

# New chile varieties have more flavor and aroma

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NuMex Heritage 6-4 chile pepper variety. Researchers at New Mexico State University's Chile Pepper Institute developed this and another new variety, the NuMex Heritage Big Jim, by essentially "cleaning up" the breeding line of two previously existing, popular varieties. The new varieties have five times more flavor and aroma than the varieties from which they are derived.

- Think the bold, sweet scent of roasting green chile is one of the best smells around? Well it's about to smell even better -- and taste better, too.

Researchers with New Mexico State University's Chile Pepper Institute in Las Cruces have developed two new chile varieties with improved flavor and aroma after essentially "cleaning up" two existing varieties popular with

farmers and chile aficionados.

The new varieties -- known as NuMex Heritage Big Jim and NuMex Heritage 6-4 -- have five times the flavor and aroma of the varieties they were created from -- the NuMex Big Jim and New Mexico 6-4.

Paul Bosland, professor of horticulture and director of the Chile Pepper Institute, said researchers created the new varieties because the old Jim Big and 6-4 varieties had "run out," losing their signature flavor after many growing seasons.

"Over the years they lost their identity. They're not true to type anymore. The chile the farmers were growing had a great look and disease resistance, but no taste," Bosland said. "In New Mexico, you have to have chile that tastes good."

Chile can lose its identity due to cross pollination with other varieties, Bosland said.

"As the bee in the garden or field dotes from one plant to another, it could possibly bring pollen from a different plant in. Or in your mechanical mix with seeds, you make a mistake. There are always accidents that occur along the way," he said.

And the varieties have had a long time to get mixed up. New Mexico 6-4 was created in 1957; The NuMex Big Jim was released in 1975.

Bosland and his colleagues at the institute decided to get the varieties back to their old selves, so to speak.

In 2002, they obtained the original seed of both varieties, frozen in liquid nitrogen, from the U.S. Department of Agriculture's National Seed Storage Lab in Fort Collins, Colo. From there, the researchers worked to create breeding lines for new varieties that would capture the original flavor of the chilies while making improvements to help farmers stay competitive.

"Now, both varieties have much more flavor compounds, better yield and better plant habits. With these new guys, when you roast them the smell is much stronger and the chile flavor is so much more intense. My mouth is watering just talking about them," said Danise Coon, the Chile Pepper Institute's program coordinator.

Coon said characteristics of the new varieties include high yield, uniform heat level, easy de-stemming and traditional flavor.

The researchers also used mass spectrometry laboratory testing, which detects flavor compounds, to determine if they hit the mark for improved flavor.

Bosland said the team discovered that people were trying to steal the chile from test fields near the university.

"They're so good people are stealing them. We're pretty excited," Bosland said with a chuckle.

The chile was then grown by Biad Chili Ltd. Co. in Mesilla Park, where it was guarded and seeds were collected.

For the future, Bosland and his team is looking at improving the Sandia variety from original seed for release in about two years.

As for the new heritage varieties, Bosland said their new identities can help New Mexico's chile industry continue to tout its quality.

"The chile and that flavor is our connection to the earth. Having good tasting food is very important, and consumers are moving back toward more flavorful food," Bosland said.