

2008 Fresh Market Vegetable Varieties Trial Report

Brad R. Bergesford, Dr. Shawn Wright, Thom Harker, Wayne Lewis, Al Welch, Lynn Miller
The Ohio State University South Centers
1864 Shyville Road, Piketon, Ohio 45661-9749
Phone: (740) 289-2071

***The authors wish to thank the Ohio Vegetable and Small Fruit Research and Development Program and cooperating seed companies for providing funding and support of this project.**

Fresh market vegetable variety trials were conducted at the OSU South Centers research farm in Piketon, Ohio during the 2008 growing season. This was a good year to evaluate varieties under one of the hottest and driest growing seasons on record at Piketon. Even though plant stress was high due to these growing conditions, most varieties evaluated performed well. All trials except the ornamental corn were irrigated as needed. Each variety and experimental line was grown in accordance with the recommendations outlined in the Ohio Vegetable Production Guide (OSU Bulletin 672). All experiments were evaluated in either a randomized complete block design with four replications or as a single row observation planting with no replications.

Field trials were conducted on ornamental corn, watermelon, cantaloupe, pumpkins, summer squash, bell pepper, fresh market tomato, grape tomato and cucumbers. Objectives were to rate and observe specific genetic lines for their production and marketing characteristics. This interim report highlights results of the trials. Full individual trial reports will be submitted to Purdue University to be included in the Midwest Vegetable trial report and will be forwarded to the OVSFRDP after all statistical analysis are complete and summarized.

These field trials were highlighted and tours given at the Annual Horticulture Field night held on August 14 where over 115 growers and industry professionals were able to walk the trials and view the entries. A Pumpkin Twilight tour was conducted of the pumpkin trials and Ornamental corn trials on October 16 where over 50 growers and industry professionals were able to walk the trials and view the entries. Also, these field trials were highlighted at numerous tours and visits by OSUE and OARDC Administration, Government officials, individual growers, cooperating seed companies, international visitors, scientists and scholars.

Results:

Watermelon: 8 varieties were tested including HMX 4915, Crunchy Red, Tri X Brand 313, SP-4, Melody, AX 3022, Harmony and Lantha. There was no statistical difference among average fruit weight or marketable tons per acre. Planting of this trial was delayed to observe performance for a late season harvest window.

Fresh Market Tomato: 12 varieties were tested including SVR 1400, HMX 6830, Scarlet Red, HMX 7838, Mountain Glory, Rocky Top, SRV 01701236, SRV 01721400, Phoenix, Biltmore, Polbig and Fletcher. There was no statistical difference in average total pounds of fruit per acre. The average fruit weight among varieties was not statistically different. Average fruit weight was .66 pound.

Grape tomato: One grape tomato variety HMX 6830 was tested with average pounds of fruit per acre of 92,250 pounds. Average fruit weight of 1.9 ounces.

Pumpkins:

*3 varieties were tested including Gladiator, Spartan and Camaro. Camaro had the lowest number of orange fruit per acre (1000) and the lowest pounds of orange fruit per acre (16,104). Average fruit size for all entries ranged between 15 and 19 pounds.

*10 varieties were planted as observation trials only by seed company request including Treasure, Progress, Packer, Capital, Superior, Summit, Warlock, Magic Wand, Field Trip and Gargoyle.

Summer Squash: 3 varieties were tested including Payroll, Spineless Beauty and Paycheck. Two varieties were planted as observation trials only by seed company request including Reward and HMX7726. Six varieties were tested for powdery mildew resistance including Gentry, Spineless Beauty, Sunglo, Amatista, Payroll and Envoy.

Ornamental Corn: Seven varieties were tested including Autumn Explosion, RBV 1002 UR, RBV 8000, RBV 3004, RBV1002SL, Redi Maize and RBV 1009N. Six varieties were planted as observation trials only by seed company request including RBV 1402BL, RBV 5000, RBV 1009SL, RBV 1302R, RBV 4000 and RBV 7000. There was no statistical difference among marketable ears per acre, average ear length nor average ear width.

Cantaloupe: Four varieties were tested including Aphrodite, Athena, Pixie and RML 0409. Early season cucumber beetle and bacterial wilt disease pressure was heavy even with following recommended cultural practices. Pixie seemed more susceptible to bacterial wilt disease and was not included in the data analysis. Average total fruit per acre was statistically different among varieties with RML 0409 producing 11,111 fruit per acre. Aphrodite (5,278 fruit per acre) and Athena (6,667 fruit per acre) were not statistically different from each other.

Bell Pepper: Six varieties were tested including Declaration, Karisma, Revolution, PS 9928302, PS 09941819 and Aristotle. Average fruit weight (0.39) was not statistically different among varieties. Mean pounds of medium (21711.3), large(15,785.7), and select (3758.9) fruit per acre were not statistically different among varieties.

Total pounds of fruit per acre was statistically different among varieties:

t	Grouping	Mean	TRTMT
	A	84875	Karisma
	A		
	A	74571	Revolution
	A		
B	A	71089	PS 09941819
B	A		
B	A	69161	Aristotle
B	A		
B	A	65304	Declaration
B			
B		51018	PS 9928302

Cucumber: Seven varieties were tested including Diomede, Stonewall, Cobra, Lafayette, NUN 5523, Jackson and Wainwright. 3 varieties were planted as observation trials only by seed company request including BCS-039, HMX 7423 and Cutter. There was no statistical difference in average total fruit per acre (86,989.8) among varieties. Average total fruit per acre ranged from 68571-99643. There was no statistical difference in the average number of boxes of US fancy per acre (1139.843) among varieties. Average number of boxes of US Fancy per acre ranged from 887.2-1455.4. There was no statistical difference in the average number of boxes of US#1 per acre (355.9) among varieties. Average number of US#1 per acre ranged from 194.8-417.2. There was no statistical difference in the average number of boxes of US#2 per acre (212.6) among varieties. Average number of US#2 per acre ranged from 115.3-328.7. There was no statistical difference in the average number of boxes of total boxes per acre (1708.4) among varieties. Average number of total boxes per acre ranged from 1329.6-2076.3.

Average weight of fruit was statistically different among varieties (LSD=0.04)

t	Grouping	Mean	Variety
	A	0.46	Jackson and Wainwright
B	A	0.44	Lafayette and Diomede
B	A	0.43	NUN 5523
B		0.41	Cobra
B		0.40	Stonewall