

Pepper Varieties for Your Markets: from Bells to Habaneros and Everything in Between

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Peppers (*Capsicum* spp.) are from the Tropical Americas and were introduced to the United States via Europe and later Latin America. They are in the Solanaceous (nightshade) family, which includes tomatoes, eggplant and potatoes. Peppers are a perennial plant normally grown as an annual in most of the world, including the United States. In tropical areas there are varieties that are grown as perennials. Peppers are named after the spice pepper (*Piper nigrum*) since ground peppers (*Capsicum* spp.) could be used as a substitute,

Peppers are a very diverse vegetable with an amazing range of shapes, colors, and also “heat”. Some peppers have a compound called capsaicin that is responsible for the pungency in peppers. This is measured using Scoville units, which is a dilution factor of the capsaicin levels in peppers – the higher the Scoville units, the more heat in the pepper.

Many pepper varieties popular among ethnic groups and traditional markets, have been evaluated at the UMass Research Farm and on commercial farms. Table 1 provides some information on a number of these crops. More detailed information on these and many other peppers are available at a website maintained by Frank Mangan: www.worldcrops.org

Here is information on several of the more promising peppers from Table 1:

Ají dulce (*Capsicum chinense*) is a small, light green pepper that turns red if left long enough on the plant. In Puerto Rico, it is known as *ají dulce* or *ajicito* (sweet pepper and small pepper, respectively, in Spanish). In the Dominican Republic, it is also known as *ají gustoso* or *ají cachucha* (tasty pepper, and cap-shaped pepper, respectively, in Spanish). It has the shape and size of a habanero pepper without



Mexican heirloom pepper mix produced at the UMass Research Farm in 2008. (Photo by Zoraia Barros)

Crop name	Latin name	Scoville units*
Ají dulce	<i>Capsicum chinense</i>	0
Bell peppers	<i>Capsicum annuum</i>	0
Cascabel	<i>Capsicum annuum</i>	1,500 – 2,500
Chilaca	<i>Capsicum annuum</i>	1,000 – 1,500
Chile de arbol	<i>Capsicum annuum</i>	15,000 - 30,000
Chile manzano	<i>Capsicum pubescens</i>	30,000 – 50,000
Guajillo	<i>Capsicum annuum</i>	15,000 – 30,000
Habanero	<i>Capsicum chinense</i>	200,000 – 350,000
Jalapeños	<i>Capsicum annuum</i>	2,500 – 5,000
Malagueta	<i>Capsicum frutescens</i>	60,000 – 100,000
Poblano	<i>Capsicum annuum</i>	1,000 – 1,500
Serrano	<i>Capsicum annuum</i>	15,000 - 30,000

*Scoville units are used to measure the pungency of peppers; the higher the number the more pungent the pepper

the intense heat. Unlike many other countries in Latin America, hot peppers are not commonly used in the cuisine of Puerto Rico, Dominican Republic, or Cuba. However, there can be some *ají dulce* fruit that is pungent, probably due to out-crossing.

Jalapeños are the most well known and most popular type of hot peppers produced in Mexico. The name comes from Jalapa, the capital of the Mexican state of Vera Cruz. Much of the production in Mexico and in the US is pickled or canned. This very versatile pepper is used in many ways, including used as an ingredient in cooked or raw sauces, charred and peeled to be stuffed with cheese, meat or fish. When allowed to ripen to a deep red on the plant and then dried, it is called *chipotle*, or more correctly “*Chipocle*” in Mexico. They are also used fresh when red in certain dishes.

Jalapeños have become very common place in the US market, not only for the large Mexican and the other Latinos groups that use them, but also for the non-Latino market. In general, the Mexican market prefers the fruit to be more mature, with cracks and some red; the non-Latino market prefers green fruit with no cracks.

Poblanos are one of the most popular peppers in Mexican cuisine. Sometimes in the US it is called “*pasilla*”, which is something dried or wrinkled. When ripened on the plant and then dried, the poblano pepper is called *ancho*.

Serranos peppers are perhaps the second most common pepper in Mexico after jalapeños. They are usually used fresh, but are also canned as “*serranos en escabeche*” (packed in vinegar, onions, carrots and herbs) which is used as a popular relish that is sometimes added to sauces. For fresh or cooked sauces, it is used either raw or grilled, chopped, or ground with other ingredients. The seeds are usually not removed. Serrano varieties evaluated at the UMass Research Farm produced a lot of fruit, but a major constraint is the small size which would lead to high labor costs to fill a box.



Poblano peppers produced at the UMass Research Farm in 2008. (Photo by Zoraia Barros)



Serrano peppers produced at the UMass Research Farm in 2008. (Photo by Zoraia Barros)