

Fresh Market Plum Tomato Germplasm Evaluation - 2005

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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 cultivars grown on raised beds using black plastic mulch and trickle irrigation in northwest Ohio for marketable yields, average fruit size and fruit characteristics.

Materials and Methods: Twelve cultivars of plum tomatoes were seeded into 200-cell plug trays on April 12, 2005, 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 26, 2005 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 two times on August 18 and September 6.

Results and Discussion: Yields ranged from 15.0 to 34.8 T/A for marketable fruit (Table 1). Top yielding varieties include Health Kick, Murial, Daquiri, BHN 411 and BHN 410. The lowest yielding variety was Debarao, mainly due to the small fruit size. The only yellow variety, Golden Milano, had inconsistent fruit shape and size. Largest average fruit size was obtained with Murial, Mariana, Plum Crimson, and BHN 410. As new varieties become available for fresh market staked and plum tomatoes, variety evaluations provide valuable information on yield potential, fruit characteristics and disease problems. Yield results from both locations and photos of plum cultivars tested will be available winter 2005 via the OSU VegNet website at www.vegnet.osu.edu.

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Table 1. Plum tomato germplasm evaluation, 2005.

Cultivar	Seed Source	Red T/A	Cull T/A	Avg. fruit size (lbs)	Comments
Lunchbox	ST	24.4	0.8	.07	Similar to a large cherry tomato in size
Health Kick	ST	34.8	1.9	.16	Highest yielding
Golden Milano	ST	28.9	2.3	.14	Inconsistent shape & size
Debarao	JS	15.0	2.8	.12	Small plum, inconsistent shape
Daquiri	ST	32.1	2.4	.14	Medium fruit size; good shape
San Marzano	FM	23.4	2.4	.09	Pear shape; inconsistent size and shape
BHN 410	SW	30.8	1.9	.18	Uniform shape & size
BHN 411	SW	31.3	1.6	.18	Uniform shape & size
Mariana	SW	29.8	1.8	.23	Uniformly large, plum shaped fruit
Hybrid 882	SW	28.4	1.8	.17	Uniform shape & size
Plum Crimson	SW	28.1	3.2	.19	Large plum shape
Murial	SW	32.6	3.2	.26	2 nd highest yielding; consistently uniform size; plum shape
LSD (0.05)		NS	NS	.05	
C.V.		37.4	54.8	36.4	