

Jalapeño pepper cultivar observation in Northern Indiana, 2003

Mario R. Morales¹ and Elizabeth T. Maynard²
Department of Horticulture and LA, Purdue University
¹West Lafayette, Indiana 47907
²Westville, Indiana 46391

Introduction

Jalapeño peppers are mainly consumed by Hispanics of Mexican and Centralamerican origin, however they area gaining popularity among Americans of other backgrounds and ethnicities, too. The more than three million Hispanics living in the Midwest make a good size market for Hispanic vegetables. Sensing this market, local growers are starting to devote large areas of land to the production of Hispanic vegetables, especially hot peppers. This article reports on a trial observation of standard Jalapeño cultivars.

Materials and Methods

Nine Jalapeño pepper cultivars were planted in a greenhouse at Pinney Purdue Agricultural Center, Wanatah, Indiana on May 3, 2003. Plants were grown in 72-cell plastic trays and transplanted into unreplicated plots on June 18. Field preparation included a fall application of 90 lb/A K₂O and pre-plant incorporation of 120 lb/A N (from Urea). The observation was planted on raised beds covered with black plastic mulch for weed control. Trickle irrigation lines were placed beneath the plastic mulch to provide water and fertilizer to the growing plants as needed. Beds were 5 feet apart from center to center. Plots had two rows with plants staggered and spaced 1.5' apart within rows. Plots had a total of 12 plants (six per row), but only the eight central competing plants were harvested, the end plants were not considered. Hail hit the trial on June 28, ten days after transplanting, and broke the main stem of several plants. Undamaged plants were marked with pink flags and yields and fruit characteristics of broken and unbroken plants recorded separately. Plots were harvested on September 9 and September 30. We measured plant height (cm); fruit yield (lb/plot); average fruit weight (from 25 fruit, in g), length (from 6 fruits, in cm) and width (from 10 fruit, in cm); and fruit-wall thickness (from 3 fruits, in mm) on September 9. Fruits for these measurements were taken randomly from the bulk of the fruit harvested from each plot. On September 16, we also sampled and measured the length (in cm) and width (in cm) of three mature fruits from each plot. Data was processed using Microsoft Office's Excel.

Results and Discussion

The nine Jalapeño cultivars observed varied in yield and fruit characteristics (Table 1). There were five cultivars that yielded at least 31 lb/plot (4 lb/plant); they were **Hybrid # 7 F1**, **X3R Ixtapa F1**, **Jaladuro F1**, **Grande F1**, and **Maxi-Jala F1**. Fruit weight is probably directly dependent on the length, width and wall thickness of the fruit. **Hybrid # 7 F1**, the best yielder (34.1 lb/plot), had an above average fruit width (3.49 cm) and wall thickness (5.51 mm), which contributed to its above average fruit weight (50.3 g). **Jaladuro F1** had the best average fruit weight (64.1 g) and width (4.32 cm) and an above the mean average fruit length (8.82 cm) and

wall thickness (5.16 mm). The cultivars with good yields and large fruit size/weight for stuffing were **Hybrid # 7 F1**, **Jaladuro F1**, **Grande F1**, and **Maxi-Jala F1**. Mature fruits were longer (9.54 cm) and wider (3.55 cm) than the randomly sampled fruits (8.75 cm and 3.46 cm, respectively). Except for Grande F1, plant height increased proportionally to yield.

Table 1. Yield and fruit characteristics of Jalapeño pepper cultivars, northern Indiana, 2003

Cultivar	Source	Yield lb/plot	Plant height cm	Average fruit			Mature fruit		Fruit-wall thickness mm
				weight g	length cm	width cm	length cm	width cm	
Hybrid # 7 F1	RU	34.1	58	50.30	8.64	3.49	10.43	3.71	5.51
X3R Ixtapa F1	RU	33.4	57	42.23	8.32	3.42	9.60	3.98	4.47
Jaladuro F1	UG	31.7	53	64.10	8.82	4.32	9.35	3.97	5.16
Grande F1	RU	31.1	59	49.57	9.50	3.56	9.84	3.70	4.91
Maxi-Jala F1	UG	30.9	51	46.77	8.61	3.79	9.37	3.91	5.70
Pecos	RU	27.2	50	38.40	8.53	3.07	9.13	3.13	5.50
Tula F1	RU	27.1	50	50.70	9.38	3.49	9.85	3.57	4.73
Sayula X3R F1	ST	26.1	48	32.53	8.53	2.87	9.01	2.85	4.57
Jablo F1	UG	23.6	46	36.50	8.42	3.11	9.25	3.14	4.74
Mean		29.5	52	45.68	8.75	3.46	9.54	3.55	5.03