

'NuMex Primavera' Jalapeño

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Additional index words. *Capsicum annuum*, chile, red pepper, mild pungency

New Mexico State Univ. Agriculture Experiment Station announces the release of 'NuMex Primavera', a mild jalapeño (*Capsicum annuum* L.). Jalapeños are becoming increasingly popular in the United States (DeWitt and Bosland, 1996). Although the precise value of the jalapeño market in the United States is not available, jalapeños grown in New Mexico in 1994 were worth >\$7.0 million at the farm gate (New Mexico Agricultural Statistics, 1994). Most jalapeños are processed, adding further value. During the past decade, several processing companies have expressed a need for a mild jalapeño. 'NuMex Primavera' is such a cultivar. It provides excellent yields, good jalapeño flavor, and mild pods, and is well adapted to the southern New Mexico production area.

Origin

'NuMex Primavera' is an open-pollinated cultivar that was developed using a pedigree breeding method that included several generations of hybridizations, selfing, and repeated single plant selection (Fig. 1). During each generation, selections were made for horticultural traits that are considered to be important to commercial jalapeño growers and to the jalapeño processing industry. 'NuMex Primavera' originated from a single plant, New Mexico Breeding Line 93C29-6. All succeeding generations of increased seed were bulked from plants under an insect-proof cage (Bosland, 1993). This line was tested for several years in replicated field plot trials.

Description

'NuMex Primavera' is well adapted for commercial production in southern New Mexico, and incorporates the pod characteristics desired by processors of mild jalapeños (Bosland, 1992). 'NuMex Primavera' was selected for easy calyx detachment, good green color without purpling on the pods, little to no corkiness, and multiple locules. The fruit has a standard jalapeño fruit-shape that includes a semipointed tip and rounded shoulder (Fig. 2). Most importantly, it exhibits uniformly mild

pungency, milder than the standard cultivars (Table 1). 'NuMex Primavera' has green cotyledons and green stems with anthocyanin at the nodes.

'NuMex Primavera' was compared with the three standard jalapeño cultivars Early Jalapeño, TAM Mild Jalapeño, and Jalapeño M in replicated field tests. It produces a pod

similar in width to that of the other standard jalapeño cultivars, and similar to 'Jalapeño M' and 'Early Jalapeño' in pod length. 'NuMex Primavera' has a small calyx like 'Jalapeño M', allowing for faster destemming in the field and less waste at the processing plant. The fruit wall thickness of ≈3.7 mm was not statistically different from that of the standard jalapeño cultivars. Plant height did not differ from that of the other cultivars tested, while plant width was similar to that of 'Early Jalapeño' and 'TAM Mild Jalapeño'. In multiple years of field testing, 'NuMex Primavera' has always ranked among the top yielding cultivars for both field and market yield.

One of the most striking characteristics of 'NuMex Primavera' is its mild pungency as measured on a dry-mass basis by high-performance liquid chromatography (Collins et al., 1995). An estimate of the pungency for fresh

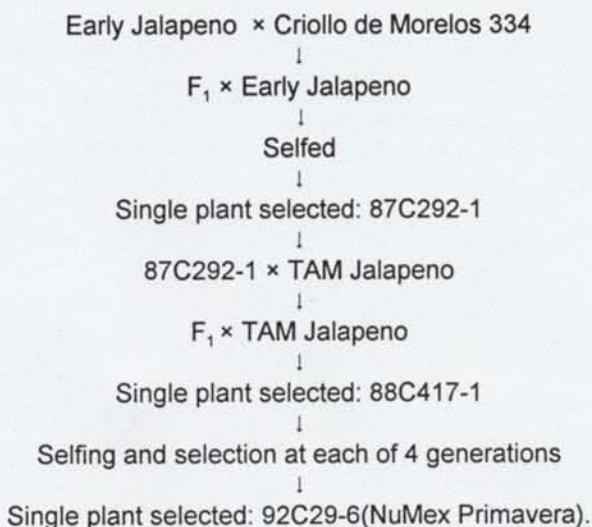


Fig. 1. Pedigree for 'NuMex Primavera' jalapeño.



Fig. 2. Green and red stage of 'NuMex Primavera' jalapeño fruits.

Received for publication 3 Nov. 1997. Accepted for publication 3 Mar. 1998. 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.

Table 1. Comparison of characteristics of 'NuMex Primavera' jalapeño with those of three standard jalapeño cultivars at Las Cruces, N.M., over 3 years of replicated trials.

Cultivar	Pungency ^z (SHU)	Yield (kg·ha ⁻¹)		Fruit characteristics				Plant characteristics	
		Field ^x	Market ^w	Length (cm)	Width (cm)	Wall thickness (mm)	Calyx diam (cm)	Height ^y (cm)	Width (cm)
NuMex Primavera	8,594 a ^v	18,600 a	14,341 ab	5.42 b	2.48 a	3.69 ab	1.72 c	16.30 a	38.62 bc
TAM Mild Jalapeño	21,290 b	10,906 b	9,479 b	6.52 a	2.58 a	4.61 a	1.82 b	12.37 a	41.30 b
Jalapeño M	45,370 c	20,750 a	19,070 a	5.79 ab	2.42 a	3.60 b	1.76 cb	15.50 a	50.28 a
Early Jalapeño	54,093 d	12,065 b	9,748 b	5.23 b	2.76 a	4.28 ab	1.98 a	13.87 a	34.65 c

^zMeasured in Scoville Heat Units (1 mg·kg⁻¹ of capsaicinoid = 15 SHU) on a dry-mass basis (Collins et al., 1995).

^yPlant height at third internode.

^xField yield is total harvest of red, green, and misshapen fruits.

^wYield after red and misshapen fruit were discarded.

^vMean separation within columns by Duncan's multiple range test at $P \leq 0.05$.

Pods would be about one-tenth of the reported dry-mass pungency. The 3-year average pungency of 8594 Scoville Heat Units makes 'NuMex Primavera' a mild jalapeño, milder than 'Jalapeño M', 'Early Jalapeño', and 'TAM Mild Jalapeño'.

will be distributed as an exclusive release through the New Mexico Crop Improvement Association, New Mexico State Univ., Box 3CI, Las Cruces, NM 88003. An application for Plant Variety Protection has been filed for this cultivar.

increase the production of genetically pure chile (*Capsicum* spp.) seed. HortScience 28:1053.

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Availability

Breeder's seed will be maintained for 5 years after the release date by the New Mexico Chile Breeding Program. 'NuMex Primavera'

Literature Cited

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