Jalapeno and Poblano pepper cultivar trials in Central Indiana, 2002

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Introduction

The increase of the Hispanic population in Indiana is creating a larger demand for ethnic products. A few Indiana vegetable growers have seen the rise of this market and, as a consequence, have started producing the most common Hispanic vegetables. These growers have a "pick-your-own" system for the local Hispanic community but also ship orders to Chicago and other locations in the Midwest. Jalapenos are by far the most consumed hot peppers by Hispanics of Mexican origin and they have gained also popularity among all American consumers. Most grocery store chains now have a section on ethnic vegetables, where the Hispanic ones are quite prevalent. This paper reports on the evaluation of 10 Jalapeno and 2 Poblano type peppers in central Indiana.

Materials and Methods

Ten Jalapeno pepper cultivars were planted in a greenhouse at Purdue University, West Lafayette, Indiana on May 14, 2002. Plants were grown in 72-cell plastic trays and transplanted into a randomized complete block design with three replications on June 24. Field preparation included the pre-plant incorporation of 1 pint/acre of Treflan and 100 lb/acre of urea. The trial 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 to the growing plants as needed. Beds were 8 feet apart from center to center. Plots had two rows spaced 18" apart and plants spaced 2' apart within the rows. Harvest started on August 30 and ended on October 15. Data was processed using SAS, a software system for data analysis.

Results and Discussion

Jalapeno and Poblano peppers grew well in central Indiana, however, the Poblano type were a little late at flowering and setting fruit. Except for a few hornworms that were eliminated by hand, no major diseases or insects attacked the plants and there was not need to spray any pesticide. There were significant differences in fruit yield, average fruit weight, number of fruits per plant, and fruit appearance among the Jalapeno pepper cultivars (Table 1). **Grande F1** was the best performer. It had the highest fruit yield (25.9 tons/acre), the third largest number of fruits per plant (120), a good average fruit size (1.27 oz) and a good fruit appearance (dark-green color). **Mitla F1** was the second best yielding cultivar with 21.2 tons/acre, a number of fruits per plant of 124, and an average fruit weight of 1.00 oz. **Hybrid #7 F1** had the third best yield (20.6 tons/acre) and the third largest average fruit weight (1.44 oz). There were two Jalapeno cultivars that produced quite large fruits: **Jaladuro F1** with an average fruit weight of 1.69 oz and **Maxi-Jala F1** with 1.63 oz. Fruits from these two cultivars were thick-walled and inflated, the kind preferred by Mexican costumers. Besides producing the second heviest fruits, **Maxi-Jala F1** also was a very good yielder (20.6 tons/acre), which makes it a good choice for production in Indiana.
There were large differences in fruit yield, average fruit weight, number of fruits per plant, and fruit appearance between the two Poblano pepper cultivars evaluated (Table 2). **Ancho Magnifico** was

the best performer of the two. It not only had a higher fruit yield (16.8 tons/acre) but also a higher load of fruits (34 fruits/plant) and a higher average fruit weight (4.16 oz). **Ancho Magnifico** fruits were large and as twice as heavy as the fruits of the other cultivar.

Table 1. Yield comparison of Jalapeno hot pepper cultivars in central Indiana, 2002

Cultivar	Seed source	Fruit yield (tons/acre)	No. fruits per plant	Avg fruit weight (oz)	Fruit appearance (1-5)[1]
Grande F1	RU	25.9 a[2]	120 a	1.27 bc	3.8 abc
Mitla F1	RU	21.2 b	124 a	1.00 d	3.0 dec
Hybrid #7 F1	RU	20.6 bc	85 dc	1.44 b	4.0 ab
Maxi-Jala F1	UG	20.1 bc	73 d	1.63 a	4.7 a
X3R Ixtapa F1	RU	19.4 bc	101 b	1.13 dc	3.5 dbc
Tula F1	RU	18.8 bcd	84 dc	1.32 b	3.7 bc
Sayula X3R F1	ST	17.8 bcd	128 a	0.82 e	2.0 f
Pecos F1	RU	17.4 bcd	96 bc	1.07 d	2.3 ef
Jaladuro F1	UG	16.8 cd	58 e	1.69 a	4.2 ab
Jablo F1	UG	14.7 d	85 dc	1.01 d	2.7 def
Mean		19.3	95	1.24	3.4
C.V.		11.4	8	8.14	14.6

[1] Appearance: 1=poor, 5=excellent
[2] Values in the same column followed by the same letter are not significantly different at the 0.05 level (Duncan's test).

Table 2. Yield comparison of Poblano pepper cultivars in central Indiana, 2002

Cultivar	Seed source	Fruit yield (tons/A)	N0. fruits per plant	Avg fruit weight (oz)	Fruit appearance (1-5)[1]
Ancho Magnifico	UG	16.8 a[2]	24 a	4.16 a	4.0 a
Ancho	RI	11.7 a	34 a	2.02 b	1.3 b
Mean		14.3	29	3.09	2.7
C.V.		32.6	30	4.38	15.3

[1] Appearance: 1=poor, 5=excellent
[2] Values in the same column followed by the same letter are not significantly different at the 0.05 level (Duncan's test).