

New Vegetable Cultivar Releases for 2008

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Objective

To test new vegetable variety releases in 2008 for their performance under northwest Ohio growing conditions and to determine new releases showing pest resistance.

Materials and Methods

Twenty-eight varieties of various vegetable crops were planted in four replications at the North Central Ag Research Station (NCARS) in Fremont, Ohio. Cultivar selections were new releases for 2008 along with varieties considered industry standards. Much input was received from growers, seed companies, and industry personnel regarding variety selection and those used as standard comparisons. Peppers (bells, banana and jalapeno), fresh market tomatoes, plum/roma-type tomatoes, eggplant, winter squash, and gourds were included in this project. Transplants were seeded and grown at NCARS and transplanted to the field during May and June. Plots were established in four replications per cultivar on a Hoytville silty clay loam soil. Tomatoes were harvested four times, peppers three times, eggplant three times, and winter squash and gourds once.

Results

Seven fresh market tomato varieties were compared and we found no significant differences in yield or average fruit size. There was a significant amount of blossom end rot, bacterial spot, and bacterial speck throughout the plots. Two heritage (heirloom) tomato cultivars ('Red Zebra' and 'Conestoga') were also planted. There was a significant difference in yield and average fruit size, with 'Conestoga' yielding 35.4 T/A red fruit and an average fruit size of 0.41 lb, compared to 'Red Zebra' yielding 8.9 T/A red fruit and an average fruit size of 0.19 lb. The majority of culls in both varieties was fruit cracking (Table 1). Green yields were fruit of marketable size that were picked at the last harvest but not yet at the breaker stage.

Two plum tomato varieties were tested with no significant differences in yield but a slight difference in average fruit size. Both varieties ('Picus' and 'Tormenta') were large-fruited with very few culled fruits and excellent disease resistance (Table 1).

One variety each of eggplant ('Irene'), butternut squash ('Matilda'), and gourd ('Lunch Lady') were trialed as new releases for 2008. Again, they all showed good disease resistance with good marketable yields and few culled fruits (Table 1).

Seven varieties of bell peppers were researched. Yields ranged from 4.1 T/A to 7.3 T/A. Top yielding varieties were 'Karisma,' 'Declaration,' and 'Flavor Burst'. Average fruit size ranged from 0.37 to 0.48 lb. Culled fruits were mainly from blossom end rot and sunscald (Table 2).

Five varieties of jalapenos were tested. There were no significant differences in yield or average fruit size. Marketable yields ranged from 8.2 to 10.5 T/A with very few culled fruit in any of the varieties (Table 2).

Four banana/snack type pepper varieties were included in this study. There were no significant differences in marketable yield and slight differences in cull T/A, and average fruit size. Culled fruits were due to blossom end rot (Table 2).

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Table 1. New Vegetable Cultivar Releases for 2008.

FRESH MARKET TOMATOES							
Variety	Status	Maturity	Seed Source	Marketable (T/A)	Cull (T/A)	Green (T/A)	Average Fruit Size (lb)
Polbig	New 2008	61 day	SW	14.5	32.9	3.0	0.54
Mountain Glory	New 2008	70 day	Rogers	18.6	29.0	4.2	0.52
Phoenix	New 2007	72 day	SM	15.8	28.3	3.7	0.45
Rocky Top	New 2008	NA	Rogers	15.6	33.2	4.2	0.49
Fletcher	New 2008	74 day	SW	13.2	28.5	6.2	0.47
Mountain Fresh Plus	Industry Std.	77 day	SW	17.2	29.3	4.9	0.54
LSD (0.05)				NS	NS	NS	NS
CV				39.5	17.0	46.9	19.3
HEIRLOOM TOMATOES							
Variety	Status	Maturity	Seed Source	Marketable (T/A)	Cull (T/A)	Green (T/A)	Average Fruit Size (lb)
Red Zebra	New 2008	75 day	Seedway	8.9	18.7	1.6	0.19
Conestoga	New 2008	NA	Harris Moran	35.4	28.6	5.0	0.41
LSD (0.05)				11.53	5.63	3.24	0.19
CV				72.6	24.1	89.5	39.1

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Table 1 (continued)

PLUM TOMATOES							
Variety	Status	Maturity	Seed Source	Marketable (T/A)	Cull (T/A)	Green (T/A)	Average Fruit Size (lb)
Picus	New 2007	74 day	SM	47.8	11.2	5.6	0.20
Tormenta	New 2008	72 day	SW	56.3	6.8	7.1	0.16
LSD (0.05)				NS	NS	NS	0.03
CV				18.3	47.2	56.2	12.9

EGGPLANT						
Variety	Status	Maturity	Seed Source	Marketable (T/A)	Cull (T/A)	Average Fruit Size (lb)
Irene	New 2008	65 day	SW	12.0	1.8	1.0

BUTTERNUT SQUASH						
Variety	Status	Maturity	Seed Source	Marketable (T/A)	Cull (T/A)	Average Fruit Size (lb)
Matilda	New 2008	90 day	SW	25.2	1.9	6.0

GOURD						
Variety	Status	Maturity	Seed Source	Marketable (T/A)	Cull (T/A)	Average Fruit Size (lb)
Lunch Lady	New 2008	120	SW	19.9	1.5	7.1

Table 2. New Vegetable Cultivar Releases for 2008.

BELLS							
Variety	Description	Status	Maturity	Seed Source	Marketable (T/A)	Cull (T/A)	Average Fruit Size (lb)
PS9927141	Green to Red	New 2008	72 day	SM	4.3	4.1	0.38
PS0928302	Green to Red	New 2008	75 day	SM	4.1	3.1	0.45
PS1819	Green to Red	New 2008	75 day	SM	5.3	2.3	0.45
Karisma	Green to Red	New 2008	72 day	SW	7.3	2.3	0.48
Declaration	Green to Red	New 2008	70 day	SW	6.0	1.7	0.44
Aristotle	Green to Red	Industry Std.	70 day	SM	5.2	3.3	0.46
Flavor Burst	Green to Yellow	New 2008	65 day	SW	6.0	1.8	0.37
LSD (0.05)					1.8	1.53	NS
CV					37.8	50.5	16.8
JALAPENO							
Variety	Description	Status	Maturity	Seed Source	Marketable (T/A)	Cull (T/A)	Average Fruit Size (lb)
Regalo	Jalapeno	New 2008	NA	Orsetti	9.3	0.2	0.05
Talon	Jalapeno	Industry Std.	75 day	RI	8.2	1.1	0.06
Chichimeca	Jalapeno	New 2008	73 day	SM	10.1	0.6	0.06
Chapala	Jalapeno	New 2008	73 day	SM	9.4	0.1	0.06
Ixtapa	Jalapeno	Industry Std.	75 day	SM	10.5	0.1	0.06
LSD (0.05)					NS	NS	NS
CV					17.5	15.4	11.7

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Table 2 (continued)

BANANA/SNACK TYPE							
Variety	Description	Status	Maturity	Seed Source	Marketable (T/A)	Cull (T/A)	Average Fruit Size (lb)
LS 0505	Banana	New 2008	NA	Long & Sweet LLC	7.7	0.6	0.09
LS 0509	Banana	New 2008	NA	Long & Sweet LLC	8.4	1.6	0.12
Pageant	Banana	Industry Std.	70 day	SI	6.9	1.8	0.11
Yummy	small orange snack type	New 2008	73 day	SW	5.8	0.02	0.06
LSD (0.05)					NS	0.51	0.10
CV					28.6	75.1	26.1