



North Dakota Home Garden Variety Trials

2013 Results

NDSU EXTENSION
SERVICE

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Chapter 1

Introduction

The Need for Better Research

The first step in growing a successful garden is to select a superior variety.

Gardeners who sow a **superior** variety can grow plants that will yield abundantly, resist diseases, and produce quality food. In contrast, gardeners who sow an **inferior** variety are headed for frustrations. No matter how hard they work in preparing the soil, watering and weeding, they may have disappointing results.

The benefits of selecting superior varieties for gardens are great. The National Gardening Association (NGA) estimates approximately one-third of households in North Dakota grow a vegetable garden.¹ Thus, there are approximately 93,000 households in North Dakota with vegetable gardens.

There are significant economic benefits to gardening. A national study by the NGA showed the average family with a vegetable garden spends \$70 on it and grows an estimated \$600 worth of vegetables.² Using this information, families in North Dakota reap a profit of over \$49 million per year in their gardens.

There is an important public health dimension to gardening. Vegetables and fruits are nature's richest source of micronutrients, minerals and dietary fiber. A diet rich in vegetables and fruits is associated with a decreased risk of obesity and certain chronic diseases such as cardiovascular disease, diabetes and some cancers. Nevertheless, only 11 percent of adults eat enough vegetables and fruits for a healthy diet.³ We need to eat more vegetables—growing a productive garden can obviously help with this.

Very little vegetable research is conducted at research stations in North Dakota. These few plots pro-

vide some insight into the characteristics of a variety, but they do not test varieties under actual gardening conditions. The environment at a field research station is dramatically different than at a home garden:

- The soils at field research stations are similar to soils at a farm; that is, relatively fertile and undisturbed. Soils in a backyard garden are intensively managed and have been highly disturbed from home construction and land grading activities.
- Trials at research stations utilize tractors, large-scale irrigation equipment, and herbicides. Backyard gardeners use shovels, hoes (maybe a rototiller), garden hoses and watering cans.
- Trials conducted at research stations are out in full sun. Many home gardens have shade for at least part of the day.

The Bottom Line

To identify superior varieties for **home gardeners**, it makes sense to determine which varieties perform best in **home gardens** under the management of **home gardeners**.

Objectives

This program has three major objectives:

1. Home gardeners will identify superior varieties of vegetables.
2. Home gardeners will become more aware of new varieties and differences among varieties. This increased level of awareness will affect the way they select vegetable varieties in the future.
3. Partnerships between local families and North Dakota State University will be strengthened.

Selecting Varieties to be Tested

Seed catalogs are carefully studied to identify varieties that are widely available and appear promising for North Dakota. In many situations, a promising new variety is compared with a variety that is widely grown in the state. In 2013, 86 trials were conducted. This included our first look at tomato, pepper, broccoli, and supersweet corn varieties.

¹ National Gardening Association. 2008. Personal communication with Bruce Butterfield, Market Research Director.

² Templin, N. (2008, April 16). How much green can growing a vegetable garden save you? *Wall Street Journal*. <www.wallstreetjournal.com>

³ Elsevier Health Sciences (2007, March 19). Americans still not eating enough fruits and vegetables, according to studies. *Science Daily*. <www.sciencedaily.com>.

Preparation of Seed Packets

Seeds are ordered in bulk from seed companies. Seeds are subsequently packaged in coin envelopes. Adhesive labels that contain planting instructions (variety name, vegetable/flower type, time to plant, and recommended spacing for sowing and thinning) are affixed on each seed packet. All seeds are untreated.

Distribution of Seeds and Supplies

This program is promoted by North Dakota State University (NDSU) Extension Service faculty and staff across the state. Information is also available at the web site <http://www.dakotagardener.com/trials/>. Interested gardeners in spring 2013 were allowed to participate in up to six trials. The fee was \$1 per trial along with \$3.50 for handling and postage. Any interested child was allowed to receive seeds of one trial for free.

In all cases, gardeners sign a pledge before receiving seeds, promising to do all they can to evaluate the varieties fairly.

Besides seeds, growers also receive row labels to mark rows, and a string to help them lay out the 10-foot-long plots. Gardeners receive simple, yet detailed instructions on laying out their plots (Appendix 1). We encourage a 10-foot plot length to be minimal at getting quality data, but container gardening is allowed.

Gardeners are responsible for managing their crops. This includes fertilizing, watering, mulching, and using pesticides. They are encouraged to use their own gardening practices so the varieties are tested under actual home garden conditions.

Quantity and Quality of Participation

In 2013, approximately 170 households submitted results from their trials (this accounts for 75% of households who received seeds). Results from over 800 research trials were submitted. Data were obtained in 38 of the state's 53 counties (Figure 2).

A pleasant finding of this program is the quality of research conducted by home gardeners. These families demonstrate extraordinary enthusiasm in this project. Besides carefully filling out report forms, they often write detailed letters on their trials.

Weather in 2013

The growing season of 2013 started much colder than normal and the establishment of gardens was delayed by weeks (Figure 1). Spring rains were abundant and some garden plots washed out. This project uses untreated seeds and some of these seeds failed to get established under the cool, wet conditions.

Growing conditions normalized during summer months. Warmer than normal weather in early fall helped our crops to mature before frost.

In general, the first hard frost arrived 10–14 days later than usual. A hard frost on the weekend of October 5–6 put an end to the growing season in the west and central regions. A hard frost did not strike much of the east until October 18. Rains were heavy in the fall.

Compiling the Data

Gardeners compared the two varieties in each trial for a series of traits, which included germination rate, plant health, earliness, yield and quality of harvested product. We asked them if they would recommend the varieties to other gardeners and which of the two varieties they preferred (Appendix 2). Comments were strongly encouraged. Gardeners submitted data online and on paper forms, depending on preference.

Comments of growers regarding their taste preferences of the vegetables are a noteworthy bonus of this grass-roots research approach.

Approximately 5% of the reports showed data with inconsistencies; these reports were eliminated from the final analysis.

A selection of representative comments of gardeners on each variety is included in this report. Reports of previous years are available on-line at <http://www.dakotagardener.com/trials/>.

Reporting the Final Results

The final results are reported to interested seed companies and NDSU educators. Newspaper and online columns are written to report findings. Presentations are made to over 1,000 gardeners every spring at conferences across the state. Participating gardeners receive a summary of the results (see page 4) and a certificate to recognize their participation in the program (Appendix 4).

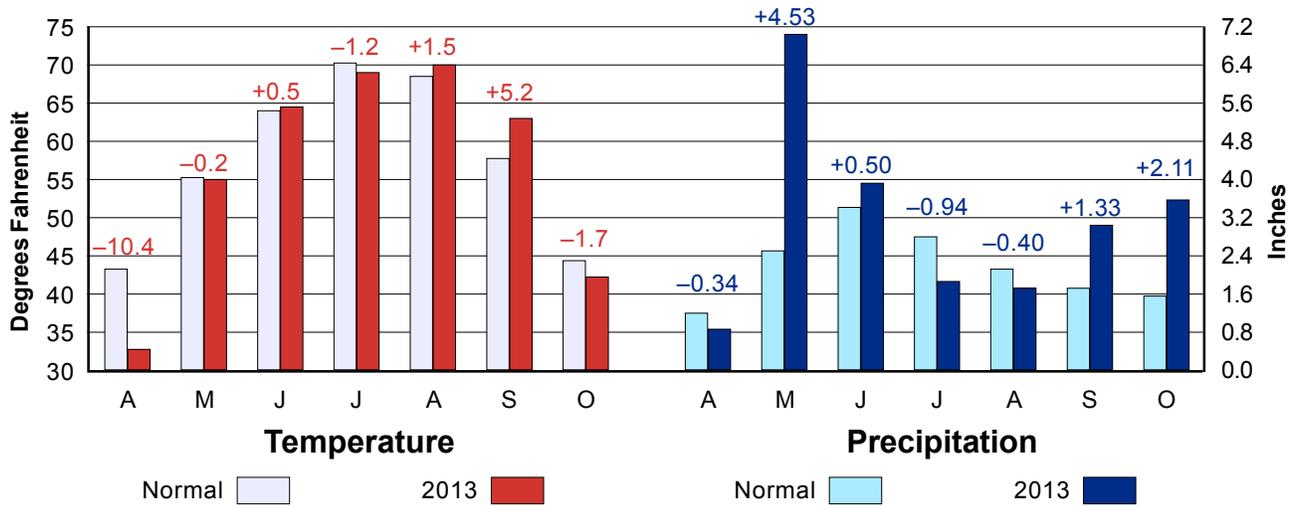


Figure 1. Composite mean monthly air temperatures and precipitation amounts in 2013 and normal (1981–2010) for key locations (Fargo, Grand Forks, Mandan, Minot, Dickinson and Williston) scattered across the state. The growing season started very cold and wet, transitioned to normal, and ended wet. Source: ND Agriculture Weather Network.

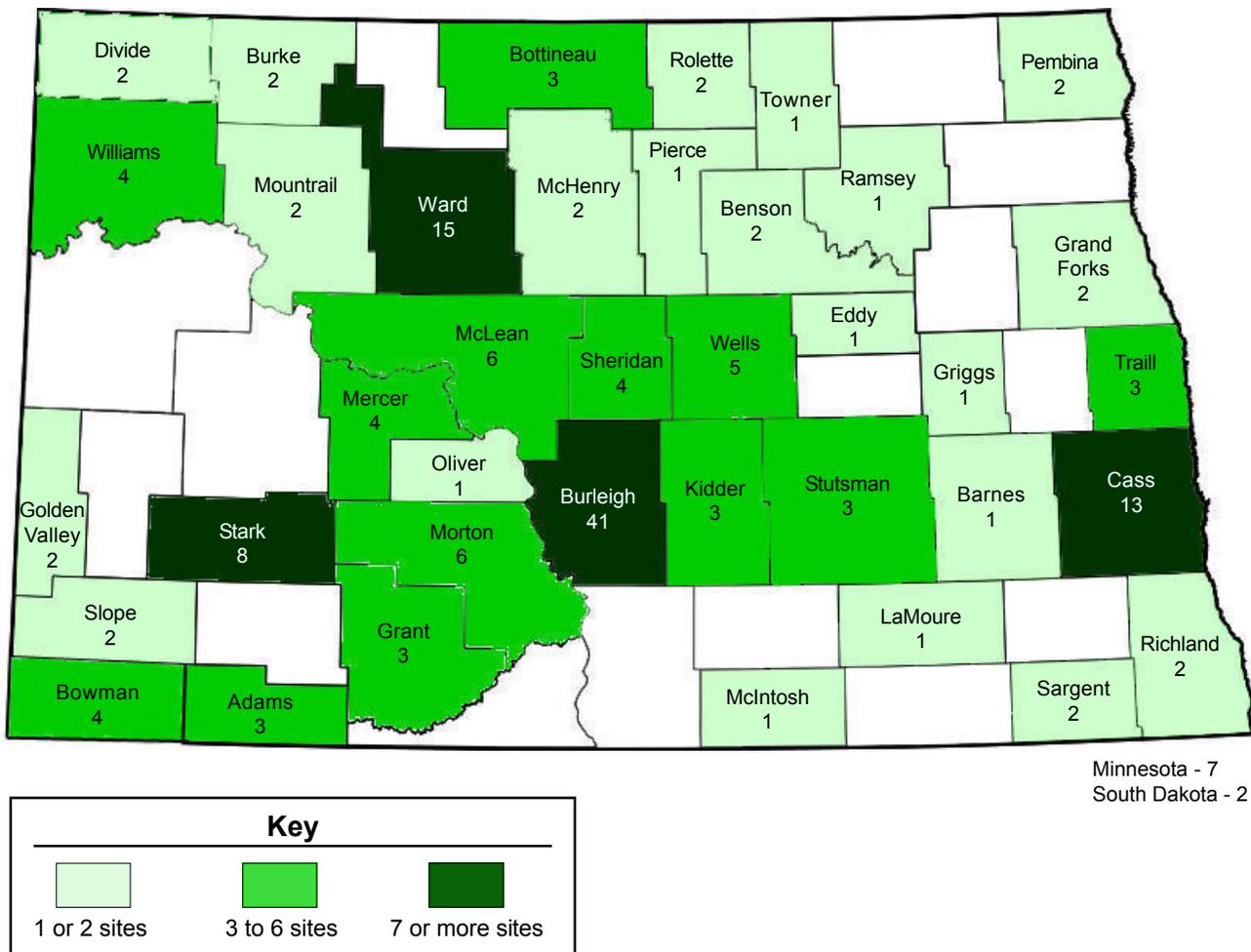


Figure 2. Households reporting variety trial results in 2013.

Chapter 2

Summary of Results

Gardeners participated in 86 trials, each trial comparing two promising vegetable or flower varieties. Over 250 gardeners rated the varieties for plant health, earliness, yield, and food/ornamental quality. In each trial they noted which of the two varieties they preferred (Pref) and which of the varieties they would recommend (Rec) to other gardeners. They rated the performance of each variety using a scale of 1 to 10, with 1 = poor and 10 = excellent. The following is a summary of data, including our conclusions for each trial.



1. Bean, Green

Both varieties received high ratings and were recommended by the vast majority of gardeners. Gardeners appreciated the vigor and yields of 'Bush Blue Lake 274'. They loved the straight, smooth and tender pods of 'Jade II'.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>B. Blue Lake 274</i>	48	76	7.65
<i>Jade II</i>	52	76	7.60
(21 sites)			



2. Bean, Green Filet

'Maxibel' germinated especially well for a filet bean (small seeds) in cool soil. Yields were good; its pods were long, thin, beautiful and delicious. 'Masai' was less vigorous. Its pods were shorter but outstanding in quality.

Variety	Pref (%)	Rec (%)	Rating
<i>Masai</i>	13	50	5.55
<i>Maxibel</i>	88	90	8.82
(12 sites)			



3. Bean, Purple

'Royal Burgundy' germinated well and grew more vigorously. It produced good yields. 'Velour' pods were slim, uniform and straight. Many gardeners preferred its filet pod; others preferred the traditional pod of 'Royal Burgundy'.

Variety	Pref (%)	Rec (%)	Rating
<i>Royal Burgundy</i>	50	78	7.17
<i>Velour</i>	50	61	6.56
(18 sites)			



4. Bean, Vegetable Soybean

'Envy' germinated much better than 'Midori Giant' in the cool soil. It was more reliable; every gardener recommended it. The bigger-seeded 'Midori Giant' matched 'Envy' for yield and quality traits. It received strong reviews as well.

Variety	Pref (%)	Rec (%)	Rating
<i>Envy</i>	75	100	8.50
<i>Midori Giant</i>	25	75	7.50
(7 sites)			



5. Bean, Yardlong

'Gita' and 'Orient Wonder' thrived in 2012 but suffered in a cooler 2013. 'Orient Wonder' showed greater tolerance to cool temps. Earliness, yield and pod quality were similar. Most gardeners did not enjoy the asparagus-like flavor.

Variety	Pref (%)	Rec (%)	Rating
<i>Gita</i>	37	51	5.20
<i>Orient Wonder</i>	63	34	5.84
(10 sites in 2012 and 11 sites in 2013)			



6. Beet

Both varieties performed well and rated similarly for most traits. When gardeners detected a difference, they usually preferred 'Merlin'. Its roots were uniform, round, bright red, and sweet. Its leaves were healthy and good for greens.

Variety	Pref (%)	Rec (%)	Rating
<i>Detroit Dark Red</i>	36	81	7.67
<i>Merlin</i>	64	88	8.27
(16 sites)			



7. Broccoli

‘Packman’ performed especially well. Gardeners liked the appearance and flavor of its heads. Yields were early and abundant. Every gardener preferred it over ‘Coronado Crown’, which did fine but was not special.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>Coronado Crown</i>	0	50	6.75
<i>Packman</i>	100	100	8.25
(6 sites)			



8. Carrot, Orange Chantenay

‘Hercules’ yields were abundant and reliable. Nearly every gardener recommended it. ‘New Kuroda’ matched, or exceeded it for looks and taste quality. It is a promising variety especially for those who enjoy eating big, raw carrots.

Variety	Pref	Rec	Rating
<i>Hercules</i>	58	92	7.75
<i>New Kuroda</i>	42	69	7.33
(13 sites)			



9. Carrot, Orange Nantes

Both grew well. ‘Laguna’ matched or exceeded ‘Nectar’ for all traits. It was sweeter, making it a great carrot for snacks. Its plants were healthy, roots were uniform, and yields were excellent. ‘Nectar’ carrots were longer; yet easier to dig.

Variety	Pref	Rec	Rating
<i>Laguna</i>	65	75	7.89
<i>Nectar</i>	35	75	7.50
(40 sites)			



10. Carrot, Purple

Gardeners were impressed with the dark color of ‘Deep Purple’, but it had a tendency to develop forked roots. It grew vigorously, matured earlier, and produced higher yields. ‘Purple Sun’ lacked vigor, but had straighter roots.

Variety	Pref	Rec	Rating
<i>Deep Purple</i>	55	83	6.58
<i>Purple Sun</i>	45	75	5.58
(12 sites)			



11. Carrot, Yellow

Both ‘Chablis Yellow’ and ‘Yellow Sun’ grew well and tasted good (but not great). Every gardener recommended ‘Chablis Yellow’. Its lush plants produced good yields. Its bright yellow roots were longer and more uniform.

Variety	Pref	Rec	Rating
<i>Chablis Yellow</i>	63	100	7.75
<i>Yellow Sun</i>	38	50	6.63
(8 sites)			



12. Corn, Ornamental

‘Fiesta’ grew vigorously and matured early. Its ears were full-sized; the kernels were bright and colorful. The purple coloring on some husks accentuated its beauty. The stalks of ‘Wilda’s Pride’ grew tall, but ears did not always mature.

Variety	Pref	Rec	Rating
<i>Fiesta</i>	75	75	8.50
<i>Wilda’s Pride</i>	25	25	5.50
(4 sites)			



13. Corn, Popcorn

‘Robust 997’ grew vigorously. Its stalks were healthy and its yields were impressive. The red kernels of ‘Red Beauty’ were stunning. Both varieties matured before frost. We won’t know until later which variety pops and tastes better.

Variety	Pref	Rec	Rating
<i>Red Beauty</i>	0	67	5.00
<i>Robust 997</i>	100	67	6.00
(3 sites)			



14. Corn, Bicolor Sugary Enhanced

‘Luscious’ showed more vigor and produced higher yields. However, both varieties struggled to get established in the cool, wet soil. Most gardeners would not recommend either variety for that reason. Poor germination is not acceptable.

Variety	Pref	Rec	Rating
<i>Ambrosia</i>	50	29	3.17
<i>Luscious</i>	50	43	5.00
(8 sites)			



15. Corn, Bicolor Super Sweet

Shrunken kernel types are known to struggle in cold, wet soils, but these varieties did well, especially 'Mirai 350 BC'. Both varieties grew well and produced good yields. Gardeners loved the taste of 'Xtra-Tender 277A'.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>Mirai 350 BC</i>	38	60	6.90
<i>Xtra-Tender 277A</i>	63	89	7.88
			(10 sites)



16. Corn, Yellow Super Sweet

Data and comments are limited, but 'Vision' performed well at all sites. Germination of these shrunken kernel varieties was less than ideal in the cold soil. Gardeners liked both varieties, but 'Vision' was preferred for its superior taste.

Variety	Pref	Rec	Rating
<i>4001Y</i>	25	75	7.25
<i>Vision</i>	75	75	8.75
			(4 sites)



17. Corn, Bicolor Synergistic

The vigor of 'Allure' was impressive. It germinated well and developed strong stalks. Yields were good. Gardeners preferred the look and taste of its ears. 'Montauk' struggled; yields were poor and its ears were susceptible to smut.

Variety	Pref	Rec	Rating
<i>Allure</i>	86	71	7.86
<i>Montauk</i>	14	14	4.00
			(9 sites)



18. Corn, Yellow Synergistic

'Honey Select' was superior. It grew more vigorously and produced higher yields. It matured earlier, and its ears were bigger and more attractive. The taste of 'Applause' was comparable; many gardeners recommended the variety.

Variety	Pref	Rec	Rating
<i>Applause</i>	20	60	7.00
<i>Honey Select</i>	80	100	8.20
			(5 sites)



19. Cucumber, Pickling

'Homemade Pickles' matched or exceeded 'Calypso' in earliness, yield and taste. Its vines got off to a stronger start. Its fruits were uniform, straight and solid. 'Calypso' was good, but 'Homemade Pickles' was better.

Variety	Pref	Rec	Rating
<i>Calypso</i>	34	59	6.54
<i>Homemade P.</i>	66	73	7.57
			(24 sites)



20. Cucumber, Slicing

'Straight Eight' is productive in cool summers and it outyielded the hybrid 'General Lee'. Its seedlings got off to a strong start. Gardeners liked the quality of 'General Lee' cucumbers; this variety yielded better in previous years.

Variety	Pref	Rec	Rating
<i>General Lee</i>	44	50	6.88
<i>Straight Eight</i>	56	86	7.43
			(10 sites)



21. Cucumber, Beit Alpha

'Diva' is not known for its vigor, but it germinated well in the cool soil and produced good crops. Fruits were thin-skinned, uniform in shape, crisp, mild, and burpless. Its competitor was disqualified due to an error by our seed source.

Variety	Pref	Rec	Rating
<i>Diva</i>		82	8.09
			(11 sites)



22. Cucumber, Burpless

The vigorous vines of 'Tasty Green' produced earlier and higher yields. Its fruits were more attractive. Gardeners liked the smooth, dark skin and straight shape of 'Summer Dance' cucumbers, but overall the variety was less reliable.

Variety	Rec	Rating	
<i>Summer Dance</i>	38	48	6.38
<i>Tasty Green</i>	62	62	7.09
			(23 sites)



23. Gourd, Ornamental

Vigorous vines produced loads of gourds with rich colors and eye-catching shapes. ‘Autumn Wings’ matured earlier. Gardeners were enthralled with the diversity of “ugly” gourds produced by ‘Gremlins’. Both varieties were outstanding.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>Autumn Wings</i>	50	78	7.25
<i>Gremlins</i>	50	78	7.50
(8 sites)			



24. Greens, Pak Choi

Gardeners were pleased by both varieties. ‘Prize Choy’ showed superior seedling vigor, but the overall edge goes to the hybrid ‘Joi Choi’ for its higher yields and more attractive plants. Both were highly susceptible to flea beetle damage.

Variety	Pref	Rec	Rating
<i>Joi Choi</i>	50	67	7.00
<i>Prize Choy</i>	50	67	6.50
(8 sites)			



25. Greens, Tatsoi

This trial was a disappointment due to poor germination. Heavy rains washed out some seedbeds. ‘Tatsoi’ showed superior germination and higher yields; while ‘Savoy Tatsoi’ was more flavorful. Flea beetles were a problem.

Variety	Pref	Rec	Rating
<i>Tatsoi</i>	63	40	4.10
<i>Tatsoi Savoy</i>	38	20	3.33
(11 sites)			



26. Kohlrabi, White

Gardeners liked ‘Winner’ for its early maturity and superior quality. Its bulbs were more attractive and less subject to splitting; its flavor was mild and fruity. ‘Kossak’ had higher yields. Its larger bulbs did not get woody and were delicious.

Variety	Pref	Rec	Rating
<i>Kossak</i>	43	75	7.14
<i>Winner</i>	57	88	8.29
(9 sites)			



27. Lettuce, Green Butterhead

Nearly everyone recommended both varieties. Gardeners were impressed with the productivity, taste, and heat tolerance of these lettuces. The varieties were comparable in all traits with a slight, but consistent edge going to ‘Nancy’.

Variety	Pref	Rec	Rating
<i>Nancy</i>	71	88	8.13
<i>Sylvesta</i>	29	88	7.50
(9 sites)			



28. Lettuce, Red Butterhead

Both varieties performed well. Gardeners enjoyed their flavor and resistance to bolting. Most gardeners preferred ‘Red Cross’ for its impressive seedling vigor, superior resistance to bolting, and brighter red leaves.

Variety	Pref	Rec	Rating
<i>Merveille d. Q.S.</i>	25	75	7.50
<i>Red Cross</i>	75	75	8.25
(5 sites)			



29. Lettuce, Green Crisphead

‘Reine des Glaces’ was good, but ‘Nevada’ was better. ‘Nevada’ rated higher for all traits. Its productivity, taste, and heat tolerance were impressive. The heads were bright green and heavy. Every gardener recommended ‘Nevada’.

Variety	Pref	Rec	Rating
<i>Nevada</i>	100	100	8.50
<i>Reine d. Glaces</i>	0	60	7.25
(5 sites)			



30. Lettuce, Red Crisphead

Both varieties performed well, but most gardeners preferred ‘Sierra’. Its plants were healthier, more vigorous, and more productive. Every gardener recommended it. The leaves of ‘Pablo’ were more colorful and especially beautiful.

Variety	Pref	Rec	Rating
<i>Pablo</i>	33	67	8.67
<i>Sierra</i>	67	100	9.00
(3 sites)			



31. Lettuce, Green Leaf

Gardeners liked both varieties and were evenly split on their preferences. 'Italienischer' and 'Venetian' produced an abundance of delicious, large leaves. Neither of the varieties displayed a significant advantage over the other.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>Italienischer</i>	50	75	8.00
<i>Venetian</i>	50	88	8.00
			(8 sites)



32. Lettuce, Red Leaf

The vigor of 'New Red Fire' was excellent, and gardeners quickly harvested impressive yields of crisp lettuce. Every gardener liked it. However, half of gardeners preferred 'Red Velvet'. Its plants were more intense in color, and delicious.

Variety	Pref	Rec	Rating
<i>New Red Fire</i>	50	100	7.57
<i>Red Velvet</i>	50	71	8.14
			(7 sites)



33. Lettuce, Red Oakleaf

'Red Salad Bowl' showed good germination and strong vigor. This led to fuller stands and higher yields. Its plants were more attractive and tasted better, too. Every gardener liked it. The seedlings of 'Mascara' struggled in the heavy rains.

Variety	Pref	Rec	Rating
<i>Mascara</i>	17	33	5.50
<i>Red Salad Bowl</i>	83	100	7.93
			(7 sites)



34. Lettuce, Romaine

Both varieties produced good crops of flavorful lettuce. Gardeners were split on preferences. Some liked the taste and extended harvest season of 'Green Forest'. Others liked the high yields, ruffled leaves, and full heads of 'Crisp Mint'.

Variety	Pref	Rec	Rating
<i>Crisp Mint</i>	46	71	7.85
<i>Green Forest</i>	54	64	8.00
			(14 sites)



35. Melon, Cantaloupe

'Athena' was a reliable producer of good tasting melons and outperformed 'Sarah's Choice' in all traits including earliness, yield and fruit quality. Both varieties suffered low yields due to the cool, wet spring.

Variety	Pref	Rec	Rating
<i>Athena</i>	82	83	7.82
<i>Sarah's Choice</i>	18	58	6.18
			(13 sites)



36. Melon, Large Cantaloupe

The cool spring led to poor germination. Half of gardeners failed to harvest any fruits. 'Superstar' is the standard big cantaloupe, but 'Solstice' was earlier and matched it for flavor. Most gardeners preferred 'Solstice'; data are limited.

Variety	Pref	Rec	Rating
<i>Solstice</i>	67	50	6.00
<i>Superstar</i>	33	50	6.25
			(6 sites)



37. Melon, Galia

'Arava' vines were vigorous and produced higher yields at most sites. Its melons were attractive. 'Passport' is known for earliness, but 'Arava' was just as early, if not earlier at most sites. The cold, wet spring reduced yields.

Variety	Pref	Rec	Rating
<i>Arava</i>	60	60	6.89
<i>Passport</i>	40	40	6.00
			(10 sites)



38. Melon, Korean

'Sun Jewel' was rated superior for all traits: healthier vines, earlier maturity, more attractive melons, and better tasting. 'Ginkaku' was a disappointment. Half of our gardeners struggled to get ripe melons due to the cool, wet spring.

Variety	Pref	Rec	Rating
<i>Ginkaku</i>	11	13	3.42
<i>Sun Jewel</i>	89	56	6.75
			(10 sites)



39. Okra, Red

Most gardeners preferred ‘Carmine Splendor’. They enjoyed the beauty of its blossoms and the quality of its pods. The plants of ‘Red Burgundy’ were healthier, more vigorous, and produced an earlier crop. Overall yields were comparable.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>Carmine Splendor</i>	60	61	6.78
<i>Red Burgundy</i>	40	53	6.20
(9 sites in 2012 and 6 sites in 2013)			



40. Pea, Freezing Shell

Both varieties were endorsed by the majority of gardeners. Most preferred ‘Little Marvel’. Its small pods were packed with sweet, flavorful peas. ‘Early Frosty’ showed strong seedling vigor, matured early, and produced high yields.

Variety	Pref	Rec	Rating
<i>Early Frosty</i>	42	77	7.00
<i>Little Marvel</i>	58	77	7.14
(14 sites)			



41. Pea, Fresh Shell

Gardeners were impressed with the robust plants and high yields of ‘Knight’. Its pods were uniform, straight and full of flavorful peas. ‘Maestro Improved’ produced good early crops. Its pods were long and its peas were delicious.

Variety	Pref	Rec	Rating
<i>Knight</i>	59	75	7.41
<i>Maestro Impr.</i>	41	75	7.55
(26 sites)			



42. Pea, Snap

Both varieties grew well. ‘Sugar Ann’ showed superior seedling vigor and produced good crops several days before ‘Cascadia’. Most gardeners preferred the taste of ‘Sugar Ann’. Yields of the two varieties were comparable.

Variety	Pref	Rec	Rating
<i>Cascadia</i>	31	79	7.38
<i>Sugar Ann</i>	69	86	8.85
(15 sites)			



43. Pea, Snow

‘Oregon Sugar Pod 2’ has always done well in our trials. Its robust vines produced impressive yields of pods that looked attractive and tasted delicious. ‘Avalanche’ was acceptable, but did not generate much excitement.

Variety	Pref	Rec	Rating
<i>Avalanche</i>	31	56	6.88
<i>Oregon S.P. 2</i>	69	75	7.88
(18 sites)			



44. Pepper, Green Bell

Most gardeners were satisfied with both varieties. Gardeners liked the size and shape of ‘Bell Boy’ fruits. Most of its fruits had 4 lobes and were good for stuffing. ‘New Ace’ produced decent yields, but most fruits had only 3 lobes.

Variety	Pref	Rec	Rating
<i>Bell Boy</i>	50	71	5.86
<i>New Ace</i>	50	57	5.71
(10 sites)			



45. Pepper, Gold Bell

Few gardeners participated in this trial, but both ‘Flavorburst’ and ‘Golden Summer’ produced good crops. Their peppers were brightly colored, and our gardeners enjoyed their flavor. ‘Flavorburst’ showed outstanding seedling vigor.

Variety	Pref	Rec	Rating
<i>Flavorburst</i>	50	100	6.00
<i>Golden Summer</i>	50	100	6.50
(3 sites)			



46. Pepper, Orange Bell

‘Orange Blaze’ germinated better, showed more vigor, produced earlier, and its yields were vastly superior. Although its peppers were smaller, they were brilliant orange. ‘Gourmet’ showed low germination, low vigor, and low yields.

Variety	Pref	Rec	Rating
<i>Gourmet</i>	0	0	3.67
<i>Orange Blaze</i>	100	100	7.60
(5 sites)			



47. Pepper, Italian

Both varieties produced an abundance of peppers at most sites. Our small team of gardeners split on their preferences. Some liked the large green fruits of “Giant Marconi”; others preferred the yield and glossy red fruits of ‘Jimmy Nardello’s’.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>Giant Marconi</i>	50	75	6.50
<i>Jimmy Nardello’s</i>	50	50	6.75
			(4 sites)



48. Pepper, Italian Bullhorn

Plants were healthy and bore excellent crops. ‘Carmen’ produced an earlier crop, but most gardeners preferred ‘Marcato’. Its plants were more vigorous and productive. Gardeners enjoyed its thick walled, glossy red fruits.

Variety	Pref	Rec	Rating
<i>Carmen</i>	25	75	6.75
<i>Marcato</i>	75	75	7.75
			(4 sites)



49. Pepper, Sweet Specialty

Both ‘Flamingo’ and ‘Gypsy’ performed well at most sites. They produced loads of pale green, elongated fruits. ‘Flamingo’ plants were larger and more vigorous. Its fruits were more uniform in shape and sweeter in taste.

Variety	Pref	Rec	Rating
<i>Flamingo</i>	67	67	8.00
<i>Gypsy</i>	33	67	7.67
			(4 sites)



50. Pepper, Ancho

‘Tiburon’ showed excellent germination and healthy growth. It produced the first fruits and was more productive than ‘Ancho Grande’. ‘Ancho Grande’ did not make much of an impression, good or bad, on our small team of gardeners.

Variety	Pref	Rec	Rating
<i>Ancho Grande</i>	0	0	5.00
<i>Tiburon</i>	100	100	9.00
			(3 sites)



51. Pepper, Cayenne

‘Cheyenne’ plants were tall and sturdy; its yields were very good. Our small team of gardeners was especially impressed with the size of the peppers. ‘Cayenne Long Red Thin’ did well, but did not excel in any trait.

Variety	Pref	Rec	Rating
<i>Cayenne L.R.T.</i>	0	33	7.33
<i>Cheyenne</i>	100	100	8.33
			(3 sites)



52. Pepper, Jalapeno

Both varieties produced an abundance of jalapenos in our short growing season. ‘Mucho Nacho’ plants were healthier and produced higher yields. Its fruits were deep green, larger, and resisted cracking better.

Variety	Pref	Rec	Rating
<i>Early Jalapeno</i>	20	60	6.60
<i>Mucho Nacho</i>	80	80	7.00
			(5 sites)



53. Pepper, Santa Fe

Our small team of gardeners was impressed with the productivity of both varieties. The plants were full of colorful fruits. ‘Mariachi’ showed strong seedling vigor and developed into healthy, compact plants.

Variety	Pref	Rec	Rating
<i>Mariachi</i>	67	100	7.67
<i>Santa Fe Grande</i>	33	67	7.33
			(3 sites)



54. Pumpkin, Miniature

Gardeners loved both varieties. Their vines produced an abundance of fruits. ‘Munchkin’ pumpkins were bright orange, ribbed, and had a flattened shape. ‘Wee-B-Little’ pumpkins were deep orange with a unique, globular shape.

Variety	Pref	Rec	Rating
<i>Munchkin</i>	50	83	8.17
<i>Wee-B-Little</i>	50	83	8.00
			(6 sites)



55. Pumpkin, Small

Gardeners marveled at the precocious orange color and early maturity of 'Neon'. Its pumpkins were bright orange, round and uniform. 'Field Trip' pumpkins were deeper orange and its vines showed greater tolerance to powdery mildew.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>Field Trip</i>	25	57	7.86
<i>Neon</i>	75	88	8.75
(8 sites)			



56. Pumpkin, Midsize

'Gladiator' excelled in all traits. Its vines were healthier and produced more. Gardeners liked the uniformity and deep orange color of the fruits. The new variety 'Orange Rave' lacked vigor and was nothing to rave about.

Variety	Pref	Rec	Rating
<i>Gladiator</i>	78	89	8.00
<i>Orange Rave</i>	22	33	5.88
(9 sites)			



57. Pumpkin, Large

Both varieties produced a lot of big, nice pumpkins. 'Howden Biggie' produced slightly larger pumpkins while 'Big Doris' matured earlier. Gardeners enjoyed growing large pumpkins, but modest ratings reflect satisfaction and not excitement.

Variety	Pref	Rec	Rating
<i>Big Doris</i>	50	55	6.70
<i>Howden Biggie</i>	50	64	7.20
(11 sites)			



58. Rutabaga

Most gardeners were introduced to rutabaga and many did not like it. Both varieties suffered damage from maggots, flea beetles and other pests. 'American Purple Top' was preferred for its healthier plants and milder flavor of its roots.

Variety	Pref	Rec	Rating
<i>American P.T.</i>	56	63	6.33
<i>Laurentian</i>	44	44	5.68
(10 sites in 2012 and 2 sites in 2013)			



59. Spinach, Savoy Leaf

Neither of the varieties was clearly better. In 2012, most gardeners preferred 'Donkey' for its darker green leaves and full flavor. In 2013, the germination of 'Donkey' dropped off, and 'Tyee' was preferred for its productivity and mild flavor.

Variety	Pref	Rec	Rating
<i>Donkey</i>	51	73	7.22
<i>Tyee</i>	49	69	7.02
(33 sites in 2012 and 13 sites in 2013)			



60. Spinach, Smooth Leaf

Both varieties grew well and showed good resistance to bolting. 'Olympia' was more productive and its yields were more consistent from site to site. 'Pigeon' was praised by some gardeners for its thick, more flavorful leaves.

Variety	Pref	Rec	Rating
<i>Olympia</i>	50	71	7.59
<i>Pigeon</i>	50	65	6.47
(19 sites)			



61. Squash, Green Zucchini

Both varieties grew well. 'Spineless Beauty' was preferred for its early maturity, good yields of attractive fruits, and healthy, spineless vines. Every gardener liked it. 'Zucchini Elite' is a fine variety, but does not excel for any trait.

Variety	Pref	Rec	Rating
<i>Spineless Beauty</i>	80	100	7.67
<i>Zucchini Elite</i>	20	83	6.83
(8 sites)			



62. Squash, Green Stripe Zucchini

'Green Tiger' germinated better, grew faster and stronger, produced earlier, produced higher yields, and had straighter fruits. 'Safari' could match it for taste, but nothing else. Gardeners showed a lot of enthusiasm for this trial.

Variety	Pref	Rec	Rating
<i>Green Tiger</i>	80	80	8.40
<i>Safari</i>	20	60	6.80
(5 sites)			



63. Squash, Yellow Zucchini

New variety 'Easypick Gold' outshined the standard 'Gold Rush'. Our small team liked the glossy, deep yellow color and tenderness of the fruits. Its vines produced more fruits and its open, nearly spineless habit made it easy to pick.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>Easypick Gold</i>	100	100	7.33
<i>Gold Rush</i>	0	33	5.33
			(3 sites)



64. Swiss Chard, Pink

Both varieties performed well. 'Peppermint' got off to a strong start and was very healthy. Many gardeners preferred its multicolored stalks and crinkly leaves; others liked the smoother leaves and productivity of 'Magenta Sunset'.

Variety	Pref	Rec	Rating
<i>Magenta Sunset</i>	50	71	7.43
<i>Peppermint</i>	50	86	7.71
			(8 sites)



65. Tomato, Bush

Gardeners gave high ratings to both varieties. Most preferred 'Bush Early Girl II'. It was earlier at most sites and a heavy producer. Every gardener liked it. 'Better Bush' had sturdier vines that produced larger, more attractive tomatoes.

Variety	Pref	Rec	Rating
<i>Better Bush</i>	40	60	7.60
<i>Bush Early Girl II</i>	60	100	8.40
			(5 sites)



66. Tomato, Early

'Stupice' vines got off to a strong start and produced good crops of tomatoes early in the season. Its fruits were juicy and tasted better than those of 'Siberian'. The fruits of 'Siberian' ripened later but were larger and more attractive.

Variety	Pref	Rec	Rating
<i>Siberian</i>	20	50	4.75
<i>Stupice</i>	80	75	7.50
			(6 sites)



67. Tomato, Main Season

Our small team of gardeners liked both varieties. Most gardeners preferred 'Mountain Fresh Plus', primarily for the looks of its big, bright red tomatoes. Gardeners noted the early maturity and good yields of 'Celebrity'.

Variety	Pref	Rec	Rating
<i>Celebrity</i>	33	67	7.33
<i>Mtn. Fresh Plus</i>	67	67	8.00
			(5 sites)



68. Tomato, Black

Our small team was disappointed with both varieties. Seedlings lacked vigor, yields were poor, and the flavor was fair at best. None of researchers could recommend either of these varieties.

Variety	Pref	Rec	Rating
<i>Black Prince</i>	50	0	3.50
<i>Indigo Rose</i>	50	0	4.00
			(3 sites)



69. Tomato, Canning

A cool spring, transplant shock, and hailstorms damaged several sites. Few, if any conclusions can be drawn, but 'Roma VF' was the preferred choice among our small team of gardeners. They liked its yield and the quality of its fruits.

Variety	Pref	Rec	Rating
<i>Roma VF</i>	100	100	8.00
<i>Viva Italia</i>	0	50	7.00
			(5 sites)



70. Watermelon, Red

Both varieties produced good quality, ripe melons. Most gardeners preferred 'Sweet Dakota Rose'. Its vines were healthier and produced higher yields. It matched, if not exceeded 'Sweet Favorite' for earliness, looks and flavor.

Variety	Pref	Rec	Rating
<i>Sweet Dakota R.</i>	70	70	7.90
<i>Sweet Favorite</i>	30	70	7.60
			(15 sites)



71. Watermelon, Red Icebox

Both ‘Blacktail Mountain’ and ‘Sugar Baby’ struggled to get established in the cool, wet spring. ‘Sugar Baby’ was more reliable and produced a few melons. Most gardeners did not recommend either variety.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>Blacktail Mtn.</i>	0	0	2.00
<i>Sugar Baby</i>	100	33	5.00
			(5 sites)



72. Watermelon, Yellow Icebox

‘Early Moonbeam’ vines were more vigorous and produced ripe watermelons earlier than ‘Yellow Doll’. It produced more melons, too. ‘Yellow Doll’ struggled in the cool, wet spring. Its melons were fewer in number but sweeter in taste.

Variety	Pref	Rec	Rating
<i>Early Moonbeam</i>	100	75	7.80
<i>Yellow Doll</i>	0	20	5.40
			(6 sites)



73. Basil, Italian

‘Genovese’ was preferred 2 to 1 among members of our small team of gardeners. All gardeners recommended it. The performance of ‘Genovese’ matched if not exceeded that of ‘Nufar’ for all yield and quality traits.

Variety	Pref	Rec	Rating
<i>Genovese</i>	67	100	7.33
<i>Nufar</i>	33	33	6.00
			(4 sites)



74. Basil, Lemon

Gardeners loved both varieties, which rated similarly for health, yield and flavor. Most gardeners preferred ‘Sweet Dani’. It showed superior seedling vigor and rapid growth. The bright green leaves of ‘Mrs. Burns’ were very attractive.

Variety	Pref	Rec	Rating
<i>Mrs. Burns</i>	35	76	8.00
<i>Sweet Dani</i>	65	87	8.37
			(10 sites in 2012 and 5 sites in 2013)



75. Basil, Purple

‘Amethyst Improved’ was healthier and more beautiful than ‘Purple Ruffles’. The color was more uniform and shiny. Gardeners preferred its true Genovese taste, too. Data for this trial are limited as heavy rains washed out a few sites.

Variety	Pref	Rec	Rating
<i>Amethyst Impr.</i>	100	100	9.00
<i>Purple Ruffles</i>	0	50	6.00
			(5 sites)



76. Cilantro

‘Caribe’ plants were healthier, more robust, and full of attractive, flavorful leaves. ‘Confetti’ is nothing more than a novelty. It lacks vigor and flavor. Even as a novelty it flops since its unique quality—its frilly leaf shape—was not liked.

Variety	Pref	Rec	Rating
<i>Caribe</i>	90	90	8.10
<i>Confetti</i>	10	50	5.30
			(10 sites)



77. Parsley

Most gardeners preferred ‘Giant of Italy’ for its larger leaves, early season vigor, and overall health. Some gardeners noted the mild, sweet flavor of ‘Titan’. Parsley seeds were slow to germinate and stands suffered due to the cool, wet spring.

Variety	Pref	Rec	Rating
<i>Giant of Italy</i>	67	63	6.88
<i>Titan</i>	33	38	6.75
			(10 sites)



78. Cosmos

‘Double Click Mix’ received very high ratings. Gardeners were impressed with the size, abundance, and long life of its blooms. ‘Versailles Mix’ plants were healthy, but could not match the showiness of ‘Double Click Mix’ in the garden.

Variety	Pref	Rec	Rating
<i>Double Click Mix</i>	83	100	9.00
<i>Versailles Mix</i>	17	71	6.67
			(7 sites)



79. Cosmos, Sulphur

Gardeners loved both varieties. 'Bright Lights' bloomed earlier at most sites; its shrubby plants were adorned with gold and orange flowers. 'Diablo' had a more compact habit and was covered with eye-catching scarlet-orange blooms.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>Bright Lights</i>	50	83	7.92
<i>Diablo</i>	50	83	8.00
(12 sites)			



80. Sunflower, Dwarf

'Firecracker' was more vigorous, bloomed earlier, and produced more flowers. It was more attractive. Most gardeners liked the subtle yellow shades of 'Music Box', but preferred the bold red and gold bursts of 'Firecracker'.

Variety	Pref	Rec	Rating
<i>Firecracker</i>	80	100	8.50
<i>Music Box</i>	20	70	6.90
(13 sites)			



81. Sunflower, Gold Cutting

These single-stem varieties were developed for cut flower production, and gardeners liked both. Overall, the edge went to 'ProCut Gold' for its remarkable earliness, plant vigor, and uniformity of flower.

Variety	Pref	Rec	Rating
<i>ProCut Gold</i>	67	100	7.75
<i>Sunrich Gold</i>	33	75	6.50
(4 sites)			



82. Sunflower, Orange

'Soraya' was healthier, bloomed earlier, and was more free flowering. It received high ratings and unanimous approval from our small team of gardeners. The blooms of the shorter-stalked 'Sonja' could not match the radiance of 'Soraya'.

Variety	Pref	Rec	Rating
<i>Sonja</i>	0	33	4.33
<i>Soraya</i>	100	100	8.67
(3 sites)			



83. Sunflower, Double Petal

'Greenburst' showed strong seedling vigor, sturdy multi-stemmed stalks, and healthy plants. It bloomed earlier and prolifically. 'Double Quick Orange' had an attractive bloom and its single-stem habit made it suited for cut flowers.

Variety	Pref	Rec	Rating
<i>Double Quick O.</i>	25	63	5.63
<i>Greenburst</i>	75	88	8.00
(9 sites)			



84. Wheat, Ornamental

Gardeners were charmed by the understated beauty of wheat. Many were fascinated by the unique blue heads and black beards of 'Utrecht Blue'. 'Black Tip', with its white heads and black beards, grew easily and bloomed earlier.

Variety	Pref	Rec	Rating
<i>Black Tip</i>	44	60	5.50
<i>Utrecht Blue</i>	56	78	7.00
(9 sites)			



85. Zinnia, Coral

Gardeners liked both varieties. The petal colors of 'Benary's Giant Coral' were true and bright; its flowers were big and plentiful; and its flower stems were sturdy. 'Senora' matched it in many ways, but its blooms were less brilliant.

Variety	Pref	Rec	Rating
<i>Benary's G. Coral</i>	60	86	8.21
<i>Senora</i>	40	79	7.36
(9 sites)			



86. Zinnia, Cutting

'Oklahoma Mix' and 'Sunbow Mix' produced an abundance of bright, colorful flowers for bouquets. 'Oklahoma Mix' matched or exceeded 'Sunbow Mix' in all traits, including plant health, earliness, abundance of blooms, and beauty.

Variety	Pref	Rec	Rating
<i>Oklahoma Mix</i>	78	100	8.42
<i>Sunbow Mix</i>	22	74	7.21
(20 sites)			

Chapter 3

Trial Reports

Trial 1. Bean, Green

Varieties (information from seed catalogs)

'Bush Blue Lake 274'

60 days. The standard for yield and quality. Dark green, stringless pods. Dependable. White seeds.

'Jade II'

60 days. Slender pods with exceptional flavor. Deeper green pods than the original 'Jade'. Heat-tolerant plants produce good yields.

Data

Data were collected at 21 sites in 2013.

Trait	'Bush Blue Lake 274'	'Jade II'	Same
Germinated best	21 %	21 %	58 %
Healthier plants	47	16	37
Matured earlier	26	37	37
Higher yields	63	32	5
More attractive pods	16	58	26
Tasted better	11	26	63
<i>Preference</i>	48	52	
<i>Recommend to others</i>	76	76	
<i>Overall rating¹</i>	7.65	7.60	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both came up great. I loved both varieties. They had nice long beans and were thin. They both produced a lot of beans on each plant.
- Both germinated well and plants were healthy. Pods tasted good.
- Both were tasty.
- Both were very tasty; hard to tell apart.
- Very nice, healthy plants.
- Both varieties began producing at about the same time. Both had good flavor.
- Plants looked great, even through September.
- We couldn't keep up with the yields! Both had great taste.



Comments on 'Bush Blue Lake 274' Bean

- Plants were larger, fuller and leafier. The plants were slower to bear; but once producing, it provided a much higher yield. It also produced longer. Pods were nice, full and long.
- Produced much longer and had all around higher yields. Seemed to have a second flush of pods when it cooled off this fall.
- More health problems and suffered more damage from grasshoppers.
- Plants stayed upright better, but already had mold with the first picking of beans.
- Plants are taller with more blooms. Produced 4X as many pods as 'Jade II' in the first flush of pods.
- Both varieties are good, but we prefer the taste of this variety.
- Seedlings were first out of the ground with faster progression during the first month. Showed better vigor through the early part of the growing season. Much heavier yield. The seeds in the pods became large quicker compared to 'Jade II'.
- Came up better and began producing sooner.

Comments on 'Jade II' Bean

- I really liked the darker green of 'Jade II'. It seemed more attractive after cooking. They were a straighter bean.
- Good, uniform growth. Lovely leaf color. Pods were beautiful; uniform color and size.
- A huge producer of long, straight, beautiful beans. Pods were a little longer and straighter. The best I have ever grown. 'Bush Blue Lake 274' was almost as nice.
- Didn't get as fat and mealy; better texture.
- I loved its quality. The beans were smooth, straight, beautiful, and tender.
- I prefer its taste. Its pods were more attractive. They stayed straight and were darker green; much nicer for canning and for pickled beans.
- Pods were straighter; some 6–8 inches long; crisper. Better for pickling and canning.
- Produced first, but only by a few days. Pods were waxier and thinner (attractive, but not as attractive as those of 'Bush Blue Lake 274'). A very good variety.
- Produced longer.
- Better yields.
- Plants snapped off easily when harvesting. Produced first by about a week. Pods were longer and darker green. Harvest season was short.
- Pods were skinnier and the seeds did not get big compared to the pods of 'Bush Blue Lake 274'. Pods had more snap to them! Last picking was September 25! Still good.
- Slower to germinate.

Conclusions

Both varieties received high ratings and were recommended by the vast majority of gardeners. Gardeners appreciated the vigor and yields of 'Bush Blue Lake 274'. They loved the straight, smooth and tender pods of 'Jade II'.

Trial 2. Bean, Green Filet

Varieties (information from seed catalogs)

'Masai'

58 days. Compact plants produce very slender, 5-inch-long pods. Pods are crisp and attractive.

'Maxibel'

60 days. The 7-inch pods are straight, very slender, and dark green. Superior flavor. Speckled brown seeds.

Data

Data were collected at 12 sites in 2013.

Trait	'Masai'	'Maxibel'	Same
Germinated best	0 %	67 %	33 %
Healthier plants	0	36	64
Matured earlier	0	67	33
Higher yields	33	56	11
More attractive pods	22	67	11
Tasted better	22	44	33
<i>Preference</i>	<i>13</i>	<i>88</i>	
<i>Recommend to others</i>	<i>50</i>	<i>90</i>	
<i>Overall rating¹</i>	<i>5.55</i>	<i>8.82</i>	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Sturdy plants. Couldn't tell any difference in taste; both had a good taste. Both produced beans until the snow. I recommend both varieties; it all depends on what size of pod you prefer.
- Plants were healthy; pods were nice and straight. Both were good for fresh eating and pickling.

Comments on 'Masai' Bean

- Heavier yields with more continued flowering. Simply a more tender bean without any strings.
- Beans were nice for whole beans without cutting. This would be an excellent choice if you were limited on garden space—smaller plants.
- More pods per plant. Two plants pulled out of ground while picking.
- Sown May 11 and nothing came up. We replanted later and they all germinated. Many more pods but they were thinner and smaller (3–4 inches) compared to 'Maxibel' (4–6 inches).
- Less than 10 percent germination.
- Only one seed germinated.



Comments on 'Maxibel' Bean

- Produced many meals of beautiful beans. Wonderful long, slender pods that didn't make seeds all season. I love this variety; it has all the good qualities a green bean should have.
- Nice, tall, sturdy plants. Lovely thin pods—garden edible. The kids are eating the 'Maxibel' just like garden peas or snap peas—can't even save enough to freeze!
- Slender pods and less mealy when they got larger.
- Germinated first. Overall, it produced more beans, tasted good, and had healthier plants.
- More yield; less stringy; better tasting.
- Its pods were bigger and easier to pick.
- The pods looked and tasted better. Had a little bit higher yield.
- First to germinate and larger plants one month after germination. Pods were pencil thin and straight; very attractive but tougher and stringier.
- Better germination (near 100 percent compared to 90 percent for 'Masai'). Nice, larger plants. Produced pods a good week to 10 days earlier. Produced more beans and were easier to pick.
- The plants produced well and the beans were very long.

Conclusions

"Maxibel" was outstanding. It germinated especially well for a filet bean (small seeds) in cool soil. Yields were good; its pods were long, thin, beautiful and delicious. 'Masai' was less vigorous. Its plant stands were thinner, reducing yields. Its pods were shorter but outstanding in quality.

Trial 3. Bean, Purple

Varieties (information from seed catalogs)

‘Royal Burgundy’

55 days. Pods are 5 inches long, stringless and tender. Dark purple pods turn green when cooked.

‘Velour’

55 days. A filet type with deep purple color. The smooth, slender pods turn green when cooked. Compact bushes produce heavy crops.



Data

Data were collected at 18 sites in 2013.

Trait	‘Royal Burgundy’	‘Velour’	Same
Germinated best	44 %	13 %	44 %
Healthier plants	50	19	31
Matured earlier	29	41	29
Higher yields	47	29	24
More attractive pods	33	39	28
Tasted better	24	18	59
<i>Preference</i>	50	50	
<i>Recommend to others</i>	78	61	
<i>Overall rating¹</i>	7.17	6.56	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- We love purple beans! Great taste and very tender. High yielding.
- Both produced very well. They produced into middle of September.
- Nice plants. Both attractive and tasted the same.
- We called these magic beans. It was interesting that they started purple and then turned green after cooking.
- I enjoyed giving away some of the beans. I did tell them the purple beans would turn green when cooked.
- Overall, the plants were poor performers. This was likely due to our cold spring. We had heavy downpours over several weeks just after planting.
- Both germinated well. The grasshoppers loved them.
- I did not care for either variety.

Comments on ‘Royal Burgundy’ Bean

- Outperformed in all traits and produced long before ‘Velour’.
- Bigger pods, which we prefer.
- Much meatier and thicker bean.
- Pods were larger and therefore more noticeable. We like its larger pods. Healthier leaves.
- For higher yields, this variety gets the nod.
- Strong germination. Plants were taller with more branching. Produced until frost.
- If you did not pick it fast enough, the pods would become stringy.
- Produced more; lots of beans.
- Tasted a little better. Didn’t produce well and had sickly looking plants (rust on leaves).
- Seedlings were quite a bit bigger and the row was fuller.
- Leaves were bigger. Lots of magic purple beans.
- Plants laid over.
- Earlier bearing. Bigger beans. Developed seeds faster.
- Germination was a big issue. The seed was sown and we got considerable rain over the next couple of weeks and it remained cool. This variety germinated better.

Comments on 'Velour' Bean

- Nice straight, slim pods. Strong, upright plants. Easier to pick.
- More slender pods that held longer at ripening.
- We liked its flavor and more uniform pods.
- Produced a more abundant crop. Pods were slimmer and stringless. The kids preferred its slender pods.
- Only a couple plants grew. These matured a few days earlier than those of 'Royal Burgundy'.
- Produced better, but beans were tough, even if picked very young.
- Produced more in the early season but less toward the end of the season. A more attractive bean.
- Better production under our cold, wet conditions.
- If you like haricots verts (small, thin pods), these are good. If you like bigger beans, these are too tough. These were too tough for French cut beans.
- Had the first yield, yielded longer. The beans stayed a nice size; didn't get large and hard like 'Royal Burgundy'.
- Didn't bother to pick most of the pods. They were too tiny and not worth cleaning.

Conclusions

'Royal Burgundy' germinated well and grew more vigorously than 'Velour'. It produced good yields of meaty beans. 'Velour' pods were slim, uniform and straight. Many gardeners appreciated the quality of its filet pod, while others preferred the traditional pod of 'Royal Burgundy'.

Trial 4. Bean, Vegetable Soybean

Varieties (information from seed catalogs)

'Envy'

75 days. Reliable variety for the north. Upright 2-foot plants bear bright green seeds for edamame.

'Midori Giant'

70 days. Heavy yields of pods filled with large, smooth-textured beans used in making edamame. Tan seeds.

Data

Data were collected at 7 sites in 2013.

Trait	'Envy'	'Midori Giant'	Same
Germinated best	71 %	0 %	29 %
Healthier plants	50	0	50
Maturred earlier	33	33	33
Higher yields	40	40	20
More attractive seeds	20	20	60
Tasted better	0	25	75
<i>Preference</i>	75	25	
<i>Recommend to others</i>	100	75	
<i>Overall rating¹</i>	8.50	7.50	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both delicious.
- Plants of both varieties were healthy. They tasted and looked the same.
- Neither variety germinated. I tried too hard. I soaked the seeds overnight before planting in mud and covering.
- Both good.
- A brown thrasher "thinned" the sprouts and I was left with only 41 'Envy' and 28 'Midori Giant' plants.
- Sheep enjoyed both before we were able to harvest.



Comments on 'Envy' Soybean

- A good choice if early production is desired.
- Vigorous growth; well branched. Produced more.
- The superior germination led to higher yields. This variety seemed to grow better in our climate.
- More consistent.

Comments on 'Midori Giant' Soybean

- Yield and taste are most important to me. 'Midori Giant' produced more pods per plant. Better taste.
- Bigger yield.
- Germinated two days later. Plants did not have a strong color.
- Only a couple plants grew. These matured about a week ahead of 'Envy'.

Conclusions

'Envy' has always done well in our trials. It germinated much better than 'Midori Giant' under our cool, wet conditions. It was more reliable and every gardener recommended it. The big-seeded 'Midori Giant' matched 'Envy' for yield and quality traits. It received high ratings and was recommended by most gardeners.

Trial 5. Bean, Yardlong

Varieties (information from seed catalogs)

‘Gita’

78 days. Dark green pods; thin as a pencil and up to 20 inches long. Fun for kids. Needs a tall trellis.

‘Orient Wonder’

70 days. Bright green, slender pods. Tolerates cool weather. Needs a tall trellis. Brown-red seeds.



Data

Data were collected at 10 sites in 2012 and 11 sites in 2013.

Trait	2012			2013			Weighted Total		
	‘Gita’	‘Orient Wonder’	Same	‘Gita’	‘Orient Wonder’	Same	‘Gita’	‘Orient Wonder’	Same
Germinated best	30 %	20 %	50 %	18 %	36 %	45 %	24 %	28 %	47 %
Healthier plants	11	44	44	22	33	44	17	38	44
Matured earlier	63	25	13	25	75	0	43	51	6
Higher yields	50	13	38	25	63	13	37	39	25
More attractive pods	38	38	25	25	50	25	31	44	25
Tasted better	0	13	88	0	13	88	0	13	88
<i>Preference</i>	50	50		25	75		37	63	
<i>Recommend to others</i>	75	50		30	20		51	34	
<i>Overall rating¹</i>	7.25	7.50		3.33	4.33		5.20	5.84	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

2012

- I would not grow these beans again. Did not care for the taste. Nice for a conversation vegetable.
- Both were 10–14 days behind my regular pole beans. I think almost every seed germinated. Both caught me by surprise with their first yield. They were equal producers. Beautiful climbing plants. Loved them on the white trellis behind giant zinnias! I would only use these again as a visual background for my flowers, but not to eat.
- This was the first time these were grown and we’re hooked.
- Both were very tasty. Enjoyed growing both. Got a nice crop and will grow them again. Also started some seeds in the greenhouse and planted in pots around the deck. These did well and got some early beans.
- Lovely, medium-height runners. Similar yields.

Both had very long, slender pods although we didn’t like the taste of either. We used these plants as a companion planting to shade our lettuces and cucumbers.

- Near 100 percent germination for both. Plants grew vigorously although there was some yellowing of leaves. The pods of these varieties had a similar taste and texture. I prefer the taste of bush beans but my boyfriend much preferred these over bush beans when prepared as dilled beans. Both varieties pickled similarly.

2013

- Took long for development; neither variety looked healthy this year. Both produced poorly; too long to maturity. Very narrow window to pick beans before they become too mature. Both tasted poorly and lacked flavor.
- Both did fabulous! 100 percent germination! Unfortunately, our family (and friends we gave some to) didn’t really enjoy the flavor of either variety.

More General Comments

- Equal germination and growth through the first month. Plants were stunted and grew poorly. Trellising and good conditions were provided, but neither variety showed any vigor or promise.
- Neither variety performed as well as 'Gita' did two or three years ago.
- Not sure we would ever grow these again. They were a little chewy even after cooking, so we pickled most of them.
- Neither one tasted good. Showy plant.
- Can't say anything good about yardlong beans. Very poor yield. Pods are tough and stringy. Cannot compare to 'Dragon's Tongue' or 'Kentucky Wonder' bean.
- Neither of the varieties tasted good, but they were still fun to grow!

Comments on 'Gita' Bean

2012

- Although both varieties grew well, the more uniform and straight pods of 'Gita' were much more attractive and easier to process. Fun plant!
- Popped right up. Matured several days earlier. Pods were straighter.
- Produced earlier (started picking on July 25, 5 days before 'Orient Wonder') and produced 25 percent more. Plants were bigger.
- Consistent producer.
- Relatively low germination (50 percent) and seedlings got off to a slow start.

2013

- Pods were far more green; not as purple.
- Better yield.
- Didn't produce at all.

Comments on 'Orient Wonder' Bean

2012

- Healthier plants and great taste. Pods had a brighter color.
- Healthy plants. Seemed to produce a bit better.
- Matured one week earlier.

2013

- More vigorous growth and earlier producing.
- Higher yield; healthier plants.

- Germinated first; grew fast and found trellis. Plants were bigger with fuller leaves. Longer and fuller pods.
- Better production and matured faster.
- Had yellow spots on its leaves for some reason. It did produce a higher yield, so if you like the taste of the bean, you would have more produce to enjoy.
- Had yellow on its leaves. I had fertilized the patch, but perhaps they were still lacking?

Conclusions

Both varieties thrived in the warm summer of 2012 and suffered through a cooler summer in 2013. Over two years of testing, 'Orient Wonder' received a higher rating and was preferred over 'Gita'; yet only one-third of gardeners would recommend it. 'Orient Wonder' showed greater tolerance to cool weather. Earliness, yields and pod quality of these varieties were comparable. The lush vines and long beans of both varieties were impressive, but most gardeners did not enjoy the asparagus-like flavor of these beans.

Trial 6. Beet

Varieties (information from seed catalogs)

'Detroit Dark Red'

60 days. Standard variety grown by gardeners for over 100 years. Roots are globular, smooth and tender. Perfect for canning.

'Merlin'

55 days. Roots are bright red, round, and smooth. Very uniform in shape and exceptional in sweetness. Dark green, glossy leaves.



Data

Data were collected at 16 sites in 2013.

Trait	'Detroit Dark Red'	'Merlin'	Same
Germinated best	43 %	29 %	29 %
Healthier plants	7	27	67
Matured earlier	20	20	60
Higher yields	27	40	33
More attractive roots	20	40	40
Tasted better	7	21	71
<i>Preference</i>	36	64	
<i>Recommend to others</i>	81	88	
<i>Overall rating¹</i>	7.67	8.27	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Similar germination. Matured equally. Very little difference in yield; both were very productive. Roots were very attractive.
- They were identical and prolific. They surpassed our expectations so greatly we ended up donating a bunch.
- Both varieties were huge! Both were not only tall but the roots were also very large.
- Both were good. I couldn't tell a difference.
- Both were good. It was a good year for the beet crop because of the large amount of rain we had.
- Both near 100 percent germination. Nice, sweet beets.
- Our girls like the taste of 'Merlin'; our parents liked 'Detroit Dark Red'.
- Both were good beets.
- Both tasted fine and canned/froze nicely. Seeds did not germinate uniformly.

Comments on 'Detroit Dark Red' Beet

- Roots were larger and had slightly larger yield.
- We enjoyed the uniform root shape and taller greens of 'Detroit Dark Red'. Its seeds are bigger and easier to sow.
- Its beets are rounder. They are a bit sweeter.
- Stronger flavor with a lingering taste. A superb beet, but I prefer the sweeter taste of 'Merlin'.

Comments on 'Merlin' Beet

- Beets were more attractive—rounder, brighter, darker red, and uniform. Earlier.
- Nice, round globes. Nicer beets. Produced well.
- Produced larger roots and tasted better. Larger/healthier plants.
- More uniform roots, higher yield.
- We used to grow 'Detroit Dark Red' but 'Merlin' produces more.
- They were outstanding in every way. More attractive roots and sweeter tasting.
- Bigger greens.
- Better young leaves for salads.
- Sweeter with no aftertaste.
- More susceptible to scab disease.
- Voles preferred to munch on this variety.

Conclusions

Both 'Detroit Dark Red' and 'Merlin' performed well and were highly recommended by gardeners. These varieties rated similarly for most traits. When gardeners detected a difference, they usually preferred 'Merlin'. They were impressed with its uniform, round, bright red appearance and its sweet taste. Its leaves were healthy and good for greens.

Trial 7. Broccoli

Varieties (information from seed catalogs)

‘Coronado Crown’

60 days. Extra large, blue-green heads with outstanding side shoot production. Gourmet flavor.

‘Packman’

53 days. Very popular for its reliable performance. Large central heads with good side shoot production. Superb, mild flavor.

Data

Data were collected at 6 sites in 2013.

Trait	‘Coronado Crown’	‘Packman’	Same
Germinated best	17 %	17 %	67 %
Healthier plants	20	20	60
Matured earlier	25	50	25
Higher yields	33	67	0
More attractive heads	0	100	0
Tasted better	0	75	25
<i>Preference</i>	0	100	
<i>Recommend to others</i>	50	100	
<i>Overall rating¹</i>	6.75	8.25	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- All seeds came up for both varieties. The plants of both varieties looked similar.
- These two ran neck and neck—it was almost unbelievable how close they were.
- Both had near 100 percent germination.
- Neither produced as well as I expected as it got so hot and dry when they should have produced. I should have thinned them, too.
- Most of our seed washed away. Both varieties really struggled in our garden this year.



Comments on ‘Coronado Crown’ Broccoli

- Looks more like what people expect broccoli to look like. If one likes traditional broccoli looks and flavor, they’ll prefer this.
- Better color; healthy looking.
- Seemed to grow faster.

Comments on ‘Packman’ Broccoli

- Yielded more and I liked the looks of the heads. They were greener and not as tight.
- Nicer heads and produced side shoots for a long time. Earlier, so cabbageworms not as much of an issue.
- Big, dense heads.
- Tastes like peas! I prefer its flavor, which is particularly good in omelettes.

Conclusions

“Packman” performed especially well. Gardeners liked the appearance and flavor of ‘Packman’ heads. Its yields were early and abundant. Every gardener preferred it over ‘Coronado Crown’, which did fine but was not special.

Trial 8. Carrot, Orange Chantenay

Varieties (information from seed catalogs)

'Hercules'

65 days. Strong tops with cone-shaped roots. Stores well. Especially good in heavy or rocky soils where other carrots struggle.

'New Kuroda'

65 days. Refined Chantenay-type known for its deep orange, sweet roots. Tolerant to heat. Widely planted in Asia. Popular for juices.



Data

Data were collected at 13 sites in 2013.

Trait	'Hercules'	'New Kuroda'	Same
Germinated best	23 %	23 %	54 %
Healthier plants	15	23	62
Matured earlier	31	23	46
Higher yields	42	25	33
More attractive roots	31	38	31
Tasted better raw	25	42	33
Tasted better cooked	25	13	63
<i>Preference</i>	58	42	
<i>Recommend to others</i>	92	69	
<i>Overall rating¹</i>	7.75	7.33	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both produced large carrots!
- They both did very well! The best carrot harvest I have ever had. Not sure if this was because of the varieties or weather.
- Both were sweet.
- These varieties performed similarly in germination, plant health, maturity and root appearance.
- Both varieties had tall tops and the roots were unbelievable! I have never seen such large carrots before!
- Huge carrots!

Comments on 'Hercules' Carrot

- Could harvest earlier. Roots were longer, rather than wider.
- They had better flavor. They are yummy!
- Roots were large, although they stayed tender and sweet.
- More single roots.
- Had a lot of double carrots. This led to bigger yields but made it more difficult to clean.
- Better germination, but several of the roots were forked.
- I liked these better, but my husband liked 'New Kuroda' better.

Comments on 'New Kuroda' Carrot

- Easier to clean; a nice long root.
- The carrots were larger and slimmer, which I prefer.
- Earlier and larger carrots.
- The color, size, shape and overall visual quality of its roots are more pleasing.
- Sweeter and nicer looking.
- Did not germinate.

Conclusions

'Hercules' has always been impressive in our trials. Its yields are abundant and reliable. It did well again in 2013; nearly every gardener in our trials recommended it. 'New Kuroda' matched, or exceeded it for looks and taste quality. It is another promising carrot variety especially for those who enjoy eating big, raw carrots.

Trial 9. Carrot, Orange Nantes

Varieties (information from seed catalogs)

‘Laguna’

65 days. Bright orange, 6-inch roots with outstanding flavor. Uniform shape and superior quality.

‘Nectar’

72 days. Full-season type with long 8-inch roots. Roots are uniform, smooth and straight. High yields.

Data

Data were collected at 40 sites in 2013.

Trait	‘Laguna’	‘Nectar’	Same
Germinated best	38 %	8 %	54 %
Healthier plants	23	5	73
Matured earlier	16	24	59
Higher yields	42	16	42
More attractive roots	40	31	29
Tasted better raw	53	16	32
Tasted better cooked	17	10	72
<i>Preference</i>	65	35	
<i>Recommend to others</i>	75	75	
<i>Overall rating¹</i>	7.89	7.50	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- The plants were hearty and grew well.
- Very close in all aspects. Even the raw taste was close.
- Both were tasty.
- I’m sure every seed sprouted. This was the year for carrots. Plants were lush. All of the carrots were gigantic, and we had lots of misshaped carrots. The carrots froze really well.
- Both were remarkably equal in every aspect! Wow! Both did very well.
- Both showed great germination. Very healthy plants. Both had great yields. Both were delicious, whether raw or cooked.
- Both germinated well and plants were equally healthy.
- Patchy start, but came on like gangbusters later.
- Both varieties tasted good.
- Both had vigorous plants. The carrots were of similar size at frost.
- Both produced very well.



- Both produced the same. Both had a sweet taste, especially after the first frost.
- Roots were pretty straight.
- Both produced well. Great year for carrots because of the abundance of rain.
- We had nice spring rains that helped almost every seed germinate! Both had pretty orange color to the roots.
- Good germination on both and they tasted great all the way through the season.
- Both took a while to germinate. Plants looked great.
- Very healthy tops; about 18 inches tall.
- Both have pretty leaves.
- Both 10 percent germination.
- Poor germination.

Comments on ‘Laguna’ Carrot

- Straighter, longer roots. Better “carrot” flavor.
- Two out of three of us prefer the taste of ‘Laguna’.
- Straighter roots. Sweet and crisp taste.
- Great taste and nice uniform roots.
- Roots were a little bigger, but most carrots in our trial were small. I should have watered more, but the location of the garden makes watering difficult.
- Its raw carrots were sweeter, which makes it a better choice for snacks, which our grandchildren like.
- Much sweeter! When raw, it tasted much better. A little sweeter when cooked, but it was hard to distinguish between the two. I do not like this variety since it was so difficult and frustrating to get out of the ground! It was impossible without a shovel.

More Comments on 'Laguna' Carrot

- Longer, more symmetrical roots. A nicer looking carrot.
- Better size and shape of carrot.
- We prefer its taste and appearance.
- 'Laguna' outperformed 'Nectar' except for flavor, in which they were equally good.
- Although both were the same in most categories, I felt 'Laguna' was better. Earlier by just a few days.
- Roots have a nice size, not as big in diameter.
- More 'Laguna' grew, but they both tasted great.
- Better flavor, especially when eaten raw.
- The row was fuller and the roots were sweeter.
- Had such healthy, bushy looking greens. Its carrots were longer and seemed more mature at harvest time. Great looking carrots. I liked the roundness of its carrots at its root end. Nice straight carrots. It won the taste trial because of its superior sweetness.
- Produced larger carrots. Roots had a nice shape. A sweeter taste.
- Produced 203 carrots (3.09 pounds) compared to 99 carrots (0.96 pounds) for 'Nectar'.
- Both varieties had great germination, but 15 percent more with 'Laguna'. Produced twice as many carrots but they were smaller. Roots were sweeter and slightly crisper.
- The roots were longer and harder to pull because of the hard ground in my garden. The roots are pretty and darker orange.
- Matured a little earlier. Roots were very sweet and a little straighter.
- More consistent. Better flavor.
- Better germination (80 percent compared to 50 percent for 'Nectar').
- Half of the carrots were multirooted; some golf ball size; some cracks; I shredded or sliced and froze them. Bugs seemed to attack this variety more; perhaps because it was sweeter. More areas of rot in the roots.
- A lot of strange deformed roots.
- Roots were too big and often split.
- Went to seed, something I've never seen a carrot do.

Comments on 'Nectar' Carrot

- They were bigger and tasted better.
- Roots were longer and more uniform in size.
- Came up first. Carrots were bigger and more attractive.
- Tasted good both raw and cooked. Carrots looked nicer. Easier to harvest.
- Very sweet, good tasting even before a frost.
- Sweeter tasting carrot.
- Somewhat larger carrots.
- Not as sweet as I would have liked it to be.
- Produced carrots we could eat much sooner.
- Tended to have more multiple roots.
- Roots were tougher.
- Tasted better.
- Grew better.
- Larger, nicer, longer roots.
- A little sweeter.
- Roots were easier to dig, clean, use, give away.

Conclusions

This was our most popular trial and gardeners liked both varieties. Both germinated well and grew well in the abundant rains. Most gardeners preferred 'Laguna'; it matched or exceeded 'Nectar' for all traits. It was sweeter, making it a great carrot for snacks. Its plants were particularly healthy, its carrots were uniform in shape, and its yields were excellent. 'Nectar' carrots were longer, and yet easier to dig out of the ground.

Trial 10. Carrot, Purple

Varieties (information from seed catalogs)

‘Deep Purple’

73 days. Dark purple roots with light-colored cores. Sweet flavor. Color fades when cooked. Tops are strong and vigorous.

‘Purple Sun’

90 days. Bright purple color from skin to core. The anthocyanin-rich roots are valued for their health benefits. Color fades when cooked.



Data

Data were collected at 12 sites in 2013.

Trait	‘Deep Purple’	‘Purple Sun’	Same
Germinated best	58 %	0 %	42 %
Healthier plants	67	0	33
Matured earlier	67	0	33
Higher yields	67	17	17
More attractive roots	33	42	25
Tasted better raw	27	27	45
Tasted better cooked	25	13	63
<i>Preference</i>	55	45	
<i>Recommend to others</i>	83	75	
<i>Overall rating¹</i>	6.58	5.58	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both did very well and tasted delicious.
- The kids ate them right out of the garden. Very few made it into the house.
- I have never grown purple carrots before. I was surprised they were so purple, even after they were cooked! I am going to enjoy cooking with these colorful carrots in soups, stews and hot dishes.
- Neither variety was as sweet as we’d expected of purple carrots, but we’ve not really had a truly hard, hard freeze. We think both varieties may have improved in taste in a few more weeks. Neither variety was prolific, but both produced more carrots than we usually get.
- Neither did well. The soil was too wet.
- Pretty leaf color. Neither variety showed stellar yield.
- Very poor germination (10 percent).

Comments on ‘Deep Purple’ Carrot

- We loved its color and taste.
- More attractive plant and root, especially color. Produced more carrots.
- Better germination, maturation, production, yield—everything except for taste.
- Much better yields. Carrots were bigger but some were octopus carrots.
- Definitely a fuller row. The stalk grew taller and the rows filled out nicer. Roots had odd growths and were hard to peel and such.
- Higher yield, but forked roots made it difficult to dig and use.
- Roots look like an octopus.
- Sixty of its 82 (73 percent) carrots were straight; in comparison 54 of the 61 carrots (89 percent) of ‘Purple Sun’ were straight.
- Darker color.

Comments on ‘Purple Sun’ Carrot

- Plants showed more consistent growth but were smaller.
- Tasted sweeter than ‘Deep Purple’.
- Tasted better for sure.
- A better carrot except for its poor germination.
- Much smaller plants. Carrots were straight, nice.

Conclusions

Gardeners generally liked both varieties, but with significant reservations. They were impressed with the dark color of ‘Deep Purple’, but it had a tendency to develop forked roots. It grew vigorously, matured earlier, and produced higher yields. ‘Purple Sun’ lacked vigor, but had straighter roots.

Trial 11. Carrot, Yellow

Varieties (information from seed catalogs)

'Chablis Yellow'

70 days. Broad-shouldered Danvers type with bright yellow color. Vigorous tops produce long, 8-inch roots. Mild flavor.

'Yellow Sun'

75 days. Kuroda type with broad shoulders. Attractive, golden yellow roots. Good yields of 7-inch roots. Strong, complex flavor.



Data

Data were collected at 8 sites in 2013.

Trait	'Chablis Yellow'	'Yellow Sun'	Same
Germinated best	13 %	0 %	88 %
Healthier plants	25	0	75
Matured earlier	50	13	38
Higher yields	50	25	25
More attractive roots	50	25	25
Tasted better raw	38	0	63
Tasted better cooked	29	14	57
<i>Preference</i>	63	38	
<i>Recommend to others</i>	100	50	
<i>Overall rating¹</i>	7.75	6.63	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Wonderful germination! Plants were lush. They flourished. Tons of big carrots. Blanching for the freezer brought out the beautiful yellow color.
- Both germinated slowly but caught up.
- They both did well.
- Both tasted sweeter after frost, when more mature. Neither variety has excellent flavor.

Comments on 'Chablis Yellow' Carrot

- Roots looked nicer.
- A little sweeter.
- Roots were single, longer and more uniform. Slightly better taste, both cooked and raw.
- Lusher, more attractive foliage. Its roots were larger, although the roots of both varieties were short (4–6 inches). Roots were more uniform. Higher yields.
- Produced sooner. Better plants.

Comments on 'Yellow Sun' Carrot

- Better yield; sweeter flavor.
- Easier to clean and peel because its roots were less hairy.
- Matured earlier. The potential is there for a greater yield.
- Lots of multiple roots.

Conclusions

Both 'Chablis Yellow' and 'Yellow Sun' grew well and tasted good (but not great). 'Chablis Yellow' was particularly impressive—every gardener recommended it. Its lush plants produced good yields. Its bright yellow roots were longer and more uniform.

Trial 12. Corn, Ornamental

Varieties (information from seed catalogs)

'Fiesta'

102 days. Early variety with short stalks. Glistening kernels on 8-inch cobs. Colorful husks accentuate the beauty of the kernels.

'Wilda's Pride'

110 days. Tall stalks produce large, 10-inch ears. Impressive array of kernel colors. From New England.



Data

Data were collected at 4 sites in 2013.

Trait	'Fiesta'	'Wilda's Pride'	Same
Germinated best	0 %	0 %	100 %
Healthier plants	50	25	25
Matured earlier	50	25	25
Higher yields	100	0	0
More attractive ears	100	0	0
<i>Preference</i>	75	25	
<i>Recommend to others</i>	75	25	
<i>Overall rating¹</i>	8.50	5.50	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Cobs were lovely but small. Companion planted with pumpkins.

Comments on 'Fiesta' Corn

- Strongest all the way along, from germination to maturity. Large full ears with dark blue and maroon kernels.
- Much more colorful and appealing as an ornamental variety.
- More attractive ears—especially to the raccoons.
- Grew to 6 feet tall; 'Wilda's Pride' stalks grew 4–5 feet tall.

Comments on 'Wilda's Pride' Corn

- Did not fully mature and the very few ears that did grow were white and yellow; quite small.
- Taller plants with thicker, heartier appearing leaves.
- This corn grew to over 10 feet tall!

Conclusions

'Fiesta' is an impressive ornamental corn for the north. It grew vigorously and matured early. Its ears were full-sized, and the kernels were bright and colorful. The purple coloring on some of the husks further accentuated the beauty of its ears. The stalks of 'Wilda's Pride' grew tall, but its ears did not always mature before frost.

Trial 13. Corn, Popcorn

Varieties (information from seed catalogs)

'Red Beauty'

120 days. Six-inch ears have dark red kernels. Pink husks. Beautiful as a popcorn treat and as an ornamental. Late maturing.

'Robust 997'

112 days. Glossy yellow kernels pop into a high quality, tender popcorn. Vigorous 8-foot stalks.

Data

Data were collected at 3 sites in 2013.

Trait	'Red Beauty'	'Robust 997'	Same
Germinated best	0 %	50 %	50 %
Healthier plants	0	67	33
Matured earlier	33	33	33
Higher yields	0	67	33
More attractive ears	33	33	33
Tasted better	-	-	-
<i>Preference</i>	<i>0</i>	<i>100</i>	
<i>Recommend to others</i>	<i>67</i>	<i>67</i>	
<i>Overall rating¹</i>	<i>5.00</i>	<i>6.00</i>	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- We really enjoyed this trial! Being our first time growing popcorn, it was really fun to see how it compared to sweet corn. We are really looking forward to tasting it! We won't know how they taste until the cobs dry out later this year.
- We have never grown popcorn before. Not many seeds came up.



Comments on 'Red Beauty' Popcorn

- True to its name, the cobs are absolutely beautiful. I cannot wait to see what it looks like once it is popped!

Comments on 'Robust 997' Popcorn

- More and larger ears.
- Its cobs on the main stalk grew up to 10 inches long; compared to 6 inches for 'Red Beauty'. Stalks suffered wildlife damage but were almost twice the bulk of 'Red Beauty'.

Conclusions

Both varieties lived up to their respective names. 'Robust 997' grew vigorously. Its stalks were healthy and its yields were impressive. We only have three gardeners in this trial, but they all preferred it over 'Red Beauty'. The red kernels of 'Red Beauty' were stunning. Both varieties matured before frost; this is key for us in ND. We won't know until later this winter as to which variety pops and tastes better.

Trial 14. Corn, Bicolor Sugary Enhanced

Varieties (information from seed catalogs)

'Ambrosia'

75 days. Popular for its delicious flavor, early vigor, and resistance to diseases. Large ears. Sturdy stalks.

'Luscious'

75 days. Large, blocky ears filled with sweet kernels. Easy to pick. Good flag protection. Sturdy stalks.

Data

Data were collected at 8 sites in 2013.

Trait	'Ambrosia'	'Luscious'	Same
Germinated best	25 %	38 %	38 %
Healthier plants	25	50	25
Matured earlier	67	33	0
Higher yields	33	67	0
More attractive ears	0	0	100
Tasted better	33	33	33
<i>Preference</i>	50	50	
<i>Recommend to others</i>	29	43	
<i>Overall rating¹</i>	3.17	5.00	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Neither variety came up. I don't know if it washed out with the rain, or crusted over when the sun did come out. This is the first time that ever happened to me. I usually have no problem raising sweet corn!
- Neither variety did very well. Germination was less than 25 percent. The spring was too wet and cold. The seeds from NDSU were not treated and animals ate the seeds. This is the second year corn from NDSU did not do well for me.
- Neither of the varieties germinated well. We had about six plants that grew.
- I had to replant both varieties. In general, they were not that great.



Comments on 'Ambrosia' Corn

- The stalks were sturdier and withstood wind better.
- Better taste.
- Only three plants came up. Of the 8–10 ears that matured, each had 15–20 extra large, round kernels scattered around the cob. Poor pollination.
- Never germinated.

Comments on 'Luscious' Corn

- An outstanding choice for North Dakota gardeners. Performed very well; whereas 'Ambrosia' didn't perform at all. It outyielded all sweet corn varieties grown in my garden this year.
- Produced only three stalks. Never really matured.
- None came up.

Conclusions

'Luscious' showed more vigor and produced higher yields. However, both 'Luscious' and 'Ambrosia' struggled to get established in the cool, wet soil. Most gardeners would not recommend either variety for this reason. Poor germination is not acceptable for a sugary enhanced type of sweet corn. Our seed treatment policy of only providing untreated seed may need to be reconsidered.

Trial 15. Corn, Bicolor Super Sweet

Varieties (information from seed catalogs)

'Mirai 350 BC'

78 days. A new class of sweet corn from Japan. Superb flavor and tenderness. Requires isolation from other sweet corn types.

'Xtra-Tender 277A'

77 days. Popular variety. Its large ears are filled with small, exceptionally sweet, tender kernels. Requires isolation from other sweet corn types.



Data

Data were collected at 10 sites in 2013.

Trait	'Mirai 350 BC'	Xtra-Tender 277A'	Same
Germinated best	56 %	11 %	33 %
Healthier plants	22	22	56
Matured earlier	33	44	22
Higher yields	25	38	38
More attractive ears	25	38	38
Tasted better	13	50	38
<i>Preference</i>	38	63	
<i>Recommend to others</i>	60	89	
<i>Overall rating¹</i>	6.90	7.88	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both germinated well; did well after the hail in early June; and matured at the same time. Both are good varieties.
- Both are good producers for small gardens.
- Both did well in our hot dry summer following a cool spring.
- Raccoons damaged the planting.

Comments on 'Mirai 350 BC' Corn

- Larger ears, filled to end of ear.
- It was a nicer corn from the get go.
- Wonderful taste! Could be eaten raw! We had many compliments on this corn! People could not believe how good it was. Up until this fall, a farmer in our area was known for having the best corn—this year it was us! Unfortunately, the 'Xtra-Tender 277A' was mowed over by a volunteer.

- Much better germination.
- Better germination (37 vs. 31 plants for 'Xtra-Tender 277A'). A few more ears (45 vs. 41).
- Slow to germinate. Stalks were 1/3 smaller. Small cobs.
- Just OK. None of us liked it, but we all liked Xtra-Tender 277A.

Comments on 'Xtra-Tender 277A' Corn

- Matured two weeks earlier. Really tender taste—pops in your mouth. Great sweet taste.
- The cobs look better.
- I have been planting this variety for years. For my family it is the #1 sweet corn to eat. They always ask, "When is the good stuff ready to eat." Very sweet and tender, but germination was poor. I never plant untreated corn seeds. This was the poorest germination I have ever seen, especially for 'Xtra-Tender 277A'. I will not grow sweet corn again unless the seed is treated; it is a waste of time and effort.
- We all liked its taste. Much better than 'Mirai 350 BC'.
- I had to replant half of it, but did not have to replant 'Mirai 350 BC'.

Conclusions

Shrunken kernel types are known to struggle in cold, wet soils, but these varieties did well, especially 'Mirai 350 BC'. Both varieties grew well and produced good yields. Gardeners loved the taste of 'Xtra-Tender 277A'. It was the preferred choice among these gourmet varieties and highly recommended by gardeners.

Trial 16. Corn, Yellow Super Sweet

Varieties (information from seed catalogs)

'4001Y'

70 days. Widely adapted, popular corn. Noted for earliness, sweetness and tenderness. Requires isolation from other sweet corn types.

'Vision'

75 days. Big ears filled with glossy kernels. Exceptional eating quality. Strong stalks. Requires isolation from other sweet corn types.



Data

Data were collected at 4 sites in 2013.

Trait	'4001Y'	'Vision'	Same
Germinated best	25 %	25 %	50 %
Healthier plants	25	0	75
Matured earlier	25	50	25
Higher yields	50	25	25
More attractive ears	25	25	50
Tasted better	25	75	0
<i>Preference</i>	25	75	
<i>Recommend to others</i>	75	75	
<i>Overall rating¹</i>	7.25	8.75	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Sturdy stalks. Ripened at the same time. Long, uniform ears. Comparable ears per plant. I liked both of them very much.
- Very poor germination. I will no longer sow seeds of corn varieties that are not treated.

Comments on '4001Y' Corn

- Matured one week earlier. Very large ears.

Comments on 'Vision' Corn

- Very sweet and tender. My family loves this variety of corn.
- Better germination (25 vs. 16 plants) led to higher yields. My wife, daughter and I all felt it had a slightly better taste.
- Ears have a user-friendly size—fits nicely in a kettle. Sweeter.
- Only a few seedlings came up.

Conclusions

Our data and comments are limited, but 'Vision' performed extremely well at all four sites. It was preferred and recommended by three of the gardeners. Germination of both of these shrunken kernel varieties was less than ideal in the cold, wet soil. 'Vision' gets the nod for its superior taste.

Trial 17. Corn, Bicolor Synergistic

Varieties (information from seed catalogs)

'Allure'

70 days. Strong stalks produce a fine early crop of delicious corn. Sweet and juicy. Good yields. Easy to pick.

'Montauk'

79 days. Very large ears filled with juicy kernels. Very sweet. Vigorous stalks tolerate drought. Easy to grow.



Data

Data were collected at 9 sites in 2013.

Trait	'Allure'	'Montauk'	Same
Germinated best	67 %	0 %	33 %
Healthier plants	75	13	13
Matured earlier	38	13	50
Higher yields	88	0	13
More attractive ears	57	29	14
Tasted better	57	0	43
<i>Preference</i>	86	14	
<i>Recommend to others</i>	71	14	
<i>Overall rating¹</i>	7.86	4.00	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both germinated well. Plants looked healthy. The ears of both varieties tasted very good. They produced at the same time.
- Great taste, very sweet.
- Both varieties did well.

Comments on 'Allure' Corn

- Higher yield of nice cobs; less smut.
- Superior germination (almost 2 to 1); this led to higher yields. Slightly better taste.
- Stalks resisted lodging. Ears were longer with uniform kernels.
- Much better germination (49 plants compared to 19 for 'Montauk'). Yields reflected this. Good flavor, sweet and tender. Deeper kernels, giving a sense of being more filling.
- Most seed germinated, compared to only two plants of 'Montauk'.
- Slightly sweeter.

- Produced larger, fuller ears and had higher germination and survival rate.
- Cobs were thinner with unevenly sized kernels. Both varieties tasted good, but 'Allure' was sweeter.
- Had tiny ears on 4-foot stalks, but the ears filled out; the ears of 'Montauk' did not fill out and had spotty kernel growth. This damage may be due to corn rootworms.

Comments on 'Montauk' Corn

- Cobs were smaller and some were filled with smut. More worm problems.
- Wimpy stalks, wind-damaged. Stalks had multiple stems. Kernels looked dull after cooking, but were crisp and tender.
- Only 50 percent germination. Half-sized ears.
- Two of 20 plants developed smut. Ears were larger, evenly filled and uniform.
- Less than 50 percent germination. Poor development and production.

Conclusions

The vigor of 'Allure' was impressive. It germinated well and developed strong stalks. Yields were good. Gardeners preferred the look and taste of its ears. 'Montauk' struggled; its yields were poor and its ears were susceptible to smut.

Trial 18. Corn, Yellow Synergistic

Varieties (information from seed catalogs)

'Applause'

75 days. High quality corn with bright, shiny kernels. Tender and sweet. Widely adapted.

'Honey Select'

77 days. An award-winning variety known for its very large ears and amazing flavor.

Data

Data were collected at 5 sites in 2013.

Trait	'Applause'	'Honey Select'	Same
Germinated best	20 %	40 %	40 %
Healthier plants	0	60	40
Matured earlier	20	60	20
Higher yields	0	80	20
More attractive ears	0	60	40
Tasted better	20	20	60
<i>Preference</i>	20	80	
<i>Recommend to others</i>	60	100	
<i>Overall rating¹</i>	7.00	8.20	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both were great.
- Only 20 percent of each variety germinated. My personal corn planted the same day did much better. Both varieties in this trial were good producers.
- I planted late (June 13) and plants did not grow very big. Neither variety produced very well. Their cobs tasted very good.

Comments on 'Applause' Corn

- Sweeter taste.
- Five days earlier.
- Had up to four ears per stalk but only top two were usable. Kernels were tender and sweet, juicy with good flavor and bigger kernels.



Comments on 'Honey Select' Corn

- Germinated a bit better. Cobs looked nice on the stalk and off. Both varieties tasted good, but this was better. Plain and simple good corn.
- More ears. Bigger ears. Sweeter.
- Produced a little more.
- Plants were taller and showed more heft. Multiple stems; the main stem produced two ears each. The kernels popped in your mouth, with an earthy, pleasant taste. I prefer its kernels, which were smaller.

Conclusions

'Honey Select' was superior. It grew more vigorously and produced higher yields. It matured earlier, and its ears were bigger and more attractive. The taste of 'Applause' was comparable; many gardeners recommended the variety.

Trial 19. Cucumber, Pickling

Varieties (information from seed catalogs)

'Calypso'

52 days. Vines produce exceptional yields, especially early in the season. Medium-dark green cukes are ideal for pickling.

'Homemade Pickles'

55 days. Vigorous, disease-resistant vines produce loads of cukes ideally shaped for pickling. Medium-green fruits are solid and crisp.



Data

Data were collected at 24 sites in 2013.

Trait	'Calypso'	'Homemade Pickles'	Same
Germinated best	21 %	58 %	21 %
Healthier plants	15	40	45
Matured earlier	40	45	15
Higher yields	32	41	27
More attractive cukes	29	38	33
Tasted better	5	24	71
<i>Preference</i>	34	66	
<i>Recommend to others</i>	59	73	
<i>Overall rating¹</i>	6.54	7.57	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both performed very well and I had more cukes than in other years.
- Both varieties had cucumbers with a very good shape for pickling. Centers were dense without being real seedy. Both tasted very good—sweet and not bitter—even with limited irrigating.
- Vines of both varieties grew prolifically.
- Very nice plants. Very prolific producers. I gave cukes to all my friends. Both varieties were excellent and it was hard to choose which was better. I literally harvested hundreds of cukes.
- Both were good producers. Similar yields and taste.
- Both had nice straight, short cukes. Very easy to put into jars for pickles.
- I was surprised how fast the seeds germinated. These darker cukes are wonderful. I am sad the season is soon over.

- Neither variety germinated well (sown May 27). For the few plants that germinated, both produced fairly well.
- Vines did not look good. Generally unsatisfied. Did not get the produce as I have in the past with other varieties I have planted.
- Germination and plant growth suffered due to weather.
- Poor germination. Yields were not up to our expectations. Both pickled well.
- Not sure I would plant either again as they got too big quickly for making nice pickles.

Comments on 'Calypso' Cucumber

- More uniform and nicer looking cucumbers.
- Straighter cukes. Less bitter. Germinated better and produced 15 percent more.
- Had a bit better yield.
- More vines and more cukes. Seemed to be hardier.
- Better germination (70 percent compared to 18 percent for 'Homemade Pickles'). Seemed to have sturdier vines; faster growing. Cukes had dark green with light stripes; firm and blocky.
- The only variety that grew for me.
- Produced better in our wet year, but did not produce well.
- Sharper spines, but otherwise looked fine.
- Cukes had some odd shapes for making dills; but these were fine for slicing.

Comments on 'Homemade Pickles' Cucumber

- I liked its shape and size. Crisp. A nice pickler.
- Germinated better and had larger production. It produced longer into the season.
- Germinated better (75 percent compared to 60 percent for 'Calypso'). Produced first and had a longer season of producing.
- Cukes had a more even shape and size. More consistent growth, production and better flavor.
- A straighter cuke.
- Very good for pickles; not so large. Smaller foliage and great producers. Would plant again—very pleased.
- Hardier and didn't need as much watering.
- Approximately 10 days earlier. Produced nearly twice the cukes. Slightly better taste. Easier to pick (less spiny cukes). Good production.
- Produced sooner.
- Produced more.
- Tasted sweeter and matured earlier.
- Better shape. Slower to get too big for my purposes.
- Its vines tended to turn brown sooner than 'Calypso'.
- Faster growth, larger leaves and fruits. Cukes were larger, more uniform with good color. Better fruit for pickling.
- I watered the garden plenty, but the vines always looked like they were dry.
- Solid cukes with medium green skin. Seemed to taste a little sweeter. I enjoyed its flavor better.
- Did not grow in the wet weather.

Conclusions

Most gardeners preferred 'Homemade Pickles'. It matched or exceeded the performance of 'Calypso' in all measured categories including earliness, yield and taste. The vines of 'Homemade Pickles' got off to a stronger start. Its fruits were uniform, straight, solid, and slow to get seedy. 'Calypso' was good, but 'Homemade Pickles' was better.

Trial 20. Cucumber, Slicing

Varieties (information from seed catalogs)

‘General Lee’

66 days. Very productive, main-season slicer. Disease-resistant vines set good yields even under adverse conditions.

‘Straight Eight’

58 days. Early slicer. Straight, dark green fruits grow 8 inches long. Small seed cavity. Excellent for slicing or for making dill pickles.



Data

Data were collected at 10 sites in 2013.

Trait	‘General Lee’	‘Straight Eight’	Same
Germinated best	30 %	40 %	30 %
Healthier plants	29	43	29
Matured earlier	33	33	33
Higher yields	38	50	17
More attractive cukes	50	33	17
Tasted better	33	33	33
<i>Preference</i>	44	56	
<i>Recommend to others</i>	50	86	
<i>Overall rating¹</i>	6.88	7.43	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both varieties produced cucumbers into October.
- Both had only two plants germinate (but that was plenty). Both had healthy plants and yielded well.
- Both germinated well indoors; however weather and soil conditions were bad and the plants died.
- Cool, wet weather resulted in an unacceptable number of seeds germinating.
- They both germinated a little later because of the wet spring. This also led to mold on vines and reduced yields.

Comments on ‘General Lee’ Cucumber

- Better plants earlier in the season. Seeds of cukes seemed to be larger.
- Produced first but only by a few days. Slightly better yields. Very nice looking cukes. Delicious!

- I have grown ‘Straight Eight’ for years, but was very impressed with ‘General Lee’. The plants did not get as big and weren’t as leafy, but they produced well. The fruit was not as prickly. Its fruit had smaller seeds, even when they got large. They were never bitter. I like its texture.
- Very poor germination—about 30 percent.

Comments on ‘Straight Eight’ Cucumber

- More seeds germinated and it was more prolific. I couldn’t believe all the cukes a got from such a small space.
- Its leaves did a better job of protecting the fruits from yellowing. Its vines were more vigorous late in the season.
- Cucumbers were very inconsistent. Some were good but many were very bitter and we were unable to eat. Sometimes certain bites of the cucumber were good and the following bite was bitter. Very odd! Some were very short and fat and we had some that yellowed for reasons we were unsure of.
- Better germination and production.
- Better germination (70 percent vs. 50 percent for ‘General Lee’). Fruits were more bitter.

Conclusions

‘Straight Eight’ has a following in ND. It is a productive variety in cool summers and it outyielded the hybrid ‘General Lee’ this year. It was recommended by more gardeners and received higher overall ratings. Its vines got off to a strong start. Gardeners liked the quality of ‘General Lee’ cucumbers; this variety yielded better in previous years.

Trial 21. Cucumber, Beit Alpha

Varieties (information from seed catalogs)

Note: This trial was a comparison of 'Amiga' and 'Diva'. After planting, we were informed by our seed supplier there was a mix-up and our 'Amiga' seeds may be seeds of a different cucumber. Thus, we are limited to providing information on 'Diva' in this report.

'Diva'

58 Days. Gourmet quality. Bright green, spineless cukes with minimal seeds. No peeling is required of its thin skin. AAS Award winner.

Data

Data were collected at 11 sites in 2013.

Trait	'Diva'
<i>Recommend to others</i>	82
<i>Overall rating¹</i>	8.09

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

Comments on 'Diva' Cucumber

- Plants were dark green and beautiful. They flourished and I finally had to trellis them—crazy producers. The yields kept going! Cucumbers were super straight and not bulgy.
- Plants were strong and healthy throughout the summer. Lots of beautiful, smooth-skinned, dark green cukes. Mild and always bitterless and burpless. Has a nice deep skin color, but what I liked the best was its crunchy texture and great flavor ... mild, sweet, yummy! Even as a larger cuke, these were good. Wish we could grow these all year long!
- Nice looking plants. They stayed relatively small but still produced an abundance of cukes. Great taste.
- Seventy-five percent germination. Productive. Uniform shape, attractive green color. Tasted good.
- Germinated 100 percent. Cukes had a uniform size and good flavor. We liked how it produced in our tunnel system.
- Near 100 percent germination. Productive.
- Good plants in the garden. Small but tasty cukes.
- The thin skin was superior. I like the crispness of the fruits and its small seeds.



- Great taste but low yield.
- They were late maturing and not very productive. I think we have other varieties that are better.

Conclusions

'Diva' is not known for its vigor, but it flourished in most gardens. It germinated well in the cool soil and produced good crops of attractive cukes. The fruits were thin-skinned, uniform in shape, crisp, mild, and burpless. It was the highest rated cucumber in our trials this year.

Trial 22. Cucumber, Burpless

Varieties (information from seed catalogs)

'Summer Dance'

60 days. Straight, glossy cukes of exceptional quality. Productive vines tolerate heat and diseases.

'Tasty Green'

60 days. Smooth, dark green cukes are thin skinned, burpless, and bitter free. Easy to grow.



Data

Data were collected at 23 sites in 2013.

Trait	'Summer Dance'	'Tasty Green'	Same
Germinated best	26 %	43 %	30 %
Healthier plants	5	50	45
Matured earlier	11	79	11
Higher yields	15	60	25
More attractive cukes	21	63	16
Tasted better	17	17	67
<i>Preference</i>	38	62	
<i>Recommend to others</i>	48	62	
<i>Overall rating¹</i>	6.38	7.09	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Started plants indoors and both varieties germinated very well. Vines grew well in summer and were healthy and vigorous. Both produced an abundance of cukes. Both were easy to grow.
- Both yields were astronomical.
- Vines looked nice. I would probably plant both again.
- Both made great pickles.
- Mold appeared on leaves. It was probably because of wet conditions. Our cucumbers didn't seem to do as well as previous years.

Comments on 'Summer Dance' Cucumber

- Cukes were straighter, more attractive, and sweeter.
- Nice, straight, 12-inch-long cukes. Good for slicing in any direction.

- Straighter cukes.
- Cukes had smooth skin (not prickly) and were straighter.
- Came up much healthier and produced lovely cukes without requiring a ton of attention. I have very rarely had a successful cucumber crop but 'Summer Dance' did remarkably well and is an excellent option for gardeners like myself who don't always have the time to get out into the garden every single day. So impressed with the yield of this crop—can pull 5–6 cukes off daily. They do, however, get rather seedy.
- Smoother skin. Nice dark green on the outside.
- Slow to start, but produced nearly twice as many cucumbers. Kept producing high quality, good-sized cucumbers until frost.
- Germinated a little earlier.
- None germinated (sown May 15).

Comments on 'Tasty Green' Cucumber

- Produced first. Most productive. Produced longest. Nice shape and size.
- Matured almost two weeks earlier. Produced 30 percent higher yield.
- Much better production.
- Nice long, skinny cucumbers.
- Overall better.
- Grew faster. Harvested a few cukes, but none from 'Summer Dance'. The cucumbers I got were delicious! Just wish there were more.
- Matured a few days earlier, which is always a bonus (first harvest was July 7).
- Larger plants. Bloomed earlier.
- Vines were very healthy and the yield was plentiful.

More Comments on 'Tasty Green' Cucumber

- We grow our fruits on a fence and the fruits of 'Tasty Green' were straight and less likely to curl.
- Longer and straight. Good skin.
- Cukes were all curved and had larger seeds inside.
- Fruits curled at the end.
- Didn't yield a lot. The cukes got fat in one area and didn't grow as nice and straight.
- Its cucumber spoiled faster so if you are saving them—don't.
- Did not germinate.

Conclusions

'Tasty Green' got off to a strong start and was preferred by most gardeners. Its vigorous, healthy vines produced earlier and more cucumbers. The fruits were more attractive. Several gardeners were impressed with the smooth, dark skin and straight shape of 'Summer Dance' cucumbers, but overall the variety was less reliable. Gardeners enjoyed the bitterfree, burpless fruits of both varieties.

Trial 23. Gourd, Ornamental

Varieties (information from seed catalogs)

'Autumn Wings'

95 days. A popular blend of winged and warted gourds. Shaped like pears, crooknecks and more. Vibrant colors.

'Gremlins'

95 Days. Bright, colorful gourds with warts. Shapes of stars, wings, crooknecks, acorns, and more. Solid and speckled fruits are 6 inches in size.



Data

Data were collected at 8 sites in 2013.

Trait	'Autumn Wings'	'Gremlins'	Same
Germinated best	25 %	38 %	38 %
Healthier plants	38	13	50
Matured earlier	83	0	17
Higher yields	43	29	29
More attractive fruits	14	43	43
<i>Preference</i>	50	50	
<i>Recommend to others</i>	78	78	
<i>Overall rating¹</i>	7.25	7.50	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both varieties are great. The best trial I have participated in to date. Because both varieties were gourds I have never seen before. Wonder where I can get these to plant again.
- Both took over my garden. Both of their gourds looked nice depending on what weird shapes you like. Both were outstanding in production and great looking gourds.
- They germinated at about the same time—nearly 100 percent. The vines were really healthy—did well with relatively dry conditions. The vines produced great. There were many different, unique fruits from only two varieties! First time growing gourds—loved them! Will plant again.
- The gourds of both varieties were attractive.
- The vines grew everywhere even though we planted only two hills. The customers really liked the decorative features of them. Although the vines produced a lot of gourds, we were able to sell them all.

- Both were fun.
- Both got powdery mildew in August.

Comments on 'Autumn Wings' Gourd

- Produced gourds 8–10 days earlier. Vines produced loads of smaller colorful gourds, about 5 times more than 'Gremlins'. Its colors were bright and more characteristic for fall decorations.
- Started out nicer and healthier, but 'Gremlins' caught up. Earlier by a few days.
- Slightly healthier plants. We liked the bright colors and shapes of its gourds.

Comments on 'Gremlins' Gourd

- Lots of variety and deep colors. Its gourds were uglier, which I like.
- Germinated first, at 95 percent ('Autumn Wings' germinated at 80 percent). More interesting, unusual shapes and colors.
- Plants were bigger; more produce. Unusual fruits.
- Better producer and unique shapes.
- Produced more gourds with a green bottom, which was preferred by the customers.

Conclusions

Gardeners enjoyed growing both varieties. Their vigorous vines produced loads of gourds with rich colors and eye-catching shapes. 'Autumn Wings' matured earlier, and some gardeners were especially enthralled with the diversity of "ugly" gourds produced by 'Gremlins'. Both varieties are suitable for ND; it only depends on what shapes the grower is looking for.

Trial 24. Greens, Pak Choi

Varieties (information from seed catalogs)

'Joi Choi'

45 days. Ivory white stalks and dark green leaves. Mild and crunchy flavor. Hybrid vigor. Used in stir fries.

'Prize Choy'

50 days. Crispy and succulent, celery-like stalks with dark green leaves. Used in stir fries. Thrives in cool weather.

Data

Data were collected at 8 sites in 2013.

Trait	'Joi Choi'	'Prize Choy'	Same
Germinated best	13 %	50 %	38 %
Healthier plants	43	0	57
Higher yields	50	33	17
More attractive	50	17	33
Tasted better	17	33	50
<i>Preference</i>	50	50	
<i>Recommend to others</i>	67	67	
<i>Overall rating¹</i>	7.00	6.50	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Healthy, vigorous sprouts.
- Beautiful color; good stamina and size.
- Both grew OK.
- Both grew fast but the bugs were very hard on the new plants. We sprayed with Sevin, but quit spraying during the harvest (most of summer). The bugs came back and ruined most of the leaves for table use—stalks were fine.
- Both varieties were infested with flea beetles. As in the past, these Asian greens became my “trap crop” for flea beetles. I am hoping to plant some early under my cold frames next year so I can actually harvest some. These were fun to grow!
- They both bolted before much of a head could be formed. Planted in too hot an area. We learned not to sow seeds in a sunny/hot location. We were bummed as we were excited to try this.
- I don't like its taste—very strong.
- Neither variety grew for me. Last year I also tried to grow it and it didn't come up (sown May 18).



Comments on 'Joi Choi' Pak Choi

- Higher yields. These are pretty plants—would work in a flower bed. Next time I will try row covers to keep off flea beetles.
- Less flea beetle damage. Plants were taller and sturdier. Yield was nearly double. Stalks had a lovely color; not too tall, nor too short.
- Kept producing until the first frost. Grew two feet tall. It seemed to keep growing even though the bugs ate a lot of holes in the leaves.
- Germinated a bit later, but overall better.

Comments on 'Prize Choy' Pak Choi

- Showed the first sign of life.
- Germinated first, although both had poor germination. Planting delayed to June 7 (and still sown under cool, damp and still very wet conditions). Overall, this variety was best.
- Seedlings germinated slightly earlier and were larger.
- Grew faster. I liked the taste. Looked very nice.
- Bolted first. Prolific production. Tasty raw or cooked.

Conclusions

Gardeners were pleased but not excited by the performance of these varieties. Both were highly susceptible to flea beetle damage. 'Prize Choy' showed superior seedling vigor, but the overall edge goes to the hybrid 'Joi Choi' for its higher yields and more attractive plants.

Trial 25. Greens, Tatsoi

Varieties (information from seed catalogs)

'Tatsoi'

21 to 45 days. Plants produce a rosette of smooth, spoon-sized leaves with mild flavor. Leaves may be used in salads when young or in stir fries when mature.

'Tatsoi Savoy'

21 to 45 days. Asian green with puckered leaves. Mild, delicious flavor. Adds texture to salads and stir fries.



Data

Data were collected at 11 sites in 2013.

Trait	'Tatsoi'	'Tatsoi Savoy'	Same
Germinated best	55 %	0 %	45 %
Healthier plants	40	60	0
Higher yields	67	33	0
More attractive	25	25	50
Tasted better	0	75	25
<i>Preference</i>	63	38	
<i>Recommend to others</i>	40	20	
<i>Overall rating¹</i>	4.10	3.33	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- No seedlings germinated.
- Germinated poorly. Flea beetles loved these. I have left the plants to see how they fare after our first frost—it looks like they may have a second “flush” of leaves that will not be damaged as much by the beetles.
- None sprouted. Could have been to heavy rain and washing out of seeds.
- Not one single seed came up.

Comments on 'Tatsoi' Greens

- Better germination. Flea beetles created little holes in the leaves.
- Healthier plants and higher yields. Very pretty plants!
- Tasted awful, but at least it grew.
- Tasted okay but bitter after bolting.

Comments on 'Tatsoi Savoy' Greens

- Pretty green plants. Good flavor.
- Its leaves looked better; less subject to damage from flea beetles.
- More susceptible to damage from flea beetles.
- All of the seedlings were completely eaten by flea beetles so they were completely lost (we only lost half of the 'Tatsoi').
- None of it germinated.
- Never germinated.
- Germination was less than 10 percent.

Conclusions

This trial was a disappointment due to the poor germination of both varieties. Seed quality seems to be a factor, as well as heavy spring rains that washed out some seedbeds. 'Tatsoi' showed superior germination and higher yields; while 'Savoy Tatsoi' was more flavorful. Flea beetles were a problem for both varieties.

Trial 26. Kohlrabi, White

Varieties (information from seed catalogs)

‘Kossak’

80 days. Giant, 8-inch bulbs mature late and are used for winter storage. Interior flesh is sweet and delicious.

‘Winner’

45 days. Very popular for its fresh, fruity taste. Holds well in the field.

Data

Data were collected at 9 sites in 2013.

Trait	‘Kossak’	‘Winner’	Same
Germinated best	25 %	13 %	63 %
Healthier plants	14	29	57
Matured earlier	14	57	29
Higher yields	57	29	14
More attractive bulbs	14	57	29
Tasted better	14	29	57
<i>Preference</i>	43	57	
<i>Recommend to others</i>	75	88	
<i>Overall rating¹</i>	7.14	8.29	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Uniform germination on both. Both grew vigorously. Bulbs were a nice, medium silvery green. Both were delicious in stir fry or salad.
- Both germinated well. Plants were very healthy. Good yields. Very good taste. A good year for kohlrabi.
- Both tasted equally good.



Comments on ‘Kossak’ Kohlrabi

- Bulbs split and rotted.
- Its bulbs got so big that people think it will be woody, but it’s not. Slightly stronger in flavor.
- Produced a little better. Had large bulbs and they didn’t get woody. For its size, it had a very good taste.
- Tasted better, and its flesh was crisper.
- Taller plants.
- I did not like the shape of its bulbs.
- Produced a little better.

Comments on ‘Winner’ Kohlrabi

- More usable bulbs—with no splitting. Much better tasting. Produced much better and had a sweeter flavor.
- Sweet, crisp taste.
- This is now my favorite kohlrabi. I love the sweet, fruity taste.
- Produced more.

Conclusions

Both varieties grew well. Most gardeners preferred ‘Winner’ for its earlier maturity and superior quality. Its bulbs were more attractive and less subject to splitting. The flavor of ‘Winner’ was mild and fruity. ‘Kossak’ produced larger bulbs and higher yields. Its large bulbs did not get woody and were surprisingly delicious.

Trial 27. Lettuce, Green Butterhead

Varieties (information from seed catalogs)

'Nancy'

52 days. Medium green leaves are thick and crunchy. Full, heavy heads have excellent quality.

'Sylvesta'

52 days. Big heads full of thick, delicious leaves. Easy to grow. Resists many diseases.

Data

Data were collected at 9 sites in 2013.

Trait	'Nancy'	'Sylvesta'	Same
Germinated best	22 %	0 %	78 %
Healthier plants	25	13	63
Higher yields	25	13	63
More attractive	25	13	63
Tasted better	25	13	63
<i>Preference</i>	71	29	
<i>Recommend to others</i>	88	88	
<i>Overall rating¹</i>	8.13	7.50	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- I would plant either variety again. They were slow to bolt. We had nice heads for a month. The recent wave of hot weather has been hard on them and now we are feeding them to the chickens.
- Both had nice, attractive plants with no insect issues. Equally robust yields. Both are great home garden lettuce varieties.
- This is very good lettuce but fragile.
- Both tasted great.
- They both produced well; we just didn't like the taste. Too bitter.
- I prefer growing romaine—much crisper leaves.



Comments on 'Nancy' Lettuce

- Slightly better germination. Matured a little earlier. Made better heads and did not bolt as quickly.
- Better germination.
- Its leaves were more tender and tasted better.

Comments on 'Sylvesta' Lettuce

- Grew better.
- Had a tighter head that made it easier to pick.
- Taste similar but 'Sylvesta' was slightly more tender.
- A little bitter.

Conclusions

Nearly every gardener in the trial recommended both 'Nancy' and 'Sylvesta'. They were impressed with the productivity, taste, and heat tolerance of both varieties. The varieties were comparable in all traits with a slight, but consistent edge going to 'Nancy'. When forced to make a choice, most gardeners chose 'Nancy'.

Trial 28. Lettuce, Red Butterhead

Varieties (information from seed catalogs)

'Merveille des Quatre Saisons'

60 days. This "Marvel of Four Seasons" has reddish hearts full of crisp, flavorful leaves. Widely adapted. French heirloom.

'Red Cross'

48 days. Large, bright red heads. Exceptional tolerance to heat.



Data

Data were collected at 5 sites in 2013.

Trait	'Merveille d. Q. Saisons'	'Red Cross'	Same
Germinated best	20 %	60 %	20 %
Healthier plants	25	25	50
Higher yields	25	25	50
More attractive	25	75	0
Tasted better	25	25	50
<i>Preference</i>	25	75	
<i>Recommend to others</i>	75	75	
<i>Overall rating¹</i>	7.50	8.25	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both were tasty. Both were very slow to bolt.
- Both were nice.
- Very similar.
- Similar yield per plant.

Comments on 'Merveille des Quatre Saisons' Lettuce

- Tighter, more butterhead-like head. Nicer looking and better tasting. Produced more.
- Went to seed first and it was a cool summer. May bolt early in a normal/warmer summer. Tougher bite and a stronger, but not bitter flavor.

Comments on 'Red Cross' Lettuce

- Definitely germinated better.
- Better germination (95 percent vs. 75 percent for 'Merveille des Quatre Saisons'). Did not bolt as easily. Nice full plants with beautiful leaves. Smoother flavor. Had a slightly bitter aftertaste, which was not noticeable when eaten with dressing or in a sandwich.
- More tender and much more prolific.

Conclusions

Both varieties performed well. Gardeners enjoyed their flavor and resistance to bolting. Most gardeners preferred 'Red Cross' for its impressive seedling vigor, superior resistance to bolting, and brighter red leaves.

Trial 29. Lettuce, Green Crisphead

Varieties (information from seed catalogs)

'Nevada'

48 Days. Densely packed, bright green leaves. Delicious flavor. Impressive tolerance to heat.

'Reine des Glaces'

62 days. This "Queen of the Ice" has dark green, pointed leaves. Crisp and sweet. A small, loosely packed iceberg type. Very attractive.



Data

Data were collected at 5 sites in 2013.

Trait	'Nevada'	'Reine des Glaces'	Same
Germinated best	75 %	0 %	25 %
Healthier plants	75	25	0
Higher yields	50	0	50
More attractive	75	0	25
Tasted better	75	0	25
<i>Preference</i>	100	0	
<i>Recommend to others</i>	100	60	
<i>Overall rating¹</i>	8.50	7.25	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- They were both very good. Hard to decide on one but if I had to plant again it would be 'Nevada'.
- Both varieties were great. We had fresh lettuce into July.

Comments on 'Nevada' Lettuce

- Able to harvest sooner. Tasted better. Stayed crisper longer in the fridge.
- Both were good, but this was better.

Comments on 'Reine des Glaces' Lettuce

- Its taste bordered on bitter at times.

Conclusions

'Reine des Glaces' was good, but 'Nevada' was better. 'Nevada' rated higher for all traits. Its productivity, taste, and heat tolerance were all impressive. The heads were bright green and heavy. Every gardener in the trial preferred 'Nevada' and recommended it to other gardeners.

Trial 30. Lettuce, Red Crisphead

Varieties (information from seed catalogs)

‘Pablo’

69 days. Loose heads of wavy-edged leaves. The outer bronze leaves contrast nicely with the green inner leaves. Mild flavor. Slow to bolt.

‘Sierra’

50 days. Red-tinged crisphead known for its vigor and exceptional tolerance to heat. Delicious.

Data

Data were collected at 3 sites in 2013.

Trait	‘Pablo’	‘Sierra’	Same
Germinated best	0 %	33 %	67 %
Healthier plants	0	67	33
Higher yields	0	67	33
More attractive	67	0	33
Tasted better	0	33	67
<i>Preference</i>	33	67	
<i>Recommend to others</i>	33	100	
<i>Overall rating¹</i>	8.67	9.00	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both have excellent taste. Nicest lettuce I have ever planted. Lasted a long time and didn’t turn bitter.
- They were both very healthy.
- Taste is equally good.

Comments on ‘Pablo’ Lettuce

- A prettier plant. It’s beautiful, not as productive.
- More color; a darker red color.
- Much more peppery flavor, which I do not like.



Comments on ‘Sierra’ Lettuce

- Grew larger and faster. Better flavor. More prolific for initial growth, and regrowth after cutting.
- Plants are fuller, larger, hardier looking.
- Very nice looking, but more green.

Conclusions

Both varieties performed well, but most gardeners preferred ‘Sierra’. Its plants were healthier, more vigorous, and more productive. Every gardener recommended it. The leaves of ‘Pablo’ were more colorful and especially beautiful. Data and comments from this trial are limited.

Trial 31. Lettuce, Green Leaf

Varieties (information from seed catalogs)

'Italienischer'

55 days. Upright plants with robust growth. Leaves are bright green, mild and crispy.

'Venetian'

48 days. Loose heads of very long, frilly leaves. Lime green color. Tender texture. Vigorous growth.

Data

Data were collected at 8 sites in 2013.

Trait	'Italienischer'	'Venetian'	Same
Germinated best	38 %	25 %	38 %
Healthier plants	25	38	38
Higher yields	13	38	50
More attractive	38	25	38
Tasted better	38	38	25
<i>Preference</i>	50	50	
<i>Recommend to others</i>	75	88	
<i>Overall rating¹</i>	8.00	8.00	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both varieties would be great in any ND garden. Neither one turned brown or wilted. Remarkable regrowth well into summer when it slowed down. The flavor was not particularly what I care for in lettuce, but that is just my taste buds.
- Plants were very pretty and green.
- Both varieties were healthy looking. Both produced plenty of leaves. Their contrasting colors and leaf shapes were interesting. Both remained non-bitter.
- Both produced well. Really not any notable differences.
- Neither did well in a late planting (sown July 8).



Comments on 'Italienischer' Lettuce

- Had a fun look with a nice color—a great addition to any garden. A stronger flavor, which suited me better than rather blah taste of 'Venetian'.
- Large, bright green leaves. Crisp with mild flavor.
- More vigorous growth. We prefer its leaf shape. The size, flavor, color and shape of 'Italienischer' are more pleasing.

Comments on 'Venetian' Lettuce

- Nice leaves, crisp, tasty. Stayed sweet.
- Seemed to grow faster and thicker. Fuller plants.
- Longer, lime green leaves. Tender and tasty. I prefer this variety because of its tenderness.
- Turned a little bitter early on.

Conclusions

Gardeners liked both varieties and were evenly split on their preferences. 'Italienischer' and 'Venetian' flourished in the cool summer weather, producing an abundance of delicious, large leaves. Neither of the varieties displayed a significant advantage over the other.

Trial 32. Lettuce, Red Leaf

Varieties (information from seed catalogs)

'New Red Fire'

55 days. Popular variety known for its heavy heads of deeply colored, frilly leaves. Reliable and slow to bolt.

'Red Velvet'

55 days. Stunning maroon-tipped leaves with green-tinged backs. Slow to bolt.

Data

Data were collected at 7 sites in 2013.

Trait	'New Red Fire'	'Red Velvet'	Same
Germinated best	67 %	0 %	33 %
Healthier plants	17	33	50
Higher yields	67	17	17
More attractive	0	17	83
Tasted better	0	17	83
<i>Preference</i>	50	50	
<i>Recommend to others</i>	100	71	
<i>Overall rating¹</i>	7.57	8.14	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- These were both great. I gave away a lot with many requests for more. Definitely a winner—both of them.
- Both had beautiful lettuce that did not get bitter. I had more than enough for us and shared with others. One lady used hers for a good three weeks and said it was the best garden lettuce she ever had!
- Hard to tell much difference between the varieties.
- Leaves appeared very similar.
- Both tasted bitter; don't know why.
- Hot, dry conditions caused some bitterness in both—bolted in heat.



Comments on 'New Red Fire' Lettuce

- Very robust. Seemed to grow quicker. Fuller plants with continuous growth.
- Went to seed earlier. Got bitter very quickly and generally had a stronger taste.

Comments on 'Red Velvet' Lettuce

- More yield; longer producing; color was better.
- Healthier plants, earlier production.
- More red color.

Conclusions

'New Red Fire' is the leading variety of red leaf lettuce and it did not disappoint in this trial. Seedling vigor was excellent, and gardeners quickly harvested impressive yields of crisp lettuce. Every gardener recommended it. However, half of our gardeners preferred 'Red Velvet'. Although less robust, its plants were healthy, more intense in color, and matched 'New Red Fire' for flavor. The overall rating of 'Red Velvet' was actually higher.

Trial 33. Lettuce, Red Oakleaf

Varieties (information from seed catalogs)

'Mascara'

65 days. Curly, dark red leaves of exceptional beauty. Tolerant to heat. Mild flavor.

'Red Salad Bowl'

50 days. Its burgundy, deeply lobed leaves are crisp and flavorful. Very slow to bolt. Easy to grow. An All-America Selections winner.



Data

Data were collected at 7 sites in 2013.

Trait	'Mascara'	'Red Salad Bowl'	Same
Germinated best	0 %	100 %	0 %
Healthier plants	0	100	0
Higher yields	0	100	0
More attractive	0	67	33
Tasted better	17	67	17
<i>Preference</i>	17	83	
<i>Recommend to others</i>	33	100	
<i>Overall rating¹</i>	5.50	7.93	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- I like red lettuce—more vitamins.
- Normally when lettuce starts to get lanky and goes to seed, the leaves get very bitter. That was not the case with either of these two varieties. Even after they got lanky, I was still able to harvest the lettuce for great salads.

Comments on 'Mascara' Lettuce

- Although the stand of 'Red Salad Bowl' looked better at the beginning, they ended up very even at the end of the season. 'Mascara' did not go to seed as soon.
- Very bad germination (5 percent).
- Only one plant grew.
- Got mostly flooded out; whereas, the 'Red Salad Bowl' had 100 percent germination.
- Only two plants came up. Maybe 'Mascara' had a bad year.

Comments on 'Red Salad Bowl' Lettuce

- We had 10 inches of rain in one week. The 'Red Salad Bowl' held up really well. Loved the dark color of this lettuce. Tasted good. I will grow this again.
- Better germination. Overall better for yield by default.
- Seedlings came up much earlier.
- Overall better lettuce.
- Withstood our rains and strong wind better.

Conclusions

'Red Salad Bowl' showed good germination and strong seedling vigor. This led to much fuller stands and higher yields compared to 'Mascara'. The plants were more attractive and tasted better, too. Every gardener recommended 'Red Salad Bowl'. The seedlings of 'Mascara' struggled in the heavy rains of spring.

Trial 34. Lettuce, Romaine

Varieties (information from seed catalogs)

‘Crisp Mint’

55 days. Ruffled, mint-shaped leaves. Full heads grow 10 inches tall. Outstanding flavor.

‘Green Forest’

56 days. Very attractive, dark green leaves. The heads are full and tall. Resists bolting.



Data

Data were collected at 14 sites in 2013.

Trait	‘Crisp Mint’	‘Green Forest’	Same
Germinated best	8 %	23 %	69 %
Healthier plants	23	23	54
Higher yields	38	15	46
More attractive	31	31	38
Tasted better	23	46	31
<i>Preference</i>	<i>46</i>	<i>54</i>	
<i>Recommend to others</i>	<i>71</i>	<i>64</i>	
<i>Overall rating¹</i>	<i>7.85</i>	<i>8.00</i>	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Excellent germination. Both produced well. Flavor of both was very good.
- Good germination. Both were very good and big producers—lots of lettuce.
- We eat a lot of romaine and had way more than we could use. Very high yields on both. Both varieties were straggly in their growth.
- Both had large green leaves.
- Both were delicious!
- It got hot; they bolted before setting heads.

Comments on ‘Crisp Mint’ Lettuce

- ‘Crisp Mint’ had more compact leaves and a good romaine look. Leaves were fuller, thicker and healthier. More leaves/head. Sweeter, less bitter; although both were tasty.
- Plants grew faster after sowing. Stronger plant; didn’t wilt as much with high heat. Had an after-taste when eating.
- More like what I buy in the store.

- The best we have ever grown and eaten. Formed very nice, store quality heads. Stayed crunchy in salads. Even my grandkids asked for a salad when we served the ‘Crisp Mint’. Planted a fall crop that also did very well. Harvested the last of it today on October 14.
- Produced nicer heads. Longer leaves and better heads.
- I would grow both again, but ‘Crisp Mint’ produced twice as much at every picking.
- Developed fungal problems late in the season while ‘Green Forest’ remained healthy. Bolted 10 days earlier. I like its ruffled leaves early in the season; its heads look like store bought.
- Bolted two weeks earlier.

Comments on ‘Green Forest’ Lettuce

- It seemed like we got to eat it longer. Flavor was just a bit milder, sweeter.
- Thicker leaves and a longer harvest season gave me more time to appreciate the taste.
- I liked its darker green color. Leaves were more attractive and not as bitter.
- Tasted better; crunch; lots of flavor—but not too strong.

Conclusions

Both varieties produced good crops of flavorful lettuce. Gardeners were split on preferences. Some preferred the taste and extended harvest season of ‘Green Forest’. Others liked the high yields, ruffled leaves, and full heads of ‘Crisp Mint’.

Trial 35. Melon, Cantaloupe

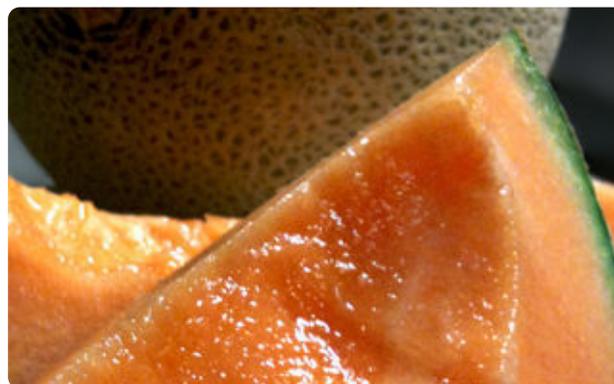
Varieties (information from seed catalogs)

'Athena'

79 days. An early melon with very good flavor. Melons are 5–6 pounds with thick, firm, orange flesh. Coarsely netted rinds rarely crack.

'Sarah's Choice'

76 days. Good yields of midsize (3–5 pound) melons. Deep orange flesh with outstanding flavor. Vines resist many diseases.



Data

Data were collected at 13 sites in 2013.

Trait	'Athena'	Sarah's Choice'	Same
Germinated best	50 %	8 %	42 %
Healthier plants	42	0	58
Matured earlier	69	31	0
Higher yields	55	0	45
More attractive melons	45	18	36
Tasted better	45	18	36
<i>Preference</i>	82	18	
<i>Recommend to others</i>	83	58	
<i>Overall rating¹</i>	7.82	6.18	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both germinated well (50–60 percent), although I may have planted early (May 5). Great yields.
- Our summer was cool and cloudy and so many melons of both varieties did not mature in time.
- Both of these produced delicious melons. I would definitely love to plant again!
- It was a very cold spring. None of the melons produced much fruit. I can't recommend either variety based on those results, but I do think it was an unusual year.
- The vines covered a good amount of ground. Due to cool wet days, melons matured slowly. Had much rotting even with turning. Not keeping well.
- Both germinated well indoors; we never had luck with getting ripe melons with direct seeding. Plants were healthy and vigorous throughout the season. Both produced lots of very nice melons. We enjoyed all the melons. Very good taste.
- Both were poor overall.

Comments on 'Athena' Cantaloupe

- Earlier and more melons.
- Melons were larger, but ripened later. Sweeter.
- Melons were really good and sweet. A nice size.
- Its melons were double the size even though they were slower to ripen.
- First melon ripened on August 23, early for us.
- More robust vines and more melons. Tolerated mice damage better. Tasted very good. Really good performer.
- Melons were earlier, somewhat smaller, and had a smoother rind. Taste was very good but the splitting of melons was a problem. The other cantaloupe varieties I grew in the garden did not split.

Comments on 'Sarah's Choice' Cantaloupe

- Earlier, and its melons were bigger.
- Matured 7–10 days later. Melons were bigger and more heavily netted. Our favorite for taste.
- It produced a bunch of melons but they got eaten by mice midway through the summer.
- Melons were way behind and they split.
- Vigorous vines, very fruitful. Earlier. Melons would develop a crack if left in the patch a day or two too long. Flavor and size of melons declined late in season—these melons were not marketable.

Conclusions

'Athena' performed as well as any melon variety in our trials this year. It was a reliable producer of good tasting melons and outperformed 'Sarah's Choice' in all traits including earliness, yield and fruit quality. Both varieties suffered low yields due to the cool, wet spring.

Trial 36. Melon, Large Cantaloupe

Varieties (information from seed catalogs)

‘Solstice’

76 days. Massive (6–9 pound) melons with sweet, orange flesh. Deeply ribbed fruits. Vines are productive and resist diseases.

‘Superstar’

86 days. Big yields of large (6–8 pound) melons. Rind has coarse netting and deep sutures. The salmon-color flesh is flavorful.



Data

Data were collected at 6 sites in 2013.

Trait	‘Solstice’	‘Superstar’	Same
Germinated best	17 %	17 %	67 %
Healthier plants	25	0	75
Matured earlier	75	25	0
Higher yields	25	25	50
More attractive melons	25	25	50
Tasted better	50	25	25
<i>Preference</i>	67	33	
<i>Recommend to others</i>	50	50	
<i>Overall rating¹</i>	<i>6.00</i>	<i>6.25</i>	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Neither variety grew or produced. Due to wet spring they were planted late in wet soil.
- Neither germinated until very late. Then only a couple plants which produced only a few small melons.
- Both varieties had very poor germination this year (sown June 2). Maybe too wet? No plants survived and produced fruit.
- Each plant had 3 or more cantaloupes per vine but only a few ‘Superstar’ melons ripened before frost.
- We liked both a lot.

Comments on ‘Solstice’ Cantaloupe

- It was sweeter and grew better.
- Melons were bigger and better tasting.
- Produced no ripe melons.

Comments on ‘Superstar’ Cantaloupe

- The only variety to ripen before frost.
- The plants did not vine out and grow as nice. Its melons were really tiny.

Conclusions

The cool spring led to poor germination and low yields. Half of our gardeners failed to harvest any ripe fruits. ‘Superstar’ is the standard big cantaloupe variety, but ‘Solstice’ was earlier and matched it for flavor. Most gardeners preferred ‘Solstice’ although data and comments are limited in this trial.

Trial 37. Melon, Galia

Varieties (information from seed catalogs)

'Arava'

77 days. Luscious 3-pound melons. A good yielder, even under cool conditions. Fruits slip from vines when ripe. Named for a valley in Israel.

'Passport'

71 days. Large, 5–6-pound melons ripen early. Thick green flesh is sweet and aromatic. Small seed cavity. Vigorous vines. Fruits slip when ripe.



Data

Data were collected at 10 sites in 2013.

Trait	'Arava'	'Passport'	Same
Germinated best	30 %	30 %	40 %
Healthier plants	33	11	56
Matured earlier	44	44	11
Higher yields	57	29	14
More attractive melons	43	14	43
Tasted better	29	29	43
<i>Preference</i>	60	40	
<i>Recommend to others</i>	60	40	
<i>Overall rating¹</i>	6.89	6.00	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Tasted similar.
- Hard to tell the difference between the two. Both had softball-sized and bigger melons (3 pounds maybe). People loved them. I can't tell the difference in taste between them; both are very sweet.
- Both were very good.
- It was an unusual year. Our weather was quite cool until July 15. These varieties produced a few small fruits. The only one that ripened (a 'Passport') was tasteless and not sweet. Total disappointment!
- I didn't like the taste. Seemed to go from underripe to overripe very quickly.
- Plants grew well. I was disappointed on the size of both green melon varieties as they were small.

Comments on 'Arava' Melon

- Vines were fuller. First ripe melon was ready about two weeks before that of 'Passport'. Produced 3X as many melons. I have never had so many melons before—great producer. 'Arava'!
- Produced a couple more melons. More tolerant of pressure from insects and vermin.
- Consistently good every year I plant them.
- Neither did well, but 'Arava' was better overall.
- Tasted like a honeydew; 'Passport' tasted more like a cantaloupe.

Comments on 'Passport' Melon

- Germination was good. First melons harvested August 31; 8 days before 'Arava'. Overall, its vines produced 30 melons weighing a total of 70 pounds (average of 2.33 pounds). In comparison, 'Arava' vines produced 22 melons weighing a total of 54 pounds (average of 2.45 pounds). Slightly better taste.
- Better tasting. The melon is almost all flesh; very small seed cavity.
- A few of its melons rotted.

Conclusions

Most gardeners preferred 'Arava'. Its vines were vigorous and produced higher yields at most sites. Its melons were attractive. 'Passport' is known for its earliness, but 'Arava' was just as early, if not earlier at most sites. The cold, wet spring reduced yields and dampened enthusiasm for both of these melon varieties.

Trial 38. Melon, Korean

Varieties (information from seed catalogs)

‘Ginkaku’

72 days. Melons are small (1.5 pounds), but abundant. Flesh is white and very sweet. Eat fresh or in fruit salad. Vigorous vines.

‘Sun Jewel’

68 days. Oval, lemon yellow melons with white stripes. Sweet white flesh— almost like a pear. Very early and easy to grow. Fruits slip when ripe.



Data

Data were collected at 10 sites in 2013.

Trait	‘Ginkaku’	‘Sun Jewel’	Same
Germinated best	30 %	30 %	40 %
Healthier plants	11	56	33
Matured earlier	13	88	0
Higher yields	17	83	0
More attractive melons	14	71	14
Tasted better	0	50	50
<i>Preference</i>	11	89	
<i>Recommend to others</i>	13	56	
<i>Overall rating¹</i>	3.42	6.75	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Nice plants but did not mature due to late planting (May 25) and dry conditions.
- Melons were very small; not much bigger than a large potato.
- The vines did not spread very far; row spacing could be decreased. Mild flavor; not very sweet.
- Neither variety produced a ripe melon, though ‘Ginkaku’ vine was large and had more than 3 melons/vine until frost.
- I took a chance and direct seeded both varieties on May 25 and neither variety germinated. I would like to try these varieties of melon again by starting them indoors and transplanting them out.
- I didn’t prefer either. Low yields. Very, very small window between underripe and overripe stages.

Comments on ‘Ginkaku’ Melon

- Produced 2X more melons, but the melons were smaller.

Comments on ‘Sun Jewel’ Melon

- More productive; earlier ripening; better shaped fruit. I may grow this in the future.
- The easiest melon I have ever grown. Ripened early. Lots of melons. Taste is not what I expected, but I enjoyed it.
- Produced more.
- Matured a few days earlier.

Conclusions

‘Sun Jewel’ was rated superior for all traits: healthier vines, earlier maturity, more attractive melons, and better tasting. ‘Ginkaku’ was a disappointment at most sites. Although both varieties are reported to be early maturing, half of our gardeners struggled to get ripe melons due to the cool, wet spring.

Trial 39. Okra, Red

Varieties (information from seed catalogs)

'Carmine Splendor'

51 days. Deep red pods turn lighter red as they develop. Plants are productive and ornamental. Early.

'Red Burgundy'

57 days. Attractive 4-foot plants with burgundy accents produce good yields of tender, burgundy pods.



Data

Data were collected at 9 sites in 2012 and 6 sites in 2013.

Trait	2012			2013			Weighted Total		
	'Carmine Splendor'	'Red Burg.'	Same	'Carmine Splendor'	'Red Burg.'	Same	'Carmine Splendor'	'Red Burg.'	Same
Germinated best	22 %	56 %	22 %	20 %	0 %	80 %	21 %	34 %	45 %
Healthier plants	11	56	33	40	20	40	23	42	36
Matured earlier	14	71	14	50	25	25	28	53	18
Higher yields	38	38	25	50	25	25	43	33	25
More attractive pods	25	38	38	75	25	0	45	33	23
Tasted better	38	38	25	67	33	0	50	36	15
<i>Preference</i>	50	50		75	25		60	40	
<i>Recommend to others</i>	75	75		40	20		61	53	
<i>Overall rating¹</i>	7.63	7.00		5.50	5.00		6.78	6.20	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

2012

- Both varieties grew quickly and yielded quite a bit of produce. Pods look very nice.
- Neither variety compares to my traditional 'Clemson Spineless'.
- Both were prone to insect damage despite regular insecticide applications.
- I waited till June 1 to plant—in the future I will need a longer growing season or an earlier planting date.

2013

- Plants were healthy and bore well.
- Neither was very robust until the end of season.
- Nothing came up. Cold spring to blame?
- The pods of both varieties were too tough to really work with. I have grown these before with better results.

Comments on 'Carmine Splendor' Okra

2012

- Beautiful blossoms but scant yields.
- Blossoms were more attractive.
- Its pods could get pretty large before they got woody.
- Longer pods.
- Deeper color overall and when cooked/pickled turned a creamy white as compared to a sickly grey for 'Red Burgundy'.
- Better tasting; not as woody.
- Plants seemed to suffer quickly when not watered. Began losing leaves after first picking. Pods were sweeter, milder.

More Comments on 'Carmine Splendor' Okra

2013

- Flowers were beautiful.
- The first to produce pods and it produced the full season.
- Better yield.
- More tender pods. Uniform pod color. Higher edible yield.

Comments on 'Red Burgundy' Okra

2012

- Perfect, 100 percent germination. Taller plants. Deeper red, more slender pods. More tender pods, but no one really enjoyed the taste of either. Plants were more attractive.
- Germinated well and plants were nice.
- Better emergence. Hardier, better heat tolerance.
- Stalks were taller and more vigorous. Pods have a sharper taste.
- More flavorful.
- Spindly and scant yield.

2013

- Plants were almost double in height. Pods were tough and woody at a much smaller size.
- Pods were more attractive. The texture was a bit more tender—I am not an expert on okra, but I liked its taste better.
- Some of its pods curled.

Conclusions

Most gardeners preferred 'Carmine Splendor'. They enjoyed the beauty of its blossoms and the quality of its pods. The plants of 'Red Burgundy' were healthier, more vigorous, and produced an earlier crop. Overall yields were comparable.

Trial 40. Pea, Freezing Shell

Varieties (information from seed catalogs)

'Early Frosty'

60 days. Easy to shell and superior for freezing. Production is early and peas are sweet. Vines grow 28 inches; trellising is optional.

'Little Marvel'

63 days. An old-time favorite. Big yields of densely packed, small pods. Peas are sweet and tender. Dwarf vines do not need trellising.



Data

Data were collected at 14 sites in 2013.

Trait	'Early Frosty'	'Little Marvel'	Same
Germinated best	29 %	14 %	57 %
Healthier plants	36	29	36
Matured earlier	43	29	29
Higher yields	46	8	46
More attractive pods	36	36	29
Tasted better	23	38	38
<i>Preference</i>	42	58	
<i>Recommend to others</i>	77	77	
<i>Overall rating¹</i>	<i>7.00</i>	<i>7.14</i>	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both varieties tasted great and froze well. Both varieties do well.
- My harvest consisted of 1 cup of peas—total, both varieties. The entire season. I will use my space for something else next year.
- The vines of both varieties were healthy and vibrant. The yields this year were incredible! The best I've had in years! They both yielded excellent and even though we munched while in the garden, I have froze many future meals. In late summer, the peas decided to produce again! I'm amazed at how many peas are still out there. The plants are white, but still seem healthy enough to produce! Both varieties shelled and froze well.
- Neither grew well. Only a few plants for each. We only got about 4 pea pods off both of them. This was a bad year for peas for us. Not sure why as we have had success with peas in past.

Comments on 'Early Frosty' Pea

- Plants dried up sooner and quit producing. Matured one week earlier.
- I prefer its taste. They were "yummy."
- Much more yield. Longer pods. Sweeter taste.
- Fuller plants and slightly higher yield. Larger, plumper pods.
- Matured one week earlier. Too small of a window for picking; its peas turned woody too fast.

Comments on 'Little Marvel' Pea

- More peas per pod, and vines produced longer. Easier to shell. Peas were sweeter and more tender. Just an all-around better variety.
- Climbed the trellis better. A deeper, stronger root system. Slightly sweeter and slightly more pea flavor. Both varieties grow well, but 'Little Marvel' is preferable if garden space is a factor.
- I've grown 'Little Marvel' in the past. Its peas cook up and freeze nicely. Pods are consistently filled with peas. Much sweeter than 'Early Frosty'.
- The peas were sweeter and lasted longer.
- More peas with less shelling.
- Bore all of its peas at once—better for freezing than multiple small pickings, which happened with 'Early Frosty'. Pods were very short.
- We like its taste better; much sweeter.

Conclusions

Both varieties were endorsed by the majority of gardeners. Most preferred 'Little Marvel'. Its small pods were packed with sweet, flavorful peas. 'Early Frosty' showed strong seedling vigor, matured early, and produced high yields.

Trial 41. Pea, Fresh Shell

Varieties (information from seed catalogs)

'Knight'

62 days. This variety is popular among growers for its reliable production. Tender peas. Its short vines do not require a trellis.

'Maestro Improved'

61 days. Early variety with dark green, long pods. Pods borne in pairs on 24-inch vines. Multiple harvests. Trellising is not needed.



Data

Data were collected at 26 sites in 2013.

Trait	'Knight'	'Maestro Improved'	Same
Germinated best	33 %	17 %	50 %
Healthier plants	52	17	30
Matured earlier	26	70	4
Higher yields	45	32	23
More attractive pods	45	36	18
Tasted better	35	17	48
<i>Preference</i>	59	41	
<i>Recommend to others</i>	75	75	
<i>Overall rating¹</i>	7.41	7.55	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both showed good germination. Produced a longer time this year because of cooler July weather.
- Both of these peas grew well. I liked both of them since they resisted mildew during the wet June we had.
- Near 100 percent germination. Both grew well on fence.
- Vines were smallish, but healthy. Very sweet! My son can't stop eating them.
- Both varieties did pretty well. In fact after the first planting, I pulled out the dead plants, dug the area again, and planting a second time with the remainder of the seeds I had leftover from the first planting. Lucky for us, they also germinated and are producing before we've gotten a hard frost. So we've had twice the produce!
- Plants were healthy and the peas tasted good.
- Our family was split on which tasted better!

- Both were very tasty.
- Both varieties grew well, filled well, tasted good, and withstood the heat.

Comments on 'Knight' Pea

- Came up a bit sooner. Plants were sturdier. I liked the look of its pods. Better taste.
- Germinated first. Bigger plants.
- Vines were larger and more robust. On July 31, 'Maestro Improved' was done but 'Knight' still had gorgeous plants and many pods (cool summer). Pods were gorgeous, large and straight. Pods had 14 percent more peas per pod and produced 25 percent more pods. These were sweeter when cooked, but had to wait a little longer (about 1 week) to produce.
- Seedlings emerged 2 days earlier. Fewer plants died after a hard rain. The plants stayed healthier longer. Produced 528 pods and 4.40 pounds of pods, compared to 192 pods and 1.41 pounds for 'Maestro Improved'. Pods were more consistent in shape.
- Higher yields.
- Better tasting. Healthier plants; didn't need as much water.
- Plants produced longer and stayed healthier.
- Matured much earlier but with smaller pods.
- Pods were shorter and fatter.
- Higher yield over a shorter time period. Straight pods.
- Yields were only enough for "garden eating."
- Produced good yields in spite of hard rain and hail.
- Higher yields.

Comments on 'Maestro Improved' Pea

- Matured one week earlier.
- More plants. First to bloom and first to mature. Got more peas. Fuller pods. Better quality peas.
- Seedlings emerged 2–3 days earlier. Plants were larger. Thicker skinned pods that yielded more peas per pod. Pods had up to 12 peas each. Tasted better—even the larger peas.
- Taller plants with larger pods and more peas.
- Larger, fuller plants. Its pods were ready to pick a full week ahead of 'Knight'. The harvest was more extended but developed crooked pods after a couple of pickings.
- Long slender pods, but many were bent. Had more peas for a longer time.
- I planted peas as a fall crop. Results were very good. 'Maestro Improved' matured 10–14 days earlier. Its vines produced more and larger pods. Pods had 8–11 peas each, at least 2 more peas per pod than those of 'Knight'.
- Matured one week earlier, and continued to produce. Multiple pickings. Pods were larger (longer). Much higher yields. Very sweet.
- I grew five different varieties of peas and "Maestro Improved" yielded noticeably earlier than all the others.
- Nice plants early in the season. Harvesting was done July 31.
- Three weeks into the season, these had a better stand. A month into the season they were putting on pods and plants were appreciably bigger. Matured 9 days earlier. Produced 1.5 pounds on July 12, compared to 0.75 pounds harvested on July 21 for 'Knight'. Overall, vines produced 4.75 pounds compared to 2.75 pounds for 'Knight'. Pods were nice and plump; the pods of 'Knight' were small and underfilled. Both my granddaughter and I preferred the taste of 'Maestro Improved'.
- Taste was better, sweeter.
- Flowered first (June 21), four days earlier. Harvesting began July 4. Pods were much more attractive at first as it had larger and smoother pods, but later pods became a little deformed. Tasted better to me but my daughter disagreed.
- Much earlier. Its plants were bigger but not necessarily more productive. Pods were plumper and bigger.

Conclusions

Gardeners liked both varieties but for different reasons. Most gardeners preferred 'Knight'. They were impressed with its robust plants and high yields. Its pods were uniform, straight and full of flavorful peas. 'Maestro Improved' produced good early crops, one week before 'Knight'. Its pods were longer and its peas were delicious.

Trial 42. Pea, Snap

Varieties (information from seed catalogs)

'Cascadia'

65 days. The 30-inch vines produce a cascade of delicious, dark green peas. Vines tolerate diseases. Trellising is optional.

'Sugar Ann'

52 days. Very early. The 24-inch vines produce sweet, crisp pods. Remove string from pods before cooking. Does not require trellising.



Data

Data were collected at 15 sites in 2013.

Trait	'Cascadia'	'Sugar Ann'	Same
Germinated best	8 %	67 %	25 %
Healthier plants	15	38	46
Matured earlier	8	92	0
Higher yields	31	31	38
More attractive pods	23	46	31
Tasted better	23	54	23
<i>Preference</i>	<i>31</i>	<i>69</i>	
<i>Recommend to others</i>	<i>79</i>	<i>86</i>	
<i>Overall rating¹</i>	<i>7.38</i>	<i>8.85</i>	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Almost 100 percent germination for both varieties. Multiple 1-gallon pails full—outstanding!
- Both tasted wonderful. The vines required little watering and tending.
- Neither variety could withstand the heavy rains after sowing. Yields were poor but the taste of both was good.

Comments on 'Cascadia' Pea

- It's not bad; just can't compete with 'Sugar Ann'.
- More attractive pods and healthier plants. More full foliage, too.
- Produced 302 pods, compared to 235 for 'Sugar Ann'.
- Produced longer and more.
- A little sweeter and more flavor. More and bigger pods.

- Tasted better. Pods were bigger and more attractive.
- Better taste.

Comments on 'Sugar Ann' Pea

- First harvest was July 6, 9 days earlier than 'Cascadia'. Bigger flowers and more attractive pods. Produced peas over a longer time, all the way until August 13. Provided a steady supply for salads, stir frying and freezing.
- Bloomed first. Had more taste.
- Higher yields. Sturdy plants. This is my second year growing 'Sugar Ann' and it has been my preferred choice both years.
- Produced consistent high yields through early August.
- Plants grew right away and produced more. The peas tasted amazing.
- Two times more yield. I loved eating the pods.
- Very sweet and kept better longer.
- Better flavor.
- Sweeter.

Conclusions

'Sugar Ann' received exceptionally high marks and was preferred by most gardeners. It showed superior seedling vigor and produced good crops of pods several days before 'Cascadia'. Yields of the two varieties were comparable, but more gardeners preferred the taste of 'Sugar Ann'. Both varieties grew well and were recommended by the vast majority of gardeners.

Trial 43. Pea, Snow

Varieties (information from seed catalogs)

'Avalanche'

60 days. Its deep green, crisp pods are easily seen on the semi-leafless vines. Good yields. Vines grow 30 inches. Trellising optional.

'Oregon Sugar Pod 2'

65 days. Easy to grow, early variety. Pods are delicious steamed or fresh. Disease-resistant vines grow 24–30 inches. Trellising optional.



Data

Data were collected at 18 sites in 2013.

Trait	'Oregon Sugar		Same
	'Avalanche'	Pod 2'	
Germinated best	17 %	44 %	39 %
Healthier plants	12	41	47
Matured earlier	7	47	47
Higher yields	18	65	18
More attractive pods	12	59	29
Tasted better	7	47	47
<i>Preference</i>	<i>31</i>	<i>69</i>	
<i>Recommend to others</i>	<i>56</i>	<i>75</i>	
<i>Overall rating¹</i>	<i>6.88</i>	<i>7.88</i>	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Plants were healthy. Varieties produced at the same time. Very sweet and tender pods. Both are great varieties.
- Almost 100 percent germination for both. Very healthy plants. I could not taste the difference between the two—both delicious!
- Nice germination on both. Healthy looking plants.
- Both produced very well.
- Germination was not very good. Rabbits, heavy rains, soggy ground and then a dry summer. We did enjoy the snow peas.

Comments on 'Avalanche' Pea

- Nice size of pods. Lots of them. Delicious; enjoyed these. Crisp.
- Straighter pods.
- Pods curled and had spots.

- Produced a larger crop.
- Three pickings compared to two for "Oregon Sugar Pod 2".
- Earlier and a little sweeter.

Comments on 'Oregon Sugar Pod 2' Pea

- Tasted sweeter; bigger crunch. Produced well.
- Withstood heavy rain and germinated better. Produced well. Nice looking pods; tasted very good.
- Could have been supported with a fence. Vines were very tall and fell over. Amazing crop! I have never had peas grow and continue so late into the season.
- Seedlings were more vigorous and plants grew taller. Picked a week earlier. Much higher yields. Pods were longer (3–6 inches compared to 2–4 for 'Avalanche'). Definitely tasted better; sweeter.
- Pods were more attractive.
- Germination was 2X better. Pods were sweeter, had better pea flavor, but curled.
- More produce. Healthier pods.
- Pods were not as large but better for the table. Better flavor.
- Seedlings were first out of the ground and developed quicker. Plants were more robust. Bigger pods with a higher yield. Very juicy.
- Had to do a second seeding due to poor germination. A better producer.

Conclusions

'Oregon Sugar Pod 2' has always done well in our trials and it excelled in this competition. Its robust vines produced impressive yields of pods that looked attractive and tasted delicious. 'Avalanche' was acceptable, but did not generate much excitement.

Trial 44. Pepper, Green Bell

Varieties (information from seed catalogs)

'Bell Boy'

70 days. All-purpose early type. Large, 3 to 4-lobed fruits with thick walls and good quality. An All-America Selections Winner.

'New Ace'

60 days. Very early and reliable. Easy to grow and productive. Fruits have thin walls and are somewhat tapered.



Data

Data were collected at 10 sites in 2013.

Trait	'Bell Boy'	'New Ace'	Same
Germinated best	40 %	20 %	40 %
Healthier plants	33	11	56
Matured earlier	50	50	0
Higher yields	17	33	50
More attractive fruits	67	17	17
Tasted better	0	20	80
<i>Preference</i>	50	50	
<i>Recommend to others</i>	71	57	
<i>Overall rating¹</i>	5.86	5.71	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- I have never had luck with peppers but there were a lot this year. Skin a bit tough—not as sweet as store ones. Terrific for cooking.
- Both produced well. Both tasted very good.
- Neither one was real great due to the cool temps during most of the summer.
- Neither variety produced fruit.
- 100 percent germination; I was very impressed; healthy seedlings.
- A strong wind wiped out the delicate plants.

Comments on 'Bell Boy' Pepper

- Kept well after picking. More peppers per plant. Nice sized; could be used as stuffed peppers.
- Good sized fruits and seemed firmer.
- Most fruits had 4 lobes.

Comments on 'New Ace' Pepper

- Performed better with more peppers per plant. Earlier. Most fruits had 3 lobes.
- These ripened to red first. The red peppers were so sweet and delicious.
- Nicer all around.

Conclusions

Most gardeners were satisfied with both of these early varieties and would recommend them to other gardeners. Gardeners liked the size and shape of 'Bell Boy' fruits. Most of its fruits had 4 lobes and were well suited for stuffing. 'New Ace' produced decent yields, although most of its fruits had only 3 lobes.

Trial 45. Pepper, Gold Bell

Varieties (information from seed catalogs)

'Flavorburst'

72 days. Lime green peppers turn yellow and then vibrant orange. Three-lobed, elongated fruits with excellent flavor.

'Golden Summer'

70 days. Lime green peppers turn bright gold. Exceptional yields. Fruits have thick walls and mild flavor.



Data

Data were collected at 3 sites in 2013.

Trait	'Flavorburst'	'Golden Summer'	Same
Germinated best	33 %	0 %	67 %
Healthier plants	33	0	67
Matured earlier	67	33	0
Higher yields	0	0	100
More attractive fruits	0	50	50
Tasted better	0	0	100
<i>Preference</i>	50	50	
<i>Recommend to others</i>	100	100	
<i>Overall rating¹</i>	6.00	6.50	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both produced about 6 to 8 peppers per plant and about the same size. I thought they were both good and sweet. Very nice peppers.

Comments on 'Flavorburst' Pepper

- One hundred percent and vigorous germination, compared to 53 percent for 'Golden Summer'. Transplants were taller and better looking.
- When I transplanted the seedlings the 'Flavorburst' had roots 3X as long as the 'Golden Summer'.

Comments on 'Golden Summer' Pepper

- First to ripen.

Conclusions

Few gardeners participated in this trial; nevertheless, both varieties looked promising. Both 'Flavorburst' and 'Golden Summer' produced good crops in our cool weather. Their peppers were brightly colored, and our gardeners enjoyed their flavor. 'Flavorburst' showed outstanding seedling vigor.

Trial 46. Pepper, Orange Bell

Varieties (information from seed catalogs)

'Gourmet'

65 days. Green fruits mature to a colorful bright orange. Compact plants produce blocky peppers with sweet flavor. Easy to grow.

'Orange Blaze'

68 days. Short, sturdy plants produce good yields. Fruits are small but very bright in color. Easy to grow.

Data

Data were collected at 5 sites in 2013.

Trait	'Gourmet'	'Orange Blaze'	Same
Germinated best	0 %	80 %	20 %
Healthier plants	0	100	0
Matured earlier	0	100	0
Higher yields	0	100	0
More attractive fruits	0	100	0
Tasted better	0	0	100
<i>Preference</i>	0	100	
<i>Recommend to others</i>	0	100	
<i>Overall rating¹</i>	3.67	7.60	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- None.

Comments on 'Gourmet' Pepper

- Fruits had thicker walls, which I prefer.
- Took three plantings to get a decent number to germinate. Yikes! Only had one plant grow and it only gave one pepper. It was beautiful.
- Did not germinate.
- Only 10 percent of transplants survived.



Comments on 'Orange Blaze' Pepper

- Germinated better (76 percent vs. 70 percent for 'Gourmet'); healthier seedlings. Plants grew stronger out of the greenhouse and continued throughout the season. A vast majority of the fruits matured to a brilliant orange (in our world that is what growing orange peppers is all about). Much more attractive fruits.
- Survived transplanting better; nice-sized peppers.
- Great flavor; thick skins.
- Smaller peppers; and only one pepper turned green to orange. The green peppers were good tasting, and the plants were much more productive than those of 'Gourmet'.

Conclusions

This was a slam dunk for 'Orange Blaze'. It germinated better, showed more vigor, produced earlier, and its yields were vastly superior. Although its peppers were smaller, they were brilliant orange. Every gardener recommended 'Orange Blaze' (this is an impressive accomplishment for any pepper variety in our trials). No gardeners recommended 'Gourmet', which struggled from the start.

Trial 47. Pepper, Italian

Varieties (information from seed catalogs)

'Giant Marconi'

72 days. Tapered, 8-inch fruits prized for their flavor. Great for frying, grilling and roasting. Peppers turn from green to red. An All-America Selections Award winner.

'Jimmy Nardello's'

85 days. Italian heirloom. Great for frying, these peppers add a roasted apple flavor to foods. Slim, 10-inch, glossy red fruits.



Data

Data were collected at 4 sites in 2013.

Trait	'Giant Marconi'	'Jimmy Nardello's'	Same
Germinated best	25 %	50 %	25 %
Healthier plants	25	50	25
Matured earlier	50	50	0
Higher yields	0	50	50
More attractive fruits	0	50	50
Tasted better	25	25	50
<i>Preference</i>	50	50	
<i>Recommend to others</i>	75	50	
<i>Overall rating¹</i>	6.50	6.75	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both had good germination. Both grew well in the garden. Both produced lots of peppers. Enjoyed the taste of both. Very nice peppers.
- Both tasted good.

Comments on 'Giant Marconi' Pepper

- Germinated very well. Twice as many plants as 'Jimmy Nardello's'.
- Larger peppers.
- More like a green pepper flavor. Better flavor.
- Produced only one fruit and it was only 1-inch long.

Comments on 'Jimmy Nardello's' Pepper

- Only one seed didn't sprout.
- Fruits were first to turn red.

Conclusions

Data and comments are limited, but both of these varieties show promise. Both grew well in most gardens and produced an abundance of peppers. Gardeners were evenly split on their preference. Some liked the large green fruits of "Giant Marconi" while others preferred the yield and glossy red fruits of 'Jimmy Nardello's'.

Trial 48. Pepper, Italian Bullhorn

Varieties (information from seed catalogs)

‘Carmen’

75 days. Tapered, 7-inch fruits mature from green to brilliant red. Sweet taste for salads or roasting. Sturdy, productive plants. An All-America Selections Award winner.

‘Marcato’

77 days. Thick-walled, tapered fruits grow 7 inches long. Glossy red at maturity. Sweet flavor. Big yields from strong plants.



Data

Data were collected at 4 sites in 2013.

Trait	‘Carmen’	‘Marcato’	Same
Germinated best	25 %	25 %	50 %
Healthier plants	0	75	25
Matured earlier	100	0	0
Higher yields	0	50	50
More attractive fruits	0	67	33
Tasted better	0	0	100
<i>Preference</i>	25	75	
<i>Recommend to others</i>	75	75	
<i>Overall rating¹</i>	6.75	7.75	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Very slow to sprout—almost gave up, but once they started all seeds came up. Plants had lush foliage in our container garden/high density planting. Plants were tolerant of heat. Did very well and both set fruit well. Both tasted great red or green; very sweet—not at all bitter. Amazing raw and cooked; freeze well, too.
- Both had 100 percent germination. I planted them in pots and they never produced any fruit.
- Plants were productive but neither variety had enough time to produce healthy fruit that changed color.

Comments on ‘Carmen’ Pepper

- Ripened sooner.
- Matured earlier but the first fruits had issues with blossom end rot.
- Slightly larger peppers.

Comments on ‘Marcato’ Pepper

- Germination was 2X better. Much higher producing. Much larger peppers.
- They were both good competitors, but ‘Marcato’ was slightly more prolific.
- Plants were darker green and bigger.

Conclusions

Both varieties performed admirably. Their plants were healthy and bore excellent crops of peppers. ‘Carmen’ produced an earlier crop, but most gardeners preferred ‘Marcato’. Its plants were more vigorous and productive. Gardeners enjoyed its thick walled, glossy red fruits.

Trial 49. Pepper, Sweet Specialty

Varieties (information from seed catalogs)

'Flamingo'

66 days. Glossy fruits turn from ivory-yellow to orange-red. Medium-sized fruits are slightly tapered. Very productive plants.

'Gypsy'

62 days. Yellow to orange-red fruits are mostly 3-lobed and slightly tapered. Compact plants produce amazing yields. An All-America Selections Award winner.



Data

Data were collected at 4 sites in 2013.

Trait	'Flamingo'	'Gypsy'	Same
Germinated best	25 %	25 %	50 %
Healthier plants	50	0	50
Matured earlier	25	0	75
Higher yields	33	33	33
More attractive fruits	33	0	67
Tasted better	50	0	50
<i>Preference</i>	67	33	
<i>Recommend to others</i>	67	67	
<i>Overall rating¹</i>	8.00	7.67	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both are excellent producers with slightly lobed peppers. Their fruits start out pale green. We finally picked our entire crop on October 24. The fruits are quite cold tolerant, but the plants are not. Today I am making marinated peppers.
- They both produced at the same time. I liked the looks of the fruits—nice color! The peppers are crunchy—overall very good peppers.
- Neither one produced more than one pepper per plant; a disappointing yield. Poor yield and poor growth.

Comments on 'Flamingo' Pepper

- Seeds germinated first and had a slightly higher percentage. Plants seemed a bit stockier and fuller with leaves. The best plant produced 8 nice peppers! What a champ! The average yield was 4 peppers per plant (compared to 2–3 for 'Gypsy'). Fruits were more uniform overall. With my taste testers, many commented 'Flamingo' had a sweeter flavor. This variety seemed to dominate in every test area. Had uniform peppers, excellent production, healthy plants, and great color. I'd plant these again—anytime!
- Fruits were bigger.
- Plants were taller and ended up larger.

Comments on 'Gypsy' Pepper

- More fruits. Longer in shape.
- Three of the plants seemed dwarfed—never grew much and never produced any peppers. The fruits were more elongated in shape.

Conclusions

Both 'Flamingo' and 'Gypsy' performed well at most sites. They produced loads of pale green, elongated fruits for salads and cooking. The majority of gardeners preferred 'Flamingo'. Its plants were larger and more vigorous. Its fruits were more uniform in shape and sweeter in taste.

Trial 50. Pepper, Ancho

Varieties (information from seed catalogs)

'Ancho Grande'

76 days. Called poblano when young, the deep green fruits mature to orange-red. Used for chile rellenos.

'Tiburon'

65 days. Sturdy plants produce big yields of uniform, heavy fruits. Moderately hot: 1,000–2,000 units.



Data

Data were collected at 3 sites in 2013.

Trait	'Ancho Grande'	'Tiburon'	Same
Germinated best	0 %	100 %	0 %
Healthier plants	0	67	33
Matured earlier	0	100	0
Higher yields	0	100	0
More attractive fruits	0	33	67
Tasted better	0	0	100
<i>Preference</i>	<i>0</i>	<i>100</i>	
<i>Recommend to others</i>	<i>0</i>	<i>100</i>	
<i>Overall rating¹</i>	<i>5.00</i>	<i>9.00</i>	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

Conclusions

'Tiburon' did well in our limited testing. It showed excellent germination and healthy growth. 'Tiburon' produced the first fruits and was more productive than 'Ancho Grande'. 'Ancho Grande' did not make much of an impression, good or bad, on our team of gardeners.

General Comments

- The plants of both varieties were nice. Their fruits tasted good.
- We ate rellenos for the first time—delicious!

Comments on 'Ancho Grande' Pepper

- None.

Comments on 'Tiburon' Pepper

- Better germination (2 to 1). Plants were far more productive.
- Germinated first, but the other was only days behind. They produced more.
- We enjoyed this variety. Its plants were green and healthy. There were lots of big peppers. Peppers were dark green and smooth.

Trial 51. Pepper, Cayenne

Varieties (information from seed catalogs)

‘Cayenne Long Red Thin’

75 days. Slim, 6-inch fruits are thin walled and dry easily. Bright red fruits are very hot. Scoville rating: 30,000.

‘Cheyenne’

60 days. Early and very productive. Slim and wrinkled, 8-inch fruits used in frying and salsas. Sturdy plants.



Data

Data were collected at 3 sites in 2013.

Trait	‘Cayenne Long Red Thin’	‘Cheyenne’	Same
Germinated best	0 %	0 %	100 %
Healthier plants	0	33	67
Matured earlier	33	33	33
Higher yields	0	67	33
More attractive fruits	0	100	0
Tasted better	0	50	50
<i>Preference</i>	<i>0</i>	<i>100</i>	
<i>Recommend to others</i>	<i>33</i>	<i>100</i>	
<i>Overall rating¹</i>	<i>7.33</i>	<i>8.33</i>	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both had good germination.

Comments on ‘Cayenne Long Red Thin’ Pepper

- None.

Comments on ‘Cheyenne’ Pepper

- I liked that the peppers were so much larger. Much quicker to pick.
- Plants looked better and grew taller. The peppers were bigger and looked nicer. The peppers of both varieties were very hot, but these were not quite as hot and tasted better.

Conclusions

Our data and comments for this trial are limited, but the vigor of ‘Cheyenne’ was evident. Its plants were tall and sturdy. Yields were very good. Gardeners were especially impressed with the size of the peppers. ‘Cayenne Long Red Thin’ did well in our trials, but it took a back seat to ‘Cheyenne’.

Trial 52. Pepper, Jalapeno

Varieties (information from seed catalogs)

‘Early Jalapeno’

65 days. Prolific yields of 3-inch tapered fruits. Dark green fruits turn red. Scoville rating of 5,000.

‘Mucho Nacho’

68 days. Jumbo, 4-inch fruits for stuffing. Thick, heavy walls. Vigorous plants produce heavy yields. Widely adapted. Scoville rating of 6,000.

Data

Data were collected at 5 sites in 2013.

Trait	‘Early Jalapeno’	‘Mucho Nacho’	Same
Germinated best	40 %	20 %	40 %
Healthier plants	20	60	20
Matured earlier	25	50	25
Higher yields	20	60	20
More attractive fruits	20	60	20
Tasted better	33	0	67
<i>Preference</i>	20	80	
<i>Recommend to others</i>	60	80	
<i>Overall rating¹</i>	6.60	7.00	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Germination was very good. Very healthy seedlings through the first transplanting. Both had great looking fruit and tasted great.
- The plants had a slow start due to the cool weather.



Comments on ‘Early Jalapeno’ Pepper

- Plants struggled with our early cold wet season, but recovered amazingly well. Produced the first ripe red fruits. Once the plants caught on, they really yielded. Seemed hotter.
- Very impressive! Planted the seeds in the garden late. ‘Early Jalapeno’ grew well and produced beyond my expectations. Tall (2.5 feet) plants. ‘Mucho Nacho’ plants never grew more than 6 inches.
- Peppers were smaller and fewer in number.

Comments on ‘Mucho Nacho’ Pepper

- Healthy all season—incredible production. Fruits were shiny and resisted cracking better. A more consistent performer.
- Liked the larger size of its peppers.
- Large, tasty fruit.
- I started my plants indoors in peat pots. Four of the seedlings survived the transplanting process; twice as many compared to ‘Early Jalapeno’.

Conclusions

Both ‘Early Jalapeno’ and ‘Mucho Nacho’ produced an abundance of jalapeno peppers and are well suited to our short growing season. Most gardeners preferred ‘Mucho Nacho’. Its plants were healthy and productive. Gardeners appreciated its large, deep green, crackfree fruits.

Trial 53. Pepper, Santa Fe Hot

Varieties (information from seed catalogs)

'Mariachi'

68 days. Fruits ripen from pale cream to orange-red. Impressive yields. Fruits 3.5 inches long and 1.5 inches at the crown. Scoville rating of 550.

'Santa Fe Grande'

80 days. Heavy crops of fruits that mature from creamy yellow to orange-red. Scoville rating of 600.

Data

Data were collected at 3 sites in 2013.

Trait	'Mariachi'	'Santa Fe Grande'	Same
Germinated best	100 %	0 %	0 %
Healthier plants	100	0	0
Matured earlier	33	33	33
Higher yields	33	33	33
More attractive fruits	0	33	67
Tasted better	33	0	67
<i>Preference</i>	67	33	
<i>Recommend to others</i>	100	67	
<i>Overall rating¹</i>	7.67	7.33	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both varieties were loaded with fruits. We loved the color mix. Could be used as an ornamental.
- Weather didn't allow enough time for them to change color beyond a whitish-yellow. We really liked the mild, hot flavor.
- Both took a long time to germinate.



Comments on 'Mariachi' Pepper

- Plants were compact, but gave us lots of peppers! Ripened earlier.
- 'Mariachi' plants stayed smaller and had lower fruit production.

Comments on 'Santa Fe Grande' Pepper

- Taller plants that had a decent amount of peppers per plant.
- 'Santa Fe Grande' was spicier!

Conclusions

The few gardeners who participated in this trial were impressed with the productivity of both varieties. The plants were full of colorful fruits in shades of ivory, yellow, orange and red. 'Mariachi' showed strong seedling vigor and developed into healthy, compact plants.

Trial 54. Pumpkin, Ornamental

Varieties (information from seed catalogs)

‘Munchkin’

100 days. Bright orange, deeply ribbed fruits. Dry well and stay firm. Vines are vigorous and productive.

‘Wee-B-Little’

95 days. Tiny round pumpkins are the size of baseballs. Deep orange rind is smooth; suitable for painting. Compact vines. An All-America Selections Award winner.



Data

Data were collected at 6 sites in 2013.

Trait	‘Munchkin’	‘Wee-B-Little’	Same
Germinated best	17 %	33 %	50 %
Healthier plants	0	50	50
Matured earlier	17	17	67
Higher yields	60	40	0
More attractive fruits	33	50	17
<i>Preference</i>	50	50	
<i>Recommend to others</i>	83	83	
<i>Overall rating¹</i>	8.17	8.00	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- They both did well.
- The size, shape and color of their fruits are different, but both pleasing.
- Both matured at the same time.

Comments on ‘Munchkin’ Pumpkin

- Germinated first. Matured earlier. Easy to harvest. So cute!
- We got 80 pumpkins, compared to 34 for ‘Wee-B-Little’.
- Produced quite a few more pumpkins.
- Produced half as many pumpkins.
- I loved the look. It is soooo cute!
- I find the shape and color more appealing.

Comments on ‘Wee-B-Little’ Pumpkin

- Its fruits look more like a traditional pumpkin only smaller—everyone loved it!
- Its vines were more compact and easier to tend to. The pumpkins were prettier in appearance, and some even had a lighter yellow appearance, which was popular.
- We liked its round, smooth shape. Its pumpkins are different than all the other little decorative pumpkins we’ve grown and were a draw at Farmers’ Market.

Conclusions

Gardeners loved both ‘Munchkin’ and ‘Wee-B-Little’. Their vines were healthy and produced an abundance of pumpkins. The principal difference between the varieties is the fruit itself. The pumpkins of ‘Munchkin’ were bright orange, ribbed, and had the flattened shape of a traditional decorative pumpkin. ‘Wee-B-Little’ pumpkins were deep orange with a unique, globular shape. Both were outstanding.

Trial 55. Pumpkin, Small

Varieties (information from seed catalogs)

'Field Trip'

105 days. Deep orange, 7-pound fruits with long handles. Easy for kids to carry. Compact, semi-bush vines.

'Neon'

70 days. Earliest pumpkin. Nicely shaped, 8-pound fruits are perfect for jack-o'-lanterns. Compact vines.

Data

Data were collected at 8 sites in 2013.

Trait	'Field Trip'	'Neon'	Same
Germinated best	13 %	0 %	88 %
Healthier plants	13	0	88
Matured earlier	13	75	13
Higher yields	25	38	38
More attractive fruits	38	63	0
<i>Preference</i>	25	75	
<i>Recommend to others</i>	57	88	
<i>Overall rating¹</i>	7.86	8.75	
<i>Average weight (lbs)</i>	5.8	5.5	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both varieties seemed to grow well here. I would plant both as the kindergarten kids like them.
- One hundred percent germination for both!
- Both were very healthy.

Comments on 'Field Trip' Pumpkin

- Healthier plants. Tolerated powdery mildew better. More attractive pumpkins. Larger size (7 pounds compared to 4.8 pounds for 'Neon').
- I prefer its deeper orange color, but the almost yellow color of 'Neon' is okay, too.
- Small pumpkins with uniform size.



Comments on 'Neon' Pumpkin

- More attractive shape and color. Orange from the start; no green fruit.
- Seemed to perform better than 'Field Trip' under my dry conditions. Their vines set pumpkins first and the fruits matured 2–3 weeks earlier. Pumpkins were more uniform with a nice round shape. Evenly colored—love how its pumpkins are colored as they set fruit! Very attractive and uniform. My grandkids loved them.
- Turned orange in July. Produced larger pumpkins.
- Flowered first and bore pumpkins first. The pumpkins were medium-sized; better for carving. Some size variation (small to medium). Thicker walled and meatier fruits. Vines died off first.
- A great pumpkin for kids. The pumpkins started orange and we watched them glow and grow in the garden all summer.

Conclusions

'Neon' has always done well in our trials and this year was no exception. Gardeners marveled at its precocious orange color and early maturity. Its pumpkins were bright orange, round, and uniform. 'Field Trip' pumpkins were deeper orange and its vines showed greater tolerance to powdery mildew. It was rated highly, but could not match the brilliance of 'Neon'.

Trial 56. Pumpkin, Midsize

Varieties (information from seed catalogs)

‘Gladiator’

115 days. A most popular variety. Deep orange, 20-pound fruits. Productive, semi-vigorous vines.

‘Orange Rave’

105 days. New variety. Dark orange, 20-pound fruits good for jack-o’-lanterns. Semi-vigorous vines.

Data

Data were collected at 9 sites in 2013.

Trait	‘Gladiator’	‘Orange Rave’	Same
Germinated best	44 %	22 %	33 %
Healthier plants	75	13	13
Matured earlier	75	13	13
Higher yields	67	22	11
More attractive fruits	63	13	25
<i>Preference</i>	78	22	
<i>Recommend to others</i>	89	33	
<i>Overall rating¹</i>	8.00	5.88	
<i>Average weight (lbs)</i>	14.8	14.2	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Their pumpkins had a nice shape.
- Both varieties were excellent. They produced well and abundantly.
- Have not grown pumpkins for years. Wish there were more pumpkins of both varieties.
- Neither grew well; we planted them in a new garden area.



Comments on ‘Gladiator’ Pumpkin

- More leaves and longer vines. Turned color sooner. Produced more pumpkins and big, nice size. A little larger (39 inches in circumference, compared to 29 inches for ‘Orange Rave’).
- Larger fruits. We liked ‘Gladiator’ a bit better because the fruits had a shiny bright skin.
- Grew well. The three plants gave me 8 nice-shaped pumpkins, which was exactly what I needed for my 8 grandchildren.
- Pumpkins were more uniform in size. No blemishes.
- Fruits averaged 12 pounds, one more than ‘Orange Rave’.
- Each vine produced one medium-size pumpkin.

Comments on ‘Orange Rave’ Pumpkin

- Matured earlier.
- Slower to mature, but its pumpkins looked nice.
- Had a few more fruits.
- More pumpkins—better shaped.
- Could not stand up to all the rain we had in June. All of its plants died.
- Plants dried up.

Conclusions

‘Gladiator’ excelled in all traits. Its vines were healthier and produced more pumpkins. Gardeners liked the uniformity and deep orange color of the fruits. Although this was a cooler than normal growing season, its pumpkins matured before Halloween. The new variety ‘Orange Rave’ was nothing to rave about. It lacked vigor and could not stand up to the ‘Gladiator’.

Trial 57. Pumpkin, Large

Varieties (information from seed catalogs)

'Big Doris'

90 days. Large, 35-pound fruits with smooth skin and an upright shape—perfect for carving. Strong handles. Vigorous vines.

'Howden Biggie'

115 days. Dark orange fruits with impressive 40-pound fruits. Strong handles help you carry the pumpkins out of the garden. Vigorous vines.



Data

Data were collected at 11 sites in 2013.

Trait	'Big Doris'	'Howden Biggie'	Same
Germinated best	40 %	20 %	40 %
Healthier plants	27	18	55
Matured earlier	45	18	36
Higher yields	40	50	10
More attractive fruits	50	30	20
<i>Preference</i>	50	50	
<i>Recommend to others</i>	55	64	
<i>Overall rating¹</i>	6.70	7.20	
<i>Average weight (lbs)</i>	20	24	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both produced a lot of big, very nice pumpkins.
- Both had similar size, some reaching 60 pounds.
- Both produced well.
- I will try both of these varieties again next year. I love pumpkins!
- I was just thrilled to even get any pumpkins! Always have had problems in the past.
- Vines were full of blooms, but few pumpkins matured before frost.

Comments on 'Big Doris' Pumpkin

- Eighty-three percent germination compared to 33 percent for 'Howden Biggie'. Larger stems and leaves. Matured first.
- Produced 5X more pumpkins. Average diameter was 17 inches compared to 14 inches for 'Howden Biggie'.

- Slow to germinate.
- Set pumpkins earlier and matured sooner. I really liked its huge stems (handles).
- Had such a nice round shape with no flat sides.
- Only produced one small fruit late; 'Howden Biggie' produced no fruit.

Comments on 'Howden Biggie' Pumpkin

- Produced 6 very large (40-pound) pumpkins, while 'Big Doris' produced 2 big and 2 small pumpkins (average 25 pounds).
- Larger and better for jack-o'-lantern carving. We enjoyed the larger size for carving, and my daughter liked watching how large they grew.
- The plants seemed to hold up better in the heat we had. Nicer shaped fruit. Larger pumpkins (29 inches in diameter compared to 16 inches in diameter for 'Big Doris').
- Produced more and larger pumpkins.
- Developed powdery mildew late in the season. Produced 23 pumpkins compared to 21 for 'Big Doris'.

Conclusions

Both varieties produced a lot of big, nice pumpkins. Gardeners were evenly split on their preferences. In general, 'Howden Biggie' produced slightly larger pumpkins while 'Big Doris' matured earlier. Gardeners enjoyed growing these large pumpkins, but the modest ratings reflect a sense of satisfaction and not excitement over these varieties.

Trial 58. Rutabaga

Varieties (information from seed catalogs)

‘American Purple Top’

90 days. Large, 6-inch roots are tan with purple tops. Flesh is yellow, mild, and fine grained. Stores well.

‘Laurentian’

95 days. Popular Canadian variety. Creamy yellow base with deep purple tops. Flesh is pale yellow, sweet, and smooth in texture.



Data

Data were collected at 10 sites in 2012 and 2 sites in 2013.

Trait	2012			2013			Weighted Total		
	‘Amer. P. Top’	‘Laurentian’	Same	‘Amer. P. Top’	‘Laurentian’	Same	‘Amer. P. Top’	‘Laurentian’	Same
Germinated best	10 %	30 %	60 %	0 %	0 %	100 %	8 %	25 %	67 %
Healthier plants	43	29	29	50	0	50	44	24	33
Matured earlier	14	29	57	0	0	100	12	24	64
Higher yields	29	29	43	0	0	100	24	24	53
More attractive roots	43	43	14	0	50	50	36	44	20
Tasted better	60	20	20	0	0	100	50	17	33
<i>Preference</i>	57	43		50	50		56	44	
<i>Recommend to others</i>	56	33		100	100		63	44	
<i>Overall rating¹</i>	6.00	5.22		8.00	8.00		6.33	5.68	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

2012

- Both are very good. Very sweet. My neighbors are enjoying them too.
- Both did well and tasted good.
- Neither variety produced any rutabagas. Just made a long narrow root.
- The roots were straight and full of maggots. Neither made bulbs.
- I ate none—had a maggot infestation!
- Many small plants were eaten by flea beetles. So had to replant two weeks later. The tops were later eaten by cabbage worms and flea beetles. Got powdery mildew towards the end of the season.

2013

- The roots did not fill out really well, but color was good. Good strong flavor.

Comments on ‘American Purple Top’ Rutabaga

2012

- Fuller, bigger leaves. Much bigger heads. Tasted better.
- Tasted better—milder.
- Richer color.
- Bigger, better-shaped roots.
- Has a rounder shape.

2013

- More size variation among its roots; some were really big and crowded others in the row.
- I prefer its color.

Comments on 'Laurentian' Rutabaga

2012

- Tastier—better for pickling.
- Larger roots (twice as big) but overall had similar yield. Roots were smoother. Had a really strong bitter taste.
- Less susceptible to flea beetles.

2013

- Uniform size; roots did not get too huge or too small.

Conclusions

Most of our gardeners were introduced to rutabaga through this trial and many did not like it. Both varieties suffered damage from root maggots, flea beetles and an array of other problems. 'American Purple Top' was preferred for its healthier plants and the milder flavor of its roots.

Trial 59. Spinach, Savoy Leaf

Varieties (information from seed catalogs)

‘Donkey’

38 days. Dark green, crinkly leaves for spring sowing. Slow to bolt. Disease-resistant plants.

‘Tyee’

40 days. The standard savoy (crinkly) leaf spinach. Very slow to bolt. Upright habit makes harvesting easy.



Data

Data were collected at 33 sites in 2012 and 13 sites in 2013.

Trait	2012			2013			Weighted Total		
	‘Donkey’	‘Tyee’	Same	‘Donkey’	‘Tyee’	Same	‘Donkey’	‘Tyee’	Same
Germinated best	30 %	27 %	42 %	8 %	31 %	62 %	24 %	28 %	48 %
Healthier plants	21	21	59	27	27	45	23	23	55
Higher yields	31	28	41	36	45	18	32	33	35
More attractive	37	23	40	36	45	18	37	29	34
Tasted better	30	13	57	18	55	27	27	25	49
<i>Preference</i>	61	39		27	73		51	49	
<i>Recommend to others</i>	73	67		73	73		73	69	
<i>Overall rating¹</i>	7.34	6.88		6.91	7.36		7.22	7.02	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

2012

- Both looked and tasted good. I would grow both again.
- Both grew well and produced more spinach than I could eat.
- They did great and continued to grow well and produce until the heat got to them in July.
- Great taste—no bolting. Both were excellent and we were able to cut off spinach into August. This has never happened with other varieties as they always bolted!
- These two varieties grew almost identical for me. Both did very well in all categories and we took multiple cuttings from the plants.
- Both had tender leaves early in the season but the leaves became coarse possibly due to hot dry summer.
- Each of them matured early and the leaves had holes in them. I froze some but could not keep up with them. All the leaves had holes in them.

- Both had good yield.
- Enjoyed both of them.
- Neither variety germinated well. The plants that did germinate were productive. Want to try them again next year.
- None of the seeds even came up (sown May 1)—maybe too dry?
- Decent germination (both around 56 percent).

2013

- Both had 100 percent germination. Both had great, large, healthy, strong leaves.
- Both had near 100 percent germination. Both stayed healthy even through brutal rains and cool temperatures early on. Great production.
- Both varieties looked very healthy.
- Sowed May 13. They both came up right away and looked really good, but they bolted—they did not grow more than the size of a golf ball. The spot in my garden was too hot.
- Sowed May 13; first harvest was June 20; last harvest was July 19.

More General Comments

- Planting suffered from hail; leaves got hurt but came back well. I have never raised spinach in my garden before. I really liked raising it because of the nice deep green color it adds to the lettuce in my salads. Both varieties were excellent.
- We harvested enough of both to feed the whole neighborhood! These two varieties were very similar.
- I had leftover seed from my spring planting and sowed in it mid August. They both germinated equally. They both grew back after harvesting a first cutting. Leaves remained viable after first frosts.

Comments on 'Donkey' Spinach

2012

- Leaves were larger and had more flavor.
- Leaves are bigger and thicker, which I prefer.
- We liked its leaf shape better.
- The same number of plants for each variety came up, but more of 'Donkey' survived. They stayed healthier and edible longer. We prefer its taste, too.
- Better germination and bigger harvest.
- Better germination (90 percent in 10 days compared to 75 percent in 12 days for 'Tyee').
- A slightly milder taste.
- We prefer its milder taste.
- Had a stronger taste, which I didn't like as well.
- No bitterness.
- Its greener leaves looked better in salads.
- Bolted right away (sowed second week of May).
- Tended to want to go to seed sooner.
- Showed 75 percent germination, compared to 45 percent for 'Tyee'. Stronger, nicer spinach flavor; kids described it as tasting like peas; we prefer it.

2013

- Kept on producing after I picked and picked. A late planting withstood several frosts.
- Kept nice a long time. Did not bolt as fast.
- Produced well into August. The leaves kept better color for a longer time.
- Neither did great but 'Donkey' produced better.
- Doesn't cook as well.

Comments on 'Tyee' Spinach

2012

- Much better germination. Matured earlier by a few days. Picked longer.
- Grew thicker.
- Plants were bigger and fuller.
- Seemed healthier; bigger plants.
- Heavier leaves; larger veins.
- Plants started off a little stronger. Leaves were bigger with better texture.
- I liked this for being early and staying less bitter.
- Slower to bolt.
- Slower to go to seed.
- Bolted faster.
- Bolted a few days earlier.
- Bolted one week earlier. Leaves are more delicate.
- Milder flavor.
- Poor germination (sown April 30).
- Slow to germinate but did well once came up.
- Leaves were limper and tasted bitter.

2013

- Ready to pick first and did not bolt too fast.
- Came back after cutting whereas 'Donkey' did not.
- Tasted better—greener.
- Lighter color. Sweeter.
- More productive but did bolt sooner.
- Leaves were nicer shaped; multipointed. Bolted later.
- Leaves were a little smoother. Bolted a little later, but close.
- Slightly milder and more tender.
- Produces more leaves. The plant does not look as nice but it tastes better raw and cooked.
- Bolted early; almost before maturity. Never tasted right.

Conclusions

Neither of the varieties was clearly better than the other. In 2012, most gardeners preferred 'Donkey', primarily for its darker green leaves and full flavor. In 2013, 'Tyee' was preferred, primarily due to its productivity and milder flavor. The germination of 'Donkey' dropped off in the cool, wet weather. Gardeners can pick their variety depending on how they value leaf color and flavor.

Trial 60. Spinach, Smooth Leaf

Varieties (information from seed catalogs)

‘Olympia’

38 days. Yields are quick and abundant. Leaves are smooth and mild in flavor. Plants resist bolting.

‘Pigeon’

40 days. Organic type with smooth, dark green leaves. Leaves grow upright and are easy to harvest.

Data

Data were collected at 19 sites in 2013.

Trait	‘Olympia’	‘Pigeon’	Same
Germinated best	32 %	26 %	42 %
Healthier plants	25	25	50
Higher yields	50	28	22
More attractive	27	47	27
Tasted better	27	27	47
<i>Preference</i>	50	50	
<i>Recommend to others</i>	71	65	
<i>Overall rating¹</i>	7.59	6.47	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- I would grow both again. ‘Olympia’ for bigger production and ‘Pigeon’ for looks and taste.
- About 80 percent germination for both varieties.
- Both had high yields and didn’t bolt. We harvested a lot, well into the fall.
- Both varieties looked pretty wilted after all the rain (10 inches in one week). This wasn’t a good year for my greens and cool season crops.
- I usually plant ‘Bloomsdale Long Standing’. Neither of these varieties would be an improvement on my old standby.

Comments on ‘Olympia’ Spinach

- Productive and tasted good. Mild pleasant flavor suitable for salads. Bolted two weeks before ‘Pigeon’.
- Produced more.
- Held up better to heavy rain and hail.
- Compact leaves; smoother; and tasted better.
- Germinated much better. Tasted good but its leaves were weak and wilted.



- Slower bolting; larger leaves.
- Seeded first.
- Tasted sour.

Comments on ‘Pigeon’ Spinach

- I liked that the leaves were a little smaller and I felt they looked better in a salad.
- It looks a little different—I like it.
- Thick leaves and had an assertive taste, not unlike New Zealand spinach.
- Stronger taste.
- Smoother taste. The plants that did develop were beautiful; some of the plants just did not grow big.
- Nice leaves and lasted all summer. Stored well in the refrigerator.
- Bolted quicker.
- Bolted earlier.
- All seeds grew. Fuller plants.
- Only 10 percent germination.

Conclusions

Both varieties grew well and gardeners were evenly split on their preferences. ‘Olympia’ was more productive and its yields were more consistent from site to site. This consistency led to higher overall ratings. ‘Pigeon’ was praised by some gardeners for its thick, more flavorful leaves. Seedling establishment was a concern at some sites due to heavy spring rains. Our cool temperatures contributed to an extended harvest and gardeners were satisfied on the resistance to bolting of both varieties.

Trial 61. Squash, Green Zucchini

Varieties (information from seed catalogs)

'Spineless Beauty'

43 days. Plants are nearly spineless and have an open habit, making it easy to harvest. Big yields over an extended season. Delicate flavor.

'Zucchini Elite'

48 days. Impressive yields, especially early in the season. Medium green, glossy zukes with a cylindrical shape.



Data

Data were collected at 8 sites in 2013.

Trait	'Spineless Beauty'	'Zucchini Elite'	Same
Germinated best	0 %	0 %	100 %
Healthier plants	57	0	43
Matured earlier	67	0	33
Higher yields	50	17	33
More attractive fruits	50	0	50
Tasted better	14	0	86
<i>Preference</i>	80	20	
<i>Recommend to others</i>	100	83	
<i>Overall rating¹</i>	7.67	6.83	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both had 95 percent germination rate.
- Both had good yields.
- Similar varieties. Both germinated well. Same yields.
- Both were very slow to produce this year. First harvest was not until the end of July.
- Plants were overbearing. The vines went everywhere. The fruits tasted good—even after they were large.
- Many of the small zucchini in early summer turned yellow (it was humid and wet much of the summer up here). Later in the summer we enjoyed lots of zucchini.
- They were started indoors and then put in the garden, but were washed out.

Comments on 'Spineless Beauty' Squash

- Bigger plants. Produced the first zucchini. Tasted great.
- Easy to pick. Good quality zucchini.
- Better yield, better quality. We had zucchini all summer long.
- Earlier, but not by much. Produced more and larger fruits.
- Earlier maturation.

Comments on 'Zucchini Elite' Squash

- Kept producing later into the fall—picked last ones during the second week of October.
- A lot of the zucchini seemed to rot as they were growing.

Conclusions

Both varieties performed well. 'Spineless Beauty' was preferred for its early maturity, good yields of attractive fruits, and healthy, spineless vines. 'Spineless Beauty' has done well in our trials in the past and every gardener this year recommended it. 'Zucchini Elite' is a fine variety, but does not seem to have any advantage over 'Spineless Beauty'.

Trial 62. Squash, Green Stripe Zucchini

Varieties (information from seed catalogs)

‘Green Tiger’

50 days. Its glossy fruits have distinctive dark and medium green stripes. The compact, open plants are easy to harvest. Good yields.

‘Safari’

50 days. The lustrous, dark green zucukes have light green stripes. Plants are nearly spineless and easy to pick.

Data

Data were collected at 5 sites in 2013.

Trait	‘Green Tiger’	‘Safari’	Same
Germinated best	80 %	0 %	20 %
Healthier plants	80	0	20
Matured earlier	80	20	0
Higher yields	60	20	20
More attractive fruits	60	0	40
Tasted better	20	0	80
<i>Preference</i>	80	20	
<i>Recommend to others</i>	80	60	
<i>Overall rating¹</i>	8.40	6.80	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both were strong plants. I love zucchini and both varieties were tasty!
- Both germinated well. Healthy plants. Great yield! Yummy.
- I grew these for the “town folks” in our community garden. Many had never seen striped zucchini and were excited about that. Both varieties were popular.
- I really preferred neither. Both produced small fruit. They got 6 to 8 inches long and quit growing.



Comments on ‘Green Tiger’ Squash

- Plants grew faster. Sturdier plants. Fruits were straighter and more attractive. Flavorful.
- Matured a few days earlier. Very productive. Nice yield this year with our moisture.
- Skin stayed soft longer and didn’t have the “rind” of more mature squash.

Comments on ‘Safari’ Squash

- Produced earlier. Brighter green fruit.
- Plants were slower to grow. Fruit was bell shaped.

Conclusions

‘Green Tiger’ was superior. It germinated better, grew faster and stronger, produced earlier, produced higher yields, and had straighter fruits. ‘Safari’ could match it for taste, but nothing else. Gardeners showed more enthusiasm for this trial than the standard green zucchini trial.

Trial 63. Squash, Yellow Zucchini

Varieties (information from seed catalogs)

'Easypick Gold'

50 days. Lustrous, deep yellow fruits are produced on open, nearly spineless plants.

'Gold Rush'

52 days. Smooth, uniform zukes with golden yellow color. Upright, open plants are easy to harvest.



Data

Data were collected at 3 sites in 2013.

Trait	'Easypick Gold'	'Gold Rush'	Same
Germinated best	67 %	0 %	33 %
Healthier plants	0	33	67
Matured earlier	33	0	67
Higher yields	100	0	0
More attractive fruits	100	0	0
Tasted better	33	0	67
<i>Preference</i>	100	0	
<i>Recommend to others</i>	100	33	
<i>Overall rating¹</i>	7.33	5.33	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- None.

Comments on 'Easypick Gold' Squash

- Produced lots of tender fruit.
- Larger fruit. Plants were bigger and were slower to develop powdery mildew.

Comments on 'Gold Rush' Squash

- Fruit was a slightly different color and was "tougher."
- Germination was spotty.

Conclusions

In our limited testing, the new variety 'Easypick Gold' outshined the standard yellow zucchini variety 'Gold Rush'. Gardeners liked the glossy, deep yellow color and tenderness of the fruits. Its vines produced more fruits and its open, nearly spineless habit made it easy to pick them. Every gardener preferred 'Easypick Gold' and recommended it to fellow gardeners.

Trial 64. Swiss Chard, Pink

Varieties (information from seed catalogs)

'Magenta Sunset'

55 days. Vivid magenta stalks contrast with glossy, semi-smooth leaves. Tender and nutritious.

'Peppermint'

62 days. Crinkly, dark green leaves have contrasting white veins and pink-striped petioles. Regrows well after cutting.

Data

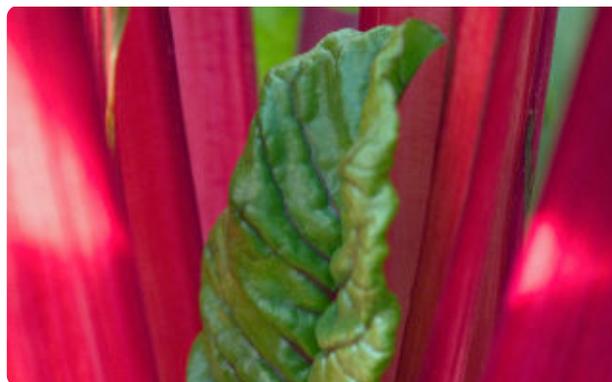
Data were collected at 8 sites in 2013.

Trait	'Magenta 'Sunset'	'Peppermint'	Same
Germinated best	38 %	50 %	13 %
Healthier plants	14	57	29
Matured earlier	29	29	43
Higher yields	43	29	29
More attractive	14	43	43
Tasted better	0	29	71
<i>Preference</i>	50	50	
<i>Recommend to others</i>	71	86	
<i>Overall rating</i> ¹	7.43	7.71	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both produced a lot!
- Plants were very healthy. Leaves were very nice in size and shape. The yields lasted through the first frost plus some—what hardy plants! Both were great!
- Cool temps delayed germination.



Comments on 'Magenta Sunset' Swiss Chard

- Better germination (95 percent compared to 85 percent for 'Peppermint').
- Smoother leaves and bigger plants.
- Smooth leaves—appeared more like spinach than Swiss chard.
- Tasted better longer, but both ended up bitter.
- Tasted strong and bad.

Comments on 'Peppermint' Swiss Chard

- Grew faster and bigger. Long harvest; still harvesting on October 12. I prefer the color of its stalk and leaves. This was best all around.
- Plants were larger, healthier. More chard to harvest. Ready to harvest a bit earlier.
- It was so beautiful and bountiful; hardy as well.
- Both had a bitter finish, but 'Peppermint' was a bit milder.
- We were able to eat this variety first. Its wavy leaves looked like traditional Swiss chard.
- Bugs were less attracted to it.

Conclusions

Both varieties performed well and gardeners were evenly split on their preferences. 'Peppermint' got off to a strong start and its plants were very healthy. Many gardeners preferred its multicolored stalks and crinkly leaves; others liked the smoother leaves and productivity of 'Magenta Sunset'. Both varieties developed bitterness as they matured.

Trial 65. Tomato, Bush

Varieties (information from seed catalogs)

'Better Bush'

68 days. Good-sized, 8-ounce fruits. Compact vines grow 4 feet high with an upright habit; staking needs are minimal. Good for patio gardeners.

'Bush Early Girl II'

54 days. Version of 'Early Girl' with larger fruits and more compact vines. Popular among patio gardeners. Early ripening.



Data

Data were collected at 5 sites in 2013.

Trait	'Better Bush'	'Bush Early Girl II'	Same
Germinated best	20 %	20 %	60 %
Healthier plants	60	20	20
Matured earlier	40	60	0
Higher yields	40	60	0
More attractive fruits	60	20	20
Tasted better	0	20	80
<i>Preference</i>	40	60	
<i>Recommend to others</i>	60	100	
<i>Overall rating¹</i>	7.60	8.40	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- One hundred percent germination. They are both wonderful varieties. Their tomatoes tasted the same. Having a late fall helped our tomato crop. Start the tomatoes as early as you can.
- Yields were lower than expected thanks in part to our crazy growing season ... it was late getting into the garden, and temperatures cooled off too soon in the fall.

Comments on 'Better Bush' Tomato

- Extremely strong plants.
- Sturdy plants. Larger tomatoes.
- Ripened first. Tomatoes were a good size, larger, more uniform, and round. Nice and juicy.
- Fruits were later and more susceptible to blossom end rot.
- More rewarding to grow. Stronger, healthier, etc.

Comments on 'Bush Early Girl II' Tomato

- It is much earlier—it beat the frost. Unbelievable production although the vines are more frail.
- Plants were delicate. Earlier by 7–10 days. Plants were loaded. Produced twice as many tomatoes.
- Early production and a heavy producer up until frost. No blossom end rot.
- Plants looked healthier early in the season.

Conclusions

Gardeners gave high ratings to both varieties. The majority of them preferred 'Bush Early Girl II'. It was earlier than 'Better Bush' at most sites and was a heavy producer. Every gardener in the trial recommended it. 'Better Bush' had sturdier vines that produced larger, more attractive tomatoes.

Trial 66. Tomato, Early

Varieties (information from seed catalogs)

‘Siberian’

60 days. Dwarf plants set fruit early. Egg-shaped 2.5-inch fruits are packed with flavor. Compact vines do not need trellising.

‘Stupice’

65 days. Heirloom from Czechoslovakia. Compact plants produce heavy yields of 2-inch fruits. Remarkable flavor. No trellising needed.



Data

Data were collected at 6 sites in 2013.

Trait	‘Siberian’	‘Stupice’	Same
Germinated best	0 %	60 %	40 %
Healthier plants	0	75	25
Matured earlier	0	75	25
Higher yields	40	60	0
More attractive fruits	50	25	25
Tasted better	0	75	25
<i>Preference</i>	<i>20</i>	<i>80</i>	
<i>Recommend to others</i>	<i>50</i>	<i>75</i>	
<i>Overall rating¹</i>	<i>4.75</i>	<i>7.50</i>	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both germinated in 8 days. The fruits were small—I thought they would get bigger.
- All seeds came up. Plants were healthy. Similar yield.

Comments on ‘Siberian’ Tomato

- Plants grew a foot taller. Larger fruits.
- Germinated over a period of two weeks and very poorly. Its tomatoes were thick skinned like a paste tomato.
- Germinated earlier.

Comments on ‘Stupice’ Tomato

- Better tasting tomato.
- Produced nicely, but fruit was small (1.5–2.0 inches in diameter). Spoiled quickly after picking.
- A great small-sized early tomato. First fruits harvested August 28 compared to September 25 for ‘Siberian’. Our average first frost is September 15. Its earlier maturity led to much higher yields. Juicy and very prolific.
- Nice because they got ripe so early.
- First harvest on July 7.

Conclusions

‘Stupice’ was the clear winner. The vines got off to a strong start and produced good crops of tomatoes early in the season. Its fruits were juicy and tasted better than those of ‘Siberian’. The fruits of ‘Siberian’ ripened later but were larger and more attractive.

Trial 67. Tomato, Main Season

Varieties (information from seed catalogs)

'Celebrity'

72 days. Popular for its reliability and resistance to disease. An All-America Selections Award winner. Medium-large fruits. Determinate vines; trellising is optional.

'Mountain Fresh Plus'

75 days. Fruits are big and bright red. Perfect for slicing. Good resistance to diseases. Widely adapted. Determinate vines; trellising is optional.



Data

Data were collected at 5 sites in 2013.

Trait	'Mountain Fresh		
	'Celebrity'	Plus'	Same
Germinated best	20 %	0 %	80 %
Healthier plants	0	25	75
Matured earlier	50	25	25
Higher yields	50	25	25
More attractive fruits	25	75	0
Tasted better	0	0	100
<i>Preference</i>	33	67	
<i>Recommend to others</i>	67	67	
<i>Overall rating¹</i>	7.33	8.00	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both performed wonderfully and provided large and uniformly sized fruit. Both good!
- Germination near 100 percent. Vines very healthy. Of nine varieties in my garden, I would place 'Celebrity' #5 and 'Mountain Fresh Plus' #6. Both tasted great.

Comments on 'Celebrity' Tomato

- A bit more productive. Stronger plants through the season. More prone to blossom end rot. Fruits had circular scarring at stem end.

Comments on 'Mountain Fresh Plus' Tomato

- Its taste was pretty impressive.
- Better yield.

Conclusions

Our data and comments for this trial are limited, but most gardeners liked both varieties. Most gardeners preferred 'Mountain Fresh Plus', primarily for the looks of its big, bright red tomatoes. Gardeners noted the early maturity and good yields of 'Celebrity'.

Trial 68. Tomato, Black

Varieties (information from seed catalogs)

'Black Prince'

74 days. Rich orange fruits with mahogany brown shoulders. The 3-inch globes have rich flavor. Indeterminate vines require pruning and staking.

'Indigo Rose'

80 days. Vibrant, deep indigo fruits are full of healthy antioxidants. Two-inch, round fruits. Indeterminate vines require pruning and staking.



Data

Data were collected at 3 sites in 2013.

Trait	'Black Prince'	'Indigo Rose'	Same
Germinated best	0 %	33 %	67 %
Healthier plants	33	33	33
Matured earlier	100	0	0
Higher yields	0	33	67
More attractive fruits	0	0	100
Tasted better	100	0	0
<i>Preference</i>	50	50	
<i>Recommend to others</i>	0	0	
<i>Overall rating¹</i>	3.50	4.00	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Hard to germinate and to grow. They never ripened. It was very hard to tell when they were ready. Both tasted like a green tomato.
- Attractive in a relish tray. Tasted OK but hard to tell when ripe as the top stays black and the bottom turns red; but you have to look at the bottom to decide if ripe. Did not keep well.
- Neither made it alive from my indoor plantings to tomato sets in the garden. I had some other tomato varieties that I started at home and got into the garden alive and well.
- A strong storm wiped out the delicate plants.

Comment on 'Black Prince' Tomato

- Bigger and more uniform fruits. It tasted better than 'Indigo Rose' but not very good. Fruits did not keep well.

Comment on 'Indigo Rose' Tomato

- I liked the smaller fruits, but feel it's more of a novelty.

Conclusions

Few gardeners were interested in testing black tomatoes. Both of the varieties were disappointing. Seedlings lacked vigor, yields were poor, and the flavor was fair at best. None of our gardeners would recommend either variety to another gardener.

Trial 69. Tomato, Canning

Varieties (information from seed catalogs)

'Roma VF'

78 days. Popular for paste and sauces. Compact vines produce heavy yields of solid, thick-walled fruits. Easy to grow. Determinate.

'Viva Italia'

72 days. Firm, juicy fruits with high sugars. Good for canning and for fresh eating. Productive. Determinate vines do not require trellising.



Data

Data were collected at 5 sites in 2013.

Trait	'Roma VF'	'Viva Italia'	Same
Germinated best	25 %	0 %	75 %
Healthier plants	0	0	100
Matured earlier	0	0	100
Higher yields	100	0	0
More attractive fruits	100	0	0
Tasted better	0	0	100
<i>Preference</i>	100	0	
<i>Recommend to others</i>	100	50	
<i>Overall rating¹</i>	8.00	7.00	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both were very productive. Very meaty. Good flavor.
- These didn't do well at all for us. They took forever to germinate and once in the ground took even longer. By the time they were ready to produce, we got hit with that early frost in September. Not a happy camper and will try again next year.
- Both germinated very well inside. As for outside, I do not know as I failed at transplanting them.
- All my plants died before transplanting.

Comment on 'Roma VF' Tomato

- Not a very tall plant.

Comments on 'Viva Italia' Tomato

- None.

Conclusions

Data and comments from this trial are very limited. A cool spring, transplant shock, and hailstorms damaged several trials across the state. Few, if any conclusions can be drawn from this trial, but 'Roma VF' was the preferred choice among the few gardeners. They liked its yield and the quality of its fruits.

Trial 70. Watermelon, Red

Varieties (information from seed catalogs)

‘Sweet Dakota Rose’

85 days. Sweet flesh has very few seeds. Developed in North Dakota and adapted to its short summer. Striped melons grow 10–20 pounds.

‘Sweet Favorite’

80 days. Reliable producer of 15–20-pound melons, even in the north. The vigorous vines produce good yields. Flesh is red and juicy. Striped rinds.



Data

Data were collected at 15 sites in 2013.

Trait	‘Sweet Dak. Rose’	‘Sweet Favorite’	Same
Germinated best	33 %	27 %	40 %
Healthier plants	46	8	46
Matured earlier	50	30	20
Higher yields	67	0	33
More attractive melons	50	10	40
Tasted better	40	30	30
<i>Preference</i>	70	30	
<i>Recommend to others</i>	70	70	
<i>Overall rating¹</i>	7.90	7.60	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both produced many ripe fruits; some up to 20–25 pounds. Great looking melons. Wonderful taste. Was super pleased with both. Started seed indoors.
- I was pleasantly surprised that both varieties ripened at all and produced good crops, considering I planted June 29. They both produced a wheelbarrow of melons and I am still eating them, after giving most away. What a wonderful crop. The hardest part is guessing when they are ripe!
- They both suffered from the cool, wet summer we had. Planted on north side of corn, unfortunately. ‘Sweet Dakota Rose’ produced 11 small melons that did not ripen, versus 7 small melons of ‘Sweet Favorite’ that did ripen. Neither of these varieties was as good as ‘Blacktail Mountain’, which I normally grow.
- We did not get any ripe melons until right before frost.

- Both had healthy plants all summer.
- Planted four hills of each variety; they all germinated at the same time.
- Neither variety grew for me this year. Not sure why.
- Nothing came up (sown May 24 and June 20).
- Neither variety produced due to late, wet planting.
- Slow to germinate due to the cold, wet weather.
- Deer ate them off.

Comments on ‘Sweet Dakota Rose’ Watermelon

- Seemed to have fewer seeds and earlier ripening. Awesome watermelon—not too big.
- Melons ripened three weeks earlier. Produced 20–24 melons per hill compared to 4 for ‘Sweet Favorite’ (the latter still weren’t ripe on October 3). Melons were larger—they are round up to 20 pounds. Excellent sweetness. Not a lot of seeds.
- Large, well producing melons that I would buy in a store. Huge!
- Nice round fruits, which are more attractive than oblong melons.
- Even when not fully ripe, these melons were tasty and sweet. It had fewer seeds. It was also a smaller melon, which fits my usage better.
- We preferred its smaller melon.
- Three of my four hills of ‘Sweet Favorite’ wilted up and died. All ‘Sweet Dakota Rose’ hills survived.
- Harvesting began early September.
- This variety was superior before grasshoppers and drought destroyed my planting.
- Does not seem to germinate very well.

Comments on 'Sweet Favorite' Watermelon

- Sweeter and bigger.
- Produced a couple big, oval melons that were impressive.
- Very good tasting.
- Germinated at 50 percent, compared to 40 percent for 'Sweet Dakota Rose'; I believe these were affected by the cold, very wet spring.
- Produced its first ripe melon about three weeks earlier than 'Sweet Dakota Rose'. Produced 6 melons, compared to 8 for 'Sweet Dakota Rose' (the latter were picked just before frost and I felt like they were not quite ripe and needed more time on the vine). Flesh was dark red, very sweet and juicy; full of flavor.
- Melons are oblong, about 10–15 pounds. They had a good taste the last time I grew them, but this year they were not ripe enough.
- Deer started to eat when ripe so they must be good.

Conclusions

Both varieties produced good quality, ripe melons in spite of a cool start to our short growing season. Most gardeners preferred 'Sweet Dakota Rose'. Its vines were healthier and produced higher yields. It matched, if not exceeded 'Sweet Favorite' for all traits, including earliness, looks and flavor.

Trial 71. Watermelon, Red Icebox

Varieties (information from seed catalogs)

‘Blacktail Mountain’

85 days. Deep scarlet flesh is crisp and juicy. Developed in Idaho and matures early. Solid dark green rind. Melons grow 6–12 pounds.

‘Sugar Baby’

75 days. The most reliable variety for the north. Its orange-red flesh is crisp and sweet. Solid dark green rind. Melons grow 6–12 pounds.



Data

Data were collected at 5 sites in 2013.

Trait	‘Blacktail Mountain’	‘Sugar Baby’	Same
Germinated best	0 %	40 %	60 %
Healthier plants	0	100	0
Matured earlier	100	0	0
Higher yields	0	100	0
More attractive fruits	0	0	100
Tasted better	0	100	0
<i>Preference</i>	0	100	
<i>Recommend to others</i>	0	33	
<i>Overall rating¹</i>	2.00	5.00	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both did poorly and no edible fruits. Maybe too wet of spring?
- Had only a couple plants grow from each variety and only one plant from each survived to maturity. Melons were identical in size, shape and color.
- Crop failure.

Comments on ‘Blacktail Mountain’ Watermelon

- Had the first ripe melon; however the plant died after the melon ripened.
- We lost most of the plants fairly early on—the plants turned black and died. It looked like frost damage, but couldn’t have been.
- Did not germinate (sown June 7).

Comments on ‘Sugar Baby’ Watermelon

- Had more foliage and survived to first frost. Produced two large melons, one more than ‘Blacktail Mountain’.
- More flavor.
- The one vine that germinated took off great; leaves got weird and curled in midseason. Produced one perfect melon. Tasted great; very sweet.
- Rodents or deer ate the few melons that survived.

Conclusions

It is hard to grow watermelons in North Dakota, especially when the growing season starts off cool and wet. Both ‘Blacktail Mountain’ and ‘Sugar Baby’ struggled to get established. ‘Sugar Baby’ was more reliable and produced a few melons. Nevertheless, most gardeners would not recommend either variety.

Trial 72. Watermelon, Yellow Icebox

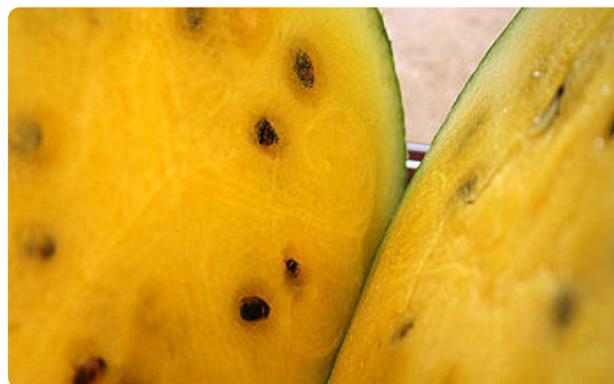
Varieties (information from seed catalogs)

'Early Moonbeam'

78 days. A selection from 'Yellow Doll'. Bright yellow flesh with sweet taste. Striped, round melons weigh 5–8 pounds.

'Yellow Doll'

68 days. An extra early variety with sweet flesh. Its semi-compact vines produce striped, 5-pound melons.



Data

Data were collected at 6 sites in 2013.

Trait	'Early Moonbeam'	'Yellow Doll'	Same
Germinated best	50 %	17 %	33 %
Healthier plants	60	0	40
Matured earlier	67	33	0
Higher yields	100	0	0
More attractive fruits	25	25	50
Tasted better	25	50	25
<i>Preference</i>	<i>100</i>	<i>0</i>	
<i>Recommend to others</i>	<i>75</i>	<i>20</i>	
Overall rating¹	7.80	5.40	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Vines were healthy until frost. The melons looked the same.
- Didn't get any decent ones from either variety. Melons were very small and spoiled before we could see what they tasted like. I've grown 'Yellow Doll' before and they were much better. Not sure why both varieties were so bad this year.

Comments on 'Early Moonbeam' Watermelon

- Germinated better (70 percent compared to 50 percent for 'Yellow Doll') in our cold and very wet spring. Very vigorous plants that produced a lot of melons. Produced 21 melons compared to 15 for 'Yellow Doll'.
- Vines were more vigorous by far. Most of its melons were small (less than 6 pounds), but the flavor was huge!
- Three plants came up (compared to one plant for 'Yellow Doll'). More melons and larger melons. Taste was crisper and really good.

Comments on 'Yellow Doll' Watermelon

- Much sweeter and tasted great.
- Its first ripe melon was harvested one day before the first melon of 'Early Moonbeam'. Melons were sweeter and slightly smaller.
- Only a few plants came up. Then the hail destroyed them.

Conclusions

Every gardener preferred 'Early Moonbeam'. Its vines were more vigorous and produced ripe watermelons earlier than its parent, 'Yellow Doll'. It produced more melons. 'Yellow Doll' struggled in the cool, wet spring. Its melons were fewer in number but sweeter in taste.

Trial 73. Basil, Italian

Varieties (information from seed catalogs)

‘Genovese’

70 days. Classic flavor and appearance. Dark green leaves about 3 inches long.

‘Nufar’

77 days. Sweet-scented, 4-inch-long leaves. Disease-resistant plants.

Data

Data were collected at 4 sites in 2013.

Trait	‘Genovese’	‘Nufar’	Same
Germinated best	0 %	50 %	50 %
Healthier plants	33	0	67
Produced higher yields	33	0	67
Looked more attractive	33	33	33
Tasted better	33	0	67
<i>Preference</i>	67	33	
<i>Recommend to others</i>	100	33	
<i>Overall rating¹</i>	7.33	6.00	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- This was not the year for us and basil. The first planting didn’t take; and the second one came up so late, the frost got them before we could enjoy them.
- Seed did not germinate. I have heavy clay soil.



Comments on ‘Genovese’ Basil

- Better appearance.
- Leaves did not have the bitterness like ‘Nufar’. Also, had a lemon undertone to the taste. Leaves were coarser.

Comments on ‘Nufar’ Basil

- Matured quicker.

Conclusions

It is difficult to draw conclusions since data and comments from this trial are limited. ‘Genovese’ was preferred 2 to 1 and all gardeners recommended it. The performance of ‘Genovese’ matched if not exceeded that of ‘Nufar’ for yield and quality traits.

Trial 74. Basil, Lemon

Varieties (information from seed catalogs)

‘Mrs. Burns’

62 days. Intense flavor. Bright green leaves. Heirloom from New Mexico.

‘Sweet Dani’

65 days. Extremely vigorous plant allows for multiple harvests. Strong fragrance. AAS Award winner.



Data

Data were collected at 10 sites in 2012 and 5 sites in 2013.

Trait	2012			2013			Weighted Total		
	‘Mrs. Burns’	‘Sweet Dani’	Same	‘Mrs. Burns’	‘Sweet Dani’	Same	‘Mrs. Burns’	‘Sweet Dani’	Same
Germinated best	20 %	30 %	50 %	20 %	40 %	40 %	20 %	33 %	47 %
Healthier plants	25	38	38	0	0	100	17	25	59
Higher yields	38	38	25	33	33	33	36	36	28
Looked more attractive	44	22	33	33	33	33	40	26	33
Tasted better	22	22	56	33	33	33	26	26	48
<i>Preference</i>	40	60		25	75		35	65	
<i>Recommend to others</i>	80	80		67	100		76	87	
<i>Overall rating¹</i>	8.33	8.22		7.33	8.67		8.00	8.37	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

2012

- Both did exceedingly well. Lots of plants and all of them were very healthy.
- Both prolific. Never bolted. The kids ate the leaves of both varieties readily—they loved it!
- Both were prolific plants. Some are 3-feet high and as big around.
- We could not tell any difference. We loved the smell of them!
- Plants did not survive the summer in our little garden.

2013

- Very healthy! I left some plants to flower—bees loved them! Both were quite good. Made excellent pesto for fish and chicken. The dried leaves made a pleasant tea.
- One hundred percent germination. Pretty green color.

- No seed germinated. I had a tough year with basil in general, even my ‘Genovese’ did not germinate and I had to start them in the greenhouse.

Comments on ‘Mrs. Burns’ Basil

2012

- We gave lots to neighbors and all thought ‘Mrs. Burns’ was best. They would stand at the garden and nibble and then take some home to cook. The taste was excellent. It made wonderful pesto as well as using it fresh. Interestingly, ‘Sweet Dani’ was not as sweet.
- Bigger and healthier plants!
- Seemed heartier.

2013

- Liked the flavor better.
- Produced more leaves.

Comments on 'Sweet Dani' Basil

2012

- Grew better in my garden. Very full, productive plants.
- Sweeter, softer leaves.
- It sprouted first.

2013

- Very bright lemon flavor and also attractive.
- Harvested 5 days earlier. Flavor was excellent.

Conclusions

Gardeners loved both varieties. The plants were healthy and produced lots of leaves with intense lemon flavor. 'Mrs. Burns' and 'Sweet Dani' rated similarly for most traits including health, yield and flavor. Most gardeners preferred 'Sweet Dani'. It showed superior seedling vigor and rapid growth. The bright green leaves of 'Mrs. Burns' made it an especially attractive plant.

Trial 75. Basil, Purple

Varieties (information from seed catalogs)

'Amethyst Improved'

60 days. Stunning, deep purple leaves. True 'Genovese' flavor.

'Purple Ruffles'

80 days. Large, crinkly leaves are used for cooking, garnishing, or as an ornamental. An All-America Selections Award winner.



Data

Data were collected at 5 sites in 2013.

Trait	'Amethyst Improved'	'Purple Ruffles'	Same
Germinated best	0 %	20 %	80 %
Healthier plants	67	0	33
Produced higher yields	33	33	33
Looked more attractive	100	0	0
Tasted better	50	25	25
<i>Preference</i>	100	0	
<i>Recommend to others</i>	100	50	
<i>Overall rating¹</i>	9.00	6.00	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- I cut both back and got plenty to eat.

Comments on 'Amethyst Improved' Basil

- Color was uniform; whereas 'Purple Ruffles' was freckled.
- Shiny leaves, bigger plants. Tasted the best.
- This one was more fun to grow; didn't seem to be watered as much.

Comments on 'Purple Ruffles' Basil

- Only had one ruffled looking plant. Some plants were green with purple. Stronger tasting.

Conclusions

For the second straight year, 'Amethyst Improved' has performed well in our tests. The deep purple plants were healthier and more beautiful than those of 'Purple Ruffles'. The color was more uniform and shiny. Gardeners preferred its true Genovese taste, too. Data for this trial are limited as heavy rains washed out a few sites.

Trial 76. Cilantro

Varieties (information from seed catalogs)

‘Caribe’

52 days. Easy to grow and extremely slow to bolt. Used to enhance salsas and curries.

‘Confetti’

50 days. Unique type with frilly, fern-like leaves. Authentic cilantro flavor with increased sweetness. Quick growing and slow to bolt.

Data

Data were collected at 10 sites in 2013.

Trait	‘Caribe’	‘Confetti’	Same
Germinated best	50 %	10 %	40 %
Healthier plants	50	0	50
Flowered earlier	38	25	38
Produced higher yields	50	0	50
Looked more attractive	60	30	10
Tasted better	56	11	33
<i>Preference</i>	90	10	
<i>Recommend to others</i>	90	50	
<i>Overall rating¹</i>	8.10	5.30	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comment

- Both germinated slowly at first but then exploded. They both flowered about the same time. This is a very strong flavored herb! Both are attractive. Planted on the north side of our trees and they did really well.
- Both germinated well. Plants were very healthy and easy to grow.
- Both varieties stood up well to the harsh spring (10 inches of rain in early June).
- They both seemed slow to go to seed and the leaves stayed green longer—probably due to the rain.
- I have had much better luck with the variety ‘Calypso’. Much bigger, leafier plants that are slower to bolt.
- Both went to seed quickly.



Comments on ‘Caribe’ Cilantro

- Larger plant leaves and tasted better; stronger flavor.
- I liked its bigger/fuller leaves and the looks of it.
- Seemed to have healthier plants. Filled up its garden area better.
- More flavor in its large leaves.
- Brighter taste.
- Had more usable leaves.
- More like the cilantro that I have bought at grocery store.
- Germinated earlier. Flowered a little earlier. Plants grew taller. Super easy to grow, vigorous, beautiful, and tastes great!
- Produced tons of leaves before bolting; whereas ‘Confetti’ went to seed before I could even harvest any leaves.

Comments on ‘Confetti’ Cilantro

- Milder tasting, which my family prefers (Scandinavians!).
- The only good thing about ‘Confetti’ is that it grew well. Plants look like a carrot top—didn’t like the look. Did not have the “cilantro” taste I was expecting.
- Didn’t have much flavor.

Conclusions

‘Caribe’ was clearly superior. Its plants were healthier, more robust, and full of attractive, flavorful leaves. ‘Confetti’ is nothing more than a novelty. It lacks vigor and it lacks flavor. Even as a novelty it flops since its unique quality—its frilly leaf shape—was not liked by most gardeners.

Trial 77. Parsley

Varieties (information from seed catalogs)

'Giant of Italy'

75 days. Huge, flat leaves with rich flavor. Strong, vigorous plants. Heirloom from Italy.

'Titan'

75 days. Small, flat leaves are packed with sweet flavor. Compact, upright plants. Useful for cooking and as a garnish.



Data

Data were collected at 10 sites in 2013.

Trait	'Giant of Italy'	'Titan'	Same
Germinated best	40 %	30 %	30 %
Healthier plants	38	13	50
Produced higher yields	14	29	57
Looked more attractive	43	0	57
Tasted better	29	43	29
<i>Preference</i>	67	33	
<i>Recommend to others</i>	63	38	
<i>Overall rating¹</i>	6.88	6.75	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- They both had nice healthy plants. I loved that this kept coming back when it was harvested several times. I enjoyed fresh parsley every morning before chores. Just ate it by itself.
- Both were equally healthy.
- Both took a long time to germinate. Both looked healthy but were slow to grow.
- Poor germination—may have been due to cold, wet spring.
- Did not come up.

Comments on 'Giant of Italy' Parsley

- Better tasting and looking.
- Flavor seemed more intense.
- Didn't brown as easily/quickly.
- Produced better.
- Would make a prettier garnish.
- More of a flat-leaf parsley.

Comments on 'Titan' Parsley

- It was slower to come on, but once it matured, there was a lot of it!
- Prefer its taste.
- A more even flavor and not so strong.
- Higher yields.

Conclusions

Most gardeners preferred 'Giant of Italy' for its larger leaves, early season vigor, and overall health. Some gardeners noted the mild, sweet flavor of 'Titan'. Parsley seeds were slow to germinate and stands suffered due to the cool, wet spring.

Trial 78. Cosmos

Varieties (information from seed catalogs)

‘Double Click Mix’

110 days. Unique semi-double and double blooms. Late blooming. Great in garden and for cutting. Sturdy stems. Height 42 inches.

‘Versailles Mix’

80 days. Large flowers on strong stems make this perfect for cut flowers. Single petals. Height 42 inches.

Data

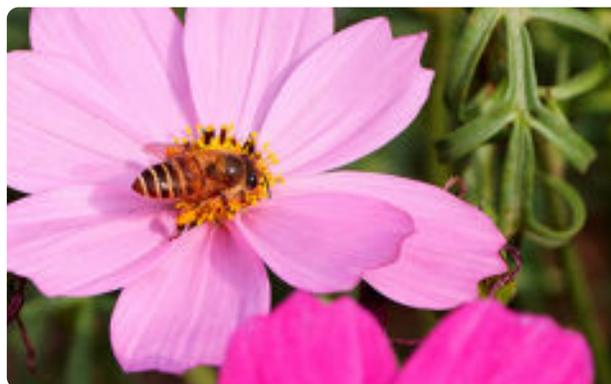
Data were collected at 7 sites in 2013.

Trait	‘Double Click Mix’	‘Versailles Mix’	Same
Germinated best	33 %	17 %	50 %
Healthier plants	33	0	67
Bloomed earlier	33	33	33
More flowers	67	17	17
More attractive in garden	50	17	33
More attractive in vase	20	0	80
<i>Preference</i>	83	17	
<i>Recommend to others</i>	100	71	
<i>Overall rating¹</i>	9.00	6.67	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Really nice flowers. Hard to pick a favorite.
- Flowers are great. I like them both. Would grow them both for variety.
- Both germinated well and were very attractive as a cut flower.
- Both bloomed into early October and seemed equally hardy.



Comments on ‘Double Click Mix’ Cosmos

- Germinated well and were blooming by July. Their color was beautiful and we enjoyed having them as cut flowers, though they had a short “cut life.”
- Blooms lasted longer. Blooms were larger. Plants were adaptable to our ND weather extremes.
- Beautiful large flowers. Long lasting.
- A nice accent plant with its white flowers.

Comments on ‘Versailles Mix’ Cosmos

- Love the colors! The plants were tall and very colorful.
- Did not germinate until late July (sowed June 10). That’s quite a wait! They began blooming in early August. They were attractive once they got going.
- Better performance in my infertile soil.

Conclusions

‘Double Click Mix’ received very high ratings—every gardener recommended it. Gardeners were impressed with the size, abundance, and long life of its blooms. ‘Versailles Mix’ plants were healthy, but could not match the showiness of ‘Double Click Mix’ in the garden.

Trial 79. Cosmos, Sulphur

Varieties (information from seed catalogs)

'Bright Lights'

75 days. Clusters of bright, semi-double gold and orange flowers. Height 40 inches.

'Diablo'

75 days. Radiant mix of scarlet flowers. Beautiful in naturalized plantings and good for cut flowers, too. Height 30 inches.



Data

Data were collected at 12 sites in 2013.

Trait	'Bright Lights'	'Diablo'	Same
Germinated best	33 %	25 %	42 %
Healthier plants	36	18	45
Bloomed earlier	64	27	9
More flowers	27	45	27
More attractive in garden	33	33	33
More attractive in vase	30	20	50
<i>Preference</i>	50	50	
<i>Recommend to others</i>	83	83	
<i>Overall rating¹</i>	7.92	8.00	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- They were both beautiful. We enjoyed lots of bouquets and I gave lots of bouquets away!
- Nice flowers. Very pretty cut flowers. These plants need lots of room as they become large shrub-like plants full of flowers.
- Lots of flowers.
- Lots and lots of beautiful flowers. These cosmos were awesome! I saved the seeds and will plant next year.
- Both were tall, strong, and withstood wind and rain.
- Neither variety blew over in the Red River Valley winds. For weeks it was like a golden pool of color.
- Both needed to be staked. Both were attractive.
- Both germinated poorly.

Comments on 'Bright Lights' Cosmos

- Bloomed earlier and longer. Hundreds of flowers per plant. Bright colors.
- We really liked this variety. One hundred percent germination. Vibrant colors. Its overall performance was excellent.
- I loved the ferny look of the foliage.
- Grew over 4 feet tall and was beautiful; it would be wonderful for a showy border along a fence or as a background planting.
- Earlier blooms.
- Plants were less attractive—they grew taller, but branched out more.

Comments on 'Diablo' Cosmos

- Earlier and very long lasting blooms. Gorgeous!
- Much more prolific in bloom. I will plant this again.
- A sturdy bush plant with bright orange flowers.
- A much prettier colored flower; the colors of 'Bright Lights' were nothing special.
- I prefer its more compact look. The plants appear to be more covered with flowers.
- Germinated 20 percent better, but neither germinated fully. Approximately 25 percent more blooms. More densely flowered. I liked its appearance better.

Conclusions

Gardeners loved both varieties and were evenly split in their preferences. 'Bright Lights' bloomed earlier at most sites; its 40-inch plants were adorned with gold and orange flowers. 'Diablo' had a more compact habit (30 inches tall), but had as many, if not more flowers. Its scarlet-orange blossoms were eye-catching.

Trial 80. Sunflower, Dwarf

Varieties (information from seed catalogs)

'Firecracker'

55 days. A bright display of red and gold petals on dwarf, 30-inch plants. Branching habit.

'Music Box'

60 days. Fantastic display of blooms on dwarf, 28-inch plants. Solid and bicolor blooms in shades of cream to yellow and red. A Fleuroselect Award winner.



Data

Data were collected at 13 sites in 2013.

Trait	'Firecracker'	'Music Box'	Same
Germinated best	67 %	8 %	25 %
Healthier plants	50	0	50
Bloomed earlier	80	10	10
More flowers	63	13	25
More attractive in garden	56	0	44
More attractive in vase	57	0	43
<i>Preference</i>	80	20	
<i>Recommend to others</i>	100	70	
<i>Overall rating¹</i>	8.50	6.90	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both were beautiful and good for cut flowers.
- Plants are healthy. These plants continue to amaze me. This is my first year growing sunflowers. They've been fun to watch and grow!
- Both had thick foliage, beautiful, thick stems.
- Germination near 100 percent. Plants stayed healthy until frost. Full of blossoms.
- Neither variety thrived. I must have done something wrong.
- Deer damage.

Comments on 'Firecracker' Sunflower

- Taller plants. More flowers. Plants did not lay down as much compared to 'Music Box'.
- Bloomed earlier.
- Flowers were bigger and prettier. It was a better cut flower because the stems were longer.
- More flowers, more beauty. Healthier plants.

- Taller plants; better for cut flowers.
- Taller, thicker stalks and stems. Larger heads. Bloomed earlier.
- Larger blooms. Brighter colors.
- Bloomed a week earlier. The blooms looked like wild sunflowers that grow on the roadside.
- Better appearance. Less bothered by bugs.

Comments on 'Music Box' Sunflower

- Its smaller bloom was a better size for display.
- Bloomed two weeks later. A few deformed heads.
- Very pretty in the garden during the summer.
- The flower bloom is just beautiful!
- Had many, many more flowers but they weren't as pretty.
- Had different shades of yellow flowers. More decorative.
- Seedlings got covered by soil after a heavy rain.

Conclusions

'Firecracker' was more vigorous, bloomed earlier, and produced more flowers than 'Music Box'. It was more attractive in the garden and in a vase. Most gardeners liked the subtle yellow shades of 'Music Box' but they preferred the bold red and gold bursts of 'Firecracker'.

Trial 81. Sunflower, Gold Cutting

Varieties (information from seed catalogs)

'ProCut Gold'

55 days. Golden flowers with green centers. Non-branching, single bloom type. Excellent early cut flower. Pollenless. Height 66 inches.

'Sunrich Gold'

65 days. Large golden flowers are ideal for cutting. Non-branching, single bloom type. Pollenless. Height 54 inches.



Data

Data were collected at 4 sites in 2013.

Trait	'ProCut Gold'	'Sunrich Gold'	Same
Germinated best	50 %	25 %	25 %
Healthier plants	50	0	50
Bloomed earlier	75	0	25
More flowers	67	33	0
More attractive in garden	25	0	75
More attractive in vase	50	50	0
<i>Preference</i>	67	33	
<i>Recommend to others</i>	100	75	
<i>Overall rating¹</i>	7.75	6.50	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both were beautiful and good for cut flowers.
- Plants are healthy. These plants continue to amaze me. This is my first year growing sunflowers. They've been fun to watch and grow!

Comments on 'ProCut Gold' Sunflower

- Seemed to just do better and produce better heads. Heads were larger and more round.

Comments on 'Sunrich Gold' Sunflower

- Very pretty in the garden during the summer.
- Its smaller bloom was a better size for display.
- Bloomed two weeks later. A few deformed heads.
- Seedlings got covered by soil after a heavy rain.

Conclusions

These single-stem varieties were developed for cut flower production, and gardeners liked both. Overall, the edge went to 'ProCut Gold' for its remarkable earliness, plant vigor, and uniformity of flower.

Trial 82. Sunflower, Orange

Varieties (information from seed catalogs)

‘Sonja’

90 days. Bright, 4-inch tangerine flowers with dark disks. Branching type. Height 40 inches.

‘Soraya’

80 days. Large, 5-inch golden yellow flowers. Great for cutting. Nearly pollenless. Branching type. Winner of All-America Selections and Fleuroselect awards. Height 72 inches.



Data

Data were collected at 3 sites in 2013.

Trait	‘Sonja’	‘Soraya’	Same
Germinated best	0 %	33 %	67 %
Healthier plants	0	67	33
Bloomed earlier	33	67	0
More flowers	0	100	0
More attractive in garden	0	100	0
More attractive in vase	0	50	50
<i>Preference</i>	<i>0</i>	<i>100</i>	
<i>Recommend to others</i>	<i>33</i>	<i>100</i>	
<i>Overall rating¹</i>	<i>4.33</i>	<i>8.67</i>	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both were beautiful and good for cut flowers.

Comments on ‘Sonja’ Sunflower

- None.

Comments on ‘Soraya’ Sunflower

- Overall the better flower. Taller plants. Bigger heads. Long lasting as cut flower. They were fun to cut and arrange.
- Germinated more prolifically and produced many more flowers.

Conclusions

In our limited testing, ‘Soraya’ was clearly superior. Its plants were healthier, bloomed earlier, and was more free flowering. It received high ratings and unanimous approval from our team of gardeners. The blooms of the shorter-stalked ‘Sonja’ could not match the radiance of ‘Soraya’ in the garden.

Trial 83. Sunflower, Double Petal

Varieties (information from seed catalogs)

'Double Quick Orange'

65 days. Fully double sunflower made for cutting. Single bloom type. Pollenless disk does not make a mess in the vase. Height 54 inches.

'Greenburst'

55 days. New semidouble sunflower with golden petals and a light green disk. Branching type. Pollenless blooms. Height 66 inches.



Data

Data were collected at 9 sites in 2013.

Trait	'Double Quick Orange'	'Greenburst'	Same
Germinated best	0 %	56 %	44 %
Healthier plants	11	78	11
Bloomed earlier	0	88	13
More flowers	25	38	38
More attractive in garden	13	38	50
More attractive in vase	50	25	25
<i>Preference</i>	25	75	
<i>Recommend to others</i>	63	88	
<i>Overall rating¹</i>	5.63	8.00	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- They both would grow great and would look good in different spots.
- Near 100 percent germination.
- Both germinate well. Unique blooms.
- Both germinated well. Deer ate them.

Comments on 'Double Quick Orange' Sunflower

- Blooms had more color.
- Once it bloomed, it far outdid 'Greenburst'. Large, yellow (not orange), single flowers lasted well into fall. The lack of a brown center was very attractive. Much prettier than 'Greenburst'.
- Blooms kept its color longer.
- Plants seemed healthier and had nice blooms.
- Suffered stem rot in early August. Its single blossoms per stem made it better for bouquets.

Comments on 'Greenburst' Sunflower

- Loved the plant size, the cut flower, and the duration of bloom.
- Plants were taller, more leaves, sturdier.
- Germinated first. Sturdy and healthy plants. Bloomed two weeks earlier. Its multi-blossom stems gave more weeks of color. Extra large flowers.
- Popped right up. More uniform stand both in stalk size and plant height. Bloomed one week earlier. Produced a multiflowered head, but faded quickly.
- Germinated sooner. Plants looked better and grew taller. Bigger flowers but more yellow-green in color.

Conclusions

'Greenburst' impressed gardeners with its strong seedling vigor, sturdy stalks and healthy plants. It bloomed earlier, and its branching habit generated fresh colorful flowers all summer. 'Double Quick Orange' had an attractive bloom and its single-stem habit made it suitable for cut flowers.

Trial 84. Wheat, Ornamental

Varieties (information from seed catalogs)

'Black Tip'

100 days. White kernels contrast beautifully with the long black awns. Lovely in flower arrangements. Spring durum type. Height 30 inches.

'Utrecht Blue'

100 days. Four-row seedheads with blue-gray husks and long black awns. Spring durum type. Height 30 inches.

Data

Data were collected at 9 sites in 2013.

Trait	'Black Tip'	'Utrecht Blue'	Same
Germinated best	63 %	13 %	25 %
Healthier plants	38	25	38
Bloomed earlier	75	13	13
More heads	50	50	0
More attractive in garden	38	50	13
More attractive in vase	33	50	17
<i>Preference</i>	<i>44</i>	<i>56</i>	
<i>Recommend to others</i>	<i>60</i>	<i>78</i>	
<i>Overall rating¹</i>	<i>5.50</i>	<i>7.00</i>	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both are being dried and they are both pretty for dried flower arrangements.
- Both lodged in the wind/rain.
- Neither did well. Too wet.

Comments on 'Black Tip' Wheat

- Produced lots of decorative heads.
- Taller and looked more like a decorative plant in the flower garden.
- Attractive, strong and long lasting.
- Headed out in early July, well before 'Utrecht Blue'. Heads were fatter but looked dirty or diseased.
- As summer progressed, the stand looked scrawny. I can't explain it, but it seems it was possibly more attractive to mice/rabbits. The heads never got black; they just looked dull.
- When mature it lost the beard that would make it good in flower bouquets.



Comments on 'Utrecht Blue' Wheat

- Grew 65 inches. The blue heads with black beards are beautiful. After cut, the heads lost very little color. The beards also look golden when light is shined upon it! Beautiful. I am giving some to my 93-year-old aunt who still wheat weaves. I am making a tall bouquet of the remainder.
- I got a 6-inch-diameter clump of stems compared to 1.5 inches for 'Black Tip'. Better overall performance. Dark awls were a nice contrast. I believe these would do best singly or in small groupings of 3–5 tucked between larger plants, as in a cottage garden.
- More foliage and longer stemmed heads that were truly blue. Pretty blue heads.
- Much better germination. Great in fall flower arrangements.
- A very poor grower. Very spotty in development.

Conclusions

These varieties brought smiles to most gardeners, who were charmed at the understated beauty of wheat. Gardeners were fascinated by the unique blue heads and black beards of 'Utrecht Blue'. 'Black Tip', with its white heads and black beards, grew easily and bloomed earlier. Some gardeners struggled to grow wheat in the wet weather.

Trial 85. Zinnia, Coral

Varieties (information from seed catalogs)

'Benary's Giant Coral'

80 days. Large, 5-inch flowers on long, sturdy stems. Resists mildew. Excellent cut flower. Height 40 inches.

'Senora'

80 days. Large, fully double, 4-inch blooms in a special shade of salmon-pink. Heat-tolerant plants. Excellent for cutting. Height 36 inches.

Data

Data were collected at 16 sites in 2013.

Trait	'Benary's Giant Coral'	'Senora'	Same
Germinated best	31 %	38 %	31 %
Healthier plants	31	23	46
Bloomed earlier	33	42	25
More flowers	36	36	29
More attractive in garden	54	23	23
More attractive in vase	36	9	55
<i>Preference</i>	60	40	
<i>Recommend to others</i>	86	79	
<i>Overall rating¹</i>	8.21	7.36	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Both had very healthy plants. Flowers were quite large. The flowers lasted very well as cut flowers and bloomed well into October.
- Very nice zinnias. Never liked zinnias before, but these varieties won me over.
- Plants were healthy and flowers were beautiful. They looked lovely together and both lasted until frost on October 6.

Comments on 'Benary's Giant Coral' Zinnia

- Germinated significantly more quickly. Produced larger, more beautiful flowers. My daughter prefers its color.
- Compact large blossoms that retain their form for a considerable time. It is still blooming in October—reminiscent of the flowers my family grew many years ago.



- More eye appealing.
- Brighter colors.
- Prefer its color.
- I prefer the color and size of its flowers.
- I prefer its colors, the size of plant and bloom. Long lasting in bouquets.
- Very bright and tall. I prefer its bright cheery color.
- Healthier. Beautiful flowers and stood up well against heavy rain. Flowers were large; more brilliant than 'Senora'.

Comments on 'Senora' Zinnia

- Many different shaped flowers: pincushion, powderpuff and more.
- Very nice flowers but they became tacky more quickly.
- Loved how it went from a bright coral color to a softer pinkish and lasted a very long time!
- Stronger stems.
- Some of the ugliest zinnias I have ever seen.
- I liked its darker color.
- Bloomed a bit earlier. The flowers looked better.
- First bloom on July 28.
- Did not germinate very well.

Conclusions

Gardeners liked both varieties. The 'Benary's Giant' series of zinnias has always performed well in our trials, and this year was no exception. The petal colors of 'Benary's Giant Coral' were true and bright; its flowers were big and plentiful; and its flower stems were sturdy. 'Senora' matched it in many ways, but its blooms were less brilliant.

Trial 86. Zinnia, Cutting

Varieties (information from seed catalogs)

‘Oklahoma Mix’

80 days. Bright colors, excellent vase life, and resistance to mildew. Lots of 2-inch blooms. Outstanding for cut flowers. Height 30–40 inches.

‘Sunbow Mix’

90 days. Vivid blooms in shades of red, purple, yellow, orange and white. The 1.5-inch blooms adorn long, wiry stems. Height 24–30 inches.



Data

Data were collected at 20 sites in 2013.

Trait	‘Oklahoma Mix’	‘Sunbow Mix’	Same
Germinated best	35 %	10 %	55 %
Healthier plants	26	5	68
Bloomed earlier	37	11	53
More flowers	42	11	47
More attractive in garden	37	26	37
More attractive in vase	21	0	79
<i>Preference</i>	78	22	
<i>Recommend to others</i>	100	74	
<i>Overall rating¹</i>	8.42	7.21	

¹Rated on a scale of 1 to 10, with 1 = poor and 10 = excellent.

General Comments

- Started blooming in mid July and still going strong in October. Both varieties were loaded with flowers all summer. When I cut flowers to bring inside for bouquets, they stayed good for over 2 weeks.
- Produced great plants. Flowers were very prolific, beautiful and lasted very well as cut flowers. We cut them regularly, and they bloomed into early October.
- Both varieties had more blossoms/plant than the ones I have planted in the past.
- Sturdy stalks. Both very pretty and healthy looking.
- Both were beautiful—many compliments on them!
- Beautiful plants. Vibrant colors.

- Beautiful flowers.
- One hundred percent germination. Sturdy plants.
- I’ve grown zinnias for years—they are a favorite—and the plants in this trial started similarly to what we have grown in the past. The flowers seemed to be smaller than ones I’ve planted in the past, but are very colorful—new colors I’ve not had before! And my neighbor lady enjoyed the bouquet I brought her the other day. They are so welcoming every time I get to the garden! Late summer was hot and dry, yet these guys kept blooming! Both varieties are great!

Comments on ‘Oklahoma Mix’ Zinnia

- Larger flower heads; taller stalks; stood out more in the garden; deeper colors.
- Larger flowers and more colorful.
- More larger flowers appeared. More robust plants and more flowers.
- Bigger flowers; more flowers. I liked the variety of colors.
- Just a little bit prettier.
- Healthy tall flowers, good for cutting due to long stems even in branches. Started blooming several days earlier.
- Early maturity. Seemed to put on more flowers in a continuous manner. Its cut flowers lasted longer in a vase. Our customers preferred this variety.
- More flowers. More color variety. Plants were shorter but sturdier.
- Not quite as vibrant but also very pretty. Would plant again.
- More variety in colors.
- Superior colors for bouquets and in the garden.

More Comments on 'Oklahoma Mix' Zinnia

- It grew faster and looked better and the flowers were prettier and bigger.
- Had some brilliant red blossoms on a few plants—lovely!
- Germinated significantly more quickly.

Comments on 'Sunbow Mix' Zinnia

- Brighter, more colorful mix of colors.
- Truly loved it. Petite, tight, vibrant clusters of blossoms. Lasted the longest and was very tolerant of weather extremes. Today it is October 15 and still somewhat colorful and standing tall.
- Mostly pinks and purples.
- Bloomed six days earlier. Beautiful colors.
- Fine if you like smaller flowers.
- More susceptible to falling over or breaking/bending in wind and hard rain.
- Looked like zinnias I've had before—the top turns brown and the lower half of the blossom remains colored for a while.
- Looked like zinnias I've had before—the top turns brown and the lower half of the blossom remains colored for a while.
- More yellow and oranges mixed in with the pinks and reds. A wider variety of colors.

Conclusions

Gardeners were delighted with both varieties. 'Oklahoma Mix' and 'Sunbow Mix' produced an abundance of bright, colorful flowers for bouquets. 'Oklahoma Mix' matched or exceeded 'Sunbow Mix' in all traits, including plant health, earliness, abundance of blooms, and beauty. Every gardener recommended it.

Appendixes

Appendix 1. Welcome Letter

Dear Jenny,

Welcome to our research team! It will be fun to work with you this summer. Enclosed are the seeds you ordered. If you are missing anything, please let me know. Now let's go over some key points:

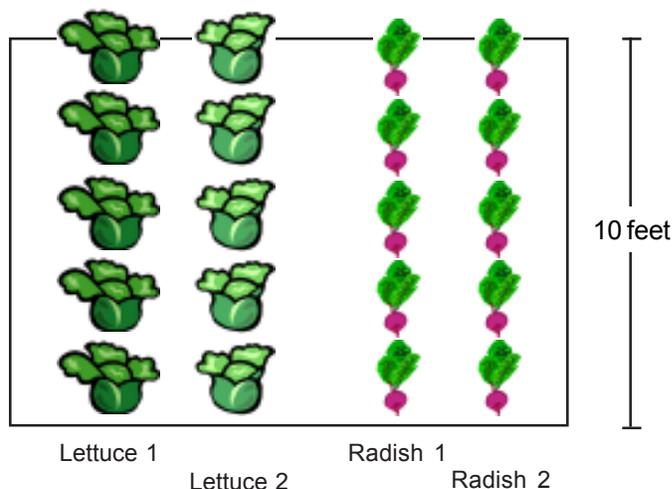
1. Each trial compares two varieties. **You must plant both varieties.**
2. To make it a fair comparison, you need to **treat both varieties in the same manner**. They should get the same amount of sunlight and general care (watering and fertilizing).
3. We want to see how these varieties perform under real-life home garden situations. The seed packets have some instructions on how to sow your seeds, but you may use your own gardening practices. For example, I sow my cucumber seeds in a *row*, but you can plant them in *hills*, if you wish. It's up to you.
4. When possible, **grow the varieties for each trial in rows next to each other**. You have enough seeds to grow at least 10 feet of each variety. To make it easier for you, I've enclosed a yellow row marker with string. There is a 10-foot space between the two black marks on the string. It's okay if you don't have quite enough space for 10-foot rows, but try to sow close to that much area. We want to get a fair look at both varieties. Look at the diagram below. Notice that the varieties being compared are grown next to each other. In this way, they are most likely to get the same amount of sunlight and care.
5. Most people don't like to grow flowers in rows. It's okay to plant them in groups or clumps instead. Just remember to give both varieties the same general location and care.
6. **Use the plot labels** that are enclosed. This will help you remember which variety is which. You may want to **make a plot diagram after you are done planting** for your future reference in case the plot labels fade or get removed accidentally.
7. An example of a completed evaluation form is enclosed. Use this as a guide to help you when evaluating the varieties in your trials.

If you have any questions, please don't hesitate to ask. I'll be happy to help.

Again, thanks for joining our team. If you know of a friend who may be interested in joining us, please share the enclosed brochure. Thanks!

Sincerely,

Tom Kalb
Horticulture Educator
tom.kalb@ndsu.edu



Appendix 2. Example of Evaluation Form

Muskmelon Variety Trial

Trial #19

Gardener Name: Jenny Gardener

County: Golden Valley

Date Sown: May 30

Which variety?	Apollo	Zeus	Same	Comments
Germinated best?		X		Both had near 100% germination, but Zeus seedlings showed more vigor
Had healthier plants?		X		Apollo vines turned gray in fall
Produced the first ripe melons?	X			Three days earlier than Zeus
Produced higher yields?		X		Zeus produced 10 good melons; Apollo produced only 6
Had more attractive melons?		X		Zeus had larger fruits and brighter orange flesh
Tasted better?		X		Zeus was heavenly; Apollo was not quite as sweet

Overall Performance Rating	Apollo	Zeus
Rate each variety on a scale of 1 to 10, with 1 = poor and 5 = good and 10 = excellent. Don't give both a "10". Be very critical!	5	9

Preference		
Circle the variety you prefer. Don't circle both—make a choice!	Apollo	<u>Zeus</u>
Please state the reason(s) for your preference: <i>Zeus was outstanding. Good yields of large, sweet fruits. The vines looked healthy all summer. Apollo ripened early, but the vines were weak and the melons tasted bland.</i>		

Recommendation
Circle the varieties you recommend for North Dakota gardeners: Apollo <u>Zeus</u> Both Neither

Please write any additional comments on back. They are very helpful!

Send to Tom Kalb, NDSU-Extension, 3715 East Bismarck Expressway, Bismarck, ND 58501.

E-mail: <tom.kalb@ndsu.edu>. Thanks for your participation!

Appendix 3. Acknowledgements

Gardeners

North Dakota State University Extension Service is very thankful to the following gardeners who provided results from their research plots:

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Ken Anderson	Aric, Bailey, Clayton, Cotton and Jessica Grove	Sharon Lehman
Kristie Anderson	Jennifer, Ethan and Evan Grove	Amy J. Lenertz
Mary Ann and Carissa Anderson	Connie, Alison and Emma Gulleon	Ellin and Adam Lindee
Vanessa, Claire, Bethany and Grant Anderson	Vickie L.T. Gunsch	Amanda, Kaiyah and Selah Luethy
Chris Augustin	Jennifer Hagemeister	Verna Lund
Matt Baer	Kaylie Halvorson	Apryl Lyn and Willow Ann Lunde
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Adella Benz	Mark Hanlon	Terry Mack
Laura Benz	Sylvia Hansen	Jean Madsen
Ruth Bornsen	Nancy M. Hanson	Cheryl Marshall
Kathy Bosch	Kaylie Halvorson	Lori Martin
Harriet and Lyle Bracken	Jerry Hapka	Megan Martin
Lorna D. Bradbury	Kim Holloway	Jess McMullen
Carmy Bren	Pam Holscher	Valerie, Hayes, Sydney, Whitney and Wyatt McGee
Cheryl J. Brooke	Kathy Holte	Eden and Wyatt McLeod
Avery Brousseau	Shirley K. and Bob Holzer	Deb McPherson
Amy, Alexia and Andrew Brown	Andrew, Ava and Emily Huffling	Peter, Alena and Ingrid Meberg
Krista, Abby, Brady and Emma Burman	Glenna A. Johnson	Janice Mills
Jim and Sharon Canfield	Nancy and Dan Johnson	Darrick, Aubrie, Gabrielle and Olivia Mischke
Caring Hands 4-H	Megan Jones	Sara M. Mittelsteadt
John Carlson	Tom, Joe and Maria Kalb	Diane and Mason Moran
Deb Chambers	John Karhoff	Alexis Morlok
Pat Conrad	Gail Kartes	Jon Mueller
Brooklyn and Madison Corum	Cory, Melissa, Claire, Craig and Elena Keith	Linda Ness
Phyllis Dieterle	Lyndsie Kennedy	Penny Nester
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Kelsey Liann Dunnell	Bryan, Rhonda, Kaden and Layne Korgel	Carrie, Gavin, Levi and Westin Opdahl
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Pamela Erickson	Cade, Cody, Kara and Keegan Kostohryz	Sheila and Ron Palczewski
Ronald Erickson	Elizabeth, Holden, Hudson and Savannah Kraft	Chuck Peterson
Alice Fitterer	Mathew Krogen	Donna L. Peterson
Lon and Isaac Flage	Sue Krohn	Natalie and Gavin Peterson
Lori Flaten		Charlotte L. Pladsen
Nadine J. Florhaug		
Julie, Carly and Nicole Fornshell		
Jacqueline Friedt		

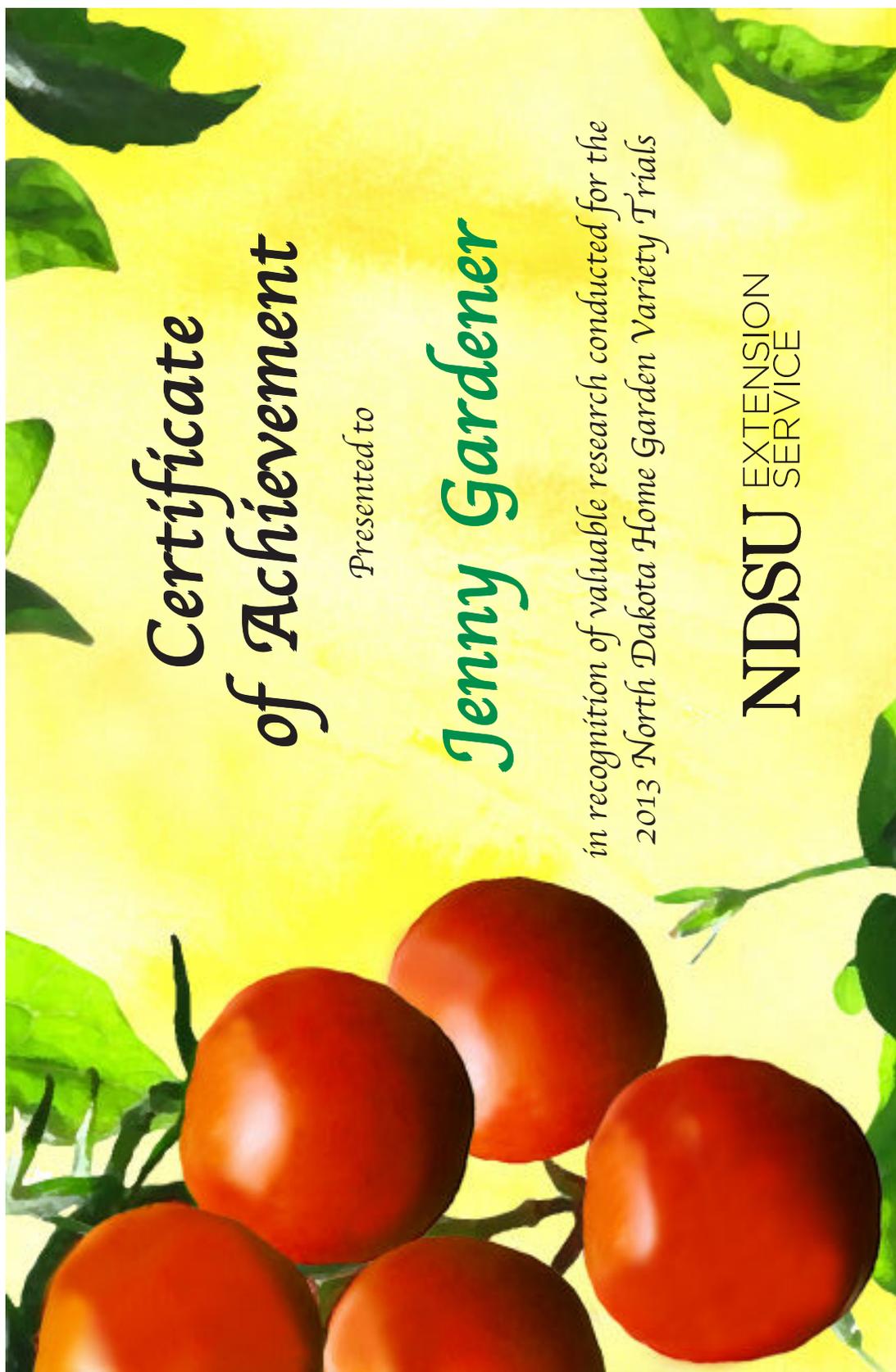
DeLaine Poppke
Shelley Porter
Diane Randle
Joy Rasmussen
Tim Rasmussen
Emily, Gracie, Hayden and
 Madeline Risty
Rena, Blake and Haylee Rustad
Alta Schaar
Robert Schank
Lois and Dennis Schott
Sharon Schroeder
Blaine and Virginia Schumacher
Mark Schumaker
Charlotte Schwab
Dorothy Shertzer
Larry Simpson
Kyla Spichel
Courtney Sprenger
Jeff and Lahni Stachler
Jon Stika
Patricia Stockdill
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Stacey and Paul Swanson
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Maria, Elizabeth and Katelynn
 Toomey
Terri Tranby
Bonnie Trom
Dawn Ueckert
Sima Ulrich
Jill Vandal
Whitney and Lilli Vetter
Lillian Volochenko
Joyce Ann Waldock
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 Samantha Weber
Rachelle and Rylee Weiler
Kenneth Weinzierl
Brenda Weron
Jane White
Karla, Azariah, Elizabeth, Isaiah,
 Josiah and Maria Wiegrefe
Alan and Janelle Wieser
Jennifer Wild
Melinda, Garrett, Raelyn and
 Trent Williams
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Adalynne and Dominic Wood
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<http://www.flickr.com/photos/veganfeast/4996848357/>; **44: green peppers** by Ian Turton, <http://www.flickr.com/photos/16041363@N00/3733048642/>; **45: Peppery** by Bill Kowk, <http://www.flickr.com/photos/30531256@N04/3413973572/>; **46: Orange Peppers** by Clint Mickel, <http://www.flickr.com/photos/30649191@N00/9138019295/>; **47: Peppers!** by Ian Ransley, <http://www.flickr.com/photos/design-dog/1105387136/>; **48: capsicum** by Takato Marui, <http://www.flickr.com/photos/m-louis/2049526235/>; **49: Gypsy Peppers** by Reid Beels, <http://www.flickr.com/photos/reidab/1347445489/>; **50: Poblano Chili** by Akaporn Bhothisuwan, <http://www.flickr.com/photos/akaporn/4885539450/>; **51: Red Peppers** by George Brett, <http://www.flickr.com/photos/orpost/3890670791/>; **52: Jalapeño** by lucianvenutian, <http://www.flickr.com/photos/lucianvenutian/898368349/>; **53: Peppers at the market** by La Citta Vita, <http://www.flickr.com/photos/49539505@N04/6262714188/>; **54: little pumpkins** by Ginny, <http://www.flickr.com/photos/78011127@N00/2938151720/>; **55: Pumpkins** by Nadia Prigoda-Lee, <http://www.flickr.com/photos/57977817@N00/56425560/>; **56: Pumpkin** by Lady_Fox, http://www.flickr.com/photos/lady_fox/1763413173/; **57: a big one** by jasleen_kaur, <http://www.flickr.com/photos/25384802@N08/2925500058/>; **58: rutabagas** by bourgeoisbee, <http://www.flickr.com/photos/bourgeoisbee/1956050903/>; **59: A Pound of Spinach -- Fresh from the garden** by Robb & Jessie Stankey, <http://www.flickr.com/photos/robbplusjessie/3639148843/>; **60: Baby spinach** by Robin, <http://www.flickr.com/photos/goofygouda/4670222381/>; **61: Organic Zucchini** by ilovebutter, <http://www.flickr.com/photos/jdickert/852904568/>; **62: zucchini** by UGA College of Agriculture, <http://www.flickr.com/photos/ugacommunications/5965110798/>; **63: Squashed** by Abbyladybug, <http://www.flickr.com/photos/abbyladybug/3747600282/>; **64: chard: a leaf and stems** by Yu, <http://www.flickr.com/photos/ubookworm/31066093/>; **65: Les Tomates** by Jess, <http://www.flickr.com/photos/jels/5219108481/>; **66: red and ripe** by Greg Pevirell-Conti, <http://www.flickr.com/photos/gregpci/2305709784/>; **67: Firey Tomatoes** by Swaminathan, <http://www.flickr.com/photos/araswami/1068420494/>; **68: Black Krim tomato** by Indirect Heat, <http://www.flickr.com/photos/indirectheat/4789013776/>; **69: roma** by Kelly, <http://www.flickr.com/photos/spinksy/298570380/>; **70: watermelon is love** by Edward O'Connor, <http://www.flickr.com/photos/hober/168648375/>; **71: Watermelon II** by Still Burning, <http://www.flickr.com/photos/stillburning/190685771/>; **72: yellow watermelon** by Greg Hirson, <http://www.flickr.com/photos/ghirson/42770867/>; **73: Basil** by Amanda Slater, <http://www.flickr.com/photos/pikerslanefarm/2650630412/>; **74: lemon basil** by Joan, <http://www.flickr.com/photos/pipdiddy/4969488166/>; **75: Purple Basil** by Patrick Bennett, <http://www.flickr.com/photos/-patrickb-/5838864066/>; **76: Coriander in a close-up** by Henrique Vicente, <http://www.flickr.com/photos/henriquev/41333668/>; **77: Flat-leaved parsley** by Jeremy Keith, <http://www.flickr.com/photos/adactio/2856031477/>; **78: Pink cosmos and bee** by Dennis Wong, <http://www.flickr.com/photos/denniswong/3375540542/>; **79: Chorus Line** by John, <http://www.flickr.com/photos/puzzler4879/5349425408/>; **80: Bee Enjoying A Sunflower** by Audrey, <http://www.flickr.com/photos/audreyjm529/939989293/>; **81: Sunflower blossom / bee** by Ctd 2005, <http://www.flickr.com/photos/kikisdad/40410814/>; **82: Trio** by Roger Lynn, <http://www.flickr.com/photos/rogerlynn/1181903351/>; **83: Bright Happy Face Sunflower** by Audrey, <http://www.flickr.com/photos/audreyjm529/197161152/>; **84: Durum wheat spike** by International Maize and Wheat Improvement Center, <http://www.flickr.com/photos/cimmyt/5146721586/>; **85: Zinnia** by TexasEagle, <http://www.flickr.com/photos/texas eagle/7411654870/>; **86: Pretty in Pink** by BlueRidgeKitties, <http://www.flickr.com/photos/blueridgekitties/4836624430/>.

Appendix 4. Certificate of Recognition



Appendix 5. Seed Sources

The following are a few sources where seeds of the varieties tested in 2013 may be found. This list is not meant to be a complete list. There are many other seed companies that offer these varieties. The information given herein is for educational purposes only. References to a company are made with the understanding that no discrimination is intended and no endorsement by the North Dakota Extension Service is implied.

Key:

Bu = Burpee	Fe = Fedco	Ha = Harris	HP = HPS	Hu = Hummert
Jh = Johnny's	Jr = Jordan	Ju = Jung	Kz = Kitazawa	MV = Mtn Valley
Os = Osborne	Pi = Pinetree	SS = Seed Savers	St = Stokes	Te = Territorial
TG = Tomato Growers	TT = Totally Tomatoes	Ve = Veseys	Wi = Willhite	

1. **Bush Blue Lake 274:** Bu, Fe, Ha, Hu, HP, Jr, Ju, MV, Os, Pi, St, Wi. **Jade II:** Jr, Ju, MV, St, Te.
2. **Masai:** Fe, Ju, Pi. **Maxibel:** Fe, Ju Os, Pi, Te, Ve, Wi.
3. **Royal Burgundy:** Fe, Jh, Ju, MV, Os, Pi, St, Te, Ve. **Velour:** Fe, Jh, Ju, Os, Te.
4. **Envy:** Jh, Pi, SS. **Midori Giant:** Bu, Fe, Kz, Te.
5. **Gita:** Jh. **Orient Wonder:** Kz, Te.
6. **Detroit Dark Red:** Bu, Fe, Ha, Hu, Jr, MV, Os, Pi, SS, Ve, Wi. **Merlin:** Ha, Jh, Os, St, Te, Ve.
7. **Coronado Crown:** HP, Ju. **Packman:** Ha, HP, Hu, Jr, Ju, MV, Os, TT, Wi.
8. **Hercules:** Jh¹, Ju. **New Kuroda:** Fe, Kz, Pi.
9. **Laguna:** Jh¹, Os, Ju. **Nectar:** Jh.
10. **Deep Purple:** Jh. **Purple Sun:** Te.
11. **Chablis Yellow:** Kz. **Yellow Sun:** Jh.
12. **Fiesta:** Ha, Hu, Jr, Os, St, Wi. **Wilda's Pride:** Ha.
13. **Red Beauty:** Jh. **Robust 997:** Jh, Wi.
14. **Ambrosia:** Fe, HP, Hu, Jr, Ju, MV, Wi. **Luscious:** Fe, Ha, Jh, Jr, Ju, Os, St, Te, Ve.
15. **Xtra-Tender 277A:** Ha, HP, Jh, Jr, Ju, St. **Mirai 350 BC:** Ha, Hu, Ju, Kz.
16. **4001Y:** Ha, Os. **Vision:** Ha, Jh, St.
17. **Allure:** Ha, Jh, Jr, St, Ve. **Montauk:** Ha, Jh, Jr, Ju, St, Ve.
18. **Applause:** Ha, Ve. **Honey Select:** Fe, HP, Hu, Ju, MV, Os, Pi, Ve.
19. **Calypso:** Fe, Jr, Kz, Os, Pi, Ve, Wi. **Homemade Pickles:** HP, Jr, Ju, Pi, Te, TT, Wi.
20. **General Lee:** Fe, Ha, Jh, Jr, Pi, Te, TT. **Straight Eight:** Bu, HP, Hu, Jr, Ju, MV, Ve, Wi.
21. **Diva:** Ha, HP, Jh, MV, Pi, TT.
22. **Summer Dance:** Ju, Kz, Os, Pi, Te, TT, Ve. **Tasty Green:** Ha, HP, Hu, Jr, Ju, Kz, MV, Os, St, TT, Ve.
23. **Autumn Wings:** Fe, Ha, Hu, Jh, Jr, Ju, Os, St, Te, Ve. **Gremlins:** Jh, Ju, Te.
24. **Joi Choi:** Fe, Ha, Jh, Jr, Kz, Os, St, Te. **Prize Choy:** Fe, SS.
25. **Tatsoi:** Fe, Jh, Kz, MV, Os, Pi, St, SS, Te, Ve. **Tatsoi Savoy:** Kz.
26. **Kossak:** HP, Jh, Ju, Os, Pi, Ve. **Winner:** Fe, Jh, Jr, Kz, Os, St.
27. **Nancy:** Fe, Jh. **Sylvesta:** Jh, Ju, Ve.
28. **Merveille des Quatre Saisons:** Pi, SS. **Red Cross:** Jh.
29. **Nevada:** Ha, Jh, Ju, Te. **Reine des Glaces:** Jh, Te.
30. **Pablo:** Fe, SS. **Sierra:** Fe, Ha, Wi.
31. **Italienischer:** Fe, Te. **Venetian:** Te.
32. **New Red Fire:** Fe, Ha, Jh, Ju, Kz, Os, Pi, St, Te, Ve. **Red Velvet:** Pi, SS, Te.
33. **Mascara:** SS, Te. **Red Salad Bowl:** Fe, Hu, Jh, Jr, Ju, MV, SS, St, Ve.
34. **Crisp Mint:** Fe, Ju, SS, Te. **Green Forest:** Jh, Ve.
35. **Athena:** Fe, Ha, HP, Hu, Jh, Jr, Ju, MV, Os, St, Te. **Sarah's Choice:** Jh.
36. **Solstice:** Hu, Ju. **Superstar:** Ha, Hu, Jr, Ju, Os, Te.
37. **Arava:** Fe, Jh. **Passport:** Ha, Pi, St, Ve, Wi.
38. **Ginkaku:** Kz. **Sun Jewel:** Jh.
39. **Carmine Splendor:** Jh, Ju. **Red Burgundy:** Fe, Hu, Jr, Kz, Pi, SS, Te, Wi.

40. **Early Frosty**: Fe, Ha, Hu, Jr, MV, Pi, Ve. **Little Marvel**: Ha, HP, Hu, Jr, Ju, MV, Wi.
41. **Knight**: Ha, Hu, Jr, MV, Pi, St, Ve, Wi. **Maestro Improved**: Kz, Os.
42. **Cascadia**: Fe, Jr, Ju, Pi, St, Te. **Sugar Ann**: Fe, Jh, Jr, Ju, MV, Os, Te, Wi.
43. **Avalanche**: Jh, Ju, Te. **Oregon Sugar Pod II**: Bu, Fe, Ha, Hu, Jr, Kz, MV, Os, Pi, Te, Ve.
44. **Bell Boy**: HP, Hu, Jr, Ju, MV, St, TG, TT, Wi. **New Ace**: Fe, Ha, HP, Pi, TT, Ve.
45. **Flavorburst**: Bu, Fe, HP, Jh, Ju, TG, TT. **Golden Summer**: HP, Wi.
46. **Gourmet**: HP, Jh, Ju, Te, TT. **Orange Blaze**: Ha, HP, Hu, Ju, St, TG, TT, Ve.
47. **Giant Marconi**: Ha, HP, Ju, MV, TG, TT. **Jimmy Nardello's**: Fe, SS, Te, TT.
48. **Carmen**: Fe, Ha, HP, Jh, Ju, MV, St, TG, TT, Ve. **Marcato**: Ha, St.
49. **Gypsy**: HP, Hu, Jr, Ju, MV, Os, TG, TT. **Flamingo**: Ha, HP, Os, Te, TT.
50. **Ancho Grande**: MV. **Tiburón**: Fe, Ha, Jh, Os.
51. **Cayenne Long Red Thin**: Fe, HP, Hu, Os, St, TT. **Cheyenne**: Bu, Ha, Jh, St.
52. **Early Jalapeno**: Fe, HP, Jh, Jr, Ju, MV, Pi, Te, TT, Ve. **Mucho Nacho**: Ha, HP, Ju, MV, TG, TT.
53. **Mariachi**: Bu, HP, Hu, Ju, MV, TG, TT. **Santa Fe Grande**: MV, SS. TG, Wi.
54. **Munchkin**: Ha, Hu, Jh, Jr. **Wee-B-Little**: Fe, Ha, Jh, Jr, Ju, MV, Os, Pi.
55. **Field Trip**: Ha, Os, St. **Neon**: Ha, Jr, Te, Ve.
56. **Gladiator**: Ha, Hu, Jr, MV, Os, St. **Orange Rave**: Jr, St, Te.
57. **Big Doris**: Jh, Te. **Howden Biggie**: Ha, Jr, Ju, MV, Os, St.
58. **American Purple Top**: Ha, Hu, Jr, Ju, MV, Os, St. **Laurentian**: Fe, Ju, Os, Pi, St, Ve.
59. **Donkey**: Fe. **Tyee**: Fe, Ha, Jh, Jr, Ju, MV, Os, Pi, Ve.
60. **Olympia**: Fe, Ha, Te. **Pigeon**: Jh¹, Os.
61. **Spineless Beauty**: Fe, Ha, Jr, MV, St. **Zucchini Elite**: Ha, Jr, MV, Os.
62. **Green Tiger**: Bu, Ha, HP, Ju, Os, Pi. **Safari**: Jh.
63. **Easypick Gold**: HP, Ju, Te, TT. **Gold Rush**: Ha, HP, Hu, Jr, MV, Os, St, Wi.
64. **Magenta Sunset**: Kz, MV, Os, Te. **Peppermint**: Ha, Os, St.
65. **Better Bush**: TG, TT. **Bush Early Girl II**: HP, TT.
66. **Siberian**: HP, SS, TG, TT. **Stupice**: Os, Pi, SS, Te, TG, TT.
67. **Celebrity**: Bu, Ha, HP, Hu, Jh, Jr, Ju, MV, Os, St, TG, TT, Wi. **Mountain Fresh Plus**: Ha, HP, Hu, Jh, Jr, Ju, St, TT.
68. **Black Prince**: Te, TG. **Indigo Rose**: Ha, Jh, Ju, MV, Te, TG, TT.
69. **Roma VF**: Bu, Ha, HP, MV, Pi, TG, TT, St, Ve. **Viva Italia**: HP, Jr, Ju, MV Os, TT.
70. **Sweet Dakota Rose**: Fe. **Sweet Favorite**: Fe, Jh, Jr, Ju, MV, St.
71. **Blacktail Mountain**: Fe, SS, Te. **Sugar Baby**: Fe, Ha, HP, Hu, Jh, Jr, Ju, MV, Os, Te, Wi.
72. **Early Moonbeam**: Fe. **Yellow Doll**: Ha, HP, Hu, Jr, Ju, MV, Os, St.
73. **Genovese**: Bu, Fe, Hu, Jh, Os, SS, St. **Nufar**: Jh, Os.
74. **Mrs. Burns**: Fe, Jh, Os, SS. **Sweet Dani**: Fe, Ha, HP, Ju, Pi, Te.
75. **Amethyst Improved**: Jh. **Purple Ruffles**: Fe, Ha, HP, Jh, MV, Pi, St, Te, Ve.
76. **Caribe**: Fe, Pi. **Confetti**: HP, Te, TT.
77. **Giant of Italy**: Jh. **Titan**: Jh.
78. **Double Click Mix**: Fe, Ha, Jh, St, Te. **Versailles Mix**: Ha, Jh.
79. **Bright Lights**: Bu, Fe, Hu, Jr. **Diablo**: SS.
80. **Firecracker**: Jh, Ve. **Music Box**: HP, Jh, Pi.
81. **ProCut Gold**: Ha, Jh. **Sunrich Gold**: Ha, Jh, St.
82. **Sonja**: Jh, Os. **Soraya**: Fe, Ha, HP, Jh, Ju, Os, St, Te.
83. **Double Quick Orange**: Jh. **Greenburst**: Ha.
84. **Black Tip**: Jh. **Utrecht Blue**: Fe.
85. **Benary's Giant Coral**: Ha, Jh, St. **Senora**: Bu, HP, Ju.
86. **Oklahoma Mix**: Ha, Hu, HP, Jh, Ju, Os, St. Te. **Sunbow Mix**: Jh.

¹This variety might not be available from this company in 2014.

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