2004 World Chile Pepper Production Statistics

The Chile Pepper Institute has compiled the latest statistical data concerning chile pepper production and acreage from the Foreign Agriculture Organization Statistics Service (FAOSTAT), The National Agricultural Statistics Service (NASS), and the New Mexico Department of Agriculture (NMDA). All data are from 2004 production, the most current information available.

The statistics included at the end of this article are the most accurate information available and there is considerable complexity that arises from an array of factors that affect the accuracy of this report. Factors to consider when reviewing this information include careless record keeping, non-reporting by growers, and the fact that statistical data on chile pepper production is not widely published.

When agricultural fields are inspected the same questions come up for all growers, "Where are the records backing up these acres? Where are the sales receipts, the seed source documentation and the farm maps? Was chile pepper planted in this field last year?" For growers trying to squeeze bookkeeping between processor contracts, daily chores, farmers' markets, and family time, the documentation process can be intimidating. Many growers describe record maintenance as "a chore" and "boring, but necessary labor."

Recently, organizations like the FAO, NASS, and NMDA have created easily searchable and accessible databases of such statistics, however, difficulties include a lack of specifics in the variety data such as lumping all green chile peppers and red chile peppers into two categories and not separating them into pod types. There is also confusion as to whether the statistics are referring to fresh or dried chile pepper.

Inside This Issue

WORLD PRODUCTION

Green chile peppers can be defined here as Capsicum annuum, C. frutescens, and C. chinense. Production data excludes crops cultivated explicitly as spices.

Top Four Fresh Green Chile Pepper Producing Areas in Metric Tons (MT)

1. Asia – 15,577,848 MT (China producing 12,028,000 MT)
2. Europe – 2,886,996 MT (Spain producing 1,006,000 MT)
3. America – 2,831,370 MT (Mexico – 1,853,610 MT & U.S. – 977,760 MT)
4. Africa – 2,104,239 MT (Nigeria producing 720,000 MT)

Total World Production of Fresh Green Chile Peppers – 24,026,852 MT

PLEASE SEE STATS, P. 2
CONT. FROM P.1

Top Four Green Chile Pepper Growing Areas in Hectares (Ha)*

1. Asia – 1,002,261 Ha (China growing 602,500 Ha)
2. Africa – 277,229 Ha (Nigeria growing 91,000 Ha)
3. America – 175,093 (Mexico – 140,693 Ha & U.S. – 34,400 Ha)
4. Europe – 142,644 Ha (Spain, Bulgaria, and Serbia all growing 20,000 Ha each)

Red chile peppers can be defined here as cayenne pepper, paprika, or hot red chile peppers (*C. annuum*; *C. frutescens*). Total World Production of Red Chile Pepper – 2,461,520 MT

Top Four Red Chile Pepper Producing Areas in Metric Tons (MT)

1. Asia – 1,843,306 MT (India producing 1,100,000 MT)
2. Africa – 394,702 MT (Ethiopia producing 116,000 MT)
3. Europe – 138,100 MT (Hungary producing 57,000 MT)
4. America – 103,000 MT (Mexico – 55,000 MT & U.S. – 48,000 MT)

*One Hectare = 2.4 Acres

PRODUCTION IN THE UNITED STATES

The top four chile pepper producing states in the United States are New Mexico with 15,300 acres, Arizona with 5,400 acres, California with 5,300 acres, and Texas with 4,100 acres. For New Mexico chile pepper production, there was a 25 percent increase in total green and red production from 2003. These numbers include jalapeño, New Mexican green, hot and mild, paprika, cayenne, and hot and mild New Mexican red. Total production for 2004 was 106,850 tons. The total value for all New Mexico chile pepper production for 2004 was $50 million at farm-gate.

New Mexico Green and Red Chile Production in 2004

![Graphs of New Mexico Green and Red Chile Production](graphs.png)
Longstanding Member Wins Chili Cook-off to Benefit Student Scholarships

Harry S. Brown, aka Hut Brown, a Chile Pepper Institute member since 1995, won first place in the New Mexico State Open Chili Cook-off championship held in Ruidoso, New Mexico, with his “Bounty-hunter Chili” recipe, on October 1, 2005. The recipe title goes back to Sheriff Pat Garrett who was chasing Billy the Kid, and found his camp at Stinking Springs, New Mexico. Garrett found that Billy had cooked a pan of chili. Garrett stated that “any man that eats chili can’t be all bad.” Brown is also a longstanding member of the Chili Appreciation Society International (CASI).

CASI’s mission is to promote chili and raise money for charity. CASI is involved in more than 500 chili cook-offs per year and raised more than $1,000,000.00 annually for local charities. In addition to raising funds for charitable organizations in the United States and participating foreign countries, it seeks to educate the public about the historic and cultural significance of chili - an indigenous American tradition, and work for the adoption of chili as The National Food of the United States.

Recipe: Broken Arrow Ranch Chili

Use a heavy skillet with a tight fitting lid. Heat oil and brown meat, add the beer and cook on low heat for about 1 hr, stirring occasionally. Drain the juices into a separate skillet and add the onion, garlic and jalapeno and saute. Pour this mixture back into the skillet with the meat and add the remaining ingredients. Cook covered on low for 1 to 1 1/2 hours.
Serves 8-10

From the Edible Pepper Garden - Available through the Chile Pepper Institute
‘NuMex Thanksgiving’ Ornamental Chile Pepper Gives a “Martha Stewart Touch” to Florida Jail

Mr. Boatman, instructor of horticulture at the Vocational Horticulture Program at the Falkenburg Road Jail, Tampa, Florida, wrote to say the ‘NuMex Thanksgiving’ chile pepper seed, in Volume XV, Number 4 (Winter 2004/2005) issue of The Chile Pepper Institute Newsletter was grown in their program. In the last two years they have grown more than 1000 varieties of chile pepper. They especially like to grow peppers that aren’t all that common, whether they are wild, ornamental, or culinary.

When they received the ‘NuMex Thanksgiving’ seeds, they were interested in seeing what would become of them. The seeds were sown on April 11, 2005 and the ‘NuMex Thanksgiving’ fruit started maturing around September 7, 2005. Mr. Boatman stated that “NuMex Thanksgiving’ is a very compact ornamental, with fruits measuring approximately 1 ½” x ½”. The fruit on the periphery of this low plant are smaller and the ones in the middle are longer, giving a nice rounded and terraced effect. The leaves are very dark and the fruit color is a nice pumpkin orange. If the fruit is left on the plant, they will turn a shade darker. The height of the plants is 7 inches at the apex.” Mr. Boatman felt that this would be a great plant for ground cover, or in use as an annual bedding plant in Florida. He appreciated the Chile Pepper Institute for sending this sample out, and really enjoyed the ‘NuMex Thanksgiving’ peppers!

Spices and Their Influence on Metabolism

The Department of Biochemistry and Nutrition, Central Food Technological Research Institute of Mysore, India spent three decades researching the effects of spices on animal metabolism. The 30 year study included observing the safety of consumption of spices including turmeric, red pepper, black pepper, and garlic.

The study observed the influence on growth, organ weights, nitrogen balance and blood constituents upon feeding at levels close to human intake as well as up to 100 times the normal human intake. Animal studies documented the beneficial influence of turmeric, red pepper, and garlic on lipid metabolism, especially the effect on the lowering of bad cholesterol. The antioxidant effects of turmeric, red pepper, and clove were studied as well as the anti-inflammatory influence in experimentally induced arthritis.

In conclusion, spices do not contribute significantly to the nutrient makeup of our food per se, especially because of their small quantities found in our diet. However, in view of the many promising health benefits spices are said to exert, these food additions have assumed the status of “Nutraceuticals” and are considered a natural and necessary component of our daily nutrition. Although most of the animal studies that documented the beneficial influence of spices have employed spice concentrations roughly 5-10 times the average levels found normally in Indian diets, such higher levels can be comfortably consumed.

<table>
<thead>
<tr>
<th>Experimental System</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rats on 4% fat</td>
<td>5% red pepper lowered cholesterol</td>
</tr>
<tr>
<td>Control Rats</td>
<td>1.5, 3.0 &amp; 15mg red pepper lowered</td>
</tr>
<tr>
<td>Rats on 10% fat</td>
<td>0.2% red pepper lowered cholesterol</td>
</tr>
<tr>
<td>Diabetic rats</td>
<td>15mg did not reduce cholesterol or glucose</td>
</tr>
<tr>
<td>Rats on 0.5% cholesterol</td>
<td>0.015% red pepper lowered cholesterol, especially LDL</td>
</tr>
<tr>
<td>Rats on 30% fat</td>
<td>0.015% red pepper lowered triglyceride levels</td>
</tr>
</tbody>
</table>

From Food Research International Vol 38, 2005
Chile Pepper Institute Pairs Halloween Pumpkins with Peppers - By Norman Martin, NMSU Agriculture Communications

Rather than whack into the squishy insides of a pumpkin this year, a New Mexico State University chile expert is drawing on pepper pods to decorate the face of a special Halloween jack-o’-lantern.

“Carved jack-o’-lanterns don’t have to rule on Halloween,” said Danise Coon, program coordinator of NMSU’s Chile Pepper Institute. “October is prime time for pumpkins, but you can always bring a little southern New Mexico into the holiday.”

Of course, Coon has a distinct advantage in having access to the Institute’s demonstration garden, which has more than 150 varieties of spicy-sweet smelling varieties of red, green, paprika, cayenne and jalapeño peppers from across the world. The Institute is one of the world’s leading research centers for chile.

For those interested in making their own chile-based pumpkin head, she suggested checking out nearby farmers’ markets for usual chiles or growing their own specialty chiles. The Chile Pepper Institute sells seeds for more than 50 varieties, some of them highly colorful and exotic looking.

“People are always surprised that there are so many different shapes, colors and sizes of chile,” Coon said. “There’s a blazing mix of red, green, yellow, purple, brown, ivory and orange colors.”

To decorate her pumpkins, Coon leans toward little hat-shaped peppers called Christmas bells, along with other colorful ornamentals, cayenne peppers and Thai types. But she stays far away from habaneros, the world’s hottest peppers.

“You have to be very careful around habaneros because their oils can get on your hands and face,” Coon said. “You don’t want that to happen.”

The name jack-o’-lantern most likely comes from an Irish folktale in which a miserly man named Jack is denied entry to both heaven and hell, according to Lesley Bannatyne in “Halloween: An American Holiday, An American History.” The devil punished him by making him walk the earth with a lantern made from a carved turnip and lighted by a coal from hell.

“It could have been worse, I guess,” Coon said. “He could have been hauling around a carved habanero.”

Member Mailbag

Art Singer, one of our Pennsylvania members, has sent us an update on his chile pepper crop. He reported that the weather was sunny and rather dry for the growing season in Pennsylvania. His small chile pepper patch produced a profusion of pods in comparison to the last 3 years. He shared the bounty with friends and neighbors giving away many serrano and Kung Pao peppers, which were the most prolific. The Red Savinas in the garden have seen their last year, the 6th of production, and they will not be coming into the house for the winter. In mid-summer he started some new plants from seed for next year’s garden, 8 Red Savina and 9 Chocolate Habanero plants will over-winter in his living room until next spring.

He also reported “the autumn weather here has become unseasonably cool and rainy, probably due to the turbulence in the Atlantic. Although the tomato plants have been removed from the garden, all the chile plants are still there, with loads of green pods still to be harvested. I will wait a while longer to let some of them grow larger. However, they probably will not ripen this late in the year. I have been fervently watching the Weather Channel for indications of possible frost and the final harvesting will be done before the first frost.”

“I’ve been frying the chile peppers in oil to which I have added garlic at the end of the process. They are a wonderful condiment in sandwiches and of course, some of the fresh pods are used in Texas-style chili.”
AAS 2006 Chile Pepper Winners

The 2006 All-America Selections (AAS) for flower and vegetable award winners have been announced. ‘Black Pearl’ is the winner as an ornamental chile pepper. It has unique, pure, black foliage when grown in full sun. The word ‘pearl’ comes from the shape of the fruit, which are small and very round and start off black and matures to red.

Other chile pepper selection winners include the F₁ hybrid ‘Carmen’ and the F₁ hybrid ‘Mariachi’. The F₁ hybrid ‘Carmen’ is an improved Italian-type, that has fruit that turns from green to red and is very sweet with no heat.

The F₁ hybrid ‘Mariachi’ is a yellow wax type that has fruit that turns from yellow to orange, maturing to red and has a mild heat level.

The AAS website at www.aaswinners.com has seed sources and additional information.

Chile Peppers for Good Digestion

In a recent study from The New England Journal of Medicine, ingesting capsaicin, the chemical that causes the heat in chile peppers, was shown to decrease symptoms associated with functional dyspepsia, a common and troubling chronic digestive disorder of unknown cause.

According to the study, capsaicin acts to impair the activity of nerve fibers that carry pain sensations to the central nervous system. An experiment of 15 participants had capsaicin added to their diet and 15 received a placebo. Those receiving the capsaicin had significant decreases in the symptoms of functional dyspepsia compared to those receiving the placebo.

Chile Peppers Used in Arthritis Research

According to a study from the National Academy of Sciences, the body uses the same brain mechanism to detect heat from chile peppers, hot mustards, and the sharpness of garlic. The finding was made during research on the mechanisms of pain sensation. Understanding how such nerves work can help researchers learn more about how arthritis and other muscular problems develop.

2006 New Mexico Chile Conference

The 2006 New Mexico Chile Conference will be held on February 6 and 7, 2006. This is the 25th anniversary for the Conference. Each year the Conference draws more than 300 growers, producers, and processors for a day-long program covering the latest research and news in the chile pepper industry. For more information, go to www.chilepepperinstitute.org.
B U R N I N G  Q U E S T I O N S

Q. How should I know when it is time to pick my chiles?

A. When picking green chile, most New Mexican pod types give a good “crackle” when the pod is gently squeezed. Jalapeños are ready to pick when they reach about 2 to 2 ½ inches long and are very firm.

Q. One of my habanero plants has just started to produce fruit and we will be getting our first frost soon, is there any way to save my plant?

A. Absolutely! To save the plant transplant it to a pot and keep it indoors throughout the winter. A common practice to help transplant survival rate is to excessively trim the plant to help it through transplant shock. Using a transplanting solution available at your local garden center will also reduce the transplant shock. In the spring, after the last frost, move the pot outside or transplant it into the garden.

Q. I just had my first ‘NuMex Big Jim’ harvest this year and to my surprise, the peppers were only 3 to 5 inches long. Is this due to a lack of water? Plants are pale in color and some of the lower leaves turn yellow and fall off, normally the day after watering.

A: Most of the time, people over-fertilize their plants, but because of the yellowing of leaves and the pale color of the plants. Diehard organic gardeners swear by fish emulsion, but any water soluble commercial fertilizer, such as Miracle Gro or Peters 15-20-15 or close to that percentage fertilizer is good. Pod size is directly proportional to plant growth and size for the larger podded varieties, so if your plants are undersized because of a lack of nitrogen, the pods will be smaller.

News Continued

Cervantes Selected for State Public Service Award

Ms. Emma Jean Cervantes, a former NMSU faculty member, longtime supporter of the university, and chairwoman of the Chile Pepper Institute Board of Directors will receive the New Mexico Distinguished Public Service Award at a banquet in Albuquerque on November 4, 2006. NMSU President Michael Martin will give the keynote address for the event. Dr. Garey Carruthers, Dean of the College of Business and Vice Provost for Economic Development, will share the master of ceremony duties with former New Mexico governor Toney Anaya.

Ms. Cervantes, owner of Cervantes Enterprises and Agribusiness in La Mesa, was selected because of her outstanding service to organizations in New Mexico. She helped establish Mesilla Valley Hospice while she was on the nursing faculty at NMSU in the 1970s. She also helped establish the Memorial Medical Center Foundation and the First Step Center, and was a member of the NMSU Foundation.

IS YOUR LABEL RED? IT’S TIME TO RENEW YOUR MEMBERSHIP!!