

**Some like it hot, others mild; some green, some red...and still other connoisseurs prefer "pinto," an orangey, fiery blend of red and green.**

But if you had a chile garden, would you know the "right" time to harvest?

"When you give that green chile pod a little squeeze, and it kind of crackles, but feels nice and firm and hasn't started to turn red yet? That's when your green chile is ready to be picked," says Danise Coon, a senior research specialist at New Mexico State University's Chile Pepper Institute (CPI).

And no, red chile doesn't come from another plant or chile strain: it's green chile that's simply had time to mature.

"You would be surprised," Danise says. "A lot of people don't realize that green and red chile come from the same plant."

"Pinto" is a combination of red and green, an orange-yellowish hue that develops as green chile transitions into red.

As a senior researcher, Danise lives and breathes chile. Well, she tries not



*Chile de Morelos*

to breathe it in, but sometimes it's inevitable.

"We have over 170 different chile varieties in our teaching garden," Danise says. "We have tons of brand-new varieties this year that people haven't seen yet."

The Chile Pepper Institute is the nation's only research organization dedicated to studying only chile. With the help of a dedicated team of researchers, educators, student aides, interns, private members, and corporate partners, the institute has made its home on the NMSU campus. The CPI Gift Shop is located on the second floor of Gerald Thomas Hall, just south of the NMSU Horseshoe, and it operates research and breeding facilities at the Fabian Garcia

Horticultural Center. The horticultural center, located at 111 W. University Avenue, supports greenhouse, orchard, and crop research, and contains the CPI's Teaching Garden, which is open to the public. Founded in 1992 by longtime NMSU chile researcher Paul Bosland, Ph.D., the institute's mission is to build on the research of chile peppers by finding ways to eliminate or minimize crop disease; maximize yields; and improve flavor through traditional, non-GMO breeding techniques.

Since its inception, the institute has developed, grown, and sold more than 750,000 varieties of chile seeds to backyard gardeners, and thousands more for industry farmers.

"I think the biggest thing we've tried to tackle in the last three to four years has been quality," Danise says. "We want to say that New Mexico chile and New Mexico-grown



**ARE YOU**

**A HOT HEAD?**

**MEET THE HEAT, CHILE STYLE**

Article by Gabriel Vasquez  
Photography by Bill Faulkner



NuMex Cinco de Mayo

chile are much, much higher quality crops than what's coming in internationally. The NuMex Heritage 6-4 and NuMex Heritage Big Jim are two new chile varieties specifically developed for our growers with a pepper that has five times more flavor compounds—it's much more flavorful than old varieties and crops coming out of California and Arizona."

"We listen to the growers and they make suggestions as to traits they would like to see in their chiles," says Dr. Bosland, the institute's director. "One thing people don't realize is that chile peppers cross-pollinate. Insects will come, grab pollen from one plant and take it to the next. So we can get some mixture in the seed. We don't want that; we want the variety to stay pure."

For local and regional growers, the Chile Pepper Institute is a much-needed resource and business partner. Researchers also help growers cope with deadly diseases that can wipe out entire crops if not treated or anticipated.

"If you get *phytophthora* in the field and it wipes out half your field overnight because of a monsoon downpour, what's the farmer going to do?" Danise asks. "We're working hard on that. We've made a lot of progress over the last 20 years, and we've learned just how complex a tiny little fungus can be. 'Curly top' is another big disease around here."

Phytophthora, also known as "chile wilt," is caused by a soil-borne fungus that attacks the plant's root system. It's a disease that's found on chile peppers worldwide, but is particularly aggressive in the Southwestern U.S. The disease most com-

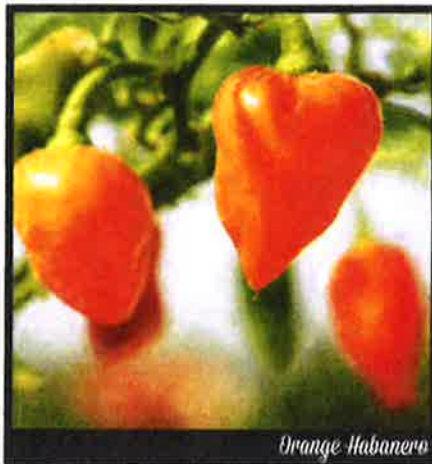
monly appears after heavy irrigation or rains, and is particularly dangerous for local growers during the monsoon season. Other known chile diseases include *Verticillium Wilt*, a soil-borne fungus; seedling disease, another soil-borne fungus that causes the seedling to rot; bacterial leaf spot, which causes dark purple spots on the leaves and stems; black mold, which is a combination of several fungi that cause black mold on chile fruit; and the beet curly-top virus, one of the most prominent crop viruses that affects the likes of peppers, melons, beans, tomatoes, spinach, and many others.

"We're working to make new cultivars for farmers that have greater disease-resistance," Danise says.

There's one large obstacle for local growers, but unfortunately, it's one that neither scientists nor farmers have much control over.

"A huge challenge right now is drought," Danise says. "This ongoing drought has caused some problems for growers. If they don't have a good working well here, they just can't grow chile. This year, farmers had one allotment of EBID [Elephant Butte Irrigation District]. You can't grow chile, or anything on that. No well, no chile."

Chile farming in the Mesilla Valley, albeit a time-honored tradition and home to the Chile Capital of the World, is not always profitable. Some years, pests can wipe out crops. Other years, it's drought, and recently, it's been the influx of international chile imports at lower cost that have been driving down prices.



Orange Habanero

This year however, the Village of Hatch (our neighbor to the north) is expecting one of its largest chile harvests ever, thanks in part to the lack of insects and diseases. But because Hatch farmers have been forced to primarily use well water and received very little EBID water, prices for locally-grown chile will be slightly higher this year.

Danise says despite the higher prices, locals, connoisseurs, and reputable distributors are still willing to pay more because they know they're getting authentic, New Mexico-grown chile.



Aji Mono

In the last several years, retail food distributors have partnered with the Chile Pepper Institute to market and sell New Mexican chile products, bringing in supplemental funding to support the institute while helping those companies expand their brand and consumer reach.

One such company is CaJohns Fiery Foods, the first distributor to get involved with the institute.

"We met John and Sue Hard of CaJohns Fiery Foods in 2006," Danise says. "They came down and I gave them a tour of our teaching garden. They came back to the gift shop and bought a couple of seed packets and books.

"They proceeded to say 'We really, really love what you're doing here, and we want to give back.'"

Around that same time, Dr. Bosland was conducting research to find the world's hottest chile pepper—the 1-million-Scoville-unit Bhut Jolokia pepper, otherwise known as the 'Ghost Pepper.' John said, 'I want to make a hot sauce with the

world's hottest chile pepper, and I want you to have the proceeds," Danise says. "That's how 'Holy Jolokia' was created."

Holy Jolokia, an extremely powerful and flavorful hot sauce that's been on the retail market for about five years, is now CaJohn's best-seller, bringing in substantial revenue to support the institute and help brand the company.

"We've won at least four awards for that hot sauce," Danise says. "After two years of selling that, John went on to create a salsa, barbecue sauce, and now a taco sauce from the same pepper, which is amazing."

But when news spread that institute researchers had discovered an even hotter pepper—a true scorcher in every sense of the word—CaJohns had to develop a new product to match.

"When we discovered the Trinidad Moruga Scorpion to be at 2 million Scoville units, they decided to create the Sancto Scorpio hot sauce. We have enjoyed a wonderful relationship with CaJohns for several years."

At 2 million Scoville units, the Trinidad Moruga Scorpion pepper is eons hotter than a traditional jalapeño pepper, which measures between 3,000 and 8,000 Scoville units. For comparison, red and green chile peppers are between 500–750 Scoville units.

"Thanks to the Bhut Jolokia and CaJohns, we were able to get funding to start an Endowed Chair for the institute," Danise says.



Since then, two other retailers have gotten in on the action: Biad Chili Products of Las Cruces and Mrs. Renfro's. The Biads sell a gourmet-roasted green chile product from two institute strains with powerful flavor profiles: NuMex Heritage 6-4 and NuMex Heritage Big Jim. Mrs. Renfro's went the CaJohn's path and now sells Ghost Pepper Salsa and Ghost Pepper Nacho Cheese Sauce. Proceeds from the sales of both products go back to the institute.

"Bueno Foods in Albuquerque also recently stepped up to join our Development Leadership Council and put some money toward our Endowed Chair," Danise says.

As of February, the institute had raised nearly half a million dollars, half a million short of the \$1 million required to start an Endowed Chair at NMSU.

Danise explains, "We have a lot of things going on right now, and we're confident that we'll reach that \$1 million mark soon."

In an effort to expand its statewide reach, support networking, and share new research with regional growers, every year in February, NMSU hosts the New Mexico Chile Conference.

"We get about 300 growers, producers, and processors that attend," Danise says. "Most are regional, but we get people coming from all over the world. We have the most advanced researchers talking about the most up-to-date topics at that conference."

Anyone can get involved.

**Chile Pepper Institute Memberships** are offered to individuals at rates as low as \$25 per year. In exchange, they

receive "priority" status with educators; that is, their chile-growing questions and concerns are answered by priority, and they receive quarterly newsletters, exotic and hard-to-find chile seed packets, chile-growing tips and advice, and a catalog of members.

"We have members as far as Australia and all over Europe," Danise says. "Chile lovers span the globe." ■

## THE HOTTEST PEPPERS IN THE WORLD

Measured in Scoville Heat Units

**2 MILLION**  
Trinidad Moruga Scorpion

**1.8 MILLION**  
Chocolate 7-Pot

**1.5 MILLION**  
Bhut Jolokia

**1.3 MILLION**  
Trinidad Scorpion

**1.2 MILLION**  
7-Pot

**970,000**  
Dorset Naga

**577,000**  
Red Savina

**350,000**  
Scotch Bonnet | Habanero

**100,000**  
Thai Pepper | Chiltepin

**50,000**  
Cayenne | Tabasco

**30,000**  
Arbol | Manzano

**23,000**  
Serrano

**8,000**  
Jalapeño

**4,000**  
Poblano | Anaheim

**750**  
Green/Red Chile

**0**  
Bell Pepper

[www.chilepepperinstitute.org](http://www.chilepepperinstitute.org)

Source: Chile Pepper Institute

# Local HEATS

Local or visiting chile lovers can get their fix in an eclectic variety of ways and equally unique places around Las Cruces.



To go "straight to the source," consider **Sparky's Burgers, Barbecue & Espresso** in Hatch, where you can wrap your taste buds around their world-famous green chile cheeseburger. "The Dinker," a green chile cheeseburger with BBQ pork topping, a green chile cheese patty melt, or a chicken sandwich. Their sweet corn with local green chile is a must for new visitors. If you're feeling really adventurous, consider Sparky's green chile lemonade to wash it all down.



Closer to town you can find green chile prepared in unique and contemporary ways, such as pecan-encrusted green chile strips at **The Game Sports Bar and Grill**, green chile tempura from **Aqua Reef Euro-Asian Cuisine**, or, if you really want to think outside the burger, try the duck tacos with roasted Hatch green chile at **The Sunset Grill**.

At **De La Vega's Pecan Grill & Brewery**, you can find green chile mac-and-cheese, and for late-night snacking, you could consider getting green-chile flavored pistachios from **Heart of the Desert Pistachios & Wine**.

If a morning cure is what you need, **La Posta de Mesilla** offers green chile Bloody Marys all day. Once you have a green chile infused Bloody Mary, you'll never want a plain Bloody Mary again.



As for salsa, which is staple for any New Mexican, **Pandito Restaurant's** salsa bar will keep you moving up the heat ladder from their traditional red to tomatillo to the fiery chipotle and beyond. **Si Señor** and **Topollo's**, each restaurant with more than one location, also have several different and delicious salsas for patrons to savor.



If it's enchiladas that you're craving and you want some that will make your mouth water, both for taste and for heat, look no further than **Noble's Cafe**. They serve up homemade dishes that are spicy, flavorful, and fresh. You won't find Tabasco here—you won't need it!

Whatever your taste buds crave,

if you're eating in Las Cruces, you will most likely be faced with one of the toughest questions of your day:

"Red or green?"



Courtesy Floren Valdez, The Sunset Grill, and Carlos Doria