

# PASSION FRUIT

New Mexico  
chile fuels a  
global love  
affair. We dive  
into the science,  
the romance,  
the flavors,  
and the recipes.

Photographs by  
**DOUGLAS MERRIAM**

The harvest pours forth in southern New Mexico. **Facing page:** A sample of varieties grown at the Chile Pepper Institute, in Las Cruces.



The Big Jim chile variety is notable for its size and heat. It's a statewide favorite for chiles rellenos.



# The Mystery of Big Jim

A 10-year effort to restore one of New Mexico's most distinctive chiles underscores how memory thrives in our taste buds. By Kate Nelson

In the early 2000s, Mesilla Valley chile farmers brought a conundrum to Paul Bosland. “Our chile doesn’t taste right anymore,” they told him, “not like what we grew up with, not *our* chile.”

Since 1975, they had planted the NuMex Big Jim

variety developed by Roy Nakayama at New Mexico State University’s College of Agriculture. Nakayama had worked with Hatch grower James Lytle on the test plantings and honored his collaborator by naming the chile after him.

*Guinness World Records*

named the Big Jim the largest green chile, given that it can reach 10 inches long. And its meaty walls made it perfect for chiles rellenos. Used as well in enchiladas and sauces, its flavor came to define New Mexico chile.

But something had changed, the farmers told

Bosland, one of Nakayama’s successors. Could he fix it?

Already adept at breeding new varieties, the then director of NMSU’s Chile Pepper Institute set to work. The first thing he learned? “They released the variety too early,” he says. “The heat was variable.” The flavor was another matter. “No one could describe it,” he says, which is a bigger deal in chile cultivation than you might think.

When it comes to flavor and heat, chile researchers have long relied on subjective assessments. The Scoville scale for heat was originally based on tasters estimating hotness to establish a heat index from zero (bell peppers) to 16 million (pure capsaicin). The advent of high-performance liquid chromatography enabled researchers to actually count capsaicin molecules, bringing scientific rigor to the process.

But what kind of heat is it, where does it land on the tongue, how long does it last, and just how does it taste? Scientific analysis of flavor is emerging research at the institute, with years of work ahead. For now, we have the impressive-sounding organoleptic method. “That just means ‘I bit it and I know what it tastes like,’” Bosland says.

While you might describe it as sweet, bitter, acidic, mel-low, or buttery, the next person might disagree. One thing that influences a person’s perception of chile flavor is what they ate at home. Bosland has observed it repeatedly during his years of growing a globe’s worth of varieties at the institute’s teaching garden.

**“The Big Jim chile has enough heat to make it pleasurable while not being so hot you have to inhale,” Jimmy Lytle says. “You can actually enjoy the flavor, with just a good punch.”**

“The ají chile has such a unique flavor profile that Mexicans say they don’t taste right,” he says. “But a Peruvian or Bolivian says, ‘That’s my chile.’”

Big Jim lovers wanted *their* chile back. But how do you replicate a lost flavor? Bosland started by scoring some of the 1975 seeds from a cold storage facility at Colorado State University. In the first year, he grew a new crop to replace the borrowed seeds and enough for himself the following year.

He asked local farmers to walk the field that second year, tasting the chiles and flagging the ones that reminded them of home.

He harvested seeds from the most popular ones and grew those. Then he did it again; and again, each time deepening the flavor. “It was a 10-year process,” he says. “Besides the flavor, the plant architecture had to change to fit farms—and it had to have a uniform heat.”

How hot? Well, they could have chosen mild, medium, or hot from those variable-heat seeds. The institute had already bred a reliable mild with the NuMex Joe E. Parker, an Anaheim-style chile, and a strong medium with the similarly reengineered NuMex Heritage 6-4, a New Mexico-style pod. For Big Jim, Bosland and the growers chose hot.

By 2013, NuMex Heritage Big Jim seeds were ready.

Jimmy Lytle, son of the namesake, and his wife, Jo, stand by the legacy version and grow it today. “We’re snobbish about it,” Jo says. “We have the foundation seed.” Their children now oversee the chile fields and the family’s Hatch Chile Express store, selling frozen and powdered chile, salsas, sauces,



You can harvest your own Big Jims at Big Jim Farms, in Los Ranchos de Albuquerque. Above, owner Jim Wagner shows off prize specimens. For more information, see p. 48.

and ristras (hatchchile express.com).

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He likes to stuff his rellenos with ham and cheese, but notes that a loyal customer

in Maine opts for lobster. “Doesn’t that sound delicious?” Jo says.

After all of his work tinkering with chile flavors, Bosland hopes that consumers go beyond asking about a chile’s heat level and factor in flavor as well. “We want people to ask for varieties—just like you do with apples,” he says. “Different varieties have different

flavors. Know what flavors you like and ask for that.”

Just make sure it’s from Hatch, Jo says. What makes that chile a national favorite? “Well, other than the good soil, the living water from the Río Grande, and the hot days and cool nights, I guess the best answer is that God smiled on us. And for that we are always grateful.”



## **JOSÉ GONZALEZ**

**CHILE FARMER, ALCALDE**

**In a humid, tree-curtained corner of the Española Valley, José Gonzalez walks among rows of chile plants growing beside sunflowers, corn, beans, tomatoes, peas, squash, and a few stalks of wheat. The bulk of his harvest goes to the Santa Fe Farmers' Market, where the ruby strands of chile ristras and wreaths lie across the Gonzalez Farms table alongside freshly washed produce and cheerful flowers. Gonzalez says he's tried other jobs, but the farm calls him back. He likes the plants, he jokes. They seem to like him, too.**

I've been farming pretty much all my life, since I was five years old helping my grandparents in Mexico. After we came here, it was totally different. I used to work for my grandparents just to get a hot meal; here I do it to make a living.

I start seeds in the field, but I have some spares in the greenhouse, too. That way, if we have a late frost, I don't have to worry about it. That's my main product—the chiles. I grow chile pequin, Sandía, Big Jim, and this

year I started with Chimayó chile. I want to start making my own seed out of that.

We harvest them all by hand. It's really easy to harvest the Big Jim or Sandía. The chile pequin is so tiny it takes more time. We fill baskets or buckets, boxes—whatever we find. I wait until all my chile peppers are ripe red, because my wife has learned how to make ristras and decorations, so we have to harvest them when they're all red. The smell, when you roast them or you're cook-

ing with them, is so nice.

When we're going to be at the farm for a long time, we bring the kids. They play in whatever they find; the little one, he likes the muddy puddles. I want to encourage my kids to like farming. I would prefer they go to college first and then decide what they want to do.

Even if you're tired, when you see the plants growing and all healthy, it pays off.  
—As told to Elizabeth Miller



## MORE THAN JUST SALSA

Capsaicin, the alkaloid that makes chiles taste hot, has been a healer since the ancient Inca and Aztec cultures. These days, super-hot chiles are bred specifically for use in medicinal creams for muscle aches and arthritis and in essential oils to treat migraines and missing limb syndrome. At least one maker places capsaicin in a spray for reducing nasal congestion. (We say a steaming bowl of green chile stew does so even better.)

Beyond medicine, chile grown in New Mexico ends up in numerous products that don't come on a combo platter. Mashed and processed into a flavorless and spiceless coloring agent, it appears in lipstick, pepperoni, Doritos, Gatorade, and bologna, and even adds a pleasant tint to mayonnaise.

Fiery varieties go into pepper spray, bear repellent, and natural pest deterrents.

Added to the foods of captive birds and fish, it imparts a redder hue. (Flamingos in zoos and koi in ponds are beneficiaries.) —*Kate Nelson*

# The Making of Chile U

One of the only scientific institutions devoted to a so-called condiment flourishes in Las Cruces. By Kate Nelson

**B**ehind an inconspicuous door in the unremarkable hallway of a standard university building lies a one-room wonder. There, a former classroom bursts with racks of colorful seed packets, shelves of salsas, walls of posters, and an array of gardening guides.

Since its inception in 1992, New Mexico State University's Chile Pepper Institute, in Las Cruces, has grown from a cramped closet to this shop, along with an annual teaching garden, test plots, laboratories, a seed bank, high-tech equipment, and researchers who explore every aspect of soil, water, disease, nutrition, flavor, heat, harvesting, and commercial processing. They partner with local growers as well as others in Japan, Israel, India, Mexico, and elsewhere. They develop new varieties, study climate change, and help promote a fruit native to South America's tropical rainforests that has worked its way into nearly every cuisine on the planet.

"We are a chile ambassador to the

world," says Rolando Flores Galarza, dean of NMSU's College of Agricultural, Consumer, and Environmental Sciences. "And our work isn't done."

The university earned its chile acclaim with research originating in the early 1900s, when horticulturist Fabian Garcia introduced New Mexico 9, the first chile bred specifically for a dependable pod size and heat. Garcia, a native of Mexico, laid the foundation for what has grown into a \$50 million industry in his adopted state.

Those burlap bags of green chiles that most of us eagerly await each fall to restock the freezer? They're but a blip of the total. Fields that stretch from Hobbs to Deming and from the Mesilla Valley north through Lemitar and Chimayó feed an international appetite for salsas, spices, medicinal balms, dyes, and more.

"The Tabasco sauce we find in the stores, that's from a variety of cayenne chile grown in Las Cruces, fermented in the Mesilla Valley, and sent to Louisiana,"

The teaching garden at New Mexico State University's Chile Pepper Institute tests 150 different varieties every year.





**Clockwise:** Paul Bosland in the Chile Pepper Institute's teaching garden, where varieties range from international favorites to multicolored ornamentals.



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Flores Galarza says. “Deming has the largest chile-processing facility in the world.”

That jar of kimchi in the fridge just might contain NuMex Sandía chile from a field in Hatch.

Brands like Mrs. Renfro’s and Old El Paso are regular customers, and Biad Chili is but one of the Las Cruces-based processors that supplies them. The Biad family has worked with NMSU since 1951 and today operates three dehydrating plants.

“The institute is always listening on how they can improve varieties, what the growers need, what the industry is looking for,” says Chris Biad, one of the family partners. “They would come up with different versions, we would produce them and see how they worked, then go back and say, ‘It’s great for consistency, but it doesn’t peel well,’ and they’d try again.”



When Paul Bosland proposed starting an institute, a wall of skepticism appeared. “People wondered if chile was a fad,” Bosland says. “One person said, ‘It’s nothing but a damned condiment.’” He moved forward, became its director, and grew into the king of capsaicin in part through his successful breeding of new varieties (more than 20



since 1988) and a talent for promoting New Mexico chile as star chefs turned spice into an epicurean craze.

In 1999, he won an Ig Nobel Prize from *Annals of Improbable Research* magazine for breeding NuMex Primavera, a jalapeño with all of the flavor and none of the heat—something salsa makers had requested, to replace the less

flavorful bell peppers they were adding to their products. The feat drew comical jabs from those who thought the whole point of a jalapeño was its sear, but Bosland happily accepted the award. “It was good publicity,” he says. “I figured most people don’t even know New Mexico is a state.”

He went on to pioneer chiles with great flavor and heat, but

## HOT SPOT

The Chile Pepper Institute Visitor Center & Gift Shop funds student research and jobs through sales of salsas, posters, T-shirts, and more, both online and at its campus store (currently closed for COVID-19). *Gerald Thomas Hall, room 265, 945 College Ave., [chile.nmsu.edu](http://chile.nmsu.edu)*

The institute's teaching garden, featuring 150 rotating varieties, is generally open to the public but is also closed for now; call or email to see if a socially distanced visit is possible. *140 W. University Ave., 575-646-3028, [cpi@nmsu.edu](mailto:cpi@nmsu.edu)*

also sprightly colored ornaments that can be grown as houseplants.

Bosland retired last year, but not before helping to raise \$1 million for the Paul W. Bosland Chile Pepper Breeding and Genetics Endowed Chair, ensuring that others continue his work for years to come. And what is to come? "For 30 years, I've been saying the ajís are next," he says. "The ají amarillo is often used in ceviche, and it has a true South American flavor. We need a chef who sees it as the greatest thing, to create demand."

Pumping out that and other varieties to feed the world's zest for the latest zing is one of the success stories of his tenure. Here's another: "When I started, Arizona and Texas were claiming everything," he says. "Now we're making New Mexico the center of the chile universe."



## MATT ROMERO

### CHILE ROASTER, DIXON

**In New Mexico, chile is handed down in recipes and with seeds the same way some families pass along an heirloom watch. Such is the case with Matt Romero, reigning chile roaster at the Santa Fe Farmers' Market. After a career as a chef in restaurants like Coyote Café in the late 1990s, Romero moved into agriculture. He had help from a seed-saving uncle, Arthur "Toddy" Martínez, who has bred chiles in Alcalde since the 1970s. The special chile and Romero's theatrical roasting skills draw all comers to his market stand to witness a deeply rooted part of New Mexican culture: roasting green chile.**

My uncle gave me his knowledge and his variety of chile. He handed me seeds in a tin can and said, "I've been working on this for 20 years—don't lose it." He had developed this variety that was an extremely beautiful plant with nice big chiles that were very tasty and hot. We called it Alcalde Improved, and I became the caretaker of his legacy.

When that first barrel of chile gets fired up in the morning, it draws people to it like a campfire. You can smell it, you can hear it, you can almost taste it. It's such a unique experience. It's the crackling skin starting to pop, and the smell wafting over you. The more you can toast the skin and get it dark,

the more flavor there will be underneath.

There is so much emotion in chile. It is like a religion in New Mexico. I think it's because of the short season. I have a saying at the market: "Green chile is why you move here, red chile is why you stay."

Pulling it out of the freezer, it's good. But it is not the same as opening a bag while it's still warm, peeling the chile, putting it on a tortilla with a little salt and garlic. It's another world, and that's the world where you're home with Grandma and she's grilling chiles on her flat griddle and she just made tortillas. You go right back to that moment again. —As told to Maria Manuela

# Pick a Pepper

We asked two experts to describe the flavors of New Mexico's best chile varieties. By Maria Manuela

“The Río Grande is our Mother River,” says chef Michelle Chavez. “A minerality happens because of the snowmelt and rocks and geological factors that make up our state. If we didn’t have that water and we didn’t have this geology, we would not have that chile.” Chavez has cooked professionally for more than 26 years, 15 of them at the Santa Fe School of Cooking. Born in El Paso, Texas, she has Southwestern cuisine in her blood. “Chile is very much like wine in that it’s terroir-based, and it’s all about varieties.”

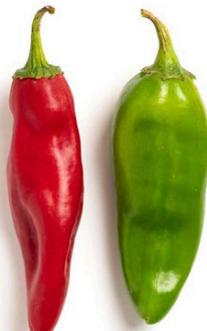
Dave DeWitt starts every day with a spicy virgin Bloody Mary. He’s built a career as a food historian and writer about chile and is often called “the Pope of Peppers.” Since moving to New Mexico in 1974, he’s published 40 books on the subject. “You can’t write about New Mexican food without writing about chile peppers,” he says. His newest book, *Chile Peppers: A Global History* (University of New Mexico Press), debuts September 15.

We presented an assortment of New Mexico chiles\* to them for tasting notes and tips on how to cook with them.



**NuMex Sweet Paprika**  
0 SHU\*\*

*Dave DeWitt: It is a mildly pungent, round-shouldered, high-color New Mexican-type chile.*



**NuMex Joe E. Parker**  
900 SHU

*Michelle Chavez: This is smaller than a Big Jim, so is probably better for a green chile stew or things you’re going to chop it up into. It’s also not as hot as a Big Jim.*



**NuMex Heritage 6-4**  
1,500 SHU

*DeWitt: This is the most popular cultivated chile in the state. It’s great in all New Mexican dishes after roasting and peeling. It has medium heat.*



**NuMex Española Improved**  
2,000 SHU

*DeWitt: This cultivar resulted from a hybridization between Sandía and a northern New Mexico strain of chile. The fruits have mild pungency and are excellent for making sauces.*



**NuMex CaJohns Jumbo Serrano**  
3,000 SHU

*DeWitt: This is named after John Hard, creator of CaJohns Fiery Foods. It’s good to use in fresh salsas.*



**Chimayó**  
6,000 SHU

*Chavez: I don’t know if it’s because the ground is sacred there, or because of the water, or the varietal itself. For a dried red chile, it is amazing. When you open a bag, it almost smells like sun-dried tomatoes or sun-dried cherries. They really, truly take on a flavor from the sun.*



**NuMex Barker's Hot**

8,000 SHU

*DeWitt: One of the hottest of the New Mexico types, these peppers grow 5 to 7 inches long and 1 to 2 inches wide. They can be eaten red or green.*



**NuMex Sandía Select**

9,400 SHU

*Chavez: This is hot. It has really, really good chile flavor in its green form, but it's better dried, because it has thin flesh.*



**NuMex Heritage Big Jim**

9,500 SHU

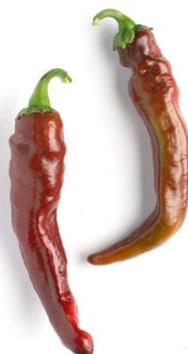
*Chavez: This chile has a good, mineral green chile flavor and thick, fleshy walls, so it's good for rellenos.*



**NuMex Jalmundo Jalapeño**

17,000 SHU

*DeWitt: The name is a contraction of jalapeño and mundo, meaning "world" in Spanish, implying that the chile is as big as the world. These are perfect to use as poppers—breaded, deep-fried jalapeños stuffed with cheese.*



**NuMex Las Cruces Cayenne**

17,000 SHU

*DeWitt: This has a hot heat level. The varietal is turned into mash and shipped to Louisiana for making hot sauces.*



**NuMex Lemon Spice**

25,000 SHU

*Chavez: This chile was created for its color. It's similar to a jalapeño—kind of tropical-tasting and almost a little smoky.*



**NuMex Vaquero Jalapeño**

30,000 SHU

*Chavez: Vaquero is "cowboy," so this is the cowboy jalapeño. There's something different about the flavor of a jalapeño. It hits you in the back of your throat and straight down your tongue.*



**NuMex Orange Spice**

79,000 SHU

*Chavez: This one is hot. Like really hot. DeWitt: It is one of the newest jalapeños developed at New Mexico State University and makes a beautiful colorful salsa.*



**NuMex Bailey Pequin**

90,000 SHU

*DeWitt: The fruit falls from the stem at maturity, making it easier to harvest. The chiles are small—less than one inch long—and have a distinctive flavor. When dried, the powder is pungent.*



A Jemez Pueblo family with a chile ristra, ca. 1905.

**“Chile and corn are our main traditional crops,” says Pueblo Governor David Toledo. “We got them by interacting with other tribes.”**

among tribal people in the Southwest. Its pathway north from South America and Mexico to arrive here is the stuff of legend. Thousands of years ago, “chile was cultivated in Mexico. We know that much,” says Charles Havlik, senior research assistant at the Agricultural Science Center at Los Lunas, a part of New Mexico State University. “When did it land here? I like to leave that as an open question.”

Certainly birds ate chiles and dispersed the seeds. Through Indigenous trade routes, many South and Central American foods like corn, beans, squash, potatoes, and tomatoes made their way, where tribes wholly adopted them into their diets, cultures, and identities. In Chaco Canyon, scientists have found remnants of chocolate and chile from the time of its occupation, 850–1250, Havlik says.

But if you want to go by written record, the earliest mention of chile in New Mexico comes from the journals of Spanish colonists and conquistadors. Juan de Oñate, for example, mentioned bringing seeds with him from Mexico in 1598, Havlik says.

“Regardless of when it showed up,” he says, “chile was well integrated into Native American cuisine.”

At Pueblo Harvest, the restaurant at the Indian Pueblo

# Native Soil

Chile is rooted in the traditional foods of Southwest tribes. By Andi Murphy

Looking at his field in early July, Jemez Pueblo Governor David Toledo can’t believe this is the view from his house. Vibrant green leaves, cornstalks, vines, and bushes dot the earth. As the sun sets, a soft yellow light weaves through the vegetation, casting long shadows. Surrounding this quarter-acre garden are the homes and gardens of his fellow tribal members in the

heart of the pueblo.

“It’s a sight to see,” he says on the phone, abiding by his tribe’s social-distancing protocols. “Every time I come out here, I’m so thankful to the Creator for giving us this blessing.”

A ping! notifies me of an incoming text message. It’s photos from Toledo of that warm sunlight, those vibrant leaves, and the tiny white flowers just starting to bloom

on the chile plants. A good portion of his field, which he manages with his three sons, is chile. The seeds came from Toledo’s elders and their ancestors. The farmland, too, is passed down from generation to generation.

“Chile and corn are our main traditional crops,” he says. “We got them by interacting with other tribes. We traded seeds.”

Chile holds a hallowed role

Cultural Center, in Albuquerque, Executive Chef Ray Naranjo (Santa Clara Pueblo) uses chile in nearly every dish on the menu. He sees his contemporary interpretations as a bridge that brings people and their cultures together on one plate.

“It’s a fusion medium—everything that’s known in fine dining,” he says. “I like to make green and red varieties of gastrique sauce.”

In New Mexico, some of the oldest chile varieties are considered landraces, meaning they adapted to the land and the environment. Many pueblos and northern New Mexico communities have traditional varieties. The flavors are distinct, Naranjo says, with less bitter notes and a pronounced heat. He personally likes the chile from small-batch farmers in Chimayó.

“There are some little places on the side of the road [around Española] that carry it,” he says.

At Jemez Pueblo, Governor Toledo says chiles from his handed-down seeds are usually mature and ready to pick, roast, peel, and eat by early August. “For me, that’s always Christmastime,” he says. As for the purity of the seed they started out as, he says that there’s likely no 100 percent “pure traditional” Pueblo chile anymore. Chile cross-pollinates, people select and swap seeds for personal taste, and environments change.

“We’re far past having any kind of control of it,” Toledo says. “To me, it’s the product that counts in the end.” For that, Jemez enchiladas can do the persuading.



## NICK MARYOL

### RESTAURATEUR, SANTA FE

Nick Maryol started bussing tables at Tia Sophia’s when he was 6. It was as much family obligation as tradition. At the same age, around 1950, Jim Maryol, Nick’s father, was already working the grill while his younger sister waited tables at Central Café, in Albuquerque, the restaurant run by their Greek immigrant mother, Sophia. “He probably figured it was way past time I go to work,” Nick recalls. Since then, Nick has done just about every job—except cook—in the Santa Fe fixture his parents founded in 1975. Nick took over as owner 16 years ago, yet he has changed very little about the West San Francisco Street restaurant where waitress Martha Rotuno coined the phrase “Christmas” to mean both red and green chile. (As Nick’s mother, Ann, tells the story, Rotuno urged waffling customers to “have them both—it’s Christmas.”) Although Jim passed away last July, Nick still feels his dad’s presence and the importance of maintaining his legacy.

I grew up in downtown Santa Fe in the seventies. Part of what I feel like I’m doing with this restaurant is creating a connection to a place that doesn’t really exist anymore—the Santa Fe that I remember, back when there was a Sears and a Safeway downtown. Back when cruisin’ the Plaza was a thing everybody did. Back when there were “Plaza rats.”

When I took over the restaurant, my mantra was: Just don’t screw it up.

We never tried to be precious here. It’s just home cooking. I feel like I have one of the most honest chiles in town. We don’t add a whole lot—a little bit of garlic, salt, and cornstarch. We’re not trying to challenge anybody’s personhood with the spice levels. There’s no magic ingredients, except the chile itself. It’s a lovely expression of what God intended in the first place.

Green is definitely much more of a gate-

way chile. Red is more of a connoisseur’s chile. It’s really a culinary masterpiece. Once you find the taste for red, it’s satisfying in a way that nothing else is.

I will go on a green kick for two or three months, then I’ll have a Christmas burrito. I’ll take a bite of the red and go, “Oh my gosh, I forgot how good this is.” Then I’ll go on a red kick for like three or four months.

Dad was always about the importance of work. There’s a spiritual aspect to having fulfilling work that connects you to family. It’s been nothing short of an epiphany for me. I’m just doubly blessed to have this work that grounds me to my family, to my roots, to my father, to New Mexico. That’s what chile is for me—a big hug from your family. I feel Dad’s love in every green chile, in every plate with chile on it. —As told to Steve Gleydura



# Mix and Hatch

Does chile go with everything? Mmmmaybe.

By Steve Gleydura

## Bacon

The Santa Fe School of Cooking's red chile bacon has become almost iconic in the 25 years since James Beard Award-winning cookbook

author and cooking instructor Cheryl Alters Jamison created the recipe for a red chile, honey, and jalapeño mustard glaze. It adds a sweet kick to chicken or pork chops,

but garners another layer of flavor with salty bacon. "You really appreciate the chile," says Director of Operations Nicole Ammerman, who recommends putting a Southwestern twist on your next BLT. It's also a centerpiece of the school's annual breakfast event. "We try to mix up the menu, but every year everybody's like, 'You are doing the chile bacon, right?'"

## Beer

Sierra Blanca Brewing Company's Green Chile Cerveza is no gimmick brew. The three-time gold medalist at Oregon's Best of Craft Beer Awards is a seriously good beer. Launched in 2007, the American lager spends at least seven days filtered through three-foot tea bags filled with roasted Big Jim chiles to produce its distinctive flavor. It's corn-based (think Heileman's Old Style), which plays well off the smoky chiles, and even finds its way

into a few of the Moriarty brewpub's recipes, says owner and brewer Rich Weber. "It's not about the heat," he says. "There's a lot of aroma and a nice chile flavor."

## Candy

When Luis Flores came home to join the family business about 15 years ago, he had a plan to get Las Cruces Candy Company products into gift shops and stores throughout New Mexico and beyond. He wanted to expand on what his confectioner parents started in El Paso in 1974. The key to that growth? Chile brittle. Today, Flores starts work at 2 a.m. to beat the heat and crafts 16 brittle combinations, such as red chile pistachio (his favorite), habanero pecan, piñon, and even a new lavender pecan. But the bestseller remains the green chile pecan. "The chile flavor comes after the sweetness," says Flores, who

## TAKE YOUR PICK

At a nine-acre field in Los Ranchos de Albuquerque, would-be farmers are on the hunt. Big Jim Farms offers the only U-Pick chile adventure in New Mexico.

Now in its fourth season, the experience has taken off, says Chantelle Wagner, whose family operates the farm. "People make it a challenge to find the biggest chile," she says. "It's fun and kind of emotional. Chile has such a connection to New Mexico."

Choose from among five varieties, from mild to extra hot, with on-site roasting as well as other produce, including pumpkins,

from early September (when the chile is green) until first frost in October (when it's red). During the full growing season, the Wagners hold socially distanced volunteer workdays with presentations by wellness experts.

"People love being out in the fields," Wagner says. "They say it clears their heads." —*Kate Nelson*

### Big Jim Farms

4474 Rio Grande Blvd., Los Ranchos de Albuquerque; open 9 a.m.–5 p.m. daily, September–October; 505-459-0719, [bigjimfarms.com](http://bigjimfarms.com), and on Facebook (@bigjimfarms)



Chantelle Wagner in her family's U-Pick chile field.

also sells at the Farmers & Crafts Market of Las Cruces. “At first it’s subtle, but it builds up.”

### Ice Cream

As a chef, Joel Coleman wanted a special chile for La Lecheria’s Green Chile Ice Cream. Craving something with big flavor but mild heat, he landed upon the NuMex Joe E. Parker from La Ciénega’s Green Tractor Farm to complement the other organic ingredients (egg yolks, sugar, and Organic Valley milk and cream). “This one has a fruity-forward note that worked well with ice cream,” says Coleman, who is also chef and co-owner of Santa Fe’s Fire & Hops gastropub. Others agree. The Santa Fe shop’s green chile flavor was featured on Cooking Channel’s *Man v. Food*. “People don’t expect it to be good,” he says. “Then they try it and are like, ‘Oh, that’s really good.’”



Preston Mitchell with his wife and business partner, Elaine.

## PRESTON MITCHELL

### CHILE ENTREPRENEUR, MESILLA

**A great-great-grandson of an Austrian immigrant credited with pioneering Hatch chiles as a commercial crop, Preston Mitchell helped ignite a global craze with an online chile business in 2005. What started as a way to help his grandparents find new customers has grown into the Hatch Chile Store ([hatch-green-chile.com](http://hatch-green-chile.com)), a robust emporium that delivers trucks of fresh chile to grocers and ships packs of frozen and dried chiles, salsas, pecans, tamales, and, new this year, chile face masks.**

Chile is so ingrained in our culture here. I think it’s what people remember the most—red chile ristras hanging on the stoop at night in the middle of winter. Or green chile roasting and that smell. That experience you get when you take a first bite of a freshly roasted chile with a bit of garlic and salt on it.

We think Hatch chile is similar to Napa Valley wine or Vidalia onions. Consumers recognize what a great product it is. Good, consistent marketing, good quality, and good pricing all kind of came together to allow it to take on a life of its own.

So many people order from us who’ve never experienced chile. They take a picture and post it on Facebook. Or they leave a gorgeous review: “I’ve never had New Mexico chile before. Now I’m a diehard fanatic.” The web has certainly allowed me to grow my business significantly faster than I would have with a brick-and-mortar store. When you’re looking for a new product, the

first thing you do is whip out your cellphone and google it. Being in the right place at the right time has definitely been a blessing.

This is the most exciting time of the year. There’s a feeling of apprehension because you know how busy it’s about to get.

Often, three or four families will get together and order four or five 20-to-25-pound boxes of fresh chile from us. They’ll have a backyard barbecue and roast chile and drink a Corona or a Dos Equis. The entire family gets together and everyone helps peel the chile.

We get emails from people every year who were just so happy that we were able to ship them a taste of home. I think that’s going to be even more true this year, with the coronavirus and people not able to go home. It will be really neat to make people’s day or year by getting them a nice shipment of New Mexico green chile. —As told to Diana Alba Soular

# Chile Stats

## 3rd

most valuable crop in NM (behind hay and pecans)

## \$50.6 MILLION

2016 value of NM chile—\$41.4 million from processing, \$8.6 million from fresh market

## 69,000

tons harvested (2016)

## 3,500 acres

Main variety: paprika

## 72%

of farms, or 1,408, in Doña Ana County (which includes Las Cruces, Mesilla, and Hatch) are nine acres or less

## 38%

of farms, or 544, in Río Arriba County (which includes Chimayó, Española, Dixon, and Alcalde) are nine acres or less

## NONE AT ALL

To appease their gods, Aztec priests demanded that the faithful abstain from sex and chile while fasting



## One Hundred Fifty

varieties in the Chile Pepper Institute's test plot (and they change yearly!)

## 5th

U.S. rank in global production of green peppers (chile and bells), behind China, Mexico, Turkey, and Indonesia

## SEVEN-POT

Variety of Trinidad chile; one chile is hot enough to season seven pots of stew

## 705,790 TONS

U.S. harvest, 2018

## 75–85° DAYTIME

## 50–60° NIGHTS

Ideal growing temperatures

## 5 species

*Capsicum annuum*, *C. baccatum*, *C. chinense*, *C. frutescens*, *C. pubescens*

## 2,000 pounds

Amount of green chile roasted each September by Sierra Blanca Brewing Co., for beer and food

## Zero to 16 million

Units of heat on the Scoville scale

**Bell pepper**  
0–100

**NuMex Joe E. Parker**  
900

**NuMex Heritage 6-4**  
1,500

**NuMex Heritage Big Jim**  
9,500

**Jalapeño**  
10,000

**Serrano**  
20,000

**Habanero**  
100,000

**Bhut jolokia**  
1 million

7500 BC	1870	1907	1996	2007	2012
Earliest evidence of culinary chiles in Mexico	Edmund McIlhenny obtains a patent on Tabasco sauce	Fabian Garcia begins breeding new chile varieties at what's now New Mexico State University	"Red or green?" becomes the official state question	"Christmas" becomes the official state answer	State prohibits selling chile with "New Mexico" labeling unless it's grown here.
					



Brightly colored ristras look especially nice against adobe walls.

# Ristra DIY

The ristra is iconic decor, but it's also a pantry on a string. By Maria Manuela

**R**istras of red chiles provide a unique aesthetic in New Mexico. Strung into bunches (*ristra* is Spanish for “string”), they hang from rounded archways and covered portals throughout the state. Originally, this was an easy way to dry and thereby preserve a bounty of chiles so the fruit could be plucked and added to the stew pot the rest of the year. These days, ristras might include dried flowers and bulbs of garlic or be sprayed with lacquer to ornament a home for years. (Don’t try to eat those ones.)

John Sichler of Sichler Farms is a pro at ristra tying. He’s sold thousands of them annually for 34 years, many from his family’s seasonal shops in Albuquerque. He recommends starting with chiles that are still fleshy and not yet dry; that way, the stems are

more pliable. Hold the chiles in your non-dominant hand and use your more dexterous hand to tie the knots. Check your progress as you add chiles to make sure they’re evenly spaced.

## FOR THE RISTRA

**Fresh red chile (about a bushel)**

**Cotton string**

**Twine**

**Scissors**

## FOR THE HAT

**Corn husks**

**A fork**

**A bowl of water**

## Make the ristra

1. Prep materials for the hat—the little puff at the top of the ristra. Place three to four corn husks in water. Let them soak while you make the rest of your ristra.
2. For a two-foot ristra, you will

need about five feet of twine. Measure and cut.

3. Fold twine in half and make a knot where the two ends now meet.
4. Hang twine from a nail or hook at the knotted end, so the loop is at the bottom.
5. Cut three to four strands of cotton string, about 2½ feet long apiece.
6. Create a slipknot at the end of one of your pieces of cotton string; don’t tighten it yet.
7. Place three chiles into the slipknot, with the stems’ hooks facing out to hold on to the string. Tighten the slipknot.
8. Wrap the string around the stems three times.
9. Secure the chiles with a half hitch knot. (Make a loop around the string, then pull the end of it through the loop. Tighten.)
10. Move about two to three inches up the string.
11. Repeat the process until

your cotton string is full. Move to the next cotton string. Repeat steps 5–10.

**12.** When all the strings are filled, you can wrap your ristra. Take one of the strings of chile. Beginning with the bottom bunch of three chiles, place one chile on one side of the hanging twine loop, and two on the other, so the bunch straddles the loop as an anchor.

**13.** Wrap the stems of the next bunch of chiles around the twine, somewhat like braiding them over it. Then push that bunch down until it meets the first one. Continue this until all of your cotton strings of chile are wrapped around the twine, leaving a few inches between the final chile and the knot at the top. This is where you will tie the hat.

## Make the hat

1. To make the hat, start by removing the corn husks from the water.
2. Place them on a cutting board.
3. Run the tines of a fork over them, separating the husk into thin strips.
4. Cut a small (about 3 inches) piece of cotton string.
5. Bunch the corn-husk strips around the twine, like a little broom.
6. Tie a string around the bunch and attach to the twine.

Hang the ristra in a sunny spot with good air flow for several days or weeks until it’s fully dried. You can leave it outside or bring it indoors—recommended if using the chiles for cooking. Snip them off by their stems, working from the top down.



# Fruits of Labor

It takes many hands and strong backs to bring in the mammoth chile harvests in southern New Mexico. Help is on the horizon.

By Kate Nelson



In the year 2020, chile, which ripens in waves, still requires picking by hand. Migrant labor is crucial, making issues of immigration and COVID-19 safety protocols critical. "It's hot, hard work," says Stephanie J. Walker, a researcher at the Chile Pepper Institute, in Las Cruces. "You're paid by the bucket, plus a guaranteed minimum wage." She's immersed in testing machines to take on some of the labor. A solution is years away. "We'll still have farm jobs," she says, "but eventually, the backbreaking work will be done by machines."





## DANISE COON

CHILE RESEARCHER, LAS CRUCES

Española native Danise Coon was looking to escape her family's farming roots when she started an undergrad program in psychology at New Mexico State University in the 1990s. The pull of her heritage proved too strong, and she soon switched majors to horticulture and found her way to a career at the Chile Pepper Institute, where she helps develop new varieties.

NMSU discovered that the bhut jolokia, or ghost pepper, was the first chile with over 1 million Scoville heat units. When that news got out, during an Aggie football game, one of the TV correspondents wanted to set up something where he ate a ghost pepper on camera. This guy was not used to eating hot chile. He took a bite and said, "That wasn't too bad." There were some students standing around him, and when he took a second bite, there was this unanimous gasp. He immediately said, "That was stupid, wasn't it?"

We did this at 10 o'clock in the morning, and the poor guy's mouth was still burning at 5 o'clock in the afternoon. I'm sure the video is still making its way around the internet.

I have great job perks. I get dibs on all the new varieties and test stuff out on my family.

My absolute favorite variety is NuMex Heritage 6-4. It's got this amazing flavor that transfers over to the red side, so both the green and red are good. They have a wonderful heat level and they're super easy to peel.

One of my favorite things to do, especially in the really hot months during the summer, is to get up early and head out to the field. To be out there when the sun's coming up and know that you're doing something good for New Mexico and New Mexico growers is a cool part of my job.

—As told to Diana Alba Soular



### CHILE SAUCE 101

Secret spice blends and special techniques may mark some cooks' pots of divine goodness, but these two recipes will get novices started.

Both appear in *The Best from New Mexico Kitchens*, a book originally published by *New Mexico Magazine* in 1978 and reissued to great success in 2017 by the University of New Mexico Press.

#### GREEN CHILE SAUCE

**¼ cup vegetable or olive oil**  
**1 clove garlic**  
**½ cup minced onion**  
**1 tablespoon flour**  
**1 cup water**



**1 cup diced green chile, roasted, peeled, and seeded**  
**Salt to taste**

Sauté garlic and onion in oil in heavy saucepan. Blend in flour with wooden spoon. Add water and green chile. Bring to a boil and simmer, stirring frequently, for 5 minutes.

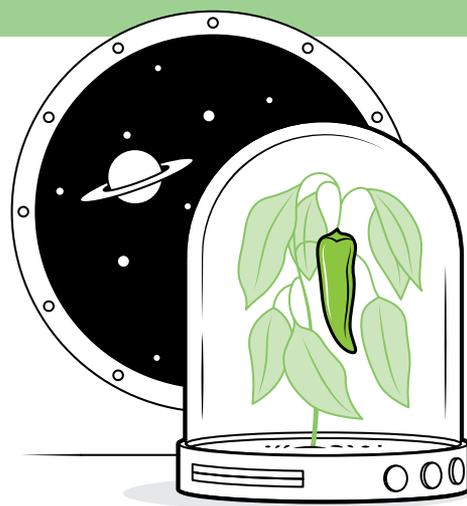
**Pro tip:** *Wear rubber gloves when peeling roasted chiles. Remove the stems and seeds—but don't rinse them in water. Doing so washes away too much of the heat.*

**RED CHILE SAUCE**  
**3 tablespoons olive oil or lard**

**1 clove garlic, minced**  
**2 tablespoons flour**  
**½ cup chile powder**  
**2 cups water**  
**Salt to taste**

Sauté garlic in oil. Blend in flour with a wooden spoon. Add chile powder and blend in. (Don't let pan get too hot—chile will burn easily.) Blend in water and cook to desired consistency. Add salt to taste.

**Pro tip:** *Not sure which chile powder to use? Add a teaspoon of it to a cup of hot water. Take a sip. Try a variety of powders to find the flavor you like.*



## Rocket Fuel

The first fruit on Mars just might be New Mexico chile. By Andi Murphy

A mission to Mars is still a decade away, but scientists at NASA already plan to stock it with green chile. Why? We could say because it tastes so good, but the answer is more basic than that. “Astronauts need vitamin C,” says Paul Bosland, founder of New Mexico State University’s Chile Pepper Institute.

Chile is chock-full of C, as well as beta-carotene and antioxidants, plus a handful of micronutrients. To get their daily C quotient, astronauts will need to know how to grow their own during the three-year round-trip to Mars. And the only pepper for the job is green chile, according to NASA’s scientists.

But not just any green chile. The plant has to be small, fruitful, fast-maturing, not too spicy, and capable of being farmed in-flight.

Jacob Torres, a technical and horticultural scientist at the Kennedy Space Center, in Florida, was working as a NASA intern in 2018. “I noticed they were talking about New Mexico chiles and I was like, ‘I’m from New Mexico!’” he says.

Torres spent his early years growing chile and other produce with his family in Española. From his NASA internship, he quickly became a member of the veggie team and recommended a variety from northern New Mexico because it matures the quickest.

The NuMex Española Improved (a hybrid from the Chile Pepper Institute) checked all the boxes and will be the first fruit grown in space, Torres says. But first the plant is slated for a 2024 “Hatch to ISS” mission, hitching a ride on SpaceX to the International Space Station to grow in its Advanced Plant Habitat. A mission to Mars will commence around 2030, rocketing a global favorite to interplanetary fame. 