

## Fresh Market Plum Tomato Cultivar Evaluation

Thom Harker, Elaine Grassbaugh, Brad Bergesford, Mark Bennett, and Matt Hofelich

<sup>1</sup>Ohio State University, Dept. of Horticulture and Crop Science, Columbus, OH

<sup>2</sup>OARDC North Central Agricultural Research Station, Fremont, OH

**Introduction:** Plum tomatoes, once grown primarily for processing, are becoming more popular in the fresh market sector. New and old varieties, providing a variety of colors, were tested under northern Ohio growing conditions.

**Objectives:** To test fresh market plum tomato cultivars grown on raised beds using black plastic mulch and trickle irrigation for fresh market sales.

**Materials and Methods:** Nine cultivars of plum tomatoes were seeded into 200-cell plug trays on April 1, 2004, and grown to maturity in the greenhouse at the OARDC North Central Agricultural Research Station (NCARS) in Fremont, Ohio. Transplants were established in the field at NCARS on May 20, 2004 into raised beds with black plastic mulch and trickle irrigation. Raised beds were spaced 5 feet apart and plants were spaced 18 inches apart within the rows. Each cultivar was replicated 4 times. Drip irrigation was applied as needed throughout the growing season. Fruit was harvested three times on August 24, September 2, and September 16.

**Results and Discussion:** Yields ranged from 10.4 to 35.6 T/A for marketable fruit (Table 1). Top yielding varieties include 'Daquiri', 'BHN 411', 'BHN 410', 'Vita Gold' and 'Sunoma'. The lowest yielding variety was 'Elberta Peach', mainly due to the fact that many off-type seeds were contained in our packets, including varieties of different fruit shapes and colors compared to 'Elberta Peach'. The only yellow variety, 'El Dorado', had inconsistent fruit shape and size, and many of the fruits were very soft and watery, indicating a very short shelf life. Significantly lower cull T/A fruits were seen in 'BHN 411', 'Plum Crimson' and 'Vita Gold'. 'Vita Gold' was the only orange fruit entry in this trial. There were no significant differences in average fruit size among any of the entries, however, the largest fruits were from 'BHN 410', 'BHN 411', 'BHN 685', and 'Sunoma'. The predominant disease problem throughout all varieties was anthracnose.

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**Table 1. Plum tomato germplasm evaluation, Fremont, OH, 2004.**

<b>Cultivar</b>	<b>Seed Source</b>	<b>Fruit color</b>	<b>Marketable T/A</b>	<b>Cull T/A</b>	<b>Average Fruit Size (lbs)</b>	<b>Comments</b>
BHN 410	BHN	Red	28.9	4.9	0.19	Nice, uniform fruit & size
BHN 411	BHN	Red	33.1	2.2	0.18	Very uniform; good fruit size
BHN 685	BHN	Red	23.1	4.1	0.18	Uniform fruit & size
Daquiri	ST	Red	35.6	6.1	0.15	Top yielding; nice fruit
Elberta Peach	TGS	Orange/red striped with gold	10.4	6.2	0.17	Many off-type seeds in the mix; fruit is soft
Plum Crimson	ST	Red	23.0	2.4	0.16	Uniform shape & size
Vita Gold	TGS	Orange	27.7	2.0	0.14	Uniform shape & size; bright orange
Sunoma	Meyer Seed Int'l.	Red	26.1	3.9	0.19	Large, uniform fruit
El Dorado	Meyer Seed Int'l.	Yellow	21.3	4.7	0.14	Inconsistent shape and size; fruit very soft & watery
<b>LSD (0.05)</b>			<b>12.41</b>	<b>2.63</b>	<b>NS</b>	
<b>C.V.</b>			<b>40.4</b>	<b>54.2</b>	<b>17.6</b>	

