

'NuMex Bailey Piquin' Chile Pepper

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Additional index words. *Capsicum annuum*, pungency, vegetable breeding, machine harvesting

"Chile piquin" is probably derived from the Spanish words *chile* (pepper) and *pequeño* (small). Botanically, it is a *Capsicum annuum* var. *aviculare*. The piquin fruit is oblong, while the tepin is round (Laborde and Pozo, 1982). Wild Chile piquins are found from the southwestern United States (Arizona and Texas) to the Andes in South America. Most commercial piquin production occurs outside the United States, primarily in Mexico (Dewitt and Gerlach, 1990). Piquins grow wild in the Mexican mountains and are collected and sold commercially, so the total amount of Mexican production is unknown. Piquin is not grown commercially in the United States because of high costs associated with hand-harvesting.

New Mexico State Univ.'s Chile Pepper Breeding Program (CPBP) announces the release of a machine-harvest, piquin-type Chile pepper, 'NuMex Bailey Piquin'. It was named in honor of Alton L. Bailey, New Mexico

State Univ. Extension Vegetable Specialist Emeritus, a valuable cooperater with the CPBP, who actively helped evaluate this selection.

Origin

'NuMex Bailey Piquin' originated as a single plant selection from an open-pollinated Chile accession collected in the Caribbean area of Mexico. The original population was a heterogenous population of several fruit types. Fruit shapes ranged from round to oblong, and length from 1 to 3 cm. The population also had plants that were "vine-like" (indeterminate) and some that were semi-determinate. Most of the individuals had the deciduous fruit characteristic; when the fruit is mature, only the pedicel and calyx remain on the plant (Intl. Bd. Plant Genet. Resources, 1983). None of the plants had a concentrated fruit set that would allow pods to be commercially harvested by machine. A pedigree selection scheme was conducted in an insect-free greenhouse from three generations. Traits helpful for machine harvesting, viz. fruit separation from calyx, semi-determinate upright plant growth, and concentrated fruit set, were selected during each generation. A single S₃ generation plant was increased in the greenhouse, and its progeny were tested 3 years for yield and feasibility of machine harvesting in field plots trials.

Description

'NuMex Bailey Piquin' is a piquin-type pepper (Fig. 1), also known as the bird pepper. Other names are chilepiquin, chiletepin, Chile tepin, and chiltecpin. It has an upright, semi-determinate, and nonspreading plant growth habit. The flower corolla is white without spots. Fruits are upright and set high in the plant canopy. It is homozygous for the deciduous fruit characteristics, allowing fruit separation from the calyx at maturity.

Pungency was tested with high-performance liquid chromatography (Woodbury, 1980). The dried fruit powder has a pungency of 97,000 scoville units. The heat sensation occurs and dissipates quickly in the mouth. 'NuMex Bailey Piquin' compares favorably with Asian hot Chile powder because it is in the same scoville range (> 80,000).

'NuMex Bailey Piquin' is the first machine-harvestable piquin. The deciduous fruit trait allows the fruits to be shaken from the plant by a machine. A one-row harvester was developed at New Mexico State Univ.; it shakes the plant, and an attached conveyor belt carries the fruits to the rear of the machine for collection. This procedure is similar to that used on some nut trees.

'NuMex Bailey Piquin' plants were grown in replicated plots at Las Cruces, N.M., and fruits were machine-harvested before frost. The 3-year average total yield was 4490 dry kg/ha. Most of the fruit (84%; 3790 kg·ha⁻¹) were mature red at harvest without prior treatment with a fruit-ripening agent. Shrinkage was similar (38%) for fresh red and green fruit.

Availability

'NuMex Bailey Piquin' is exclusively released for commercial distribution by the New Mexico Crop Improvement Assn. (NMCIA). More information may be obtained from the



Fig. 1. Branch of ripened fruit of 'NuMex Bailey Piquin' pepper (left); row of 'NuMex Bailey Piquin' pepper at maturity (right).

NMCIA (New Mexico State Univ., Box 3CI,
Las Cruces, NM 88003; 505/646-4125).

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