

Field Tomato Trials in Maine

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Materials and Methods

We selected 16 varieties of open field, determinate tomatoes ranging in maturity from 66 to 79 days. One indeterminate variety, New Girl was inadvertently planted along with the determinate varieties. New Girl was staked using a basket weave while all other varieties were grown on the ground. Three plots of each variety were transplanted in a randomized design, and data from the plots were combined for analysis. All tomatoes were seeded into trays on April 30, grown in the greenhouse and transplanted in the field on June 10, 2003. Each plot consisted of 8 plants planted 18" apart within rows and rows spaced 6' on center. Rows were covered in embossed black plastic mulch. Prior to forming the beds 10-10-10 fertilizer was incorporated into the soil at a rate equal to per 500 lb per acre. The plants were fertilized with a starter solution at transplanting.

Harvest began on August 17 and continued until September 11. The first four harvest dates were combined to measure early yields. No sprays were applied for disease or insect management. Fruit from each plot was harvest at red ripe stage, counted and weighted. The fruit were graded in to selects, marketable, and culls. Selects were large fruit with no cracks, blemishes and small blossom scars. Fruit larger than 4 oz (112g) with some scaring or cat-facing considered marketable. Small, diseased or otherwise deformed fruit were graded as culls.

Results

Most of the varieties performed well despite the cool wet spring (Table 1). However, compared to previous years harvest was delayed by approximately 7-10 days. First Pik was the top producer in 2003. Sunshine was the top early variety producing 4.04 lb (2 kg) of fruit per plot in the first four harvests. Sunshine was also the second best for total season yield and produced the greatest amount of culls. Redstone and New Girl were also top early producers, however production fell off as the season progressed. Redstone fruit were pinkish-red, uniform, round and were easily distinguished from the other varieties in the trial. New Girl was the least productive and smallest fruited of the varieties evaluated. Fabulous had the largest fruit size averaging 12.1oz (343g) while overall yields ranked in the middle of the pack. Red Sun, Emperador and BHN 543 all produced fruit averaging over 10oz (284g).

Table 1. Performance of tomato varieties evaluated in Monmouth, Maine 2003.

Variety	Total Yield (lb. / Plot)¹	Early Yield (lb. / Plot)²	Culls (lb. / Plot)³	Fruit Size (oz.)
FirstPik	91.11	12.19	26.70	6.84
Sunshine	89.32	35.41	47.16	8.78
Valley Girl	66.02	14.55	22.34	8.93
Royal Mountie	63.59	14.49	17.04	7.73
Sun Chief	61.41	10.32	12.97	9.35
Red Sun	60.53	5.03	9.81	11.68
Fabulous	60.33	4.56	14.31	12.10
BHN 543	58.74	6.57	12.83	10.02
Sun Guard	57.04	6.09	15.28	8.54
Empereador	55.06	2.23	10.41	11.47
Red Pride	51.33	4.50	11.80	9.88
Sunbrite	48.29	6.68	8.82	9.49
HMX 2807	47.28	5.58	11.25	9.91
Redstone	47.03	21.90	12.90	8.26
Sunrise	38.12	7.01	9.88	7.48
New Girl ⁴	32.30	18.28	5.89	4.73
LSD 0.05 ⁵	28.44	12.01	9.83	0.93

¹ Plots were 12 ft with 18" between plants, 6' between rows, and 8 plants/plot.

² Early yield was the sum of the first four harvests: 8/17, 8/20, 8/23, and 8/26.

³ Culls included fruit that were too misshapen, small, or diseased to be considered marketable

⁴ New Girl is an indeterminate variety and was grown on stakes using basket weave.

⁵ Data within each column must differ by this much to be considered statistically different.