, with numerous seeds in its inner cavity. They are usually bell shaped, though sometimes, it can be longer and narrower, almost pointy. Chile peppers are smaller and more pointed than their cousin the sweet peppers which do not contain capsaicin oil.

Important in the cuisines and cultures of many nations, including Africa, China, India, Mexico, South America, Spain, and Thailand, chiles are native to the Western Hemisphere and likely evolved from an ancestral form in the Bolivia/Peru area. The first chiles consumed were probably collected from wild plant but native peoples were growing the plants between 5200 and 3400 B.C., which place chiles among the oldest cultivated crops of the Americas. Chiles may have been used by indigenous people as a medicinal practice common among the Mayans.

By the time the Spanish arrived in Mexico, Aztec plant breeders had already developed dozens of varieties. The first person credited with the "discovery" of chiles was Christopher Columbus, who was the first person outside the natives of the Americas to see one. Ferdinand Magellan, another noted sailor, was credited with spreading the chile seed over all the continents in the world during his voyages.

There are approximately 10 species, constituting over 200 varieties, and many new hybrids. At least 100 of those varieties are native to Mexico. The primary distinguishing characteristics are based upon flower and seed color, shape of the body and the number of flowers per blooming and their orientation. Some of the species are *Capsicum annum* (containing the NuMex, Jalapeno and Bell varieties), *Capsicum frutescens* (containing the Tabasco variety), *Capsicum chinense* (containing the Habañero and Scotch Bonnet varieties), *Capsicum baccatum*, (containing the *P* varieties) and *Capsicum pubescens*, (containing the Rocoto and Manzano varieties).



Chiles can range in color from yellow, to orange, to red, to green to black to purple. Most range in size from 1/4" to 6" long, and 1/2" to 2" in diameter. The general rule is, the larger the chile, the milder it is. This is due to the proportion of capsaicin to the amount of flesh. There are different ratings to the amount of heat in chiles.

Chiles are classified on the Scoville Scale, named after Wilbur Scoville. In 1912 he was working on a cream that used capsaicin, the alkaloid substance in peppers that give them their heat. Scoville conducted a series of tests with whole ground chilies mixed in a solution of water and sugar. He had a panel of five tasters sip the solution in increased dilutions until it reached the point that it no longer burned the mouth. A number was then assigned to each pepper based on how much it needed to be diluted before his tasters could not feel the heat. One part of chili-heat per one million drops of water was then rated at 1.5 Scoville Heat Units or SHU for short. About 60% of the Capsaicin is located within the seeds and membranes.

Some of the more popular applications for dried chilies include Cayenne pepper, which is made from dried chili peppers. Named for Cayenne in French Guiana, it is the main flavoring ingredient in Tabasco sauce, and curry powders. Harissa is a purée of small red chili peppers and Cayenne pepper with oil, garlic, and ground coriander. Chili powder is a blend of various spices, usually cumin, oregano, paprika, cloves, garlic, and dried hot pepper and its composition will vary from region to region, area to area.

Chiles are available year round, depending on the variety of pepper. Choose peppers with deep, vivid color and no shriveling or soft spots. They're cholesterol free, low in calories and sodium, and contain vitamin C, and E, folic acid, and potassium.

Chiles are a good way to add a complex depth to your food, even if you don't want any heat. The milder ones can be used to add a rich fruitiness, or smokiness to your food. And then, there are those of us who like 'em hot!

### Red Hot Peppers

(Ratings from 1-10, 10 being the hottest)

Bell Pepper	0
Cascabel	4
Cayenne	7/8
Cherry	0-4
Chiltepin	8/9
Cubanella	0
Datil	10
De Arbol	7
Floral Gem	6/7
Fresno	5-7
Habanero	10+

Hungarian Wax	0-5
Jalapeno	1-5+
Mexi Bell	3-5
Mirasol	4/5
New Mex	1-4
Pasilla	3/4
Pepperoncini	0/1
Pimento	0
Poblano	3-4
Rocoto	10++
Santa Fe Grand	6
Scotch Bonnet	10+
Serrano	6-8
Tabasco	8/9

### The Scoville Scale

#### **Scoville Units--Some Chile Varieties and Commercial Products**

500,000- 100,000	Habañero, Scotch Bonnet, South American, Chinese, African bird's eye
100,000- 50,000	Santaka, Chiltepin, Rocoto, Chinese kwangsi
50,000- 30,000	Piquin, Cayenne Long, Tabasco, Thai prik khee nu, Pakistan dundicut
30,000- 15,000	de Arbol, crushed red pepper, habanero hot sauce
15,000- 5,000	Early Jalapeno, Aji, Amarillo, Serrano, Tabasco Sauce
5,000- 2,500	TAM Mild Jalapeno, Mirasol, Cayenne
2,500- 1,500	Sandia, Cascabel, Yellow Wax Hot
1,500- 1,000	Ancho, Pailla, Espanola, Improved, Old Bay Seasoning
1,000- 500	NuMex Big Jim, NuMex 6-4, chili powder
500- 100	NuMex R, Naky, Mexi-Bell, Cherry, Canned Green Chilies, Hungarian Hot Paprika

100- 10	Pickled Pepperoncini
0	Mild Bells, Pimento, Sweet Banana, U.S. Paprika

**The Scoville Scale Peppers**

**Pepper heat ranges**

Arbol	15,000- 30,000
Ancho	1,000- 1,500
Aji Rojo	30,000- 50,000
Bell	100- 600
Cayenne	30,000- 50,000
Cherry	100- 500
Chipotle	50,000- 100,000
Cuban	0- 500
De Arbol	15,000- 30,000
Guajillo	2,500- 5,000
Habanero	80,000- 300,000
Jalapeno	2,500- 10,000
Mirasol	2,500- 5,000
New Mexico	500- 2,500
Paprika	0- 2,500
Pasilla	1,000- 1,500
Pepperoncini	100- 500
Pequin	30,000- 100,000
Pimento	0
Poblano	1,000- 1,500
Red Savina Habenero	350,000- 577,000
Rocoto	30,000- 50,000

Serrano	5,000- 23,000
Tabasco	30,000- 50,000
Tam Jalapeno	2,500- 5,000
Thai Hot	30,000- 100,000
Yellow Wax	5,000- 15,000
Wax	0-40,000



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