

'NuMex Joe E. Parker' Chile

Paul W. Bosland¹, Jaime Iglesias², and Max M. Gonzalez²

Department of Agronomy and Horticulture, New Mexico State University,
Las Cruces, NM 88003

Additional index words. *Capsicum annuum*, vegetable breeding

New Mexico State Univ. Agriculture Experiment Station announces the release of 'NuMex Joe E. Parker', a uniform 'New Mexico 6-4'-type chile with a thicker fruit wall and higher yields than 'New Mexico 6-4'. The name was selected to honor Joe E. Parker of Las Cruces, N.M., a 1950 graduate of the College of Agriculture at New Mexico State Univ. Parker is a continuous and valued coop-

erator with the New Mexico Chile Breeding Program and was actively involved in evaluating this selection.

Origin

Although chile (*Capsicum annuum* L.) is listed as a self-pollinating crop, high out-crossing rates in New Mexico (Tanksley, 1984) have generated variability in most of the New Mexican-type chile cultivars grown. Because of the inherent variability, pure-line breeding techniques have been successful in developing new cultivars (Bosland et al., 1991). 'NuMex Joe E. Parker' originated as a single-plant selection from a field planted to an open-pollinated population of 'New Mexico 6-4'. Coinciding with selection for some horticultural traits important to the chile industry, a pedigree selection scheme was carried out in an insect-proof greenhouse for three generations (Bosland, 1992). In the field, each breed-

ing line was evaluated for >25 standard horticultural traits. The most important traits for green chiles are immature fruit color, shape, and size; yield; and uniformly mild pungency. A single plant at the S3 selection-New Mexico breeding line 271-was increased in the greenhouse and tested during 4 years of replicated field plot trials.

Description

'NuMex Joe E. Parker' is recommended for green and red chile production in southern New Mexico (Fig. 1). Chile processors have identified ideal fruit characteristics for dual-purpose chile. This cultivar has many of these characteristics and exhibits less variability for horticultural traits than 'New Mexico 6-4', the standard chile cultivar for southern New Mexico.

'NuMex Joe E. Parker' plants have a strong single main stem and are uniformly branched, a characteristic that provides foliage cover for protection from solar injury and support for an excellent fruit set. Plant height (76 cm) and width (63.5 cm) are similar to those of 'New Mexico 6-4'. In addition, there are no significant differences between the two cultivars for days to maturity (149 days), green fruit color, fruit width, or pungency. The major features of this cultivar are its outstanding mature green chile yield, red chile yield after a harvest of

Received for publication 30 Nov. 1992. Accepted for publication 22 Jan. 1993. We acknowledge the New Mexico Chile Commission for its support of this project. A contribution of the New Mexico Agricultural Experiment Station, New Mexico State Univ., Las Cruces. The cost of publishing this paper was defrayed in part by the payment of page charges. Under postal regulations, this paper therefore must be hereby marked *advertisement* solely to indicate this fact.

¹Associate Professor.

²Research Assistant.

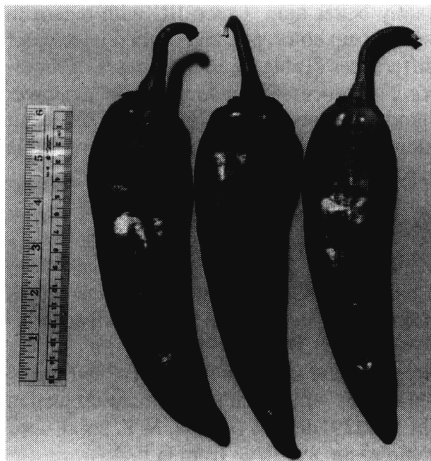


Fig. 1. 'NuMex Joe E. Parker' mature green fruit.

green fruit, red chile yield, and fruit wall thickness (Table 1). The increased fruit set after the first green harvest results in a high red-after-green dry fruit yield (Table 1), a characteristic that gives the grower the choice of continuously picking green chiles or harvesting green chiles and later harvesting red chiles. More importantly, the red-after-green yield was the highest of all cultivars tested (data not shown). A thicker fruit wall produces

Table 1. A 4-year (1988-91) comparison of yield and fruit quality characteristics between 'NuMex Joe E. Parker' and 'New Mexico 6-4' chiles at Las Cruces, N.M.

Cultivar	Fruit			Yield ²		
	Length ¹ (cm)	Wall thickness (mm)	With two locules (%)	Green (Mg·ha ⁻¹)	Red-green (kg·ha ⁻¹)	Red (kg·ha ⁻¹)
NuMex Joe E. Parker	19.84 a	4.51 a	88 a	28.16 a	8604 a	9342 a
New Mexico 6-4	16.51 b	3.55 b	81 b	22.47 b	3767 b	5675 b

¹Yield is based on a fresh-weight basis for green and a dry-weight basis for red and red-green chiles. Red yield is from a single harvest and red-green yield is the red yield after one green harvest.

²Means are separated by student's *t* test, $P \leq 0.05$.

a better yield of green chile after peeling than thin-walled fruit. 'NuMex Joe E. Parker' has a high percentage (88%) of two locule fruit, a desirable characteristic for canning whole pods. 'NuMex Joe E. Parker' color is American Spice Trade Association (ASTA) red 122, similar to that of 'New Mexico 6-4' (ASTA, 1985). Pungency is mild- 811 ± 77 scoville heat units (Woodbury, 1980). A taste panel found no off-flavors.

Availability

Seed increase is on a four-generation basis (breeders, foundation, registered, and certified), with seed production following the guidelines of the New Mexico Crop Improvement Association (NMCLA). Breeder's seed is maintained for 5 years after the release date by the

New Mexico Chile Breeding Program. Commercial distribution of 'NuMex Joe E. Parker' is through NMCLA, New Mexico State Univ., Box 3CI, Las Cruces, NM 88003.

Literature Cited

- American Spice Trade Association. 1985. Official analytical method of the American Spice Trade Association. Method 20.1. p. 43.
- Bosland, P.W., J. Iglesias, and S.D. Tanksley. 1991. 'NuMex Conquistador' paprika pepper. *HortScience* 26:215-216.
- Bosland, P.W. 1992. Chiles: A diverse crop. *HortTechnology* 26-10.
- Tanksley, S.D. 1984. High rates of cross-pollination in chile pepper. *HortScience* 19:580-582.
- Woodbury, J.E. 1980. Determination of *Capsicum* pungency by high performance liquid chromatography and spectrofluorometric detection. *J. Assn. Offic. Anal. Chem.* 63:556-558.