

‘NuMex Jalmundo’ Jalapeño

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The New Mexico State University chile pepper breeding program announces the release of ‘NuMex Jalmundo’, an open-pollinated, large-sized jalapeño. The name is a contraction of jalapeño and *mun*do (meaning “world” in Spanish), implying that it is as big as the world.

The jalapeño is one of the most popular and one of the most recognized chile peppers grown and consumed in the United States (Bosland and Votava, 1999). Jalapeños are sold fresh, frozen, canned, and pickled. A new market category within jalapeños are the “poppers” or jumbo fruits. Poppers are jalapeño fruits that have been hollowed out; stuffed with a cheddar, Monterey Jack, or cream cheese mix; then breaded with a milk-egg-breadcrumb mixture and deep-fried. They are usually served with a dip as hors d’oeuvres. Fruits of ‘NuMex Jalmundo’ are perfect for use as poppers. In addition, ‘NuMex Jalmundo’ is adapted to regions similar in climate to the southern New Mexico production area where it can be expected to produce excellent yields under commercial production practices.

Origin

Jalapeño peppers were originally named after the city of Xalapa, Mexico, where they are traditionally grown. It is an important part of Mexican–American cuisine and is the official state pepper of Texas. ‘NuMex Jalmundo’ originated from a hybridization between a bell pepper, ‘Keystone Resistant Giant’, and a jalapeño, ‘Early Jalapeno’ (Fig. 1). A pedigree breeding method was used that included five generations of single plant selection and a backcross to ‘Early Jalapeno’. During each generation, selection for horticultural traits considered to be important to the New Mexico jalapeño industry was accomplished. Seed from the single plant selection, New Mexico Breeding Line 00C919-2, was increased under insect-proof cages (Bosland, 1993). This increased seed became ‘NuMex Jalmundo’ and was used in subsequent field plot trials.

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Description and Performance

Replicated trials were conducted at the Leyendecker Plant Science Research Center 5 km south of Las Cruces, NM. Data for fruit size and yield were based on a randomized complete block design with four replications containing up to 30 plants each over 3 years. The plants were grown using standard growing practices commonly found in southern New Mexico (Bosland and Walker, 2005). From each plot, 10 randomly selected fruit were used to calculate averages for quality traits. ‘NuMex Jalmundo’ produces excellent yields of 9.5 cm (3.7 inches) long × 3.6 cm (1.4 inches) wide pods (Table 1; Fig. 2). The pods mature from green (Munsell color rating: 5GY 5/8) to red (Munsell color rating: 7.5R 3/12). ‘NuMex

Jalmundo’ has a per-pod weight greater than ‘Early Jalapeno’ but equal to the F₁ hybrid ‘Grande’. The yield of ≈67 MT/ha of the open-pollinated cultivar, NuMex Jalmundo, was equal to that of ‘Grande’ (Table 1).

Heat level was determined by a reverse-phase high-performance liquid chromatography system with fluorescence detectors. This system is the most efficient, reliable, and reproducible method available (Collins et al., 1995). The heat level of ‘NuMex Jalmundo’ is medium at ≈17,000 Scoville Heat Units (SHU) on a dry weight basis. By industry standards, ‘Early Jalapeno’ at 48,000 SHU is a “hot” cultivar, whereas ‘NuMex Primavera’ at 7,500 SHU is a mild cultivar (Bosland and Votava, 1998).

No differences in plant height ≈89 cm (35 inches), fruit wall thickness (≈4.4 mm), or plant width ≈81 cm (32 inches) was found among the three cultivars.

Availability

‘NuMex Jalmundo’ seed is available from the Chile Pepper Institute, New Mexico State University, P.O. Box 30003, MSC 3Q, Las Cruces, NM 88003. The Chile Pepper

(Keystone Resistant Giant × Early Jalapeno) → 95C2065 → 96C160-4 → (Early Jalapeno × 96C160-4) → 96C2704-10 → 97C1432-1 → 97C1876-2 → 98C2157-1 → 00C919-2 → 01C570 (NuMex Jalmundo).

Fig. 1. ‘NuMex Jalmundo’ pedigree.

Table 1. Fruit yield, fruit characteristics, and plant characteristics for ‘NuMex Jalmundo’, Grande F₁, and Early Jalapeno compared over the years 2005, 2006, and 2008.

	Yield ^c (MT/ha)	Fruit width ^y (cm)	Fruit length ^x (cm)	Fruit wt (g)	Heat ^w (SHU)
NuMex Jalmundo	6.76 a	3.56 a	9.45 a	34.1 a	17,125 b
Grande F ₁	6.55 a	3.05 a	8.28 b	30.4 a	48,336 a
Early Jalapeno	3.42 b	2.79 b	9.83 a	20.5 b	48,313 a

^cYield is the field green fruit yield less the weight of diseased or undesirable fruits.

^yFruit length and fruit width was the average of 40 fruits.

^xScoville Heat Units (SHU), 1 μg·g⁻¹ capsaicinoid = 16 SHU per dry weight basis.

^wMean separation in columns by least significant difference test at $P \leq 0.01$.



Fig. 2. Fruits of ‘NuMex Jalmundo’.

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