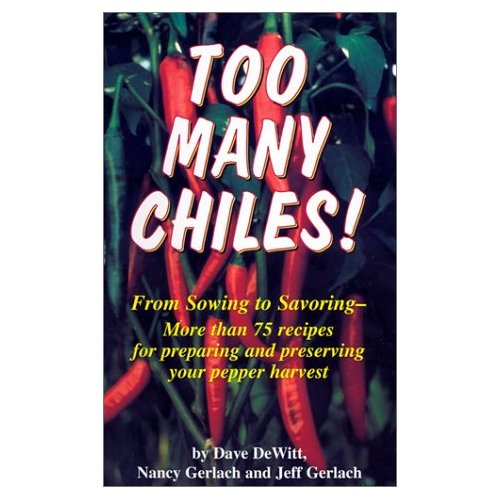
***Dick’s Peper Encyclopedie: Bewaarmethoden en Recepten***

*****Verzameling internet teksten uit:***

**Handling and Processing**

[Fresh Chiles](#handlingandprocessingfreshchiles)

[Drying Chiles](#frompodstopowderdryingchiles)

[Canning Chiles and Sauces](#canningchilesandsauces)

[How to Pickle Peppers](#hwtopicklepeppers)

[The Magnificent Moles of Oxaca](#themagnificentmolesofoxaca)

[Winging it in Buffalo](#wingingitinbuffalo)

[Salsa’s](#salsas)

[Out of the Ash: The Prehistoric Chile Cuisine of Cerén](#outoftheash), by Dave DeWitt. Archaeologists found 1400-year-old chile seeds in a vessel.

The Powerful Health Punch of the Mighty Pod

**Chile Pepper Profiles**

[Pepper Profile: Frutescens Species](#pepperprofielfrutescens) Tabasco is probably the best-known chile of this species.

[Pepper Profile: Baccatum Species](#pepperprofiebaccatum)  Familiarly termed "ají" throughout South America, this species includes some very interesting varieties.

[Pepper Profile: New Mexican Varieties](#pepperprofienewmexixanvarieties)  History, botanical information, and recipes featuring New Mexico's favorite food.

[Pepper Profile: Paprika](#pepperprofiepaprika) In the U.S., the term paprika simply means any nonpungent red chile, but Europe - especially Hungary - paprika has much greater depth.

[Pepper Profile: Bell Peppers](#pepperprofiebellpeppers)  Most of them are not pungent at all, yet they belong to the *Capsicum* genus.

[Pepper Profile: African Birdseye](#pepperprofieafricanbirdseye) The pungent pods are a major cash crop in some African countries, where this incredibly hot variety is grown for heat.

[Pepper Profile: Jalapeño](#pepperprofiejalapeno) Find out more about this versatile chile we all love.

[Pepper Profile: Serrano](#pepperprofieserrano)  This hot chile is popular in Mexico - learn more about it, including a sizzling salsa recipe.

[Pepper Profile: Piquin](#pepperprofiepiquin) Piquins are hot little devils - read about the plant, agriculture, legend & lore, as well as culinary usage

[Pepper Profile: Chipotles](#pepperprofiechipotles) Plenty of interesting information about the tasty smoked chile.

[Pepper Profile: Ancho/Poblano](#pepperprofieancho) Whether dried (ancho) or fresh (poblano), this chile is one of the most popular varieties grown in Mexico. Includes botanical information and culinary usage.

[Pepper Profile: Cayenne](#pepperprofcayenne) A brief overview of the historical and medicinal uses of this familiar pepper.

[Pepper Profile: Habanero](#pepperprofhabanero) The inside scoop on the world's hottest pepper.

[Pepper Profile: Pasilla](#pasillahabanero) This fairly mild Mexican chile is an integral ingredient in the legendary moles, and makes a flavorful addition to many cooking sauces. Includes one recipe.

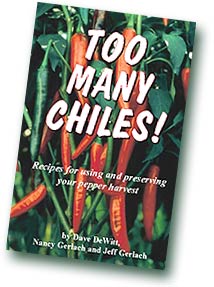
[Pepper Profile: *Pubescens* Species](#pasillapubescens) *Pubescens* is one of the oldest domesticated plants in the Americas, having been cultivated about 8,000 years ago.

[Pepper Profile: Piment d'Espelette](#pimentdespelette) The Beloved Basque Chile Pepper from the southwestern part of France.

[Pepper Profile: Pimentón](#pimenton) About the chile that's used for the famous Smoked Chile Powder from from La Vera, Spain.

[In The Land of The Wild Chiles](#chiltepin) Take a trip to Sonora, Mexico with our editor and learn all about the wild chile, the Chiltepin, complete with ten authentic Chiltepin recipes.

***Handling and Processing***

***Fresh Chiles***

Excerpted from *Too Many Chiles! Recipes for Using and Preserving Your Peppers*, by Dave DeWitt, Nancy Gerlach, and Jeff Gerlach. Published by Golden West Publishers.  
To order wholesale or retail, call 800-658-5830.

Photos by Harald Zoschke

**Recipes:**

[Frozen Chile Mash](http://www.fiery-foods.com/dave/fresh_chiles.asp#Frozen Chile Mash#Frozen Chile Mash)

[Salsa Fresca](http://www.fiery-foods.com/dave/fresh_chiles.asp#Salsa Fresca#Salsa Fresca)

[Caribbean Salsa](http://www.fiery-foods.com/dave/fresh_chiles.asp#Caribbean Salsa#Caribbean Salsa)

[Louisiana-Style Hot Sauce](http://www.fiery-foods.com/dave/fresh_chiles.asp#Louisiana-Style Hot Sauce#Louisiana-Style Hot Sauce)

[Chiles Rellenos](http://www.fiery-foods.com/dave/fresh_chiles.asp#Chiles Rellenos#Chiles Rellenos)

[New Mexican Green Chile Sauce](http://www.fiery-foods.com/dave/fresh_chiles.asp#New Mexican Green Chile Sauce#New Mexican Green Chile Sauce)

[Fresh Red Chile Sauce](http://www.fiery-foods.com/dave/fresh_chiles.asp#Fresh Red Chile Sauce#Fresh Red Chile Sauce)

[Asian Chile Paste](http://www.fiery-foods.com/dave/fresh_chiles.asp#Asian Chile Paste#Asian Chile Paste)

[Fresh Red Chile Paste](http://www.fiery-foods.com/dave/fresh_chiles.asp#Fresh Red Chile Paste#Fresh Red Chile Paste)



Most of us love chiles in whatever form we can get them, but there is something special about fresh chiles. There is a taste and a texture that cannot be duplicated by canned, dried, or frozen chiles, and they also add such bright colors to meals. So naturally, the first way to handle a mega-harvest, is to consume as many of the fresh chiles as possible.

There are many ways to use fresh chiles straight from the garden. Obviously, they can just be eaten, although many of the smaller, hotter varieties are simply too hot to be eaten straight. We love to slice up a batch of hot chiles and use them fresh on sandwiches as well as on hot dogs and burgers. They can also be used in salads of all kinds. There are many ways to use fresh chiles. As you can see from the following recipes, there are many other ways to use fresh chiles that require little or no cooking, as well as being fast and easy to prepare. We also include a number of recipes for cooked sauces and salsas, as well as cooked dishes that use fresh chiles.

**Roasting and Peeling Chiles**

Certain large fresh chiles, such as New Mexico green chiles and poblano chiles, have a tough outer skin that must be removed before using. The only practical way to remove the skin is to apply heat to the chile so that the skin blisters and pulls away from the meat of the chile. It then becomes easy to peel off the skin. There are several different methods of blistering chiles, and all of them work well. The decision on how to blister depends on what kind of equipment is available, as well as the number of chiles to be blistered.

The first step is to choose your heat source. Oven broilers work well, but seem to require sitting on the floor for extended periods of time if you're working with any quantity of chile. We recommend that you get the chile right up under the flame or you'll be there for a day or two trying to roast even 10 pounds. Stove top burners (both gas and electric) also do a good job if covered with some heavy wire mesh. We recommend using a stove top grill which is made especially for this purpose. The drawback here is the small number of chiles that can be blistered at one time. We use this heat source frequently when we have just a few chiles to roast. Outdoor grills are one of the best ways to roast chile. It is easy to regulate the heat, and a large number of chiles can be blistered at the same time. We like to make an event out of our chile roasting; we fire up the charcoal or gas grill, chill down a six-pack, turn on some music, and spend an afternoon roasting our winter supply. Chile roasters, which are usually not available outside of New Mexico or the Southwest, are the fastest and easiest of all. These machines feature a squirrel-type cage for the chiles along with one or more burners hooked into a tank of propane.

Roasting chiles on a grill: Using gas torch and tongs: Blistering pods in deep fryer:

Efficient for larger number Less flavorful, but it works Great for single pods

Larger models are motor driven. If using a roaster, we recommend that the chiles be blistered slowly, however, to allow the chile's natural sugar to caramelize, which will improve the chile's taste.



Propane-fired, motor-driven commercial chile roaster

Once you've decided on your heat source, it's time to start the heat and prepare the chiles. If they need it, wash off the chiles and let them dry. This will prevent any dust or dirt from getting on the edible part of the chile when they are peeled. Cut a small slit in the side of each chile before placing it on the fire. If you forget this step, the chiles will remind you by exploding with a loud pop, shooting their seeds (some of which can be very hot!) five or six feet in every direction. Not every chile will do this, but it is a good idea to keep a knife handy and simply stab every chile as you throw it on the fire.

As you roast the chiles, keep flipping them over to make sure that they are not burning. You will actually be able to see the skin blistering–even blackening somewhat--and pulling away from the meat of the chile. Whether or not you see that occur, it is important to brown virtually the entire chile in order to easily remove the skin. Don't be timid--the chiles can take a lot of heat before burning; on the other hand, we are merely blistering the chiles, not incinerating them.

A perfectly roasted chile Steaming chiles in a Peeling the steamed chiles

plastic bag for easy peeling

After the chiles are well blistered, place them in a large bowl and cover with a damp towel. This will "steam" the chiles a bit, and will make peeling them infinitely easier. Or, you can place the hot roasted chiles in a heavy plastic bag which will assure easy peeling. Allow the chiles to cool off under the towel or in the bag (30 to 90 minutes) and peeling will be a breeze. You can also avoid scorching your fingers, because blistered chiles right off the grill are hot little critters! (For crisper chiles, plunge them into ice water after roasting. This will stop any further cooking of the roasted pods.)

After the chiles have cooled down, it's time for the final step. If you've done a good job of roasting your chiles, peeling them is fast and easy. Simply start at either end, and pull off the skin. We generally pull from the tip back towards the stem, but it depends on the roasting job. Occasionally, you will run into problems with the deep indentations; it is hard to blister those "valleys" without burning the surrounding areas. In these cases, you simply have to go in with a knife and scrape off any remaining skin.

Because the hotter varieties of green chile are thinner fleshed than the mild ones, it is difficult to peel them and come up with an intact pod. They tend to tear and split apart during the peeling process. If you are going to chop the chile before using, it really doesn't matter if the pods split. If you want chiles to stuff, however, this can be a disaster. To produce intact, roasted and peeled green chile pods, simply start with mild chile pods, which have much thicker flesh.

At this point, most people like to cut off the stem and remove the seeds. The easiest method is to simply cut off the very top of the chile along with the stem, and then scrape the seeds out of the open end. (Removing the seeds will cause a slight loss of pungency because they are attached to the placental tissue. If you really want to reduce the firepower, you can also remove the veins (the placental tissue) that run the length of the chile and serve to attach the seeds to the pod.) You've now completed the whole process and have a chile that is ready to eat, cook with, or freeze.

**Fresh Red Chile**

Most chile lovers are familiar with New Mexican green chiles, which are the large (5" to 10"), fleshy, mild chiles that are also called Anaheim chiles. (Anaheim is actually a variety of New Mexico chile, as are Sandia, Big Jim, etc.) These same green chiles are the immature stage of the New Mexico red chiles, which are used to make chile ristras, and when dried, are ground into red chile powder. There is a stage between fresh green and dried red that is known as fresh red and many people swear that this is the most delicious stage. It has a fresh taste like fresh green, but also includes the rich flavor of dried red pods. For those who have never tried it, it is a deliciously new chile flavor sensation. Green chile, like many other chiles, undergoes a substantial chemical transformation as it turns red and matures, as the sugars and vitamin A increase.

Red and green New Gloves protect the Larger chiles can be

Mexican chiles skin when working frozen chopped or as

with hot chiles strips

As soon as the pods turn red, they start to dry out.

Fresh red is the stage where the pods have just turned red, and are as fat and sassy as fresh green. In fact, fresh red is handled just like fresh green–that is, roasted and peeled.

Many people use fresh red just like fresh green, for chiles rellenos, red chile stew, and chop it to eat on sandwiches, steaks, hamburgers, and eggs, just to name a few. Personally, we prefer to use fresh green for most of those foods; we use fresh red to prepare a base for some wonderfully tasty red chile sauces.

**Freezing Chiles**

Freezing chiles is an excellent way of preserving them. Chiles that have been frozen retain all the characteristics of fresh chiles except for their texture. Since the individual cell walls have been ruptured by the freezing of the water within each cell, the chiles will lose their crisp texture.

Another result of the freezing process, according to one source, is to spread the capsaicin throughout the chile. This occurs with the rupturing of the cell walls and can actually make some chiles seem hotter after freezing than they were beforehand. Research to date indicates that freezing chiles does not make them hotter. There is simply nothing that the freezing process alone can do, either physically or chemically, to increase the heat of a chile.

There are different requirements for freezing chiles, depending on the size of the chile. Large chiles may be frozen at any stage once they have been roasted. That is, they may be frozen before peeling (freezing actually makes them easier to peel), or after peeling and de-seeding. They may be frozen whole or chopped.

The easiest way to freeze large chiles is to put them into freezer bags, double-bag them and place in the freezer. You can also wrap them in heavy foil or freezer wrap, or you can pack them in rigid plastic containers. A handy way to freeze chopped New Mexico green chile is in plastic ice cube trays. After the trays are frozen, the chile cubes can be popped out and stored double zip bags. The cubes can then be used when making soups or stews, or in other recipes, without having to pry apart blocks of frozen chiles. Smaller varieties, including habaneros, serranos, jalapeños, and Thai chiles can be frozen without processing. Just wash off the chiles and allow them to dry before freezing. Then place them on a cookie sheet or other flat surface, one layer deep, and put them in the freezer until frozen solid. They can then be stored in double freezer bags and will keep for 9 to 12 months at zero degrees F. Sometimes they dry out a bit and need to be soaked in water during defrosting to rehydrate them. Fresh red chile paste (see below) can be stored in plastic containers or zip bags and frozen to use all year long. The paste holds up well in the freezer and really helps to cut meal preparation time.

**Cautionary Notes**

Capsaicin, the alkaloid responsible for the heat in chiles, is a joy in food--it hurts so good! It is far less welcome in large doses on the skin, or in any amount in an eye. We urge everyone who works with or processes chile in any quantity to wear gloves while handling the chile. This is especially important when handling the hottest varieties because chile burns can be extremely painful, which we can testify to from personal experience. They are also nearly impossible to cure; about the only thing to do is to wait them out because they will eventually wear off. If you do get burned, remember that capsaicin is oil soluble, meaning that water will have no effect on it. So if you come down with Hunan hand, which is the official name for capsaicin- burned hands, the best remedy is to coat your hands in vegetable oil, rather than soap and water. Even this will not completely eliminate the heat, but it will reduce it. (The same advice applies to flaming taste buds; rather than water, consume a dairy product such as sour cream, yogurt, or ice cream.) In addition, be careful where you put your nose while processing and cooking chile. It's not wise to stick your nose right over the top of the blender as you remove the lid after grinding up a batch of chiles, likewise with a covered pot of chiles that is being cooked on the stove. Whenever you're working with or cooking chiles, it's a good idea to keep your face away from any concentrated chile combinations.

**Recipes**

**Frozen Chile Mash**

Here is one of the best methods for processing and preserving large quantities of small chile pods quickly. The way is so basic that it is sometimes overlooked among preservation methods. You should have a powerful blender or food processor for this. To use, defrost the cubes and estimate 2 to 3 pods per cube. Use in recipes calling for minced or chopped small chiles.

* Fresh small chile pods, such as jalapeño, habanero, or rocoto, seeds and stems removed
* Water as needed

Place the chile pods in a food processor or blender with a little water and process to a medium-thin puree. Take care not to breathe the fumes from the pureeing. Pour the puree into plastic ice cube trays and freeze solid. Pop the cubes out and double bag them in zip bags. Label and place back in the freezer.

Yield: Varies Heat Scale: Hot to Extremely Hot

**Salsa Fresca**

Fresh salsas are a must during the summer are a great way to use the earliest pods such as jalapeños and serranos. Vary the flavor of the salsa by using different chiles as they become available. Keep a supply on hand to serve with chips as a dip, as an accompaniment to grilled poultry or fish, or with burritos, fajitas, or even hamburgers. This salsa will keep for 2 days in the refrigerator. It does not keep its texture when frozen.

* 3 serrano or jalapeño chiles, stems and seeds removed, minced
* 2 yellow wax chiles, stems and seeds removed, minced
* 2 large tomatoes, finely diced
* 1 medium purple onion, finely diced
* 2 cloves garlic, minced
* 2 tablespoons vegetable oil
* 2 tablespoons fresh lime juice or cider vinegar
* 1/4 cup chopped fresh cilantro or parsley
* 1 large avocado, diced

Combine all the ingredients except the cilantro and avocado and let the salsa sit for at least an hour to blend the flavors. Mix in the cilantro and avocado before serving.

Yield: 2 cups Heat Scale: Medium

**Caribbean Salsa**

The combination of fresh fruit and chile produces a salsa that goes well with lighter fare such as grilled chicken or fish. This will keep for up to a week in the refrigerator.

* 1 cup diced fresh mango
* 1 cup diced fresh papaya
* 6 serrano chiles, stems removed, minced or substitute 2 habaneros
* 1/2 red bell pepper, stem and seeds removed, minced
* 3 green onions, sliced, including some of the green
* 1/4 cup fresh lime juice
* 2 tablespoons vegetable oil
* Chopped fresh cilantro

Combine all the ingredients and allow to sit for an hour to blend the flavors.

Yield: 2 cups Heat Scale: Hot

**Louisiana-Style Hot Sauce**

This very easy to prepare sauce only gets better as it ages. Allow it to sit for at least a week before using, if possible. For a green version of this sauce, use serrano, jalapeño, or Thai chiles in their green stage, instead of the red varieties called for below. Note**:** This recipe requires advance preparation.

* 1/2 cup fresh tabasco chiles, stems removed, or substitute cayenne, piquin, or japones chiles
* 2/3 cup white vinegar
* 1 3/4 teaspoons salt

Place all the ingredients in a blender or food processor and puree until smooth. Pour into a clean, sterilized bottle and let steep in the refrigerator for a few weeks before using.

Yield: 3/4 to 1 cup Heat Scale: Hot

**New Mexican Green Chile Sauce**

This versatile sauce is basic to New Mexican cuisine. It is best with freshly roasted and peeled chile but can be made with canned, frozen or even dried green chile. Finely diced pork can be added but cook the sauce for an additional half hour. Use this sauce over enchiladas, burritos, or tacos. It will keep for about 5 days in the refrigerator and freezes well.

* 1 small onion, finely chopped
* 1 clove garlic, minced
* 2 tablespoons vegetable oil
* 1 tablespoon all-purpose flour
* 2 to 3 cups homemade chicken stock
* 1 cup chopped green New Mexico chile, roasted, peeled, stems removed
* 1 small tomato, peeled and chopped

Saute the onion and garlic in the oil until soft. Stir in the flour and blend well. Simmer for a couple of minutes to "cook" the flour. Slowly add the broth and stir until smooth. Add the remaining ingredients, bring to a boil, reduce the heat and simmer until the sauce has thickened, about 15 minutes.

Yield: 2 to 3 cups Heat Scale: Medium

**Fresh Red Chile Sauce**

This method of making chile sauce differs from others using fresh New Mexican chiles because these chiles aren't roasted and peeled first. Because of the high sugar content of fresh red chiles, this sauce is sweeter than most. We harvested some chiles from his garden one late summer day, made a batch of this sauce, and ate every drop as a soup! It makes a tasty enchilada sauce, too. It will keep for about a week in the refrigerator.

* 1/4 cup vegetable oil
* 8 fresh red New Mexican chiles (or more to taste), seeds and stems removed, chopped
* 1 large onion, chopped
* 3 cloves garlic
* 4 cups water
* 1/4 teaspoon ground cumin
* 1 tablespoon minced fresh cilantro
* 1/2 teaspoon Mexican oregano leaves
* Salt to taste

Heat the oil in a large saucepan and saute the chiles, onion, and garlic until the onion is soft, about 7 minutes. Add the remaining ingredients, bring to a boil, then reduce the heat and simmer for 1 hour, uncovered. In a blender, puree the sauce in batches and return it to the saucepan. Cook until the sauce thickens to the desired consistency. Add salt to taste.

Yield: About 3 cups Heat Scale: Mild to Medium

**Asian Chile Paste**

Popular throughout Southeast Asia, this garlic and chile based paste is used as a condiment that adds fire without greatly altering the taste of the dish. It is especially good in stir-frys. To use up a lot of chiles, triple the recipe. It will keep for up to 3 months in the refrigerator. It can also be frozen.

* 1 cup small fresh red chiles, stems removed, such as Thai, serrano, piquin, or japones
* 1/3 cup white vinegar
* 8 cloves garlic, chopped
* 3 tablespoons vegetable oil
* 1 teaspoon salt
* Water as needed

Combine all the ingredients in a blender or processor and puree, adding enough water to form a thick paste.

Yield: 1 cup Heat Scale: Hot

**Fresh Red Chile Paste**

This easy to prepare, tasty paste provides a fresh flavor to any dish you make. You can also cook this up in large batches and freeze it for use all year long. The paste is very versatile and can be used as a base for enchilada sauces or chili con carne, or as an ingredient in marinades or pasta sauces. It will keep for a week in the refrigerator, or you can freeze it in plastic ice cube trays.

* 12 fresh red New Mexican chiles, roasted, peeled, stems and seeds removed
* 2 cloves garlic
* 1/2 teaspoon salt

Place all the ingredients in a blender or processor with just enough water to blend. Puree until smooth, adding water if necessary; the paste should be thick. Strain to remove any fibers from the paste. Variation: Add more liquid and make a sauce.

Yield: 3/4 to 1 cup Heat Scale: Medium

**Chiles Rellenos**

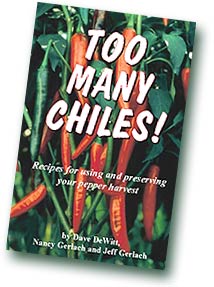
All fresh green New Mexican chiles are great for stuffing, but we prefer Big Jims because they are so large. Fresh poblano chiles (a Mexican favorite) and even large jalapeños can also be used. Top the rellenos with either a red or green chile sauce before serving.

* 6 green New Mexican chiles, roasted and peeled, stems left on
* Cheddar or Monterey Jack cheese, cut in sticks
* All-purpose flour for dredging
* 3 eggs, separated
* 1 tablespoon water
* 3 tablespoons flour
* 1/4 teaspoon salt
* Vegetable oil for frying

Make a slit in the side of each chile and stuff them with the cheese. Dredge the chiles in the flour and set aside. In a bowl, whip the egg whites until they form stiff peaks. In another bowl, beat the yolks with the water, flour, and salt until thick and creamy. Fold the yolks into the whites to make the batter. Pour the oil into a frying pan to a depth of an inch and a half and heat to 375 . Dip the chiles into the batter and fry, turning once, until a golden brown.

Yield: 3 servings Heat Scale: Medium

***From Pods to Powder:***

***Drying Chiles***

Excerpted from *Too Many Chiles! Recipes for Using and Preserving Your Peppers*,  
by Dave DeWitt, Nancy Gerlach, and Jeff Gerlach. Published by Golden West Publishers.  
To order wholesale or retail, call 800-658-5830.

Photos by Harald Zoschke

**Recipes:**

[Ancho Chile Dry Rub](http://www.fiery-foods.com/dave/drying.asp#Ancho Chile Dry Rub#Ancho Chile Dry Rub)

[Cajun Rub](http://www.fiery-foods.com/dave/drying.asp#Cajun Rub#Cajun Rub)

[South of the Border Chile Rub](http://www.fiery-foods.com/dave/drying.asp#South of the Border Chile Rub#South of the Border Chile Rub)

[Chili Powder](http://www.fiery-foods.com/dave/drying.asp#Chili Powder#Chili Powder)

[Dry Jerk Seasoning](http://www.fiery-foods.com/dave/drying.asp#Dry Jerk Seasoning#Dry Jerk Seasoning)

[Curry Powder](http://www.fiery-foods.com/dave/drying.asp#Curry Powder#Curry Powder)

[Red Chile Sauce from Pods](http://www.fiery-foods.com/dave/drying.asp#Red Chile Sauce from Pods#Red Chile Sauce from Pods)

[Red Chile Sauce from Powder](http://www.fiery-foods.com/dave/drying.asp#Red Chile Sauce from Powder#Red Chile Sauce from Powder)

The oldest, easiest, and most common way to preserve chiles is to dry them. Aside from a few of the thick-walled, meaty varieties such as jalapeños, most chiles are well-preserved by drying them at home. There are several different ways to dry chiles, employing both traditional methods and new technologies.

**Ristras**

The ristra, or chile string, is the oldest and also the most attractive method, and it is still customary in many chile-producing countries. There are several different ways of assembling these strings.

**Making Ristras**

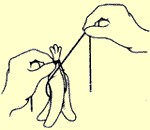
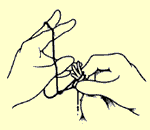
Traditional New Mexican ristras are made by tying New Mexico red chiles together in clusters of three, with cotton string (this works with various other chiles as well).

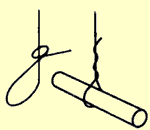
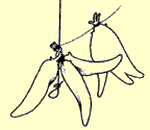
  

Ristras from:

New Mexico (L), Turkey (M) and Hungary (R)

Start by wrapping the string around the three stems a couple of times, then bring the string up between two of the chiles, and finish off with a half-hitch over the stems. Continue using the same piece of string, tying up groups of three chiles until it gets too awkward to handle. Just cut the string and start again. To make a 36" ristra will require around 15 pounds of fresh red pods.

When all the chiles have been strung by threes, they then get braided onto a length of strong twine or wire. Hanging the twine from an overhead support greatly simplifies this stage of assembly. Braid the chiles from the bottom of the twine as if braiding hair, using the twine as one braid and chiles from each grouping as the other two. Be sure to push each group down tightly against each other to insure an attractive, full-bodied ristra.

Following the above steps and using Professional ristra maker

about 140 *Big Thai Hybrid* pods, at *The Ristra Man* in Las

Renate Zoschke made her first ristra Cruces, New Mexico

These days, some ristra makers have resorted to using rubber bands to "tie" up the groups of three chiles, then slipping each group over a wire to form the ristra. This method is considerably faster than the traditional method; the downside is that the ristras tend to be a bit thin or skinny and last only as long as the rubber bands hold out.

One final method to make a ristra is to use a large needle threaded with string. Push the needle through the bottom of the stem where it widens out, pushing the chiles up tightly against each other. Again this tends to produce thin looking ristras, but this can be overcome by hanging several strings together. It is also a handy way to handle smaller chiles such as cayennes or piquins, which require a lot of time and dexterity to string in the traditional way.

Unless you live in an arid climate, it is important to dry your ristras in a location where the air circulates freely. If hung inside a home in a damp climate, there is a good chance that some of the chiles will rot. Hung from a tree, or in an open porch should give the ristra a good chance to dry properly. If a few of the chiles do start to rot, just pull them off the string; if you've got a nice full ristra, you'll never miss them! Another good reason to dry your ristra outside is that if any of the chiles start to rot, they may start dripping a liquid that will stain anything it touches. (After all, red chiles are used to produce red coloring that is used in food products.) So you might want to reconsider before hanging your fresh ristra over your 2-inch deep, snow white pile carpet. And one final disturbing note: chiles that turn bad attract fruit flies by the zillions. Obviously, it makes a lot of sense to hang them outside to dry!



Especially smaller chile varieties can be used to create wreaths

And other shapes, as in these ornaments from Santa Fe, New Mexico

**Other Drying Methods**

Another way to dry chiles, and in fact, nearly the only ways to dry some of the thick fleshed chiles, is to use a food dehydrator. As we mentioned earlier, jalapeños and several other chiles simply will not air dry. They will, however, dry well in a dehydrator. Simply place them in a single layer on the racks and follow the instructions for your model. Cutting the thick fleshed chiles in half, or into several pieces helps to speed up the process.

 Orange and Caribbean Red Habaneros, cut in half, are drying in an inexpensive "Mr. Coffee" dehydrator

Many people think that drying in an oven is just as effective, which unfortunately, is not always the case. Dehydrators supply not only heat, they also constantly circulate air through the unit. Ovens usually supply only heat, which means that meaty chiles could possibly spoil, rather than dry.

If you do use an oven, use the lowest possible heat. Cut the chiles in half, remove the seeds, and place on a baking tray. Check the chiles every hour or so to make sure they are not burning. When they are brittle, they are ready.

It's possible to dry chiles in a microwave oven**.** By chopping the chiles into small pieces and microwaving them in small quantities, chiles can be dried in no time at all, especially the smaller, thin-fleshed varieties. However, this method will not work for whole pods.

Roasted and peeled fresh green New Mexico chiles can also be dried, and, in fact, drying fresh green was the only way to preserve it in the days before freezers. See the recipe which follows. A word of warning: don't get upset by the appearance of the dried green since it turns black and looks more like road-kill than anything you'd want to eat! However, when rehydrated, it plumps up, turns almost green, and is extremely tasty.

**Making Powders**

All dried chiles can be ground into powder--and most are, including the habanero. Crushed chiles, or those coarsely ground with some of the seeds are called *quebrado*. Coarse powders are referred to as *caribe*, while the finer powders are termed *molido*. The milder powders, such as New Mexican, can also be used as the base for sauces, but the hotter powders such as cayenne and piquin are used when heat is needed more than flavor.

 A cheap electric coffee grinder is perfect for  
making chile powders. But unless you want "hot coffee", you should use separate grinders for coffee beans and chile pods

Adventurous cooks can experiment with creating powders of specific colors. For example, collect the different varieties of green, yellow, orange, red, and brown chiles and separate them into their respective colors. The colors of the powders vary from a bright, electric red-orange (chiltepins), to light green (dried jalapeños), to a dark brown that verges on black (ancho). The colored powders can then be combined with spices, as in our recipe for Chili Powder (this chapter), or they can be stored for later use. Another use for the powders is to turn them into green, yellow, orange, red, or brown chile pastes. Since some of the colors of the powders tend to be a bit dull, they can be brightened up by adding a few drops of the appropriate food coloring when making the pastes.

In some kitchens, there are more powders available than the whole pods because the powders are concentrated and take up less storage space. Store the powders in small, airtight bottles. The fresher the powders, the better they taste, so don't grind up too many pods. Use an electric spice mill and be sure to wear a painter's mask to protect the nose and throat from the pungent powder. Many cooks experiment by changing the powders called for in recipes.

**Chile Pasado**

**(Chile of the Past)**

Here is the way green chile was preserved before the invention of canning and freezers. This method assumes that you live in a dry climate like New Mexico or Arizona. If not, remove the stems from the chile and place the pods in a food dehydrator until brittle. You can place them in an oven set at the lowest heat possible, but you must monitor them carefully. There are about 10 medium-sized pods to a pound.

* 2 pounds New Mexico green chile pods (about 20 pods)
* String

Roast the chile pods on a charcoal or gas grill until the pods blister and start to turn black, turning often. Remove them from the grill and place in a plastic bag with a wet paper towel for ½ hour. Remove and carefully peel the skin off, leaving the stem and seeds intact. Tie four pods together by wrapping string around the stems and place over a line outside in the sun. Do not let the chiles get wet by rain, and you can protect them from flies and other insects with by wrapping them lightly in cheesecloth. Drying time varies with humidity levels, but dry them until they are very dark and brittle. To store, break off the stems and place the dried pods in a zip bag and then place in a second zip bag. Place in the freezer for optimum results, especially if you live in a humid climate. Because they are brittle, breaking off the stems will sometimes cause the pods to break into strips and other pieces.

 Chile Pasado strips, dry (L) and rehydrated (R)

To reconstitute the pods, place them in a pot of boiling water for 1 minute. Remove from the heat and let stand for five minutes. Remove from the water and drain. Use them in any recipe calling for green chile in any form except whole pods.

Yield: About 3 ounces Heat Scale: Varies but usually medium

For more Chile Pasado info, [click here](http://www.fiery-foods.com/dave/pasado.html)

**Dried Chile Recipes**

**Ancho Chile Dry Rub**

Here’s a great rub to use on meats that will be smoked or grilled. Since anchos are sold in fairly pliable condition, place them in the oven on low heat until they are brittle.

* 4 ancho chiles, stems removed and seeded, dried in the oven
* 2 teaspoons whole white peppercorns
* 1 teaspoon whole black peppercorns
* 1/2 teaspoon celery seed
* 3 and 1/2 teaspoons cumin seed
* 1 teaspoon thyme
* 1 small bay leaf
* 1 teaspoon annato seeds
* 1 and 1/2 teaspoons salt

Blend together all the ingredients in a spice mill or blender. Pack in a glass jar after using.

Yield: About ½ cup Heat Scale: Mild

**Cajun Rub**

Here’s a concentrated rub that has its origins in Louisiana, where it seems that every home cook has his or her own secret spice mixture for grilled foods. This rub works well on fish and is especially good on shrimp. Sprinkle it on the seafood and allow it to marinate at Room temperature for about an hour. This rub is also good on chicken before it’s grilled.

* 1 tablespoon paprika
* 5 cayenne pods, seeds and stems removed, ground into powder
* 2 teaspoons garlic powder
* 1 teaspoon freshly ground black pepper
* 1 teaspoon dried thyme
* 1 teaspoon dried oregano
* 1 teaspoon onion powder
* 1 teaspoon salt
* 1 bay leaf, center stem removed, crushed
* ½ teaspoon ground allspice
* 1/4 teaspoon ground white pepper

Combine all the ingredients in a spice grinder and process until finely ground. Store any unused rub in a sealed container in the freezer.

Yield: 2 ½ tablespoons Heat Scale: Medium

**South of the Border Chile Rub**

This is our version of Mexican flavorings that would work on goat, as in *cabrito*, pit roasted goat. Can’t find goat at Winn-Dixie? Use this rub for either grilling or smoking beef, pork, and lamb.

* 3 tablespoons ground ancho chile
* 2 teaspoons ground chile de arbol
* 2 teaspoons ground chipotle chile
* 2 teaspoons dried oregano, Mexican preferred
* 2 teaspoons onion salt
* 1 teaspoon ground cumin
* 1 teaspoon powdered garlic

Combine all the ingredients in a bowl and mix well. Store any unused rub in a sealed container in the freezer.

Yield: approximately 2/3 cup Heat Scale: Hot

**Chili Powder**

This powder is used to make *chili con carne* and replaces the commercial type; experiment with the ingredients and adjust them to your taste.

* 5 tablespoons ground New Mexican red chile
* 1 tablespoon ground hot chile, such as piquin or chiltepin
* 1 ½ tablespoons ground cumin
* 1 ½ tablespoons ground oregano
* 1 ½ tablespoons garlic powder
* 1 teaspoon salt

Mix all the ingredients together and process in a blender or spice grinder until fine. Store the excess powder in a glass jar.

Yield: ½ cup Heat Scale: Hot

**Dry Jerk Seasoning**

Jerk seasoning is actually a delicious, tropical way to barbecue. Use it to season either pork or poultry; simply rub into the meat, marinate overnight in the refrigerator, grill (or bake), and then enjoy!

If habaneros are unavailable,  
dried hot chiles like cayenne  
can be used for this seasoning

* 1 teaspoon dried ground habanero chile or substitute other hot powder such as cayenne
* 2 tablespoons onion powder
* 2 teaspoons ground thyme
* 2 teaspoons ground allspice
* 1 teaspoon coarsely ground black pepper
* ½ teaspoon ground nutmeg
* ½ teaspoon ground cinnamon
* ½ teaspoon garlic powder
* 1/4 teaspoon ground cloves

Combine all the ingredients and mix well. Store the extra seasoning in a glass jar.

Yield: About 1/4 cup Heat Scale: Hot

**Curry Powder**

Curry powder is always a combination of various ingredients, and much like chili con carne, there is no such thing as a definitive recipe. There are instead as many curry recipes as there are curry cooks. Use this recipe as a starting point and make additions or adjustments according to your tastes. Homemade curry powder is a wonderful treat for your taste buds.

* 5 tablespoons ground New Mexican red chile
* 3 tablespoons ground coriander
* 3 tablespoons ground cumin
* 1 tablespoon ground ginger
* 2 teaspoons ground cayenne
* 1 teaspoon cardamom seeds
* 1 teaspoon ground fenugreek
* 1 teaspoon freshly ground black pepper
* 1 teaspoon ground allspice
* 1 teaspoon ground cloves
* ½ teaspoon ground nutmeg

Mix all the ingredients together and process in a blender or spice grinder until fine. Store the excess powder in a glass jar.

Yield:1 ½ cup Heat Scale: Mild

**Red Chile Sauce from Pods**

This basic sauce can be used in a variety of Southwestern dishes that call for a red sauce, as well as in place of ketchup when making salad dressings and other dishes. Other large dried chiles such as guajillo, pasilla, or ancho chiles can be added or substituted. This sauce will keep up to one week in the refrigerator, or you can freeze it.

* 12 dried whole red New Mexican chiles
* 1 large onion, chopped
* 3 cloves garlic, chopped
* 3 cups water

Place the chiles on a baking pan and put in a 250 oven for 10 to 15 minutes or until the chiles smell like they are toasted, being careful not to let them burn. Remove the stems and seeds and crumble the pods into a saucepan.

Add the remaining ingredients, bring to a boil, reduce the heat and simmer for 20 to 30 minutes or until the chiles are soft.

Puree the mixture in a blender or a food processor and strain. If the sauce is too thin, place it back on the stove and simmer until it is reduced to the desired consistency.

Yield: 2 to 2 ½ cups Heat Scale: Medium

**Red Chile Sauce from Powder**

This is a basic recipe that can be used interchangeably with any of the mild red chile powders. (If this sauce were made from some of the hotter powders such as piquin, it would be too hot to eat!) Adjust the amount of powder to change the pungency of the sauce.

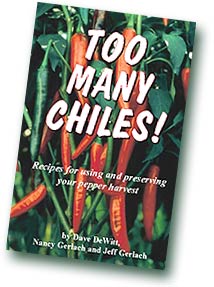
* 2 tablespoons vegetable oil
* 1 medium onion, chopped
* 2 cloves garlic, minced
* 2 tablespoons all-purpose flour
* 3 to 4 tablespoons New Mexican red chile powder
* 1/4 teaspoon ground cumin (optional)
* 3 cups chicken stock or water
* Salt to taste

In a pan, heat the oil and saute the onions and garlic until they are slightly browned. Add the flour and continue to cook for 4 minutes, stirring constantly, until the flour is browned, being careful that it does not burn.

Stir in the chile powder and cumin and heat for a couple of minutes. Add the broth, bring to a boil, reduce the heat, and simmer for 10 to 15 minutes or until the desired consistency is obtained. Salt to taste. *Variation:*  For a smoother sauce, either puree the onion and garlic or substitute 1 teaspoon onion powder and 1/8 teaspoon garlic powder and add along with the chile powder.

Yield: 2 cups Heat Scale: Medium

***Canning Chiles and Sauces***

  by Dave DeWitt and Nancy Gerlach

Excerpted from *Too Many Chiles! Recipes for Using and Preserving Your Peppers*, by Dave DeWitt, Nancy Gerlach, and Jeff Gerlach. Published by Golden West Publishers. To order wholesale or retail, call 800-658-5830.

**Recipes:**

[Green Chiles and Tomatoes](http://www.fiery-foods.com/dave/canning.asp#Green Chiles and Tomatoes#Green Chiles and Tomatoes)

[Picante Chile Catsup](http://www.fiery-foods.com/dave/canning.asp#Picante Chile Catsup#Picante Chile Catsup)

 [Taco Sauce with Green Chile](http://www.fiery-foods.com/dave/canning.asp#Taco Sauce with Green Chile#Taco Sauce with Green Chile)

[The Salsa with Six Names](http://www.fiery-foods.com/dave/canning.asp#The Salsa with Six Names#The Salsa with Six Names)

[Essential Habanero Hot Sauce](http://www.fiery-foods.com/dave/canning.asp#Essential Habanero Hot Sauce#Essential Habanero Hot Sauce)

[Chile Con Queso Soup](http://www.fiery-foods.com/dave/canning.asp#Chile Con Queso Soup#Chile Con Queso Soup)

[Low-Fat High-Chile Vichyssoise](http://www.fiery-foods.com/dave/canning.asp#Low-Fat High-Chile Vichyssoise#Low-Fat High-Chile Vichyssoise)

[New Mexico Green Chile Salad](http://www.fiery-foods.com/dave/canning.asp#New Mexico Green Chile Salad#New Mexico Green Chile Salad)

[Green Chile Scones](http://www.fiery-foods.com/dave/canning.asp#Green Chile Scones#Green Chile Scones)

Essential Habanero Hot Sauce

Generally speaking, canning is not best way to preserve chiles at home. But over the years, so many people have asked us how to do it that we have compiled the following information. Canned chiles–especially the New Mexican varieties--are readily available in supermarkets. Regarding the bottling of sauces, many gardeners with an abundance of pods at harvest time like to make their own sauces and salsas and wish to bottle them. Please note two things: bottling requires an increase in acidity versus fresh sauces and salsas, and that the recipes included here are not designed for commercial production, but for home use.

**Pressure Canning**

Because they are a low-acid fruit, chiles canned at home must be pressure canned to be safe. If improperly done, botulism can develop. Therefore, home canning of chiles is not to be considered unless one has a pressure canner. If you have the proper equipment, follow the manufacturer's instructions to the letter to insure safe results. The following description will take you through the basic steps, but again, it is imperative that the instructions for each particular canner be followed.

To begin, blister and peel large chiles, and if desired, remove stems and seeds from all chiles used. Pack the prepared chile loosely into hot, clean jars, leaving an inch of head room. Add salt (1/4 teaspoon/half pint, ½ teaspoon/pint) and add boiling water up to the one inch head room level. Put on lids, tighten well, and place in canner according to manufacturer's directions.

After letting steam escape from the canner for 10 minutes, close the petcock and process ½ pints for 30 minutes, pints for 35 minutes. When finished, remove the canner from the heat and let the pressure fall to zero, which will take up to half an hour. When the pressure reaches zero, open the petcock, wait 5 minutes, then open the canner and remove the jars to a draft-free location to cool. Be sure to check the seals on the jars the next day, to be sure that they remain tight, before storing the jars in a cool, dry, and preferably dark location.

**Water-Bath Canning**

One way to avoid having to use a pressure canner is to can chiles along with high-acid vegetables or liquids. Two examples would be salsas and hot sauces. The addition of acidic ingredients will lower the pH of the mixture to the point that makes it safe to use the water-bath method of canning. In essence, to use this method, it is necessary to add vinegar, lemon juice, or lime juice in order to raise the acid level. If adding these ingredients raises the acid level to unpalatable levels, the amount of vinegar or lemon juice can be reduced, but the product must then be either pressure canned or frozen.

Water-bath canning can be done in a special pot, or in any large metal container that is deep enough so that the water level will be at least 2 inches over the tops of the jars, and can boil freely. A rack of some kind in the pot is also necessary to keep the jars off the bottom of the pot during the vigorous boiling of processing.

After the salsa has been prepared, it must reach boiling stage before simmering it for 5 minutes. Pour it into hot, clean jars, being sure to use all the liquid, which is the high-acid portion of the salsa. Put on the lids and process in the water-bath for 30 minutes. Add boiling water during the process to keep the jars covered. When the processing time is finished, remove the jars to a draft- free location to cool.

The following tips apply to the water-bath method**:** equal parts of lemon or lime juice may be used to replace vinegar, if you so prefer. Less chile may be used in the salsas, but not more, since that will reduce the acid content of the final product. Additional salt may be safely added. Start timing the processing when the water starts to boil again, after adding the jars. And finally, additional seasonings such as oregano or cumin are best if added when serving the salsa, rather than before canning.

The New Mexico Department of Agriculture Cooperative Extension Service has shared the following recipes for canning chiles by the water-bath method.

**Recipes**

**Green Chiles and Tomatoes**

Before serving this cooked salsa, add 1 teaspoon cumin powder and stir in chopped cilantro. Serve as an all-purpose sauce with chips for a dip, with enchiladas or tacos, or as a relish or condiment with grilled meats, poultry, or fish.

New Mexican Green Chile

* 3 cups peeled and chopped tomatoes
* 3 cups chopped green New Mexico chile, roasted, peeled, seeds and stems removed
* 1½ teaspoons salt
* 1 1/4 cups white vinegar

Combine all of the ingredients in a saucepan, bring to a boil, cover, and simmer for 5 minutes. Pack in hot, clean, sterilized jars, taking care to use all the liquid. Process according to the directions above.

Yield: 4 pints Heat Scale: Medium

**Picante Chile Catsup**

Use this fiery version in place of regular catsup to spice up sandwiches, meatloaf, hot dogs, and hamburgers. It also tastes great in salad dressings and on french fries. If you wish, after pureeing, the catsup may be frozen instead of canned.

    Red & Green Jalapeños

* 6 pounds tomatoes, peeled, seeded, and chopped
* 2 stalks celery, chopped
* 1 large onion, chopped
* 4 jalapeño or serrano chiles, stems and seeds removed, chopped or substitute 2 habanero chiles
* 1 red bell pepper, stem and seeds removed, chopped
* 1 cup brown sugar
* 1½ cups cider vinegar
* 2 teaspoons dry mustard
* 1 teaspoon ground cinnamon
* ½ teaspoon ground cloves
* 1/4 teaspoon ground allspice
* 1 to 2 teaspoons salt

In a pan on low heat, cook the tomatoes for 15 minutes, then drain off the juice. Add the celery, onion, chiles, and bell pepper and simmer for 1 hour. Add the sugar, vinegar, and spices and simmer for an additional hour. Remove from the heat and puree until smooth. Pour into sterilized jars and process in a hot water bath (see instructions above)..

Yield: 4 pints Heat Scale: Medium

**Taco Sauce with Green Chile**

In addition to tacos, this simple sauce goes well with a variety of foods such as eggs and hamburgers. Before serving, try adding spices such as oregano, cinnamon, ground cloves, or cumin. For a hotter sauce, substitute jalapeños for the green chile.

* 3 cups chopped green New Mexican chile, roasted, peeled, seeds and stems removed
* 3 cups peeled, chopped tomatoes
* 3/4 cup chopped onion
* 1½ teaspoons salt
* 3 cloves garlic, minced
* 1½ cups vinegar

Combine all the ingredients in a pan, bring to a boil, cover, and simmer for 20 minutes. Pack in hot, clean, sterilized jars, being sure to use all the liquid. Process according to the instructions above.

Yield: 4 pints Heat Scale: Medium

**The Salsa with Six Names**

  Salsa with Six Names

This blend of hot chiles and fresh garden vegetables is known both north and south of the border as *salsa fria, pico de gallo, salsa cruda, salsa fresca, salsa Mexicana,* and *salsa picante*. No matter what it’s called, or what part of the Southwest it’s from, the Salsa with Six Names will always triumph over bottled salsas for the dipping of *tostadas*, as a taco sauce, or a relish for roasted or grilled meats. The key to proper preparation is to *never use a food processor or blender*. A marvelous consistency will be achieved by taking the time to chop or mince every ingredient by hand. This version of the salsa has more acidity and is designed to be processed in a water bath.

* 6 serrano or jalapeño chiles, stems and seeds removed, chopped very fine
* 1 large onion, chopped very fine
* 3 medium tomatoes, chopped very fine
* 2 cloves garlic, minced
* 1/4 cup finely chopped fresh cilantro
* 2 tablespoons vegetable oil
* 1/2 cup red wine vinegar or lime juice

Mix all the ingredients together in a non-metallic bowl. Place in sterilized jars, seal firmly and process in a water bath as described above.

Yield: 2 cups Heat Scale: Medium Hot

**Essential Habanero Hot Sauce**

This is the latest recipe in Nancy's never ending quest to duplicate that wonderful Caribbean hot sauce that we love. Fresh, frozen, or pickled habaneros can all be used, but if using pickled chiles, there is no need to rinse them. Adjust the heat by adding fewer habaneros, not by increasing the carrots as this can alter the flavor. This version of the recipe is designed to be processed in a water bath.

Habanero sauce, pureed until smooth

* 1½ cups chopped carrots
* 1 onion, chopped
* 1½ cups white vinegar
* 1/4 cup lime juice
* 3 cloves garlic, minced
* 2 teaspoons salt
* 10-12 habanero chiles, seeds and stems removed, chopped

Combine all the ingredients, except for the habaneros, in a saucepan and bring to a boil. Boil for 10 minutes or until the carrots are soft. Place all the ingredients in a blender or food processor and puree until smooth. Strain for a smoother sauce. Pour in sterilized jars and process in a water bath as described above.

Yield: 2½ cups Heat Scale: Extremely Hot

The following recipes call for canned green chile.

**Chile Con Queso Soup**

The classic combination of cheese and green chile appears here as a soup--rather than a dip or appetizer.

  Chile Con Queso Soup

* 1 medium onion, chopped
* 2 tablespoons butter or margarine
* 3 tablespoons flour
* 3 to 4 cups chicken broth
* 1 cup chopped canned green chile
* 2 tomatoes, peeled and, chopped
* 1 bell pepper, seeds and stem removed, diced (optional)
* 1½ cups half and half
* 8 ounces sharp cheddar cheese, grated

In a pan, saute the onion in the butter until soft, then remove. Add the flour to the butter and cook for 3 minutes, stirring constantly, taking care not to let the flour brown. Stir in the broth, chile, tomatoes, bell pepper, and simmer for 30 minutes. Bring to a boil, reduce the heat, add the half and half and the cheese and heat until the cheese melts and the soup is thickened.

Yield: 4 to 6 servings Heat Scale: Hot

**Low-Fat High-Chile Vichyssoise**

Of course, this version of the famous soup will be different from the heavily laden butter and cream recipes of the past. For one, it will have a lot more heat for a cold soup because we've replaced the fat with chile. Note: This recipe requires advance preparation.

* 2 tablespoons olive oil
* 2 cups chopped leeks
* 2 cups chopped onions
* 1½ quarts chicken stock
* ½ teaspoon habanero powder
* 1/4 cup chopped fresh basil
* 4 white potatoes, peeled and diced
* 1 cup canned chopped New Mexican green chile
* 1 cup evaporated skimmed milk
* 1 cup non-fat sour cream
* 1 cup skim milk
* 1 teaspoon ground white pepper
* Freshly minced chives
* New Mexican red chile powder

In a large soup pot, heat the olive oil and saute the leeks and onions until soft, about 10 minutes. Add the stock, habanero powder, basil, potatoes, and green chile, and bring to a boil. Reduce the heat and simmer until the potatoes are tender, about 20 minutes.

Remove from the heat and puree in batches in a food processor until the mixture is a very smooth, thin paste. Transfer to a bowl and add the evaporated skim milk, non-fat sour cream, skim milk, and white pepper. Mix well, taste for heat, and add hot chile powder if too mild. Cover and refrigerate for at least 5 hours. Serve in cold bowls garnished with minced chives and a sprinkling of red chile powder.

Yield: 8 servings Heat Scale: Mild to Medium

**New Mexico Green Chile Salad**

The versatility of canned green chile is demonstrated in this delicious salad.

* Mixed greens, such as Romaine, butter lettuce, or spinach
* 1 hard-boiled egg, peeled and sliced
* 1/4 cup canned green chile strips
* 1 chicken breast (boned and skinless), marinated in teriyaki sauce and grilled, and cut into 6 long, thin pieces
* 1/4 cup guacamole (or 4 ripe avocado slices)
* 2 tablespoons salsa of choice
* 6 tostada chips
* 1/4 cup cooked garbanzo beans
* 2 tablespoons chopped green onions
* 2 tablespoons diced tomatoes
* Grated cheddar cheese for garnish

Place the greens on 2 plates and cover them with the hard-boiled egg slices. Place the chile strips and chicken strips alternately on top of the egg slices. To finish, scoop the guacamole on top, followed by the salsa on top of the guacamole. Crown each with 3 tostadas stuck into the guacamole. Sprinkle the salad with the beans, onions, and tomatoes and garnish with the cheese.

Yield: 2 servings Heat Scale: Mild

**Green Chile Scones**

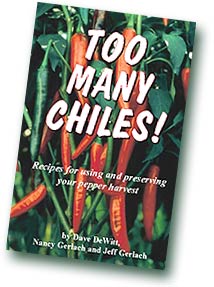
These tender and flaky scones are best served warm from the oven. For entertaining, try cutting the scones out with Southwestern cookie cutters such as a saguaro cactus, a chile, or a cowboy boot.

* 2 cups all-purpose flour
* 1 teaspoon salt
* 1 tablespoon baking powder
* 1/3 cup chopped canned green chile
* 2 cloves garlic, minced
* 1 cup plus 2 tablespoons whipping cream, divided

Preheat the oven to 425 degrees F. In a bowl, mix together the flour, salt, and baking powder. Add the chile, garlic, and 1 cup of the cream and stir until a soft dough forms. Place the dough on a floured surface and knead 10 times or until the mixture forms a ball. Divide the dough into two pieces. Pat each piece out to a 10-inch circle on an ungreased cookie sheet. Brush the top of each circle with the remaining cream. Bake for 15 minutes or until golden brown. Cut each circle into 8 wedges before serving,

Yield: 16 scones Heat Scale: Mild

***How to Pickle Peppers***

*by Dave DeWitt, Nancy Gerlach, and Jeff Gerlach*

Photography by Steve Tesky

Food Styling by Denice Skrepcinski

Excerpted from *Too Many Chiles! Recipes for Using and Preserving Your Peppers*, published by Golden West Publishers. To order wholesale or retail, call 800-658-5830.

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[Jalapeños in *Escabeche*](http://www.fiery-foods.com/dave/pickle.html#Jalapeños in Escabeche#Jalapeños in Escabeche)

[Preserving Peppers in Alcohol](http://www.fiery-foods.com/dave/pickle.html#Preserving Peppers in Alcohol#Preserving Peppers in Alcohol)

One of the best ways to handle an overwhelming chile crop is to pickle them. Pickling the peppers will preserve them at least until next year's crop comes in and makes "almost" fresh chiles available throughout the year. They can be pickled by themselves or in combination with other chiles or other vegetables. With just a little imagination, it's easy to turn out attractive, multi-colored jars of pickled peppers. And, although pickling does require some time at the stove, it's an easy way to put up a lot of chiles.

**Pickling Rules**

There are a few basic rules to follow when pickling:

1. Sterilize jars and lids in a boiling water bath for 10 to15 minutes. We generally bring a large pot to a boil with an inch or two of water, along with a folded dish towel on the bottom of the pot. Jars are then placed, mouth down, into the water, along with the lids which can just be set between the jars. We then turn down the heat just enough to keep the pot slowly boiling or simmering.
2. Use pickling salt, rather than table salt which contains undesirable (for pickling) additives.
3. While cider vinegar is more flavorful, 5 to 6 percent distilled white vinegar should be used to avoid discoloring the chiles. Note that we do use cider vinegar when discoloration is not a problem.
4. Do not boil the vinegar for a long period of time as that will reduce the acidity.
5. Poke or cut a hole in each chile to keep it from floating and also to allow the pickling solution to work into the entire chile.
6. After filling each jar, remove any trapped air with a spatula or knife blade inserted between the chiles and the wall of the jar, or by gently tapping the jar.
7. After processing in a boiling water bath, remove jars to a draft-free location and allow to cool for 12 hours before handling.

**The Jars and Bottles**

Alert readers will notice that our pickled peppers are presented in very unique bottles. But these are not the bottles we recommend for the pickling process. The pickling bottles should be the wide-mouthed Ball jars that are commonly used in putting up vegetables. For presentation as gifts or during a party, they can be transferred to the more unusual jars and bottles. Make sure that they are refrigerated after they are transferred.

Of ten you can find unique jars and bottles at import stores like Pier One and Cost Plus. But while planning out the photo shoot for this article, food stylist Denice Skrepcinski gave us some hints about where to find some of these beautiful bottles really cheap. She haunts discount stores like T.J. Maxx, Ross, and Marshall’s and looks in their housewares section. Often she finds heavily discounted jars of pickled products such as onions, peppers, and olives. Some other bottles contain flavored oils or vinegars. One unique triangular bottle was stuffed with vertical slices of carrots and *popcorn*! Denice was only interested in the bottles, of course, and recommends that you not consume any of the foods that don’t have an expiration date on them. The discounts were considerable–one 8-inch tall bottled of pickled onions and olives had a price sticker that read: "Compare at $24.00–$12.99." A sticker below showed the price reduced to $3.00. Three bucks for the jar plus chiles you’ve grown yourself makes for an attractive, inexpensive gift!

The great thing about these attractive bottles is that you can layer the chiles into stunning patterns. Note in the photos how Denice layered the Harvest Bounty and the different colored chiles in the vertical bottle to make a "traffic light." So use your imagination and make some beautiful pickled peppers.

**"Traffic Light" Pickled Peppers**

This recipe for approximately 2 pounds of peppers works well with jalapeños, serranos, yellow wax, cherry, habanero, or eperoncini chiles. So if you're a lover of pickled peppers, mark this recipe as you'll be using it a lot. In the photograph, variously colored chiles have been layered to resemble a traffic light. Note**:** This recipe requires advance preparation and does not have to be processed in a water bath.

*Brine:*

* 3 cups water
* 1 cup pickling salt

Combine the salt and water and cover the chiles with the mixture. Place a plate on the chiles to keep them submerged in the brine. Soak the chiles overnight to crisp them. Drain, rinse well, and dry.

*Pickling Solution:*

* 3 cups water
* 3 cups 5 to 6 percent distilled white vinegar
* 3 teaspoons pickling salt

Poke a couple of small holes in top of each chile and pack them tightly in sterilized jars leaving 1/4 inch headroom. In a pan, combine the water, vinegar, and salt. Bring the solution to a boil and pour over the chiles, leaving no head space. Remove trapped air bubbles. Store for 4 to 6 weeks in a cool, dark place before serving.

Yield: 4 pints Heat Scale: Varies

**Pickled Green Chile**

These chile strips are great on sandwiches or when chopped and mixed with salads such as tuna or shrimp. *Note:* This recipe requires advance preparation.

* ½ cup white vinegar
* ½ cup sugar
* 1 teaspoon salt
* 1 teaspoon dill seed
* 1/2 teaspoon mustard seed
* 8 to 10 green New Mexico chiles, roasted and peeled, cut in strips (see chapter 2 for roasting and peeling instructions)
* 3 cloves garlic, cut in slivers

Combine the vinegar, sugar, and spices in a pan and simmer over low heat for 5 minutes. Put the chile into small, sterilized jars, cover with the liquid and add some garlic to each jar. Cover tightly and refrigerate for 3 days before using.

Yield: 2 pints Heat Scale: Medium.

**Pickled Habanero Chiles**

To insure the best pickled chiles, choose only the freshest ones and those with no blemishes. Bruised fruits will produce "mushy" chiles. You can also soak the chiles overnight in a brine of 3 cups water and 1 cup pickling salt to crisp them before pickling. Be sure to rinse them well to remove excess salt before processing. Note: This recipe requires advance preparation.

* 3 dozen fresh habanero chiles or enough to fill the jars
* 2 sterilized pint jars
* Pickling Solution:
* 3 cups 5 to 6 percent distilled white vinegar
* 3 cups water
* 1 ½ teaspoons pickling salt

Poke a couple of small holes in top of each chile and pack them tightly in sterilized jars leaving 1/4-inch head space. Combine the vinegar, water, and salt. Bring the solution to a boil and pour over the chiles. Remove trapped air bubbles by gently tapping on the sides of the jars. Add more of the pickling solution if needed; close the jars. Store for 4 to 6 weeks before serving.

Yield: 2 pints Heat Scale: Extremely Hot

**Sun-Cured Pickled Jalapeños**

These pickled chiles have an East Indian flavor because of the mustard seeds and ginger. Any small green chiles can be substituted for the jalapeños. Serving Suggestions: Serve these unusual chiles on sandwiches, hamburgers, or as a side relish for grilled or roasted meats. *Note:* This recipe requires advance preparation.

* 1 cup jalapeño chiles, stems and seeds removed, cut in 1/4-inch strips
* 1 tablespoon coarse salt
* 1 tablespoon mustard seeds
* 1 teaspoon cumin seeds
* 1/4 cup oil, peanut preferred
* 1 teaspoon chopped fresh ginger
* 1/4 cup freshly squeezed lemon juice

Sprinkle the chile strips with the salt; toss and let them sit for 10 minutes. Toast the mustard and cumin seeds on a hot skillet, stirring constantly, for a couple of minutes until the seeds begin to crackle and "pop." Heat the oil to 350 degrees F., remove from the heat, stir in the ginger, and let it simmer for 2 minutes. Remove the ginger and discard. Stir in the chiles, cumin seeds, lemon juice, and pack in a sterilized jar. For 5 days, set the jar in the sun in the morning on days when it is at least 70 degrees, and bring it in at night. Shake the jar a couple times each day.

Yield: 1 pint Heat Scale: Hot

**Harvest Bounty**

This recipe can be used for pickling a combination of vegetables including chiles and bell peppers. Choose whatever mixture you desire, as well as the amount and type of chiles, and arrange them attractively in a jar before covering with the pickling solution. Be aware that some vegetables such as olives and mushrooms absorb capsaicin well and can become quite hot. *Note:* This recipe requires advance preparation.

* Chiles: yellow hots, jalapeños, serranos
* Cauliflower, broken in flowerets
* Broccoli, broken in flowerets
* Zucchini, unpeeled and thinly sliced
* Carrots, cut in coins or use baby carrots
* Pearl onions, peeled and left whole
* Garlic cloves, whole
* Small button mushrooms, whole
* ½ part water
* ½ part vinegar
* 1 teaspoon salt per pint of liquid

Wash the chiles and prick with a toothpick. Arrange your choice of vegetables and chiles in sterilized jars. Bring the water, vinegar and salt to a boil and allow to boil for one minute. Pour over the vegetables, leaving no head space, and cover. Allow the mixture to pickle for at least 2 to 3 weeks in a cool, dark place before serving.

Yield: Varies Heat Scale: Varies

**Summer Squash Pickles**

This recipe calls for zucchini, but yellow squash or cucumber would work just as well.

* 1 pound fresh zucchini, unpeeled and cut in thin slices
* 2 white onions, thinly sliced and separated into rings
* 1/4 cup salt
* 6 small hot fresh chiles, such as serrano or cayenne, stems removed, cut in half
* ½ cup cider vinegar
* ½ cup lemon juice, fresh preferred
* 4 cloves garlic, sliced
* 2 tablespoons sugar
* 2 teaspoons celery seed
* 2 teaspoons yellow mustard seeds
* 1 teaspoon dry mustard

Place the squash and onions in a colander and sprinkle with the salt and let sit for 1 hour. Rinse well and drain. Pack the vegetables into sterilized jars along with the chile. Combine the remaining ingredients in a pan, bring to a boil and pour over the vegetables, leaving 1/4-inch head space. Adjust the lids and process in a boiling water bath for 10 minutes.

Yield: 2 pints Heat Scale: Varies

**Spicy Preserved Onions**

Spicy onions are a welcome change from plain ones. Serve with sandwiches, hamburgers, hot dogs, or as a condiment. They are especially good with tacos and fajitas. Note: This recipe requires advance preparation.

* 3 pounds white onions, thinly sliced
* 1 small carrot, peeled and thinly sliced
* 6 serrano chiles, stems removed chopped, or substitute other hot fresh chiles
* Pickling Mixture:
* 3/4 cup white vinegar
* 3/4 cup water
* 1/4 cup sugar
* 10 whole black peppercorns
* 6 whole cloves

Pour boiling water over the onions and carrots and let sit for 1 minute. Drain and layer in sterilized jars along with the chile. Bring the remaining ingredients to a boil in a pan and pour over the onion mixture, leaving no head space, and cover. Allow to the onions to marinate for a couple of days in a cool, dark place before using.

Yield: 4 pints Heat Scale: Mild

**Pickled Green Beans**

Putting up chiles with other prolific vegetables such as green beans, takes care of two "too many" crops at one time. These spicy beans are a great addition to an appetizer tray. Note: This recipe requires advance preparation.

* 2 pounds fresh green beans, left whole
* 12 fresh red chiles, left whole, such as de arbol, cayenne or Thai
* 6 cloves garlic, left whole
* 1 cup chopped onions
* 1 ½ tablespoons dill seeds
* 2 teaspoons black peppercorns
* 3 cups white wine vinegar
* 1 cup water
* 2 tablespoons sugar
* ½ teaspoon salt

Trim the ends off the beans and remove the strings. Cook the beans in boiling water until barely tender, 3 to 5 minutes. Drain and plunge beans into ice water to stop cooking. Stand the beans up in sterilized, wide mouthed jars. Divide the chiles, garlic, onions, dill, and peppercorns among the jars. Combine the vinegar, water, sugar, and salt in a pan, bring to a boil, and pour over the beans. Seal the jars and allow to sit for a couple of weeks in a cool, dark place before serving.

Yield: 6 pints Heat Scale: Varies

**Jalapeños in *Escabeche***

*Escabeche* means "pickled" in Spanish, and this recipe is a way of pickling chiles that is popular in Mexico and other Latin countries. This particular method requires that the peppers be cooked and packed with several other vegetables. A variety of small hot chiles can be used, so don't limit yourself to only jalapeños. Note: This recipe requires advance preparation.

* 1 pound jalapeños, whole
* 1/4 cup olive oil
* 1 medium onion, thinly sliced
* 2 small carrots, thinly sliced
* 4 cloves garlic
* 12 whole black peppercorns
* 1/4 cup salt
* 3 cups white vinegar
* 3 cups water

In a pan, saute the chiles in the oil until the skin starts to blister. Add the onion and carrots and heat for an additional minute. Pack the chile mixture into sterilized pint jars leaving 1/2 inch head space. Add a clove of garlic, 3 peppercorns, and 1 teaspoon salt to each of the jars. In a pan, combine the vinegar and water and bring to a boil. Pour over the chiles. Seal and process the jars in a boiling water bath for 15 minutes. Store for 4 weeks in a cool, dark place before serving.

Yield: 4 pints Heat Scale: Medium

**Preserving Peppers in Alcohol**

Another method of "pickling" chiles is to preserve them in liquor. This method has several advantages to it, including the fact that the process can be completed without using the stove. Also, alcohol tends to change the chiles less than vinegar. Simply cut or poke a hole in each chile and cover with your preferred liquor. Vodka, gin, vermouth, and rum all produce tasty results. Not only does this process preserve chiles, it also produces some very interesting drinks!

***How to Pickle Peppers***

**Recipes:**

[Mole Coloradito](http://www.fiery-foods.com/dave/moles.asp#Mole Coloradito#Mole Coloradito)

[Mole Manchamanteles](http://www.fiery-foods.com/dave/moles.asp#Mole Manchamanteles#Mole Manchamanteles)

[Oaxacan Black Mole (Mole Negro Oaxaqueño)](http://www.fiery-foods.com/dave/moles.asp#Oaxacan Black Mole#Oaxacan Black Mole)

[Oaxacan Chichillo (Chichillo Oaxaqueño)](http://www.fiery-foods.com/dave/moles.asp#Oaxacan Chichillo#Oaxacan Chichillo)

[Rice Mole (Mole de Arroz)](http://www.fiery-foods.com/dave/moles.asp#Rice Mole#Rice Mole)

*Article and Photos by Patrick Holian*

Perhaps we should start with the name, *mole*. No, I am not referring to the small, furry mammal with beady eyes, although I imagine the editor would expect me to ingest such vermin. Magazine writing is, after all, most difficult work. Rather, the mole (pronounced MOW-lay) I sought was to be found deep in southern Mexico in the Valley of Oaxaca, a region famous for its seven moles.

Moles are complex, exotic sauces, often with fifteen or more ingredients. Several kinds of chiles are used in most, along with a number of unusual items. Oaxaca is known for its uncommon foods: *floras de Calabasas* or squash blossoms are frequently used in dishes (delicious); *nopales* or prickly pear cactus leaves grace some salads and soups (without spiny needles, of course); and there are *chapulines*, grasshoppers grilled in oil until crunchy and sprinkled with red chile powder (okay, I did eat one e... ah, several).

But I digress. My travel trauma this trip was caused by a lack of time. I had but three days to sample all seven moles. Upon arriving in the colonial capital, also called Oaxaca, I did a quick survey of the local restaurants only to discover that several moles were not to be found on any menu. Yikes! Better to plunge right in than to contemplate the big picture.I immediately devoured *mole rojo* for lunch at the Hostería de Anteguera on the *zócalo* (central plaza). The sauce was dark red with an intensely sweet taste and only mildly spicy. For an early dinner, I enjoyed *mole negro* at the La Flor de Oaxaca (Armenta y López 311). This mole seemed to be served everywhere and is often called "the king of moles" because of its 20+ ingredients. While it was 'pepper hot' at the top of the mouth and tongue, I was quickly learning that moles do not overpower with heat, but rather with a complexity of flavors. They are made to be savored.

Red chile powder accompanies mescal on the *zócalo*

I walked for several hours around town, finally pushing myself toward a second dinner at Restaurante Catedral (Garcia Vigil 105). I ordered *mole verde*, a green sauce that reminded me of pea soup. Perhaps it was the white beans and small pieces of *masa* (a dough-like corn mixture) that gave this mole its thick, heavy texture. A local plant called *yerba santa* gave the dish its green color and veggie flavor. It was my least favorite mole to date. I returned to my motel very tired and very full. It was time for sleep.

The next day, I was unexpectedly diverted out of Oaxaca City on a 4-hour road trip that took me to the town of Tlaxiaco, a regional center for the pine-studded highlands called the Mixtec Alta. Fortunately, I stumbled upon the Hotel El Portal on the northwest corner of the zócalo. Just past the reception desk was a grand, interior courtyard, home to Restaurante El Patio.

While the place lost points on its unimaginative name, it made up for it by offering *mole amarillo.* Yes! I had one more off the list. I was served a large platter with two pieces of chicken stranded in a sea of bright, yellow-orange sauce. The flavor was very light and intensely spicy, but what was more amazing was the intense color! *Mole amarillo* is by far the most beautiful of all the moles.

By the time I arrived back in Oaxaca City it was dark. After two days, I had only tasted four moles. As I searched the streets for dinner, I spotted El Naranjo. While nothing on the exterior indicated that this restaurant would aid me in my quest, its inner colonial courtyard drew me inside. It was here that I met my savior, owner Illiana de la Vega. "Let me tell you about moles, Patrick. Here at El Naranjo we serve *all seven moles* from the Valley of Oaxaca." I could not believe my ears. "Please, Illiana, go on." "These moles are based on my grandmother's recipes, and I have made only minor changes to them. We serve a different mole everyday, Monday through Saturday, and always have *mole negro* available."



Illiana de la Vega, owner of El Naranjo.

The mole that evening was *mole chichilo*, a rich, dark sauce based on chilhuacle negro and a mix of other Oaxacan chiles. I returned the next day, my last in Oaxaca, for *mole coloradito*. This sauce was a medium, dark red with a rich, crunchy flavor. It delivered a pleasant, back-of-the-mouth burn. A dish served with *mole coloradito* would go great with a hearty Shiraz wine.

Upon finishing my plate, I pleaded with Illiana to make *mole manchamanteles*, a distinctive sweet blend with pineapple and plantains. This would be my seventh mole and allow me to complete the list. Unfortunately, that mole was days away on El Naranjo's rotational menu. She explained that moles can’t simply be whipped up. Rather, they require extensive shopping for the many ingredients, and hours of preparation. *Mole manchamanteles* was simply not possible this evening at El Naranjo. In despair, I went out into the street.

Light green Chile de Agua at Mercado de Abastos

No matter where I went, I could not find *mole manchamanteles*. I searched the area near Los Arquitos, a series of ancient arches used at one time to support an aqueduct. I scaled the Escalera del Fortín, 1000 steps of heavy climbing which led to the city's planetarium. I even ignored the advice of several well-meaning locals who warned of thieves, pickpockets, and banditos at the Mercado de Abastos. Danger be damned! I marched on. I was on a mission.

I discovered several friendly vendors at the market who offered fresh chile peppers like the light green chile de agua and the darker chile poblano. Others sold piles of dried chiles with wonderful names like chile chiltepe, chile costeño, chile morita, and the beautifully red chile de onza. This was fine, but where was the Mexican concoction that I so feverishly sought?

As I rounded a corner, I finally hit the mother load—mountains of mole. The sign above the stand read "Juquilita—Mole Oaxaqueño en pasta." I scanned the countertops. *Mole rojo, mole colorado, mole negro¼.* That was it. Desperate, I grabbed the clerk in the brightly colored Juquilita uniform, asking him in my primitive Spanish if he had any *mole manchamanteles.* "No, señor." He answered wide-eyed, meekly pointing to the slogan above: *La tradición en su paladar*, the tradition of your palate. He was obviously a company man. I abandoned my search at the Mercado de Abastos and headed for the zócalo.

Some of the many dried chiles of Oaxaca

Dejected, I made my way to the outside café, Hostería de Anteguera. There I met a sympathetic waiter, Juan Manuel Cruz Ortiz, who patiently listened to my story.

"Señor, I am sorry. We do not serve *mole manchamanteles*. I don't know anyone here at the zócalo who serves *mole manchamanteles*. But I do have something that will take your mind off the problem."

Juan Manuel returned a few moments later and poured me the top-shelf Mescal Pechuga, a smooth, smoky-tasting distillate of the mescal plant. He showed me how to first take a pinch of red powder—a mix of red chile, salt, and *gusanos* (ground-up, dried maguey caterpillars)—drink the mescal and then follow it with a fresh orange slice. After repeating this ritual several times, I ponder my imminent departure the following morning. Perhaps I had only scaled six mountains of mole this trip, but there is always another day.



Templo Santo Domingo

I began to plan my next visit to Oaxaca and imagined how delicious *mole manchamanteles* would be upon my return. I was in need of more thought juice. "Juan Manuel! One more Mescal Pechuga, por favor."

**Recipes**

Here are two recipes from El Naranjo's Illiana de la Vega—one that I enjoyed and one that I missed. Illiana chose these two moles since their ingredients are easily available north of the border. If you have trouble finding any, Illiana suggested trying Texas-based Central Market at www.centralmarket.com. This Lone Star market should fill your ingredient needs. *Buen provecho!*

**Mole Coloradito**

*Mole coloradito*.

This brick-red mole, courtesy of Restaurante El Naranjo, is made with chile ancho, sesame seeds and almonds.

* 10 ancho chiles
* 1 pasilla chile
* 4 large roma tomatoes
* 4 medium cloves garlic, unpeeled
* 3 tablespoons vegetable oil
* 2 slices day-old bread
* 15 blanched almonds
* ½ cup sesame seeds
* 10 black peppercorns
* 1 tablespoon dried Mexican oregano (preferably Oaxacan)
* 3 whole cloves
* 3 tablespoons vegetable oil
* 1 piece Mexican cinnamon (approximately 1 inch)
* 3 cups chicken stock
* Salt
* 2 tablespoons sugar
* 8 pieces chicken or pork
* ½ medium onion
* 3 garlic cloves
* Salt

Clean the chiles with a damp cloth, then discard the seeds and stems. Roast the chiles slightly on a hot skillet. Transfer to a pot with hot water, and let them soak for 20 minutes. On a separate skillet, dry-roast the tomatoes and the unpeeled garlic cloves. Add 3 tablespoons oil to a skillet and fry the bread until pale gold. Add the blanched almonds, sesame seeds, oregano, black peppercorns and cloves. Reserve. Meanwhile, heat the oil in a big pot, blend the chiles with enough fresh water, and add to the pot. Let it fry for about 8 to10 minutes. Blend the reserved nuts and spices along with the tomatoes, garlic, and enough water. Add to the cooking pot. Blend the cinnamon with a little water and pass through a sieve over the mole. Simmer until thickened, about 20 minutes. Add the chicken stock and bring to a boil. Let cook for 15 minutes, then add salt and sugar to taste. The mole should cover the back of a spoon. Add boiled chicken (see below), let simmer for 10 minutes, and serve with rice and tortillas. To cook the chicken: Bring 2 quarts water to a boil, add ½ onion, 3 cloves garlic and salt. When boiling, add the chicken pieces and let it boil until the meat is done.

Yield: 6 servings Heat Scale: Medium

**Mole Manchamanteles**

According to El Naranjo’s website, www.elnaranjo.com.mx, "The name is derived from the fact that this light sauce spills easy and stains tablecloths. It has a sweet flavor because of the pineapple and plantains."

* 5 ancho chiles
* ½ medium onion
* 3 medium garlic cloves, unpeeled
* 3 medium tomatoes
* 5 almonds, blanched
* 4 black peppercorns
* 4 cloves
* ½ teaspoon oregano
* ½ teaspoon thyme
* 1 medium cinnamon stick
* Vegetable oil
* Stock or water, as needed
* 3 sprigs parsley
* 8 pieces chicken
* 1 quart water
* 1 medium onion
* 3 medium garlic cloves
* Salt
* 1 tablespoon salt
* 1½ tablespoons vegetable oil
* 4 tablespoons butter
* 1 slice fresh pineapple, chunked
* 2 ripe plantains, sliced

Clean the chiles with a damp cloth, cut them open, remove the stems and seeds, and spread them flat in a large dry frying pan. Roast them until they shrivel and slightly turn color, then soak them in water for up to 20 minutes. In a smaller pan, dry-roast the onion, unpeeled garlic, and tomatoes until charred. Remove the garlic cloves and peel them. In another pan add 1 tablespoon oil and fry the almonds, peppercorns, cloves, oregano, and thyme. Toast the cinnamon stick to slightly release the flavor. Transfer the chiles with enough water to a blender, process, and pass through a sieve. Meanwhile, heat 2 tablespoons of oil in a large pan, add the chile mixture, and let it fry. Blend the rest of the roasted and fried ingredients. Pass through a sieve and add to the chile paste. Simmer the mole, adding stock or water to achieve correct consistency (the mole should coat the back of a spoon). Check the seasoning and add the parsley sprigs. Clean the chicken pieces and place them in a small stockpot with water, onion, garlic and salt. Bring to a boil. Reduce the heat and poach the chicken until tender, about 30 minutes. Heat the oil and butter in a skillet, and sauté the sliced plantains until golden in color. Set aside. In the same skillet, repeat the procedure with the pineapple slices, adding more butter and oil if needed. Sauté until golden brown. Keep the fruits warm. Heat the mole along with the chicken pieces and the parsley for 15 minutes. Decorate with the fruit, and serve with rice and hot tortillas.

Yield: 6 servings Heat Scale: Mild

Here are some other Oaxacan moles.

**Oaxacan Black Mole (Mole Negro Oaxaqueño)**

There are more than sixty varieties of chiles that are grown only in the state of Oaxaca and nowhere else in Mexico. We have suggested substitutions here to reflect varieties more commonly available north of the border. You can use oil instead of lard, but the flavor will change dramatically.

* 1 whole chicken, cut into eight serving pieces
* 6 cups chicken stock
* 5 chilhuacle negro chiles, stems and seeds removed (save the seeds) or substitute ancho chiles
* 5 guajillo chiles, stems and seeds removed (save the seeds) or substitute dried red New Mexican chiles
* 4 pasilla chiles, stems and seeds removed (save the seeds)
* 4 mulatto chiles, stems and seeds removed (save the seeds), or substitute ancho chiles
* 2 chipotle chiles, stems and seeds removed (save the seeds)
* 1 medium white onion, quartered
* 6 cloves garlic
* 2 tablespoons whole almonds
* 2 tablespoons shelled and skinned peanuts
* 2 to 4 tablespoons lard or vegetable oil
* 2 teaspoons raisins
* 1 slice of bread (Challah or egg type is best)
* 1 small ripe plantain, sliced or substitute a banana
* ½ cup sesame seeds
* 2 pecan halves
* 1-inch cinnamon stick, Mexican preferred
* 2 whole peppercorns
* 2 whole cloves
* 2 medium tomatoes, chopped
* 5 fresh tomatillos, chopped
* ½ teaspoon dried oregano
* ½ teaspoon dried thyme
* 1 avocado leaf, omit if not available or substitute bay leaf
* 1 bar or to taste Mexican chocolate, Ibarra preferred
* Salt to taste
* Plenty of fresh tortillas

In a pot, simmer the chicken in the stock until tender, about ½ hour. Remove the chicken and keep warm and reserve the stock. In a large frying pan or comal, toast the chiles, turning once until darkened, but not burned or, as some Oaxaquenas prefer, fry the chiles in lard. Place the chiles in a bowl and cover with hot water to soak for ½ hour to soften. Remove the chiles and place in a blender or food processor and puree, adding a little chile water if necessary, to form a paste. In the same pan, roast the onions and garlic cloves until slightly browned, remove. Then toast the almonds and peanuts slightly, remove. Finally, toast the chile seeds, taking care to make them dark but not burned. Heat 2 tablespoons of lard in the skillet and fry the raisins until plumped, remove and drain on paper towels. Next fry the bread until browned, remove and drain. Repeat with the plantains. Add more lard if necessary, lower the heat and fry the sesame seeds slowly, stirring often. When they are slightly browned, add the pecans and brown, remove and drain. Toast the cinnamon, peppercorns, and cloves lightly in a dry pan. Cool and grind in a mocajete or spice grinder. In a food processor or blender, puree the nuts, bread, sesame seeds, and pecans in small batches, remove. Add the onions, garlic, plantains and puree, remove. Finally, add and puree the tomatoes and tomatillos. In a large cazuela or heavy pot heat the remaining lard and fry the chile paste, stirring constantly so it will not burn. When it is "dry," add the tomato puree and fry until the liquid has evaporated. Add the ground spices, the nut-bread mixture, the pureed onion mixture, and the oregano and thyme. Heat, stirring constantly, to a simmer and add the chocolate to the mole. Toast the avocado leaf for a second over the open flame and add. Slowly add some of the reserved chicken stock to the mole until the mixture is just thick enough to lightly coat a spoon and salt to taste. Continue to simmer for 5 minutes, return the chicken to the mole and heat through. Serve with plenty of sauce and hot tortillas.

Yield: 4 to 6 servings Heat Scale: Hot

**Oaxacan Chichillo (Chichillo Oaxaqueño)**

This is the legendary seventh mole from Oaxaca.

* 1½ pounds beef bones with meat; meat cut off the bones into 1-inch cubes
* 2 quarts water
* 1 onion, chopped
* 8 cloves garlic
* 1 bay leaf
* 1 chile de árbol or substitute large piquin or santaka chile
* 5 whole peppercorns
* 2 carrots, chopped
* 2 stalks celery, chopped
* 1 whole allspice berry
* 1 whole clove
* ½ pound pork butt, cut in 1-inch cubes
* 5 chilhuacle negro chiles, stems and seeds removed, save the seeds, or substitute anchos
* 6 guajillo chiles, stems and seeds removed, save the seeds, or substitute dried red New Mexican chiles
* 1 corn tortilla, torn into strips
* 1 sprig fresh oregano
* 1 sprig fresh thyme
* 2 allspice berries
* 1 whole clove
* 1 teaspoon cumin seeds
* 1 2-inch stick cinnamon, Mexican preferred
* 4 large tomatoes, quartered
* 3 fresh tomatillos, halved
* 1 clove garlic
* 1 small onion, roasted
* 2 chayotes or substitute zucchini, sliced thin
* ½ pound green beans, chopped
* 5 small potatoes, peeled and quartered
* 3 tablespoons lard or vegetable oil
* 2 to 3 avocado leaves, or substitute bay leaves
* Salt to taste
* Garnishes: sliced onion and lime slices

In a large stock pot, cover the beef bones with cold water, bring to a boil and boil for 20 minutes skimming off any foam that forms. Lower the heat and add the onion, garlic, bay leaf, chile de árbol, peppercorns, carrots, celery stalks, cloves, allspice, clove and cook for 5 minutes. Add the beef and pork cubes, lower the heat and simmer, covered, for 1 hour. Strain the stock, cool in the refrigerator and skim off any fat that rises to the top. In a large frying pan or comal, toast the chiles, turning once until darkened, but not burned. Place the chiles in a bowl and cover with hot water to soak for ½ hour to soften. Toast the tortilla strips on the comal until they blacken, remove. Toast the saved chile seeds on the comal and heat until the seeds are blackened. Remove the seeds and place in water to soak. Change the water after 5 minutes, and soak again for another 5 minutes. Drain. Drain the chiles and place in a blender or food processor along with the tortillas, blackened seeds, oregano, thyme, allspice, clove, cumin, cinnamon, and a little water and puree to a paste. Roast the tomatoes and tomatillos on the comal until soft, remove. Then roast the onion and garlic. Place them in the blender and puree. Bring 3 cups of the reserved stock to a boil and the chayote, beans, and potatoes. Reduce the heat, and simmer until the potato is easily pierced with a fork. Drain and reserve the vegetables.

Heat the lard or oil in a heavy pot or cazuela and fry the chile puree. Add the tomato mixture and fry for a couple of minutes. Stir in just enough of the beef stock to thin the mixture and salt to taste. Toast the avocado leaves and add. Add the vegetables to the mole and heat through. Garnish the mole with the onion and a lime slice and serve.

Yield: 4 to 6 servings Heat Scale: Medium

**Rice Mole (Mole de Arroz)**

This recipe combines pasillas, cascabels, and pickled jalapeños to form a trilogy of chiles. This is certainly one of the more simple mole recipes we've come across. It's also very good.

* 1 chicken, sectioned
* Water to cover
* 2 medium onions, sliced
* Salt to taste
* 1½ cups rice, cleaned and soaked
* 4 pasilla chiles, seeds and stems removed
* 3 cascabel chiles, seeds and stems removed
* 4 tablespoons oil
* 1 teaspoon cumin
* 6 black peppercorns
* 4 cloves garlic, crushed
* 4 green tomatoes, chopped
* Salt to taste
* ½ to 1 head lettuce, shredded
* Pickled jalapeños to taste

Place the chicken parts in a pan, cover with water, and add the onions and salt to taste. Cook the chicken until it is tender, 45 minutes to 1 hour. Once cooked, remove the chicken from the broth, keep it warm, and set the broth aside. Measure the broth to 3 cups, adding more water if necessary. Cook the rice in the broth until done, stirring occasionally to make sure it doesn't stick. In a separate pan, fry the chiles in a little oil, then add the cumin, peppercorns, garlic, onions, tomatoes and green tomatoes until the chiles become soft. Remove to a blender and puree, then return to the pan. Add the rice and cook for a few minutes.Serve the rice with the chicken and decorate with the lettuce and jalapeños.

Yield: 6 servings Heat Scale: Medium

**Nancy’s Fiery Fare:**

**Winging it in Buffalo**

*by Nancy Gerlach, Fiery-Foods.com Food Editor*

**Recipes in this Issue:**

[Buffalo Chicken Wings](http://www.fiery-foods.com/dave/nancy1203.asp#Buffalo Chicken Wings#Buffalo Chicken Wings)

[Grilled Chicken Wings](http://www.fiery-foods.com/dave/nancy1203.asp#Grilled Chicken Wings#Grilled Chicken Wings)

[Breaded Buffalo Wings](http://www.fiery-foods.com/dave/nancy1203.asp#Breaded Buffalo Wings#Breaded Buffalo Wings)

[Louisiana-Type Hot Sauce](http://www.fiery-foods.com/dave/nancy1203.asp#Louisiana-Type Hot Sauce#Louisiana-Type Hot Sauce)

[Blue Cheese Dressing](http://www.fiery-foods.com/dave/nancy1203.asp#Blue Cheese Dressing#Blue Cheese Dressing)

Have you ever wondered how "Buffalo Wings" got their name? Certainly not from flying bovines. The recipe for these spicy chicken wings originated in the city of Buffalo, New York and hence the name. Since their creation in 1964, they have become so popular that now they seem to be on the menu of every sports bar and tailgate and Super Bowl party across the country.

Frank Bellisimo’s Anchor Bar in Buffalo is credited as their birthplace, and his wife and cook Teressa as the creator. But there are differing versions of who had the inspiration. One rendition is that their son Dominic came home late one night with a bunch of his hungry friends and asked his mom to prepare a quick snack for them. She deep-fried some of the chicken wings she was using to prepare stock for the restaurant and, when done, doused them with hot sauce. She put them on a platter, grabbed some celery sticks from the antipasto, and served them with a bowl of house dressing, which just happened to be blue cheese. This rather odd impromptu snack was an instant hit.

After Dominic, or Rooster to his friends, took over the family business, he told a slightly different story to the *New Yorker* magazine. His version had him tending bar on a Friday night back when Catholics were avoiding meat on Fridays. It was a good crowd and, being a good host, he wanted to show his appreciation. He asked his mother to prepare a snack that they could enjoy after midnight when it was technically Saturday and consuming meat was okay. The inspiration for the dish varied, but the results were the same.

Not wanting to be left out of culinary history, Frank Bellisimo’s version has wings being delivered to the restaurant instead of the usual necks and backs he used to make chicken stock. Wanting to take advantage of his good luck, he asked his wife Teressa to come up with something he could serve at the bar instead of tossing them into the stockpot. So she cut off the useless tip and chopped the remainder in half so they would be easier to eat and proceeded to fry, coat with the hot sauce, and serve. "Mother Teressa," as loyal wing lovers refer to her, gets the credit for the recipe, but everyone else wants in on the glory. Who knows, maybe she came up with the idea all on her own.

Whichever version you choose to believe, there are a few constants in the stories. First, Teressa did come up with the recipe including the celery sticks and blue cheese dressing, it first appeared in the early to mid 60s, and it happened at the Anchor Bar in Buffalo.

Throughout the 70s, their popularity was restricted to the East Coast, but the word was spreading. When the Hooters restaurant chain was founded in the early 80s. they built their menu around Buffalo chicken wings and introduced them to the country. In 1994, Domino’s pizza went nationwide with their wings and were closely followed by Pizza Hut. And by 1995, it was estimated that hot wings were a $400 million part of restaurant revenues. Buffalo wings are now not only served nationwide, but worldwide too in such exotic places as in Dubai, United Arab Emirates, Yotsuya, Japan, and Singapore, to name a few.

Along with their popularity, legions of wings aficionados have sprung up. For the last couple of years, they have been flocking to Buffalo, New York over the Labor Day weekend to participate in the National Buffalo Wing Festival. Along with wing sauce and wing eating contests, car and truck shows, is the annual "running of the chickens." The 0.5K Chicken Wing Run, which the sponsors bill as "fun for the motivationally challenged," spans exactly 500 "cruel meters or approximately 22 driveways or 51 Winnebagos end to end." And since it’s so difficult to predict the finish times, they give prizes for both the fastest and slowest runners. This is obviously a group that take their wings and fun seriously! For more information on this festival, see <http://www.buffalowing.com/index2.html>

Some crazed Buffalo Wing fans have launched the Buffalo Wing World Domination website ( <http://bwwd.org/Main.asp> ), where their stated goals are:

* The peaceful pursuit of simple wholesome meals.
* Worship and domination of Avian Bison.
* Worldwide recognition of the wisdom of Avian Bison.

If this is just a little over the top for you, try visiting the original Anchor Bar at [www.buffalowings.com](http://www.buffalowings.com)

Over the years, many have tried to duplicate the Anchor Bar’s Buffalo Wings, but their exact recipe remains a closely guarded secret. On their website they have a recipe, but it requires the use of the Anchor Bar brand of wing sauce. Like with chili, I think that any good hot wing is good whether it’s "authentic" or not. Even though I can’t provide you with the Anchor Bar recipe, I’ve included a few easy recipes that should get you started on developing your own signature "Buffalo" wings.

**Buffalo Chicken Wings**

This is the recipe that most people will tell you is the way they make wings in Buffalo. It’s a recipe that’s easy to alter to suit your tastes.

* 4 pounds chicken wings
* Salt and freshly ground black pepper
* Vegetable oil for frying
* 1/4 cup butter or margarine
* 2 to 5 tablespoons of commercial Louisiana-type hot sauce, or recipe below
* 1 teaspoon white vinegar

*Accompaniments:*

* Blue cheese dressing either commercial or [recipe below](http://www.fiery-foods.com/dave/nancy1203.asp#Blue Cheese Dressing#Blue Cheese Dressing)
* Celery sticks

Wash the chicken wings and pat dry with a paper towel. Cut the tips off each wing and discard. Using a sharp knife, separate the two remaining pieces at the joint. Sprinkle the wing pieces with salt and pepper. Pour enough oil in a deep-fat fryer or large heavy pot to cover the wings and heat to 375 degrees. When the oil is hot, add half the wings and cook about 10 minutes, stirring occasionally. When the wings are golden brown and crisp, remove them and drain well on paper towels. Add the remaining wings and repeat the process. Put the wings in a large bowl. Melt the butter in a saucepan over medium heat, add the hot sauce and vinegar and stir to combine. Pour the hot sauce over the wings and toss to coat. Arrange the wings on a platter and serve with celery sticks and blue cheese dressing.

Yield: 48 individual wings Heat Scale: Medium to Hot

**Grilled Chicken Wings**

These wings are a tasty alternative to deep-frying the chicken. They’re great as an appetizer for a summer barbecue. Put them on the grill before guests arrive so that their great aroma greet them as they walk through the door.

Here's Gator Hammock's Buddy Taylor, cooking lots of wings on a portable grill that he custom-built.

Photo by Harald Zoschke

* 4 pounds chicken wings
* 3 teaspoons ground cayenne chile
* 2 teaspoons freshly ground black pepper
* 2 teaspoons onion powder
* 1 teaspoon dried thyme
* 1 teaspoon garlic powder
* 1/4 teaspoon celery salt
* Louisiana-type hot sauce or [recipe below](http://www.fiery-foods.com/dave/nancy1203.asp#Louisiana-Type Hot Sauce#Louisiana-Type Hot Sauce)

Wash the chicken wings and pat dry with a paper towel. Cut the tips off each wing and discard. Using a sharp knife, separate the two remaining pieces at the joint. Combine the cayenne, black pepper, onion, thyme, and celery salt in a large bowl. Add the wings to the bowl and turn them to evenly coat. Cover the bowl and refrigerate for 24 hours. Oil the grill and preheat the grill on high. Turn off all but one burner and put the wings on the cooler part of the grill. Cover and cook until the chicken is done, about 45 minutes or until the chicken juices run clear. To serve, eat them hot off the grill with the hot sauce served on the side.

Yield: 48 individual wings Heat Scale: Medium

**Breaded Buffalo Wings**

Although these wings have a breading, it’s not thick and heavy but light as well as being spicy.

* 4 pounds chicken wings
* 3/4 cup all-purpose flour
* 1 teaspoon paprika
* ½ teaspoon ground cayenne chile
* ½ teaspoon freshly ground black pepper
* ½ teaspoon garlic powder
* 1/3 cup Louisiana-type hot sauce or see recipe below
* 1/4 cup butter or margarine
* Salt
* Vegetable oil for frying

*Accompaniments:*

* Blue Cheese dressing, either commercial or see [recipe below](http://www.fiery-foods.com/dave/nancy1203.asp#Blue Cheese Dressing#Blue Cheese Dressing)
* Celery sticks

Wash the chicken wings and pat dry with a paper towel. Cut the tips off each wing and discard. Using a sharp knife, separate the two remaining pieces at the joint. Mix the flour, paprika, cayenne, black pepper, garlic powder, and salt in a large bowl. Add the chicken and toss to evenly coat. Put the wings on a sheet pan and refrigerate for a hour to hour and a half. Pour enough oil in a deep-fat fryer or large heavy pot to cover the wings and heat to 375 degrees. When the oil is hot, add half the wings and cook about 10 minutes, stirring occasionally. When the wings are golden brown and crisp, remove them and drain well on paper towels. Add the remaining wings and repeat the process. Put the wings in a large bowl. Melt the butter in a saucepan over medium heat, add the hot sauce and stir to combine. Pour the hot sauce over the wings and toss to coat. Arrange the wings on a platter and serve with celery sticks and blue cheese dressing.

Yield: 48 individual wings Heat Scale: Medium to Hot

**Louisiana-Type Hot Sauce**

This recipe is from *The Hot Sauce Bible,* by Dave DeWitt and Chuck Evans. They say that the key to success with this sauce is to use fresh rather than dried chiles and that any small fresh hot chile can be used.

* 15 to 20 large fresh Tabasco chiles, stems and seeds removed, cut in half lengthwise, or substitute fresh piquins or cayennes
* 2 cloves garlic, cut in half
* ½ cup distilled white vinegar
* Salt to taste

Place the chiles, cut side down, on a broiler rack. Broil for about 5 minutes or until the skin blisters and blackens. Transfer the peppers to a paper bag and let stand for about 10 minutes. Peel the chiles when cool. Place the chiles and garlic in a blender or food processor. With the machine running, slowly add the vinegar until the mixture is well blended. Add salt to taste. Keep covered and refrigerated until you use it.

Yield: ½ cup Heat Scale: Hot

**Blue Cheese Dressing**

This is a easy to prepare, and very tasty, alternative to bottled dressings. Increase or decrease the amount of blue cheese to suit your taste.

* 1 cup mayonnaise
* ½ cup sour cream
* 2 tablespoons minced onion
* 2 tablespoons distilled white vinegar
* 4 ounces crumbled blue cheese

Combine all the ingredients in a bowl and mix until well blended. Cover and refrigerate for a couple of hours. Use within 10 days.

Yield: 1 ½ cups

**Recipes in this Issue:**

* [Southwest Salsa Soup](http://www.fiery-foods.com/dave/nancy0404.asp#Southwest Salsa Soup#Southwest Salsa Soup)
* [Noodle and Shrimp Salad  
  with Oriental Cucumber Salsa](http://www.fiery-foods.com/dave/nancy0404.asp#Noodle and Shrimp Salad#Noodle and Shrimp Salad)
* [Oriental Cucumber Salsa](http://www.fiery-foods.com/dave/nancy0404.asp#Oriental Cucumber Salsa#Oriental Cucumber Salsa)
* [Oven Baked Quesidallas with Roasted Corn and Turtle Bean Salsa](http://www.fiery-foods.com/dave/nancy0404.asp#Oven Baked Quesidallas#Oven Baked Quesidallas)
* [Roasted Corn and Turtle Bean Salsa](http://www.fiery-foods.com/dave/nancy0404.asp#Roasted Corn and Turtle Bean Salsa#Roasted Corn and Turtle Bean Salsa)
* [Empanaditas with Mango  
  Banana Habanero Salsa](http://www.fiery-foods.com/dave/nancy0404.asp#Empanaditas#Empanaditas)
* [Mango Banana Habanero Salsa](http://www.fiery-foods.com/dave/nancy0404.asp#Mango Banana Habanero Salsa#Mango Banana Habanero Salsa)

May is National Salsa Month, along with National BBQ, Egg, Beef, Salad and Hamburger Month and that’s just to name just a few. It’s also that time of year that we Americans, at least those of us in the Southwest, celebrate Mexico’’s independence from France. What’s that all about? Actually Cinco de Mayo is an excuse for us to party with a Latin flare. And celebrate we do. With music, great food, Mexican beer, margaritas, and bowls of hot and spicy salsas. Salsa! Just the word conjures up images of fiestas, brash rhythms, bright colors and hot and spicy flavors. But salsas are more than concoctions from south of the border. Salsas literally know no ethnic boundaries. Sambals in Indonesia, chutneys from India, the fruit and chile mixes from the West Indies, even the piccalillis of the American South all qualify as a salsa. Salsas are used to accent meals in tropical areas of the world, and probably evolved because it’s hard to tolerate heavy cream and sauces in hot climates. Even in the tropical areas that were colonized by notorious gravy and sauce eaters, the French and English, spicy salsas are popular and gravies never took hold. And because they can replace a high fat sauce with a low fat, high flavor alternative, their popularity has continued to grow with the health conscious public. What exactly is a salsa? One definition is that it's a "seasoned sauce used for dipping or as a condiment." Mexicans define a salsa as a sauce and all sauces as salsas. My own definition is that salsas are a mixture of raw or partially cooked vegetables and/or fruits, herbs, and, of course, chiles. Salsas retain their texture while a sauce is cooked and then usually pureed until smooth. Salsas have bold, strong flavors that compliment and enhance the foods with which they are served. Just about any ingredient can be used to make salsa as long as the flavors blend well. Everything from vegetables, fruits, nuts, and even fish and meat have been turned into tasty salsas. I divide them into the following four categories, with any that don't fit into the first three falling into a general or exotic grouping. :The most versatile of the salsas are the ones most often associated with the term salsa. made with tomatoes, onions, and chiles, the vegetables are most often raw. Although roasting the ingredients and including some of the roasted skins, has become popular and adds another dimension to the flavor of the salsa. These salsas lend themselves well to cooking in just about any dish that calls for a tomato product, and they can also be used to top pasta or even pureed and used as a sauce. These are the ones that are found on tables throughout the Southwest and Mexico. Tomatillos, sometimes called husk tomatoes, also fall in this category. Vegetables, other than tomatoes, can be the dominant flavor in a salsa. Popular vegetables include corn, dried beans and peas, chayote squash, artichokes, and even sweet potatoes and eggplants. There is even a wonderful salsa from Yucatan in Mexico that uses radishes as the main ingredient. These are very versatile salsas and can be warmed and served as a side dish in place of a vegetable or as a spread on sandwiches. Some of the lighter vegetable salsas can be served as a salad or used as a salad dressing. The third category of salsas are the fruit salsas. The flavor combination of hot and sweet (and/or tart) is one of my favorites, so it follows that these salsas are also some of my favorites. Just about any fruit can be used but I personally like the tropical fruit blends that include bananas, pineapples, tamarinds, mangos and papayas. Fruit salsas are the most perishable type of salsa and are best used on the day that they're made. Use only the freshest of fruits or, when in a pinch, substitute dried fruits. Avoid using frozen fruits as freezing tends to destroy their texture. Fruit salsas are tasty when served hot or cold, and go well with fish and poultry. They also are great with desserts. Use them as a topping for ice cream, or as a filling for a tart or pastry.

Salsas are a great accent to any meal. They add a splash of color and can compliment an entree, add zip to a chip, or, with a little creativity, become an ingredient in a delicious dish. Your imagination is the only limit to their use.

**Southwest Salsa Soup**

Using a commercial salsa as a base for this soup makes it quick and easy to prepare as well as allowing you to choose your spice level from mild to wild. The heat of the salsa will intensify, so I won’’t use anything that is too hot or a salsa that is habanero based. This simple soup can also be expanded to a more hearty soup, with the addition of ingredients such as cooked pinto or black beans, chicken or turkey, or even whole kernel corn. Add these to the soup after it has been pureed. For a taste of green chile, chicken enchiladas in a soup bowl, just use green chile salsa and chicken.

* 1 cup chopped onion
* 2 teaspoons chopped garlic
* 2 to 3 teaspoons vegetable oil
* 1½ cups tomato-based commercial salsa
* 3 cups chicken broth
* 2 corn tortillas, torn into pieces
* 1/4 teaspoon ground cumin
* 1/4 cup chopped, fresh cilantro
* Salt and freshly ground black pepper to taste
* Garnish: Sour cream
* Chopped fresh cilantro

Heat the oil in a heavy stock or sauce pot, add the onions and saute until they are soft. Add the garlic and continue to saute for an additional minute. Stir in the salsa, broth, tortillas, cumin, and salt and pepper. Bring to a boil, reduce the heat and simmer until the tortillas are soft. Remove from the heat and cool slightly. Put the mixture into a blender or food processor and puree until smooth. Adjust the seasonings and stir in the cilantro. To serve, ladle the soup into individual bowls and garnish with a dollop of sour cream and chopped cilantro.

Yield: 4 to 6 servings Heat Scale: Mild to Hot

**Noodle and Shrimp Salad with Oriental Cucumber Salsa**

This quick and easy basic salad can be changed by using a different salsa to dress the noodles. Try a commercial peanut-based salsa and if your salsa is too thick, thin with a little oil or vinegar. Serve this salad with an Indonesian Sambal to raise the heat, if desired.

*The Salad:*

* 2 cups cooked vermicelli or Chinese noodles
* ½ cup cooked shrimp
* 1 recipe Oriental Cucumber Salsa (see recipe [below](http://www.fiery-foods.com/dave/nancy0404.asp#Oriental Cucumber Salsa#Oriental Cucumber Salsa))
* 1/4 cup chopped peanuts

*Garnish:*

* Chopped fresh cilantro

Toss the noodles with the shrimp and cucumber salsa. Garnish with the peanuts and cilantro and serve.

Yield: 2 servings as an entree or 4 as a side Heat Scale: Medium

**Oriental Cucumber Salsa**

* 4 serrano or Thai green chiles, stems removed, minced
* 1 large cucumber, peeled and finely diced
* 1/4 cup shredded carrots
* 4 green onions, chopped, including the tops
* 2 tablespoons rice vinegar
* 1 tablespoon peanut oil
* 2 teaspoons Asian chile sauce
* 1 teaspoon soy sauce
* 1 teaspoon minced fresh ginger
* 1 teaspoon sesame oil
* ½ teaspoon sugar

Combine all the ingredients in a bowl and toss to mix. Allow the mixture to sit for at least an hour to blend the flavors.

Yield: 1 to 1½ cups

Heat Scale: Hot

**Oven Baked Quesidallas with Roasted Corn and Turtle Bean Salsa**

I call quesadillas Mexican grilled sandwiches but they don’t have to be grilled as evidenced by this recipe. They can be served as an hors d'oeuvre or as a luncheon entree and they are much tastier and prettier than a plain grilled cheese sandwich.

* 6 8-inch flour tortillas
* 3 cups grated Monterey Jack cheese or Mexican Chihuahua or asadero cheese
* 1½ cups Roasted Corn and Turtle Bean Salsa (see recipe [below](http://www.fiery-foods.com/dave/nancy0404.asp#Roasted Corn and Turtle Bean Salsa#Roasted Corn and Turtle Bean Salsa))

Preheat an oven to 400 degrees F.

Arrange 2 tortillas in a layer on a greased baking sheet. Top with ½ of the cheese and salsa. Top each with another tortilla and repeat with the cheese and salsa. Place the remaining tortilla on top and sprinkle with a little cheese. Bake for 8 to 10 minutes or until the tortillas are slightly crisp and the cheese begins to melt.

Cut the quesadillas in wedges and serve with additional salsa on the side.

Yield: 4 servings Heat Scale: Mild

**Roasted Corn and Turtle Bean Salsa**

* 2 ears fresh corn or 3/4 cup canned or frozen whole kernel corn
* ½ cup cooked turtle (black) beans
* 1/4 cup diced red or green bell pepper
* 3 tablespoons finely minced red onion
* 2 jalapeño chiles, stems and seeds removed, diced
* 2 cloves garlic, finely minced
* 1/4 cup chopped fresh cilantro
* 2 to 3 vegetable oil
* 2 tablespoons vinegar or lime juice
* 1 teaspoon dried oregano, Mexican preferred
* Salt to taste

Cut the corn off the cob and put in a hot, dry saucepan over medium high heat and roast the corn for 5 minutes, stirring constantly so that it doesn't burn. Place the roasted corn in a bowl, add the remaining ingredients and mix to combine. Allow the salsa to sit for an hour to blend the flavors.

Yield: 2 cups Heat Scale: Medium

**Empanaditas with Mango Banana Habanero Salsa**

Empanaditas are little fruit or meat filled pies. Just about any fruit salsa will work in this recipe but I especially like the tropical ones. If you're short on time, use ready made pie crusts for the pastry.

*Empanaditas:*

* 1 recipe Mango Banana Habanero Salsa (see recipe [below](http://www.fiery-foods.com/dave/nancy0404.asp#Mango Banana Habanero Salsa#Mango Banana Habanero Salsa))
* 1 package active dry yeast
* 1/4 cup shortening
* 3 cups all-purpose flour
* 1 teaspoon salt
* 1 egg, beaten

Preheat an oven to 400 degrees F.

In a small bowl, dissolve the yeast in the warm (80 degrees) water. Allow the yeast to sit for 5 minutes or until starts bubble. Sift all the dry ingredients into a bowl. Using a pastry blender or two forks, cut the shortening into the dry ingredients. Add the yeast water and mix well. Do not let the dough rise. Separate the egg into 2 bowls. Lightly beat the egg white and beat the yolk with 1 tablespoon of water. Roll the dough to 1/4-inch thickness. If using a commercial pie crusts, do not roll. Cut into circles 2 to 2½-inches in diameter. Place a spoonful of salsa off-center on a circle. Brush the edges of the circle with the egg white, fold over and crimp the edges to seal.

Place the empanaditas on a lightly greased sheet pan, brush the tops with the egg yolk. Bake for 10 to 12 minutes or until golden.

Yield: 2 dozen Heat Scale: Medium to hot

**Mango Banana Habanero Salsa**

* 2 ripe mangos, peeled and diced
* 1 banana, diced
* 1/4 cup minced red onion
* 2 habanero chiles, stems removed, minced
* 1/4 cup orange juice
* 2 tablespoons lime juice
* 1 tablespoon vegetable oil
* 1 tablespoon chopped fresh mint

Combine all the ingredients in a bowl and mix well. Allow to sit for an hour to blend the flavors.

Yield: 2 cups Heat Scale: Hot

**The Powerful Health Punch of the Mighty Pod**

by Dave DeWitt

*Excerpted from* [The Chile Pepper Encyclopedia](http://www.fiery-foods.com/dave/davebooks.htm#Chile Pepper Encyclopedia) *(1998, William Morrow & Co.)*.

Chile peppers don't have to be healthy to be fun to eat, but fortunately, they are. In fact, they have quite a long history as a folk remedy for all kinds of ailments, from anorexia to vertigo. Some of the more scientifically recognized medical applications of chile peppers include treatments for asthma, arthritis, blood clots, cluster headaches, post-herpetic neuralgia (shingles), and severe burns.

Chile peppers contain only a few calories (thirty-seven per 100 grams of green chile, about three and a half ounces), and possibly have the ability to burn off those calories and others as well. This intriguing possibility comes from researchers at Oxford Polytechnic Institute in England, who conducted an experiment in TEF, an acronym meaning "thermic effects of food." Twelve volunteers ate identical 766-calorie meals. On one day, three grams each of chile powder and mustard were added to the meals; on the next day, nothing was added. On the days chile and mustard were added, the volunteers burned between four to seventy-six additional calories, with an average of forty-five.

The researchers concluded that the test was "a possible lead to a different approach to weight reduction," but also warned that the effect had been demonstrated in only one small test. They also cautioned that six grams (1/5 ounce) of the chile-mustard mixture "may be a large amount for the average American. If you are used to Mexican, Spanish, or Indian food, though, it's reasonable."

A possible explanation for the process is the fact that certain hot spices--especially chiles--temporarily speed up the body's metabolism. After eating, the metabolic rate increases anyway--a phenomenon known as "diet-induced thermic effect." But chiles boost that effect by a factor of twenty-five, which seems to indicate that increasing the amount of chile in a recipe could reduce the effective caloric content--provided, of course, that one does not drink more beer to counter the added heat.

Another intriguing possibility has been suggested by T. George Harris, who wrote in *American Health* magazine that chiles stimulate the taste buds but not the sense of smell. Thus they "perk up food without adding fat." Harris added that he formerly made jokes about hot pepper diets, but now, "over the last couple of years, chile peppers have begun to emerge as the nutritional heroes of the future."

Most of the research on the nutritional properties of hot peppers has concerned the New Mexican pod types because they are consumed more as a food than a condiment. The long green pods are harvested, roasted and peeled, and are stuffed or made into sauces. Some of the green pods are allowed to turn red on the bush; after harvesting, these red chiles are used as the primary ingredient in red chile sauces. The green chiles are quite high in vitamin C, with about twice the amount by weight found in citrus, while dried red chiles contain more vitamin A than carrots. Vitamin C is one of the least stable of all the vitamins; it will break down chemically by heat, exposure to air, solubility in water, and by dehydration. Vitamin A, however, is one of the most stable vitamins and is not affected by canning, cooking, or time.

A high percentage of vitamin C in fresh green chiles is retained in the canned and frozen products, but the vitamin C content drops dramatically in the dried red pods and powder. Each hundred grams of fresh ripe chile pods contains 369 milligrams of vitamin C, which diminishes by more than half to 154 milligrams in the dried red pods. Red chile powder contains less than three percent of the vitamin C of ripe pods, a low ten milligrams.

The amount of vitamin A dramatically increases as the pod turns red and dries, from 770 units per hundred grams of green pods to 77,000 in freshly processed dried red pods. This hundred&endash;fold rise in vitamin A content is the result of increasing carotene, the chemical which produces the orange and red colors of ripe peppers. The recommended daily allowances for these vitamins are 5000 International Units for A and sixty milligrams for C. These allowances can be satisfied daily by eating about a teaspoon&endash;full of red chile sauce for A and about one ounce of fresh green chile for C.

Each hundred grams of green chile contains less than two&endash;tenths of a gram of fat&endash;&endash;a very low amount. Since no cholesterol is found in vegetable products, peppers are free of it. The fiber content of fresh hot peppers is fairly high (between 1.3 and 2.3 grams per hundred grams of chile), and many of the dishes prepared with them utilize starchy ingredients such as beans, pasta, and tortillas. And the sugar in chiles is in the form of healthy complex carbohydrates.

Fresh green chile contains only 3.5 to 5.7 milligrams of sodium per hundred grams--a very low amount. We suggest that chile peppers can be very useful for the low&endash;sodium dieter. The substitution of hot peppers for salt makes gustatory sense because the pungency of the peppers counteracts the blandness of the meal resulting from salt restrictions. In other words, the heat masks the absence of salt.

However, canned green chile peppers should be avoided because of the salt used in the canning process, which can be over a hundred times the amount in fresh or frozen chiles. For people on a potassium&endash;restricted diet, the opposite is true: canned chiles have one&endash;half the potassium content as fresh ones. Some experts blame this anomaly on the hot lye bath method of removing the tough pepper skins, a technique which provides additional sodium by absorption and reduces the potassium through leaching. It should be noted that some processors have switched to a high&endash;pressure steam treatment to remove skins&endash;&endash;a far more healthy and tasty method.

**Chile and Herb Salt Substitute**

Use this recipe to eliminate excess salt from your diet or to reduce the amount of sale in many recipes. It tastes the best, of course, when you grow and dry your own herbs, but commercially purchased dried herbs will work also. Try this mixture on baked potatoes, pasta, and vegetables-- especially corn on the cob.

4 tablespoons dried parsley

4 tablespoons dried basil

2 teaspoons dried rosemary

1 tablespoon dried tarragon

2 tablespoons dried thyme

1 tablespoon dried dill weed

2 tablespoons paprika

1 teaspoon celery seed

1 teaspoon crushed, dried red chiles such as piquins, or 2 teaspoons New Mexican red chile powder.

Place all ingredients in a mini-food processor and blend for 10 seconds or so. Put the mixture into a shaker jar and cover tightly until ready to use.

Yield: 1/2 cup Heat Scale: Mild to Medium

Note: Try adding 1 tablespoon of pineapple-sage to replace the tarragon.

Recipes:

[Royal Chocolate with Chile](http://www.fiery-foods.com/dave/ceren.asp#Royal Chocolate with Chile#Royal Chocolate with Chile)

[The Earliest *Mole* Sauce](http://www.fiery-foods.com/dave/ceren.asp#The Earliest Mole Sauce#The Earliest Mole Sauce)

[Venison Steak with Juniper Berry and Fiery Red Chile Sauce](http://www.fiery-foods.com/dave/ceren.asp#Venison Steak#Venison Steak)

[*Pepita*-Grilled Venison Chops](http://www.fiery-foods.com/dave/ceren.asp#Pepita-Grilled Venison Chops#Pepita-Grilled Venison Chops)

[Cerén Beans](http://www.fiery-foods.com/dave/ceren.asp#Cerén Beans#Cerén Beans)

[Spicy *Calabacitas*](http://www.fiery-foods.com/dave/ceren.asp#Spicy Calabacitas#Spicy Calabacitas)

On an August evening in A.D. 595, the Loma Caldera (in what is now El Salvador) erupted, sending clouds of volcanic ash into the Mayan agricultural village of Cerén, burying it twenty feet deep and turning it into the New World equivalent of Pompeii. Miraculously, all the villagers escaped, but what they left behind gives us a good idea of the life they led, the food they ate, and the chile peppers they grew.

**The Ancient Ash**

In 1976, while leveling ground for the erection of grain silos, a Salvadoran bulldozer operator noticed that he had plowed into an ancient building. He immediately notified the national museum, but a museum archaeologist thought that the building was of recent vintage and allowed the bulldozing to continue. Several buildings were destroyed. Two years later, Payson Sheets, an anthropologist from the University of Colorado, led a team of students on an archaeological survey of the Zapotitan Valley. He was taken to the site by local residents and quickly began a test excavation, and radiocarbon dating of artifacts proved that they were very ancient. He received permission from the government to do a complete excavation of Cerén. The site was saved.

 The crew of the Cerén excavation,  
1996, looming in the background with the San Salvador volcano

Dr. Sheets and his students returned for five field sessions at Cerén, most recently in 1996. Their discoveries are detailed on their web site  <http://ceren.colorado.edu> . One of the most interesting things they discovered was, in the words of Dr. Sheets, "We had no idea that people in the region lived so well 14 centuries ago."

The ash preserved the crops in the field, leaving impressions of the plants. The plants then rotted away, leaving perfect cavities, or molds. Using techniques that were developed at Pompeii, the archaeologists poured liquid plaster into the cavities. By removing the ash, the ancient fields were revealed and could be studied. Interestingly, the Native Americans of Cerén used row and furrow techniques similar to those still utilized today; corn was grown in elevated rows, and beans and squash were grown in the furrows in between. In a courtyard of a building, "We even found a series of four mature chile plants with stem diameters over 5 centimeters (2 inches)," wrote Dr. Sheets. "They must have been many years old." Chile peppers are rarely found in archaeological sites in Mesoamerica, so imagine the surprise of the researchers when they discovered painted ceramic storage vessels that contained large quantities of chile seeds. "One vessel had cacao seeds in the bottom, and chiles above, separated by a layer of cotton gauze," Dr. Sheets revealed. "It is possible that they would have been prepared into a kind of *mole* sauce." Also found were corn kernels, beans, squash seeds, cotton seeds, and evidence of manioc plants and small agave plants, which were used for their fiber to make rope rather than being fermented for an alcoholic beverage, *pulque*, as was done in Mexico

 . 

A plaster cast of a chile stem A polychromatic vessel like

with a 2-inch diameter this one held stored chile seeds

I emailed Dr. Sheets, hoping to discover the shape and size of the chiles and thus deduce the variety being grown. But no whole pods were found, just the seeds and some pod fragments. The size of the chile stem indicated that the plant had been grown as a perennial, but all chile plants are perennial in tropical climates and can grow to considerable size.

Dr. Sheets wrote me back about an article by Dr. David Lentz, the botanist who had studied the plant remains, and I tracked it down in the journal *Latin American Antiquity* that I found in the Zimmerman Library at the University of New Mexico. Dr. Lentz wrote about the seeds and the pod fragments, "It appears that many of these fell from the rafters of buildings where they would have been hung for drying or storage." He added that the chile seeds from the site were the first in Central America found outside Mexico, and he speculated that those seeds in vessels were probably being saved for future planting.

**The Taming of the Wild Chile**

But what kind of chile was grown in Cerén? There was an intriguing clue in the article: a photograph of a chile seed compared with a bar indicating the length of one millimeter. The seed was 3.5 millimeters wide. Since the size of the seed is directly related to the size of the pod (generally speaking, the larger the pod, the larger the seed), perhaps it was possible to guess the size of the pod by comparing that ancient seed to seeds I had stored in my greenhouse.

Paleoethnobotanists, the scientists who study the plants used by ancient civilizations, have theorized that chiles were first used as "tolerated weeds." They were not cultivated but rather collected in the wild when the fruits were ripe. The wild forms had small, erect fruits which were deciduous, meaning that they separated easily from the calyx and fell to the ground.

During the domestication process, whether consciously or unconsciously, early Native American farmers selected seeds from plants with larger, non-deciduous, and pendant fruits. The reasons for these selection criteria are a greater yield from each plant and protection of the pods from chile-hungry birds. The larger the pod, the greater will be its tendency to become pendant rather than to remain erect. Thus the pods became hidden amidst the leaves and did not protrude above them as beacons for birds. The selection of varieties with the tendency to be non-deciduous ensured that the pods remained on the plant until fully ripe and thus were resistant to dropping off as a result of wind or physical contact. The domesticated chiles gradually lost their natural means of seed dispersal by birds and became dependent upon human intervention for their continued existence.

Because chiles cross-pollinate, hundreds of varieties of the five domesticated chile species were developed by humans over thousands of years in South and Central America. The color, size, and shape of the pods of these domesticated forms varied enormously. Ripe fruits could be red, orange, brown, yellow, or white. Their shapes could be round, conic, elongate, oblate, or bell-like, and their size could vary from the tiny fruits of chiltepins or tabascos to the large pods of the anchos and pasillas. But very little archaeological evidence existed to support these theories until the finds at Cerén.

**An Educated Guess**

It was exciting to think that perhaps we had a window into the ancient chile domestication process. Because their seeds were collected, and the plants were growing in a courtyard, the chile plants at Cerén were obviously cultivated and were more than just "tolerated weeds." It was time to break out my metric ruler and start measuring seeds. I came up with the following table, ranked by seed width:

|  |  |  |
| --- | --- | --- |
| **Variety**  Ancho  Serrano  Jalapeño  De arbol  Habanero  Piquin  Cerén Chiles  Chiltepin | **Pod Length**  12 cm  7 cm  6.5 cm  4.5 cm  4.5 cm  1.3 cm  ?  0.5 cm | **Seed Width**  6 mm  5 mm  5 mm  4.5 mm  4 mm  4 mm  3.5 mm  3 mm |

The first conclusion I reached was that the Cerén chiles were small-podded. They certainly were not as large as anchos, whose seeds are twice the width of those of the Cerén chiles. They could, of course, have been chiltepins, because the seeds were only half a millimeter wider than chiltepin seeds. But if they were somewhere between the size of chiltepins and piquins, that would have made the pods about 1 centimeter long, less than half an inch. And since there is evidence that the chile pods had been hung up to dry with agave twine, that process would not have been necessary for such small-podded plants. Note that the habanero, which is nine times the length of the chiltepin, has seeds only 1 millimeter wider. Also note that the de arbol variety, which is also 4.5 cm long, but much thinner, has seeds only 1 millimeter wider than the Cerén chiles. My educated guess is that the Cerén chiles were about 3.5 centimeters long, or about an inch and a half. I believe that the domestication of chiles from chiltepins to serranos and anchos would not be completed until the Aztec culture of nearly a millennium after A.D. 595. I repeat that this is my personal theory, and that I am not a paleoethnobotanist, though sometimes I wish I had studied that discipline.

**The Cuisine of Cerén**

In addition to the vegetable crops of corn, chiles, beans, manioc, cacao, and squash, the archaeologists found evidence that the Cerén villagers also harvested wild avocados, palm fruits and nuts, and certain spices such as *achiote*, or annatto seeds. In fact, Dr. Sheets observed, "The villagers ate better and had a greater variety of foodstuff than their descendants. Traditional families today eat mostly corn and beans, with some rice, squash, and chiles, but rarely any meat. Cerén’s residents ate deer and dog meat." They also consumed peccary, mud turtle, duck, and rodents, but deer was their primary meat. Fully fifty percent of the total bones found on the site belonged to white-tailed deer, and many of those deer were immature animals–giving rise to a very interesting theory.

Linda Brown, who wrote the 1996 Field Season Preliminary Report entitled "Household and Village Animal Use," noted, "Cerén residents may have practiced some form of deer management. One of the deer procurement strategies the Cerén villagers may have utilized is ‘garden hunting.’ Garden hunting consists of allowing deer to browse in cultivated fields and household gardens where they can be hunted. While some vegetation is lost to browsing, the benefits include easy access to deer when needed." Expanding upon that theory, she wrote, "The ethnohistoric data make many references to the Maya partially taming white-tailed deer. Specifically, historical sources note that it was women who were responsible for taking in, semi-taming, and raising deer. [Diego de] Landa mentioned that women raise other domestic animals and let the deer suck their breasts, by which means they raise them and make them so tame that they never will go into the woods, although they take them and carry them through the woods and raise them there. Apparently, during historic times, there was a designated place in the woods where women would take deer to browse until they needed them. Scholars have argued that pre-Columbian women may have raised deer, dogs, peccary, and fowl much like contemporary Maya women raise pigs and fowl for food, trade, and special occasion feasts. Perhaps the Cerén women raised dog, fowl (a duck was tethered inside the Household 1 *bodega*), and semi-tamed deer as a contribution to the domestic and ceremonial economy."

It is always a challenge for archaeologists to reconstruct ancient cuisines and cooking techniques. The Cerén villagers did not have metal utensils, but they did have fired ceramics that could be used to boil foods. They could grill over open flames, and perhaps fry foods in ceramic pots using cotton seed oil or animal fat. They had obsidian knives that could cut as cleanly as metal. They had *metates* for grinding corn into flour and *mocaljetes* for grinding fruits, vegetables, chiles, and spices together into sauces.

An artist’s rendering of what an outdoor kitchen in the village would have looked like.

Based on the archaeological evidence, I have devised some recipes that reflect the main ingredients used in the cooking of Cerén, adapted, of course, for modern kitchens. One of my basic theories about the history of cooking is that we should never underestimate our predecessors’ culinary sophistication, so I cannot presume that 14 centuries ago the Maya were preparing boring food. Especially since we know that they had chiles.

**Recipes**

**Royal Chocolate with Chile**

Although this drink was served to royalty in the large Mayan cities, the discovery of chile in conjunction with cacao in Cerén indicates that even commoners knew how to make this concoction.

* 1 ½ cups water
* 1/4 cup cocoa
* 1 tablespoon honey
* 1/4 teaspoon hot chile powder, such as piquin
* 1 vanilla bean pod

In a pan, heat the water to boiling. Add the remaining ingredients and stir well. Serve immediately with the vanilla bean for garnish in the drink.

Yield: 1 serving Heat Scale: Medium

**The Earliest *Mole* Sauce**

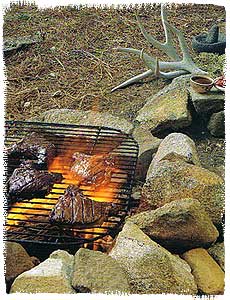
Why wouldn’t the cooks of Cerén have developed sauces to serve over meats and vegetables? After all, there is evidence that curry mixtures were in existence thousands of years ago in what is now India, and we have to assume that Native Americans experimented with all available ingredients. Perhaps this *mole* sauce was served over stewed duck meat, as ducks were one of the domesticated meat sources of the Cerén villagers.

* 4 tomatillos, husks removed
* 1 tomato, toasted in a skillet and peeled
* ½ teaspoon chile seeds
* 3 tablespoons *pepitas* (toasted pumpkin or squash seeds)
* 1 corn tortilla, torn into pieces
* 2 tablespoons medium-hot chile powder
* 1 teaspoon *achiote* (annatto seeds)
* 3 tablespoons vegetable oil
* 2 cups chicken broth
* 1 ounce Mexican or bittersweet chocolate

In a blender, combine the tomatillos, tomato, chile seeds, *pepitas*, tortilla, chile powder and *achiote* to make a paste. In a pan, heat the vegetable oil and fry the paste until fragrant, about 4 minutes, stirring constantly. Add the chicken broth and the chocolate and stir over medium heat until thickened to desired consistency.

Yield: About 2 ½ cups Heat Scale: Medium

**Venison Steak with Juniper Berry and Fiery Red Chile Sauce** This recipe is by Lois Ellen Frank, from her book *Foods of the Southwest Indian Nations* (Ten Speed Press, 2002). Both the venison and the juniper berries are available from mail-order sources.

Venison steaks on the grill Steaks served

Of course, grape juice or wine would not have been available to the Maya, but Lois has adapted this recipe for the modern kitchen.

*The Sauce*

* 1 tablespoon dried juniper berries
* 3 cups unsweetened dark grape juice or wine
* 2 bay leaves
* 1 ½ teaspoons dried thyme
* 2 shallots, peeled and coarsely chopped
* 2 cups beef stock

*The Steaks*

* 6 venison steaks, 8 to 10 ounces each
* 2 tablespoons olive oil
* 1 tablespoon salt
* 1 tablespoon freshly ground black pepper
* 4 whole dried chiles de arbol, seeds and stems removed, crushed

To make the sauce, wrap the juniper berries in a clean kitchen towel and crush them using a mallet. Remove them from the towel and place them in a saucepan with the grape juice or wine, bay leaves, thyme and shallots. Simmer over medium heat for 20 to 25 minutes, until the liquid has been reduced to 1 cup. Add the stock, bring to a boil, then decrease the heat to medium and cook for another 15 minutes until the sauce has been reduced to 1 ½ cups. Strain the sauce through a fine sieve and keep it warm. Brush the steaks on both sides with the olive oil and sprinkle with salt and pepper. Place the steaks on the grill and grill for 3 minutes, until they have charred marks. Rotate the steaks a half turn and grill for another 3 minutes. Flip the steaks over and grill for another 5 minutes until done as desired. Ladle the sauce onto each plate, top with the steaks, pattern-side up, and sprinkle the crushed chiles over them.

Yield: 6 servings Heat Scale: Medium

***Pepita*****-Grilled Venison Chops**

Here is a tasty grilled dish featuring native New World game, chiles, and tomatoes, plus *pepitas*–toasted pumpkin or squash seeds. Garlic is not native to the New World, but is given here as a substitute for wild onions, which the people of Cerén would have known.

* 5 tablespoons *pepitas*
* 3 cloves garlic
* 1 tablespoon red chile powder
* ½ cup tomato paste
* 1/4 cup vegetable oil
* 3 tablespoons lemon juice or vinegar
* 4 thick-cut venison chops, or substitute thick lamb chops

Puree all the ingredients, except the venison, in a blender. Paint the chops with this mixture and marinate at room temperature for an hour.Grill the chops over a charcoal and piñon wood fire until done, basting with the remaining marinade.

Yield: 4 servings Heat Scale: Medium

**Cerén Beans**

Three varieties of beans were found beneath the ash in the village kitchens of Cerén. Certainly they were boiled, and since they are bland, they were undoubtedly combined with other ingredients, including chiles and primitive tomatoes. The Cerén villagers would have used peccary fat for the lard and bacon, and of course would not have had cumin. But they probably would have used spices such as Mexican oregano.

* 3 cups cooked pinto beans (either canned or simmered for hours until tender)
* 1 onion, minced
* 2 tablespoons lard, or substitute vegetable oil
* 5 slices bacon, minced
* 3/4 cup *chorizo* sausage
* 1 pound tomatoes, peeled, seeded, and chopped
* 6 serrano chiles, stems removed, minced
* 1 teaspoon cumin (or substitute Mexican oregano)

Saute the beans and onion in the lard or oil for about five minutes, stirring constantly. In another skillet, saute the bacon and chorizo together. Drain. Combine the beans and onion with the drained bacon and chorizo in a pot, add the other ingredients, and simmer for 30 minutes.

Serves: 4 Heat Scale: Medium

**Spicy *Calabacitas***

This recipe combines three Native American crops: squash, corn, and chile. Although we don’t know for sure, my theory is that the Cerén villagers would have known how to use green chile. I have taken the liberty of substituting New Mexican chiles for the small Cerénean chiles, making a milder dish. The villagers, of course, would not have used butter, milk, or cheese, but rather fat and water flavored with palm fruits.

* ½ cup chopped green New Mexican chile, roasted, peeled, stems removed
* 3 zucchini squash, cubed
* ½ cup chopped onion
* 4 tablespoons butter or margarine
* 2 cups whole kernel corn
* 1 cup milk
* ½ cup grated Monterey Jack cheese

In a pan, saute the squash and onion in the butter until the squash is tender. Add the chile, corn, and milk. Simmer the mixture for 15 to 20 minutes to blend the flavors. Add the cheese and heat until the cheese is melted.

Yield: 4 to 6 servings Heat Scale: Medium

**Pepper Profile: *Capsicum Frutescens* Species**

  by Dave DeWitt and Paul W. Bosland

The tabasco chile is the best known variety of this species, being the primary ingredient in the famous sauce that is now more than 135 years old. Another famous variety is the malagueta, which grows semi-wild in the Amazon basin in Brazil, where the species probably originated. Curiously, there are not as many names for the wild varieties as there are for some other species. The most common name being "bird pepper." No domesticated *frutescens* has ever been found in an archaeological site in Middle or South America, but ethnobotanists speculate the domestication site was probably Panama and from there it spread to South America, Mexico, and the Caribbean.





Maturing Tabasco Plant Tabasco Pods

**A Brief History**

At any rate, we know the tabasco variety of *frutescens* was being cultivated near Tabasco, Mexico in the early 1840s because it was transferred to Louisiana in 1848, where it was eventually grown to produce Tabasco® Sauce. Demand outstripped supply, and today tabascos are commercially grown in Central America and Colombia and shipped in mash form to Louisiana.

In Louisiana, tabasco peppers fell victim to the tobacco etch virus, but were rescued in 1970 with the introduction of Greenleaf Tabasco, a TEV-resistant variety. Today at Avery Island, the site of the original tabasco growing and manufacturing operation, there are still fields of Tabasco under cultivation--but mostly for crop improvement and seed production.

An interesting botanical mystery crops up with the malagueta pepper from Brazil because it has virtually the same name as the melegueta pepper from West Africa. The mystery arises from the fact that the two peppers are completely unrelated botanically and in appearance. The African melegueta (*Aframomum melegueta*) is a reed-like plant with red berries, while the Brazilian malagueta is very similar to the tabasco chile.

 Malagueta Chile from Brazil

 The melegueta pepper enjoyed great popularity during the Elizabethan Age in England, primarily through trade with Portugal. Some food historians consider that since the word "melegueta" was already a Portuguese term for spicy berry, this name was transferred to a Brazilian red chile pepper of even more pungency, sometime after the Portuguese settlement of Brazil. This scenario follows a pattern that Christopher Columbus began when he misnamed chiles as pepper. The chile peppers, it seems, were given the closest common name when they were "discovered" by Europeans. Interestingly enough, the African meleguetas were eventually imported into Surinam and Guyana, where they were grown commercially. Some varieties of *frutescens* found their way to India and the Far East, where they are still called "bird pepper." There they are cultivated to make hot sauces and curries.

**Botanical Traits**

The species name "frutescens" means shrubby or bushy. *C. frutescens* plants have a compact habit, an intermediate number of stems, and grow between 1 and 4 feet high, depending on climate and growing conditions. The leaves are ovate, smooth, and measure 2½ inches long and 2 inches wide.

The flowers have greenish-white corollas with no spots and purple anthers. The pods are borne erect and measure up to 1½ inches long and 3/8 inch wide. Immature pods are yellow or green, maturing to bright red. The *frutescens* species is quite hot, measuring between 30,000 and 50,000 Scoville Heat Units.

The height of the plants depends on climate, with the plants growing the largest in warmer parts of the country. The plant is particularly good for container gardening, and one of our specimens lived as a perennial for 4 years in a pot, but gradually lost vigor and produced fewer pods each year. A single plant can produce 100 or more pods.

**Pod Variation?**

The species *C. frutescens* and *C. pubescens* have fewer pod shapes, sizes, and colors than *C. annuum*, *C. chinense* and *C. baccatum*. No one knows the real reason for this. One must remember that the diversity of pod morphology is human-guided. In other words, the differences one sees in pod size and shape are because humans conscientiously made choices on which pods to save for the next growing season. In nature, wild chile plants usually have small red, erect fruits that drop off easily. The small fruit and easy fruit drop traits are beneficial for bird dispersal. However, humans prefer large fruit and fruit that stays attached to the plant until harvested. Thus, under domestication these traits are modified.

‘Angkor Sunrise’ *frutescens* from Cambodia

The *C. frutescens* plant has small fruits that drop off easily. Therefore, an explanation for the lack of fruit shapes in *C. frutescens* is that it is still mostly a ild form. It is found growing in the same areas as *C. annuum* and *C. chinense*, so selection may have been on *C. annuum* and *C. chinense*, while *C. frutescens* had little or no selection.

The most common use for the pods is making hot sauces; they are crushed, salted, fermented, and combined with vinegar. However, the pods can be used fresh in salsas and can be dried for adding to stir-fry dishes.

**Culinary Use**

For **recipes** using *c. frutescens* species chiles, go to [**RecipesBase**](http://www.fiery-foods.com/rbase/default.asp) and pick *Malagueta* or *Tabasco* from the "Chile used" list in the search form.

**Pepper Profile: *Capsicum Baccatum* Species**

  by Dave DeWitt

The *baccatum* species, familiarly termed "ají" throughout South America, originated either in Bolivia or in Peru and, according to archaeological evidence, was probably domesticated in Peru about 2,500 B.C. Extensive *baccatum* material found at the Huaca Prieta archaeological site in Peru shows that the species was gradually improved by the pre-Incan civilizations. Fruit size increased and the fruits gradually became non-deciduous and stayed on the plants through ripening.

Pod Variations in *baccatum* Species

There are at least two wild forms (varieties *baccatum and microcarpum*) and many domesticated forms. The domesticated ajís have a great diversity of pod shape and size, ranging from short, pointed pods borne erect to long, pendant pods resembling the New Mexican varieties. One variety of aj, *puca-uchu,* grows on a vine-like plant in home gardens. The *baccatum* species is generally distinguished from the other species by the yellow or tan spots on the corollas, and by the yellow anthers.

‘Kellu-Uchu’ Variety

*Baccatums* are cultivated in Argentina, Colombia, Ecuador, Peru, Brazil, and Bolivia, and the species has been introduced into Costa Rica, India, and the United States. In the United States, they are grown to a very limited extent in California under the brand name Mild Italian and in Nevada under the brand name Chileno.

**Botanical Traits**

The species name "baccatum" means berry-like, an allusion to the smaller-podded varieties. The *baccatums* are tall, sometimes reaching 5 feet, have multiple stems and an erect habit, occasionally tending toward sprawling. The large leaves are dark green, measuring up to 7 inches long and 4 inches wide.

The flower corollas are white with distinctive dark green or brown spots; anthers are yellow or tan. The pods usually begin erect and become pendant as they mature, are elongate in shape, measure between 3 and 6 inches long and 3/4 to 1½ inches wide. They usually mature to an orange-red, but yellow and brown colors also appear in some varieties. The pods usually measure between 30,000 and 50,000 Scoville Heat Units.



*Baccatum* Flower Showing Spots on the Corolla

The *baccatum* plants tend to stand out in the garden like small trees. Their growing period is up to 120 days or more, and the plants can produce 40 or more pods.

**Flavor Profiles**

The pods have a distinctive, fruity flavor and are used fresh in ceviche (lime-marinated fish) in South America. They are also used in fresh salsas and the small yellow varieties are prized for their lemony aroma. The pods of all ajís are also dried in the sun and then crushed into colorful powders.

‘Peru Yellow’ or ‘Ají Limon’ Variety

South American food expert Mary Dempsey has noted, "Ají is a banana pepper-shaped pepper called "ají amarillo" when it is yellow or orange and "ají colorado" when red--a distinction that is important only in the hue of the dish being prepared. When dried, it is often referred to as "cuzqueño," after the city of Cuzco. Piles of the orange, gold, and brilliant red peppers are found in every outdoor market in Peru, tossed in jumbled piles, stacked in pyramids by more enterprising vendors or divided by color upon handwoven cloths."

Ají Amarillo’ Variety

**Pepper Profile: New Mexican Varieties**

by Dave DeWitt, Photos by Harald Zoschke

*Drying New Mexican  
Chiles, tied into Strings  
called* *Ristras*

**Recipe Index:**

[Classic New Mexican Red Chile Sauce](http://www.fiery-foods.com/dave/profile_nmpep.html#Classic New Mexican Red Chile Sauce#Classic New Mexican Red Chile Sauce)

[Green Chile Stew](http://www.fiery-foods.com/dave/profile_nmpep.html#Green Chile Stew#Green Chile Stew)

[New Mexican Carne Adovada](http://www.fiery-foods.com/dave/profile_nmpep.html#New Mexican Carne Adovada#New Mexican Carne Adovada)

[Posole with Chile Caribe](http://www.fiery-foods.com/dave/profile_nmpep.html#Posole with Chile Caribe#Posole with Chile Caribe)

[Southwestern Spiced Squash (Calabacitas)](http://www.fiery-foods.com/dave/profile_nmpep.html#Southwestern Spiced Squash (Calabacitas)#Southwestern Spiced Squash (Calabacitas))

According to many accounts, chile peppers were introduced into what is now the U.S. by Capitn General Juan de Oñate, the founder of Santa Fe, in 1598. However, they may have been introduced to the Pueblo Indians of New Mexico by the Antonio Espejo expedition of 1582-83. According to one of the members of the expedition, Baltasar Obregón, "They have no chile, but the natives were given some seed to plant." By 1601, chiles were not on the list of Indian crops, according to colonist Francisco de Valverde, who also complained that mice were a pest who ate chile pods off the plants in the field.

"*A la primera cocinera se le va un chile entero*," goes one old Spanish *dicho*, or saying: "To the best lady cook goes the whole chile." And so it is that the chile pepper is the single most important food brought from Mexico that defines New Mexican cuisine. After the Spanish began settlement, the cultivation of chile peppers exploded, and soon they were grown all over New Mexico. It is likely that many different varieties were cultivated, including early forms of jalapeños, serranos, anchos, and pasillas. But one variety that adapted particularly well to New Mexico was a long green chile that turned red in the fall. Formerly called "Anaheim" because of its transfer to the more settled California around 1900, the New Mexican chiles were cultivated for hundreds of years in the region with such dedication that several distinct varieties developed.

These varieties, or "land races," called 'Chimayo' and 'Española,' had adapted to particular environments and are still planted today in the same fields they were grown in centuries ago; they constitute a small but distinct part of the tons of pods produced each year in New Mexico.

In 1846, William Emory, Chief Engineer of the Army's Topographic Unit, was surveying the New Mexico landscape and its customs. He described a meal eaten by people in Bernalillo, just north of Albuquerque: "Roast chicken, stuffed with onions; then mutton, boiled with onions; then followed various other dishes, all dressed with the everlasting onion; and the whole terminated by chile, the glory of New Mexico."

Emory went on to relate his experience with chiles: "Chile the Mexicans consider the *chef-d'oeuvre* of the cuisine, and seem really to revel in it; but the first mouthful brought the tears trickling down my cheeks, very much to the amusement of the spectators with their leather-lined throats. It was red pepper, stuffed with minced meat."

**The Plant**

New Mexican chiles are pod types of the *annuum* species. The plant has mostly a compact habit with an intermediate number of stems, and grows between 20 and 30 inches high. The leaves are ovate, medium green, fairly smooth, and about 3 inches long and 2 inches wide. The flower corollas are white with no spots. The pods are pendant, elongate, bluntly pointed, and measure between 2 and 12 inches. They are dark green, maturing to various shades of red. Some ornamentals are yellow or brown. Their heat ranges from quite mild to medium, between 500 and 2,500 Scoville Units.

 *New Mexican Chile varieties*

More than 40,000 acres of New Mexican chiles are under cultivation in New Mexico, California, Arizona, and Texas. The growing period is about 80 days, and each plant produces between 10 and 20 pods, depending on variety and cultural techniques.

*For chile plants to bear this much large fruit in New Mexico's desert climate, proper irrigation is crucial. Water from the Rio Grande is provided through a system of ditches and furrows offer various heat levels*

Varieties of the New Mexican pod type are: 'Anaheim M' (mild, 8-inch pods); 'Anaheim TMR 23' (mild, 8-inch pods that are mosaic-resistant); 'Chimayó' (a land race from northern New Mexico with thin-walled, 6-inch pods); 'Española Improved' (pods 5 to 6 inches, medium heat); 'Fresno' (erect, 2-inch pods, medium-hot); 'New Mexico No. 6-4' (the most commonly grown New Mexican variety, pods are 7 inches long with medium heat); 'NuMex Big Jim' (long pods, up to 12 inches, medium heat); 'NuMex Eclipse'(chocolate-brown, mild, 5-inch pods); 'NuMex Joe E. Parker' (improved 6-4 variety); 'NuMex Sunrise'(bright yellow, mild, 5-inch pods); 'NuMex Sunset' (orange, mild, 5-inch pods); 'NuMex R Naky" (pods are 5 to 7 inches long with mild heat); and 'Sandia" (medium hot, 6-inch pods with thin walls).

*Big Jim: Largest NuMex Variety*

**Agriculture**

The earliest cultivated chiles in New Mexico were smaller than those of today; indeed, they were (and still are, in some cases) considered a spice. But as the land races developed and the size of the pods increased, the food value of chiles became evident. There was just one problem&endash;&endash;the bewildering sizes and shapes of the chile peppers made it very difficult for farmers to determine which variety of chile they were growing from year to year. And, there was no way to tell how large the pods might be, or how hot. The demand for chiles was increasing as the population of the state did, so it was time for modern horticulture to take over.

  *Chile pickers in a field near Las Cruces, NM*

 In 1907, Fabian Garcia, a horticulturist at the Agricultural Experiment Station at the College of Agriculture and Mechanical Arts (now New Mexico State University), began his first experiments in breeding more standardized chile varieties, and, in 1908, published "Chile Culture," the first chile bulletin from the Agricultural Experiment Station. In 1913, Garcia became director of the Experiment Station and expanded his breeding program.

Finally, in 1917, after ten years of experiments with various strains of pasilla chiles, Garcia released New Mexico No. 9, the first attempt to grow chiles with a dependable pod size and heat level. The No. 9 variety became the chile standard in New Mexico until 1950, when Roy Harper, another horticulturist, released New Mexico No. 6, a variety which matured earlier, produced higher yields, was wilt resistant, and was less pungent than No. 9.

The New Mexico No. 6 variety was by far the biggest breakthrough in the chile breeding program. According to the late Dr. Roy Nakayama, who succeeded Harper as director of the New Mexico Agricultural Experiment Station, "The No. 6 variety changed the image of chile from a ball of fire that sent consumers rushing to the water jug to that of a multi-purpose vegetable with a pleasing flavor. Commercial production and marketing, especially of green chiles and sauces, have been growing steadily since people around the world have discovered the delicious taste of chile without the overpowering pungency."

In 1957, the New Mexico No. 6 variety was modified, made less pungent again, and the new variety was called "New Mexico No. 6-4." The No. 6-4 variety became the chile industry standard in New Mexico and over thirty years later was still the most popular chile commercially grown in the state. Other chile varieties, such as Big Jim (popular with home gardeners; see picture above) and New Mexico R-Naky, have been developed but became popular mostly with home gardeners.

Today, Dr. Paul Bosland, who took over the chile breeding program from Dr. Nakayama, is developing new varieties that are resistant to chile wilt, a fungal disease which can devastate fields. He has also created varieties to produce brown, orange, and yellow *ristras* for the home decoration market. The breeding and development of new chile varieties--in addition to research into wild species, post-harvest packaging, and genetics--is an on-going, major project at New Mexico State. But modern horticultural techniques finally produced fairly standardized chiles. New Mexico is by far the largest commercial producer of chile peppers in the United States, with about 35,000 acres under cultivation.

**Culinary Usage**

All of the primary dishes in New Mexico cuisine contain chile peppers: sauces, stews, carne adovada, enchiladas, posole, tamales, huevos rancheros, and many combination vegetable dishes. The intense use of chiles as a food rather than just as a spice or condiment is what differentiates New Mexican cuisine from that of Texas or Arizona. In neighboring states, chile powders are used as a seasoning for beef or chicken broth-based "chili gravies," which are thickened with flour or cornstarch before they are added to, say, enchiladas. In New Mexico, the sauces are made from pure chiles and are thickened by reducing the crushed or pureed pods.

New Mexico chile *sauces* are cooked and pureed, while *salsas* utilize fresh ingredients and are uncooked. Debates rage over whether tomatoes are used in cooked sauces such as red chile sauce for enchiladas. Despite the recipes in numerous cookbooks, traditional cooked red sauces do *not* contain tomatoes, though uncooked salsas do.

  *Addictive Aroma:  
Roasting Green Chiles  
in Hatch, New Mexico*

New Mexicans love chile peppers so much that they have become the *de facto* state symbol. Houses are adorned with strings of dried red chiles, called *ristras*. Images of the pods are emblazoned on signs, T-shirts, coffee mugs, posters, windsocks, and even underwear. In the late summer and early fall, the aroma of roasting chiles fills the air all over the state and produces a state of bliss for chileheads.

**Recipes**

**Classic New Mexican Red Chile Sauce**

This basic sauce can be used in any recipe calling for a red sauce, either traditional Mexican or New Southwestern versions of beans, tacos, tamales, and enchiladas.

* 10 to 12 dried whole red New Mexican chiles
* 1 large onion, chopped
* 3 cloves garlic, chopped
* 3 cups water

Place the chiles on a baking pan and put them in a 250 degree F. oven for about 10 to 15 minutes, or until the chiles smell like they are toasted, taking care not to let them burn. Remove the stems and seeds and crumble them into a saucepan. Add the remaining ingredients, bring to a boil, reduce the heat and simmer for 20 to 30 minutes. Puree the mixture in a blender until smooth and strain if necessary. If the sauce is too thin, place it back on the stove and simmer until it is reduced to the desired consistency.

Yield: 2 to 2 ½ cups Heat Scale: Medium

Variations: Spices such as cumin, coriander, and Mexican oregano may be added to taste. Some versions of this sauce call for the onion and garlic to be sautéed in lard--or vegetable oil these days--before the chiles and water are added.

**Green Chile Stew**

This is the beef stew or macaroni and cheese of New Mexico--a basic dish with as many variations as there are cooks. Add a warmed flour tortilla and you have a complete meal.

* 2 pounds lean pork, cubed
* 2 tablespoons vegetable oil
* 1 large onion, chopped
* 2 cloves garlic, minced
* 6 to 8 green New Mexican chiles, roasted, peeled, seeds and stems removed, chopped
* 1 large potato, peeled and diced (optional)
* 2 tomatoes, peeled and chopped
* 3 cups water

Brown the pork in the oil. Add the onion and garlic, and sauté for a couple of minutes. Combine all the ingredients in a kettle or crockpot and simmer for 1 ½ to 2 hours or until the meat is very tender.

Serves: 6 Heat Scale: Hot

**New Mexican Carne Adovada**

This simple but tasty dish evolved from the need to preserve meat without refrigeration since chile acts as an antioxidant and prevents the meat from spoiling. It is a very common restaurant entree in New Mexico. Serving suggestions: Place the Carne Adovada in a flour tortilla to make a burrito, use it as a stuffing for sopaipillas, or use it as filling for enchiladas. If quartered potatoes are added during the last hour of baking, the dish becomes a sort of stew.

* 1 ½ cups crushed dried red New Mexican chile, seeds included
* 4 cloves garlic, minced
* 3 teaspoons dried Mexican oregano
* 3 cups water
* 2 pounds pork, cut in strips or cubed

Combine the chile, garlic, oregano, and the water and mix well to make a *caribe* sauce. Place the pork in a glass pan and cover with the chile *caribe* sauce. Marinate the pork overnight in the refrigerator.

Bake the carne adovada in a 300 degree F. oven for a couple of hours or until the pork is very tender and starts to fall apart.

Serves: 6 Heat Scale: Hot

**Posole with Chile Caribe**

Here is the classic version of posole as prepared in northern New Mexico. Serving the chile *caribe* as a side dish instead of mixing it with the posole allows guests to adjust the heat to their own taste.

*Dried red NuMex Sandia Chile*

*The Posole:*

* 2 dried red New Mexican chiles, stems and seeds removed
* 8 ounces frozen posole corn or dry posole corn which has been soaked in water overnight
* 1 pound pork loin, cut in ½-inch cubes
* 1 teaspoon garlic powder
* 1 medium onion, chopped
* 6 cups water

Combine all the ingredients in a pot except the pork and boil at medium heat for about 3 hours or until the posole is tender, adding more water if necessary. Add the pork and continue cooking for ½ hour, or until the pork is tender but not falling apart. The result should resemble a soup more than a stew.

*The Chile Caribe:*

* 6 dried red hot New Mexican chiles, stems and seeds removed
* 1 teaspoon garlic powder

Boil the chile pods in two quarts of water for 15 minutes. Remove the pods, combine with the garlic powder, and puree in a blender. Transfer to a serving bowl and allow to cool. To Serve: The posole should be served in soup bowls accompanied by warm flour tortillas. Three additional bowls of garnishes should be provided: the chile *caribe*, freshly minced cilantro, and freshly chopped onion. Each guest can then adjust the pungency of the posole according to individual taste.

*Note:* For really hot chile *caribe*, add dried red chile piquins, cayenne chiles, or chiles de arbol to the New Mexican chiles.

Serves: 4 Heat Scale: Medium, but varies according to the amount of chile *caribe* added.

**Southwestern Spiced Squash (*Calabacitas*)**

This recipe combines two other Native American crops, squash and corn, with chile. One of the most popular dishes in New Mexico, it is also so colorful that it goes well with a variety of foods.

* 3 zucchini squash, cubed
* ½ cup chopped onion
* 4 tablespoons butter or margarine
* ½ cup chopped green New Mexican chile, roasted, peeled, stems removed
* 2 cups whole kernel corn
* 1 cup milk
* ½ cup grated Monterey Jack cheese

Sauté the squash and onion in the butter until the squash is tender. Add the chile, corn, and milk. Simmer the mixture for 15 to 20 minutes to blend the flavors. Add the cheese and heat until the cheese is melted.

Serves: 4 to 6 Heat Scale: Medium

**Pepper Profile: Paprika**

[Nomenclature](http://www.fiery-foods.com/dave/profile_paprika.html#Nomenclature#Nomenclature)

[History](http://www.fiery-foods.com/dave/profile_paprika.html#History#History)

[Cultivation](http://www.fiery-foods.com/dave/profile_paprika.html#Cultivation#Cultivation)

[Processing](http://www.fiery-foods.com/dave/profile_paprika.html#Processing#Processing)

[Types of Hungarian Paprikas](http://www.fiery-foods.com/dave/profile_paprika.html#Types#Types)

[Culinary Uses](http://www.fiery-foods.com/dave/profile_paprika.html#Culinary Uses#Culinary Uses)

**Recipe:**

[Chicken Paprikash (*Csírkepaprikás*)](http://www.fiery-foods.com/dave/profile_paprika.html#Chicken Paprikash#Chicken Paprikash)

**Nomenclature**

The word paprika derives from the Hungarian *paparka*, which is a variation on the Bulgarian *piperka*, which in turn was derived from the Latin *piper*, for "pepper." In the United States, the term paprika simply means any nonpungent red chile, mostly New Mexican pod types that have had their pungency genetically removed. In Europe, however, paprika has much greater depth, having not only distinct pod types but also specific grades of the powders made from these pod types.

**History**

There is a minor debate over the arrival of the imported Capsicums from the Western Hemisphere into Hungary and surrounding areas. Some historians credit their spread to the invasion of the Ottoman Turks into Central Europe. The armies of Sulieman the Magnificent conquered Syria and Egypt in 1516-17, Yugoslavia in 1521, and Hungary in 1526. The year 1526 is the date usually given for the introduction of paprika into Hungary by the Turks, but this date is only plausible if the Turks had somehow acquired chiles from either Spanish, Italian, or Greek traders in the Mediterranean.

Zoltan Halasz, author of *Hungarian Paprika Through the Ages*, believes: "Most probably the Turks got into the possession of Paprika through Italian intermediaries, and since a great many nations fond of gardening lived on the Balkan Peninsula, which was under Turkish occupation, the cultivation of the spice, winning favor among all these peoples, soon became widespread."

A more likely scenario holds that the Turks first became aware of chile peppers when they beseiged the Portuguese colony of Diu, near Calicut, in 1538. This theory suggests that the Turks learned of chile peppers during that battle and then transported them along the trade routes of their vast empire, which stretched from India to Central Europe. According to Leonhard Fuchs, an early German professor of medicine, chiles were cultivated in Germany by 1542, in England by 1548, and in the Balkans by 1569. Fuchs knew that the European chiles had been imported from India, so he called them "Calicut peppers." However, he wrongly assumed that chiles were native to India.

So, sometime between 1538 and 1548, chiles were introduced into Hungary, and the first citizens to accept the fiery pods were the servants and shepherds who had more contact with the Turkish invaders. Zoltan Halasz tells the tale: "Hungarian herdsmen started to sprinkle tasty slices of bacon with Paprika and season the savoury stews they cooked in cauldrons over an open fire with the red spice. They were followed by the fishermen of the Danube...who would render their fish-dishes more palatable with the red spice, and at last the Hungarian peasantry, consuming with great gusto the meat of fattened oxen and pigs or tender poultry which were prepared in Paprika-gravy, professed their irrevocable addiction to Paprika, which by then had become a characteristically Hungarian condiment."

From that point on, the landed gentry, the aristocracy, and the royal courts readily adopted the hot spice, and the Danube region developed Europe's only genuine chile cuisine. In the sunny south of Hungary, the brilliant red pods decorated gardens everywhere, and even today, that part of the country is the heart of Paprika country. In 1569, an aristocrat named Margit Szechy listed the foreign seeds she was planting in her garden in Hungary. On the list was "Turkisch rot Pfeffer" (Turkish red pepper) seeds, the first recorded instance of chiles in Hungary. Upon Mrs. Szechy's death and the subsequent division of her estate, her Paprika plots were so valuable they were fought over bitterly by her daughters.

**Cultivation**

The great pepper-growing areas around Kalocsa and Szeged have just the right combination of soil characteristics, temperature, rainfall, and sunshine required to cultivate these plants successfully. In March, the pepper seeds are put in water to germinate, then transferred to greenhouse beds. Seven weeks later, in May, the small pepper shrubs are re-planted in the open fields. Harvesting starts at the end of the first week in September and lasts for about a month, depending on weather conditions. By harvest time, the mature plants will have grown to a height of sixteen to twenty-four inches. And the pepper pods--three to five inches long and about one to one and a half inches wide--will have ripened from green or yellow to bright red.

In Kalocsa, the annual harvest is celebrated with a paprika festival in September. Known as the Kalocsa Paprika Days, it features an exhibition of food products and agricultural machinery, a professional conference on the topic of paprika, various sports events, a "Paprika Cup" international chess tournament, and a fish soup cooking contest. But the highlight of all this is the Paprika Harvest Parade, complete with local bands and colorful folk-dancing groups, followed that same night by a Paprika Harvest Ball.

**Processing**

So how do those tons of newly-picked peppers get turned into the condiment known as paprika, in all of its many forms? Before the Industrial Revolution, farmers used to string all their ripe peppers by hand and hang them up in a protected place to dry. After a certain period of time, the drying process was completed in large earthenware ovens. The peppers were then crushed underfoot, and finally pounded into a powder by means of a *kulu*, a huge mortar with a large pestle driven by human power. Water mills later replaced the *kulu* for grinding paprika, and by the late 1800s steam engines were being used for this task.

But until the mid-1800s it was difficult to control the pungency of the paprika produced. The capsaicin which gives paprika its spicy flavor is found in the pod's veins and seeds, which were removed by hand before the crushed dried peppers were ground into a powder. This was a time-consuming and inexact process, which yielded paprikas in taste from rather mild to fairly hot. The results were unpredictable.

In 1859, the Palfy brothers of Szeged invented a machine for removing the veins and seeds, then grinding the dried pods into a quality-controlled powder. The millmaster could now determine exactly how much capsaicin was to be removed and how much should be retained. The Palfys' technique continued to be used in Hungarian factories for almost a century--until the fairly recent introduction of modern automatic machines that wash, dry, crush, sort, and grind the peppers in a continuous process.

The Palfys' invention made possible the large-scale commercial production of very mild ("Noble Sweet") paprika, which had a much bigger export market than the hotter-tasting varieties. As the industry expanded to meet both local and foreign demand for this mild (but still richly flavored) paprika, the growers saw the advantage of cultivating a spice pepper that did not need to have its veins and seeds removed.

Ferenc Horvath of Kalocsa developed the first variety of Hungarian pepper that was "sweet" throughout--meaning that its veins and seeds contained very little capsaicin indeed. This kind of pepper is now favored by growers in the regions of Kalocsa and Szeged. It can be used alone, ground to produce a mild but flavorful paprika powder--or in combination with other, hotter peppers to produce some of the standard varieties of paprika marketed by the Hungarians. But with all this emphasis on the demand-and-supply of *mild* paprika during the past one hundred years, one is tempted to speculate that Hungarian food *before* Horvath and the Palfys must have been much hotter than it is today.

In the Hungarian countryside, Paprika peppers are threaded onto strings and are hung from the walls, porches, and eaves of farmhouses, much like the chile ristras in the American Southwest. Today Hungary produces both pungent and sweet Paprikas, but originally all Hungarian Paprika was aromatic and quite hot. It was evidently too hot for some tastes, for by the turn of this century other countries were requesting that Hungary develop a non-pungent variety. By accident, farmers produced a sweet variety in their fields when they planted milder "eating" Paprika with hotter "seasoning" Paprika in proximity, and insects cross-pollinated the two. The resulting hybrid reduced the pungency of the Paprika pods and probably led to the non-pungent varieties now grown in Spain.

**Types of Hungarian Paprikas**

Note: The hottest paprikas are not the bright red ones, but rather the palest red and light brown colored ones.

* Special Quality (*Különleges*): The mildest and brightest red of all Hungarian paprikas, with excellent aroma.
* Delicate (*Csípmentes Csemege*): Ranging rom light to dark red, a mild paprika with a rich flavor.
* Exquisite Delicate (*Csemegepaprika*): Similar to Delicate, but more pungent.
* Pungent Exquisite Delicae (*Csípös Csemege, Pikant)*: A yet more pungent Delicate.
* Rose (*Rózsa)*: Pale Red in color with strong aroma and mild pungency..
* Noble Sweet (*Édesnemes*): The most commonly exported paprika; bright red and slightly pungent.
* Half-Sweet (*Félédes*): A blend of mild and pungent paprikas; medium pungency.
* Hot (*Erös)*: Light brown in color, this is the hottest of all the paprikas.

**Culinary Uses**

The famous "Hungarian flavor," which is unique to the cuisine of that country, is created by the combination of lard, Paprika, and spices. Chopped onions are always cooked to translucency in the lard; Paprika and sour cream are added to pan drippings after meats have been browned to make a rich sauce, which is then served over meat and peppers. There are many versions of hot and spicy recipes with the generic terms of *gulyas* ("goulash") and *paprikas* ("paprikash").

Food authority Craig Claiborne has noted, "The innocuous powder which most merchants pass on to their customers as Paprika has slightly more character than crayon or chalk. Any Paprika worthy of its name has an exquisite taste and varies in strength from decidedly hot to pleasantly mild but with a pronounced flavor." We recommend that cooks use imported Hungarian Paprika such as Szeged, and if it is too mild, they should heat it up with ground Cayenne.

**Chicken Paprikash** (*Csírkepaprikás*)

This is one of the classic paprika recipes from Hungary. But sure to use only imported paprika in this dish, or the flavor will not be the same. It is traditionally cooked with lard or goose fat and served with dumplings. Serve over egg noodles, plain rice, or boiled potatoes.

* 3 tablespoons corn oil
* 2 tablespoons butter
* 1 rounded tablespoon medium-hot paprika
* 1 tablespoon hot paprika
* 1 whole fresh long red chile , such as New Mexican
* 2 rounded tablespoons mild paprika
* 2-1/2 to 3-pound chicken, cut into serving pieces
* 2 medium onions, chopped
* 3 large cloves garlic, minced
* 2 tablespoons brandy
* 3/4 cup chicken stock
* 1/3 to 1/2 cup sour cream
* Salt (to taste)

Heat the oil and butter in a large (4- to 6-quart) heavy stove-top casserole. Brown the chicken pieces over medium-high heat. Using a slotted spoon, remove the chicken and set aside. Add the chopped onions to the casserole and saute the onions until translucent. Add the garlic and cook for 1 to 2 minutes. Reduce heat to very low, stir in all the paprika, and cook for an additional minute, stirring constantly. Add brandy; stir to deglaze the pan. Add the browned chicken pieces and mix well. Add the chicken stock and whole hot red pepper.

Bring the mixture to a boil over high heat, reduce heat to low, cover and simmer for 45 to 60 minutes. Using a slotted spoon, remove the chicken to a serving platter and keep warm. Bring the liquid in the casserole to a boil over high heat, and reduce the liquid by about one-third. Turn the heat to low, and slowly stir in the sour cream, until the sauce is smooth. Add salt to taste. Pour the sauce over the chicken and serve immediately.

Yield: 6 servings Heat Scale: Medium

**Pepper Profile: Bell Peppers**

[Agriculture](http://www.fiery-foods.com/dave/profile_bell.html#Agriculture#Agriculture)

[Culinary Usage](http://www.fiery-foods.com/dave/profile_bell.html#Culinary Usage#Culinary Usage)

**Recipe:**

[Four-Pepper Garlic Chicken](http://www.fiery-foods.com/dave/profile_bell.html#Chicken#Chicken)

Bell is a pod type of the *annuum* species. They are multi-stemmed with a habit that is subcompact tending toward prostrate, growing between 1 and 2 1/2 feet tall. The leaves are medium-green, ovate to lanceolate, smooth, and are about 3 inches long and 1 1/2 inches wide. The flower corollas are white with no spots. The pods are pendant, 3- or 4-lobed, blocky, and blunt. Their immature color is dark green, usually maturing to red, but sometimes to yellow, orange, or purple. The pungent variety, ‘Mexi-Bell’ has only a slight bite, ranging from 100 to 400 Scoville Units.

**Agriculture**

Bells are the most commonly grown commercial peppers in the United States, with approximately 65,000 acres under cultivation in the U.S. Mexico follows with about 22,000 acres, and most of their bells are exported to the U.S. More than 100 varieties of bell peppers have been bred, and we have chosen our selections on the basis of color, pungency, disease resistance, and availability to the home grower.

Bells grow well in sandy loams with good drainage. The hotter varieties are usually grown in the home garden. The growing period ranges from 80 to 100 days, depending on whether it is picked green or at the mature color. A single plant produces 10 to 20 pods. A recommended variety is ‘Mexi-Bell.’

**Culinary Usage**

Bells are often used in the fresh form, cut up in salads, or stuffed with meats and baked. Pungent bells are also used in fresh salsas. Also, they are a common ingredient in Cajun and Creole cookery. All varieties can be preserved by freezing.

**Four-Pepper Garlic Chicken**

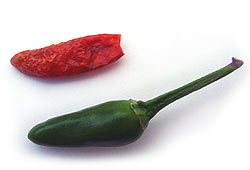
This recipe was developed by chef Ed Arace of Panama Red's Beach Bar and Seafood Grille in Nashville, Tennessee, who comments: "I couldn't cook without peppers or hot sauce--even in my delicate dishes a little dash of sauce or a small amount of peppers will enhance it without overpowering it." This poultry dish, however, is not delicate but rather robust.

* 1/4 cup diced onion
* 1/4 cup diced green bell pepper
* 1/4 cup diced red bell pepper
* 1/4 cup diced celery
* 4 cloves garlic, minced
* 1/4 cup sliced mushrooms
* 1 Tablespoon peeled and minced fresh ginger
* 2 Scotch bonnet (habanero) chiles, stems removed, seeded, and finely minced
* 1 cup olive oil
* 1 fresh cayenne chile (or other hot variety), stem removed, seeded, and finely minced
* 2 tablespoons soy sauce
* 1 and 1/2 pounds boned and skinned chicken breasts, cut into 1-inch squares
* Flour for dredging
* 1 cup chicken stock
* 1 teaspoon sugar
* Juice of 1 lime
* 2 teaspoons cornstarch
* 2 teaspoons cooking sherry
* 3 cups cooked wild or white rice
* 1/4 cup sliced green onions for garnish

Sauté the onion, bell peppers, celery, garlic, mushrooms, ginger, and Scotch bonnet in a large skillet in 1/4 cup of the oil for about 3 minutes. Add the cayenne and the soy sauce and cook for 2 minutes more. Roll the chicken pieces in flour and, in another skillet, fry them in the remaining oil until brown, about 5 minutes. Drain the pieces on paper towels and keep warm. To the sauted vegetables, add the chicken stock, sugar, and lime juice and bring to a boil. Add the cornstarch to the sherry, mix well, and add it to the vegetables, continuing to cook over medium heat. Add the chicken and stir constantly until thickened. Divide the rice equally among 4 plates, serve the chicken around it, and garnish with the green onions.

Yield: 4 servings Heat Scale: Hot

**Pepper Profile: African Birdseye**



Malawi Birdseye Pods:  
Dried (red) and fresh (green)

Photo by Harald Zoschke

[Nomenclature](http://www.fiery-foods.com/dave/profile_birdseye.html#Nomenclature#Nomenclature)

[Botanical Description](http://www.fiery-foods.com/dave/profile_birdseye.html#Botanical Description#Botanical Description)

[Pungency](http://www.fiery-foods.com/dave/profile_birdseye.html#Pungency#Pungency)

[Cultivation](http://www.fiery-foods.com/dave/profile_birdseye.html#Cultivation#Cultivation)

[Seed Availability](http://www.fiery-foods.com/dave/profile_birdseye.html#Seed Availability#Seed Availability)

[Pod Usage](http://www.fiery-foods.com/dave/profile_birdseye.html#Pod Useage#Pod Useage)

[Note from Dr. Paul Bosland,  
New Mexico State University](http://www.fiery-foods.com/dave/profile_birdseye.html#Note from Dr. Paul Bosland, New Mexico State University:#Note from Dr. Paul Bosland, New Mexico State University:)

[Culinary Usage](http://www.fiery-foods.com/dave/profile_birdseye.html#Culinary Usage#Culinary Usage)

**Recipe:**

[Shrimp Pili-Pili](http://www.fiery-foods.com/dave/profile_birdseye.html#Shrimp Pili-Pili#Shrimp Pili-Pili)

**Nomenclature**

Since many wild chiles have the word "bird" in their names, distinguishing among them can be difficult. Most bird peppers are undomesticated varieties of four species: *annuum, baccatum, chinense,* and *frutescens.* The most familiar bird peppers are the Mexican chiltepin and the Texan chilipiquin. The African birdseye chile is both wild and domesticated and is also known in English as African devil chile, in Swahili as *pili-pili* and in Kamba as *ndul.* Some sources state that this chile is also *prik kee nu*, the Thai "mouse dropping pepper," but that is a different, much thinner chile. It should be pointed out that *pili-pili* simply means "pepper-pepper" and is a generic term for any African chile.

**Botanical Description**

Most sources state that the birdseye is *Capsicum frutescens*, making it a relative of the tabasco chile. Depending on growing conditions, the plants range in height from one and a half to four feet tall, and are usually very bushy. The leaves vary in length from 1 ½ to 3 inches and in width from ½ inch to 1 inch. The fruits generally measure between 1/2 and 1 inch long and taper to a blunt point. Immature pod color is green, mature color is bright red.

Malawi Birdseye: Immature pods and flowers

Photo by Harald Zoschke

**Pungency**

Pungency can vary according to precise variety of birdseye, where it is grown, and environmental conditions. The birdseye, particularly the Ugandan variety, is thought to be the most pungent chile that is not of the *chinense* species, measuring up to 175,000 Scoville Heat Units.

In a test of a variety provided by German chile gardener Harald Zoschke, the ‘Malawi Birdseye’ variety from Africa was measured at 112,226 SHU, and the same variety grown in Harald's garden was measured at 99,579 SHU.

**Cultivation**

It has grown wild in Africa for centuries but has been under commercial cultivation in for many years in Uganda, Malawi, and Zimbabwe. Other countries where it is cultivated include Papua New Guinea, China, Mexico, Chile, and India. The plants are perennial and sometimes produce for three years before they are plowed under. Growing African birdseye chiles is very labor-intensive and they require hand-picking. The pods are picked when they are bright red and 2 or less centimeters (3/4 inch) long. A single plant yields about 300 grams (2/3 pound) of fresh pods. Yields of about 1.8 metric tons per hectare are typical (a hectare is 2.47 acres).

Ton Benink (right) of Griffin International  
with growers of Birdseye chiles in Malawi.

Photo by Griffin International BV, The Netherlands

**Seed Availability**

Seed sources are difficult to find in the United States. It is best to do a Web search for suppliers of whole pods (search: birdseye pepper) and take the seeds from them. Since the pods are not furnace-dried, the seeds are usually viable.

**Pod Usage**

Because of the extremely high heat levels, most African birdseye chiles are processed into oleoresin capsicum (pepper extract) for use in commercial food processing and the pharmaceutical industry. The ground powder is often sold as extremely hot cayenne powder and is packaged in capsules. Prices paid for birdseye pods in July, 2001 were: Zimbabwe, US$ 2,750 per metric ton and Malawi, US$ 2,800 per metric ton.

Because of the extremely  
high heat levels, the prolific  
African birdseye chiles are  
processed into oleoresin.

Photo by Harald Zoschke

**Note from Dr. Paul Bosland, New Mexico State University:**

I think that saying "African birdseye chile" is like saying "chile verde" or "green chile." Any piquin-shaped fruit is "African birdseye chile." A couple of years ago, I got thirty accessions from Ghana. They were marked C. annuum and C. frutescens. It turned out that some annuums were C. chinense. And, all the accessions labeled C. frutescens were C. annuum, except for one accession that was a mix of C. frutescens and C. annuum. Maybe this goes back to the days when C. annuum equalled C. frutescens? From my experience, Ethiopia, Zimbabwe, and Senegal all have C. annuum. There is little good African information. An interesting observation is that in Nepal, the wild chiles are C. frutescens, while those around houses and in plots are C. annuum or C. chinense.

**Culinary Usage**

Take care in using African birdseye chiles in the kitchen because of the extreme pungency of the pods. You would not, for example, want to make a hot sauce out of a cup of the pods and some vinegar. However, they can be used in marinades, as the following recipe shows.

**Recipe**

**Shrimp Pili-Pili**

Pili-Pili is the generic name for African chiles as well as the name of this shrimp dish from Mozambique. Shellfish is abundant off the coast, and the prawns are so large that a couple will make a meal. The marinade not only goes well with shrimp or prawns, but also with fish and chicken. Note: This recipe requires advance preparation.

*Marinade:*

* 1 tablespoon crushed dried African birdseye chile, or substitute piquin
* 1/4 cup butter or margarine
* 1/4 cup peanut oil
* 4 cloves garlic, minced
* 3 tablespoons lime or lemon juice, fresh preferred
* 1 pound large shrimp or prawns, shelled and deveined

Melt the butter and add the oil and the remaining marinade ingredients. Simmer for a couple of minutes to blend the flavors. Transfer to a ceramic bowl. Toss the shrimp in the marinade and marinate for a couple of hours in the refrigerator.. Thread the shrimp on skewers and grill over charcoal or broil, until the shrimp are slightly browned and done. Note: Double the marinade recipe and use it as a sauce over the cooked shrimp. and serve on the side.

Yield: 4 servings Heat Scale: Hot

**Pepper Profile: Jalapeño**

[The Plant](http://www.fiery-foods.com/dave/profile_jalapeno.html#The Plant#The Plant)

[Agriculture](http://www.fiery-foods.com/dave/profile_jalapeno.html#Agriculture#Agriculture)

[Culinary Usage](http://www.fiery-foods.com/dave/profile_jalapeno.html#Culinary Usage#Culinary Usage)

**Recipe:**

[Jalapeño Cherry Bombs](http://www.fiery-foods.com/dave/profile_jalapeno.html#Jalapeño Cherry Bombs#Jalapeño Cherry Bombs)

**Pepper Profile: Jalapeño**

This chile was named after the city of Xalapa in Veracruz, Mexico, where it is no longer commercially grown.

**The Plant**

This chile pepper is a pod type of *Capsicum annuum.* Jalapeños usually grow from 2 1/2 to 3 feet tall. Jalapeños have a compact single stem or upright, multibranched, spreading habit. The leaves are light to dark green and measure about 3 inches long and 2 inches wide. The flower corollas are white with no spots. The pods, which are conical and cylindrical, are pendant and measure about 2 to 3 inches long and 1 inch wide. They are green (occasionally sunlight will cause purpling), maturing to red, and measure between 2,500 and 10,000 Scoville Units. The brown streaks, or "corking" on the pods are desirable in Mexico but not so in the U.S.

**Agriculture**

In Mexico, commercial cultivation measures approximately 40,000 acres in three main agricultural zones: the Lower Palaloapan River Valley in the states of Veracruz and Oaxaca, northern Veracruz, and the area around Delicias, Chihuahua. The later region grows the American jalapenos, which are processed and exported into the U.S. Approximately 60% of the Mexican jalapeno crop used for processing, 20% for fresh consumption, and 20% in production of [chipotle](http://www.fiery-foods.com/dave/profile_chipotles.html) chiles, smoked jalapeños.

In the United States, approximately 5,500 acres is under cultivation, with Texas the leading state for jalapeño production, followed by New Mexico. Home gardeners should remember that the U.S. varieties of jalapeños flourish better in semi-arid climates--ones with dry air combined with irrigation. If planted in hot and humid zones in the U.S. during the summer, the yield of such jalapenos decreases and so Mexican varieties should be grown. The growing period is 70 to 80 days, and the yield is about 25 to 35 pods per plant.

Recommended Mexican varieties are ‘Típico’ and ‘Peludo’; recommended U.S. varieties are ‘Early Jalapeño’ (hot) and ‘TAM Jalapeño’ (mild).

**Culinary Usage**

Jalapeños are one of the most famous chile peppers. They are instantly recognizable and a considerable mythology has sprung up about them, particularly in Texas. The impetus for the popularity of jalapenos starts from a combination of their unique taste, their heat, and their continued use as a snack food.

In 1956, *Newsweek* magazine published a story on a pepper-eating contest held in the Bayou Teche country of Louisiana, near the home of the famous Tabasco sauce. The article rated the jalapeño as "the hottest pepper known," more fiery than the "green tabasco" or "red cayenne." Thus the Tex-Mex chile was launched as the perfectly pungent pepper for jalapeño-eating contests, which have proliferated all over the country.

Essential for Nachos:

Sliced Jalapeños

Many jalapeños are used straight out of the garden in salsas. Others are pickled in escabeche and sold to restaurants and food services for sale in their salad bars. Jalapeños are processed as "nacho slices," and "nacho rings" that are served over nachos, one of the most popular snack foods in arenas and ball parks. Jalapeños are commonly used in commercial salsas and picante sauces, which process a large percentage of the imports from Mexico.

**Recipe**

**Jalapeño Cherry Bombs**

These little explosions make perfect appetizers for chilehead guests.

* 24 jalapeño chiles
* 8 ounces Monterey Jack or cheddar cheese, sliced
* Flour for dredging
* 2 eggs, beaten
* Vegetable oil for deep-fat frying

Slit each pepper, remove the seeds with a small spoon or knife and stuff the peppers with pieces of cheese. If necessary, insert a tothpick to hold the chiles together. Dip each stuffed chile in the flour, then the egg, then the flour again. Fry in 350 degree F. oil until the chiles are golden brown. Drain and Serve.

Yield: 24 Heat Scale: Medium to Hot

Variations: Stuff the chiles with cooked chorizo, or cooked ground meat mixed with cheese.

**Pepper Profile: Serrano**

[The Plant](http://www.fiery-foods.com/dave/profile_serrano.html#The Plant#The Plant)

[Agriculture](http://www.fiery-foods.com/dave/profile_serrano.html#Agriculture#Agriculture)

[Culinary Usage](http://www.fiery-foods.com/dave/profile_serrano.html#Culinary Usage#Culinary Usage)

**Recipe:**

[Fresh Tomatillo Salsa with Serranos](http://www.fiery-foods.com/dave/profile_serrano.html#Fresh Tomatillo Salsa with Serranos#Fresh Tomatillo Salsa with Serranos)

In Spanish, *serrano* is an adjective which means "from the mountains." The chile described by this adjective was first grown in the mountains of northern Puebla and Hidalgo, Mexico.

**The Plant**

Serranos vary in habit from compact to erect, have an intermediate number of stems, and grow from 1 1/2 to 5 feet tall. The leaves vary from light to dark green, are pubescent (hairy), and measure 3 1/2 to 5 inches long and 1 1/2 to 2 inches wide. The flower corollas are white with no spots. The pods grow erect or pendant, are bluntly pointed, and measure between 1 and 4 inches long and 1/2 inch wide. Serranos measure between 10,000 and 20,000 Scoville Units.

Serrano Plant

**Agriculture**

Mexico has about 37,500 acres of serranos under cultivation, compared to only 150 acres in the United States, mostly in the Southwest. The states of Veracruz, Sinaloa, Nayarit, and Tamaulipas are the biggest producers of Mexican serrano chiles, growing about 180,000 tons of pods a year. Despite the proliferation of canned serranos, only 10 percent of the crop is processed. The vast majority is used fresh. A very small amount of red serranos is dried out for sale in markets. Recommended varieties are the Mexican cultivars ‘Altamira,’ ‘Panuco,’ and ‘Tampiqueño.’ In 1985, the Texas Agricultural Experiment Station released ‘Hidalgo,’ a mild, multiple virus resistant strain which is now popular in the U.S.

**Culinary Usage**

Relatively unknown in the United States until a couple of decades ago, serranos have gained fame because of their pickling.. Many different brands of *serranos en escabeche*, or serranos pickled with carrots and onions, have gained favor in the Southwest, where they are consumed as a snack or *hors d'ouevre*. By far, the most common use of *serranos* is in fresh salsas. The chiles are picked fresh from the garden or purchased in produce departments, are minced and then combined with a variety of vegetables. The resulting salsas can be used as dips, or as condiments for meats, poultry, seafood, and egg dishes.

**Recipe**

**Fresh Tomatillo Salsa with Serranos**

In Mexico, all sauces are *salsas*, regardless of whether or not they are cooked. But in the U.S., a salsa usually refers to an uncooked sauce. This is one of the simplest--yet tastiest--uses of serrano chiles. Serve this as a dip for chips or as a marinade and basting sauce for grilled poultry and meat.

* 1 pound fresh green tomatillos
* 3 tablespoons finely chopped red onions
* 2 serrano chiles, seeds and stems removed, minced
* 1 small bunch cilantro, coarsely chopped
* Juice of 1 lime
* 1 to 2 tablespoons olive oil (optional)
* Sugar to taste (optional)

Husk the tomatillos and wash them thoroughly under very hot water. Cool under running water, and coarsely puree in food processor or blender. Add the onions, serrano chiles, cilantro, and lime juice and pulse until coarsely chopped. Remove the bowl and add olive oil if you wish to adjust the consistency. Add some sugar if the tomatillos are too sour.

Yield: About 2 cups Heat Scale: Medium

**Pepper Profile: Piquin**

[The Plant](http://www.fiery-foods.com/dave/profile_piquin.html#The Plant#The Plant)

[Agriculture](http://www.fiery-foods.com/dave/profile_piquin.html#Agriculture#Agriculture)

[Legend and Lore](http://www.fiery-foods.com/dave/profile_piquin.html#Legend and Lore#Legend and Lore)

[Culinary Usage](http://www.fiery-foods.com/dave/profile_piquin.html#Culinary Usage#Culinary Usage)

The piquin is a pod type of the *annuum* species.The word "piquin," also spelled "pequin," is probably derived from the Spanish word "pequeño," meaning small, an obvious allusion to the size of the fruits. Variations on this form place the words "chile" or "chili" before or in combination with both "pequin" and "tepin" forms. The wild form of the piquin type is variously called chiltepin or chilipiquin and it is possible that the word "chilipequin" is derived from the Náhuatl (Aztec) word "chiltecpin" rather than from "pequeño."

The piquins are also known by common names such as "bird pepper" and "chile mosquito." Most are unnamed varieties, both wild and domesticated, varying in pod size and shape from BBs to de Arbol-like fruits. Generally speaking, the wild varieties (spherical "tepins") are called chiltepins and the domesticated varieties (oblong "piquins") are called piquins or pequins, but in Texas the wild varieties are called chilipiquins.

**The Plant**

Piquins vary greatly, usually having an intermediate number of stems and an erect habit. In the wild, piquins can grow 6 feet high or more, and in the greenhouse they have grown 15 feet high in one season. However, some varieties have a prostrate habit, spreading across the ground like a ground cover. The leaves are medium green and are lanceolate or ovate, measuring about 3 1/2 inches long by 1 1/2 inches wide. The flower corollas are white with no spots. The pods are borne erect, are round or oblong, and measure between 1/4 and 1/2 inch long and wide. Domesticated varieties usually have elongate, pointed pods, usually borne erect but occasionally pendant, sometimes measuring up to 2 inches long. Piquins are extremely hot, measuring between 50,000 and 100,000 Scoville Units. In Mexico, the heat of the Chiltepin is called *arrebatado* ("rapid" or "violent"), which implies that although the heat is great, it diminishes quickly.

**Agriculture**

Piquins were part of the prehistoric migration of *Capsicum annuum* from a nuclear area in southern Brazil or Boliva north to Central America and Mexico. Ethnobotanists believe that birds were responsible for the spread of most wild chiles--and indeed, the chiltepin is called the "bird pepper." Attempts at domestication of the wild plants have led to the development of the commercial chile piquin, which grows under cultivation in Mexico and Texas (some wild forms have escaped). A cultivated form of the chiltepin has been grown successfully in Sonora and in the Mesilla Valley of New Mexico, where they are planted as annuals. In all cases of domestication, the cultivated forms tend to develop fruits larger than the wild varieties; botanists are not certain whether this trait is the result of better cultural techniques or the natural tendency for humans to pick the largest fruits, which contain next years' seed.

In Mexico, a number of different varieties of piquins grow wild in the mountains along both coasts: from Sonora to Chiapas on the Pacific and Tamaulipas to Yucatán on the Gulf. They are collected and sold as fresh green, dried red, and in salsas, but the amount of total production is unknown. Some Mexican food companies bottled the chiltepins *en escabeche* and sell them in supermarkets. In the United States, retail prices for wild chiltepins reached $48 per pound in 1988.

In the U.S., about a thousand acres of "small chili" are cultivated, mostly in Texas and New Mexico. Many of these chiles are packaged and labeled as piquin regardless of the shape of their pods--from those resembling red peppercorns to those which look like small New Mexican varieties--and there is no way to tell which are cultivated and which are collected in the wild.

Piquins do well in the home garden and are particularly suited to being grown in containers as perennials. Garden writer Paul Bessey of the *Arizona Daily Star* reports that rosy-headed house finches regularly decimate his ripening chiltepins, so some netting protection from birds may be necessary when growing this variety. The growing period is at least 90 days, and the plant can produce between 50 and 100 pods, depending on its size and growing period.

**Legend and Lore**

The Tarahumara Indians of the Sonoran Desert in Mexico believe that chiltepins were the greatest protection against the evils of sorcery. One of their proverbs holds that "The man who does not eat chile is immediately suspected of being a sorcerer." The Papago Indians of Arizona maintain that the chiltepin "has been here since the creation of the earth."

Medical applications of chiltepins are numerous. In Mexico they are habitually used for the relief of acid indigestion; they are crushed, mixed with garlic, oregano, and warm water. Other maladies reputedly treated by chiltepins include sore throats, dysentery, rheumatism, and tumors.

Popular folklore holds that Texans love chile Piquins so much they eat them right off the bush. In fact, their infatuation is so great that Piquin-heads rarely travel far from home without an emergency ration of the tiny pods, either whole or crushed, in a silver snuffbox or pillbox. Texans also reputedly use the chile Piquin in place of soap to punish children for using "cuss words."

**Culinary Usage**

In 1794, Padre Ignatz Pfefferkorn, an early observer of Sonoran culinary customs, described how chiltepins were primarily used, and of course piquins can substituted: "It is placed unpulverized on the table in a salt cellar, and each fancier takes as much of it as he believes he can eat. He pulverizes it with his fingers and mixes it with his food. The chiltepin is still the best spice for soup, boiled peas, lentils, beans, and the like...." Today the red dried chiltepin is used precisely the same way--crushed into soups, stews, and bean dishes. The green fruit is chopped and used in salsas and bottled *en escabeche*.

**Pepper Profile: Chipotles**

*by Dave DeWitt and Chuck Evans*

[Origins](http://www.fiery-foods.com/dave/profile-chipotles.html#Origins#Origins) [History](http://www.fiery-foods.com/dave/profile-chipotles.html#History#History)

[Varieties](http://www.fiery-foods.com/dave/profile-chipotles.html#Varieties#Varieties) [Heat Scale](http://www.fiery-foods.com/dave/profile-chipotles.html#Heat Scale#Heat Scale)

[Smoking](http://www.fiery-foods.com/dave/profile-chipotles.html#Origins#Origins) [Smoking Habaneros](http://www.fiery-foods.com/dave/profile-chipotles.html#Smoking#Smoking)

[Storage](http://www.fiery-foods.com/dave/profile-chipotles.html#Storage#Storage) [Making Chipotle Powder](http://www.fiery-foods.com/dave/profile-chipotles.html#Making Chipotle Powder#Making Chipotle Powder)

[Commercial Products](http://www.fiery-foods.com/dave/profile-chipotles.html#Commercial Products#Commercial Products)

[Chipotles Adobados Recipe](http://www.fiery-foods.com/dave/profile-chipotles.html#Chipotles Adobados Recipe#Chipotles Adobados Recipe)

[Additional Chipotle Information](http://www.fiery-foods.com/dave/profile-chipotles.html#Additional Information#Additional Information)[Selected Sources for Chipotles and Chipotle Products](http://www.fiery-foods.com/dave/ndx_chipotle.asp#Chipotle Products)

Generally speaking, chipotle in English refers to any smoked chile pepper. The Spanish word *chipotle* is a contraction of *chilpotle* in the Náhuatl language of the Aztecs, where *chil* referred to the hot pepper and *potle* was derived from *poctli*, meaning smoked. The word was apparently reversed from Náhuatl, where it originally was spelled *pochilli.* Other early spellings in Mexico are *tzilpoctil, tzonchilli*, and *texochilli*.

The most commonly smoked chiles are jalapeños, named for the city of Jalapa in the state of Veracruz. They are also known in Mexico as *cuaresmeños*, or Lenten chiles. In Puebla, Central Mexico, and Oaxaca, jalapeños are known as *huachinangos*, while in coastal Mexico and Veracruz they are called *chiles gordos*.

**Origins**

Smoked chiles had their origin in the ancient civilization of Teotihuacan, north of present-day Mexico City. It was the largest city-state in Mesoamerica and flourished centuries before the rise of the Aztecs. Chipotles also made an appearance in the marketplaces of Tenochtitlán, the capital city of the Aztecs that is now called Mexico City. Certain varieties of fleshy chiles, now called jalapeños, would not dry properly in the sun--their thick flesh would rot first. However, like meats, they could be preserved by the process known as smoke-drying.

**History**

Bernardino de Sahagún, a Spanish friar who lived in Mexico in the early 1500s, described a dish called *teatzin* which was served in Cholula in the state of Puebla. It contained a combination of chipotle and pasilla sauces for stewing fresh jalapeños and lenten palm flowers.

In 1575, a Spanish visitor to Mexico, Juan de la Cueva, described a dish that combined the seedless chipotles (*capones*), onions, piñon nuts, and a broth with meat juice and *pulque* (agave beer). The sauce was simmered with chunks of meat to create *pipián de piñon*.

For hundreds of years after the Aztecs, smoked chiles were found predominantly in the markets of Central and South Mexico, such as Puebla, Oaxaca, Veracruz, and Chiapas. In Huatasco in the state of Veracruz, a salsa called *tlatonile* made with tomatoes, peanuts, and chipotles has been made for centuries.

**Varieties**

The true chipotle is grayish-tan, quite stiff, and is often described as looking like a cigar butt. It is deeply imbued with smoke and is both hot and flavorful. This main variety is also called *chile ahumado* (smoked chile); *chile meco* (blackish-red chile; *meco* is close to *seco*, meaning dry); the double terms *chipotle meco* and *chipotle típico*, and just *típico.* Further confusing the issue is a cultivated variety of jalapeño that is also named 'Típico.' Yes, the 'Tipico' variety is often smoked to become a *típico chipotle*.

Other varieties of smoked jalapeños are often mistaken for the *típico* chipotle. The most common one is called *morita*, which means "little blackberry" in Spanish. The color of this smoked chile is dark red, sometimes approaching purple in color. Often the *morita* is referred to as a smoked serrano chile, but this is inaccurate. Both the *típico* and the *morita* are smoked jalapeños; the difference is that the *morita* is not smoked nearly as long, and thus it remains very leathery and pliable. Not only is the smoky flavor much more intense in the *típico*, its flavor is much richer.

But the *morita* is commonly marketed as the *típico* chipotle because it can bring $2 to $4 more per pound with that name. Unfortunately, most of the "chipotles" being sold in markets in the United States are in actuality the inferior *moritas*. This is because most of the chipotles produced in Mexico are eaten there, leaving little for export.

To make up for lack of the *típico* variety to export, producers in the northern states of Mexico, particularly Chihuahua, have turned to the *moritas*, which are much less expensive to produce. Unfortunately, they call the *moritas* "chipotles" and sometimes claim that they have never heard of the *típico* variety. To further confuse the issue, in the interior, the *típico* is known by brokers as "Veracruz."

Other varieties of smoked chiles include:

*Cobán*: a piquín chile that is smoked in southern Mexico and Guatemala.

*Pasilla de Oaxaca*: a variety of pasilla chile that is smoked in Oaxaca and is used in the famous *mole negro*.

*Jalapeño chico*: jalapeños that are smoked while still green. Usually, they are culls from the fresh market that need to be preserved, and the smoke-drying process obscures any blemishes.

*Capones:* This rare smoked chile is a red jalapeño without seeds; the term means "castrated ones." They are quite expensive and are rarely exported.

Habanero: recently, a smoked habanero product has been introduced into the United States. It is used as a very hot substitute for any chipotle.

**Heat Scale**

Of course, the heat scale of smoked chiles varies considerably. The *coban* and habaneros are the hottest of the smoked chiles and the *morita* and *típico* are the mildest. Since jalapeños themselves have medium heat, when smoked they retain the same heat level, which ranges from about 5,000 to 10,000 Scoville Units, measured in the dried form. By comparison, New Mexican chiles are typically 500 to 1,000 Scoville Units, and habaneros range from 80,000 to more than 300,000 Scoville Units. When many chipotles are added to a dish, the result can be quite pungent.

**Smoking**

Why did Native Americans smoke chiles in the first place? Perhaps some thick-fleshed chiles such as early jalapeños were dropped near the communal fire and later, a leathery, preserved chile was the result. Since smoking is believed (along with salting) to be one of the earliest preservation methods, it would make sense that the "meaty" chiles could be smoked right along with the meat.

In the town of Delicias in northern Mexico, the red jalapeños are smoked in a large pit on a rack made out of wood, bamboo, or metal. Another nearby pit contains the fire and is connected to the smoking pit by an underground tunnel. The pods are placed on top of the rack where drafts of air pull the smoke up and over the pods. A farm may have a smoker of a different design at the edge of the fields, and it may be a fireplace of bricks with grates at the top and a firebox below. This smoker is for small batches.

Chipotles smoked in the Mexican manner are not always available north of Mexico. And with prices of chipotles topping $15.00 per pound when they are available, an attractive alternative is for cooks to smoke their own chiles. As chile expert Paul Bosland of New Mexico State University commented, "It is possible to make chipotle in the backyard with a meat smoker or Weber-type barbecue with a lid. The grill should be washed to remove any meat particles because any odor in the barbecue will give the chile an undesirable flavor. Ideally, the smoker or barbecue should be new and dedicated only to smoking chiles." The result of this type of smoking is a chipotle that more resembles the red *morita* than the classic tan-brown *típico*.

There are five keys to the quality of the homemade chipotles: the maturity and quality of the pods, the moisture in the pods, the type of wood used to create the smoke, the temperature of the smoke drying the pods, and the amount of time the fruits are exposed to the smoke and heat. But remember that smoking is an art, so variations are to be expected and even desired.

Recommended woods are from fruit trees or other hardwoods such as hickory, oak, and pecan. Pecan is used extensively in parts of Mexico and in southern New Mexico to flavor chipotle. Although mesquite is a smoke source in Mexico, we prefer the less greasy hardwoods. Mesquite charcoal (not briquets) is acceptable, and hardwood chips, especially when soaked, can be placed on top to create even more smoke. It is possible, however that the resinous mesquite smoke (from the wood, not charcoal) contributes to the tan-brown coloration of the *típico* variety of chipotle.

Wash all the pods and discard any that have insect damage, bruises, or are soft, and remove the stems from the pods. Start two small fires on each side of the barbecue bowl, preferably using one of the recommended hardwoods. If you are using a meat smoker with a separate firebox, simply build the fire in the firebox.

Place the pods in a single layer on the grill rack so they fit between the two fires. For quicker smoking, cut the pods in half lengthwise and remove the seeds. Keep the fires small and never expose the pods directly to the fire so they won't dry unevenly or burn. The intention is to dry the pods slowly while flavoring them with smoke. If you are using charcoal briquets, soak hardwood chips in water before placing them on the coals so the wood will burn slower and create more smoke. The barbecue vents should be opened only partially to allow a small amount of air to enter the barbecue, thus preventing the fires from burning too fast and creating too much heat.

Check the pods, the fires, and the chips hourly and move the pods around, always keeping them away from the fires. It may take up to forty-eight hours to dry the pods completely, which means that your fire will probably burn down during the night and will need to be restoked in the morning. When dried properly, the pods will be hard, light in weight, and brown in color. After the pods have dried, remove them from the grill and let them cool. To preserve their flavor, place them in a zip-lock bag.

Ten pounds of fresh jalapeños yield just one pound of chipotles after the smoking process is complete. A pound of chipotle goes a long way, as a single pod is usually enough to flavor a dish.

A quick smoking technique involves drying red jalapeños (sliced lengthwise, seeds removed) in a dehydrator or in an oven with just the pilot light on. They should be desiccated but not stiff. Then smoke them for three hours over fruitwood in a traditional smoker with a separate firebox, or in the Weber-style barbecue as described above. This technique separates the drying from the smoking so you spend less time fueling the smoker.

Chuck Evans has experimented with smoke-drying pods on a large scale with jalapeños grown near Toledo, Ohio. The large red pods had a lot of white "corking", which is a desirable trait for jalapeños in Mexico. Thus they resembled the variety called *Huachinango*. He took the pods to a local catering firm that specialized in barbecue and used one of their revolving rack smokers. With hickory wood as his smoke source, he smoked the pods at 110 degrees for three days. He was attempting to duplicate the *típico* ("cigar-butt") variety but the result was much more like the *mora* or *morita*, with their bright red-brown leathery appearance.  
The second attempt at duplicating the *típico* variety was in another meat-packing plant in a modern room with climate-controlled, injected smoke. The result was identical to the first try.

Then Chuck repeated the experiment a third time with a primitive smoker in a sausage-making facility. It was a small room with racks set on the ground and smoke that continuously circulated. He left the pods in the room for a week, and the chipotles were closer to the desired tan-brown color, but the pods still had too much moisture in them. He concluded that the raw red jalapeños contained extra moisture to begin with.

Obviously, the Mexicans have perfected the *típico* technique, while we Americans are struggling to duplicate it with more modern equipment. There is a delicate balance of the pit temperature, the amount of smoke, the type of smoke, and the length of time that produces the perfect chipotle. Perhaps we shall be forced to dig smoking pits in our backyards and begin growing mesquite trees.

**Smoking Habaneros**

Rob Polishook is one of the owners of Chile Today-Hot Tamale, a company that introduced the Smoked Habanero chiles to American chileheads. When we asked him about his technique for smoking the hottest chiles in the world, he wouldn't reveal his exact trade secrets, but he did give us some general techniques.

"Producing the smoked habanero chile is an intricate and time-consuming process," he wrote. "The habaneros are smoked over a medley of exotic woods, herbs, and spices. The habaneros are smoked for sixteen to thirty hours and must be turned and sorted depending on their density and size at least once an hour. This process ensures that the habaneros do not burn and will have a rich, smoky, citrus, incendiary flavor. Chile Today-Hot Tamale's homemade habanero smoker has smoked thousands of pounds of habaneros. Similar to a chef's favorite pan, it has seasoned perfectly." Rob's final comment is good evidence for devoting a smoker strictly to chipotles.

**Storage**

Many cooks have success storing chipotles in a zip-lock bag in a cool and dry location. If humidity is kept out of the bags, the chipotle will last for twelve to twenty-four months. A more secure method for storing them at room temperature is to keep them in glass jars with a tight-fitting, rubber-sealed top.

Of course, the best storage of all is to freeze them. Use heavy-duty freezer bags and double-bag the chipotles. They will keep for years with no noticeable loss of flavor or smoke.

**Making Chipotle Powder**

A "dried" chipotle usually has about 80-90 percent of its moisture removed, which is enough, with the smoke, to preserve it and retard bacterial growth, but not enough to create a powder. Therefore, regardless of whether you are using the *típico* chipotle or the *morita*, they must be further dried in a food dehydrator or in the oven on the lowest possible heat, until they are so dry that you can snap them in half.

Put on a painter's mask to protect yourself from uncontrollable sneezing, and break the chipotles into manageable pieces. Use an electric spice mill or a coffee grinder to reduce the pod pieces to a powder.

Because they are so desiccated, the chipotle powder stores well in air-tight containers such as small jars. But remember, powders will oxidize and absorb odors from the air or the freezer, so if you intend to freeze the powders or store them in bags at room temperature, triple-bag them first.

**Commercial Products**

In the United States and Canada, dried chipotles are usually sold in the *típico* or *morita* forms. They are available from mail-order sources.

Chipotles en Adobo, a tomato-based vinegar sauce, are manufactured by the major Mexican spice and sauce companies, including San Marcos, La Preferida®, Embasa, Herdez®, and La Costeña. In this form, the chipotles have rehydrated and have been flavored by the sauce. For cooks wishing to duplicate this method of preservation, we have provided a recipe for Chipotles Adobados (Chipotle Chiles in Adobo Sauce).

Manufacturers of salsas and hot sauces containing chipotles include Búfalo® Chipotle Hot Sauce, Montezuma® Smokey Chipotle® Hot Sauce and Smokey Chipotle®, Don Alfonso Chipotles en Adobo, El Paso Chile Company, Del Monte, La Preferida®, San Angel, and Coyote Cocina.

Additional products may be found in the [**Industry Directory**](http://www.fiery-foods.com/directory/default.htm), using the keyword "Chipotle" as well as [**here**](http://www.fiery-foods.com/dave/ndx_chipotle.asp#Chipotle Products).

**Recipe: *Chipotles Adobados* (Chipotle Chiles in Adobo Sauce)**

Here's a pickled chile recipe from Tlaxcala. These sweet-hot pickled chiles can be the basis of a sauce of their own if they're further puréed, or they can be served as a condiment with enchiladas and other main dishes. Note that this recipe requires advance preparation.

* ½ pound dried chipotle chiles, stems removed
* Water to rehydrate
* 1 quart vinegar
* 1 head garlic, peeled and crushed
* ½ cup *piloncillo*, or ½ cup packed brown sugar
* 1 cup roasted and peeled green chile, such as *poblano* or New Mexican
* 2 medium tomatoes, chopped
* 6 black peppercorns
* 3 bay leaves
* 1 teaspoon ground cumin
* Salt to taste

Soak the chipotles in water until they rehydrate, at least one hour, then drain. In a saucepan, add ½ of the vinegar, ½ of the garlic and the brown sugar. Cook this mixture for about 20 minutes, then add the chipotles. In another pan, combine the green chile, tomato, remaining garlic, peppercorns, bay leaves, cumin, remaining vinegar, and salt to taste. Cook for about 30 minutes, covered, over a medium heat. Add the chipotle chile mixture, stir well, and store in sterilized jars.

Yield: About 1 ½ quarts Heat Scale: Hot

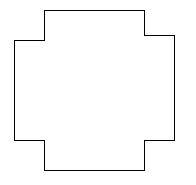
**Additional Chipotle Information**

This Pepper Profile is adapted from [***The Pepper Pantry: Chipotles***](http://www.fiery-foods.com/dave/davebooks.htm#Pepper Pantry: Chipotle) (Celestial Arts, 1997).

See also [**Cooking with Chipotles**](http://www.fiery-foods.com/dave/chipotle.html), by Nancy Gerlach (plenty of recipes), and [**The Evolution of Chipotle Flavor**](http://www.fiery-foods.com/dave/chipotle2.asp)

## Smoked Chiles

http://www.io.com/~wallen/chili/images/thin-line.gif

I was moved to create this section because there are so many people growing their own chiles. I have eight assorted chile plants (potted) which produce *way* more than I can use just for myself and family.

So, what do you do? You can freeze fresh chiles or roasted chiles for months. You can dry chiles in a [*ristra*](http://www.geocities.com/TheTropics/Island/3920/ristrapage.html), or, you can smoke them! Here's how I do it...

http://www.io.com/~wallen/chili/images/thin-line.gif

### [t3-2-sm](http://www.io.com/~wallen/ther.html)Cages

You need something to hold even small chiles in the smoker without having them drop through the grill. I made cages from 1/4-inch wire mesh I got at the local hardware store. Just cut a square about twenty inches on a side. Then, cut a 4-inch square from each corner, so that you have something like the figure to the right. Fold each side up, and wire together about three inches up. Then fold the last inch over towards the inside, forming a lip to keep stuff in when you can shake the contents about.

http://www.io.com/~wallen/chili/images/thin-line.gif

### Smoking

Prepare chiles by cutting off their stems. Additionally, you can puncture them or slit them in half. It's only necessary to expose their insides for the smoking process; this allows the smoke in and the moisture out. Put chiles into cage(s) about 2 inches deep. (You can make a cage out of aluminum foil, if you like, but I prefer the rugged and re-usable.)

Build a coal bed in your smoker. I have a [single-barrel style](http://www.chargriller.com/), so I build a *small* mesquite/charcoal bed at one end, and put the cages at the other. I soak mesquite brickettes or split limbs in water for an hour. After I have a small bed of hot charcoal, I enclose it with the mesquite. As time goes on, I add charcoal to the center and mesquite to the edges. I size the coal bed to keep the smoker at about 200-225 degress. Every time you add to the coal bed, shake the cages about to mix the chiles.

Smoke until the chiles are almost completely dry. This takes about six to eight hours in my smoker, and I check the fire every hour. If you have a multi-compartment smoker, then you probably already know more about this than *I* do! :-)

Anyway, do it slow, use mesquite, invite friends over to watch it happen, and give them a little baggie of the result. They'll be so impressed!

Smoked jalepeno is called *chipotle*, and if you search [Google](http://www.google.com/search?q=chipotle) you'll find that this is a very hip and popular ingredient for hundreds of recipes. Other chiles also work well with smoking. Chile pequins are small round chiles which make a *great* smoky ingredient. You just crush one between your fingers over your dish and voila! I just recently smoked a hugh batch of ripe (red) anahiem chiles; they are not very hot at all, but make a delicious sauce. You can smoke just about any chile, as others have shown:

[Home-Smoked Chipotle Chiles](http://www.ebicom.net/kitchen/page/veggies/chipot.htm)

[Pepper Profiles: Chipoltles](http://www.fiery-foods.com/dave/profile-chipotles.html)

Experiment, have fun, and let me know about the results!

http://www.io.com/~wallen/chili/images/thin-line.gif

### Preparation

Cut the smoked chiles in half to remove the seeds, if you like. Then, you can powder them in a blender (don't get the dust in your face!), or you can re-hydrate them by steeping in hot water for 30 minutes or so, then blending into a sauce. (For peppers with tough skins, like New Mexicos and Anaheims, you must re-hydrate, then scrape the pulp from the skin before blending a sauce.)

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# Home-Smoked Chipotle Chiles

* chunks or logs of fragrant hardwood, preferably a combination of oak and mesquite
* 1 1/4 pounds red ripe jalapeno chiles, with stems
* 1/2 cup dried red New Mexico chile puree or commercial chile paste, such as Santa Cruz
* 1/3 cup water
* 2 tablespoons tomato paste
* 2 tablespoons cider vinegar
* 1 tablespoon packed dark brown sugar
* 1 clove fresh garlic, peeled and crushed
* 1/4 teaspoon salt

Prepare a smoker according to the manufacturer's directions, using the wood chunks and achieving a steady temperature of 275 to 300°. Place the chiles directly on the smoker rack (or use a shallow disposable foil pan) at the cooler end of the smoking chamber or on the upper rack if your smoker has one. Lower the cover and smoke the chiles for 2 1/2 hours, or until they are soft, brown, and slightly shriveled.  
Remove the chipotles from the smoker. In a medium nonreactive saucepan, combine them with the chile puree, water, tomato paste, vinegar, brown sugar, garlic, and salt. Set over medium heat and bring to a simmer. Cook, stirring once or twice, until the sauce is very thick, about 15 minutes. Cool to room temperature.  
Transfer the chipotles to a covered storage container and refrigerate for at least 24 hours before using. They can be refrigerated for up to 2 weeks or frozen for up to 2 months.

**Dried Chipotle Peppers**: After removing the chiles from the smoker, place them on a rack and leave them, loosely covered, at room temperature, until crisp, light, and dry, 1 to 2 weeks, depending on the humidity. Store airtight at room temperature.

NOTES : Green jalapenos can be used, but red ones are more beautiful and have a deeper, sweeter flavor. Grow your own, or select chiles that are beginning to turn red; they will eventually ripen. (Those picked without any red at all in their peels will always remain green.)  
Makes about 3 cups.

Curtis sez: "If you want to use store-bought dried chipotles (which means the time to make this recipe goes down to under 1/2 hour), it might help you to know that I just weighed 1 1/4 pounds of jalapenos, and it took 30 peppers. But since my jalapenos were on the small side, I'd think that 20-25 dried chipotles would be about the right amount." MAKES ABOUT 3 CUPS From the Chile-Heads Recipe Collection URL: http://chile.ucdmc.ucdavis.edu:8000/www/recipe.html

**Pepper Profile: Ancho/Poblano**

**by Dave DeWitt**

This chile is a pod type of the *annuum* species. The name *ancho* means 'wide,' an allusion to the broad, flat, heart-shaped pods in the dried form. The fresh pod is called *poblano*.

**The Plant**

Anchos are multiple-stemmed and compact to semi-erect, semi-woody, and about 25 inches high. The leaves are dark green and shiny, approximately 4 inches long and 2-1/2 inches wide, and the corollas are off-white and appear at every node. The flowering period begins 50 days after sowing and continues until the first frost. The pods are pendant, vary between 3 to 6 inches long, and 2 to 3 inches wide, are conical or truncated and have indented shoulders. Immature pods are dark green, maturing to either red or brown, and the dried pods are a very dark reddish-brown, nearly black. They are fairly mild, ranging from 1,000 to 1,500 Scoville Units.

**Agriculture**

This variety is one of the most popular peppers grown in Mexico, where about 37,000 acres of it are under cultivation. The ancho/poblano varieties grow well in the U.S. but only about 150 acres are planted. Growers in the eastern U.S. reported their plants grown in Wharton, New Jersey, topped four feet and needed to be staked to keep them from toppling over. These plants produced well, but the pods never matured to the red stage before the end of the growing season. The usual growing period is 100 to 120 days and the yield is about fifteen pods per plant, although there are reports of up to thirty pods per plant.

**Culinary Usage**

Fresh poblanos are roasted and peeled, then preserved by canning or freezing. They are often stuffed to make chiles rellenos. The dried pods can be stored in airtight containers for months, or they can be ground into a powder. Anchos are commonly used in sauces called *moles*.

**Roasted Poblano Chiles Stuffed with Spiced Goat Cheese**

Poblano chiles impart a distinctive taste to these rellenos and are usually milder than the New Mexican varieties. The filling is a combination of traditional Mexican and New Southwestern ingredients.

* 2 teaspoons ground red New Mexican chile
* ½ cup goat cheese
* ½ cup ricotta cheese
* 1 cup walnuts, chopped fine
* ½ cup raisins
* 1/4 teaspoon ground cinnamon
* 1/4 teaspoon ground cloves
* 4 large poblano chiles, roasted and peeled, stems left on
* Flour for dredging
* 4 eggs, separated
* 4 tablespoons flour
* 2 teaspoons baking powder
* 1 tablespoon water
* 1/4 teaspoon salt
* Vegetable oil for frying

Combine the ground red chile, cheeses, walnuts, raisins, cinnamon, and cloves to make the filling. Make a slit in the side of each pepper and stuff with the filling. Roll each chile in the flour and shake off the excess. Beat the egg whites until they are stiff. In a separate bowl, combine the egg yolks and the remaining ingredients (except the oil), then gently fold them into the egg whites to make a batter. Carefully dip the chiles into the batter and coat well. Heat 2 to 3 inches of oil in a pan to 350 degrees. Add the chiles and fry until they are lightly browned, turning them once. Remove and drain on paper towels.

Serves: 4

**Pepper Profile: Cayenne**

by Dave DeWitt

**Background and History**

The word cayenne seems to come from *kian*, the name of the pepper among the Tupi Indians of northeastern South America. The pod type probably originated in what is now French Guiana and was named after either the Cayenne River or the capital of the country, Cayenne.

It owes its spread around the world to Portugal, whose traders carried it to Europe, Africa, India, and Asia. Although it probably was introduced into Spain before 1500, its circuitous route caused it to be introduced into Britain from India in 1548.

A plant resembling cayenne was described in 1552 in the Aztec herbal, *The Badanius Manuscript*, indicating their medical use for such hot peppers: treating toothache and scabies. In 1597, the botanist John Gerard referred to cayenne as "ginnie or Indian pepper" in his herbal, and in his influential herbal of 1652, Nicholas Culpepper wrote that cayenne was "this violent fruit" that was of considerable service to "help digestion, provoke urine, relieve toothache, preserve the teeth from rottenness, comfort a cold stomach, expel the stone from the kidney, and take away dimness of sight." Cayenne appeared in *Miller's Garden Dictionary* in 1771, proving it was cultivated in England--at least in home gardens.

**Botany and Gardening**

The cayenne is tree-like, with multiple stems and an erect habit. It grows up to 3 feet tall and 2 feet wide. The leaves are ovate, smooth, and medium green, about 3 ½ inches wide and 2 inches long. The flower corollas are white with no spots. The pods are pendant, long, and slender, measuring up to 10 inches long and 1 inch wide. They are often wrinkled and irregular in shape. A mature plant can easily produce 40 pods. The cayenne is very pungent, measuring between 30,000 and 50,000 Scoville Units.

**Cultivation**

Grown commercially in New Mexico, Louisiana, Africa, India, Japan, and Mexico, the cayenne has a growing period of about 90 days from transplanting. Surprisingly, perhaps, New Mexico is leading the way in production of cayenne chiles for hot sauces, according to Gene Jefferies of the McIlhenny Company, owner of Trappey's, a major cayenne sauce manufacturer. In 1995, more than 1,000 acres of cayenne were planted in New Mexico. Cayenne acreage in the U.S. rose from 2500 acres in 1994 to 4500 acres in 1995. About 105 million pounds of cayenne mash (crushed cayennes with about 20 percent salt) was produced in the U.S., with Reckitt & Colman, producers of Durkee's Red Hot, accounting for nearly one-half of that amount. In fact, 75 to 85 percent of all cayenne mash in the world is produced in the U.S. Retail sales (not including food service) of cayenne pepper sauces topped $82 million in 1995.

**Recommended Varieties**

'Charleston Hot.' Very hot, large pods.

'Hot Portugal.' Large, 8-inch, medium-hot pods.

'Large Red Thick.' 6-inch, wrinkled, very hot pods.

'Long Red Slim.' 6-inch, hot pods.

'Ring of Fire.' 4-inch, hot pods.

'Super Cayenne.' Hybrid, with 3 ½-inch hot pods.

**Cayenne as a Medicine**

Cayenne is a pod type of the *annuum* species, and there are many cultivars, or varieties that are grown around the world. However, the cayenne you buy for use in capsules and cooking may not be made from the cayenne pod type--in fact, it probably is not. Cayenne pod types are grown around the world, mostly in Africa, India, and the United States. But in the U.S., for example, the entire crop, most of which is grown in New Mexico and West Texas, is used in the manufacture of Louisiana-style hot sauces. Virtually any small, hot red chile can be ground and placed in a capsule and called cayenne. But this is not necessarily an indictment because there is no difference in the composition of the different pod types and varieties of the *annuum* species, except in flavor elements and heat level. In summary, a capsule of ground piquin pods will virtually be the same in chemical composition as a capsule of ground cayenne pods. In fact, the American Spice Trade Association considers the term cayenne to be a misnomer and prefers the more generic term, red pepper.

**The Thomsonian Cayenne Proponents**

Samuel Thomson (1769-1843) was an early American herbalist. He was uneducated but fascinated with herbs and devoted his life to learning how to heal with them. Thomson began calling himself "doctor" after treating his family and neighbors with herbs and producing at least some curing. He called himself a "botanic physician" and believed that most diseases were caused by cold and cured with heat, so it was no wonder that he loved cayenne and prescribed it as a warming herb. He wrote in *Learned Quackery Exposed*: *And death is cold, and life is heat*

*These temper'd well, your health's complete.*

He discovered cayenne, he wrote, early in his career while searching for something that would produce "a strong heat in the body" and retain it until "cankers of the body" were removed. He tried ginger, mustard, horseradish, peppermint, but none had the desired effect. Then, in 1805, in a cabin in New Hampshire, of all places, he found a string of red peppers hanging. "I knew them to be very hot," he wrote, "but did not know of what nature. I obtained these peppers, carried them home, reduced them to powder, and took some of the powder myself, and found it to answer the purpose better than anything else I had made use of."

Soon Thomson began to scorn physicians as "educated quacks" and "parasites." He built a large practice in rural Massachusetts as a herbal healer and in 1813 he patented a collection of herbal remedies which he sold outside of mainstream medicine. These were the precursors of patent medicines.

In 1818, Thomson moved to Boston and founded a movement. He sold what he called "family right certificates," which were memberships in his society and tickets to buy his medications. He eventually sold 100,000 of these certificates, raising an astonishing (for those days) two million dollars. His medications were wildly popular and eventually were sold in regular drug stores in addition to his own outlets.

Thomson had six "courses" of treatment, which were special combinations of botanical medicines. The courses included powders, tinctures, syrups, enemas, and infusions, along with hot sweat baths. Purging, or vomiting, was encouraged with the liberal use of lobelia.

Along with lobelia, cayenne was one of his favorite herbs. "It is one of the safest and best articles ever discovered to remove disease," he wrote in 1835. "The medical faculty never considered it much of value, and the people had not knowledge of it as a medicine, till I introduced it, by making use of it in my practice."

Thomson combined the cayenne with lobelia, gave the tincture in a tea of witch-hazel leaves, and it had the effect he was looking for: "It would retain the heat in the stomach after puking." Two years later, Thomson discovered hot pepper sauce and began to prescribe that as well!

"I have made use of cayenne in all kinds of disease," Thomson proclaimed, "and have given it to patients of all ages and under every circumstance that has come under my practice; and can assure the public that it is perfectly harmless. It is no doubt the most powerful stimulant known; being powerful only in raising and maintaining that heat on which life depends."

Thomson recommended as the "stock medicine for a family," one ounce of lobelia, two ounces of cayenne, a half-pound of poplar bark, a pound of ginger, and a pint of his rheumatic drops. This supply would last a family through a year of illnesses of all kinds, and the cost would be far less than traditional medicines.

The medical establishment, of course, derided the Thomsonians as "puke doctors and steamers." Thomson replied:

*On lab'rers' money Lawyers feast,*

*Also the Doctor and the Priest;*

*Although their offices are three,*

*They will oppress where'er they be.*

By 1839, he reached the height of his popularity, with an estimated three million adherents--one sixth of the population of the country. But by 1850, Thomsonian medicine had totally fallen out of fashion. It had, however, profoundly influenced the next step in botanically-oriented medicine, eclectic medicine, which flourished from the 1840s until the turn of the century. Eclectic medicine eventually evolved into naturopathy.

**Patent Medicines with Cayenne**

In 1909 and again in 1912, the British Medical Association published two volumes concerning "secret remedies"--the classic patent medicines. The association performed chemical analysis of these remedies, and found that many of them contained high quantities of capsicum or cayenne. For example, the Home Doctor Backache and Kidney Pills promised to "induce the kidneys to perform their proper functions." They contained twenty percent chile powder along with oil of juniper, potassium nitrate, magnesia, sugar, and soap.

Towle's Pennyroyal and Steel Pills contained an astonishing 43 percent chile powder, while Levasco ("The Great Indian Gout and Rheumatic Cure") was a topical treatment. It guaranteed: "Earache cured in 2 minutes, toothache cured in 2 minutes, gout cured in a few hours." It contained three grains of oleoresin capsicum along with camphor, oil of lavender, oil of rosemary, and soap.

Mother Siegel's Curative Syrup contained tincture of capsicum, along with dilute hydrochloric acid, aloe, and water. It was touted as "a cure for impurities in the blood" as well as "a cure for dyspepsia and liver complaints." The advertising copy, which ignored the tincture of capsicum, read: "So let's get rid of the smoke by putting out the fire, and purify our blood with Mother Siegel's Syrup, which will sweep away the poisons and make us healthy and strong."

Box's Pills and Golden Fire were pills and a liniment that were taken together "in severe cases of rheumatism." The pills contained a large quantity of chile powder along with powdered gentian, flour, aloe, and soap. The liniment contained a decoction of capsicum plus the oils of amber, rosemary, eucalyptus, and camphor. Golden Fire treated not only rheumatism but also gout, neuralgia, sprains, asthma, bronchitis, enlarged joints, and tumors. It was both rubbed on the throat and gargled with water as a cure for sore throat and diphtheria, and it was recommended for toothache as well.

**Culinary Uses of Cayenne**

Cayenne is either dried and made into powder or processed for manufacture into Louisiana-style hot sauces. As mentioned above, powdered "cayenne" that is found in supermarkets may not actually be from that pod type; it is a generic term for hot red chile powder.

*Fresh Cayenne Hot Sauce*

Here is a quick and easy twist on Louisiana hot sauce. The key here is to use fresh rather than dried chiles. Serve this sauce over fried foods such as fish or alligator.

10 large fresh red cayenne chiles, stems and seeds removed, cut in half lengthwise

2 cloves garlic, cut in half

3/4 cup vinegar

Salt to taste

Place the cayennes, cut side down, on a broiler rack. Broil for about 5 minutes or until the skin blisters and blackens. Transfer the peppers to a plastic bag for about 10 minutes. Peel when cool. Place the chiles and garlic in a blender or food processor. With the machine running, slowly add the vinegar until the mixture is well­blended. Add salt to taste. Keep covered and refrigerated until use.

Yield: 1 cup Heat Scale: Hot

*Creole Sauce*

This sauce, similar to that served at the world­renowned Antoine's restaurant in the French Quarter of New Orleans, represents the essence of Creole cookery. It is wonderful when served over chicken, shrimp, or rice dishes.

1 cup chopped green bell pepper   
1 cup chopped onion   
2 tablespoons butter   
3 cups chopped tomato pulp   
1/4 teaspoon dried thyme   
2 bay leaves   
4 cloves garlic, minced   
2 tablespoons minced fresh parsley   
1 teaspoon paprika   
Salt to taste   
1 ½ teaspoons cayenne powder   
1 tablespoon cornstarch

Sauté the bell pepper and onion in the butter until soft. Add all the other ingredients, except the cornstarch, and simmer for 20 minutes. Mix the cornstarch with a little water and blend into the sauce. Cook for a few minutes more to thicken.

Yield: About 3 cups Heat Scale: Medium

**Pepper Profile: Habanero**

by Dave DeWitt

**What's In a Name?**

Habaneros and their kin are varieties of *Capsicum chinense*, which is one of the five domesticated species of peppers. As is true with the rest of the peppers, the nomenclature of the *chinense* species is highly confusing. There are three major difficulties: a misnamed species, the misuse of the word "habanero," and a confusing number of common names.

The species was misnamed *Capsicum chinense* in 1776 by Nikolaus von Jacquin, a Dutch physician who collected plants in the Caribbean for Emperor Francis I from 1754 to 1759. Jacquin, who first described the species as "chinense" in his work, *Hortus botanicus vindobonensis*, wrote, mysteriously, "I have taken the plant's name from its homeland," which was dead wrong. We are now stuck with a totally inaccurate species name of a supposedly Chinese pepper that's not from China but from the Caribbean and South America.

The second nomenclature problem is with the word habanero (sometimes erroneously spelled *habañero*), when it is used in English to represent the entire *chinense* species. That appellation is a misnomer because there are dozens--if not hundreds--of pod types within the species, and the Spanish name *habanero* technically refers to a specific pod type from the Yucatán Peninsula. But because consumers in the United States were familiar with the Mexican peppers, habanero became the buzz word for the species--even to the point where writers were calling the Scotch bonnet a type of "habanero." Wrong. The Scotch bonnet and habanero are different pod types of the same species. Despite all this logic, we admit that the word habanero has come into common usage as the generic term for the species--and that is why we use it in that manner. The third nomenclature problem is a plethora of common names ranging from Scotch bonnet to bonney pepper to bonda man Jacques to Congo pepper.

But what about the Cuban connection? Isn't that the origin of habanero, meaning "from Havana"? Pepper experts have long debated the possible Cuban origin for the habaneros that are grown today in the Yucatán Peninsula of Mexico and Belize. Mexican horticulturists Cancino Laborde and P. Pozo Compodonico stated that the habanero is the only pepper in Yucatán without a Mayan name, which would indicate that it was imported. We have grown out seeds from Cuban immigrants which turned into the familiar orange habaneros, another indication of their Cuban origin.

**Origins**

The Amazon basin was the center of origin for the *chinense* species, but the story of the spread of the wild varieties and their eventual domestication is still not clear. However, the oldest known *chinense* specimen ever found was a single intact pod (probably a wild form) that was discovered in Preceramic levels (6,500 B.C.) in Guitarrero Cave in coastal Peru.

Since both wild and domesticated forms of the Brazilian *chinense* exist today, it follows that the species was domesticated much in the same manner as the *annuum* species was in Mexico. First, it was a tolerated weed with erect fruits. Then, as early farmers planted the seeds and tended the plants, there was a gradual evolution by human selection to larger, more pendant pods.

The domestication of the *chinense* species occurred around 2000 B.C., and, according to ethnobotanist Barbara Pickersgill, "it was probably connected with the development of agriculture in tropical forests. It seems reasonable to assume that *C. chinense* was domesticated east of the Andes by these tropical forest agriculturists, who were probably responsible for the domestication of manioc." She added, wryly: "As a condiment, the chile pepper probably formed a welcome addition to any diet consisting largely of manioc starch." By about 1000 B.C., domesticated *chinense* varieties had spread to the Pacific coast of Peru.

The cultivation of the *chinense* species produced many pod types and varieties. Bernabe Cobo, a naturalist who traveled throughout South America during the early seventeenth century, probably was the first European to study the *chinense* species. He estimated that there were at least forty different pod types of the chiles, "some as large as limes or large plums; others, as small as pine nuts or even grains of wheat, and between the two extremes are many different sizes. No less variety is found in color...and the same difference is found in form and shape."

*Chinense* was and still is the most important cultivated pepper species east of the Andes in South America. Barbara Pickersgill notes that the fruit characteristics of the species are more variable around the mouth of the Amazon than further west because of human selection of the pods.

The dispersion of domesticated *chinense* types into the Caribbean and Central America occurred in two different directions. Some *chinense* varieties spread into the Isthmus from Colombia and eventually became common in Panama and Costa Rica. But apparently their spread north was halted before they reached the Yucatán Peninsula. Meanwhile, during their great migrations, the ancestors of the Arawaks and Caribs transferred the *chinense* from the Amazon Basin through Venezuela and into the Caribbean, where pod types developed on nearly every island. Pickersgill believes that the habanero was "a historic introduction from the West Indies" into Yucatán, completing the *chinense's* island-hopping encirclement of the Caribbean Sea.

**A Hot History**

When Columbus first explored the Caribbean islands in 1492, there's a good chance that the first chile pepper he encountered was a Scotch bonnet or its cousin. After all, long before Columbus arrived, the *chinense* had spread throughout the islands. So it would not be surprising to learn that Columbus misnamed the pod *pimiento* (pepper) right after biting into a *chinense*.

According to Jean Andrews, "After 1493, peppers from the West Indies were available to the Portuguese for transport to their western African colonies." Brazilian peppers were available by 1508, when Portugal colonized Brazil. After sugar cane was introduced into Brazil in 1532, there was a great need for slave labor. Considerable trade sprang up between Portuguese colonies in Angola and Mozambique and across the Atlantic in Pernambuco, Brazil. It is believed that this trade introduced New World peppers into Africa, especially the *chinense* and *frutescens* species.

An early naturalist, Francisco Ximnez, wrote in his natural history of Guatemala in 1722 that he had heard of a pepper from Havana that was so strong that a single pod would make "a bull unable to eat." Some people theorize that the unnamed pod was the legendary early habanero.

**Legend and Lore**

A well known West Indies folk tale describes a Creole woman who loved the fragrant island pods so much that she decided to make a soup out of them. She reasoned that since the Scotch bonnets were so good in other foods, a soup made just of them would be heavenly. But after her children tasted the broth, it was so blisteringly hot that they ran to the river to cool their mouths. Unfortunately, they drank so much water that they drowned--heavenly, indeed! The moral of the story is to be careful with Scotch bonnets and their relatives, which is why many sauce companies combine them with vegetables or fruits to dilute the heat. And water, of course, is hardly the best cool-down; dairy products are.

A Caribbean natural pepper remedy supposedly will spice up your love life! In Guadeloupe, where *chinense* is called *le derriere de Madame Jacques*, that pepper is combined with crushed peanuts, cinnamon sticks, nutmeg, vanilla beans packed in brandy, and an island liqueur called Creme de Banana to make an aphrodisiac. We assume it's taken internally.

**Habanero Hot Sauces**

An old island adage says that the best Caribbean hot sauce is the one that burns a hole in the tablecloth. We've never seen that happen in all our trips to the Caribbean, but we're certain that the earliest hot sauces in the region were made with the crushed *chinense* varieties. According to some sources, the Carib and Arawak Indians used pepper juice for seasoning, and after the "discovery" of chile peppers by Europeans, slave ship captains combined pepper juice with palm oil, flour, and water to make a "slabber sauce" that was served over ground beans to the slaves aboard ship.

The most basic hot sauces on the islands were made by soaking chopped Scotch bonnets in vinegar and then sprinkling the fiery vinegar on foods. Over the centuries, each island developed its own style of hot sauce by combining the crushed chiles with other ingredients such as mustard, fruits, or tomatoes.

Homemade hot sauces are still common on the islands of the Caribbean. The sauces *piquante* and *chien* from Martinique and *ti-malice* from Haiti all combine shallots, lime juice, garlic, and the hottest *chinenses* available. Puerto Rico has two hot sauces of note: one is called *pique* and is made with acidic Seville oranges and habaneros; the other is *sofrito*, which combines small piquins ("bird peppers") with annatto seeds, cilantro, onions, garlic, and tomatoes. In Jamaica, Scotch bonnets are combined with the pulp and juices of mangoes, papayas, and tamarinds. The Virgin Islands have a concoction known as "Asher," which is a corruption of "Limes Ashore" It combines limes with habaneros, cloves, allspice, salt, vinegar, and garlic.

Another good example of the combination of habaneros and other ingredients is Melinda's (called Marie Sharp's Hot Sauce in the U.S.), made in Belize from habaneros, carrots, and onions, which makes for a milder, more flavorful sauce than simply combining the pureed chiles with vinegar.

Jamaica's Pickapeppa sauce has a flavor similar to Worcestershire sauce with only a slight bite. The fruity flavor comes from mangos, raisins, and tamarind. However, it should be noted that the company has a much hotter version of Pickapeppa with more Scotch bonnets and fewer fruits.

The hot sauce called Matouk's owes its existence to a speech by Trinidadian political leader Dr. Eric Williams, who said that the variety of jams, jellies, sauces, and pickles made by housewives were an integral part of Trinidad's culture. However, he pointed out that as women gained employment, the nation was in danger of losing the tastes of the home kitchens of Trinidad and Tobago. George Matouk, a Trinidadian businessman, was inspired by Williams' speech, and in 1968 he founded Matouk's Food Products and began manufacturing jellies, jams, and hot sauces. Congo peppers (the local name for habaneros) are combined with herbs, spices, and papayas. The Matouks' brand has three heat levels of their sauce. About half of their sauce production is consumed locally, and the rest is exported, mostly to the United States and Canada. The United States is the number one market for Matouk's Trinidadian hot sauces.

The last decade has seen an enormous explosion in habanero hot sauce production, with most of it in the United States. There are now more than a hundred brands of habanero hot sauces, with more on the way. Even the McIlhenny Company is producing one, Tabasco Habanero Hot Sauce.

**2. From Seed to Shelf**

**The Habanero Family Described**

Because of the great diversity of the species, there is no typical *chinense*. The varieties range between one and four and a half feet tall, depending on environmental factors. Some perennial varieties have grown as tall as eight feet in tropical climates, but the average height in the U.S. garden is about two feet. It has multiple stems and an erect habit. The leaves are pale to medium green, usually ovate in shape, and are often large, reaching up to 6 inches long and 4 inches wide. They are usually crinkled, which is a distinguishing trait.

The flowers have white, slightly greenish corollas and purple anthers. The plant sets 2 to 6 fruits per node and this trait distinguishes it from the other *Capsicum* species, which usually only set one fruit per node. *Chinense* crosses prolifically with *annuum*, sporadically with *frutescens* and *baccatum*, and does not cross with *pubescens*.

The pods vary enormously in size and shape, ranging from chiltepin-sized berries one-quarter inch in diameter, to wrinkled and elongated pods up to five inches long. The familiar habaneros are pendant, lantern-shaped or campanulate (a flattened bell shape), and some are pointed at the end. Caribbean *chinenses* are often flattened at the end and resemble a tam, or bonnet. Often the blossom ends of these pods are inverted. The pods are green at immaturity and mature to red, orange, yellow, or white. *Chinense* pods are characterized by a distinctive, fruity aroma that is often described as "apricot-like."

**Varieties**

The basic varieties of the *chinense* species are as follows. (To put the heat scale in perspective, ratings of a jalapeño range from 3,000 to 8,000 Scoville Units.)

* Orange habaneros are perhaps the most common and are originally from the Yucatán Peninsula. They are grown commercially in California and Texas, and in home gardens all over the country. They typically measure 80,000 to 200,000 Scoville Units.
* Red habaneros are grown commercially in Costa Rica and California. The 'Red Savina' variety from GNS Spices, Inc. is the first member of the species to be awarded a Plant Variety Protection permit from the USDA. 'Red Savina' is also the hottest pepper ever tested, at 577,000 Scoville Units.
* Datil peppers are a somewhat milder variety with elongated pods that is grown around St. Augustine, Florida. We estimate their heat to be around 40,000 Scoville Units.
* Scotch bonnets are the typical, tam-shaped chiles of the Caribbean. They are also called booney peppers, bonney peppers, and goat peppers on various islands. They are usually red or yellow at maturity. They are about 100,000 Scoville Units.

**Growing the Habs**

The habanero relatives that we have collected and planted over the years are but a small fraction of the total number of pod types in the species. However, they paint a fascinating picture of the world of this intriguing species of chile pepper.

In the United States, most commercial habanero seeds are generic (meaning that their precise origin is not specified), although some varieties such as 'Red Savina' are appearing in seed catalogs. For growers who wish to find exotic *chinense* seeds, we suggest Seed Saver's Exchange or the U.S. Department of Agriculture's Plant Introduction Station in Georgia (see Sources at the end of this article).

The seeds tend to take a long time to germinate, and bottom heating is the key to speeding up the process. The *chinense*, being tropical plants, do best in areas with high humidity and warm nights, but we have heard reports of *chinense* varieties growing well in such diverse locations as northern California, Texas, Illinois, and Louisiana. Wherever they are planted, however, they are slow growers, especially in the Southwest, and the growing period is at least 100 days or more after transplanting for mature pods.

The yield varies enormously according to the varieties grown and how well the particular plants adapt to the local environment; we have grown stunted plants with as few as ten pods and large, bushy plants with fifty or more.

The key to good growth seems to be a loose, friable soil that is well-drained but kept moist. After years of growing, we know to add organic matter to the garden soil in the form of aged manure and sawdust, compost, peat moss, or a combination of all three. For container soil, vermiculite and perlite are added to commercial potting soil along with a little sand to promote drainage. Don't use garden soil for containers unless it is thoroughly mixed half and half with the above mixture.

During the growing season, take care not to over-fertilize, or you will have spectacular leaf growth and few pods. Any type of stress on the plant, such as withholding water, will tend to make the pods hotter. In hot and dry dessert climates, providing a sunscreen or partial shade can prevent sunscald and encourage vegetative growth.

**Harvesting**

As the plant flowers and sets fruit, there will be pods in all stages of maturity. Of course, the ripe, brightly colored pods are the most desirable, but the green pods are also good to cook with, if not quite as hot and flavorful. In some cases, with highly prolific plants that are setting dozens and dozens of pods, be sure to pick the pods as they get ripe. You may pick green ones as the plant approaches its "fruit load"--the maximum number of pods that a plant can hold.

If you are collecting seed, remember that only mature pods in full color will have seeds that will germinate. After picking, the length of time the pods will remain usable varies according to temperature, humidity, and storage. Fresh pods will last a week or so in the house, and a couple of weeks in the refrigerator. Clean all excess moisture off the habaneros before storing them in a plastic bag in the refrigerator. Inspect them every few days for mold and use them as soon as possible.

**Storing**

Over the years, many people have asked us how to preserve the habanero crop. The simplest method is to wash and dry the pods and place them in a plastic bag in the freezer. They will lose some of their firmness when defrosted, but the flavor, heat, and aroma are all preserved. Habaneros can also be pureed with a little vinegar and the mixture will keep in the refrigerator for weeks.

Another common preservation method is drying the pods. They should be cut in half vertically, seeds removed, and placed in a food dehydrator. After they are thoroughly dried, they can be stored in jars, stored in plastic bags in the freezer, or ground into powders (be sure to wear a dust mask!). Drying does not affect the heat level of the pods, but pods that are rehydrated will lose some flavor and aroma.

Remember, sauces and salsas are a great way to utilize excess habaneros from the garden!

**The Heat Level**

Although the species is renowned for the high heat level of its pods, we should remember that all heat levels are found in the *chinense*, from zero to the hottest ever measured. The typical commercial habanero averages between 80,000 and 150,000 Scoville Units but has great variability depending upon climate and stress. In a series of experiments at New Mexico State University, Paul Bosland and Peggy Collins tested the same variety of *chinense*, an orange habanero from Yucatán, grown under different conditions. In 1992, grown outside in a field, the pods measured 357,992 Scoville Units. The same variety, grown in the greenhouse, measured 260,825 Scoville Units. The variability of pungency approached thirty percent, which illustrates the role played by the environment in the heat levels of chile peppers. However, when cooks use habaneros and their relatives, they can assume that the recipes are hot, although it is wise to taste-test the habaneros first by placing a tiny sliver on the tongue and then chewing it up. Of course, the heat level can be adjusted by varying the number habaneros used, by increasing the amounts of the other ingredients in the recipes, or by removing the seeds and placental tissue to decrease the heat of the habaneros.

**Handling**

Since habaneros have the highest concentration of capsaicin, they are the most dangerous in terms of burns. For people sensitive to capsaicin, it can cause contact dermatitis just like poison ivy. It is particularly dangerous when it comes into contact with sensitive body parts like the eyes.

It is not merely enough to wear gloves when handling habaneros. The gloves and the cutting board used to chop them should be cleaned with bleach and a strong dish detergent to avoid transferring the capsaicin to other surfaces where it might be retransferred accidentally to the eyes. Cooks talented with knives have learned how to clean and chop an habanero without touching it with their fingers.

If you should get capsaicin in your eyes, immediately flush them with water or an eyewash.The pain will be intense, but it will soon go away. Should your fingers or hands burn from capsaicin contact, the best treatment is to submerge them in vegetable oil.

**Flavor Elements**

American chefs and cookbook authors love to wax poetic about the unique flavor of the fresh habanero relatives. Chef Mark Miller described fresh habaneros as having "tropical fruit tones that mix well with food containing tropical fruits or tomatoes," and Scotch bonnets as possessing a "fruity and smoky flavor." Cookbook author Steven Raichlen agreed, describing the Scotch bonnet as "floral, aromatic, and almost smoky." As far as the dried habaneros were concerned, Miller detected "tropical fruit flavors of coconut and papaya, a hint of berry, and an intense, fiery acidic heat."

**Habanero Substitutions and Products**

Any of the habanero relatives can be substituted for any other--Scotch bonnets for datil peppers, for example. Other varieties of chiles can be used in place of habaneros, but why bother?

There are many habanero products available in the marketplace, but the cook has to be resourceful. In addition to scouring gourmet shops and natural foods markets, cooks should explore Latin and Caribbean markets, and in some cases, Asian markets that carry Latin and Caribbean products. Here is how to use some of the processed forms:

* Dried pods. These should be rehydrated for about a half hour in hot water before using. Smoked pods are also available, and they should also be rehydrated.
* Powders. Generally speaking, use about 1 teaspoon powder to equal a single fresh pod.

Pickles. Usually West Indian in origin, these imports are used in two ways. The vinegar can be sprinkled over foods like a hot sauce, and the pods can be washed and used as a substitute for fresh pods.

Crushed or Pureed Habaneros. A highly concentrated form that sometimes has lime juice or vinegar added. One teaspoon substitutes for a single fresh pod.

Hot Sauces. Generally speaking, about two teaspoons of a commercial habanero sauce will substitute for a single fresh pod.

 **Pepper Profile: Pasilla**

by Dave DeWitt

I

In Spanish, *pasilla* means "little raisin," an allusion to the dark brown pods of this type. In California the ancho is sometimes called pasilla, causing much confusion. In western Mexico it is sometimes called *chile negro*, a term that also refers to the darker anchos. In the fresh form, the pod is known as *chilaca*.

The Plant

Pasillas are pod types of the *annuum* species. The plant has an intermediate number of stems, an erect habit, and grows 2 to 3 feet high or more. The primary branches begin over 5 inches from the lowest stem portion so the pods will not touch the ground. The leaves are ovate, smooth, medium green in color, and measure 3 inches long and 1 1/2 inches wide. The flowers have white corollas with no spots. The pods are extremely elongate, cylindrical, furrowed, and measure 6 inches long (or more) by 1 inch wide. Immature fruits are dark green, maturing to dark brown. The growing period is 90 to 100 days, and the yield is 20 pods or more to the plant. This type is not particularly pungent; measuring between 1,000 and 1,500 Scoville Units.

**Agriculture**

It is likely that the pasilla is the immediate predecessor of the New Mexican type, and it has adapted particularly well to the temperate regions of Mexico. About 7,500 acres of pasillas are cultivated in Mexico, primarily in Aguascalientes, Jalisco, Zacatecas, and Guanajuato, with the annual yield amounting to approximately 3,500 tons of dried pods. The most popular Mexican varieties are 'Pabellon One' and 'Apaseo.' There is no commercial U.S. production, but the pasilla does well in the home garden, and the pods should be allowed to dry on the plant.

**Culinary Usage**

The pasilla is part of the legend of the origin of *mole* sauces, which also contain anchos. Because it is very flavorful, the pasilla is a favorite of Mexican *moleros*, cooks who specialize in preparing unique *mole* sauces. The pasilla is mainly used in the dried pod or powder form in sauces such as *moles* and *adobos*. It adds an interesting taste and color to standard red chile enchilada sauce as well.

Roast Pork with Pasilla Adobo Sauce

Adobo is a thick sauce of chiles, vinegar, and spices that is popular in both Mexico and in the Philippines. This roast makes a wonderful entree, sliced and served with a sauce made from the pan drippings. Any leftover meat can be made into tasty shredded pork enchiladas. Accompany this roast with Mexican rice and a salad of avocados, tomatoes, onions, and sweet and hot peppers dressed with olive oil, wine vinegar, squeezed garlic, and a mix-and-match collection of minced fresh herbs such as cilantro, Mexican oregano, mint, basil, tarragon, parsley, sage, rosemary, and thyme. Note that this recipe requires advance preparation.

6 pasilla chiles, stems and seeds removed

2 cups chicken broth

1 medium onion, chopped

3 cloves garlic, chopped

3 tablespoons vegetable oil

1/2 teaspoon ground cumin

1/2 teaspoon dried oregano, crushed

2 tablespoons vinegar

1 cup beer

1 3-pound pork roast

Simmer the chiles in the chicken broth for 5 minutes, or until they are soft. Sauté the onion and garlic in the oil, add the remaining ingredients, except the pork, and simmer for 10 minutes to blend the flavors. Place the sauce in a blender and puree until smooth. Make deep gashes in the roast and push the sauce into the gashes. Pour the remaining sauce over the meat and marinate in the refrigerator overnight. Preheat the oven to 425 degrees F., place the pork on a rack on the middle shelf, and immediately reduce the heat to 350 degrees. Cook the meat for 30 to 45 minutes per pound or until the internal temperature reaches 185 degrees. Baste frequently with the sauce. Place foil over the top of the roast if it starts getting too brown.

Serves: 6

**Pepper Profile: *Pubescens* Species**

*by Dave DeWitt*

*Pubescens* is the only domesticated Capsicum species with no wild form; however, two wild species, *C. cardenasii* and *C. eximium*, are closely related. The center of origin for this species was Bolivia, and the species was probably domesticated about 6,000 B.C., making it one of the oldest domesticated plants in the Americas. Botanist Charles Heiser, citing Garcilaso de la Vega (1609), notes that *pubescens* was "the most common pepper among the Incas, just as it is today in Cuzco, the former capital of the Incan empire."

It is grown today in the Andes from Chile to Colombia, mostly in small family plots. It is also cultivated in highland areas of Central America and Mexico. The common name for this species in South America is *rocoto* or *locoto*. In Mexico, it is also called *chile manzano* (apple pepper), and *chile perón* (pear pepper), both allusions to its fruit-like shapes. In some parts of Mexico and Guatemala, *pubescens* are called *chile caballo*, "horse pepper." Yellow *pubescens* are called *canarios*, or canaries, in parts of Mexico, particularly Oaxaca.

*Pubescens* has a compact to erect habit (sometimes sprawling and vine-like) and grows up to 4 feet tall, but 2 feet is more usual in U.S. gardens. In Bolivia, they grow to 15 feet. The leaves are ovate, light to dark green, very pubescent (hairy), and measure up to 3 1/2 inches long and 2 inches wide.

The flowers have purple corollas, purple and white anthers, and stand erect above the leaves. The pods are round, sometimes pear-shaped, measuring about 2 to 3 inches long and 2 to 2 1/2 inches wide, but some pods as large as Bell peppers have been reported. The pods are green in their immature state, maturing to yellow, orange, or red.

Their heat level is 30,000 to 50,000 Scoville Units and higher. The *pubescens* varieties contain a unique set of capsaicinoids (pungency compounds), causing some people to believe they are hotter than habaneros. In parts of the Americas they are referred to as "*el mas picante de los picantes*," the hottest of the hot.

As with *C. frutescens*, there is a lack of pod diversity with *C. pubescens*. The fruits are large and stay attached to the plant. There are wild forms of *C. annuum*, *C. chinense*, and *C. baccatum*; however, with *C. pubescens*, no plant with small fruits that easily separate from the plant has ever been found. It has been suggested that *C. pubescens* was domesticated so long ago that its wild form is extinct. So, even if it had been domesticated for so long, why is the variability less? One explanation is that when *C. pubescens* was domesticated it went through a "founders effect." Founders effect is when the establishment of a new population is founded by a few original individuals that carry only a small fraction of the total genetic variation of the parental population. If this was the case, there is not enough genetic diversity to allow for genetic recombination to produce the assortment of pod forms seen in the other species.

Furthermore, *C. pubescens* is isolated from other domesticated species and cannot cross-pollinate with them. This reduces the genes available. Another factor may be the climate in which it grows best. Because it thrives only in a narrow temperature range, *C. pubescens* may not have been grown in as many places, thus reducing the opportunity for selection by humans.

Scientists are presently addressing this question with sophisticated molecular techniques, and may have an answer as to the lack of pod diversity in a few years. Of course, their work depends upon having the genetic resources available--the seeds of the future.

The *pubescens* are traditionally grown in high mountain areas of tropical countries. They can survive very light frosts but not hard freezes. Some sources state that because of their long growing season and need for long day length, the *pubescens* varieties are unsuitable for cultivation in the United States. However, experiments have shown that plants started early can achieve fruiting in one season. Some plants may not fruit because there is mostly self-incompatibility in the species. To set fruit, pollen must be transferred by bees or humans from a neighboring plant of the same variety. The species also responds well to shading because the foliage has a tendency to burn in full sun. The growing season is long, 120 days or more, and the plants produce up to 30 pods, depending on the length of the growing season.

*Pubescens* varieties are usually consumed in their fresh form because the pods are so thick they are difficult to dry. They are commonly used in fresh salsas, and the larger pods can be stuffed with meat or cheese and baked.

**Stuffed Rocoto Chiles**

(*Rocotos Rellenos)*

The heat factor in this dish can be very high, but the other ingredients will temper it somewhat. Serve it with hot slices of fresh corn and rounds of sweet potatoes.

20 red rocoto chiles, or substitute the largest jalapeños available

Water to cover

1 pound pork, cubed

3 cups water

2 tablespoons vegetable oil

2 onions, chopped

2 cloves garlic, minced

1 cup peanuts, toasted and ground

1 pound cooked green peas

1/4 teaspoon salt

1/4 teaspoon freshly ground black pepper

2 hard-boiled eggs, diced

4 eggs, separated

Vegetable oil for frying

Wash the chiles, leave the stems intact, open half way, and carefully remove the seeds. Place the peppers in a large pot, cover with water, and boil the chiles slowly for 3 minutes. Drain the chiles carefully, keeping them intact, and set aside.

Place the pork in a medium saucepan, add the 3 cups of water, and bring to a boil. Lower the heat to a simmer and cook for 1 hour, or until the pork is tender. Drain the mixture and reserve the cooking liquid. Grind the pork using a coarse setting on the grinder, and set aside.

Heat the oil in a medium skillet and sauté the onions and the garlic. Add the ground pork, peanuts, peas, salt, pepper, and enough of the reserved pork stock to keep the mixture moist. Mix in the chopped eggs, then remove from the heat and let the mixture cool for a few minutes.

Stuff the chiles with this mixture and close as tightly as possible.

Beat the egg whites until they are quite stiff and then fold the well beaten egg yolks into the whites.

Heat the oil, and when it is ready, dip each pepper into the egg mixture and deep fry for 30 to 60 seconds, until the outside is golden brown.

Yield: 20 stuffed chiles Heat Scale: Hot

***Piment d’ Espelette*:  
The Beloved Basque  
Chile Pepper**



*by Dave DeWitt*

**Recipe Index:**

[Chicken Basquaise with Espelette Piperade](http://www.fiery-foods.com/dave/espelette1.html#Chicken Basquaise with Espelette Piperade#Chicken Basquaise with Espelette Piperade) ref_red_r

[Sliced Veal with Espelette Peppers](http://www.fiery-foods.com/dave/espelette1.html#Sliced Veal with Espelette Peppers#Sliced Veal with Espelette Peppers)

[Axoa Lamb with Espelette Pepper](http://www.fiery-foods.com/dave/espelette1.html#Axoa Lamb with Espelette Pepper#Axoa Lamb with Espelette Pepper)

Some varieties of chile peppers are given treasured status in certain regions of the world, where they are celebrated in art, legend, the kitchen, and festivals. Paprika has such status in Hungary, the jalapeño in Laredo, Texas, and the *mole* varieties *ancho* and *pasilla* in central Mexico. The New Mexican varieties, grown in the state that produces more chiles than all the other United States combined, are worshiped from Taos to Las Cruces, and from Gallup to Tucumcari in the Land of Enchantment. But a little known chile is acclaimed in–of all places–southwestern France, where it has gained controlled-name status, much like Champagne sparkling wine and Roquefort cheese. That chile is *piment d’ Espelette*, or the Espelette pepper, and it has become a cultural and culinary icon in that part of Basque country.

Espelettes Decorating a Building

**Early History**

When Columbus brought chile peppers to Europe from the Caribbean after his second voyage in 1493, they were first grown in monastery gardens in Spain and Portugual as curiosities. But soon the word got out that the pungent pods were a reasonable and cheap substitute for black pepper, which was so expensive that it had been used as currency in some countries. So the best thing about chiles–in addition to their heat and flavor–was that they did not have to be imported from India; anyone could grow them as annuals in temperate climates.

Carried by Spanish and Portuguese explorers, numerous varieties of chiles quickly spread throughout the Mediterranean region and Africa, and the rest of the Eastern Hemisphere, where they permanently spiced up world cuisines such as those of India, Southeast Asia, and China. However, there were some famous national cuisines that were not conquered by chiles; Italians, for example, utilized chiles only sparingly. The *peperoncinis*, for example, are used in *antipasto*, crushed red chiles are a topping for Neapolitan pizzas, and hot red chile powder as an ingredient in some pasta sauces. But no one region in Italy celebrates chiles. In France, however, chiles were established as a tradition in just one region the Nive Valley in the southwest, and especially in the village of Espelette to the south. It is believed that chiles were introduced into the Nive Valley by Gonzalo Percaztegi in 1523, the same year that corn first made its appearance there. At first it was thought to be related to black pepper and was even called "long black American pepper," and it wasn’t until the 17th century that it was placed in its own genus.



Espelette Pepper

**Culinary Uses**

Much like ristras in the American Southwest, the red pods of the Espelette peppers are threaded on cords and are hung on the sides of buildings and from racks. The strings of peppers–translated variously as "braids" or "tresses," are allowed to dry in the sun. They are then ground into powder or made into commercial pastes. Interestingly the earliest use of the ground Espelettes is connected to yet another uniquely American crop: cacao, or chocolate.

In the 17th century, chocolate became very popular in Europe both in candies and in drinks. Chocolatiers in Bayonne, perhaps influenced by tales of Montezuma’s favorite drink, combined Espelette powder and chocolate.



Strings of Espelette Peppers

A century later, hams from the Basque area were covered with Espelette pepper to redden the ham before curing. The powder was also used in the making of Bayonne hams and some *pates*, sausages, blood sausages, rolls, and pies. From this point on, Basque cooks began using the Espelette pepper in place of black pepper in seafood dishes.

About the same heat scale as hot paprika, the Espelette pepper is regarded by the French as a four on the scale of one to ten. In fact, hot paprika powder can be substituted, as can New Mexico red chile powder.

**"The Celebration of Peppers" and Controlled-Name Status**

Up until 1940, the Espelette peppers were not made into strings because the harvest was not big enough; the peppers were merely ground into powder. But as more of the peppers were grown, farmers started selling them as strings for decorative as well as culinary purposes. By the 1960s, the Espelette peppers became so popular that the village of Espelette, population 1700, established the Celebration of Peppers, a festival much like the Hatch Chile Festival in New Mexico. The first festival was in 1967 and it is held annually the last Sunday in October. It now attracts more than 10,000 people and features food, music, dance, and games.

As the popularity of the peppers grew in France, the farmers realized that they had a very unique product, one that deserved recognition and protection. They did not want farmers in other regions to grow, for example, paprika and call it Espelette. At first they formed cooperative enterprises to protect their interests, and eventually they applied to the National Institute for Trade Name Origins for an *Appellation d’Origine Controlee* (AOC). On December 1, 1999, and AOC was granted to Espelette peppers and products, giving it the same protection as more famous names, such as Champagne sparkling wine. Only ten communities are allowed to use the name Espelette: Espelette, Ainhoa, Cambo les Bains, Halsou, Itsassou, Jatsou, Laressore, St. Pee sur Nivelle, Souraide, and Ustarritz. The total growing area is about 3,000 acres.

**Recipes**

Jar of Espelette Puree Strings of Espelette Peppers in Market

**Chicken Basquaise with Espelette Piperade**

*Piperade* is a colorful pepper sauce that is only spicy when made in the Basque region. This simple but delicious dish is often served at the Celebration of the Peppers. Serve it boiled potatoes and green beans.

½ cup olive oil

4 medium onions, chopped

3 cloves garlic

4 green bell peppers, seeds and stems removed, chopped

2 red bell peppers, seeds and stems removed, chopped

4 large tomatoes, peeled and chopped

3 tablespoons Espelette powder, or more to taste (substitute hot paprika or New Mexico red chile powder)

Pinch of thyme

1 chicken, cut up

Salt and pepper to taste

Heat 1/4 cup olive oil in a large saute pan and saute the onions and garlic for 5 minutes, stirring occasionally. Add the bell peppers and cook over medium heat for 10 minutes. Add the tomatoes and Espelette powder and cook for 20 minutes, stirring occasionally. Add the thyme, salt, and pepper and transfer to a bowl. Wipe out the pan and heat the remaining 1/4 cup of oil. Brown the chicken in the oil until golden, turning often. Pour the Piperade over the chicken, reduce the heat, cover and simmer until tender, about 30-40 minutes. Add salt and pepper to taste.

Serves 4 to 6 Heat Scale: Mild to Medium

**Sliced Veal with Espelette Peppers**

This is a classic veal dish from southwest France. If you cannot find Espelette Puree, use fresh red New Mexican chiles and puree them in a blender with a little water. Another substitute is to use fresh red bell peppers with New Mexico red chile powder. Serve with mashed potatoes and yellow squash.

1/4 cup olive oil

1 onion, sliced

1 clove garlic, chopped

4 green bell peppers, seeds and stems removed, finely chopped

2 red bell peppers, seeds and stems removed, finely chopped

1 ½ pounds veal, thinly sliced and then cut into 1-inch pieces

1/4 to ½ cup Espelette Puree

2 teaspoons freshly chopped thyme

2 bay leaves

1 cup beef bouillon

Salt and pepper to taste

In a large saute pan, heat the olive oil. Saute the onion and garlic for 5 minutes, then add the bell peppers and saute for 5 more minutes, stirring occasionally. Add the veal, Espelette Puree, thyme, and bay leaves, and saute for 5 more minutes. Add the bouillon, cover, reduce the heat, and simmer for about 30 minutes. Remove the cover and continue cooking for 10 more minutes until the mixture thickens. Add salt and pepper to taste.

Serves: 4 to 6 Heat Scale: Mild to Medium

**Axoa Lamb with Espelette Pepper**

Lamb axoa is a recipe typical of the Basque region, prepared in the same fashion as a stew. In France, lamb tongue and hooves are used to further flavor the dish, but I have omitted them here. Serve with a crusty French bread and red wine. Again, substitute hot paprika or New Mexican red chile powder for the Espelette. If you wish to make this more of a stew, add two potatoes, finely chopped, and double the bouillon.

1/4 cup olive oil

2 onions, finely chopped

2 cloves garlic, finely chopped

4 green bell peppers, finely chopped

2 red bell peppers, finely chopped

1 ½ pounds lamb, cut into ½ inch cubes

2 tablespoons Espelette pepper powder

1 ½ cups beef bouillon

2 bay leaves

Salt and pepper to taste

In a large pot, heat the olive oil. Saute the onions and garlic for 5 minutes, stirring occasionally. Add the bell peppers and saute for 5 minutes, stirring occasionally. Add the lamb and saute another 5 minutes. Add the Espelette powder, the bouillon, and bay leaves, reduce the heat, and simmer, covered, for 25 minutes. If using potatoes, simmer until the potatoes are tender. Add salt and pepper to taste.

Serves: 4 to 6 Heat Scale: Mild to Medium

**Pimentón:  
The Smoked Chile Powder**

**from La Vera, Spain**

*by Dave DeWitt*

Logo of the *Pimenton* Growers and Processors Association

**Recipe Index**

[Spanish Chorizo with *Pimentón*](http://www.fiery-foods.com/dave/pimenton.html#Spanish Chorizo#Spanish Chorizo)

[*Pimentón* Garlic Soup](http://www.fiery-foods.com/dave/pimenton.html#Pimenton Garlic Soup#Pimenton Garlic Soup)

[Grilled Tuna Steaks with *Salsa* *Pimentón*](http://www.fiery-foods.com/dave/pimenton.html#Grilled Tuna Steaks#Grilled Tuna Steaks)

Everyone knows that Columbus carried chile peppers to Spain from the New World on his second voyage in 1493, but who first used the pods for flavoring food? José Guerra, writing in "Foods from Spain News," speculates that monks at the Monastery of Guadalupe in Extremadura were the first Europeans to discover the flavor–and heat–of chiles by crushing them and adding them to their soups. This theory agrees with that of food historians, who believe that chiles initially were grown in monasteries and the seeds were spread throughout Spain and Europe first by traveling monks and then by Spanish and Portuguese traders, who introduced them into Africa, India, and Asia. Within a hundred years after Columbus brought them to Spain, chile peppers had circumnavigated the globe and spiced up numerous regional cuisines.

But what happened to the chiles in Spain? Why didn’t the cuisine of Spain become fired up like that of India, or even Hungary? No one knows for certain. As in Italy, there are a few hot and spicy dishes in Spain, but chiles did not dominate the cuisine–except in one part of Extremadura in the far west, the same region where they were first introduced. That hotbed of chiles is the valley of La Vera, where the *pimientos* (chiles) are grown and smoked to make the famous spice *pimentón* *de la Vera.*

Pimiento Pods Ready to Be Picked

Some sources speculate that the *pimentón* tradition in La Vera was started by another group of monks from the Yuste Monastery in Caceres in the sixteenth century. According to Janet Mendel, author of *Traditional Spanish Cooking*, when the Spanish emperor Charles V abdicated the throne of Spain in 1555 and retired to the Yuste monastery, he loved *pimentón* immensely. He recommended it to his sister, Queen Mary of Hungary, and that is how paprika became popular in that country. (Other sources give credit to the Turks for introducing chiles into Hungary at a later date.)

The Yuste monks, over the centuries, shared their secrets of growing and processing the chiles with local farmers. But it wasn’t until the mid-nineteenth century that the farmers began growing their *pimientos* on a large scale and processing them into *pimentón.* These days, *pimentón* is the region’s main source of income.

**Growing and Smoking the *Pimientos***

In early March, farmers germinate the seeds and grow seedlings in greenhouses. They are transplanted to the fields in May. Some of the fields are so remote that they are not accessible to tractors and other farm equipment, so farmers use mule labor to prepare the fields, and ride mules to the fields to remove weeds by hand. In all the fields, the crop is picked by hand in October when all the pods are bright red but still pliable. In eastern Spain, where it is drier, the pods can be dried in the sun. But in Extremadura, fall rains raise the humidity to the level where the pods would rot or mold. So in the La Vera valley, they are placed in burlap sacks and then loaded on flatbed trucks that haul them to the drying buildings.

Long dried and smoked pimiento pods (sweet variety, left) and cascabel-like (hot variety, above)

The *pimientos* are slowly dried over smoldering pedunculate or holm oak logs for ten to fifteen days and are hand-turned twenty-four hours a day before they are ready to be processed into *pimentón.* The smoke-dried pods are then ground into powder (the *pimentón*) and packed in bulk containers. The majority of the *pimentón* goes to the sausage factories, where it is used to spice up, flavor, and brighten up the famous Spanish *chorizo.* But it is also packed in tins for the consumer market. There are three varieties of *pimentón*--sweet (*dulce*), hot (*picante*), and bittersweet (*agridulce*).



Grinding Machines in a *Pimentón* Processing Plant

*Pimentón de la Vera* was the first chile pepper product to be granted a *Denominacíon de Origen*, or controlled name status. (The second was the *piment d’Espelette*, which was granted a French *Appellation d’Origine Controlee*). Controlled name status means that other varieties of *pimientos* cannot be called *pimentón*, and that consumers are guaranteed that the product is made in the same, time-honored manner. Look for the letters "D.O." on any product labeled as *pimentón*.

**Culinary Uses**

*Pimentón de La Vera* in its typical tin container, hot variety ("picante")

Sweet *pimentón* is great for flavoring potatoes, rice, and fish recipes, while the traditional bittersweet, smoky variety is used as a flavoring for smoked meats and in beans, game dishes, and stews. The hot type is used in winter soups, chorizo, and Galician *pulpo*, or octopus. The octopus is boiled and sliced, then sprinkled with olive oil, salt, and hot *pimentón* powder. Interestingly, there are recipes for *chorizo* and potato stews that utilize all three of the types of *pimentón*. Substitutions for *pimentón* include hot paprika and New Mexican ground red chile, but for a better approximation of the smokiness of the *pimentón*, mix in some ground chipotle chile.

Conversely, hot *pimentón* can be substituted for any recipe calling for paprika or ground red chile. Chili con carne enthusiasts should experiment with *pimentón* in their never-ending quest to improve their chili.

**Resources**

*Pimentón* may be found in markets selling Iberian and Latino foods. It is available by mail order from the following websites:

[www.spaincuisine.com](http://www.spaincuisine.com)

[www.latienda.com](http://www.latienda.com)

[www.thespicehouse.com](http://www.thespicehouse.com)

[www.tablespan.com](http://www.tablespan.com)

In Europe, especially in the German-speaking countries, *Pimentón de La Vera* is available at the Pepperworld Hot Shop:

[www.pepperworld.com](http://www.pepperworld.com)

**Pimentón Recipes**

**Spanish Chorizo with *Pimentón***

This is the classic Spanish sausage which was later transplanted to Mexico and flavored with different chiles. Traditionally, the links are air-dried in a cool place before being refrigerated. For a great breakfast treat, remove the sausage from the casings, crumble and fry it in a pan. Add eggs that have been whisked and scramble them with the sausage. Serve with a chile sauce made from *pimentón*. You will need a sausage stuffer attachment for your grinder for this recipe. In some versions of this recipe, other seasonings, such as cinnamon and coriander, are added.

2 pounds lean pork, coarsely ground

3 cloves garlic, mashed in a press

1/4 cup vinegar

1 teaspoon oregano

1/4 cup hot *pimentón*

1 teaspoon freshly ground black pepper

2 teaspoons salt

1/4 teaspoon ground cumin

1 teaspoon oregano

1 yard sausage casing

In a large bowl, combine all ingredients. Using the sausage stuffer, force the mixture into the casings and twist off links and tie them.

Yield: About 2 pounds Heat Level: Medium

***Pimentón* Garlic Soup**

The traditional, quick garlic soup of Madrid is transformed into a smoky-hot masterpiece with the addition of *pimentón*. What a perfect dish for a Sunday brunch!

1/4 cup olive oil

2 ounces diced bacon

6 cloves garlic, diced

1 ½ tablespoons hot *pimentón*

1/4 teaspoon ground cumin

6 cups homemade chicken broth

Salt to taste

20 baguette slices, ½ inch thick and toasted

4 eggs

Heat the olive oil in a large soup pot over medium heat. Add the bacon and garlic and fry for about 3 minutes. Add the *pimentón*, cumin, and broth. Add salt to taste. Bring the mixture to a boil, then reduce the heat. Add the baguette slices and simmer for 5 minutes. Break each egg into the soup so that it rests on top. Cover the pot and cook until the whites are set but the yolks are still liquid, about 4 minutes. Carefully ladle the soup and eggs into bowls and serve.

Serves: 4 Heat Scale: Medium

**Grilled Tuna Steaks with *Salsa* *Pimentón***

In this seafood specialty, the *pimentón* is used in the marinade and in the sauce that seasons it at serving. Salmon steaks or the steaks of any large fish may be substituted. Serve with a Caesar salad and saffron rice.

2 tablespoons olive oil

3 tablespoons hot *pimentón*

Salt and pepper to taste

2 tablespoons chopped fresh Italian parsley

4 tuna steaks, 1-inch thick

6 cloves garlic, minced

1 medium purple onion, chopped

2 medium tomatoes, chopped

2 red bell peppers, roasted, peeled, seeded, and chopped

½ cup minced green olives

Italian parsley leaves for garnish.

In a small bowl, combine 1 tablespoon of the olive oil, 1 tablespoon of *pimentón*, salt and peppers, and the parsley and mix well. Rub this mixture over each side of the tuna steaks. Cover the steaks and marinate for 1 hour.

Heat the remaining olive oil in a saucepan and add the garlic, onion, another tablespoon of *pimentón* and saute for about 2 minutes. Add the tomatoes and bell peppers and cook until the mixture thickens, about 5 minutes. Remove from the heat and transfer to a blender or food processor. Add the remaining *pimentón* and the olives and puree. Transfer the sauce back to the pan and keep warm.

Grill or broil the tuna steaks to the desired doneness. Serve covered with the sauce and garnished with the parsley leaves.

Serves: 4 Heat Scale: Medium

**Chiltepin: In the Land of the Wild Chiles**

by Dave DeWitt

**Recipes in this story:**

[Salsa Casera](http://www.fiery-foods.com/dave/chiltepin.html#Salsa Casera#Salsa Casera)

[Chiltepines en Escabeche](http://www.fiery-foods.com/dave/chiltepin.html#Chiltepines en Escabeche#Chiltepines en Escabeche)

[Agua Chile](http://www.fiery-foods.com/dave/chiltepin.html#Agua Chile#Agua Chile)

[Capón de Ajo](http://www.fiery-foods.com/dave/chiltepin.html#Capón de Ajo#Capón de Ajo)

[Carne Adovada Estilo Sonora](http://www.fiery-foods.com/dave/chiltepin.html#Carne Adovada Estilo Sonora#Carne Adovada Estilo Sonora)

[Caldo Puchero](http://www.fiery-foods.com/dave/chiltepin.html#Caldo Puchero#Caldo Puchero)

[Sonoran Enchiladas](http://www.fiery-foods.com/dave/chiltepin.html#Sonoran Enchiladas#Sonoran Enchiladas)

[Chiltepin Chorizo](http://www.fiery-foods.com/dave/chiltepin.html#Chiltepin Chorizo#Chiltepin Chorizo)

[Machaca Sierra Madre](http://www.fiery-foods.com/dave/chiltepin.html#Machaca Sierra Madre#Machaca Sierra Madre)

[Chiltepin Ice Cream](http://www.fiery-foods.com/dave/chiltepin.html#Chiltepin Ice Cream#Chiltepin Ice Cream)

My amigo Antonio swears that the motto of the Sonoran bus lines is "Better Dead Than Late," and I believe him. The smoke-belching buses were flying by us on curves marked by shrines commemorating the unfortunate drivers whose journeys through life had abruptly ended on this mountain road. We waved the buses on and cruised along at a safer speed to enjoy the spectacular vistas on the way to the valley of the *Chiltepineros*.

It was November, the time of the Sonoran Chiltepin harvest, yet the temperature was in the upper 80s. My wife, Mary Jane, and I had accepted the invitation of Antonio Heras-Duran to visit the home of his mother, Josefina, the "chile queen," who lives in the town of Cumpas. From there, we journeyed through the spectacular scenery of the foothills of the Sierra Madre range--Chiltepin country. Our destination was the Rio Sonora valley and the villages of La Aurora and Mazocahui. As we drove along, Antonio and I reminisced about our fascination with the wild chile pepper.

**A Fiery Flashback**

Both of us had attended a symposium on wild chiles that was held in October, 1988, at the Desert Botanical Garden in Phoenix. The leader of the conference was the ecologist Dr. Gary Nabhan, author of *Gathering the Desert*, director of Native Seeds/SEARCH, and an expert on Chiltepins. Other chile experts attending included Dr. W. Hardy Eshbaugh, a botanist from Miami University of Ohio; Dr. Jean Andrews, author of *Peppers: The Domesticated Capsicums*; and Cindy Baker of the Chicago Botanical Garden.



As the conference progressed, I was amazed by the amount of information presented on Chiltepins. Botanists believe that these wild chiles are the closest surviving variety to the earliest forms of chiles which developed in Bolivia and southern Brazil long before mankind arrived in the New World. The small size of their fruits were perfect for dissemination by birds, and the wild chiles spread all over South and Central America and up to what is now the United States border millennia before the domesticated varieties arrived. In fact, Dr. Eshbaugh believes they have the widest distribution of any chile variety, ranging from Peru north to the Caribbean, Florida, and Louisiana and west to Arizona.

There is a wide variation in pod shapes, from tiny ones the size and shape of BBs to elongated pods a half inch long. By contrast, domesticated Piquins have much longer pods, up to three inches. The Chiltepins most prized in Mexico are spherical and measure five to eight millimeters in diameter. They are among the hottest chiles on earth, measuring up to 100,000 Scoville Units and a 9 on the heat scale.

The word "Chiltepin" is believed to be derived from the Aztec language (Nahuatl) combination word "chilli" + "tecpintl," meaning "flea chile," an allusion to its sharp bite. That word was altered to "chiltecpin," then to the Spanish "chiltepín," and finally Anglicized to "chilipiquin," as the plant is known in Texas. We have settled on a non-accented "Chiltepin" as the English term for the plant and fruit. Its botanical name is *Capsicum annuum* var. *aviculare*.

In Sonora and southern Arizona, Chiltepins grow in microhabitats in the transition zone between mountain and desert, which receive as little as ten inches of rain per year. They grow beneath "nurse" trees such as mesquite, oak, and palmetto, which provide shelter from direct sunlight, heat, and frost. In the summer, there is higher humidity beneath the nurse trees, and legumes such as mesquite fix nitrogen in the soil--a perfect fertilizer for the Chiltepins. They also protect the plant from grazing by cattle, sheep, goats, and deer. Chiltepins planted in the open, without nurse trees, usually die from the effects of direct solar radiation.

Although the Chiltepin plant's average height is about four feet, there are reports of individual bushes growing ten feet tall, living twenty-five to thirty years, and having stems as big around as a man's wrist. Chiltepins are resistant to frost but lose their leaves in cold winter weather. New growth will sprout from the base of the plant if it is frozen back.

There is quite a bit of legend and lore associated with the fiery little pods. In earlier times, the Papago Indians of Arizona traditionally made annual pilgrimages into the Sierra Madre range of Mexico to gather Chiltepins. Dr. Nabhan discovered that the Tarahumara Indians of Chihuahua value the Chiltepins so much that they build stone walls around the bushes to protect them from goats. Besides spicing up food, Indians use Chiltepins for antilactation, the technique where nursing mothers put Chiltepin powder on their nipples to wean babies. Chiltepins are also an aid in childbirth because when powdered and inhaled they cause sneezing. And, of course, the hot chiles induce gustatory sweating, which cools off the body during hot weather.

In 1794, Padre Ignaz Pfeffercorn, a German Jesuit living in Sonora, described the wild chile pepper: "A kind of wild pepper which the inhabitants call *chiltipin* is found on many hills. It is placed unpulverized on the table in a salt cellar and each fancier takes as much of it as he believes he can eat. He pulverizes it with his fingers and mixes it with his food. The chiltipin is the best spice for soup, boiled peas, lentils, beans and the like. The Americans swear that it is exceedingly healthful and very good as an aid to the digestion." In fact, even today, Chiltepins are used--amazingly enough--as a treatment for acid indigestion.

Padre Pfeffercorn realized that Chiltepins are one of the few crops in the world which are harvested in the wild rather than cultivated. (Others are mushrooms, piñon nuts, Brazil nuts, and some wild rice.) This fact has led to concern for the preservation of the Chiltepin bushes because the harvesters often pull up entire plants or break off branches. Dr. Nabhan believes that the Chiltepin population is diminishing because of overharvesting and overgrazing. In Arizona, a Chiltepin reserve has been established near Tumacacori at Rock Corral Canyon in the Coronado National Forest. Native Seeds/SEARCH has been granted a special use permit from the National Forest Service to initiate permanent marking and mapping of plants, ecological studies, and a management plan proposal.

The symposium on wild chiles was fascinating, and we even got to taste some Chiltepin ice cream. But, it was even more interesting to see the Chiltepineros in action years later.

**In the Village of the Dawn**

The only way to drive to the village of the dawn (La Aurora) is to ford the Rio Sonora, which was no problem for Antonio's Jeep. The first thing we noticed about the village was that nearly every house had thousands of brilliant red Chiltepins drying on white cloths in the front yard. We stopped at the modest house of veteran chilepinero Pedro Osuna and were immediately greeted warmly and offered liquid refreshment. As Pedro measured out the Chiltepins he had collected for Antonio and Josefina, we asked him about the methods of the Chiltepineros.

He said that the Durans advanced him money so he could hire pickers and pay for expenses such as gasoline. Then he would drive the pickers to ranches where the bushes were numerous. He dropped the pickers off alongside the road, and they wandered through the rough cattle country handpicking the tiny pods. In a single day, a good picker could collect only six quarts of Chiltepins. At sunset, the pickers returned to the road, where Pedro met them. The ranchers who owned the land would later be compensated with a liter or so of pods.

Usually, the pods would be dried in the sun for about ten days. But because that technique is lengthy and often results in the pods collecting dust, Antonio had built a solar dryer in back of Pedro's house. Air heated by a solar collector rose up a chimney through racks, with screens holding the fresh Chiltepins--a much more efficient method. Modern technology, based upon ancient, solar-passive principles, had arrived at the village of the dawn.

I asked Pedro how the harvest was going, and he said it was the best in more than a decade because the better than average rainfall had caused the bushes to set a great many fruits. Antonio added that during the drought of 1988, Chiltepins were so rare that there was no export crop. According to Pedro, factors other than rainfall also had an influence on the harvest--specifically, birds and insects. Mockingbirds, pyrrhuloxia (Mexican cardinals), and other species readily ate the pods as they turned red, but the real damage to the entire plant was caused by grasshoppers.

The total harvest in Sonora is difficult to estimate, but at least twenty tons of dried pods are collected and sold in an average year. Some Chiltepineros have suggested that in a wet year like 1990, fifty tons might be a better estimate. The total export to the United States is estimated at more than six tons a year, and the Durans account for much of that. As I watched Antonio and his mother weigh huge sacks of Chiltepins on the small scale in front of the market, I asked Antonio about prices.

He declined to tell me what he paid the Chiltepineros, but he offered a wealth of information about other pricing information. Between 1968 and 1990, the wholesale price of Chiltepins had multiplied nearly ten fold. Between 1987 and 1990, the price had nearly tripled, mostly because of the 1988 drought. Currently, Chiltepins were being sold in South Tucson in one-quarter ounce packages for $2.00, which equates to a phenomenal $128 per pound. Thus, at that time, Chiltepins were the second most expensive spice in the world, after saffron.

Why do people in the United States lust after these tiny pods? Dr. Nabhan suggests that Chiltepins remind immigrants of their northern Mexico homeland and help them reinforce their Sonoran identity. Also, they have traditional uses in Sonoran cusine, as evidenced by the recipes we collected. In addition to spicing up Sonoran foods, they are an anti-oxidant and thus help preserve *carne seca*, the dried meat we call jerky. No wonder the Chile Queen and her son work hard to import many hundreds of pounds of pods.

After the sacks of Chiltepins were loaded into the Jeep, we were joined by *Arizona Republic* reporter Keith Rosenblum, who was writing a story on the Chiltepineros. We went for lunch in the nearby village of Mazocahui, passing signs reading "Se Vende Chiltepin," Chiltepins for sale. At the rustic restaurant, which was really the living room of someone's house, we sat down for a fiery feast. Bowls of Chiltepins were on the table, and the extremely hot *salsa casera* was served with carne adovada, *carne machaca*, beans, and the superb, extremely thin Sonoran flour tortillas.

**The Future of Chiltepins**

On the drive back to Cumpas, Antonio spoke of his dreams--and the problems inherent in achieving them. He wanted to create a Chiltepin plantation, where all the bushes were centrally located and irrigated, thus eliminating wasted time and money with pickers wandering for miles through rough country.

I reminded him of the problems with previously cultivated Chiltepin crops that we had learned about at the symposium. In those experiments, growers had planted the Chiltepins in rows under artificial shade and had irrigated them as if they were growing Jalapeños. The cultivated Chiltepins had the tendency to produce pods fifty percent larger than the wild variety, which did not seem authentic and thus were rejected by consumers. Several reasons for the occurrence of the larger pods had been advanced. There was the natural tendency of growers to select larger pods for their seed stock for the following year, which is how chiles developed from BB sized to the large pods we have today. Also, increased water and fertilizer could enlarge the pods.

The wild plants, when cultivated, were susceptible to chile wilt, the fungal disease aggravated by too much water. In one test planting near the Rio Montezuma, the Chiltepin plants were wiped out by moth caterpillars, yet a wild population just two miles away was unaffected. One possible explanation had been offered: during times of drought, Chiltepins went dormant, as did their nurse plants. However, during the drought, chiles that were cultivated in rows and irrigated stuck out like sore thumbs and attracted pests.

But Antonio had a plan to eliminate those problems. He would mimic nature, he told me, and improve on it only slightly. He envisioned a "natural plantation," one near Cumpas where he would plant thousands of Chiltepin plants under mesquite nurse trees and provide drip irrigation to them. There were plenty of friends and relatives--especially kids--to scare off birds, to spread netting to defeat grasshoppers, and to pick the crop. Dogs would guard the crop from unauthorized harvesters, and Antonio's solar dryers would provide a clean, perfect crop. It seemed eminently logical to me, and I wished him luck.

Back in the town of Cumpas, loud salsa music enlivened the streets as if a fiesta were in progress. Josefina and her assistant, Evalia, prepared a wonderful, Chiltepin-spiced meal. We drank some *bacanora*, the magical Mexican moonshine, and dined on an elegant--and highly spiced--menu of Sonoran specialties.

I felt inspired. After submerging myself in the Chiltepin culture of Sonora, I was very comfortable in saying, "Yo soy un chiltepínero," *I* am a Chiltepinero.

**Finding Chiltepins**

Chiltepins can be found on spice racks in supermarkets and Hispanic grocery stores throughout the Southwest. They are also available from the following sources.

**Retail:** Old Southwest Trading Company, P.O. Box 7545, Albuquerque, NM 87194, (505) 836-0168.

**Seeds:** Native Seeds/SEARCH, 2509 Campbell Ave. #325, Tucson, AZ 85719, FAX (520) 327-5821 and Plants of the Southwest, Agua Fria Rt. 6, Box 11A, Santa Fe, NM 87501, (505) 438-8888.

**Recipes:**

**Salsa Casera** (Chiltepin House Sauce)

This diabolically hot sauce (at least a 9 on the heat scale) is also called Chiltepin *pasta* (paste). It is used in soups and stews and to fire up *machaca*, eggs, tacos, tostadas, and beans. This is the exact recipe prepared in the home of Josefina Duran in Cumpas, Sonora.

2 cups Chiltepins

8 to 10 cloves garlic

1 teaspoon salt

1 teaspoon Mexican oregano

1 teaspoon coriander seed

1 cup water

1 cup cider vinegar

Combine all ingredients in a blender and puree on high speed for 3 to 4 minutes. Refrigerate for one day to blend the flavors. It keeps indefinitely in the refrigerator.

Yield: 2 cups Heat Scale: Extremely Hot

**Chiltepines en Escabeche**

In the states of Sonora and Sinaloa, fresh green and red Chiltepins are preserved in vinegar and salt. They are used as a condiment or are popped into the mouth when eating any food--except, perhaps, oatmeal. Since fresh Chiltepins are not available in the U.S., adventurous cooks and gardeners must grow their own. The tiny chiles are preserved in three layers in a 1 pint, sterilized jar.

Fresh red and/or green Chiltepins (as many as you want to pickle)

3 cloves garlic, peeled

3 teaspoons salt

3 tablespoons cider vinegar

water

Fill the jar 1/3 full of Chiltepins. Add 1 clove garlic, 1 teaspoon salt, and one tablespoon cider vinegar. Repeat this process twice more and fill the jar to within 1/2 inch of the top with water.

Seal the jar and allow to sit for 15 to 30 days.

Yield: 1 pint Heat Scale: Hot

**Agua Chile**

("Chile Water")

One of the most basic Chiltepin dishes known, this recipe is prepared only in the state of Sinaloa, where the Chiltepins produce fruits all year long. This simple soup is served in mountain villages, and everyone makes his own in a soup bowl.

2 Chiltepins (or more, to taste), crushed

1 garlic clove, chopped

1/4 ripe tomato, diced

Pinch Mexican oregano

Pinch salt

Boiling water

In a soup bowl, add all ingredients except the water and mix together. Add boiling water to the desired consistency and mash everything together with a large spoon.

Serves: 1 Heat Scale: Medium

**Capón de Ajo** (Chopped Garlic Soup with Chiltepins)

* Another basic Chiltepin soup. This one is for true garlic lovers!
* 8 to 10 cloves garlic, chopped
* 1/2 onion, chopped (optional)
* 1 tablespoon vegetable oil or butter
* 4 Chiltepins (or more, to taste), crushed
* 2 cups boiling water
* 1 thin flour tortilla, heated on a griddle until crisp

Sauté the garlic and onion in the oil or butter until soft, then transfer to a soup bowl. Add the Chiltepins and pour in the boiling water. Break the tortilla into pieces and add it to the liquid.

Serves: 1 Heat Scale: Hot

**Carne Adovada Estilo Sonora** (Sonoran-Style Marinated Pork)

This unusual recipe is half jerky and half grilled pork. Don't worry about exposing the meat to the air; the vinegar is a high-acid preservative.

* 10 Chiltepins (or more to taste), seeds removed and saved
* 10 dried red New Mexican chiles, stems removed, seeds removed and saved
* 3 large cloves garlic
* 1 teaspoon Mexican oregano
* 1 teaspoon salt
* 1/2 cup cider vinegar
* 1/2 cup water
* 1 small cabbage, chopped
* Juice of 4 limes
* 4 lbs pork tenderloin, sliced into strips 1/4 -1/2 inch thin  
  (for easier slicing, freeze the pork slightly, then slice)
* Corn or flour tortillas

Boil the New Mexican chiles until they are soft. Add all the other ingredients except the pork, chile seeds, and tortillas and puree in a blender to make the marinade. Add the seeds to the chile marinade and marinate the pork in the mixture for an 1 hour. Hang the strips of meat over a clothesline in the sun and arrange cheesecloth around them to keep the insects away. Dry the meat in the sun for two days in dry weather and then refrigerate until ready to use. Grill the meat strips over mesquite wood for 1 to 2 minutes per side. Dice the strips and spread the meat over thin flour or corn tortillas.. Spread chopped cabbage over the meat and sprinkle lime juice over the top. Fold the tortilla in half and serve.

Serves: 8 Heat Scale: Hot to Extremely Hot

**Caldo Puchero** (Pot of Vegetable Stew with Chiltepins)

Like most stews, this one takes a while to cook, about 4 hours. It is interesting because it contains a number of pre-Columbian ingredients, namely Chiltepins, corn, squash, potatoes, and tepary beans. The spicy heat can be adjusted by adding or subtracting Chiltepins.

* 15 Chiltepins, or more to taste
* 1 beef soup bone with marrow
* 1 cup dried tepary or garbanzo beans
* 4 cloves garlic, chopped
* 1 acorn or butternut squash, peeled, seeds removed, and cut into 1-inch cubes
* 3 ears corn, cut into 2-inch rounds
* 4 carrots, cut into 1-inch pieces
* 1 head cabbage, quartered
* 3 green New Mexican chiles, roasted, peeled, seeds and stems removed, chopped
* 3 stalks celery, cut into 1-inch pieces
* 2 large potatoes or sweet potatoes, cut into 1-inch cubes
* 3 zucchini squash, cut into 1/2-inch slices
* 1 onion, quartered
* 2 cups fresh string beans, cut into 1-inch pieces
* 1/2 cup minced fresh cilantro
* Water

In a large soup kettle combine the Chiltepins, soup bone, beans, garlic, and twice as much water as needed to cover. Bring to a boil, reduce heat, and simmer for 1 hour. Add the acorn or butternut squash, the corn, and more water and simmer for 30 minutes. Add the carrots and cabbage and simmer for 15 minutes. Add the green chiles, celery, and potatoes and cook for 30 minutes. Add the zucchini, onion, and string beans and simmer for 30 to 45 minutes until everything is tender. When ready to serve, remove the kettle from the heat, remove the soup bone, and add the cilantro.

Serves: 8 Heat Scale: Hot

**Sonoran Enchiladas**

These enchiladas are not the same as those served north of the border. The main differences are the use of freshly made, thick corn tortillas and the fact that the enchiladas are not baked. We dined on these enchiladas one night in Tucson as they were prepared by Cindy Castillo, a friend of the Duran family, who is well-versed in Sonoran cookery.

*The Sauce:*

* 15 to 20 Chiltepins, crushed
* 15 dried red New Mexican chiles, seeds and stems removed
* 1 teaspoon salt
* 3 cloves garlic
* 1 teaspoon vegetable oil
* 1 teaspoon flour

In a saucepan, combine the chiles, salt, and enough water to cover. Boil for 10 or 15 minutes or until the chiles are quite soft. Allow the chiles to cool and then puree them in a blender along with the garlic. Strain the mixture, mash the pulp through the strainer, and discard the skins. Heat the oil in a saucepan, add the flour, and brown, taking care that it does not burn. Add the chile puree and boil for5 or 10 minutes until the sauce has thickened slightly. Set aside and keep warm.

*The Tortillas:*

* 2 cups masa harina
* 1 egg
* 1 teaspoon baking powder
* 1 teaspoon salt
* Water
* Vegetable oil for deep frying

Mix the first four ingredients together thoroughly, adding enough water to make dough. Using a tortilla press, make the tortillas. Deep fry each tortilla until it puffs up and turns slightly brown. Remove and drain on paper towels and keep warm.

*To Assemble and Serve:*

2 cups grated queso blanco or Monterey Jack cheese, Shredded lettuce, 3 to 4 scallions, minced (white part only)

Place a tortilla on each plate and spoon a generous amount of sauce over it. Top with the cheese, lettuce, and scallions.

Serves: 4 to 6 Heat Scale: Hot

**Chiltepin Chorizo**

There are as many versions of *chorizo* in Mexico and the Southwest as there are of enchiladas. Essentially, it is a hot and spicy sausage that is served with eggs for breakfast, as a filling for tostados or tacos, or mixed with refried beans. This Sonoran version is spicier than most, and, in addition, it is served crumbled rather than being formed into patties.

* 15 to 20 Chiltepins, crushed
* 1 cup red New Mexican chile powder
* 1 tablespoon chile seeds (from Chiltepins or other chiles)
* 1 pound ground lean pork
* 1/4 teaspoon salt
* 1/4 teaspoon freshly ground black pepper
* 1/2 teaspoon Mexican oregano
* 3 Tablespoons white vinegar
* 4 cloves garlic, minced
* 1 teaspoon ground cloves

Combine the pork with the rest of the ingredients, mix well, and let it sit at room temperature for 1 or 2 hours, or in the refrigerator overnight. (It keeps well in the refigerator for up to a week. Or, freeze the chorizo in small portions and use as needed.)

Fry the chorizo until it is well-browned.

Serves: 4 Heat Scale: Hot to Extremely Hot

**Machaca Sierra Madre**

The word "machaca" derives from the verb *machacar*, to pound or crush, and that description of this meat dish is apt. The shredded meat is often used as a filling for burritos or chimichangas and is sometimes dried.

* 3 pound arm roast
* 10 to 15 Chiltepins, crushed
* 1 and 1/2 cups chopped green New Mexican chile, roasted, peeled, stems removed
* 1 cup tomatoes, peeled and chopped
* 1/2 cup onions, chopped
* 2 cloves garlic, minced

Put the roast in a large pan and cover it with water. Bring to a boil, reduce heat, cover, and simmer until tender and until the meat starts to fall apart, about 3 or 4 hours. Check it periodically to make sure it doesn't burn, adding more water if necessary.

Remove the roast from the pan and remove the fat. Remove the broth from the pan, chill, and remove the fat. Shred the roast with a fork.

Return the shredded meat and the defatted broth to the pan, add the remaining ingredients, and simmer until the meat has absorbed all the broth.

Serving Suggestions: Serve the meat wrapped in a flour tortilla along with shredded lettuce, chopped tomatoes, grated cheese, and sour cream, which would reduce the heat scale.

Serves: 6 to 8 Heat Scale: Hot

**Chiltepin Ice Cream**

This novelty was first served in 1988 for the symposium on wild chiles at the Desert Botanical Garden in Phoenix and at the Fiesta de los Chiles at the Tucson Botanical Gardens. It is very hot in the proportions given (despite the tendency of ice cream to cut the heat), so you may want to reduce the quantity of Chiltepins.

* ½ cup Chiltepines en Escabeche (see recipe), rinsed thoroughly  
  and pulverized (or substitute fresh green or red pods)
* 1 gallon vanilla ice cream

Combine all ingredients and mix thoroughly in a blender until green flecks appear throughout the ice cream. Serve in small portions.

Serves: 20 Heat Scale: Hot