

## **The Pick of the Crop – Highmoor Farm Pepper Variety Trial**

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### **Materials and Methods**

We evaluated 15 pepper varieties in a replicated trial with three replicates. Plants were started on in the greenhouse April 23 and transplanted to the field on June 9, 2003. Three plots of each variety were planted in a randomized design. Each plot consisted of 20 plants planted in double rows on black plastic covered 42" beds spaced 6' apart. Plant spacing within rows was 18". Prior to forming the beds the field was fertilized with 10-10-10 at a rate equal to 500 lb/acre. The plants also received started solution at transplanting. No other supplemental irrigation was provided. No sprays were made to manage insects or disease.

Harvest dates were August 18, September 4, 16, and 26. The center 16 plants of each bed were harvested for data collection, the first and last pair of plants in each plot served as guard plants. The individual plots were divided in half: the first group of 8 plants in each plot were harvested at the mature green fruit stage and the second group of 8 plants in each plot were harvested at the colored fruit stage. On the final harvest date, all marketable green fruit were also harvested from the colored fruit portion of each plot. Number of fruit and fruit weight were recorded for each plot and the data combined for analysis. Fruit length, width, and wall thickness were determined from 10 randomly selected fruit of each variety.

### **Results**

The summer of 2003 was a particularly challenging summer to grow peppers. The cool wet spring followed by widely fluctuating temperatures and moisture resulting in many aborted blossoms and corresponding yield reductions (Table 1). Ace and New Ace were clearly the top producers for both green and colored fruit. However, fruit of these varieties tend to be small, thin walled and often misshapen (Table 2). Vivaldi and Aristotle X3R were the second greatest yielders followed by a clustering of varieties. Heritage, Gourmet and Queen produced unacceptable low yields. Fruit sizes ranged from 5 oz (Ace) to 9.25 oz (Socrates)

**Table 1. Performance of pepper varieties evaluated at Highmoor Farm, Monmouth Maine 2003.**

Variety	Total Fruit	Total Yield (lb./plot) <sup>1</sup>	Number Green Fruit per plot	Green Fruit Yield (lb/plot) <sup>2</sup>	Number Colored Fruit per Plot	Colored Fruit Yield (lb/plot) <sup>3</sup>
Ace	110	35.85	86	26.61	25	9.23
New Ace	84	28.64	60	19.39	24	9.25
Vivaldi	40	16.83	40	16.57	1	0.36
Aristotle X3R	38	13.45	37	12.94	1	0.51
Socrates	21	12.05	13	6.46	8	5.59
King Arthur	23	9.61	20	6.89	3	2.72
Brigadier	19	9.52	18	8.73	1	0.78
Early Sunsatation	23	9.32	19	6.99	4	2.32
Ironsides	21	9.17	17	6.50	4	2.67
Double-Up	27	8.84	25	7.61	2	1.22
Patriot	16	7.30	16	7.30	0	0.00
Olympus	11	5.59	9	4.51	2	1.08
Heritage	8	4.37	7	4.02	0	0.35
Gourmet	9	3.76	4	1.31	6	2.45
Queen	9	3.71	6	2.16	3	1.54
<b>LSD 0.05<sup>4</sup></b>	18	7.80	16	6.49	7	3.05

<sup>1</sup> Plots were 15' double row bed with rows 18" apart and 18" between plants within rows. 6' between beds, and 20 plants per plot.

<sup>2</sup> Green fruit were harvested from 8 plants, the first half of each plot.

<sup>3</sup> Red fruit were harvested from 8 plants, the second half of each plot.

<sup>4</sup> Data within each column must differ by this much to be considered statistically different.

**Table 2. Average fruit sizes<sup>1</sup> of peppers grown at Highmoor Farm, Monmouth Maine 2003.**

Variety	Ave fruit wt (oz)	Length (in)	Width (in)	Thickness (mm)
Socrates	9.25	4.4	3.78	7.4
Heritage	9.11	4.7	3.89	8.0
Olympus	8.26	3.8	3.28	7.4
Patriot	7.42	4.0	3.88	8.4
Brigadier	7.4	3.9	3.45	7.4
Ironsides	7.28	4.0	3.32	6.3
King Arthur	6.99	3.9	3.41	7.2
Vivaldi	6.74	4.9	3.57	7.3
Early Sunsatation	6.46	3.9	3.75	6.9
Queen	6.42	3.7	3.35	7.1
Gourmet	6.17	3.6	3.41	6.9
Aristotle X3R	5.66	3.5	3.61	7.8
New Ace	5.47	3.8	3.39	5.9
Double-Up	5.36	3.9	3.28	7.3
Ace	5.19	3.8	3.30	5.3
<b>LSD 0.05<sup>2</sup></b>	1.86	0.5	0.41	1.5

<sup>1</sup> Averages were obtained by measuring 10 randomly selected green fruit.

<sup>2</sup> Data within each column must differ by this much to be considered statistically different.