

Evaluation of Specialty Vegetable Crops and New Cultivars – 2005

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Objectives:

- 1). To test five specialty crops in Ohio for yield and fruit/plant characteristics.
- 2). To test six newly released cultivars to evaluate fruit characteristics and yield potential under Ohio growing conditions.

Methods and Materials:

The following five specialty crops were tested at the North Central Agricultural Research Station (NCARS), in Fremont Ohio:

'Cosmic Purple' carrots	'Sancho' specialty melon
'Atomic Red' carrots	'Visa' specialty melon
'Burpee Golden' beets	

Carrots and beets were direct seeded on May 12 into raised beds measuring 6 feet in length. Each crop was replicated 3 times. Seedlings were thinned on June 15. Carrots were harvested twice on July 19 and August 9. Beets were harvested three times on July 19, July 26 and August 9.

Specialty melons ('Visa' and 'Sancho') were seeded on May 9 into 50-cell plug trays. Pumpkins and melons were established in the field on June 1 into flat ground with black plastic mulch. Rows were spaced 7.5 feet apart with in row plant spacing of 3 feet.

The following new cultivar releases were also tested at NCARS during the 2005 growing season:

'Orange Blossom' tomato	'Jet' acorn squash
'Alliance' bell pepper	'Red Warty' specialty pumpkin
'One Ball' summer squash	'Eight Ball' summer squash

Tomato and bell pepper cultivars were seeded into 200-cell plug trays on April 12. They were established in the field on May 26 into raised beds with black plastic mulch and trickle irrigation. Rows were spaced 5 feet apart with in-row plant spacing of 18 inches. Tomatoes were harvested twice on August 9 and 18. Peppers were harvested twice on August 19 and September 6.

Pumpkin and squash varieties were seeded on May 9 into 50-cell plug trays. They were established in the field on June 1 into flat ground with black plastic mulch. Rows were spaced 7.5 feet apart with in-row plant spacing of 3 feet. Summer squash varieties were harvested three times on July 13, 19 and 25. Acorn squash and pumpkins were harvested on September 12.

Results and Discussion:

New /Specialty Crops (Table 1)

'Cosmic Purple': this specialty carrot has a true purple color. Would be a nice addition for sales to specialty markets or restaurants. Average yield from 6 feet of row was 56 carrots weighing 7.8 lbs. Weight includes carrots with tops intact. Average length of carrots at harvest were 7-9 inches. Only a few of the carrots harvested were forked or twisted.

'Atomic Red': this cultivar was more orange in color than red. The red color seems to develop when the carrots are larger. Average yield from 6 feet of row was 31 carrots weighing 3.6 lbs, including tops. More twisted and forked carrots were harvested compared to the 'Cosmic Purple' cultivar. Average length at harvest was 6-8 inches. If you are interested in a dark red carrot, perhaps another cultivar may have better color development.

'Burpee Golden': this bright golden specialty beet is unique for specialty markets and restaurant sales. Beets retain their bright gold color after cooking. Average yield from 6 feet of row was 32 beets weighing 9 lbs (with tops attached). No culled beets were harvested from any of the reps. Good cultivar for niche market sales.

'Sancho': this specialty melon has unique dark green and yellow speckled skin with a white interior. Marketable yield was 4.9 T/A and average fruit size was 7 lbs. Excellent flavor. Plots had heavy bacterial wilt pressure.

'Visa': this melon is round, netted skin and sweet, green flesh. Marketable yield was 2.2 T/A with an average fruit size of 3.7 lbs. Heavy bacterial wilt throughout the plots.

New Cultivars (Table 2)

'Orange Blossom': this round bright orange tomato has an average fruit size of .37 lbs. Marketable yield was 24.1 T/A. Consistent fruit size.

'Alliance' bell pepper: this 3 and 4 lobes pepper matures from green to red. Fruits are blocky with thick walls. Marketable yield was 11.5 T/A with 1 T/A culled fruits.

'One Ball' summer squash: this unique, round squash is bright yellow with a green star pattern at the stem end. Average fruit weight was 0.8 lbs. Total marketable yield was 10 T/A with no culled fruit from any harvests. This unique cultivar would be excellent for

niche or restaurant sales and is suitable for grilling, baking or stuffing. Caution should be taken when harvested, as fruit will not easily twist from the plant so cutting from the plant is required. Matures in 35 days.

‘Eight Ball’ summer squash: this small round squash is dark green and similar in size to ‘One Ball’. Total marketable yield was 14.9 T/A. No culled fruits from the three harvests. As with all summer squash, frequent harvests are needed due to fast fruit development. This variety needs to be cut from the plant at harvest, as the stems are very corky and cannot be removed by twisting. Nice compliment to other summer squash. Matures in 35 days.

‘Jet’ acorn squash: this acorn squash has an average fruit size of 2.2 lbs and total marketable yield was 14.9 T/A. Consistent fruit size and shape throughout all replications. Semi-bush plant type and matures in 85 days.

‘Red Warty’ specialty pumpkin: this unusual, eye-catching pumpkin is bright orange to red with a warted surface. Average fruit size was 17.4 lbs with fruits ranging in size from 2.9 to 48 lbs. Marketable yield was 16.1 T/A, with no culled fruits. Nice addition to other fall items such as pumpkins and gourds. Good roadside market item.

Table 1. New/specialty crops tested at NCARS, 2005.

Crop	Cultivar	Seed Source	Marketable Yield	Culls
Carrot	‘Cosmic Purple	JS	7.8 lbs (from 6’ row)	0.7 lbs
Carrot	‘Atomic Red’	JS	3.6 lbs (from 6’ row)	2.5 lbs
Beet	‘Burpee Golden’	ST	9 lbs (from 6’ row)	0 lbs
Specialty melon	‘Sancho’	SW	4.9 T/A	0.5 T/A
Specialty melon	‘Visa’	SW	3.7 T/A	0.2 T/A

Table 2. New cultivars tested at NCARS, Fremont, OH, in 2005.

Crop	Cultivar	Seed Source	Marketable T/A	Cull T/A
Tomato	'Orange Blossom'	JS	24.1	3.1
Bell Pepper	'Alliance	ST	11.9	1.0
Summer Squash	'One Ball'	SW	10.0	0.0
Summer Squash	'Eight Ball'	SW	14.9	0.0
Acorn Squash	'Jet'	JS	14.9	0.5
Specialty pumpkin	'Red Warty'	SW	16.1 T/A	0.0

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