

University of Wisconsin

Urban and Regional Food Systems

2015 Vegetable Variety Screening Trials

WINTER SQUASH and PUMPKIN

Trial Notes: All varieties planted June 3, 2015. Planted in mounds and mulched with chopped alfalfa hay. High incidence of Angular Leaf Spot in early season. No significant varietal difference in disease resistance. Four plants per mound and 12 ft between mounds.

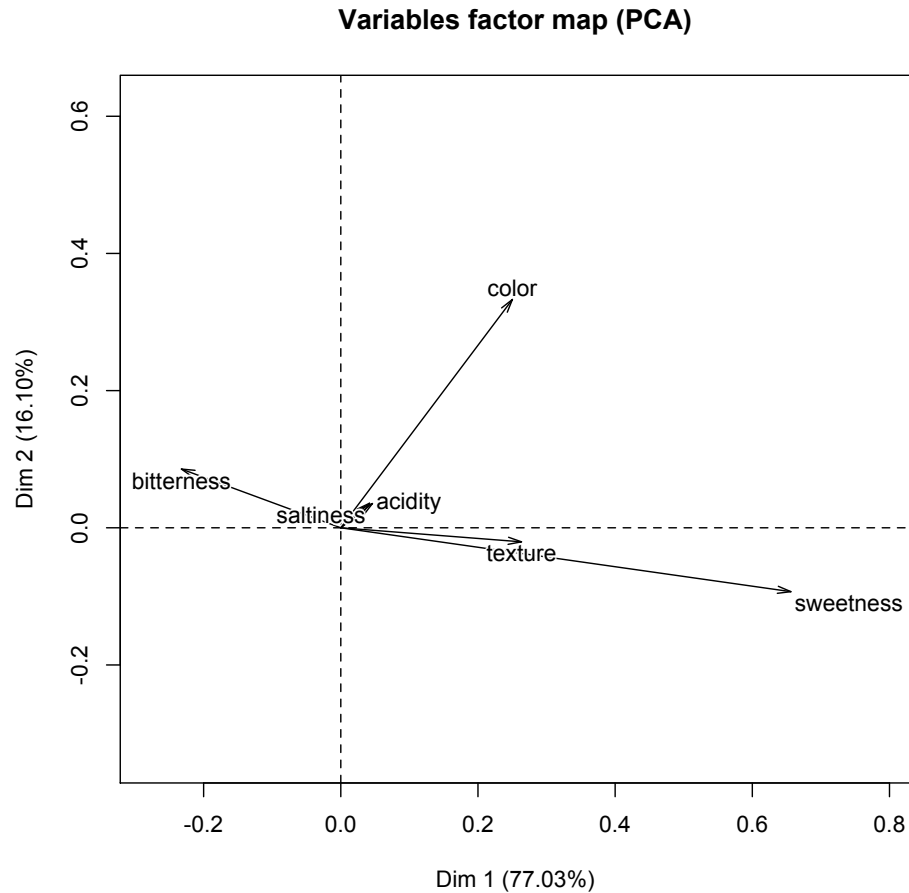
| Cultivar | Type | Company | Germ | First Female Flower | Date Harvested | Total Harvest Weight (kg) | AVG Fruit Size (kg): 10 Fruit sample | STDV Fruit Size (gm): 10 Fruit Sample | Total #M Fruit | Total # UM Fruit | Total # Fruit | % M Fruit | # M Fruit/plant | 60 Day Storage: #M | 60 Day Storage: #UM | 60 Day Storage: % M | 100 Day Storage: # M | 100 Day Storage: # UM | 100 Day Storage: % M |
|-----------------------------|---------------------------------------|-----------------------------|------|---------------------|----------------|---------------------------|--------------------------------------|---------------------------------------|----------------|------------------|---------------|-----------|-----------------|--------------------|---------------------|---------------------|----------------------|-----------------------|----------------------|
| Discus | <i>C. maxima</i> | Adaptive Seeds | 0.75 | 17-Jul | 2-Oct | 27 | 2.1 | 0.8 | 13 | 3 | 16 | 83% | 3.3 | 6 | 0 | 100 | 3 | 3 | 50 |
| Lower Salmon River | <i>C. maxima</i> | Adaptive Seeds | 1.00 | 28-Jul | 16-Oct | 63 | 3.8 | 0.8 | 17 | 0 | 17 | 100% | 4.3 | 15 | 1 | 94 | 10 | 5 | 63 |
| Oregon Homestead Sweet Meat | <i>C. maxima</i> | Adaptive Seeds | 1.00 | 28-Jul | 16-Oct | 109 | 6.0 | 1.1 | 16 | 11 | 27 | 59% | 4.0 | 12 | 4 | 75 | 7 | 5 | 44 |
| Potimarron | <i>C. maxima</i> | Adaptive Seeds | 0.75 | 17-Jul | 2-Oct | 102 | 2.0 | 0.5 | 49 | 13 | 63 | 79% | 12.3 | 25 | 0 | 100 | 23 | 2 | 92 |
| E30R.00013 | <i>C. maxima</i> | Vitalis | 1.00 | 28-Jul | 16-Oct | 74 | 1.3 | 0.2 | 64 | 14 | 78 | 82% | 16.0 | 38 | 0 | 100 | 36 | 2 | 95 |
| E30R.079 | <i>C. maxima</i> | Vitalis | 1.00 | 28-Jul | 16-Oct | 35 | 1.2 | 0.4 | 32 | 7 | 39 | 82% | 8.0 | 22 | 1 | 96 | 21 | 1 | 91 |
| Orange Summer | <i>C. maxima</i> | Vitalis | 1.00 | 28-Jul | 16-Oct | 90 | 1.7 | 0.5 | 49 | 4 | 53 | 93% | 12.3 | 40 | 0 | 100 | 37 | 3 | 93 |
| Doran Round | <i>C. moschata</i> | Adaptive Seeds | 0.75 | 28-Jul | 16-Oct | 40 | 1.5 | 0.3 | 27 | 31 | 57 | 47% | 6.7 | 7 | 5 | 58 | 2 | 5 | 17 |
| Violina Rugosa | <i>C. moschata</i> | Adaptive Seeds | 0.75 | 28-Jul | 16-Oct | 52 | 4.4 | 1.8 | 12 | 3 | 15 | 82% | 3.0 | 0 | 4 | 0 | 0 | 0 | 0 |
| NY 13-9028 | <i>C. moschata</i> x <i>C. maxima</i> | Cornell -- Michael Mazourek | 0.25 | 28-Jul | 16-Oct | 58 | 0.5 | 0.1 | 168 | 36 | 204 | 82% | 42.0 | 30 | 3 | 91 | 24 | 6 | 73 |
| NY 13-9912 | <i>C. moschata</i> x <i>C. maxima</i> | Cornell -- Michael Mazourek | 1.00 | 28-Jul | 16-Oct | 62 | 0.8 | 0.1 | 92 | 8 | 100 | 92% | 23.0 | 22 | 2 | 92 | 19 | 3 | 79 |
| NY 13-9914 | <i>C. moschata</i> x <i>C. maxima</i> | Cornell -- Michael Mazourek | 0.50 | 28-Jul | 16-Oct | 52 | 0.6 | 0.1 | 112 | 0 | 112 | 100% | 28.0 | 27 | 0 | 100 | 25 | 2 | 93 |
| Honeynut | <i>C. moschata</i> | High Mowing Organic Seeds | 1.00 | 28-Jul | 2-Oct | 24 | 0.4 | 0.1 | 62 | 4 | 66 | 94% | 15.5 | 20 | 0 | 100 | 30 | 9 | 150 |

| Cultivar | Type | Company | Germ | First Female Flower | Date Harvested | Total Harvest Weight (kg) | AVG Fruit Size (kg): 10 Fruit sample | STDV Fruit Size (gm): 10 Fruit Sample | Total #M Fruit | Total # UM Fruit | Total # Fruit | % M Fruit | # M Fruit/plant | 60 Day Storage: #M | 60 Day Storage: #UM | 60 Day Storage: % M | 100 Day Storage: # M | 100 Day Storage: # UM | 100 Day Storage: % M |
|--------------------|--------------------|---------------------------|------|---------------------|----------------|---------------------------|--------------------------------------|---------------------------------------|----------------|------------------|---------------|-----------|-----------------|--------------------|---------------------|---------------------|----------------------|-----------------------|----------------------|
| Nutterbutter | <i>C. moschata</i> | High Mowing Organic Seeds | 1.00 | 28-Jul | 2-Oct | 63 | 1.2 | 0.2 | 61 | 13 | 74 | 82% | 15.3 | 20 | 0 | 100 | 20 | 0 | 100 |
| Buttermilk | <i>C. moschata</i> | UW -- Jim Nienhuis | 1.00 | 28-Jul | 16-Oct | 13 | 1.3 | 0.4 | 10 | 2 | 12 | 83% | 2.5 | 9 | 1 | 90 | 6 | 3 | 60 |
| Butterscotch | <i>C. moschata</i> | Johnny's Selected Seeds | 0.75 | 28-Jul | 16-Oct | 24 | 0.6 | 0.2 | 36 | 0 | 36 | 100% | 9.0 | 19 | 1 | 95 | 10 | 9 | 50 |
| E30B.00012 | <i>C. moschata</i> | Vitalis | 1.00 | 28-Jul | 16-Oct | 64 | 1.2 | 0.3 | 57 | 1 | 58 | 98% | 14.3 | 44 | 2 | 96 | 33 | 11 | 72 |
| Havana | <i>C. moschata</i> | Vitalis | 1.00 | 28-Jul | 16-Oct | 78 | 1.5 | 0.4 | 49 | 7 | 56 | 88% | 12.3 | 36 | 0 | 100 | 36 | 0 | 100 |
| Tiana | <i>C. moschata</i> | Vitalis | 0.75 | 28-Jul | 16-Oct | 108 | 1.3 | 0.2 | 77 | 0 | 77 | 100% | 19.3 | 42 | 0 | 100 | 38 | 4 | 90 |
| Ayote | <i>C. moschata</i> | SOSS seed exchange | 1.00 | 28-Jul | 16-Oct | 3 | 1.6 | 1.1 | 2 | 0 | 2 | 100% | 0.5 | 0 | 2 | 0 | 0 | 0 | 0 |
| Cruzan | <i>C. moschata</i> | SOSS seed exchange | 1.00 | 28-Jul | 16-Oct | 26 | 3.7 | 0.8 | 7 | 3 | 10 | 70% | 1.8 | 3 | 4 | 43 | 2 | 1 | 29 |
| Invincible | <i>C. moschata</i> | SOSS seed exchange | 1.00 | 28-Jul | 16-Oct | 71 | 3.9 | 3.1 | 15 | 5 | 20 | 75% | 3.8 | 4 | 3 | 57 | 3 | 1 | 43 |
| Candystick Dessert | <i>C. pepo</i> | Adaptive Seeds | 1.00 | 28-Jul | 2-Oct | 28 | 0.6 | 0.1 | 45 | 7 | 52 | 87% | 11.3 | 25 | 3 | 89 | 17 | 8 | 61 |
| Honey Boat | <i>C. pepo</i> | Adaptive Seeds | 0.75 | 28-Jul | 2-Oct | 15 | 0.6 | 0.1 | 25 | 8 | 33 | 76% | 6.3 | 8 | 3 | 73 | 6 | 2 | 55 |
| Sweet Dumpling | <i>C. pepo</i> | Johnny's Selected Seeds | 0.75 | 28-Jul | 2-Oct | 30 | 0.7 | 0.1 | 53 | 0 | 53 | 100% | 10.7 | 30 | 0 | 100 | 24 | 6 | 80 |

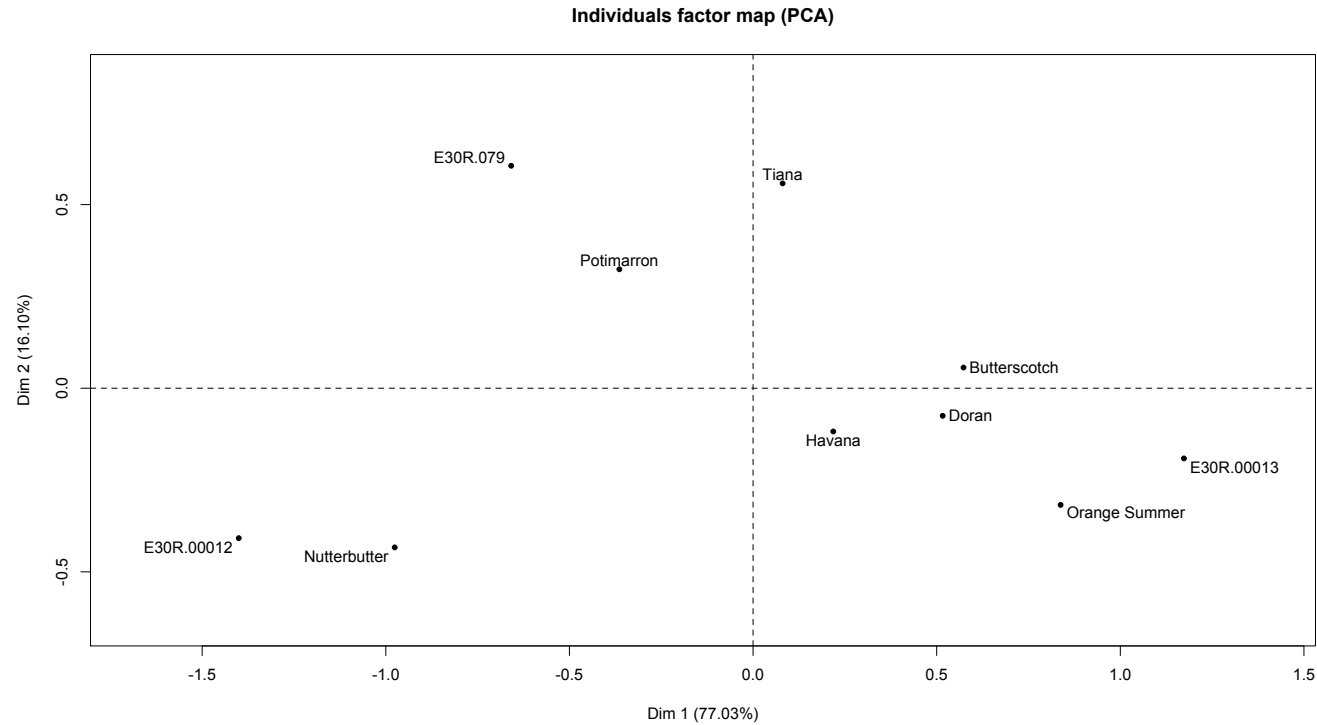
| Farm | Farmer | Species | Varieties | Would you grow this again? | How marketable is it? | What did you think of the flavor? | Strongest point | Major flaws | Which variety was the best/worst? | General Notes |
|--------------|---------------|---------|--------------|----------------------------|-------------------------------------|---------------------------------------------------------------------------------------|-------------------|-----------------------|------------------------------------------------------|---------------|
| Wild Ridge | Anna Metscher | squash | Havana | yes | good | good | nice color | variety of sizes | worst | |
| Wild Ridge | Anna Metscher | squash | Nutterbutter | yes | very good | very good! Sweet | good size for CSA | some disease | medium | |
| Stoney Acres | Kat Becker | squash | Nutterbutter | | not to chefs - they want big squash | Great | cute | too small | | |
| Wild Ridge | Anna Metscher | squash | Tiana | yes | very good | very good | good size | didn't like the color | best | |
| Stoney Acres | Kat Becker | squash | Tiana | maybe | very | fine - but really our chefs and even CSA folks like bigger squash so they loved that. | Size | | Size is needed for our markets so this was the best. | |
| Stoney Acres | Kat Becker | squash | Honeynut | maybe | not to chefs - they want big squash | Good | | too small, color | | |

| Trial management | soil type | prior crop | cover crop | bed preparation | planting method | planting date | plant spacing | fertilizer | mulch | irrigation | pest or pathogen treatments |
|------------------|-----------------------------|------------------|------------|---------------------------------------|-----------------|--------------------------|---------------------|---------------------------------------------------------------|---------|------------|-----------------------------|
| Anna Metscher | sandy loam | fall succession | clover | tillage | transplant | GH 5/11, transplant 6/13 | 1 row at 2' | 2 buckets compost | no | drip | none |
| Kat and Tony | Freeon and Magnor Silt Loam | fallow-oats/peas | none | chisel plow, disk, raised bed/plastic | seed into holes | 5.21.16 | 18 inches 1 row/bed | fertrell super K onto beds at rate of 2 Tbs/hole once growing | plastic | drip | none |

| Squash | | | | | | | |
|---------------------------------------------------------------------------------|---------------------|-----------------|-------------------|-----------------|------------------|----------------|------------------|
| Variety | intensity*** | color*** | texture*** | sweet*** | bitter*** | acidity | saltiness |
| Red Kuri | | | | | | | |
| E30R.00013 | 3.2 | 3.1 | 3.1 | 3.6 | 1.5 | 1.6 | 1.7 |
| Orange Sumr | 3.2 | 2.8 | 3.0 | 3.3 | 1.5 | 1.5 | 1.9 |
| Potimarron | 2.5 | 3.0 | 2.7 | 2.1 | 2.0 | 1.6 | 1.9 |
| E30R.079 | 1.9 | 3.3 | 2.4 | 1.8 | 2.0 | 1.5 | 1.8 |
| Butterscotch | | | | | | | |
| Doran | 2.8 | 3.0 | 2.5 | 3.0 | 1.4 | 1.5 | 1.7 |
| Havana | 2.8 | 2.9 | 3.0 | 2.6 | 1.6 | 1.5 | 1.7 |
| Tiana | 2.7 | 3.4 | 2.7 | 2.5 | 1.9 | 1.7 | 1.7 |
| Butterscotch | 2.7 | 3.1 | 3.1 | 2.9 | 1.6 | 1.7 | 1.6 |
| Nutterbutter | 2.2 | 2.2 | 2.6 | 1.8 | 2.0 | 1.5 | 1.5 |
| E30B.00012 | 1.7 | 2.1 | 2.1 | 1.5 | 2.0 | 1.4 | 1.7 |
| Significant differences among varieties *** p < 0.0001, ** p < 0.01, * p < 0.05 | | | | | | | |



Representation of quality characteristics, based on crew evaluation, resulting from a principal component analysis of all crew quality evaluation data. The length of the arrow for each characteristic is proportional to its contribution to the variation among varieties, and the direction of the arrow is in the direction of increasing scores for that characteristic. This shows how related the characteristics are to each other, and is also used to read the following graph of varieties. The individual (variety) factor map on the next page plots where each variety lands relative to these quality components



Representation of varieties, based on crew evaluation, resulting from a principal component analysis of all crew quality evaluation data. The position of each variety shows how it was evaluated for the different quality characteristics on the previous page. For example, a variety that near or beyond the end of the color arrow would show particularly intense color and a variety on the opposite side of the graph than the direction in which the color arrow points would have poor color. This can be done for each of the quality characteristics. This graph also shows how varieties are related to each other for the complete set of quality characteristics, and characteristics that contributed more to the variation among varieties have greater weight in determining where varieties are positioned on the graph. This can be helpful in making selections based on multiple characteristics at once. This graph helps us select which varieties we send to the group of chefs we are working with for further quality evaluation

| Variety | Type | Date | Number of Chefs | Flavor Intensity (1-9, 9=high) | Buy for yourself | Buy for your restaurant | How would you serve it? | Description of unique flavor characteristics | Strongest point | Major flaws |
|---------------|-----------|---------|-----------------|--------------------------------|------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Butterscotch | butternut | 12.8.15 | 4 | 6 | 1 | 1 | blend to make soup ; desert ; roasted or sauted to showcase natural sweetness ; very simply | not a huge fan of the texture. Nutty oaky flavor I like ; very rich, great for desert ; great density and depth of flavor! Sweet and rich and earthy ; buttery | good crust when cooked, that was delicious ; sweetness ; great sweet and rich taste and firm texture made this a favorite ; buttery | grainy ; . ; . ; . |
| Tiana | butternut | 12.8.15 | 4 | 5.75 | 0.5 | 0.75 | cold in a ketchup for our polenta fries ; ; slightly denser textuer than previous, richer body. Serve roasted or mashed ; roasted or candied | citrus, kind of sweet and sour in a good way ; ; nuttery and buttery flavor, would be highlighted by simple proportions ; slightly bitter, firmer texture | citrusy ; buttery ; flavor, texture, great taste with little off flavors make this a winner for me ; firm | a little grainy ; . ; . ; bitter |
| NYS9028 | butternut | 12.8.15 | 3 | 5.67 | 0.67 | 0.67 | roasted, blended, very versetile ; roasted or soup ; soup | carrot and rutabegga. Good texture ; dense and carrot-like in flavor and sweetness ; nutty | yummy new flavors, love the flavor not really "squashy" more caroty/rutagegga ; flavor ; . | none ; . ; . |
| Honeynut | butternut | 12.8.15 | 4 | 4.75 | 0.75 | 0.75 | roasted as a side ; ; mild, very soft texture and slightly sweet. Good for soup puree, pie ; soup | good texture almost rutabegga. Mild flavor and little nutty and buttery ; ; ; sweet and nutty, though not as rich as the previous one ; slightly grainy | root veggie flavor ; . ; flavor ; NA | none, this is not that much better than the others, just my preference :) ; dry, astringent ; soft texture ; grainy |
| Nutterbutter | butternut | 12.8.15 | 3 | 4.33 | 0.67 | 0.67 | with butter and sal and pepper. So good by itself ; soup ; with other things | great texture, buttery ; . ; mild flavor | good alone, really liked this one, makes a great holiday side ; dry ; too mild | none ; . ; too mild |
| NYS9912 | butternut | 12.8.15 | 4 | 4.25 | 0.25 | 0.25 | in a soup ; . ; stringy, soft texture. Good for puree or soup ; puree | buttery and nutty, but not overpowering ; ; mild and some light hay or straw earthiness ; slightly stringy | smooth and creamy, yum ; . ; . ; . | a little bland ; . ; texture, flavor ; . |
| E30R.00013 | red kuri | 12.8.15 | 4 | 6.5 | 1 | 1 | roasted ; ; roasted or braised, great flavor and natural sweetness, good body ; puree | bright and summy ; ; ; earthy rick flavor and nice firm texture. Slightly smoky finish ; slight sweet, pumpkin, smooth texture | dosen't taste like anter? ; . ; appearance ; smooth texture | a little stringy ; . ; . ; . |
| Orange Summer | red kuri | 12.8.15 | 4 | 5.75 | 1 | 0.75 | blended as a sauce, for something very versatile though ; ; fine texture and mild flavor, would be good for puree or pie. Also good roasted and sauted ; puree | citrus undertones, smokey ; ; mild earthy flavor, slightly mineral finsih would be good for curry or stew ; strong flavor, soft texture, slight pumpkin flavor | smokiness ; oily ; texture, appearance ; flavor | none ; slight fishy flavor ; mildness, slightly astringent finish ; . |
| Potimarron | red kuri | 12.8.15 | 4 | 5.75 | 0.75 | 0.75 | for a holiaday special as a side ; . ; roasted, sauted, soup, puree, great rich texture has many applications ; soup | strong flavor, right away, then it dies ; . ; rich, dense earthy, sweet and caroty in flavor ; smooth | strong squash flavor. Good sometimes ; creamy ; flavor, appearance ; NA | strong squash flavor ; . ; . ; . |
| Grand | | | | 5.44 | 0.74 | 0.74 | | | | |

Squash

