

North Dakota Home Garden Variety Trials

Results
2014



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 25% of adults and 8% of children in North Dakota eat enough vegetables for a healthy diet.³ We need to eat more vegetables—growing a productive garden can obviously help with this.

Compared to other crops, relatively little vegetable research is conducted at research stations in North Dakota. These plots provide some insight into the char-

acteristics of varieties, but they do not test varieties under actual home 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: 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, herbs and flowers.
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 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 2014, 55 trials were conducted. This included our first look at potato 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 Centers for Disease Control. 2012. North Dakota: State Nutrition, Physical Activity, and Obesity Profile.

Preparation of Seed Packets

Seeds are ordered in bulk from seed companies. Seeds are subsequently packed into coin envelopes (potato seeds are packed into brown paper bags). 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. Most seeds are untreated; exceptions being most sweet corn trials and a few melon varieties. No genetically modified organism (GMO) varieties are used.

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.ag.ndsu.edu/homegardenvarietytrials/>. Interested gardeners in spring 2014 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.

Through our Potato Pirates Project, potato seed was made available to over 130 families at no cost.

Each gardener signs 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 2014, approximately 275 households submitted results from their trials (this accounts for 80% of households who received seeds). Results from over 1,000 research trials were submitted. Data were obtained in 47 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 2014

The growing season of 2014 started cooler and wetter than normal. The establishment of gardens was delayed by weeks (Figure 1).

Growing conditions remained cooler than normal for most of the growing season. We focus our research on early maturing varieties; nevertheless, many of the melon and other heat-loving crops failed to mature before frost. Cool-season vegetables such as lettuce, peas and spinach thrived.

Rainfall amounts were fairly normal. There were no reports of widespread flooding or droughts.

The first hard frost arrived at most gardens 3–9 days later than usual. A hard frost on October 3 put an end to the growing season in the west and central regions. A hard frost struck the east on October 8.

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.

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.ag.ndsu.edu/homegardenvarietytrials/>.

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).

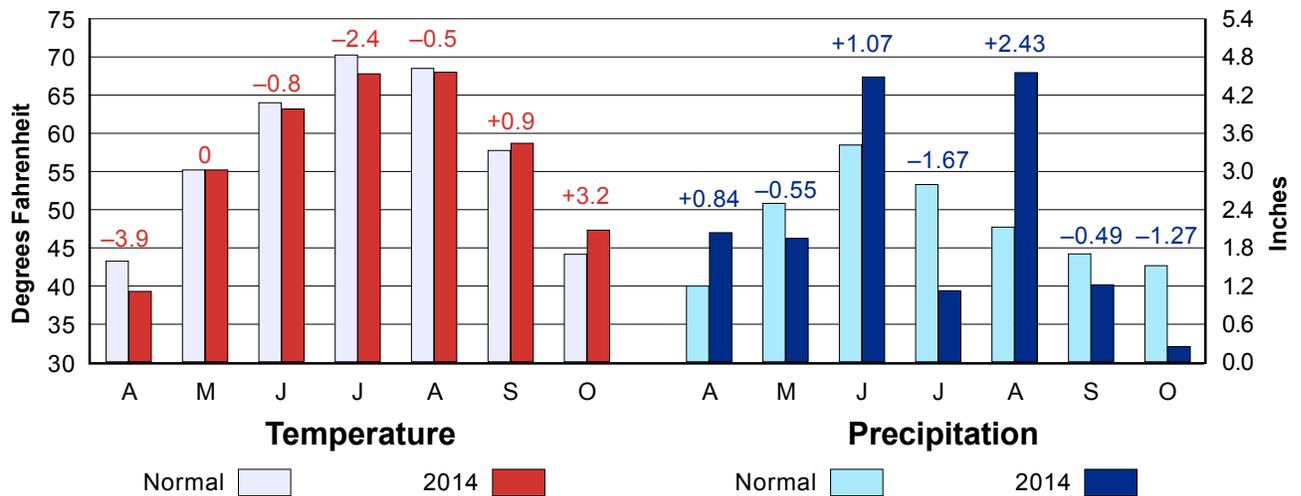


Figure 1. Composite mean monthly air temperatures and precipitation amounts in 2014 and normal (1981–2010) for key locations (Fargo, Grand Forks, Mandan, Minot, Dickinson and Williston) scattered across the state. The growing season started cold and wet, and remained cool for most of the growing season. Source: ND Agriculture Weather Network.

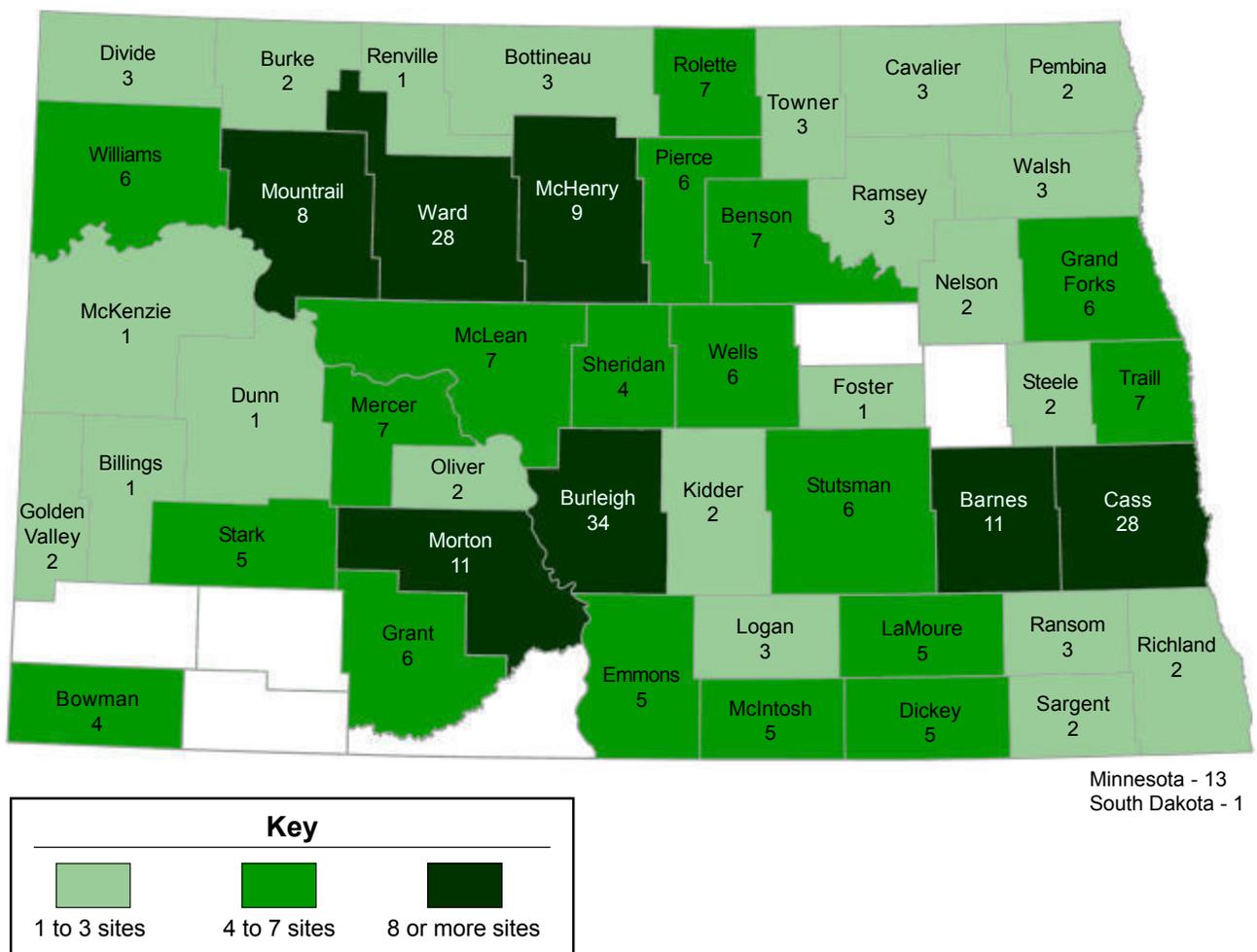


Figure 2. Households reporting variety trial results in 2014.

Chapter 2

Summary of Results

Gardeners participated in 55 trials, each trial comparing two promising vegetable, herb or flower varieties. Over 425 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

'Bush Blue Lake 274' has a strong reputation and our gardeners liked it. Its plants were bigger and fuller. 'Lewis' pods were darker green, straighter, more slender, and slower to get seedy. Taste qualities and yields were comparable.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>B. Blue Lake 274</i>	52	83	7.75
<i>Lewis</i>	48	71	7.50
(24 sites)			



2. Bean, Green Filet

'Crockett' pods were shiny dark green, straight, slender and delicious. Its plants were rich green, healthy and productive. 'Maxibel' showed strong seedling vigor and matured earlier; its pods were medium green and long.

Variety	Pref (%)	Rec (%)	Rating
<i>Crockett</i>	67	85	7.67
<i>Maxibel</i>	33	64	7.26
(40 sites)			



3. Beet

The strong and consistent performance of 'Red Ace' was impressive. It especially excelled when gardeners allowed beets to get larger for pickling; such beets were uniform and flavorful. 'Zeppo' was good but showed no advantage.

Variety	Pref (%)	Rec (%)	Rating
<i>Red Ace</i>	60	94	7.80
<i>Zeppo</i>	40	72	7.33
(19 sites)			



4. Carrot, Orange

Both varieties performed well; neither clearly outperformed the other for any trait. Gardeners generally liked 'Goldfinger' for the beauty of its long, straight roots. They liked 'Laguna' for its larger roots and consistently high yields.

Variety	Pref (%)	Rec (%)	Rating
<i>Goldfinger</i>	47	76	7.59
<i>Laguna</i>	53	76	7.55
(59 sites)			



5. Carrot, Purple

Plants were healthy and produced long roots. 'Purplesnax' showed superior seedling vigor, deeper purple color and straighter roots. 'Purple Haze' tasted much better—less earthy—especially when gardeners ate the carrots raw.

Variety	Pref (%)	Rec (%)	Rating
<i>Purple Haze</i>	53	67	7.71
<i>Purplesnax</i>	47	73	7.73
(15 sites)			



6. Corn, Early Sugary Enhanced

'Temptation' surpassed 'Trinity' (the standard early variety) in all traits. Seedlings germinated well in the cool soil; the stalks were healthy. It matured earlier and its cobs were long and delicious. 'Trinity' did well but was overshadowed.

Variety	Pref (%)	Rec (%)	Rating
<i>Temptation</i>	67	75	7.86
<i>Trinity</i>	33	67	7.08
(17 sites)			



7. Corn, Midseason Super Sweet

'Xtra-Tender 274A' grew vigorously and was ready to harvest at least one week earlier. The ears were large and filled with kernels. Gardeners raved over its outstanding flavor. Summer Sweet '7002R' could not compare.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>7002A</i>	14	29	5.57
<i>Xtra-Tender 274A</i>	86	71	8.58
			(8 sites)



8. Corn, Late Super Sweet

Data are limited. 'Xtra-Tender 277A' excelled for the second year. Its yields were impressive and its flavor was super sweet. '7112R' ears were large and uniform with good tip cover. Its kernels had a delicious balance of corn and sugars.

Variety	Pref	Rec	Rating
<i>7112</i>	33	67	8.00
<i>Xtra-Tender 277A</i>	67	67	8.33
			(3 sites)



9. Corn, Midseason Synergistic

'Cuppa Joe' showed good tolerance to cold soil. It germinated better than 'Allure' and matured earlier. Gardeners rated it highly and enthusiastically recommended it. Both 'Cuppa Joe' and 'Allure' produced good yields of quality sweet corn.

Variety	Pref	Rec	Rating
<i>Allure</i>	29	63	5.88
<i>Cuppa Joe</i>	71	88	7.38
			(8 sites)



10. Corn, Late Synergistic

Data are limited. 'Montauk' and 'Serendipity' both produced big, delicious ears of sweet corn. Gardeners were evenly split on their preference. The outstanding flavor of 'Montauk' and good yields of 'Serendipity' were noteworthy.

Variety	Pref	Rec	Rating
<i>Montauk</i>	50	60	6.80
<i>Serendipity</i>	50	60	6.80
			(5 sites)



11. Cucumber, Burpless

'Tasty Green' yields were earlier and much more abundant. Its fruits were straighter, more attractive and better tasting. Our summer was cool like an English summer, but the English cucumber 'Telegraph Improved' struggled.

Variety	Pref	Rec	Rating
<i>Tasty Green</i>	74	75	7.37
<i>Telegraph Imp.</i>	26	35	5.68
			(21 sites)



12. Cucumber, Pickling

'Homemade Pickles' has always been a standout performer. It germinated better, matured earlier, and produced many more cucumbers than 'Eureka'. Many gardeners noted the uniform shape and size of its fruit.

Variety	Pref	Rec	Rating
<i>Eureka</i>	29	48	5.90
<i>Home. Pickles</i>	71	78	7.10
			(25 sites)



13. Cucumber, Slicing

'Straight Eight' is a popular heirloom variety in North Dakota due to its tolerance of cool summers, but the hybrid 'Dasher II' was healthier, produced cucumbers earlier, and produced much higher yields. Fruit qualities were comparable.

Variety	Pref	Rec	Rating
<i>Dasher II</i>	70	91	7.80
<i>Straight Eight</i>	30	55	6.40
			(12 sites)



14. Cucumber, Snack

This was a tough year for cucumbers and 'Muncher' showed greater vigor throughout the growing season. Its yields were earlier and more consistent. The fruits of both varieties were straight, smooth-skinned and delicious.

Variety	Pref	Rec	Rating
<i>Diva</i>	36	60	6.73
<i>Muncher</i>	64	80	7.27
			(25 sites)



15. Kale, Dinosaur

New hybrid 'Black Magic' matched or exceeded 'Lacinato' in all traits including yield and flavor. It showed strong vigor and was ready to harvest earlier. Gardeners liked its dark, crinkly leaves. Insect damage was a problem for both.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>Black Magic</i>	76	86	7.35
<i>Lacinato</i>	24	68	7.05
			(25 sites)



16. Lettuce, Red Butterhead

Both varieties performed well. They resisted bolting and produced good crops of very attractive, crisp and delicious lettuce. Gardeners liked the health of 'Red Cross' and some gardeners raved over the beauty of 'Skyphos'.

Variety	Pref	Rec	Rating
<i>Red Cross</i>	54	71	7.92
<i>Skyphos</i>	46	64	7.77
			(14 sites)



17. Lettuce, Red Crisphead

Gardeners praised the beauty of 'Pablo'. Its bronze, wavy leaves contrasted nicely with its green inner leaves. 'Sierra' was more productive. Its exceptional resistance to bolting was not evident due to the cool seasons. Data are limited.

Variety	Pref	Rec	Rating
<i>Pablo</i>	57	43	7.29
<i>Sierra</i>	43	43	6.57
			(3 sites in 2013 and 4 sites in 2014)



18. Lettuce, Green Leaf

These varieties were very different. 'Deer Tongue' had thicker, crisper, darker green leaves with a sharper taste. 'Slobolt' looked and tasted more like "regular" lettuce. Gardeners appreciated the qualities of both, but most preferred 'Slobolt'.

Variety	Pref	Rec	Rating
<i>Deer Tongue</i>	30	80	7.56
<i>Slobolt</i>	70	80	7.22
			(10 sites)



19. Lettuce, Green Oakleaf

Only three gardeners participated. All recommended both varieties and all preferred 'Royal Oakleaf'. They loved its darker colored, frilly leaves. Both varieties were reliable and slow to bolt.

Variety	Pref	Rec	Rating
<i>Royal Oakleaf</i>	100	100	9.00
<i>Salad Bowl</i>	0	100	6.67
			(3 sites)



20. Lettuce, Red Oakleaf

Data are limited but 'Danyelle' looked promising. It produced higher yields than 'Red Salad Bowl' (the standard red oakleaf) and most gardeners preferred its flavor. Gardeners liked its deep red color. It resisted bolting better and was never bitter.

Variety	Pref	Rec	Rating
<i>Danyelle</i>	75	75	7.50
<i>Red Salad Bowl</i>	25	50	5.75
			(4 sites)



21. Lettuce, Green Romaine

Gardeners were delighted with both varieties. The cool moist weather contributed to a long and abundant harvest. Most gardeners preferred 'Green Forest' for its milder flavor. It showed greater resistance to bolting at several sites.

Variety	Pref	Rec	Rating
<i>Green Forest</i>	72	86	8.11
<i>Salvus</i>	28	71	7.16
			(21 sites)



22. Melon, Cantaloupe

Both varieties produced very low yields due to the cool weather. Many gardeners felt the melons of 'Athena' looked and tasted better. 'Athena' has been our early cantaloupe champion and 'Dutchess' did not display any superiority.

Variety	Pref	Rec	Rating
<i>Athena</i>	50	50	6.00
<i>Dutchess</i>	50	40	5.50
			(14 sites)



23. Melon, Large Cantaloupe

Both varieties produced very low yields over two cool growing seasons. ‘Superstar’ is the standard large cantaloupe, but ‘Solstice’ was more reliable and productive. It matched if not exceeded ‘Superstar’ for fruit quality. Data are limited.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>Solstice</i>	57	60	5.40
<i>Superstar</i>	43	46	4.83
(6 sites in 2013 and 9 sites in 2014)			



24. Melon, Galia

‘Arava’ matured earlier, produced higher yields and tasted better. Both varieties struggled in the unusually cool growing season. Melons were slow to ripen and yields were low. Some gardeners did not harvest a single ripe melon.

Variety	Pref	Rec	Rating
<i>Arava</i>	75	65	6.32
<i>Visa</i>	25	47	5.05
(17 sites)			



25. Pea, Shell

‘Lincoln’ plants were robust and consistently produced high yields. Its pods were very attractive, long, and filled with delicious peas. The small vines of ‘Progress No. 9’ produced a strong early crop. Gardeners liked the taste of both.

Variety	Pref	Rec	Rating
<i>Lincoln</i>	70	85	7.78
<i>Progress No. 9</i>	30	58	6.27
(33 sites)			



26. Pea, Snow

Gardeners were impressed with the early maturity and overall yields of ‘Oregon Sugar Pod 2’. Its pods were dark green. Several gardeners favored the bright green and flatter pods of ‘Sweet Horizon’. Gardeners split on taste preferences.

Variety	Pref	Rec	Rating
<i>Oregon S. Pod II</i>	54	73	7.76
<i>Sweet Horizon</i>	46	72	7.50
(30 sites)			



27. Potato, Gold with Light Flesh

‘Yukon Gem’ vines were healthier and its yields were much greater. Its tubers were more attractive and uniform. Its well-known parent ‘Yukon Gold’ matured earlier and its tubers were larger. Gardeners enjoyed the flavor of both varieties.

Variety	Pref	Rec	Rating
<i>Yukon Gem</i>	67	86	8.11
<i>Yukon Gold</i>	33	66	6.87
(50 sites)			



28. Potato, Purple with Light Flesh

‘Purple Viking’ was preferred for its purple/pink marbled skin and its snow white flesh. Yields were reliable. The golden flesh of ‘Peter Wilcox’ was appealing. Its tubers were bright purple and uniform. Gardeners split on taste preferences.

Variety	Pref	Rec	Rating
<i>Peter Wilcox</i>	36	74	7.32
<i>Purple Viking</i>	64	79	7.59
(67 sites)			



29. Potato, Purple with Purple Flesh

‘Adirondack Blue’ yields were consistent; tubers were bright purple and smooth. ‘Purple Majesty’ was less reliable (seed quality may have been a factor). Its tubers had a rougher, very dark purple skin. Taste of both was fair; best for baking.

Variety	Pref	Rec	Rating
<i>Adirondack Blue</i>	52	68	6.67
<i>Purple Majesty</i>	48	62	6.60
(66 sites)			



30. Potato, Red with Light Flesh

‘Red Gold’ yields were higher. The qualities of its yellow-flesh tubers were comparable to the white-flesh tubers of ‘Dark Red Norland’. Many gardeners were familiar with ‘Dark Red Norland’; they liked its taste and early maturity.

Variety	Pref	Rec	Rating
<i>Dark Red Norland</i>	54	72	7.50
<i>Red Gold</i>	46	83	7.46
(29 sites)			



31. Potato, Red with Rose Flesh

'Mountain Rose' was generally more productive. Its tubers were pinkish red and rounder. 'Adirondack Red' tubers were violet-red and they kept more of their color after cooking. Gardeners generally enjoyed the flavor of both varieties.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>Adirondack Red</i>	50	76	6.97
<i>Mountain Rose</i>	50	73	7.21
			(40 sites)



32. Pumpkin, Midsize

'Dakota Howden' tolerated the cool Dakota summer. It produced more pumpkins; its fruits turned orange quicker. 'Gladiator' showed good vigor. Its bush habit is well suited for gardens. Pumpkin weights were similar: 17–18 pounds.

Variety	Pref	Rec	Rating
<i>Dakota Howden</i>	77	86	6.92
<i>Gladiator</i>	23	64	5.58
			(14 sites)



33. Pumpkin, Large

Most gardeners preferred 'Cronus'. They liked the uniform, upright shape of its pumpkins. 'Super Herc' produced more pumpkins and was a more reliable performer across sites. Pumpkin weights were similar: 23–24 pounds.

Variety	Pref	Rec	Rating
<i>Cronus</i>	63	65	6.73
<i>Super Herc</i>	38	71	7.13
			(17 sites)



34. Spinach, Savoy Leaf

'SV2157VB' was extremely healthy and a reliable producer of rich green leaves. Almost all gardeners recommended it. Gardeners enjoyed the flavor of 'Tyee', a well-known variety. Both varieties were attractive and resisted bolting.

Variety	Pref	Rec	Rating
<i>SV2157VB</i>	50	89	7.89
<i>Tyee</i>	50	67	7.56
			(9 sites)



35. Spinach, Smooth Leaf

'Olympia' showed its superiority again in our trials. Its plants were healthier and its yields were higher. Gardeners were impressed with its large, full and flavorful leaves. 'Molokai' received decent ratings but showed no advantage.

Variety	Pref	Rec	Rating
<i>Molokai</i>	39	44	7.06
<i>Olympia</i>	61	78	7.67
			(19 sites)



36. Squash, Straightneck

Most gardeners preferred 'Multipik' for its impressive yields of quality fruits. Its vines were more vigorous and consistently productive. The fruits of 'Slick Pik YS 26' were straight, smooth and beautiful.

Variety	Pref	Rec	Rating
<i>Multipik</i>	63	88	8.00
<i>Slick Pik YS 26</i>	38	50	7.50
			(8 sites)



37. Squash, Zucchini

Both varieties produced impressive yields of delicious fruits. 'Raven' was earlier and more productive at more sites. Its fruits were very dark green. Half of gardeners preferred 'Spineless Beauty' and its speckled, medium-green fruits.

Variety	Pref	Rec	Rating
<i>Raven</i>	50	80	8.11
<i>Spineless Beauty</i>	50	74	7.89
			(20 sites)



38. Watermelon, Gold

Both varieties performed poorly due to the cool season. Yields were low and several gardeners did not harvest a ripe melon. 'Orange Krush' vines were healthy and set more fruit, but neither variety can be recommended at this time.

Variety	Pref	Rec	Rating
<i>Orange Krush</i>	80	43	4.50
<i>Super Gold</i>	20	43	4.17
			(9 sites)



39. Watermelon, Red

Many gardeners did not harvest a ripe melon. Gardeners with a ripe ‘Sweet Dakota Rose’ enjoyed its delightful flavor. The high yield potential of ‘Legacy’ was evident. Both varieties performed well during previous “normal” summers.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>Legacy</i>	55	48	5.70
<i>Swt Dakota Rose</i>	45	52	5.39
			(26 sites)



40. Watermelon, Red Icebox

We experienced two cool growing seasons and both varieties performed poorly. Germination, stand establishment and vine health were poor. Most gardeners harvested no or very few ripe melons. Fruit quality was disappointing.

Variety	Pref	Rec	Rating
<i>Blacktail Mtn</i>	27	9	2.57
<i>Sugar Baby</i>	73	20	3.47
			(5 sites in 2013 and 10 sites in 2014)



41. Basil, Citrus

Most gardeners enjoyed the distinct tastes and fragrances of both varieties. They preferred ‘Sweet Dani’ for its larger, bushier plants. ‘Sweet Dani’, a lemon-scented type, grew more vigorously and uniformly. It bolted later.

Variety	Pref	Rec	Rating
<i>Lime</i>	44	56	7.07
<i>Sweet Dani</i>	56	69	7.43
			(17 sites)



42. Basil, Italian

‘Genovese’ excelled in all traits and was preferred by a 2 to 1 margin over ‘Sweet Aroma II’. ‘Genovese’ plants were healthier, more productive and more attractive. Taste qualities of the varieties were similar.

Variety	Pref	Rec	Rating
<i>Genovese</i>	67	83	8.17
<i>Sweet Aroma II</i>	33	33	6.33
			(7 sites)



43. Basil, Italian Large Leaf

Both varieties were healthy and productive. All gardeners recommended ‘Italian Large Leaf’. They liked its early season vigor, dark green leaves and mild flavor. The ruffled leaves of ‘Sweet Mammoth’ created interest but were difficult to clean.

Variety	Pref	Rec	Rating
<i>Italian Large Leaf</i>	75	100	9.00
<i>Mammoth Sweet</i>	25	50	7.50
			(4 sites)



44. Cilantro

‘Calypso’ produced the first yield and produced more yield. It was slower to bolt and slower to get woody. Its leaves were more attractive and tasted great. ‘Santo’ plants were healthy but could not match the vigor or quality of ‘Calypso’.

Variety	Pref	Rec	Rating
<i>Calypso</i>	88	80	8.22
<i>Santo</i>	13	40	6.56
			(10 sites)



45. Cosmos, Red

Both grew well. ‘Rubenza’ bloomed earlier. Its flowers were deep rose in color; darker than the vibrant red colors of ‘Versailles Red’. The plants of ‘Versailles Red’ were taller. Both were attractive in the garden and as a cut flower.

Variety	Pref	Rec	Rating
<i>Rubenza</i>	50	67	8.09
<i>Versailles Red</i>	50	67	7.50
			(13 sites)



46. Cosmos, Striped

Gardeners loved both varieties. The plants grew tall and were filled with flowers from late summer until frost. Most preferred ‘Picotee’ for the brightness and variation of colors in its petals. It was a remarkable garden flower.

Variety	Pref	Rec	Rating
<i>Candy Stripe</i>	36	93	7.71
<i>Picotee</i>	64	100	8.36
			(14 sites)



47. Cosmos, White

The plants grew vigorously and were filled with snowy white blossoms. Gardeners appreciated the simplicity of the single-petal blooms of 'Sensation Purity' but preferred the fuller, frillier flowers of 'Psyche White'. Data are limited.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>Psyche White</i>	100	100	8.50
<i>Sensation Purity</i>	0	100	8.00
			(2 sites)



48. Marigold, Gold Giant

Gardeners enjoyed the vigor and prolific blooming of both varieties. Most preferred 'Jedi Gold'. It bloomed earlier and produced more flowers. Its flowers were a shade darker. 'Giant Yellow' showed no clear advantage.

Variety	Pref	Rec	Rating
<i>Giant Yellow</i>	25	63	7.25
<i>Jedi Gold</i>	75	88	7.88
			(8 sites)



49. Marigold, Orange Giant

Both varieties had big bushy plants loaded with big flowers. Both performed well but 'Garland' outshone 'Jedi Orange' from the start: better germination, healthier plants, bloomed earlier and bloomed more prolifically. Its flowers were vibrant.

Variety	Pref	Rec	Rating
<i>Garland</i>	73	92	8.18
<i>Jedi Orange</i>	27	92	7.50
			(12 sites)



50. Sunflower, Apricot

The small size and unique color of their blooms made both varieties well suited for cut flower arrangements. 'Apricot Daisy' grew more vigorously, bloomed earlier and produced more flowers. 'Peach Passion' lacked vigor.

Variety	Pref	Rec	Rating
<i>Apricot Daisy</i>	82	92	7.91
<i>Peach Passion</i>	18	42	5.73
			(13 sites)



51. Sunflower, Cutting

Gardeners enjoyed both varieties but most preferred 'Sunbright Supreme'. It germinated well and bloomed earlier. Its petals were deep yellow compared to golden orange for 'Sunrich Orange', the industry standard. Data are limited.

Variety	Pref	Rec	Rating
<i>Sunbright Supr.</i>	75	75	7.00
<i>Sunrich Orange</i>	25	100	7.75
			(4 sites)



52. Sunflower, Double Petal

'Greenburst' bloomed earlier and more prolifically. Its bright golden, semidouble flowers were very attractive in the garden. Several gardeners enjoyed the fluffy, double-petal heads of 'Double Goldy'. Stalks of both varieties were sturdy.

Variety	Pref	Rec	Rating
<i>Double Goldy</i>	25	40	6.20
<i>Greenburst</i>	75	75	7.50
			(5 sites)



53. Sunflower, Pointed Petal

'Irish Eyes' plants were fuller and more compact. They bloomed earlier and produced more flowers. The green-disked blooms of 'Irish Eyes' made for a prettier plant in the garden. 'Frilly' was straggly and unimpressive.

Variety	Pref	Rec	Rating
<i>Frilly</i>	0	20	5.20
<i>Irish Eyes</i>	100	80	8.40
			(5 sites)



54. Sweet Pea

Gardeners loved 'Mammoth Choice Mix'. Its vines grew vigorously and bloomed prolifically. The flowers were large, bright and fragrant. The streaked flowers of 'Streamers Mix' were fascinating but the vines were slow to grow and bloom.

Variety	Pref	Rec	Rating
<i>Mammoth Choice</i>	93	93	8.20
<i>Streamers Mix</i>	7	47	5.64
			(16 sites)



55. Zinnia, Cutting

Both varieties grew surprisingly well in our cool weather. They grew into sturdy plants filled with big, colorful blooms. Most gardeners preferred 'California Giant Mix'. It bloomed earlier and often showed a greater variety of colors.

Variety	Pref (%)	Rec (%)	Rating (Avg.)
<i>Calif. Giant Mix</i>	64	86	8.05
<i>State Fair Mix</i>	36	73	7.63
			(44 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.

'Lewis'

53 days. Big yields of dark green beans. Pods are straight and smooth; slow to get seedy. Easy to pick.

Data

Data were collected at 24 sites in 2014.

Trait	'Bush Blue Lake 274'	'Lewis'	Same
Germinated best	32 %	23 %	45 %
Healthier plants	41	9	50
Matured earlier	43	48	10
Higher yields	32	36	32
More attractive pods	10	55	35
Tasted better	27	32	41
<i>Preference</i>	52	48	
<i>Recommend to others</i>	83	71	
<i>Overall rating¹</i>	7.75	7.50	

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

General Comments

- Both germinated very well. Plants looked healthy. Both produced average or above average yields. Nice looking pods. Very tasty!
- They both did pretty awesome!
- Excellent taste for both.
- They both tasted great.
- Strong and healthy plants.
- Neither germinated well. Only about 10% for each.



Comments on 'Bush Blue Lake 274' Bean

- Higher yields and fuller pods.
- Kept producing, and I was able to pick more.
- Produced more beans and tasted slightly better.
- Plants were bigger but less productive. Only had one large picking.
- Plants were bigger and fuller.
- Plants appeared stronger and held up to winds better.
- They produced more and were more flavorful.
- Emerged first. Fuller plants.
- Produced first and had better pods.
- Produced fairly well; better than 'Lewis'.
- Its first harvest was a few days earlier. I prefer its flavor, but my husband prefers the milder flavor of 'Lewis'.
- Our family liked its taste slightly better.
- The stems of the plants snapped off easily while harvesting. Juicier taste and better flavor.
- Almost 100% germination. Pods were almost hollow and soft.
- Pods are too big, dry.

Comments on 'Lewis' Bean

- The fruits were plentiful, long, straight, smooth, dark green, and very tasty. Very tasty raw also. Never would have tried them without this study! Thank you!
- Germination was more uniform. Plants were smaller but set beans first. Produced good, nonseedy, meaty beans around August 1 and kept setting beans through first frost. Pods were smaller, finer. Really good quality—better than standard 'Bush Blue Lake 274'.
- Pods are dark green, smaller and tastier.
- These beans were picture perfect. They looked like fake plastic beans! Long, tender, perfect pods.
- Pods were straighter and more slender.
- Longer and skinnier beans.
- Plants were heartier; they did not fall over. Ripened 2–3 days earlier. More beans per plant. Pods were thicker but stringy; maybe we waited too long to pick the beans. Good flavor.
- Produced a lot for the first picking, but never produced much after that.
- Germinated better. Pods were round, almost blue, uniform. The beans stayed thinner and we liked the dark color.
- Plants grew larger and yielded more.
- More seedlings germinated. Longer, more slender pods; more attractive. Pods held longer at maturity.
- More beans per plant.
- Higher yields. Earlier.
- Produced beans a few days earlier.
- Came up fairly quickly then never did anything after that. Produced only a few small pods.

Conclusions

'Bush Blue Lake 274' has a strong reputation and our gardeners liked it. Its plants were bigger and fuller. 'Lewis' pods were darker green, straighter, more slender, and slower to get seedy. Taste qualities and yields were comparable.

Trial 2. Bean, Green Filet

Varieties (information from seed catalogs)

‘Crockett’

60 days. Upright plants produce slim, 6-inch, very dark green pods. Yields are heavy and continuous.

‘Maxibel’

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

Data

Data were collected at 40 sites in 2014.

Trait	‘Crockett’	‘Maxibel’	Same
Germinated best	11 %	45 %	45 %
Healthier plants	35	24	41
Matured earlier	10	83	7
Higher yields	43	36	21
More attractive pods	82	9	9
Tasted better	45	15	39
<i>Preference</i>	67	33	
<i>Recommend to others</i>	85	64	
<i>Overall rating¹</i>	7.67	7.26	

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

General Comments

- Both emerged quickly and were robust. These beans can be eaten right out of the garden.
- Loved the long beans—skinny too.
- When cooked, very hard to tell apart.
- Both tasted good.
- No difference in taste. I liked both of these, especially in stir fries and grilled. It was nice they produced about a week apart so I did not get them all at once. I will plant both next year.
- Approximately 90% germination for both. All seemed to start the race at the same time and at the same speed. They both seemed to produce about the same time.
- Both were great.
- Both were good.
- Both can work.
- Great germination. Both showed great vigor.
- Great germination. Both produced great.
- Both varieties tasted good.
- Two family members preferred the taste of ‘Crockett’; two preferred the taste of ‘Maxibel’.



- Plants were healthy.
- Both came up okay. No difference in taste.
- They both came up so beautiful but were completely eaten off by the deer. The plants tried many times to come back—but were eaten off several times.
- Grasshoppers devoured both.
- Both germinated at near 100%. Both had some herbicide damage—sprayed the yard for dandelions—but with moisture came out of it and produced well.
- I don’t recommend either variety. I know several gardeners who were able to harvest more green beans of different varieties.

Comments on ‘Crockett’ Bean

- We definitely preferred the taste and appearance of its pods. Plants were very bushy; very intense, beautiful dark green color. Production was fantastic. I picked buckets of ‘Crockett’ beans; the yield of ‘Maxibel’ was a really close second. I loved the straight, pencil-like, consistent shape of ‘Crockett’ pods. Beautiful color. Made the most attractive dilly beans I’ve ever canned! Major plus! The beans were tender and tastier. Just a superior bean variety. I love this new bean!
- Pods had an interesting dark green, shiny look.
- Pods are much darker and more tender. They lasted way longer into the season.
- The eye appeal of the pods sold me. Loved the dark green, slender pods. The plants looked healthier during the season.
- Nice shaped bean and good color.
- Produced much better.
- Beautiful, shiny, dark green pods.
- I like its long, slim pods.

More Comments on 'Crockett' Bean

- Pods were more attractive and had a better taste.
- Plants were more compact—good for small gardens—with no yellow leaves. Darker green pods looked like something that was garden grown. A darker green leaf plant—very attractive. Pods had a “fresh” taste.
- Tastier; sturdier bush, dark green color; high yield. Plants were still blooming on September 9, when plants were pulled due to threat of frost.
- Plants were a darker green color. Its pods stayed straight throughout the harvest season. I loved its taste and would take a 'Crockett' bean over a 'Maxibel' bean any day. I liked the way they stayed slim.
- Easy to pick; smooth pods; excellent quality; long production; great for fresh eating!
- Nice, dark green, slender pods. Tender and did not “toughen” as they got bigger. Best beans I've grown—thought I was sold on 'Maxibel' last year.
- Loved the bright green beans. So pretty! We eat them raw too!
- This is a slightly thicker bean, which I prefer.
- Preferred its taste.
- More yield at first picking; the initial picking had especially long pods. 'Crockett' pods are beautiful, smooth, stringless, and very dark. Fewer defective beans. Easy to pick—many ripe at once on the same branch—I could pick by the handful, not one pod at a time. Very prolific! We picked on three consecutive Saturdays. After the third picking, 'Maxibel' was clearly done. I got one more picking off the 'Crockett' beans.
- Pods were darker green; more uniform and straight. Bushes did not produce exceptionally well. I only really had one good picking.
- Plants looked slightly better. More attractive pods. Overall, a slightly better variety.
- Produced less but the pods were more uniform in size. The pods had a darker green color to them and a shine. They tasted so good! We liked both but loved 'Crockett'. Friends who took some of both also liked 'Crockett' better. The pods seemed to taste great at any size. The larger beans tasted and looked just as good as the smaller beans. The pods were smaller in length than 'Maxibel' but that made them easier to pick.
- Produced better. Plants were healthier, greener and more vigorous.
- I liked its compact, sturdy bush. Taste was good. I also liked the dark green, slender pods.
- Produced a good second crop. Dark green, good looking pods.

- Plants were a lot shorter and not as bushy.
- Experienced light rust; perhaps due to poor growing climate.
- Tasted, looked and performed better in the long run. Vines seemed less attractive to grasshoppers.
- Showed more resistance to insect damage. Beans were more shiny. Softer texture and sweeter.
- Had some browned, diseased-looking leaves as summer went on.

Comments on 'Maxibel' Bean

- Much better germination led to much higher yields. Pods were long and slim (some over 8 inches) and medium green.
- Germinated first and best. Better yields and tastier beans.
- They are so prolific! I could plant fewer rows of beans if I put in more 'Maxibel'.
- Near 100% germination. Higher yields. Pods were stringy when cooked.
- Germinated 2–3 days earlier. Matured one week earlier.
- Its seedlings showed more vigor. Produced early in the season but was done early.
- Much better stand. Produced about one week earlier.
- Appears to be a very robust bean. Very tolerant to the ever-changing growing conditions we experienced this summer. Produced a third greater yield. The long and pencil-thin pods were truly a delight. Pleasant sweet taste. Good texture and virtually stringless. Beans of this nature will never be found at your local grocery store. This variety would definitely be a strong choice for any gardener.
- Produced for a longer period of time. Beans were straighter and greener. Looked much nicer. Did not have stringy pods. Looked nice and tasted good.
- Plants were larger and more attractive initially.
- Pods were larger and lighter green.
- Better taste, although 'Crockett' pods looked nicer.
- Produced more (5.7 pounds compared to 5.2 pounds for 'Crockett'). Plants showed rust or insect damage early in the season, but they grew out of it as the season progressed.
- Nice thin pods. Tall plants—need support. Started picking 60 days after planting.
- First to yield—bountiful.

More Comments on 'Maxibel' Bean

- Germinated more quickly and uniformly. Plants were bigger; some leaves turned yellow. Produced one week earlier and produced more beans per plant. Pods were light/pale green. The flavor reminded me of green beans from the grocery store; not much taste.
- Plants sprawled more and laid down. First picking on July 19, before 'Crockett'. Although it produced first, as the plant got older the beans were not as good.
- More pods. Pods were bigger. Pods were pale with rust.
- Better germination (90% vs. 80% for 'Crockett'). Matured a few days earlier. Plants continued to bloom late into the fall. Produced well. Pods were a little more "rubbery." More enjoyable to eat.
- More plants. Grew faster and fuller. Slightly earlier. More pods. Pods were longer and slightly thicker.
- Pods tasted a little tough.
- Vigorous seedlings. Plants developed mold in the midseason. Matured a good few days earlier.
- Germinated earlier. The leaves had holes right away (I think we have slugs in our yard which were harder on the 'Maxibel' plants for some reason). Yields were so prolific it was hard to keep up with them. The pods tasted really good and they had good flavor.
- After our hailstorm, the plants made a comeback and I got a couple more meals.
- Plants died off first.
- Plants died off sooner, and developed some rot at the base of the plants. Pods are pale and slightly fuzzy. Very much like the green beans I used to buy from farmsteads in Pennsylvania. More beans at different stages of development, so slower to pick. At the end there were many small beans that clearly were not going to develop fuller.

Conclusions

'Crockett' generated a lot of excitement. Its pods were shiny dark green, straight, slender and delicious. 'Crockett' plants were rich green, healthy and productive. 'Maxibel' showed strong seedling vigor and matured earlier; its pods were medium green and long. Gardeners fell in love with 'Maxibel' last year, but they found a new love this year: 'Crockett'.

Trial 3. Beet

Varieties (information from seed catalogs)

'Red Ace'

50 days. Deep red, smooth and round roots. Very uniform and early maturing. Sweet and tender. Short, bright green leaves with red veins.

'Zeppo'

50 days. Roots are very round and smooth with almost no zoning. Early maturing. Glossy green leaves are sturdy and healthy.



Data

Data were collected at 19 sites in 2014.

Trait	'Red Ace'	'Zeppo'	Same
Germinated best	11 %	22 %	67 %
Healthier plants	35	12	53
Matured earlier	24	29	47
Higher yields	31	31	38
More attractive roots	47	18	35
Tasted better	29	18	53
<i>Preference</i>	60	40	
<i>Recommend to others</i>	94	72	
<i>Overall rating¹</i>	7.80	7.33	

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

General Comments

- The beet greens were great; they were so amazing in salads and sautés. Great yields! Honestly, I could not tell them apart in taste.
- We didn't find a single difference between the varieties. They were both wonderful in every way—growth, appearance and taste.
- Plants were equally healthy. Roots were easily harvested; peeled and cubed easily.
- Near 100% germination. Vigorous; healthy.
- Both held up well in storms.

Comments on 'Red Ace' Beet

- Seemed to grow faster. Larger, nicer looking, more uniform beets. Roots were easier to boil and peel; skin came off easier.
- I harvest when beets are full sized and used for pickling. 'Red Ace' was sweet and delicious.
- Larger roots. Tasted better.

- Retained its flavor when beets got large; 'Zeppo' did not.
- Sweeter and had better looking plants.
- The leaves had fewer bug spots. Its large beets were better looking. The roots peeled easier and the plants were healthier. The roots had more of a turnip taste; less sweet.
- Near 100% germination. No disease in plants.
- Slightly healthier tops. More bushy, too. Roots were a bit larger. Roots were nice and round with smooth skin and dark color. We liked its taste better for cooking and raw juicing. The final size of roots was a smaller than desired for storage. Great for pickling, though.

Comments on 'Zeppo' Beet

- Smoother skin and better roots.
- Tops were tasty. Hands down—sweeter!
- When harvested early, its small beets were excellent and sweet as 'Red Ace'. Very delicious and firm. The roots got mushy when large.
- Roots were deep red in color; sweeter.
- Beets got large quicker. Sweeter.
- A slightly better taste; otherwise very similar.
- Better germination and larger beets.
- Did not produce very well.

Conclusions

Most gardeners liked both varieties and several felt the varieties were very similar. The strong and consistent performance of 'Red Ace' was impressive. Its plants were healthy at all sites. It seemed to excel most when gardeners allowed the beets to get larger for pickling. These beets were especially uniform and flavorful. 'Zeppo' was good but showed no advantage.

Trial 4. Carrot, Orange

Varieties (information from seed catalogs)

‘Goldfinger’

80 days. New hybrid. Deep orange color. Mild, sweet and crunchy.

‘Laguna’

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



Data

Data were collected at 59 sites in 2014.

Trait	‘Goldfinger’	‘Laguna’	Same
Germinated best	12 %	39 %	49 %
Healthier plants	16	11	73
Matured earlier	17	17	67
Higher yields	25	37	39
More attractive roots	38	36	27
Tasted better raw	30	32	38
Tasted better cooked	19	23	57
<i>Preference</i>	47	53	
<i>Recommend to others</i>	76	76	
<i>Overall rating¹</i>	7.59	7.55	

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

General Comments

- Both germinated at about 90%. Matured at the same time. Amazing yields for both varieties. Lots of carrots! Both taste great.
- Both had excellent germination! Very healthy plants. Great yields! Tasted very good raw; did not notice much difference. Both tasted very good cooked as well.
- Both produced very well. Roots were very sweet and crunchy when raw. Could not tell any difference when cooked—both good! Roots were straight and flavorful.
- Plants were very healthy. Both varieties were better than the ‘Scarlet Nantes’ I usually plant. Got sweeter with cooler nights and days. Taste of the carrots I dug October 25 was really good.
- Both could have germinated better. The roots had a pretty color. They tasted good—raw or cooked—crunchy and sweet. Both are very nice, attractive carrots!
- Both did very well. I liked them both raw and cooked. Had a great crop.

- Both were very aromatic.
- This was a hard choice because they both produced well and were early! We ate them in July!
- They were similar in maturity and yield. The looked good and similar.
- The roots had a nice length. All carrots taste good with cream!
- Very good taste, both raw and cooked!
- These varieties are very similar.
- Our final harvest in September yielded carrots 8–12 inches long!
- Roots were similar in size and shape.
- This is a hard call. Both types were very good. Tasty.
- Both performed very well!
- Both tasted good.
- Most seeds germinated despite a hard rain that flooded part of the planting.
- Slow to germinate. Tasted pretty good.
- Poor germination.
- Plants were healthy. Roots were very tasty—a little difference in flavor but one was not preferable.
- The carrots were not as sweet as I had hoped.
- We received 4.95 inches of rain in late June and the tiny carrot plants never recovered.
- I always harvest carrots after the first hard freeze (this year it was on October 3). Both of these varieties had very large roots—I prefer more slender roots.
- Not really satisfied with either variety; too many misshaped or mushy roots.
- The first planting had poor germination (sown May 29).
- Neither really produced a ton of carrots. I believe it was due to weather conditions.

Comments on 'Goldfinger' Carrot

- Germination was 51% compared to 44% for 'Laguna'. Roots were more uniform and narrower.
- Roots were sweeter and did not taper at the end.
- More ideal looking carrots.
- Roots were more even, longer, bigger, and better looking.
- Pulled out of the ground easier.
- Bushier, fuller looking greens. Its carrots seem longer and less chubby.
- Really liked its nice, straight, long carrots.
- Germinated later and the plants were smaller but healthy. Roots were straighter and more uniform.
- Nice straight roots. Better in every way with the exception of taste.
- A little bit sweeter, but they both tasted good.
- Noticeably better germination. More usable roots—no cracking. Fewer root hairs. More “carroty” flavor and not as sweet. Roots were very consistent in size and shape.
- 'Goldfinger' produced 3.87 pounds of straight carrots, compared to 2.75 pounds with some twisted carrots for 'Laguna'.
- Sweeter.
- The roots had an after taste when eaten raw and a stronger taste when cooked.
- Larger plants.
- Grew straighter.
- Tasted better and had larger roots.
- Had a better taste. Crunchier.
- Seemed to mature earlier. Roots were consistently straight, long and nice looking.
- Nice and straight carrots.
- Grew longer and not as wide.
- Some bigger carrots. Sweeter.
- For cooked carrots, its flavor is better. Smaller, crooked roots with lots of “fingers.”
- Very little taste.
- Roots were smaller, more fuzzy, twining and split.
- Milder with a crisper snap.
- Roots were shorter with blunt tips. Taste was flat.
- Stronger flavor. Husband preferred it but the other three in our family did not.
- Roots had a nicer shape.
- Plants looked great even at the end of the season. Roots were a perfect combination of crisp and sweet.
- Tasted a little better, a little sweeter.
- We sauté most of our carrots; this variety tastes better.

Comments on 'Laguna' Carrot

- Carrots were bigger and there were more of them.
- Tasted better, but I have had better in the past.
- Produced 16 pounds compared to 10 pounds for 'Goldfinger'. Roots were bigger (some over 1 pound) and several were mushy.
- Germinated better. Much straighter and larger roots. When eaten raw, we prefer its flavor.
- Absolutely huge roots; many 9 inches long. Very good flavor.
- Nice shaped carrots. Great taste.
- Grew faster and larger.
- Roots were more twisted.
- Roots were smoother and tasted better. When cooked, its taste was mellow/sweeter.
- Better, earlier germination. Roots had a bigger diameter. Sweeter.
- Nice production, pretty roots, good flavor.
- Roots had a tendency to fork.
- Most carrots got to be about 12 inches long and slender. They were sweeter.
- Better germination. Higher yields. Roots had almost no taste—neutral.
- Plants were much bushier. Some roots were twisted or had multiple roots.
- Roots were very knobby and not nice and straight.
- Carrots were straighter; fewer forked roots.
- Better yields and size of carrots. Roots were longer and more uniform.
- A little sweeter. Roots were less attractive and had many more split.
- Full, green tops. Longer, more slender, pointed roots. More carrots with extra “legs.” Fresher, brighter taste.
- Smooth skinned—excellent flavor.
- Germinated first and earlier to ripen. Slightly better taste when eaten raw.
- Flavor was really mild.
- Roots were deep orange and smooth.
- Roots were nice and straighter. Less forking.
- Roots were more uniform.

Conclusions

The performances of the two varieties were similar and gardeners liked both. No variety clearly outperformed the other for any trait. Gardeners generally liked 'Goldfinger' for the beauty of its long, straight roots. They liked 'Laguna' for its larger roots and consistently high yields.

Trial 5. Carrot, Purple

Varieties (information from seed catalogs)

‘Purple Haze’

70 days. Tapered 10-inch roots are smooth with purple exterior and bright orange centers. The flavor is sweet and the contrasting orange/purple colors are beautiful.

‘Purplesnax’

73 days. Medium purple color with contrasting orange-yellow core. Slightly tapered, 8-inch roots. The anthocyanin-rich roots are valued for their health benefits.



Data

Data were collected at 15 sites in 2014.

Trait	‘Purple Haze’	‘Purplesnax’	Same
Germinated best	0 %	36 %	64 %
Healthier plants	8	31	62
Matured earlier	15	15	69
Higher yields	31	31	38
More attractive roots	8	46	46
Tasted better raw	58	25	17
Tasted better cooked	36	9	55
<i>Preference</i>	53	47	
<i>Recommend to others</i>	67	73	
<i>Overall rating¹</i>	7.71	7.73	

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

General Comments

- Plants were tall and healthy. I liked them both.
- 100% germination. Beautiful plants.
- Myrtle, our 105-year-old friend said she had never seen such big carrots. She was an avid gardener. She wasn’t impressed by purple carrots.
- Great yields!
- Germinated on the same day. Both tasted good—same taste. Too many deformed carrots.
- Purple carrots stain white sauces, stoneware sinks, and fingers.
- The plants were disease-free. Some roots grew over one foot long. My fried rice turned purple.

Comments on ‘Purple Haze’ Carrot

- Overall a much better carrot. Roots had a nice crunch. Tasted better both cooked and raw.
- No unpleasant aftertaste; sweeter.

- Outside of carrot is less deeply purple. The carrot cores are rich orange, compared to yellowish orange for ‘Purplesnax’.
- More orange is visible on surface and in core. Roots were stubbier. Sweet with mild carrot flavor. Tastes better, both raw and cooked.
- Did not germinate well.

Comments on ‘Purplesnax’ Carrot

- Sturdier roots; better color. Outperformed ‘Purple Haze’ from the beginning. Delicious!
- Better germination led to two times the yield. Very deep purple color; less orange color in the core. More traditional carrot flavor but sharp aftertaste. Better texture when cooked.
- Germinated soonest.
- Roots were very slim, nice and straight. Earthy taste. Tasted much better cooked than raw.
- Roots had a deeper purple color. Straight roots. The raw carrots were sweeter and less bitter.
- Roots were smaller and sweeter.
- Bigger/straighter carrots. Beautiful shape.
- Roots were longer and more uniform.
- Tasted more earthy, carrot, slightly more bitter.
- Some of the carrots have a soapy taste (my husband cannot taste this).

Conclusions

Most researchers liked both varieties. ‘Purplesnax’ was preferred in the garden. Gardeners liked its superior seedling vigor, deeper purple color and straighter roots. ‘Purple Haze’ was preferred in the kitchen. Its roots tasted much better—less earthy—especially when gardeners ate the carrots raw. Plants of both varieties were very healthy and produced long roots.

Trial 6. Corn, Early Sugary Enhanced

Varieties (information from seed catalogs)

'Temptation'

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

'Trinity'

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

Data

Data were collected at 17 sites in 2014.

Trait	'Temptation'	'Trinity'	Same
Germinated best	53 %	12 %	35 %
Healthier plants	40	13	47
Matured earlier	54	23	23
Higher yields	42	17	42
More attractive ears	62	15	23
Tasted better	33	20	47
<i>Preference</i>	67	33	
<i>Recommend to others</i>	75	67	
<i>Overall rating¹</i>	7.86	7.08	

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

General Comments

- Both germinated very well. Very nice looking, healthy plants. No diseases in the corn this year. Both matured at the same time. Equal yields.
- Both tasted very good.
- Seedlings emerged at the same time.
- Both had near 100% germination. Both were very good varieties.
- Both tasseled July 17. First corn on August 11.
- Both were good. We planted late (June 12), but we still had plenty—even with the raccoons!
- Both were good tasting.
- Cutworms caused poor growth; only a few ears.
- Not the best corn we have had; not very tasty.
- Neither showed strong stalks.

Comments on 'Temptation' Corn

- Plants are much taller and sent out tassels earlier. Ears were good-sized and full of kernels.
- Well formed ears. Matured earlier; more corn; larger ears.



- Better in all areas. Stalks were taller and fuller. Longer ears.
- Grew faster with better germination. Much taller stalks. Kernels were larger and sweeter. Cobs were fuller.
- Popped up first. Produced earlier.
- Really nice looking cobs with uniform kernels. Delicious! The corn would melt in your mouth! Fewer worms. A very good variety!
- Heartier stalks and cobs. Bigger, juicier kernels.
- Matured a few days earlier. Cobs stayed sweeter longer.
- Healthier stalks; more corn. Larger ears.
- A little better tasting. Just a little earlier.
- Just didn't grow. Much smaller ears. I don't think I was able to harvest even one ear.

Comments on 'Trinity' Corn

- Superior early yield. Uniform cobs.
- I liked 'Trinity' better. Its kernels are smaller; they popped in your mouth.
- Cobs did not look as nice and were more likely to contain worms. Tasted good but not as good as 'Temptation'.
- Tasted sweeter.
- Had smut.

Conclusions

'Temptation' generated a lot of excitement. It surpassed the standard early variety, 'Trinity', in all evaluated traits. Seedlings germinated well in the cool soil and the stalks were hearty and healthy. Its harvest arrived earlier and the cobs were long and filled with delicious kernels. 'Trinity' did well but its performance was overshadowed by 'Temptation'.

Trial 7. Corn, Midseason Super Sweet

Varieties (information from seed catalogs)

'7002A'

72 days. Summer Sweet type known for its outstanding eating quality. Deep green husks. Isolate super sweet varieties from other corn types.

'Xtra-Tender 274A'

74 days. Midseason selection of Xtra-Tender group. Superb eating quality. Large ears with glossy yellow and white kernels. Requires isolation.



Data

Data were collected at 8 sites in 2014.

Trait	'7002A'	'Xtra-Tender 274A'	Same
Germinated best	0 %	38 %	63 %
Healthier plants	33	17	50
Matured earlier	0	83	17
Higher yields	14	57	29
More attractive ears	14	43	43
Tasted better	14	71	14
<i>Preference</i>	14	86	
<i>Recommend to others</i>	29	71	
<i>Overall rating¹</i>	5.57	8.58	

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

General Comments

- Both did very well, but only on the later seeding date (June 10, not May 16).
- The stalks were short and the ears were small.

Comments on '7002A' Corn

- Way nicer ears and tasted great, too. Stalks often had two or even three ears; 'Xtra-Tender 274A' never had more than one ear per stalk.
- Some of the ears did not fill in.
- Poor germination. Small plants.

Comments on 'Xtra-Tender 274A' Corn

- Came up two whole weeks before the other! Very hearty. Great tasting. Best corn I've ever grown! I was very impressed!
- Germinated one week earlier. More plants (had to thin it); higher yields. Harvested 7–10 days earlier. Taste was sweeter and more tender.
- Stalks were a bit taller. The cobs were nicely filled in. Tasted really good for such small cobs.
- Matured about two weeks before any other variety. Several ears on every stalk. Large ears were filled with kernels from top to bottom.
- Produced the first yield.

Conclusions

Gardeners were extremely impressed with 'Xtra-Tender 274A'. It grew vigorously and was ready to harvest at least one week earlier than '7002R'. The ears were large and filled with kernels from top to bottom. Gardeners raved over its outstanding flavor. The Summer Sweet '7002R' could not compare.

It should be noted we used untreated seed in this particular corn trial and no gardeners reported problems with germination despite the cool, wet weather in spring.

Trial 8. Corn, Late Super Sweet

Varieties (information from seed catalogs)

'7112R'

75 days. Exceptional tenderness and flavor. Sturdy stalks produce 8-inch ears. Bright yellow and white kernels. Isolate from non-super sweets.

'Xtra-Tender 277A'

77 days. Popular variety. Its large ears are filled with small, very sweet, tender kernels. Isolate super sweets from other corn types.



Data

Data were collected at 3 sites in 2014.

Trait	'Xtra-Tender		Same
	'7112R'	277A'	
Germinated best	0 %	0 %	100 %
Healthier plants	0	0	100
Matured earlier	0	33	67
Higher yields	0	67	33
More attractive ears	67	0	33
Tasted better	33	33	33
<i>Preference</i>	33	67	
<i>Recommend to others</i>	67	67	
<i>Overall rating¹</i>	<i>8.00</i>	<i>8.33</i>	

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

General Comments

- Both resisted disease and stood strong through winds. The plants looked really nice. The ears of both varieties were ready at the same time. Both had great flavor.
- Germination was near 100%. Plant development was severely hurt by a wind which pushed all plants to a near level position early in the plant growth (stalks were 24 inches tall at the time). The plants were healthy but it took some time to recover.
- These were treated seeds; good germination.

Comments on '7112R' Corn

- Ears were more uniform in size and finished evenly.
- Better balance of corn taste and sugar (sweetness). Not too sweet.

Comments on 'Xtra-Tender 277A' Corn

- At least two ears per stalk! Some had a third smaller ear of corn.
- Harvested a few days earlier. Some had two ears per plant. Taste was sweeter and more tender. This is the best tasting sweet corn you can grow.
- Young ears were almost too sweet; lots of sugar, little corn. Poor ear protection: its husks pulled back very early allowing corn rootworm beetles into ears.

Conclusions

Data are limited. Gardeners enjoyed both varieties. 'Xtra-Tender 277A' excelled for the second straight year. Gardeners were very impressed with its extraordinary yields and super sweet flavor. Summer Sweet '7112R' ears were large, uniform and its husks protected the kernels well. A gardener noted it had a better balance of corn and sugars in its flavor.

Trial 9. Corn, Midseason Synergistic

Varieties (information from seed catalogs)

'Allure'

70 days. Strong stalks produce big ears. Kernels are shiny, sweet and juicy. Impressive performer in North Dakota.

'Cuppa Joe'

74 days. Seedlings show good cold tolerance and grow vigorously. Good yields of large ears. Great quality.



Data

Data were collected at 8 sites in 2014.

Trait	'Allure'	'Cuppa Joe'	Same
Germinated best	13 %	50 %	38 %
Healthier plants	13	38	50
Matured earlier	17	50	33
Higher yields	43	43	14
More attractive ears	17	17	67
Tasted better	20	40	40
<i>Preference</i>	29	71	
<i>Recommend to others</i>	63	88	
<i>Overall rating¹</i>	5.88	7.38	

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

General Comments

- Both tasted good.
- Yields were similar. Ears looked and tasted good.
- I prefer super sweet (sh₂) corn over the synergistic corn. I prefer sweeter sweet corn.
- Worms in both varieties. Grew on virgin garden ground.

Comments on 'Allure' Corn

- Taller stalks with more leaves. Higher yields. Larger ears.
- Little better yield and a little earlier.

Comments on 'Cuppa Joe' Corn

- Seedlings started to grow quicker and were more robust. Taller stalks. Ears tasted much better.
- Better germination: 42% compared to 25% for 'Allure'. Stalks grew slightly faster. Ears matured three days earlier. Ears were slightly longer. We had five people at a meal and we all agreed 'Cuppa Joe' was slightly sweeter.
- Seeds germinated first. Plants were taller but neither variety got tall. Better yield.
- Slower to germinate, but 100% germination compared to 75% for 'Allure'.
- Produced more ears.
- A big storm flattened the stalks on July 21. 'Cuppa Joe' withstood the wind better. There is always wind in North Dakota.

Conclusions

'Cuppa Joe' is reported to have good tolerance to cold soil and this was a perfect spring to test for it. 'Cuppa Joe' succeeded. It germinated better than 'Allure' and matured earlier. Gardeners rated it highly and enthusiastically recommended it. Both 'Cuppa Joe' and 'Allure' produced good yields of quality sweet corn. 'Allure' was impressive last year and most gardeners recommended it this year, too.

Trial 10. Corn, Late Synergistic

Varieties (information from seed catalogs)

'Montauk'

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

'Serendipity'

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

Data

Data were collected at 5 sites in 2014.

Trait	'Montauk'	'Serendipity'	Same
Germinated best	0 %	20 %	80 %
Healthier plants	0	0	100
Matured earlier	0	40	60
Higher yields	50	50	0
More attractive ears	25	50	25
Tasted better	50	25	25
<i>Preference</i>	50	50	
<i>Recommend to others</i>	60	60	
<i>Overall rating¹</i>	6.80	6.80	

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

General Comments

- Both grew 6 feet tall; tasseled on July 23 and silked on August 1.
- Plant development was severely hurt by a wind which pushed all plants to a near level position early in the plant growth (stalks were 24 inches tall at the time). The plants were healthy but it took some time to recover. The ears of both varieties "looked" like corn should.
- Both varieties experienced no smut or vermin. It was a pleasure to pick and process.
- Neither produced ears of corn. Germination was poor: 16% for 'Serendipity' and 8% for 'Montauk' (sown May 19).



Comments on 'Montauk' Corn

- Excellent. Some of the best corn I have eaten.
- Better "corn" taste throughout, from first tip of tongue to back of mouth final swallow. Better flavor balance. Produced good ears longer. It was the last sweet corn of the season from the garden, harvested September 9.
- Good flavor; but not the yield.
- Good but not great taste.

Comments on 'Serendipity' Corn

- Produced well in to October. Ears were 12–16 inches; big around as a pop can. Good flavor.
- Outstanding flavor. Loved it!

Conclusions

Data for this late-season corn trial are limited. 'Montauk' and 'Serendipity' both produced big, delicious ears of sweet corn. Gardeners were evenly split on their preference. The outstanding flavor of 'Montauk' and good yields of 'Serendipity' were noteworthy.

Trial 11. Cucumber, Burpless

Varieties (information from seed catalogs)

'Tasty Green'

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

'Telegraph Improved'

60 days. English cucumber with mild flavor. Long, 12-inch fruits are smooth with dark green skin.

Data

Data were collected at 21 sites in 2014.

Trait	'Tasty Green'	'Telegraph Improved'	Same
Germinated best	45 %	10 %	45 %
Healthier plants	32	5	63
Matured earlier	67	28	6
Higher yields	58	26	16
More attractive cukes	67	11	22
Tasted better	50	0	50
<i>Preference</i>	74	26	
<i>Recommend to others</i>	75	35	
<i>Overall rating¹</i>	7.37	5.68	

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

General Comments

- Both germinated quickly. Had healthy plants most of the summer. Neither produced much at all. Both tasted good.
- Both varieties were very healthy.
- Both germinated at 90%. The plants looked great with lots of blooms. The cucumbers tasted good.
- Both had pretty good germination. Their cucumbers tasted good.
- Did not have good cucumbers this year. Both varieties struggled. Cukes were small and curled. Both tasted great.
- All of my cucumber plants grew to be about 5 inches tall; then just sat there "looking pretty." No results. Bad year? Bad soil? Not sure, but disappointed.
- They all got infested with cucumber beetle.
- Neither variety was very attractive.
- Eaten and pulled out by deer.



Comments on 'Tasty Green' Cucumber

- Yields were two weeks earlier. Produced many more cucumbers. I've never tasted such good cucumbers. Several cucumbers were shaped like a "J." Taste was refreshing. The clear winner of this trial.
- Germinated better. Bigger plants and bigger leaves but fewer flowers. Produced fruit one week earlier (July 15). Picked a lot more fruit. Cucumbers were straighter and more uniform in shape. Best flavor. I will grow these again. Loved how yummy these are!
- Straight shape and good flavor.
- Germinated faster, more seed grew, and produced fruit two weeks sooner. More productive. Fruits tended to grow in circles. Started my seed indoors.
- Higher yield (70 cucumbers compared to 50 for 'Telegraph Improved').
- Great flavor.
- Healthier plants. Ripened a few days sooner. Bloomed longer and produced 50% more cucumbers. Cucumbers were straighter and longer. Slightly better taste.
- The difference in germination was huge—almost one week earlier! Produced the first cucumbers; not so many though. Cucumbers were smooth, long, and pretty to look at. Some had a slight curve. The skin was not very tough, but we still preferred to peel it for eating in the salads. This seemed like a more reliable variety.
- Grew better and tasted better.
- Better producing. Best taste.
- Vines looked healthier and spread out further. Produced earlier and many, many more. Its cucumbers were consistently large and nice looking. Delicious.

More Comments on 'Tasty Green' Cucumber

- Nicer looking cukes. Just wish there were more of them.
- The best yields.
- Awesome eating cucumbers! Produced a handful every 5 days or so. Cucumbers had a dark nice color and were straight; never got too big. Very good tasting. My boys (ages 5.5 and 2.5 years) loved cucumbers from the garden.
- Resisted insects better. Cucumber beetles invaded our garden this year.
- Did not produce at all.

Comments on 'Telegraph Improved' Cucumber

- Produced the first fruits. Higher yields and prolific.
- Such odd-shaped, curled growth. The cukes looked like skinny zucchinis. They did taste okay.
- Higher yields; more fruits came later in the season.
- Lots of vine and blossoms, but few fruit before frost (September 11).
- Seemed to have more vines and leaves on plants. Cukes were a little bigger.
- Nicer, thinner cucumbers with almost no seed cavities. Produced longer.
- Produced more fruit; stayed nice longer.
- Vines were smaller and somewhat unhealthy. Did not produce much.
- Every now and then one of their cucumbers was quite bitter, but this did not happen often.
- Its taste was bitter. The cukes did not have good flavor at any size.
- Grew nicely from seed but then died.
- Plants dried up early. Cukes came out curled.

Conclusions

'Tasty Green' was the clear winner. Its yields were earlier and much more abundant. Its fruits were straighter, more attractive and better tasting. Our summer was cool like an English summer, but the English cucumber 'Telegraph Improved' struggled. It showed no advantage over 'Tasty Green' and few gardeners recommended it.

Trial 12. Cucumber, Pickling

Varieties (information from seed catalogs)

‘Eureka’

57 days. Dark green fruits suited for both pickling and salads. Productive, disease-resistant vines.

‘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 25 sites in 2014.

Trait	‘Eureka’	‘Homemade Pickles’	Same
Germinated best	4 %	63 %	33 %
Healthier plants	19	29	52
Matured earlier	30	55	15
Higher yields	20	65	15
More attractive cukes	20	40	40
Tasted better	15	20	65
<i>Preference</i>	29	71	
<i>Recommend to others</i>	48	78	
<i>Overall rating¹</i>	5.90	7.10	

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

General Comments

- Both varieties yielded very well.
- Both had a lot of fruit.
- Neither produced well. Many deformed cukes.
- Both germinated really well. Both tasted great.
- Similar germination. Both matured rather late—strange season.
- We had some beetles that set the plants back.
- Both varieties had some spots on the leaves. We grew them on a trellis.
- The vines of our pickling varieties dried out and really slowed in producing late in the season.
- Poor germination of both varieties.

Comments on ‘Eureka’ Cucumber

- Produced more cukes.
- More evenly shaped.
- Yields seemed to be more consistent once they started to bear.



- Only one seed germinated, compared to 19 for ‘Homemade Pickles’. This vine was healthy, sturdy and very productive. Nicer cucumbers; better for pickling (‘Homemade Pickle’ cukes got too fat).
- Seedlings did not emerge until much later and did not produce very well.
- Plants showed stress after the third picking.
- Many of the cucumbers had spots on their skins.

Comments on ‘Homemade Pickles’ Cucumber

- Production was much heavier and plants lasted right up to frost.
- They were great producers and early. I liked the size of the cucumbers.
- Better yield.
- Earlier producer.
- More uniform for pickling.
- I prefer its smaller size of cucumber.
- They germinated best and produced better.
- Tasted better and produced better.
- Good yield.
- More productive.
- Better germination and more vigorous plant. Its cucumbers were too prickly.

Conclusions

‘Homemade Pickles’ has always been a standout performer in our trials. Its performance this year—a very difficult year for cucurbits—was no exception. It germinated better, matured earlier, and produced many more cucumbers than ‘Eureka’. Many gardeners noted the uniform shape and size of its fruit.

Trial 13. Cucumber, Slicing

Varieties (information from seed catalogs)

'Dasher II'

58 days. A leading hybrid for many years. Dependable yields of straight, dark green, 8-inch cukes.

'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 12 sites in 2014.

Trait	'Dasher II'	'Straight Eight'	Same
Germinated best	36 %	0 %	64 %
Healthier plants	40	10	50
Matured earlier	78	22	0
Higher yields	60	20	20
More attractive cukes	33	22	44
Tasted better	30	20	50
<i>Preference</i>	70	30	
<i>Recommend to others</i>	91	55	
<i>Overall rating¹</i>	7.80	6.40	

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

General Comments

- Started indoors and had 100% germination for both varieties. Lost some plants due to severe wind and extreme heat when first put out. Both were big producers. Both were excellent for snacking and recipes.
- Both had almost 100% germination. Both did great!
- Tasted the same.
- Both had abundant flowers but few cukes. Both were disappointing.
- Low yields. We experienced poor growing conditions this year.
- Poor yields.

Comments on 'Dasher II' Cucumber

- Healthier plant; higher yield; attractive fruit.
- The size of the fruits allowed it to be used for pickling.

- Produced the first fruit. Produced 10 times more fruit. Darker green color. Tasted way better.
- The first seeds to come up. The plants were vigorous and produced longer.
- Earlier by a few days.
- Higher producing plants. The cucumbers had less seeds and made nicer spear pickles.
- More cucumbers and didn't seem to get larger in less time. Nice fruits. Did well with vinegar and cream. They also did well pickling their spears.
- The seedlings died for some reason.

Comments on 'Straight Eight' Cucumber

- The vines thrived and grew so many cucumbers!
- More cucumbers. Plants lasted longer.
- Fruits were more consistent in shape and size.
- Fungus on leaves.

Conclusions

'Straight Eight' has a following in North Dakota. It is a productive variety in cool summers and has performed well in our trials of the past. Our summer was cool again this year, but the heirloom could not match the vigor of 'Dasher II', a popular and widely adapted hybrid. The vines of 'Dasher II' were healthier, produced cucumbers earlier, and produced much higher yields. The qualities of the cucumbers were comparable.

Trial 14. Cucumber, Snack

Varieties (information from seed catalogs)

‘Diva’

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

‘Muncher’

62 days. Perfect for fresh eating—just like an apple. Mild and tender. Burpless. Good for pickling, too.



Data

Data were collected at 25 sites in 2014.

Trait	‘Diva’	‘Muncher’	Same
Germinated best	13 %	50 %	38 %
Healthier plants	15	15	70
Matured earlier	32	47	21
Higher yields	13	43	43
More attractive cukes	24	24	52
Tasted better	14	19	67
<i>Preference</i>	36	64	
<i>Recommend to others</i>	60	80	
<i>Overall rating¹</i>	6.73	7.27	

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

General Comments

- Both were great tasting! I would plant both again.
- I liked both; could eat them without peeling them.
- They both yielded very well! They both tasted wonderful!
- I was surprised how nice they were—straight and smooth.
- Every seed came up.
- Both varieties performed well. I’d truly recommend both!
- It was a toss up to choose the better of the two varieties. These cukes were late and they produced slowly. I did like the shape of them, and I think they tasted good. They made nice pickles. I also liked that they were not prickly—very easy to get ready for pickling. The cool weather slowed them up. I would plant them again and see how they grew a second time. For now, I would not recommend them to be grown in North Dakota.
- Each plant only produced about three cucumbers, which seems low to me—maybe the temperature and rain.

- Too cold. Didn’t get any plants to come up (sown May 30).
- Both were up at the same time. Their stands were not as thick, and they died three weeks earlier than my other varieties. Both produced well. Loved that they had no prickles! Both were delicious!
- Both were slow to germinate (sown June 10). Both had downy mildew early in the season. Yields were small. A bad year for cukes in my garden. The performances of ‘Straight Eight’ and my pickling variety were also poor.
- The best picking I got was after it frosted so you see why I would not recommend them for general use.
- Germination was very sporadic. Plants had healthy green leaves.
- Cucumber beetles wiped out all plants.

Comments on ‘Diva’ Cucumber

- Cukes were pretty, sleek, smooth and mild to soft skin. Was popular with the kids’ they said it tasted better.
- I like these way better because they have more flesh and less seeds. Also tasted better; less bland.
- Cukes had a nice shape and soft skin. Better taste. We ate the whole production on salad.
- Very good, but did not keep well. Had to be used when picked.
- Earlier germination. Healthy plants full of blossoms. Its cukes were tasty and abundant.
- Only half as many plants emerged, but overall yields were similar. Produced earlier by a few days.
- About 40% germination; seedlings were smaller.

More Comments on 'Diva' Cucumber

- Almost 100% germination compared to 90% for 'Muncher'. Cucumber beetles ate these plants first.
- Produced the first flowers and fruits.
- I felt the yield was much better.
- Earlier maturing.
- Approximately 50% germination.
- Had a couple baby cucumbers only two days earlier than 'Muncher'.

Comments on 'Muncher' Cucumber

- Plants were healthier. Five plants survived the hard rains, wind and diseases; compared to two plants for 'Diva'. Nice straight cukes. Very good; did not have to peel.
- Great taste—great yield. The cucumbers stayed smaller. I could use for pickles (dills) longer. If got bigger, good for slicing.
- Started seed indoors; this seed germinated all at once and quicker than 'Diva'. The vines produced earlier. The cukes had nice, smooth skins.
- Germinated better; produced more cucumbers.
- Germinated faster.
- Better germination. Grew prolifically, but the fruits got fat ends. Matured two weeks earlier. More fruit.
- Better germination: 50% compared to 30% for 'Diva' (sowed May 26). Healthier plants. The fruits were a bit straighter.
- Better germination: 75% compared to 25% for 'Diva'. Better taste and production.
- Had twice as many plants. Produced cukes significantly sooner. A lot more cukes. Taste okay, but not as good as 'Diva'.
- Produced almost twice as many plants.
- Germinated a little better.
- Did not come up well (planted May 29). Plants were not very vigorous or productive (only 6 or so cucumbers).
- Produced first.
- Vines didn't dry up as quickly.
- Better flavor. Nice fruit.
- Milder taste.
- Slow to set fruit.

Conclusions

This was a tough year for cucumbers and 'Muncher' was heartier than 'Diva'. It showed greater vigor as a seedling and throughout the growing season. Its yields were earlier and more consistent. Cucumbers of both varieties were straight, smooth-skinned and delicious.

Trial 15. Kale, Dinosaur

Varieties (information from seed catalogs)

‘Black Magic’

58 days. Very dark, crinkly leaves with rich flavor. This new hybrid shows vigorous growth and regrowth. Uniform habit.

‘Lacinato’

60 days. Italian Tuscan heirloom known for its very dark, blistered leaves and delicious flavor. Flavor improves with frost.



Data

Data were collected at 25 sites in 2014.

Trait	‘Black Magic’	‘Lacinato’	Same
Germinated best	40 %	20 %	40 %
Healthier plants	48	5	48
Matured earlier	41	14	45
Higher yields	30	17	52
More attractive leaves	45	15	40
Tasted better	30	15	45
<i>Preference</i>	76	24	
<i>Recommend to others</i>	86	68	
<i>Overall rating¹</i>	7.35	7.05	

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

General Comments

- Similar yields and really healthy plants. We loved both varieties.
- Both grew very well. I mixed them with other stuff in the NutriBlender.
- I did get the courage to try making kale smoothies for breakfast. I like them. Thank you.
- Germination was slower than anticipated. Both performed well and are still producing (October 15). Both were heavily ribbed with narrow leaves. They cooked well, and tasted good in salads.
- Bugs ate many holes in the kale, so neither variety looked good. I did not care for the taste of either one. Used for juicing as there were so riddled with holes.
- I had lots of problems with cabbage loopers. Toward fall, both the varieties grew back from the chewed mess they both were all summer, but not enough of a crop to make a good comparison.

- Germination was rapid but spotty. Similar in growth and yield. Both varieties were eaten by cabbageworm caterpillars. We cut back the plants hard in early August (too buggy) and we could actually get another small picking in October with sprouting leaves from the cool weather.
- Had almost 100% germination in both varieties. The plants looked great right away—but then bugs started in on the leaves right away. Both produced well but the bugs took over. We didn’t even get to taste these trials.
- Got overtaken by bugs; didn’t harvest.
- Both had healthy plants that produced well in late season. Bugs ate holes in the leaves; neither looked attractive. We did not like the taste of kale—seemed bitter.
- Similar in plant and leaf size. I didn’t spray for bugs so both varieties ended up with some leaf damage from caterpillars and other bugs. I discovered from this trial that I don’t care for kale—both varieties tasted the same to me—icky.
- Seedlings popped right up. Both varieties had a terrible time with worms.

Comments on ‘Black Magic’ Kale

- Darker in color and had slightly smoother and bigger leaves.
- Delicious, tender leaves. Plants did not get leggy after several cuttings. Slightly glossier leaves. I love kale and use a ton of it in my cooking. ‘Black Magic’ held up better in stir fries and soups.
- All around better. Seedlings were stronger. Less insect damage. Plants were healthier and larger. Yields were at least 25% more. Leaves were darker. Better taste and texture.
- Its first harvest was several days earlier.

More Comments on 'Black Magic' Kale

- We love its milder taste. It will work better in salads and smoothies.
- Both varieties were good, but 'Black Magic' just seemed to grow better here this summer.
- Quite a bit slower to come in. The color of the leaves was deep, and the texture was of the type most commonly seen in grocery stores.
- Stayed more compact.
- Plants were bigger.
- More consistent in germination and production. Higher yield.
- Taste was less bitter, but both varieties tasted good when cooked or used in salads.
- Much better yield and quicker to produce.
- Taste was milder, sweeter.
- This variety gets a slight edge—it looked more attractive.
- Plants were slightly more robust. I prefer the denser pigment of the leaf. Our tortoise definitely preferred 'Black Magic' for what that is worth.
- Grew well.
- Pretty good kale overall. Tough plant—harvested right up to freeze up on October 31.

Comments on 'Lacinato' Kale

- Its smoky blue color and lacy edges are prettier in a dish, salad, or just on a plate for display. The leaves are tender and the taste is sweeter, both cooked or raw.
- Excellent. Will grow again.
- Milder taste.
- Taste was slightly bitter, spicier.
- Much higher germination rate. Higher yield. Less affected by insects. Not as bitter.
- More resistant to cabbage loopers.
- Got buggy first.
- Germinated about 20% better.
- Germinated faster. Larger plants.
- Later but larger leaves.
- Did not come up.

Conclusions

Both varieties performed well but the new hybrid 'Black Magic' was a more consistent performer. It matched or exceeded the heirloom 'Lacinato' in all measured traits including yield and flavor. 'Black Magic' showed strong seedling vigor and was ready to harvest earlier at many sites. Gardeners liked the looks of its dark, crinkly leaves. Insect damage was a consistent problem for both varieties.

Trial 16. Lettuce, Red Butterhead

Varieties (information from seed catalogs)

'Red Cross'

48 days. Large, bright red heads. Exceptional tolerance to heat. Proven performer in North Dakota.

'Skyphos'

47 days. Dark red heads with beautiful green centers. Easy to grow. Heads are large and flavorful.

Data

Data were collected at 14 sites in 2014.

Trait	'Red Cross'	'Skyphos'	Same
Germinated best	31 %	8 %	62 %
Healthier plants	42	17	42
Higher yields	31	23	46
More attractive	25	42	33
Tasted better	25	25	50
<i>Preference</i>	54	46	
<i>Recommend to others</i>	71	64	
<i>Overall rating¹</i>	7.92	7.77	

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

General Comments

- Germination was good. Very attractive lettuce with excellent taste.
- Came up at the same time. Tasted the same.
- They grew almost identical.
- Both grew large amounts of lettuce. We were giving much away.
- The tips of the leaves of both are tough, and the lower areas of leaves are very thin and fragile.
- Slow germination. Neither produced any heads.
- Looked and tasted the same until 'Skyphos' bolted. Tasted much better than the regular red lettuce in my garden, which got bitter right away.
- Some washed out due to the rainy spring. Neither variety bolted. Both were good. Sturdy plants.

Comments on 'Red Cross Lettuce

- Healthy plants with good yields. Very attractive. Excellent taste.
- Crisper; more like lettuce.
- Bigger heads and sweeter.



- Pretty; did well in the cooler temps later in the season. Good for a late crop.
- More plants, healthier. Showed more resistance to bolting. Better yield.
- Lovely red blush. Very pleasant taste.
- Better flavor. They grew almost identical.
- Tasted good longer.
- Plants were paler in color and more fragile. There was spoilage inside the heads when picked.
- Got bitter earlier.

Comments on 'Skyphos' Lettuce

- Produced the most beautiful heads of lettuce I think I've ever seen. Deep red color. Gorgeous crisp heads, heartier plants. Very crisp. Stayed crisp longer after we picked them. Several smaller heads formed off to the sides of the main head. Much, much better yields. First yield was one week earlier. Resisted bolting one week longer.
- Grew more abundantly, healthier, fuller looking. Its color and texture was so beautiful!
- Fuller heads. The colors and leaves were picture perfect.
- Went to seed about two weeks earlier.
- Tasted bitter.
- Plants were smaller and thinner. Light yields.
- Seemed to be more resistant to pests.
- Bolted two weeks later.

Conclusions

Both varieties performed well in the cool summer. Both resisted bolting and produced good crops of quality lettuce. Gardeners liked the health of 'Red Cross' and some gardeners raved over the beauty of 'Skyphos'. Both varieties were delicious.

Trial 17. 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 and 4 sites in 2014.

Trait	2013			2014			Weighted Total		
	'Pablo'	'Sierra'	Same	'Pablo'	'Sierra'	Same	'Pablo'	'Sierra'	Same
Germinated best	0 %	33 %	67 %	50 %	0 %	50 %	29 %	14 %	57 %
Healthier plants	0	67	33	25	0	75	14	29	57
Higher yields	0	67	33	67	33	0	38	47	14
More attractive	67	0	33	67	0	33	67	0	33
Tasted better	0	33	67	67	0	33	38	14	47
<i>Preference</i>	33	67		75	25		57	43	
<i>Recommend to others</i>	33	67		50	25		43	43	
<i>Overall rating¹</i>	8.67	9.00		6.25	4.75		7.29	6.57	

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

General Comments

2013

- 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.

2014

- Both of these lettuces grew fine. Neither went to seed in the cool summer, neither went to seed. Neither formed heads; more like a loose leaf. If looking for a crisphead, there are much better choices; I grow romaine head lettuce.

- Much more peppery flavor, which I do not like.

2014

- Plants were bigger, fuller and prettier. Two times more yield. Beautiful color, curved leaves. Prettier and looks better on a plate. Better taste; crisp, delicious and sweet.
- Plants were bigger. More robust until deer ate it.
- At least it had red leaves.

Comments on 'Sierra' Lettuce

2013

- 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.

Comments on 'Pablo' Lettuce

2013

- A prettier plant. It's beautiful; not as productive.
- More color; a darker red color.

More Comments on 'Sierra' Lettuce

2014

- Seemed to be crisper inside the head. Kept producing while 'Pablo' bolted earlier (August 29).
- Had very little red color.

Conclusions

Gardeners were very impressed with the beauty of 'Pablo'. Its bronze, wavy leaves contrasted nicely with its green inner leaves. 'Sierra' was more productive. Its exceptional resistance to bolting was not evident due to the cool growing seasons. This trial was not popular and data are limited.

Trial 18. Lettuce, Green Leaf

Varieties (information from seed catalogs)

'Deer Tongue'

48 days. Thick green, pointed leaves radiate from the center. Heat tolerant. Plants are rugged and productive. Sharp flavor.

'Slobolt'

48 days. True to its name, one of the most heat-tolerant varieties. Crisp, mild flavor. Proven performer in North Dakota.



Data

Data were collected at 10 sites in 2014.

Trait	'Deer Tongue'	'Slobolt'	Same
Germinated best	0 %	30 %	70 %
Healthier plants	33	0	67
Higher yields	20	40	40
More attractive	22	44	33
Tasted better	22	33	44
<i>Preference</i>	<i>30</i>	<i>70</i>	
<i>Recommend to others</i>	<i>80</i>	<i>80</i>	
<i>Overall rating¹</i>	<i>7.56</i>	<i>7.22</i>	

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

General Comments

- Very different looks, but both were attractive. I really liked both. When mixed together they made a nice salad with their different textures.
- Good germination for both. Plants were very healthy, especially during the dry summer. Both were slow to bolt. Both produced ample amounts of lettuce—faster than we could eat it.
- Both came up at the same time. Produced very healthy and thick plants. Both tasted great.
- Very different looks. Both tasted good.
- Both were very good tasting.
- Very good germination.
- Both tasted bitter.

Comments on 'Deer Tongue' Lettuce

- Thicker, crispier leaf.
- Thicker, dark green leaves. Too thick for our taste.
- Crispier.

- Lasted later into the season. Tasted good—gave a “new” look to salads.
- Plants were beautiful, dark green. Stronger flavor that most of our kids did not appreciate.
- More attractive plant. Better tasting.
- Interesting shape.
- Started to go to seed when not picked for two weeks.
- Never germinated.

Comments on 'Slobolt' Lettuce

- Fresh and crisp. My family preferred it because it looked more like “regular” lettuce. Had a good flavor and held up well in the refrigerator. Leaves were lighter green and less thick.
- Lighter, frillier leaf.
- Nice light green color.
- Thicker stand. Slight browning on leaf tips. We were more familiar with it and so we ate it days before 'Deer Tongue'. We cut it several times; a big hit with kids. Bright green leaves. More mild tasting. We preferred it by 3 to 1; Tommy preferred the stronger taste of 'Deer Tongue'.
- The first harvest was about one week earlier.
- Lasted longest in the garden and produced even after cutting.

Conclusions

These varieties were very different. 'Deer Tongue' had thicker, crisper, darker green leaves with a sharper taste. 'Slobolt' looked and tasted more like “regular” lettuce. Gardeners appreciated the qualities of both varieties; in the end they preferred the lettuce they were more comfortable with: 'Slobolt'.

Trial 19. Lettuce, Green Oakleaf

Varieties (information from seed catalogs)

'Royal Oakleaf'

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

'Salad Bowl'

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

Data

Data were collected at 3 sites in 2014.

Trait	'Royal Oakleaf'	'Salad Bowl'	Same
Germinated best	0 %	67 %	33 %
Healthier plants	67	0	33
Higher yields	0	67	33
More attractive	100	0	0
Tasted better	33	0	67
<i>Preference</i>	100	0	
<i>Recommend to others</i>	100	100	
<i>Overall rating¹</i>	9.00	6.67	

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

General Comments

- They never bolted. We harvested before they went to seed.



Comments on 'Royal Oakleaf' Lettuce

- Fuller, faster growing, better looking. I prefer its darker color and shape. No problems with it.
- Darker leaves.
- Prettier leaves. Good flavor.

Comments on 'Salad Bowl' Lettuce

- Lacks flavor.
- More plants germinated. Deer and rabbits were especially hard on this variety. The plants kept coming back.

Conclusions

Only three gardeners participated in this trial. All recommended both varieties and all preferred 'Royal Oakleaf'. They loved its darker colored, frilly leaves. Both varieties were reliable and slow to bolt.

Trial 20. Lettuce, Red Oakleaf

Varieties (information from seed catalogs)

'Danyelle'

51 days. Leaves are lobed with deep red color. Plants show a uniform habit and are slow to bolt.

'Red Salad Bowl'

51 days. Popular for its burgundy red, deeply lobed leaves. Mild flavor and heat tolerant. Very easy to grow.

Data

Data were collected at 4 sites in 2014.

Trait	'Danyelle'	'Red Salad Bowl'	Same
Germinated best	0 %	25 %	75 %
Healthier plants	25	50	25
Higher yields	75	25	0
More attractive	50	25	25
Tasted better	75	0	25
<i>Preference</i>	75	25	
<i>Recommend to others</i>	75	50	
<i>Overall rating¹</i>	7.50	5.75	

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

General Comments

- Both tasted really good; they were not bitter. I had lots of salad this summer!
- Neither bolted.
- Both germinated very well!
- I had very few of any variety come up. What did die before I could get it to eating size. Not sure what happened.



Comments on 'Danyelle' Lettuce

- I prefer its texture, flavor, and how long it lasted.
- Kept producing longer—resisted bolting.
- Never got real bitter to the end of season.

Comments on 'Red Salad Bowl' Lettuce

- Bitter after the first harvest. The deer didn't even eat it, but they took the 'Danyelle'.

Conclusions

'Red Salad Bowl' has performed well in the past and is the standard variety of red oakleaf lettuce. Granted our sample size is limited, but 'Danyelle' looks very promising. It produced higher yields than 'Red Salad Bowl' and most gardeners preferred its flavor. Gardeners liked its deep red color, too. It resisted bolting better and was never bitter in taste.

Trial 21. Lettuce, Romaine

Varieties (information from seed catalogs)

‘Green Forest’

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

‘Salvius’

58 days. Crispy, glossy, medium-green leaves. Heads are tall and thick. Slow to bolt and very easy to grow. Delicious.



Data

Data were collected at 21 sites in 2014.

Trait	‘Green Forest’	‘Salvius’	Same
Germinated best	21 %	37 %	42 %
Healthier plants	25	15	60
Higher yields	33	33	33
More attractive	26	21	53
Tasted better	50	15	35
<i>Preference</i>	72	28	
<i>Recommend to others</i>	86	71	
<i>Overall rating¹</i>	8.11	7.16	

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

General Comments

- Both grew big. Both grew well. Two months of lettuce. Both were yummy.
- This was really close—I would recommend both as the yields were really close. I ended up giving a lot away to neighbors and the food pantry since we just can’t eat that much at once.
- Growth was very similar. We enjoyed so much lettuce from July through September! Salad, tacos, salad, sandwiches, lettuce wraps, salad ... This lettuce trial was really wonderful. Very few bugs even stopped by to hang out.
- Great year to grow with plentiful rain. They performed similarly.
- Both were beautiful! Both were great!
- The plants looked great. Both tasted good.
- It was a very wet and cold spring. Both varieties came up well. Both were excellent.
- Looked and tasted really similar.
- Neither bolted. Both got bitter at the same time (July 21).

Comments on ‘Green Forest’ Lettuce

- Nice green color; flavorful; produced well.
- More compact leaves that looked more like the romaine in stores. More attractive looking. Crunchier and had a slightly better taste. Kept longer in the refrigerator.
- Larger plants; higher yields.
- Harvested a lot and it lasted longer. Tasted great.
- Had very nice plants and tasted better. Did not go to seed as early.
- Plants were healthier and tasted better.
- It was less vigorous but kept a good mild taste even in a dry spell.
- Tasted a little better.
- Somewhat milder.
- Flavor was much sweeter with very little if any bitter aftertaste.

Comments on ‘Salvius’ Lettuce

- Good production. Tasted best.
- Bigger plants.
- Better tasting—nicer looking plant.
- A slight edge in earliness. Better yield. Taller plants.
- Little higher yield.
- Slower to germinate. Plants dried out earlier.

Conclusions

Gardeners were delighted with both varieties. The cool moist weather contributed to a long and abundant harvest. Most gardeners preferred ‘Green Forest’ for its milder flavor. It showed greater resistance to bolting at several sites.

Trial 22. Melon, Cantaloupe

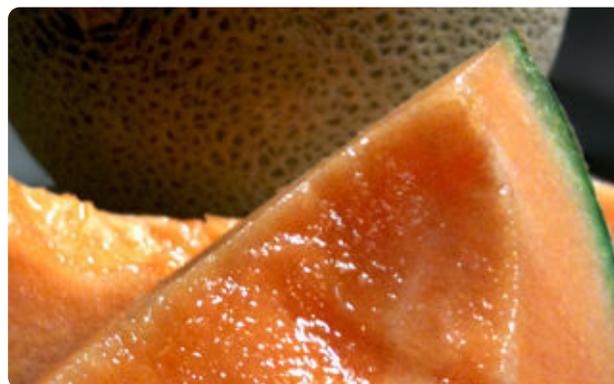
Varieties (information from seed catalogs)

'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.

'Dutchess'

73 days. New variety with very sweet, firm, orange flesh. Well-netted fruits average 4.5 pounds. Vines resist many diseases.



Data

Data were collected at 14 sites in 2013.

Trait	'Athena'	'Dutchess'	Same
Germinated best	21 %	21 %	57 %
Healthier plants	27	0	73
Matured earlier	50	50	0
Higher yields	40	20	40
More attractive melons	67	11	22
Tasted better	50	38	13
<i>Preference</i>	50	50	
<i>Recommend to others</i>	50	40	
<i>Overall rating¹</i>	6.00	5.50	

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

General Comments

- Both had 100% germination. They needed a longer growing season. There were lots of fruits, but none got larger than a softball. None ripened.
- Both tasted OK but not great.
- Neither ripened because of early frost.
- I started them indoors to get a jump start on this long maturing variety and also placed them both in "hot houses." Not much yield from either. Only one usable melon (from 'Dutchess').
- Didn't ripen well. Many were still green.
- Neither germinated (sown May 24).
- Neither germinated (sown May 25).

Comments on 'Athena' Cantaloupe

- Produced a higher yield and tasted much sweeter.
- Only one ripe melon. No ripe melons for 'Dutchess'.

- Larger melons. Slower to get ripe.
- Bigger fruit; better tasting.
- Had more and bigger melons. I thought for sure it would taste great, but it didn't.
- Did not harvest a single melon.
- Melons were more salmon in color, compared to the greenish 'Dutchess'. Our kids all thought it had an aftertaste of fingernail polish remover; well, the scent of it if you could taste it. Very strong.

Comments on 'Dutchess' Cantaloupe

- Hands down the better tasting melon. It grew about the same as 'Athena' but tasted way better. I was surprised.
- Produced more melons.
- Tastier.
- We found it harder to know when its melons were ripe, because they remained green much longer. While waiting for them to ripen, they got overripe and many rotted in the garden. We learned to pick them earlier than we thought they should be picked. We prefer its milder taste.
- Vines started to have a dry look. The melons looked more attractive.

Conclusions

Both varieties produced very low yields due to the cool growing season. Neither variety was impressive. More gardeners felt the melons of 'Athena' looked and tasted better. 'Athena' has been the early cantaloupe champion and 'Dutchess' is the newcomer. 'Dutchess' did not show any superiority over the champion this year.

Trial 23. 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 and 9 sites in 2014.

Trait	2013			2014			Weighted Total		
	'Solstice'	'Superstar'	Same	'Solstice'	'Superstar'	Same	'Solstice'	'Superstar'	Same
Germinated best	17 %	17 %	67 %	43 %	0 %	57 %	33 %	7 %	61 %
Healthier plants	25	0	75	43	0	57	36	0	64
Matured earlier	75	25	0	17	50	33	40	40	20
Higher yields	25	25	50	57	29	14	44	27	28
More attractive melons	25	25	50	71	14	14	53	18	28
Tasted better	50	25	25	60	40	0	56	34	10
<i>Preference</i>	67	33		50	50		57	43	
<i>Recommend to others</i>	50	50		67	44		60	46	
<i>Overall rating¹</i>	6.00	6.25		5.00	3.88		5.40	4.83	

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

General Comments

2013

- We liked both a lot.
- 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 three or more cantaloupes per vine but only a few 'Superstar' melons ripened before frost.
- We liked both a lot.

2014

- The plants came up but did not grow much.
- Many large melons but none got ripe before frost.
- Flowered but did not produce fruit.

- Pounding rains at planting time; the ground then turned hard. Cool spring followed by cool summer. Neither variety produced ripe melons. Looked like maybe another week or so needed. I also planted my old standby 'Gold Star'; they had always done well but this year we have a total of one melon.
- Cucumber beetle infestation took several seedlings out. Plants were healthy but slow to get established. Short growing season; needed to plant earlier (sown May 22).
- Rabbits damaged the establishment of both varieties.

Comments on 'Solstice' Cantaloupe

2013

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

More Comments on 'Solstice' Cantaloupe

2014

- Better germination. Healthier seedlings. Flesh had better texture.
- More melons. Bigger, sweeter melons—extra nice flavor.
- Better taste and yield.
- None of the cantaloupes in this trial ripened, but the 11 'Solstice' plants produced 30 melons; the 5 plants of 'Superstar' produced 11 melons. The 'Solstice' melons were larger.

Comments on 'Superstar' Cantaloupe

2013

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

2014

- Melons were larger and sweeter. Had a nicer shape. Typical rough texture to rind. Earlier to ripen.
- A little earlier.
- Higher yield (high tunnel production).

Conclusions

The last two growing seasons have been unusually cool and results were fairly consistent year after year. Both varieties performed poorly. Yields were very low. 'Superstar' is the standard large cantaloupe variety, but 'Solstice' was more reliable and productive. It matched if not exceeded 'Superstar' for melon quality. Most gardeners preferred it although they were disappointed in both varieties. Data and comments are limited.

Trial 24. Melon, Galia

Varieties (information from seed catalogs)

‘Arava’

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

‘Visa’

77 days. Thick green flesh with very high sugar content. Vines and vigorous and productive. Oval, well-netted fruits average 4 pounds.



Data

Data were collected at 17 sites in 2014.

Trait	‘Arava’	‘Visa’	Same
Germinated best	44 %	6 %	50 %
Healthier plants	27	13	60
Matured earlier	54	38	8
Higher yields	64	21	14
More attractive melons	62	23	15
Tasted better	55	27	18
<i>Preference</i>	75	25	
<i>Recommend to others</i>	65	47	
<i>Overall rating¹</i>	6.32	5.05	

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

General Comments

- I love these melons! They actually grow well in southwest North Dakota!
- Different flavor.
- Barely any plants germinated (sown May 22). Neither variety produced.
- We picked them too late. Overripe and mushy.
- Because of the wet spring and cool fall, both varieties were not as sweet as expected—a bit watery flavor.
- Growth of vines and production of melons was poor—too cool.
- Didn’t quite get enough time to really ripen.
- Did not produce fruit.
- Poor germination led to large gaps in rows.
- With cool summer, plants didn’t set many fruits and they did not ripen.
- They all died—crazy season for melons.
- Both had a little powdery mildew, especially later in the season.

Comments on ‘Arava’ Melon

- Better germination. Produced more melons that matured fully. Sweeter.
- More melons, larger melons and better taste.
- Matured 10 days earlier. Half again as many melons. Were less prone to cracking.
- Melons were larger and had a nicer green color. Tasted much better.
- Higher production. Sweet.
- Took a long time to produce.
- Melons were larger but did not ripen this year.
- Healthier plants. Good fruit set. No ripe melons.
- More melons but they were smaller.

Comments on ‘Visa’ Melon

- Seedlings popped through quicker. More plants. Seemed heartier. Melons had thicker skin. Sweeter. I would grow this again.
- Lots of blossoms, but only one, very small melon. It tasted good! No ‘Arava’ melons ripened.
- Sweet fruit.
- Matured faster. Flavor was very sweet and mild.
- Tasted flat.
- Did not keep.
- They ripened earlier but got overripe fast. You had to pick them before they would come off the vine easily; otherwise they tasted mushy.

Conclusions

Most gardeners preferred ‘Arava’. It matured earlier, produced higher yields and tasted better. Both varieties struggled in the unusually cool growing season. Melons were slow to ripen and yields were low. Some gardeners did not harvest a single ripe melon.

Trial 25. Pea, Shell

Varieties (information from seed catalogs)

'Lincoln'

65 days. Good for freezing. Pods are filled with 8–10 tender peas. Excellent flavor. Vines tolerate heat and resist diseases. Height 28 inches.

'Progress No. 9'

62 days. Popular heirloom. Large, dark green pods filled with tender peas. Used to make baby food. Dwarf, 20-inch vines.



Data

Data were collected at 33 sites in 2014.

Trait	'Lincoln'	'Progress No. 9'	Same
Germinated best	52 %	13 %	35 %
Healthier plants	45	17	38
Matured earlier	30	47	23
Higher yields	58	26	16
More attractive pods	60	7	33
Tasted better	30	23	47
<i>Preference</i>	70	30	
<i>Recommend to others</i>	85	58	
<i>Overall rating¹</i>	7.78	6.27	

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

General Comments

- Both varieties produced until the end of July!
- Both did well because of the cooler summer.
- Germinated at the same time and they matured at the same time.
- Both germinated around 95%.
- Both were very good yielders.
- Both had good yields.
- Both tasted good.
- Kids loved them.
- Both were very slow to germinate. My child liked eating peas right out of the garden.
- Not a good year for peas for me.

Comments on 'Lincoln' Pea

- Many more plants and peas. Tasted better; sweeter. Overall much better pea, including taste, appearance and quality.

- Overall, I thought this variety did better throughout the whole growing season. The plants stayed robust the longest. Better yields. Taste was great.
- Much better germination (100% compared to 70% for 'Progress No. 9'). Plants were much healthier. A lot of nice pods—great for market. Uniform shells. Longer harvest season. Yielded more.
- Grew faster and produced healthy, good tasting peas.
- Performed better. Longer, fuller pods.
- Better yield; longer yield time; and excellent taste fresh and cooked. Better germination; more plants.
- Plants were almost double the size. 'Lincoln' was our obvious preference for its vine size, large yield, and taste.
- Pods were more attractive. Peas were more tender. Better eating quality.
- Vines were 3 times bushier. More yield.
- Sweeter, smaller peas.
- Better flavor and higher yields.
- Produced more peas per pod.
- Pods were fewer but fuller with peas.
- Germinated much better. Nicer looking plants. Pods looked very nice.
- Germinated much earlier.
- Through this, another strange growing year, 'Lincoln' produced the best.
- We love 'Lincoln'!
- Longer yielding and higher yielding.
- Grew better and greater production of peas.
- Germinated first but its seedlings lacked the vigor of 'Progress No. 9' when the heat and dry weather came. Produced two weeks ahead. Its pods were not as nice and full. Vines were subject to powdery mildew.

Comments on 'Progress No. 9' Pea

- Tender, sweet and delicious. Really impressive yields—literally hundreds of peas. Healthy plants!
- My grandpa is a “Lincoln Pea Guy.” He was surprised when ‘Progress No. 9’ was sweeter!
- Very healthy, thriving plants that produced abundantly. Tender, sweet peas.
- Surprised us with its huge pods on tiny plants. Early yields.
- Did a little better; yields were earlier and higher.
- Produced the first yield.
- First yield was large and abundant. Overall better yield and we love its taste right from the garden. Pods have a tougher spine.
- Earlier producer. Vines were smaller and no staking was needed.
- Had huge shells and produced sooner.
- It grew better and tasted better.
- Produced longer and was a better pea.
- Huge peas and pods.
- More large peas.
- Pods were smaller; often only had two peas inside.
- Slightly earlier. Pods were huge and ugly, with very large peas.
- Quite a few of the pods were curled. The peas were sweeter by far. We like “sweet” green peas.
- Tasted a bit sweeter. Plants were healthier.
- Pods were curled and tougher to shell.
- Matured a few days earlier but the pods were not filled out. The cold, wet weather might have affected its yields.
- Never produced pods.

Conclusions

‘Lincoln’ always wins our pea trials and this year was no exception. Its plants were robust and consistently produced high yields. Its pods were very attractive, long, and filled with delicious peas. The small vines of ‘Progress No. 9’ produced a strong early crop. Gardeners liked the taste of both varieties.

Trial 26. Pea, Snow

Varieties (information from seed catalogs)

'Oregon Sugar Pod 2'

65 days. Easy to grow, early pea. Pods are delicious steamed or fresh. Disease-resistant, 24–28-inch vines. Trellising optional.

'Sweet Horizon'

65 days. New gourmet pea noted for its extremely straight pods. Pods are borne in pairs and easy to pick. Vines grow 30-inches; trellising optional.



Data

Data were collected at 30 sites in 2014.

Trait	'Oregon Sugar Pod 2'	'Sweet Horizon'	Same
Germinated best	39 %	14 %	46 %
Healthier plants	14	32	54
Matured earlier	57	32	11
Higher yields	52	30	19
More attractive pods	21	36	43
Tasted better	29	25	46
<i>Preference</i>	54	46	
<i>Recommend to others</i>	73	72	
<i>Overall rating¹</i>	7.76	7.50	

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

General Comments

- They sprouted on the same day! Both had amazing yields; both yielded peas for over a month! Both were delicious.
- Both germinated well. Both had healthy plants. Both produced at about the same time. Both produced well. Nice looking pods. Tasted very good. Both varieties were very, very good!
- We got a second growth and crop from both. Both gave us baskets full of pods! The pods looked great! The pods grew to a nice size and had great color.
- Good germination and yield. Good early growth and early harvest.
- Both varieties showed excellent germination, pod appearance and taste. No taste difference.
- Both produced good yields.
- Both were tasty—kept producing most of the summer.

- Both did really well; no diseases, no bugs, no nothing.
- They both came up nearly identically. All plants were vigorous. Both performed well.
- Both varieties were strong, healthy climbers.
- Near 100% germination.
- We noticed no difference in the two varieties. Both were good despite the late planting (May 20) and wet, cold spring.
- Both succumbed to powdery mildew earlier than my shell peas. Both had produced well until that time. The pods were yummy!
- Poor germination for both varieties. We received 9 inches of rain in June and it was too wet.

Comments on 'Oregon Sugar Pod 2' Pea

- Vines were about one foot taller. The first yield came one week earlier. Produced longer.
- Large plants. Many pods. Very sweet pods and peas.
- Delicious peas; large healthy plants that kept producing more and more.
- The varieties were very similar, but 'Oregon Sugar Pod 2' produced more and for a longer time.
- Sprouted bigger and faster. They had the first peas. Bigger pods. More productive. Slightly sweeter taste.
- Fuller, larger, darker pods. Higher yields.
- Better yield; bigger pods.
- Sweeter taste. Good for snacking.
- Very large pods and good tasting.
- Produced a nicer plant.
- Had a higher and more consistent yield and produced longer into the season.

More Comments on 'Oregon Sugar Pod 2' Pea

- Produced more pods and tasted just slightly better.
- Matured a couple days earlier. More pods and the pods were larger, straighter and fatter.
- Slightly larger pods. Pods were sweeter and strings less noticeable. More tender.
- Came up first; three days earlier.
- Germinated faster.
- Germination was 44% compared to 40% for 'Sweet Horizon'. Pods ripened five days earlier.
- Developed brown spots on its pods. Pods were thick and unattractive.
- Halfway through the growing season it lost some of the plant on the bottom of the vines. This was the first variety to give us pods. The pods were a bit sweeter; we give it a slight edge in taste.

Comments on 'Sweet Horizon' Pea

- Hardier plants. They had nicer pods and the peas inside did not get large very fast so they did not have to be watched quite so carefully.
- Pods were greener, but very small. More flavor.
- Fresher green color.
- Produced 5.7 pounds compared to 5.2 pounds for 'Oregon Sugar Pod 2'.
- Healthier plants—heartier during dry weeks.
- Pods stayed flat while those of 'Oregon Sugar Pod 2' tended to curl a lot.
- Vines were healthier. Vines were taller with a thicker base. Pods were longer and straighter.
- Better germination. Healthier plants.
- Longer, healthier vines. Matured a few days earlier. Both produced well, but 'Sweet Horizon' produced a bit more; produced later in the season. Pods were much larger.
- Larger, wider pods.
- Plants were healthier. They did not get a fungus/disease as soon.
- Pods were sweeter and crispier.
- More tender pods and tasted better.
- Stem rot on some plants. Several pods were pale. The pods became leathery sooner. Peas were slow to form; a notable number of pods were peapless. Earlier to mature and higher early yields.
- Better yield.
- The pods did not have as many imperfections.
- Hardy. Very tasty, super sweet.
- Never germinated.

Conclusions

The pea vines of both varieties thrived in the cool summer weather. Both varieties were rated highly. Gardeners were especially impressed with the early maturity and overall yields of 'Oregon Sugar Pod 2'. Its pods were dark green. Several gardeners favored the bright green and flatter pods of 'Sweet Horizon'. Gardeners were split on their taste preferences.

Trial 27. Potato, Gold with Light Flesh

Varieties (information from seed catalogs)

‘Yukon Gem’

Tubers have bright gold skin and yellow flesh. Midseason maturity. Yields are good and reliable. Resists scab.

‘Yukon Gold’

Very popular for its golden flesh and delicious flavor. Great storage ability. Very early maturity.



Data

Data were collected at 50 sites in 2014.

Trait	‘Yukon Gem’	‘Yukon Gold’	Same
Germinated best	29 %	20 %	51 %
Healthier plants	43	7	50
Higher yields	54	24	22
More attractive tubers	44	29	27
Tasted better	26	19	56
<i>Preference</i>	67	33	
<i>Recommend to others</i>	86	66	
<i>Overall rating¹</i>	8.11	6.87	

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

General Comments

- Both of these performed wonderfully.
- These two are so similar; it is hard to pick.
- Both germinated sooner than the red varieties. Both taste great and we eat with skin on.
- These potatoes were the best I ever had. They all germinated and were ready to eat early. Very acceptable yields. I would plant these two again in a heartbeat. We love the white skin, and the kids don’t mind if they aren’t peeled. Just fry or mash them and eat.
- Good yields. Good year for potatoes—all did well.
- Both were very good tasting with a buttery flavor and smooth texture.
- Both tasted good, especially mashed. Both grew well.
- Both were very tasty.
- Both baked up good and great taste.
- Both germinated well. Both tasted great.
- Family was split down the middle on which one tasted better.

- Tasted the same when cooked.
- I could not notice any difference in taste. Both seemed drier than the ‘Yukon Gold’ of previous years. I recommend both.
- One hundred percent germination on both. Plants were large and bushy.
- One hundred percent germination.
- Equally matched in germination and vine health.
- Vines were vigorous.
- Both did well.
- Neither variety germinated very well.
- Very similar in taste, texture and moisture. I was disappointed in their yield.
- Low yields.
- Planted ten hills of each, and nine hills of each sprouted. I can’t tell a difference in taste. Production was poor. I should have planted them several inches deeper, judging from the fact they popped up through the soil even as I piled more dirt on top of them. I’ve never had this problem with my red potatoes. Neither variety did anywhere close to my own red potatoes. We’ll stick with the red ones in the future.
- Grasshoppers ate off all the tops.

Comments on ‘Yukon Gem’ Potato

- Matured a little later. Much higher yield (59 pounds compared to 27 pounds for ‘Yukon Gold’).
- Produced twice as much yield. Size was smaller but more consistent. We like its texture better.
- I grow potatoes for flavor. ‘Yukon Gem’ is fabulous. Great texture; wonderful flavor.
- Yield was 30 pounds compared to 9.25 pounds of ‘Yukon Gold’. Tubers were nice and smooth. Few “fingers.”

More Comments on 'Yukon Gem' Potato

- Higher yields.
- Produced more tubers (six or more per plant compared to two per plant for 'Yukon Gold'). These tubers were slightly smaller but more uniform in shape. Much more and better flavor. I was surprised because I have grown 'Yukon Gold' before and just thought the Yukons were just low performers compared to red varieties. 'Yukon Gem' produced as much as my red varieties this year.
- Better germination. Plants were healthier and stayed greener longer; required less attention. Twice the yield; average potato size was nice, and similar between the varieties. Skin is stronger and thicker. They are less starchy.
- Higher yield (87 pounds compared to 40 pounds for 'Yukon Gold'). Bigger potatoes. Susceptible to scab while the 'Yukon Gold' potatoes were scab free. One of our four tasters felt it had "more potato taste" while the others sensed little difference but gave the edge to 'Yukon Gem'.
- The tubers were slightly larger and more uniform. It yielded better and had nicer potatoes.
- Seemed to produce plants from every seed potato while the row of 'Yukon Gold' had several bare spots. On June 7, I noted its plants were healthier and larger. One plant had 24 tubers! The champion for sure! That's what I want to find when harvesting. I liked its potato appearance: oval to round oblong; smooth skin; medium size; like I want for a baked or boiled spud. The size was perfect for our family. Has a good, mild flavor; yellowish flesh. Very nice potato variety. No signs of disease on the plants or potatoes.
- Germinated better; yielded better; more uniform tubers; better looking tubers. Darker yellow flesh.
- Yield was 16% higher by weight. Tubers were more uniform. Slightly more potato flavor. A little better texture.
- Produced 22.7 pounds compared to 19.6 pounds for 'Yukon Gold'.
- Produced a lot more smaller potatoes, but similar yields overall.
- Yields were sparse, but this variety produced more.
- Tubers were smaller; better suited for my use.
- We prefer the taste of 'Yukon Gem'.
- Both as a boiled potato and in potato salad (yep, I also did potato salad for each variety), we preferred 'Yukon Gem' for its texture.
- Bigger tubers and better flavor.
- Had many small bumps on the skin.

- Less late blight on vines. Vines stayed green later in August.
- All ten hills sprouted compared to nine of ten for 'Yukon Gold'. Brown spots were in the middle of larger tubers. Higher yields.
- The plants seemed a bit more vigorous.
- Skin had brown dots on them—it does not bother me, but they are different looking.
- A hardier plant with nicely sized tubers. This variety held up well to flea beetle damage; the 'Yukon Gold' plants died off.
- Nice plants, but little yield. Potatoes were bigger.
- Larger plants; larger potatoes.
- More but smaller potatoes. The tops quit growing too soon.
- A sample hill had six baseballs plus two golf balls plus three marbles compared to a sample hill of 'Yukon Gold' consisting of nine baseballs and three golf balls. About half of its tubers were more flat than round; this was disappointing but not too bad. We had several comments on its good taste and "best mashed potatoes ever." The taste was fabulous in the mashed potato application (our favorite regular application of potatoes).
- More productive. Our 10-year-old son said it smelled like waffles as soon as he cut into it. He and mother think it tastes sweeter.
- Slower to germinate but caught up after two weeks. Tubers were rough—almost scaly.
- Better overall.

Comments on 'Yukon Gold' Potato

- Early maturity. Larger and more potatoes. Tubers had a nice, uniform size. Great tasting. It's one of my favorite potatoes.
- Yield was twice as high. Many more larger, first-sized potatoes. Smoother, buttery taste.
- Beautiful smooth skin.
- Much better yield.
- Not as many plants came up, but all produced.
- Started blooming in 30 days. We pulled up the tubers in early August for a meal and were surprised how large they were.
- Larger tubers but often only two per hill. More oblong in shape. The tubers have a creamy yellow interior and good flavor.
- More large potatoes; gold color inside.
- Nice smooth, thin skin. Flesh was more to my taste.
- Sprouts emerged 5 days earlier. More large tubers.

More Comments on 'Yukon Gold' Potato

- Tubers were more rounded. Daughter and father of the family liked both varieties but preferred the taste of 'Yukon Gold'. Its taste was "normal;" less starchy without aftertaste.
- Larger, more attractive tubers.
- Nicer tubers and more even.
- Some larger tubers but fewer tubers overall.
- I liked the taste of both varieties but 'Yukon Gold' just a little better.
- Best taste.
- Not as starchy. Sweeter tasting.
- It makes an excellent mashed potato.
- Better color.
- Good for roasting and fried.
- There were a few sprouts on the potato seeds. We harvested huge tubers.
- Vines died down a little sooner. Had some huge tubers. Tubers were grouped tight and close under the plant.
- Two plants died from insect damage. Fewer but larger tubers.
- Seemed to need staking.
- Vines suffered disease earlier. Produced bigger potatoes, which we like. We can eat them earlier.
- The tubers were very, very large; not good for small households.
- Plants were very slow to start growing, and potatoes were small.
- Potatoes were mostly green, knobby and far fewer in number.
- Very poor yield.

Conclusions

'Yukon Gem' was impressive. Most gardeners preferred it over its well-known parent, 'Yukon Gold'. Its vines were healthier and its yields were much greater (in many cases twice as large). 'Yukon Gem' tubers were slightly smaller but more attractive and uniform. The variety is reported to have more resistance to scab and late blight. 'Yukon Gold' matured earlier and its tubers were larger. Gardeners enjoyed the flavor of both varieties.

Trial 28. Potato, Purple with Light Flesh

Varieties (information from seed catalogs)

‘Peter Wilcox’

Brilliant purple skin and golden flesh. Bred by USDA for high vitamin C and antioxidants. Good for roasting and boiling. Midseason maturity.

‘Purple Viking’

Rich purple skin with pink splashes. Bright white, creamy flesh. Great for baking or mashing. Midseason maturity.



Data

Data were collected at 67 sites in 2014.

Trait	‘Peter Wilcox’	‘Purple Viking’	Same
Germinated best	20 %	20 %	61 %
Healthier plants	22	18	60
Higher yields	34	42	24
More attractive tubers	33	40	28
Tasted better	31	33	36
<i>Preference</i>	36	64	
<i>Recommend to others</i>	74	79	
<i>Overall rating¹</i>	7.32	7.59	

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

General Comments

- One hundred percent germination from both varieties. Healthy vines. Both varieties grew beautifully with very little fuss. I’m not a “green thumb” gardener but these grew very well for me.
- They both had some large tubers. I got them planted rather late (June 11), but they both matured in time.
- Germinated similarly. Vines were real good and healthy. Good yields. Yummy taste.
- This was our first year raising potatoes. We very much enjoyed the experience! We learned much about raising potatoes. We enjoy eating produce from our own garden. Both varieties taste great!
- Came up at the same time. Plants were full. Nice plants. Very attractive tubers. Yum!
- Excellent taste.
- We never had purple potatoes before. Both varieties tasted great.
- They are more of a novelty crop but were fun to grow and eat.

- Both grew quickly and looked healthy in our square foot gardens. The vines dried in middle August.
- They are more of a novelty crop but were fun to grow and eat.
- I felt they were a little slow coming out of the ground. Each produced 20 pounds. Tubers were very nice. I can’t make a choice—they were both equal across the board.
- Both had attractive tubers.
- Germinated at the same time and both had healthy plants. Both were very flavorful.
- Not a lot of potatoes.
- Both grew very well.
- Both germinated well. We really enjoyed the taste of both! Less starchy than reds or russets. Most tubers were two inches in diameter.
- Our soil was hard as a rock when we harvested—amazed the potatoes could even grow!
- Both were healthy. No Colorado potato beetle or blight. Somewhat small yields overall; approximately 12 pounds in an 8-foot row.
- Both germinated well and plants looked real healthy.
- Near 90% germination. Both taste good.
- Good fresh potatoes.
- Both baked up nicely and tasted good.
- We tried to make homemade French fries. The natural dyes came out in the washing of potatoes. It made the fries speckly. The taste was good and crispy.
- They both began coming up after 10–14 days. Produced the same amount of pounds of potatoes. I wish the peel would not come off so easily when cleaned.
- Both came up at the same time.
- Every seed germinated.

More General Comments

- Both produced well.
- Fried some of each and they tasted pretty much the same.
- All hills germinated. Both produced well. The tubers had scab which made them unattractive.
- Both had very healthy vines. The purple color was new for our family to try so it took some time for my children to taste them.
- Both varieties were damaged by flea beetles. Potato yields were diminished and tubers were small—most only about the size of an egg or a little larger.
- Insects were a problem.
- Both developed scab.

Comments on 'Peter Wilcox' Potato

- We planted four varieties and this was our highest producer. Four of five tasters preferred the taste of this variety. We disliked its skins.
- One of my friends definitely thought it had more and better flavor.
- More potatoes, but smaller.
- Germinated slower. Potatoes had a similar size and a pretty purple color. Its yellow flesh was unique and delicious.
- Slightly higher yield. Potatoes had a nice shape. Flesh is more yellow.
- Almost a buttery taste to them that was very good.
- Nice yellow flesh.
- Took longer to boil to soft state and were more off-white to almost green color when peeled.
- Its flavor reminds me of a 'Yukon Gold'.
- Small tubers.
- Great tasting. A little bit better in taste.
- Harvested one week earlier. More sweetness; more taste.
- More uniform in size. Too much like a regular potato.
- Had the shape and taste of 'Yukon Gold'. I don't care for them.
- Far better producer. Bigger, nicer tubers.
- Produced 40 pounds compared to 30 pounds for 'Purple Viking'. More uniform, too. Better taste.
- Had some scab; 'Purple Viking' did not. Produced 80 potatoes compared to 54 for 'Purple Viking'. Both were good!
- Suffered more damage from flea beetles. I liked its uniform, dark purple skin.

- Showed more resistance to bugs.
- Tubers were smaller and had a mild flavor. Good texture even after wedged and roasted.
- Potatoes were smaller. Fewer eyes, more uniform in shape. More moist; great roasted on grill. This potato was very full of garden flavor but didn't taste dirty.
- Did not germinate as well. Its potatoes boiled up nicely. It had a creamy taste and texture after cooking.
- Great flavor. Hands down better flavor than 'Purple Viking'. The texture of its yellow flesh was firm.
- Large-sized potatoes. More potatoes per plant. The tubers held together when cooked. Excellent frying potato. Thin skin was easy to peel even though it was rough with inconsistent coloring. Good strong potato taste. Took longer to cook.
- Didn't seem to mash—had lots of lumps.
- Grew better. Its golden colored flesh looked "buttery."
- Produced 56 pounds compared to 26 pounds for 'Purple Viking.'
- Potatoes were smaller; similar to what we buy at the grocery store. I prefer this size.
- My mother and sister preferred its flavor—sweeter.
- Potatoes were not uniform in size; numerous small potatoes mixed in with some larger potatoes.
- Twice the yield; and larger potatoes. Tastes very good. Pretty!
- My children preferred its taste.
- We liked the taste of this potato the best.
- Harvested 26 pounds (1.7 pounds per plant) compared to 16.25 pounds (4 pounds per plant) for 'Purple Viking'. Tubers were smaller but a more uniform size for peeling.
- Hollow spaces developed inside the tubers.

Comments on 'Purple Viking' Potato

- The potatoes were big and looked very nice.
- Produced 40.5 pounds compared to 29.3 pounds for 'Peter Wilcox'. These yields doubled the yields of our 'Yukon' trial.
- The highest yielding of all our potato varieties. Great!
- Produced 47 pounds compared to 34 pounds for 'Peter Wilcox'. Better taste.
- Huge potatoes. Seemed to have better "structure" when cooked.

More Comments on 'Purple Viking' Potato

- Great yield! Tasted great!
- Its flavor and texture was better. I think the larger size would be reduced with a thicker stand of plants. I would like to try this variety again.
- Germinated quicker and more uniformly. Large and uniform size potatoes. Nicer skins; not so many marks. I liked its whiter flesh. Excellent tasting.
- Produced bigger plants. Huge and more potatoes—great! Slightly better tasting. Attractive tubers. Earlier producing.
- Produced a little better and tasted better. Its flesh was smoother and moister.
- Super cool pink and purple marbled skin. I liked this skin—seriously.
- More attractive tubers. A nice, uniform shape.
- Good fried and mashed. Not good for baking. Its white flesh was crisp. I would like these again for next year.
- I dug one hill of both on August 1. The 'Purple Viking' had softball tubers; the 'Peter Wilcox' had tennis ball tubers. Nice white flesh. Larger tubers. Kind of a sugary flavor; great. Produced 42 pounds compared to 29 pounds for 'Peter Wilcox'.
- Produced 50 pounds compared to 40 pounds for 'Peter Wilcox'. I liked its taste and white flesh.
- Huge potatoes! One was 3.5 pounds. I have never had so many huge potatoes! I dug them on September 27 and the plants were still green, I am sure the moisture and temps this summer helped.
- Vines were healthy and full. The tubers were both nice looking and firm. Potatoes had a uniform, symmetrical size. Delicious.
- More tubers. Tubers had better size.
- Vines were more abundant and fuller. Larger potatoes. Seems to have more flavor and were bright white in color when peeled.
- Only half of the hills came up. I prefer its taste.
- Very definitely produced more potatoes. Some potatoes were huge. I would plant this again.
- Produced 25 pounds compared to 20 pounds for 'Peter Wilcox'. Its tubers were consistently large.
- Good taste and huge potatoes. I want to grow these next year.
- Vines looked healthier. A couple large tubers.
- Produced more potatoes. The flesh is stark white and delicious baked or mashed. The potato remains firm after cooking.
- Better sized, consistently large tubers.
- Averaged two to three more potatoes per plant. We loved its taste; delicious. Cooked up really well.
- Fewer tubers but larger in size. Didn't have as much taste.
- One or two very large potatoes and many others of varying sizes. Skin had dark and light areas.
- I was prepared to like 'Peter Wilcox' better because it had a yellow flesh, but I and my family preferred the taste of 'Purple Viking'.
- Some potatoes had an odd shape. Tasted better. They were nice and white with very good flavor.
- Uniform tubers with thick skin. Tasted earthy. This variety did not germinate well and its vines weren't healthy.
- Better germination; healthier vines. Potatoes of both varieties were small, but those of 'Purple Viking' were larger.
- Larger potatoes.
- Tubers were a little larger.
- Taste was excellent.
- Softer flesh; milder taste. Shorter cooking time.
- Bigger potatoes.
- More potatoes. More bitterness/aftertaste.
- Larger potatoes. Very dry texture.
- White flesh color was nice.
- Sprouted quickly. Plants were bushier and more tolerant of flea beetles. A few misshaped tubers.
- Poor germination. Larger tubers—more for baking. A better tasting potato!
- Did not produce vines at every hill. The best taste of all of four purple-skinned varieties we tested.
- No funny shapes.
- Very irregular shapes.
- Several potatoes were rotten when harvested.
- Potatoes were bigger but did not have much flavor. It tastes like a regular potato.
- The softer color of its tubers was disconcerting in other dishes; still good.

Conclusions

Most gardeners preferred 'Purple Viking'. They were attracted to its purple/pink marbled skin and the snow white flesh of its tubers. Yields were reliable and the tubers were large. The golden and flavorful flesh of 'Peter Wilcox' appealed to many gardeners. Its tubers were bright purple and more uniform in size. The vines of both varieties were generally healthy. Gardeners were divided on their taste preferences.

Trial 29. Potato, Purple with Purple Flesh

Varieties (information from seed catalogs)

'Adirondack Blue'

Glistening blue skin with deep blue flesh. Moist, flavorful flesh is superb for mashing. High in anti-oxidants. Mid-season maturity.

'Purple Majesty'

New variety with dark purple skin with rich purple flesh. Makes eye-catching chips or fries. High in antioxidants. Midseason maturity. Poor storage.



Data

Data were collected at 66 sites in 2014.

Trait	'Adirondack Blue'	'Purple Majesty'	Same
Germinated best	33 %	28 %	38 %
Healthier plants	23	28	49
Higher yields	49	39	12
More attractive tubers	48	32	20
Tasted better	19	29	52
<i>Preference</i>	52	48	
<i>Recommend to others</i>	68	62	
<i>Overall rating¹</i>	6.67	6.60	

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

General Comments

- Very healthy vines; the best I've ever had with potatoes. Produced a lot of potatoes. They both tasted spectacular.
- It was hard to see them when digging in the soil. Both tasted so good—looked beautiful boiled. Lost some color when fried. I really enjoyed growing these potatoes.
- The tubers looked really nice.
- One hundred percent germination. I have grown purple potatoes before; these did so much better; the potatoes are larger.
- The two rows looked and grew the same. This was my first time growing potatoes and I was amazed at how many potatoes we got! Our kids loved eating purple potatoes!
- Very cool flesh color. We loved the color of these potatoes. It was very fun. However, overall they weren't the best potatoes we've ever had.
- Both had good flavor.
- Good flavor! Fun to eat!

- Both varieties came up from every seed potato (planted whole); 100% success rate. No pest problems. We found the tubers to have a drier, more russet type of potato with definitely an earthy taste. We love making potato chips by peeling the potatoes and slicing them thin. These potatoes provide fun and a wow factor to our child. They are high in antioxidants, too.
- Pretty similar.
- Vines were healthy. Tubers were very hard.
- Tasted the same and both are very attractive dark purple.
- Neither had strong vines. Neither had great flavor. The color of both was good and a novelty.
- The tubers of both varieties baked good.
- Both were tasty.
- They were both tasty, but it was hard to get past the coloring.
- We had a lot of scab on both potato varieties.
- Both were good for fries, but dense for cutting. Terrible mashed potatoes. OK when boiled.
- They both cooked beautifully and were fun to eat.
- The plants were healthy; no Colorado potato beetle or blight. Small yields.
- Vines are healthy. Not a lot of difference in yield. The tubers looked okay. They were firm and tasted similar.
- One hundred percent germination. No diseases.
- Germinated well. Potatoes were sweet and good.
- Both produced a large amount of potatoes.
- Both were about equal and both had small potatoes. Beautiful color!
- Both were dry textured. Neither was flavorful.
- Not much difference in taste.
- Both of these are definitely baking potatoes; not boiling. Insects were a problem.

More General Comments

- Both mushy—not a lot of flavor. Pretty color, but the color could turn some off. Very dense texture when raw.
- The skins are thin; works great to wash and cook.
- Both tasted very good.
- Would not use as mashed potatoes—color was very unappealing. Not crazy about baked. Will try as chips—may work as novelty chip.
- Growing the purple kinds was fun for the kids but when they had to eat purple mashed potatoes, it took some convincing that they tasted as good as they looked.
- Both came up within a day of each other. Tubers looked great. Tasted the same.
- I can't tell a difference in taste. It's strange to eat purple potatoes!
- Nice potatoes. Love them both.
- The potatoes looked a little scary.
- We did not like eating purple-flesh potatoes. It is difficult to prefer one over the other.
- We only got a few potatoes of each to harvest.

Comments on 'Adirondack Blue' Potato

- Far superior in appearance of the skin. Similar to a russet potato except for being purple.
- It grew better. Yielded 8–12 tubers per plant. Pretty and purple tubers. My kids enjoyed the purple “insides.” It isn't super starchy or even that flavorful; however we did find they were good pan fried. Nice consistency. Nice plant!
- The potatoes grew large enough to have as part of a meal and the vines looked a lot healthier.
- Produced 28 pounds compared to 20 pounds for 'Purple Majesty'. A lot of big ones. Nice potato.
- More plants sprouted. Less yield (13 pounds compared to 28 pounds for 'Purple Majesty').
- Decent yields, higher than 'Purple Majesty'.
- Smoother skin and slightly better flavor.
- Bigger potatoes. Healthier plants.
- Might last longer in storage with its thicker skins and stronger meat.
- Tasted better and looked better.
- Much higher yields and bigger potatoes.
- Earthy flavor.
- Bigger potatoes, which I prefer.
- Only two of twelve hills germinated.
- A softer boiling potato.
- Bigger tubers. Vines were not as healthy.
- Potatoes looked a lot better.

- Showed slightly more vigor in the early season. This was a slightly better producer. Thinner skin.
- Produced better tubers. Okay for an unusual vegetable.
- Germinated three days earlier. The potatoes are easy to peel. Smoother skin.
- Tasted better. I would definitely plant them again.
- Grew well but the potatoes are a bit more mealy when boiled.
- Vines dried the earliest of the four varieties we planted. Its mashed potatoes were “interesting.”
- Better germination. Tall, healthy vines. Produced three times the yield. Larger tubers.
- Got mushy when cooked.
- Looked very unique. It seemed to struggle more in our wet spring weather.
- Emerged 2–3 days earlier. Prettier purple color when baked.
- When cooked, 'Adirondack Blue' was more purple and 'Purple Majesty' looked blue. Better emergence (six of nine hills compared to six of ten hills for 'Purple Majesty').
- Slow to germinate.
- Larger potatoes and larger yield. Great baked potatoes.
- We boiled and mashed them; I was surprised at how well they held their color. They tasted good, like regular mashed potatoes; looked like play dough!
- Tubers were more smooth and attractive.
- Did not all come up. We did not care for its taste.
- The slowest and worst germinating of the four purple-skin varieties we tested. Did not produce vines at each hill.
- All hills came up compared to only half of 'Purple Majesty' hills. Vines filled out better. Six tubers to a hill, which is more than 'Purple Majesty' but not a “bumper crop.” Tuber size was “small to average,” which was slightly smaller than the “average” size of 'Purple Majesty' tubers.
- Vines needed staking. Larger tubers and more of them. My family chose this variety based on taste (less earthy tasting).
- Tubers were smoother and lighter colored. Our kids preferred the taste of this variety.
- Bigger potatoes and three times the yield.
- Larger potatoes.
- The tubers had a softer skin. Some of the tubers ended up exposed on the ground.
- Only yielded eight potatoes from all the plants. Most of the plants died.
- The plants died back much earlier.

Comments on 'Purple Majesty' Potato

- Tubers were formed deep down in the soil and were not exposed to sunlight. Its potatoes were lovely and there were more of them. The tubers are really, really dark and have a rugged skin.
- Higher yield, but the spuds were very tiny.
- Both tasted good, but this tasted better (a little softer).
- Germinated faster. Bigger potatoes. Produced earlier.
- Germinated better. Tubers were larger. Tasted better.
- From germination on, it clearly blew 'Adirondack Blue' out of the water!
- Many undersized potatoes.
- I liked its flavor. It was better for roasting/frying. I liked its darker skin and flesh.
- I liked its small potatoes for roasting (many were golf ball size).
- Vines were slightly healthier. Tubers were more uniform but the skin was thick. Four of five of our tasters preferred the taste of this variety.
- Tubers had a nice smooth skin.
- Tasted slightly better when cooked plain.
- Potatoes were larger.
- More prone to bugs.
- Very pretty color. More attractive.
- More plants; bigger plants.
- The flesh looked marbled like beef.
- Large purple tubers; very pretty. The potatoes kept a nice color even through cooking.
- Potatoes were more uniform in color and were smoother. Better visual appeal. Resembled beets when cooked. Produced 115 potatoes compared to 90 for 'Adirondack Blue.'
- Sprouted first. Produced 5 gallons of potatoes compared to 3 gallons for 'Adirondack Blue'. When cooked, it kept its firmness like a normal potato.
- Produced very small potatoes. Scaly skin.
- Much better emergence. Produced six potatoes per plant compared to four potatoes per plant for 'Adirondack Blue'. Tubers were larger and healthier looking. Sweet taste.
- Germinated faster. Produced 80 pounds compared to 50 pounds for 'Adirondack Blue'. Potatoes had knobs.
- Very dry, really.
- Healthier plants and had better yield.
- More potatoes: 28 pounds compared to 13 pounds for 'Adirondack Blue'.
- Yield was 35 pounds compared to 20 pounds for 'Adirondack Blue'.
- Beautiful color and nice flavor. I am very pleased.
- I liked its purple flowers.
- Gorgeous plants and flowers; could be planted in a flower garden. Its tubers were slightly darker, but smaller overall.
- More eyes and rougher skin.
- Skin was kind of scabby.
- Had very tough skin so it wasn't as tasty.
- Suffered from potato bugs more than 'Adirondack Blue' or the 'Yukon' varieties. The tubers were hard to find in the dirt because they were so dark. They reminded us of pieces of poop. The adults liked its taste better; it was more moist.
- Vines didn't dry before frost. Needed a longer season. Produced twice as many potatoes but they were small; a higher yield overall.
- Vines were small and yellow.
- Potatoes kept being produced along the stem right at the surface of the soil. I had to keep adding more soil to cover up all the newly formed potatoes otherwise they would have turned green.
- Smaller seed. They produced more but smaller potatoes. The tubers turned a little blue, which was cool. I like its taste and the way it looks.
- They did not come up very well. They rotted in the ground.
- The seed was in poor condition. Discarded 50%—rotted. Small tubers.
- Very poor germination.
- Only one plant emerged; not sure why.
- Did not want to sprout.
- Never sprouted.
- Only one hill came up. The flesh was much darker purple.
- Poor performance.

Conclusions

Gardeners were more fascinated than impressed with these varieties. 'Adirondack Blue' yields were more consistent; its tubers were bright purple and smooth. 'Purple Majesty' was less reliable and several gardeners noted poor stand establishment. Its seeds were smaller and the eyes on the seeds were less prominent (perhaps the seed source and not the variety are more at fault here). Its harvested tubers had a rougher, very dark purple skin. The tastes of these varieties were similar but not remarkable. Many gardeners noted a dry texture more suited to baking. The purple color seemed most appealing when used in frying.

Trial 30. Potato, Red with Light Flesh

Varieties (information from seed catalogs)

‘Dark Red Norland’

Popular for its early yields of round red tubers. Moist, firm, white flesh. Vines resist scab; tolerate heavy soils. Fair storage ability.

‘Red Gold’

Rose-red skin with deep yellow flesh. Waxy texture. Outstanding flavor for an early variety. Very early.



Data

Data were collected at 29 sites in 2014.

Trait	‘Dark Red Norland’	‘Red Gold’	Same
Germinated best	8 %	27 %	65 %
Healthier plants	12	24	64
Higher yields	22	56	22
More attractive tubers	37	33	30
Tasted better	27	8	65
<i>Preference</i>	54	46	
<i>Recommend to others</i>	72	83	
<i>Overall rating¹</i>	7.50	7.46	

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

General Comments

- These potatoes were huge this year. One pound was not uncommon. I would plant these in a heartbeat yearly!
- This was the year for potatoes. Yield was exceptional. The vines were huge and lush. Both produced well and the tubers were attractive.
- Germination was slow due to the cool spring. Neither variety had blossoms. The harvested potatoes tasted great.
- One hundred percent germination. Plants were large and bushy.
- Tubers were small.
- Vines looked good.
- Both varieties grew well.
- Each variety produce one pound per hill.
- Both grew so large and had hollow-dark spots inside.
- Tasted the same.
- Their taste was different but we liked both.
- Both were okay.

- Can’t tell any difference in their taste.
- Both germinated well. They later suffered from blight and we harvested early (August 1). We did use fungicides.
- Both did okay.

Comments on ‘Dark Red Norland’ Potato

- Produced exceptionally well. The potatoes were bigger. I prefer its white flesh color over the gold.
- We liked the shape of the potato, and it had smoother skin. Worked well baking and boiling.
- Very healthy plants. Produced nice-sized potatoes. They tasted great.
- Better tasting and better producing.
- Nicer looking size and better yielding.
- Deeper eyes; harder to peel. Texture was starchy and white.
- We prefer its texture and taste.
- Like its taste and appearance.
- Harvested one hill of each on July 23; a tuber of ‘Dark Red Norland’ was baseball sized while a tuber of ‘Red Gold’ was golf ball sized.
- Potatoes were nicer and a bit larger.
- Better size of potato.
- My favorite potato for all-around use...love it boiled, mashed, in salads and however prepared.
- Hardly grew.
- We like its taste better.
- Some of the seed did not germinate.

Comments on ‘Red Gold’ Potato

- Produced about one-third more. The harvested tubers did not have as many eyes and had a more consistent size. Cleaned easier.

More Comments on 'Red Gold' Potato

- Produced 37 pounds compared to 23 pounds for 'Dark Red Norland'.
- Better taste and higher yields.
- Healthier from the get go. Larger potatoes.
- Produced 21 pounds compared to 11 pounds for 'Dark Red Norland'.
- Higher yields per plant.
- Produced two buckets compared to one bucket for 'Dark Red Norland'. Harvested on August 1.
- Germination was twice as high. Higher yields.
- Overall winner in potato salad. A much heartier potato flavor...delicious! Never thought I'd say that since I'm a huge 'Dark Red Norland' fan.
- A more starchy taste.
- Produced more by the end of August. The flesh was nice. It cooked well; excellent on the grill or boiled.
- Texture was wet and yellow tinged. More potatoes but they were smaller.
- Seemed to produce sooner.
- Skin was more free of blemishes.
- Germinated earlier. Nice plants. Fewer but larger potatoes.
- Had lots of scab.

Conclusions

Gardeners liked both 'Red Gold' and 'Dark Red Norland' and were nearly split on their preference. More gardeners recommended 'Red Gold'. Its yields were higher. Most gardeners felt the qualities of its yellow-flesh tubers were comparable to the white-flesh tubers of 'Dark Red Norland'. Many gardeners were already familiar with 'Dark Red Norland'; they liked its taste and early maturity.

Trial 31. Potato, Red with Rose Flesh

Varieties (information from seed catalogs)

‘Adirondack Red’

This variety from Cornell has violet-red skin and pink-red flesh. Flesh is moist, firm and flavorful. Spreading vines. Midseason maturity.

‘Mountain Rose’

New release from Colorado with red skin and red flesh. High in antioxidants. Moist flesh. Early maturity.



Data

Data were collected at 40 sites in 2014.

Trait	‘Adirondack Red’	‘Mountain Rose’	Same
Germinated best	33 %	23 %	44 %
Healthier plants	24	32	44
Higher yields	32	51	16
More attractive tubers	30	35	35
Tasted better	32	21	47
<i>Preference</i>	50	50	
<i>Recommend to others</i>	76	73	
<i>Overall rating¹</i>	6.97	7.21	

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

General Comments

- Both had nice smooth skin. I could not tell the difference in taste—seemed more moist than the red-skin potatoes I also grew.
- Both are late and slow growing/blooming. Yields are much better than I expected.
- We had a great time with these novelty potatoes. The girls helped make mashed potatoes from both purple and red types and they liked the red ones better. When I was 12 (58 now) my grandmother ordered purple seed potatoes from mail order and it was so exciting to dig our first purple potatoes! The yields were not too impressive back then either. We grow ‘Red Norland’ as our main potatoes. Thank you.
- Both germinated well. The tubers were good looking and tasty. Neither yielded great. Neither had very large potatoes.
- Both were great! Vines were disease free. All potatoes were very clean. Good production. About the same number of potatoes per hill. Both had a lot of small ones.

- Vines were healthy. Color of the inside of the potato was an issue for my husband. He didn’t want the color to be anything but white.
- Pink color was cool. It was weird to have pink potatoes. Didn’t look “right.”
- Both sprouted great and I was very pleased with the health of the vines. I was impressed with both varieties including their yields.
- Excellent germination. Vigorous vines—no disease. Good yields. Tasted very good.
- They taste the same to me. A little drier than most red-skinned potatoes; like a russet’s meat is. They’re good, but not what I expected.
- Both had nice shaped tubers.
- All hills came up.
- Both have good color throughout.
- Both tasted good.
- Both had a bitter taste as new potatoes.

Comments on ‘Adirondack Red’ Potato

- A little better texture. Tubers were uniform and very attractive—great for nice dinners where you want the appearance to be noticed.
- Beautiful oval tubers of similar size. Nice size for baking. After cooking, its color was more attractive than those of ‘Mountain Rose’.
- Larger tubers, earlier. Nice coloring. When sowing I thought I was going to choose the ‘Mountain Rose’ but ended up with ‘Adirondack Red’.
- We had much better luck with this. The seed produced more plants and the plants grew faster. Tubers were larger. Larger yields.
- Lots of potatoes.
- The best taste—very good!
- Kept its color when cooked but turned mushy.

More Comments on 'Adirondack Red' Potato

- Its 12 hills produced 130 potatoes compared to the 11 hills and 117 potatoes of 'Mountain Rose'.
 - Flowered first and had healthier vines. More productive. Its tubers had a nice and uniform size. Its mature tubers have better flavor than those of 'Mountain Rose'.
 - Tubers were small but had a nice skin color. They are more like a baby red potato; easy for grilling.
 - Produced 5–10 more tubers. So yummy.
 - Very tasty. Had a tendency of growing little potatoes aboveground; hilling required.
 - Germinated better. Bigger and bushier plants. Very nice-sized tubers; medium and large plus nice smaller ones for fresh potatoes. Great potatoes; good yield; healthy vines; very tasty.
 - Five children all preferred this variety.
 - Some larger tubers, but not as many overall.
 - Tubers were longer, narrower. Creamier texture.
 - Big potatoes.
 - Higher yield of potatoes and were larger.
 - Good taste. Its color is pleasant.
 - The vines looked tall and pretty, looking slender and delicate. After it became a foot tall it was drooping and losing stalks due to wind. It produced very little. The vines offered the potatoes less protection from the sun, which turned the tubers bitter.
 - Had some brown scabs on the skin.
- Some huge but mostly small tubers. Looked like ham after we cooked it. More susceptible to insect damage.
 - Vines were larger and healthier all summer—they dried later as well. A slightly larger yield.
 - The vines remained healthier longer because the wind was unable to blow them down, as they were more of a bush (true to its name). It persevered through drought and storms. The tubers were fat and lovely, growing far bigger than the other variety, and producing much more.
 - Its potatoes are rounder, which I prefer.
 - Tubers were somewhat larger. Mushy when used in microwave cooking.
 - Had twice as many potatoes. Bigger potatoes.
 - Tubers had a nice size. Yield was 36 pounds compared to 24 pounds for 'Adirondack Red'.
 - Tolerated a dry spell better. Slightly higher yield (5% by weight).
 - Pretty flowers; better yield. Not sure I would grow them again—our family was uncomfortable with the color.
 - Slightly better yield. Redder flesh. Good taste and redder tuber makes better mashed potatoes (pink mashed potatoes). Can't wait to try and make pink lefse ... More attractive skin; easier to clean.
 - The potatoes were very nice and large.
 - Came up 3 days sooner. The vines looked healthier and stronger. Better production. The tubers were medium in size and uniform in shape. Made better mashed potatoes but worse fries and fried potatoes.
 - Tubers were produced in tighter, shallow groups below ground. Tasted good; more flavorful than 'Adirondack Red'.
 - Tubers were larger and more consistent in size.
 - Only got a few nice tubers.
 - Tubers tended to be smaller.
 - Unpleasant taste.

Comments on 'Mountain Rose' Potato

- Came up good. Harvested tubers were very uniform in size. Good producer. Real nice looking. A very good spud. Lost its flesh color when cooked, but its texture was firm. Very tasty.
- The highest yield among all my four varieties ('Adirondack Red' had the lowest yield).
- Produced 36 pounds in 13 hills (average of 2.77 pounds); whereas 'Adirondack Red' produced 24 pounds in 11 hills (average of 2.18 pounds). Very good sprout emergence. Tubers had a nice size.
- Smoother skin. Softer flesh.
- Slow to come up, but overall germination was better. Healthy vines.
- Produced more potatoes (over 60 pounds compared to 35 pounds for 'Adirondack Red').
- Tubers had a nice size and great shape.
- Vines definitely looked healthier. Survived the first frost best. The tubers looked pinker and prettier.

Conclusions

Most gardeners were satisfied with both varieties and were evenly split on their preference. Plant establishment and health were good. 'Mountain Rose' was generally more productive. Its tubers were pinkish red and rounder. 'Adirondack Red' tubers were a deeper violet-red and it kept more of its color after cooking. Some gardeners noted 'Adirondack Red' produced some very large tubers. Gardeners generally enjoyed the flavor of both varieties but some were uncomfortable eating a potato with red flesh.

Trial 32. Pumpkin

Varieties (information from seed catalogs)

‘Dakota Howden’

90 days. An early selection of the very popular ‘Howden’ variety. Developed in North Dakota. Twenty-pound fruits make great jack-o’-lanterns.

‘Gladiator’

115 days. A most popular variety and a proven performer in North Dakota. Deep orange, 20-pound fruits. Productive, semi-vigorous vines.



Data

Data were collected at 14 sites in 2014.

Trait	‘Dakota Howden’	‘Gladiator’	Same
Germinated best	36 %	29 %	36 %
Healthier plants	23	38	38
Matured earlier	62	15	23
Higher yields	71	22	7
More attractive fruits	54	23	23
<i>Preference</i>	77	23	
<i>Recommend to others</i>	86	64	
<i>Overall rating¹</i>	6.92	5.58	
<i>Average weight (pounds)</i>	18	17	

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

General Comments

- This is the first year I’ve grown pumpkins that I have gotten such large fruit. Yields of both varieties averaged one large fruit per vine.
- Pumpkins were similar in shape and color.
- Need warmer weather and a longer season.
- Neither variety fully matured.
- Had some squash beetles; our vines handled it well. Lots of pumpkins!
- Squash vine borer was causing a problem.

Comments on ‘Dakota Howden’ Pumpkin

- The first pumpkins to turn orange, but some were still green by frost. The largest pumpkin was 40 pounds. Better yields and larger pumpkins.
- Fruits turned orange the quickest. Pumpkins were more uniform.

- More pumpkins (six compared to two for ‘Gladiator’). More orange in color.
- Four total pumpkins (two medium and two large). Average weight was 6 pounds.
- Pumpkins averaged 10 pounds compared to 7 pounds for ‘Gladiator’; and earlier to mature.
- Vines grew longer and fruits started turning orange right away. Three good-sized (6-pound) fruits compared to one pumpkin for ‘Gladiator’.
- Did not mature before frost on September 27.

Comments on ‘Gladiator’ Pumpkin

- Much healthier plants (July 1). All pumpkins turned orange by frost.
- More compact plant.
- Vines looked better but did not produce fruit until September.
- Thicker vines, darker leaves. Fruits were physically larger; both varieties averaged 28 pounds.
- We love its bush habit. Barely turned orange before our hard frost on September 27. Three usable pumpkins, averaging 10 pounds.
- We liked this variety for our grandkids. They had an oblong shape—nice for Halloween. The pumpkins averaged 25 pounds compared to 20 pounds for ‘Dakota Howden’. They feel more dense.

Conclusions

‘Dakota Howden’ was developed in North Dakota and it excelled during our cooler-than-normal growing season. It produced more pumpkins and the fruits turned orange quicker. ‘Gladiator’ showed good plant vigor. Its bush habit is well suited for smaller gardens. It has performed well in the past but would have benefited from a warmer summer. Pumpkin weights were similar: 17–18 pounds on average.

Trial 33. Pumpkin, Large

Varieties (information from seed catalogs)

'Cronus'

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

'Super Herc'

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 17 sites in 2014.

Trait	'Cronus'	'Super Herc'	Same
Germinated best	24 %	29 %	47 %
Healthier plants	13	27	60
Matured earlier	25	38	38
Higher yields	13	60	27
More attractive fruits	40	20	40
<i>Preference</i>	63	38	
<i>Recommend to others</i>	65	71	
<i>Overall rating¹</i>	6.73	7.13	
<i>Average weight (pounds)</i>	24	23	

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

General Comments

- Produced pumpkins in the 20–30 pound range.
- Pumpkins averaged 40 pounds for each variety. We were impressed with both. As getting planted as late in the season as they did—June 12—they both still produced great.
- Production was very good.
- High yield for both varieties.
- Both varieties had near 100% germination. Neither really turned out. We had only three fruits total and none turned orange.
- Slow to mature—both varieties.
- Cutworms were a big problem; only one plant of each variety survived. Only two big pumpkins; the rest didn't mature.
- Vines were exposed to high winds. They took a beating but both varieties produced pumpkins that were about 45 pounds in weight.

Comments on 'Cronus' Pumpkin

- Plants got larger with more vines and flowers. Produced the first big pumpkin and produced more fruit. Pumpkins had a nice, oval, consistent shape. Turned orange earlier.
- Pumpkins had a nicer shape and there were fewer split pumpkins.
- Vines are slightly taller and fuller; better. Produced five pumpkins, compared to four for 'Super Herc'. Fruits were bigger too.
- Germinated faster.
- Pumpkins were larger. Averaged 48 inches in circumference compared to 35 inches for 'Super Herc'. Fewer pumpkins (two compared to three for 'Super Herc').
- Slightly earlier.
- Sprouted first and better germination.
- Produced huge pumpkins (25 pounds) even when not planted in an ideal location.
- Bigger pumpkins, nicely shaped; just more interesting—for large pumpkins. Low maintenance; did not have to turn.
- Bloomed well but didn't set pumpkins until late; perhaps I should have hand pollinated. Never matured.

Comments on 'Super Herc' Pumpkin

- Vines had larger leaves.
- Larger pumpkins (15 pounds compared to 12 pounds for 'Cronus').
- Larger, better carvers. Pumpkins averaged 15 pounds compared to 10 pounds for 'Cronus'.
- Germinated first. Pumpkins were smaller (24 pounds compared to 40 pounds for 'Cronus'), but good carving pumpkins.

More Comments on 'Super Herc' Pumpkin

- Darker color, but its finish was more easily scarred. Pumpkins were larger. The largest was 59 pounds compared to 48 pounds for 'Cronus'. Average weight was 30–35 pounds compared to 25–30 pounds for 'Cronus'.
- I would love to try it again. I loved its color and shape as well as its size. Pumpkins averaged 20 pounds compared to 15 pounds for 'Cronus'. I carved my name in it while it was still on the vine; it healed over and looked great.
- Much better germination. Its 14 pumpkins averaged 30 pounds.
- Averaged 8 pounds per pumpkin.
- Pumpkins had a nice color and were very big. Averaged 12 pounds.

Conclusions

Despite the cool summer, gardeners were generally pleased with the yields and sizes of pumpkins. Most gardeners preferred 'Cronus'. They liked the uniform, upright shape of its pumpkins. 'Super Herc' produced more pumpkins and was a more reliable performer across sites. Mature pumpkin weights of the varieties were similar: 23–24 pounds.

Trial 34. Spinach, Savoy Leaf

Varieties (information from seed catalogs)

'SV2157VB'

45 days. Thick, shiny, rich green, slightly crinkled leaves. Upright habit and sturdy stems keep leaves off the ground. Disease-resistant plants.

'Tye'

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



Data

Data were collected at 9 sites in 2014.

Trait	'SV2157VB'	'Tye'	Same
Germinated best	33 %	22 %	44 %
Healthier plants	50	38	13
Higher yields	33	22	44
More attractive	44	44	11
Tasted better	22	44	33
<i>Preference</i>	50	50	
<i>Recommend to others</i>	89	67	
<i>Overall rating¹</i>	7.89	7.56	

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

General Comments

- Great germination. Similar health. Lots of spinach; luckily the rabbits must not like spinach. Both varieties tasted good.
- Both germinated well.
- Neither bolted.

Comments on 'SV2157VB' Spinach

- Much greener, prettier plant—nearly perfect leaves. Much sweeter tasting.
- Tolerated heat better. Generally better; healthier and higher yields. The heat stress really brought out the differences between the varieties.
- Near 100% germination.
- Superior plant health and vigor.

Comments on 'Tye' Spinach

- Germinated much better. Produced better and tasted better.
- After cutting back I was surprised at how quickly it grew. After a few warm days it was ready to be cut again.
- Kept producing a little longer until fall. A bit milder flavor.
- Bolted quickly.
- Very healthy.
- Disease free. I liked the shape of its leaves.
- Had a little more flavor but overall did not perform well.

Conclusions

Both varieties received high ratings. 'SV2157VB' was extremely healthy and a reliable producer of rich green leaves. Gardeners enjoyed the flavor of 'Tye', a most popular savoy-leaf spinach variety. Both varieties were attractive and resisted bolting.

Trial 35. Spinach, Smooth Leaf

Varieties (information from seed catalogs)

‘Molokai’

43 days. Dark green glossy leaves. Upright habit and long petioles make it easy to harvest and bunch.

‘Olympia’

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

Data

Data were collected at 19 sites in 2014.

Trait	‘Molokai’	‘Olympia’	Same
Germinated best	25 %	50 %	25 %
Healthier plants	19	56	25
Higher yields	18	53	29
More attractive	19	44	38
Tasted better	25	25	50
<i>Preference</i>	39	61	
<i>Recommend to others</i>	44	78	
<i>Overall rating¹</i>	7.06	7.67	

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

General Comments

- Both did well in the cool, wet spring. I picked more last night (October 30). Similar yields.
- Both germinated around 95%. I was impressed by both varieties. It took me a while to harvest my spinach and both varieties grew to huge leaves that were still tender and tasty.
- The season was cool and short. Neither variety went to seed.
- The varieties were basically the same.
- Both had poor germination. Only six seedlings of ‘Olympia’ and two seedlings of ‘Molokai’. Yields were great. Very tasty.
- I wish it wouldn’t go to seed so fast. I’ve tried many different kinds, and chard seems the only answer to leafy greens later in the season.
- Bolting was a major problem for both varieties.
- Neither had complete germination. Both bolted in early to mid July.
- Both varieties stopped producing big leaves and bolted during the first hot weather.



Comments on ‘Molokai’ Spinach

- I was impressed with its vigor and taste.
- Larger leaves; better tasting.
- Came up well and had a much higher yield.
- Milder flavor.
- Bolted earlier.
- Slightly healthier. Slightly more vigorous.
- Plants were darker green but less in number.

Comments on ‘Olympia’ Spinach

- Its larger seeds made it easier to plant. Larger leaves. Produced 3 times the yield. Its plants were taller and healthier. Superior in all traits.
- Just a little bit better. Plants were a little healthier and more attractive.
- Fuller leaves; more flavor.
- The leaves were huge! Enjoyed the large leaves for making lasagna—the flavor was great.
- Much more vigorous plants with fuller leaves. Wet weather and thistles compromised the growth of this trial, but ‘Olympia’ pulled through for a good harvest. Better taste; it had a bit of a “bite” for wonderful salads and pesto. Better overall.
- More leaves and lasted longer.
- Good bearer and taste.
- Excellent taste.

Conclusions

‘Olympia’ is the most popular smooth-leaf spinach variety and it showed its superiority again in our trials. Its plants were healthier and its yields were higher. Gardeners were impressed with its large, full and flavorful leaves. ‘Molokai’ received decent ratings but showed no advantage.

Trial 36. Squash, Straightneck

Varieties (information from seed catalogs)

'Multipik'

50 days. Smooth bright yellow fruits. Precocious yellow gene masks green streaks. Semi-bush vines produce high yields. Great for grilling.

'Slick Pik YS 26'

48 days. Nearly spineless vines reduce blemishing of fruit and make harvesting easier. High yields of vibrant yellow, delicious fruits.



Data

Data were collected at 8 sites in 2014.

Trait	'Multipik'	'Slick Pik YS 26'	Same
Germinated best	43 %	0 %	57 %
Healthier plants	29	29	43
Matured earlier	33	33	33
Higher yields	57	14	29
More attractive fruits	33	50	17
Tasted better	17	33	50
<i>Preference</i>	63	38	
<i>Recommend to others</i>	88	50	
<i>Overall rating¹</i>	8.00	7.50	

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

General Comments

- Both germinated at the same time and showed strong plants. Had a lot of summer squash. Very good fried in butter when picked small.
- Both germinated 90–100%. Yields were very good.
- Neither germinated in June 10 sowing. Replanted July 2. These plants were beautiful and huge.

Comments on 'Multipik' Squash

- Produced an abundance of squash. The squash was full and showed wonderful color.
- The plants may have been just a bit more vigorous.
- Plants were bigger.
- Better and more squash on the plants.
- We liked its taste more.
- Squash got bumpy.

Comments on 'Slick Pik YS 26' Squash

- Plants were smaller but had better color and were healthy. I don't mind bumpy, fat squash, but these fruits were slim and beautiful. Easy to pull off vine. Beautiful color and great taste.
- Fruits were smoother and didn't get big so fast. Just right!
- Matured a couple days earlier. Fruits were straighter. Nice for slicing in soups.

Conclusions

Most gardeners preferred 'Multipik' for its impressive yields of quality fruits. Its vines were more vigorous and consistently productive. The fruits of 'Slick Pik YS 26' were straight, smooth and beautiful.

Trial 37. Squash, Zucchini

Varieties (information from seed catalogs)

‘Raven’

48 days. Very dark green, smooth glossy fruit. Vines have an open habit. Yields are big, but are concentrated. Multiple sowings recommended.

‘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.



Data

Data were collected at 20 sites in 2014.

Trait	‘Raven’	‘Spineless Beauty’	Same
Germinated best	25 %	30 %	45 %
Healthier plants	33	17	50
Matured earlier	47	37	16
Higher yields	47	16	37
More attractive fruits	37	26	37
Tasted better	17	17	67
<i>Preference</i>	50	50	
<i>Recommend to others</i>	80	74	
<i>Overall rating¹</i>	8.11	7.89	

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

General Comments

- Every seed germinated. Both were very prolific and heavy yielding. We pulled over 130 zukes off these plants. I’ve froze 14 gallon-bags, canned more than a gallon in quart jars, added it to salsa, and we’ve eaten it until it came out of our ears.
- Plants were healthy; equal yield; looked very similar and tasted the same. Both were good.
- Both provided an endless supply of tasty straight, nice-looking zucchini.
- Lots of zucchini. I used it for making pies. It was also good for slicing for stews and for baking cakes. Also good fried in butter. Can be used raw for dips.
- Both germinated quickly. Both had very healthy plants. Both had great fruit. I think they tasted good—tasted the same. They both performed very well.
- Both germinated 85–95%. Both varieties were excellent.

- Both germinated equally well. Both varieties produced boxes of zucchinis.
- Both were very good.
- Both are good varieties.
- Both had 100% germination.
- Did have end rot issues on both varieties this year.
- Both developed mildew looking growth on a few leaves.

Comments on ‘Raven’ Squash

- Yielded four beautiful squash on August 25 (40 days after sowing) and kept producing into October. The fruits were very nice: blemish-free, shiny, smooth-skinned, deep green, and seed-free at 8 inches long. I have grown zucchini for many years and have never been so impressed. This is the first time I have been able to get small fruits consistently and not just overgrown monsters.
- Plants grew vigorously. Dark green leaves. Both varieties produced very well but ‘Raven’ had more on each plant. The skin was a smooth dark green and thin. The flesh was very tender and white. Even if the fruits got big they stayed tender with few seeds. Very mild zucchini flavor (I don’t like zucchini, but I liked this variety).
- Beautiful dark skins—but the skins got tough much faster. This tough skin was usually not a problem if the fruits were harvested when young and no more than 10 inches long. The thick skin got hung up when I used the French-fry cutter mandolin attachment. A higher percentage of its fruits were odd-shaped “mutants.”
- The fruit were smaller and cylinder-like. I also liked its color: almost black.

More Comments on 'Raven' Squash

- Sturdy, healthy plants. Abundant harvest. Zucchini were nicely shaped and tasty.
- Stood up to a light frost and continued to produce until the end of September.
- Produced first by a few days. Produced a slightly higher yield. We prefer its dark green skin compared to the lighter green, speckled skin of 'Spineless Beauty'.
- Set faster and outproduced 'Spineless Beauty' all summer long. Three times the yield.
- Germinated quicker and produced slightly more fruits.
- Less uniform shape.
- Tasted slightly better.

Comments on 'Spineless Beauty' Squash

- Perfect plants; perfect zucchini fruits. We had a wonderful crop ... more than expected.
- Produced the first yield one week earlier. Fruits were more uniform in size.
- Better taste. Seed cavity was not as watery.
- Thinner skinned—could hold off on peeling. A higher percentage of fruits developed end rot, but there were so many fruits it did not matter.
- More fruit sooner.
- Very pretty light green fruit. Better taste. The plants were not as spineless as they claimed.
- Fruits looked better.
- Nicer looking vegetable.
- Plants and fruit stayed nice longer.
- Did not germinate at all.

Conclusions

Both varieties produced impressive yields of delicious fruits; gardeners were split on their preference. 'Raven' was earlier and more productive at more sites. Its very dark green fruits were of high quality as long as they were harvested young. Fruits of 'Spineless Beauty' were speckled, medium green, and thin skinned. 'Raven' has a reputation for brief and concentrated yields; this lack of an extended harvest season was not displayed and may not be significant here since our growing season is short.

Trial 38. Watermelon, Gold

Varieties (information from seed catalogs)

‘Orange Krush’

78 days. Bright orange flesh is juicy and sweet. Big, 17-pound melons. Vigorous, disease-resistant vines produce good yields. Early.

‘Super Gold’

80 days. Deep yellow flesh is sweet and crispy. Good yields of oblong, striped melons weighing 14 pounds. Thick, strong rinds.



Data

Data were collected at 9 sites in 2014.

Trait	‘Orange Krush’	‘Super Gold’	Same
Germinated best	25 %	13 %	63 %
Healthier plants	50	17	33
Matured earlier	50	50	0
Higher yields	50	33	17
More attractive fruits	100	0	0
Tasted better	25	50	25
<i>Preference</i>	80	20	
<i>Recommend to others</i>	43	43	
<i>Overall rating¹</i>	4.50	4.17	

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

General Comments

- Both germinated near 100% in the greenhouse; this is needed in order to get ripe melons by frost. Both tasted yummy and I would grow them again. I think I prefer them over red melons.
- I started both of these inside and transplanted with a clear plastic cover. They both grew fine and started setting melons. Both must have poor disease resistance. Plants died without any melons ripening. I had other watermelons and cantaloupe, etc. that produced just fine. Would like to try these again but cannot recommend either.
- I thought both took a long time to germinate—weather was cool and wet (sown June 12). Delayed germination and early frost led to no ripe melons. I recommend trying both again. I know conditions weren’t ideal.
- Germinated within hours of each other on May 30.

- Germination was bad for both—only two plants of each (sown May 27). Did not get a ripe melon from either variety.
- Similar in health and maturity traits.

Comments on ‘Orange Krush’ Watermelon

- Better germination, but still only 45%. Two melons per vine, compared to one melon per vine of ‘Super Gold’. Melons were bigger, rounder. Sweeter.
- Longer vines, bigger leaves. Produced six melons compared to four for ‘Super Gold’. Bigger melons and better tasting.
- One melon compared to zero for ‘Super Gold’.
- A little better germination.

Comments on ‘Super Gold’ Watermelon

- Had about three times more melons per plant compared to ‘Orange Krush’.
- Melons were smaller. Looked nicer. Susceptible to Papaya Ring Spot Virus.

Conclusions

Both varieties performed poorly. Cool soil in spring delayed planting and cool temps in summer delayed maturation of melons. Yields were low and several gardeners did not harvest a ripe melon. ‘Orange Krush’ vines were healthy and set more fruit, but neither variety can be recommended at this time.

Trial 39. Watermelon, Red

Varieties (information from seed catalogs)

'Legacy'

85 days. Sweet, pink-red flesh. Good yields of 35-pound, oblong melons. Striped rind. A proven performer in central North Dakota.

'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.



Data

Data were collected at 26 sites in 2014.

Trait	'Sweet Dakota		
	'Legacy'	Rose'	Same
Germinated best	24 %	40 %	36 %
Healthier plants	24	24	53
Matured earlier	43	50	7
Higher yields	55	20	25
More attractive melons	29	21	50
Tasted better	17	67	17
<i>Preference</i>	55	45	
<i>Recommend to others</i>	48	52	
<i>Overall rating¹</i>	5.70	5.39	

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

General Comments

- So many melons! Good producers, especially 'Legacy'.
- The plants took a while to get started and neither developed much of a vine. The melons were very sweet and juicy.
- Germinated at the same time. All of the vines were nice. Produced the same amount of melons. Melons looked nice and round.
- Neither ripened due to the cool summer.
- Neither produced melons.
- Not the best year to test due to cold and rain.
- We had a lot of rain shortly after planting and I think some seeds washed away. I only got one good melon out of each. It was too cold of a summer and frost arrived in early September. This was my first time growing watermelons; it was a little disappointing.
- No harvest due to early frost.

- Produced flowers but never produced fruit.
- No fruit matured.
- Crop failure due to cold weather (sown June 5).
- We had a cold/wet spring and germination was slow. Neither variety did much. No ripe melons. I know it's hard with our short summer to grow watermelon.
- This was my first year growing watermelons. We got a good amount to set but they were slow to ripen.
- Seedlings were slow to emerge (sown May 19).
- Neither sprouted (sown May 21).
- Neither germinated (sown May 25).
- Both germinated poorly—maybe 10%.
- I sowed these in individual pots two weeks before planting in the garden. I was forced to pick them in September when it was going to freeze and they never did ripen.

Comments on 'Legacy' Watermelon

- Produced more melons. Taste was very similar but I personally liked the taste of 'Legacy'.
- Tasted best by far. Nice big melons. Sweeter.
- The flesh was light pink.
- Plants seemed stronger.
- Germinated at 70% compared to 0% for 'Sweet Dakota Rose'. I was very satisfied with 'Legacy'.
- Sprouted and produced well—even as late as we got it in (June 12).
- Plants were larger and greener. Produced one melon compared to zero for 'Sweet Dakota Rose'. It was a small melon—it did not taste great.
- Higher production. Matured fully during the growing season.

More Comments on 'Legacy' Watermelon

- Produced three ripe watermelons compared to none for 'Sweet Dakota Rose'.
- Neither variety produced mature melons, but the 'Legacy' melons were farther along.
- Produced only two watermelons compared to three for 'Sweet Dakota Rose'. The two melons did not ripen and were smaller. Planted late (June 10).
- I like its oblong shape better. Looked nicer.
- Melons were oblong; whereas fruits of 'Sweet Dakota Rose' were round. I prefer oblong melons. The vines produced a good crop but I picked them too soon.
- Germination was poor (sown May 25).
- Very poor germination (sown May 19).

Comments on 'Sweet Dakota Rose' Watermelon

- Better taste. The flesh had fewer seeds, but the seeds were quite a bit smaller.
- A bit sweeter. Fewer seeds.
- Its vines were more productive. The flesh was a medium-dark pink. It was sweeter and more fragrant.
- Ripened faster. We had a cooler summer and so were concerned they might not ripen. Very sweet.
- Bigger, fuller leaves. Better quality melons. Beautiful, round melons; vibrant dark green with light green stripes. The melons were smaller so it could be eaten at one setting. I don't like leftover melon.
- Set more melons; although none matured for either variety.
- Did not germinate (sown June 12).
- Very slow to germinate.
- Produced 22 melons (average 5.5 pounds) compared to 4 melons (average 4 pounds) for 'Legacy'.
- Seemed better overall and tasted good.
- Must need a longer season as they didn't get very ripe (sowed May 26).

Conclusions

Both varieties struggled under the cool, wet weather. Germination was poor and most gardeners did not harvest a ripe melon. Gardeners who harvested a ripe 'Sweet Dakota Rose' enjoyed its delightful flavor. The high yield potential of 'Legacy' was evident. Both of these varieties have performed well during "normal" summers of the past.

Trial 40. Watermelon, Red Icebox

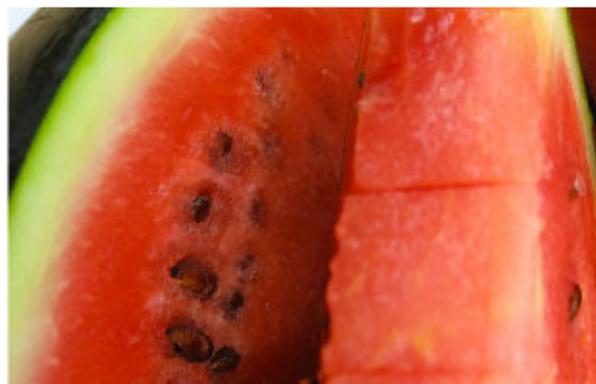
Varieties (information from seed catalogs)

'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 and 10 sites in 2014.

Trait	2013			2014			Weighted Total		
	'Blacktail Mountain'	'Sugar Baby'	Same	'Blacktail Mountain'	'Sugar Baby'	Same	'Blacktail Mountain'	'Sugar Baby'	Same
Germinated best	0 %	40 %	60 %	0 %	40 %	60 %	0 %	40 %	60 %
Healthier plants	0	100	0	17	50	33	11	67	22
Matured earlier	100	0	0	33	67	0	55	45	0
Higher yields	0	100	0	43	14	43	29	43	29
More attractive	0	0	100	20	40	40	13	27	60
Tasted better	0	100	0	25	50	25	17	67	17
<i>Preference</i>	0	100		40	60		27	73	
<i>Recommend to others</i>	0	33		14	14		9	20	
<i>Overall rating¹</i>	2.00	5.00		2.86	2.71		2.57	3.47	

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

General Comments

2013

- 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.

2014

- Both germinated well. Vines were healthy. The fruits looked nice—couldn't tell a difference between them. Both had a lot of seeds.
- Both varieties produced a lot of melons but none ripened before frost. I planted in a square-foot garden box 18 inches deep. Neither variety got larger than a softball and never firmed up.

- Maybe it was a bad year for watermelons since we got no fruits at all. We have grown watermelons with good results before. But this year they just didn't want to grow! We even planted both varieties in two different spots: outside and on the hill in the greenhouse. Still both places yielded no result.
- The vines all died. A crazy season for melons!
- The vines had a little powdery mildew, but it wasn't as bad as the mildew on the nearby Galia melon. Most of the melons did not get larger than a softball. I was not impressed with the quality of the fruit. Their melon flesh was smoochy and only had one good tasting scoop from the middle of the melon and a little around the rind. Most of the melons were harvested overripe. I expected them to grow larger and so did not harvest right away. They did not get larger; instead they got overripe. The melons had a ton of seeds inside.
- Neither germinated (sown May 24).

More General Comments

- Nothing germinated (sown May 26).
- Poor germination (sown May 28). The soil was beautiful, fertile.
- Did not germinate (sown May 30).

Comments on 'Blacktail Mountain' Watermelon

2013

- 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).

2014

- Very tasty. Wasn't quite as seedy.
- Germinated at 10% compared to 15% for 'Sugar Baby'. Vines died off much earlier than expected. Produced many more melons, but they were much smaller.

Comments on 'Sugar Baby' Watermelon

2013

- 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.

2014

- Nice size, lovely deep green rind. Sweeter and juicier.
- Vines grew more vigorously. Produced double the yield. Did not taste very good at all, unless very ripe, and even then it wasn't very good.
- Produced only three small watermelons.
- Yields were about the same, but 'Sugar Baby' produced a couple larger melons. I thought 'Sugar Baby' tasted better but others thought 'Blacktail Mountain' was better.

Conclusions

These varieties have a reputation for producing good crops under cool growing conditions. We experienced two cool growing seasons and both varieties performed poorly both years. Germination, stand establishment, and vine health were poor. Most gardeners harvested no or very few ripe melons. Fruit quality was disappointing.

Trial 41. Basil, Citrus

Varieties (information from seed catalogs)

'Lime'

65 days. Bright green leaves with strong lime fragrance. Robust plants. Adds zesty flavor to fish and chicken dishes.

'Sweet Dani'

65 days. Vigorous plant allows for multiple harvests. Strong fragrance. All-America Selections winner.

Data

Data were collected at 17 sites in 2014.

Trait	'Lime'	'Sweet Dani'	Same
Germinated best	33 %	33 %	33 %
Healthier plants	14	64	21
Produced first yield	42	42	17
Produced higher yields	27	60	13
Looked more attractive	29	50	21
Tasted better	20	40	40
<i>Preference</i>	44	56	
<i>Recommend to others</i>	56	69	
<i>Overall rating¹</i>	7.07	7.43	

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

General Comments

- These were really great varieties that thrived in our garden. Both produced quality plants.
- Very tasty.
- Both dried nice and maintained flavor.
- Both had trouble germinating, especially 'Lime'.
- Equal germination. I prefer sweet basil.
- I found I do not like citrus basil.

Comments on 'Lime' Basil

- Wins for its outstanding flavor. Best for pesto.
- Great refreshing flavor.
- Lovely and flavorful.
- Excellent flavor.
- Bolted faster. Nice flavor.
- Would be a good border plant. Its taste was distinct and very good in salads.
- Fuller bush. Bloomed one week earlier.
- Grew more aggressively; produced fuller leaves.



- Stronger, more compact plants. Suffered less damage from wind.
- Struggled to germinate.

Comments on 'Sweet Dani' Basil

- Larger, bushier plants. More plants, each with more leaves. Easy to care for. Refreshing taste.
- Taller, fuller plants, but don't look any healthier than the little plants of 'Lime'. Produced a greater yield. Best for cooking sauces and seasoning.
- Looked so much healthier. Grew faster, even after the first cutting. Got three cuttings compared to only one for 'Lime'. Each plant looked like a bouquet; 'Lime' plants did not develop branches as much. I dried some and infused some in olive oil. Great for salads and cooking.
- I love the aroma and plant vigor.
- Fuller leaves and better taste.
- I've grown this before and I like it. A good standard citrus basil.
- A taller, leafier plant. Larger and bushier. Did not go to seed as quickly as 'Lime'.
- Very slow to sprout. Once it grew, it was as equally good looking but slower to grow.
- A more uniform plant. Good leaf size. Stood tall—no top heavy leaning.
- Plants were thinner (used for floral arrangements).
- Poor germination and never matured enough to judge its yield or flavor.

Conclusions

Most gardeners enjoyed the refreshing and distinct tastes and fragrances of both varieties. They preferred 'Sweet Dani' for its larger, bushier plants. 'Sweet Dani' grew more vigorously and uniformly. It bolted later.

Trial 42. Basil, Italian

Varieties (information from seed catalogs)

‘Genovese’

70 days. Classic flavor and appearance. Dark green leaves about 3 inches long. Height 30 inches.

‘Sweet Aroma II’

77 days. Glossy green, 3-inch-long leaves with classic flavor and aroma. Disease-resistant plants. Height 24 inches.

Data

Data were collected at 7 sites in 2014.

Trait	‘Genovese’	‘Sweet Aroma II’	Same
Germinated best	57 %	29 %	14 %
Healthier plants	80	20	0
Produced first yield	80	0	20
Produced higher yields	83	0	17
Looked more attractive	75	0	25
Tasted better	33	17	50
<i>Preference</i>	67	33	
<i>Recommend to others</i>	83	33	
<i>Overall rating¹</i>	8.17	6.33	

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

General Comments

- Neither germinated (sown first week of June).
- Germination was very slow and spotty, but this is similar to other varieties we planted in the garden. The soil took a while to warm up. We harvested and used the basil fresh as soon as it had enough leaves; and I always dehydrate for a winter supply. Both were lush and steady bloomers. I also prune flowers throughout the season. Really both were very good.



Comments on ‘Genovese’ Basil

- I had a large harvest with this small trial. I’m going to use this in a winter garden. ‘Genovese’ is great in dishes and makes wonderful pesto.
- Nice looking plant.
- Lots of leaves; higher yields.
- Excelled in all traits. Great in pesto!

Comments on ‘Sweet Aroma II’ Basil

- Tasted slightly better, but both were delicious!
- Grew slowly.
- Slightly better germination.

Conclusions

‘Genovese’ excelled in all traits and was preferred by a 2 to 1 margin over ‘Sweet Aroma II’. ‘Genovese’ plants were healthier, more productive and more attractive. Taste qualities of the varieties were similar. Spotty germination was noted in the cool spring soils.

Trial 43. Basil, Italian Large Leaf

Varieties (information from seed catalogs)

'Italian Large Leaf'

80 days. Sweeter than Genovese types. Deep green leaves grow 4 inches long. Robust, 30-inch plants.

'Mammoth Sweet'

80 days. Lettuce-like leaves are large and ruffled. Well suited for rolling and stuffing. Classic, sweet basil flavor.



Data

Data were collected at 4 sites in 2014.

Trait	'Italian Large Leaf'	'Mammoth Sweet'	Same
Germinated best	50 %	25 %	25 %
Healthier plants	25	0	75
Produced first yield	67	0	33
Produced higher yields	25	25	50
Looked more attractive	75	25	0
Tasted better	75	25	0
<i>Preference</i>	75	25	
<i>Recommend to others</i>	100	50	
<i>Overall rating¹</i>	9.00	7.50	

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

General Comments

- Both were healthy looking. Kept cutting varieties through September. Each produced an ice cream pail per week; very productive.

Comments on 'Italian Large Leaf' Basil

- Its first harvest was much earlier.
- First cutting was July 7 compared to July 15 for 'Mammoth Sweet'. It got larger and bushier the more you cut it. Milder flavor.
- Better taste.
- Best for us in all categories.

Comments on 'Mammoth Sweet' Basil

- More flavorful.
- More plants, but were shorter and stockier. Its curly leaves were very attractive, but we had to wash out the sand and dirt really well before eating. Those wrinkly leaves can hold a lot of dirt after a rain. Never saw blossoms on it.

Conclusions

Both varieties were healthy and productive. Most gardeners preferred 'Italian Large Leaf' and all gardeners recommended it. They liked its early season vigor and preferred its dark green leaves and mild flavor. The ruffled leaves of 'Sweet Mammoth' created interest but were more difficult to clean. Data are limited.

Trial 44. Cilantro

Varieties (information from seed catalogs)

‘Calypso’

52 days. Easy to grow and extremely slow to bolt. Full, bushy plants produce good yields. Used to enhance salsas and curries.

‘Santo’

52 days. The standard variety grown for its fast growth and resistance to bolting. Pungent leaves for Mexican and Asian dishes. Deep green leaves with sturdy stems for bunching.



Data

Data were collected at 10 sites in 2014.

Trait	‘Calypso’	‘Santo’	Same
Germinated best	40 %	10 %	50 %
Healthier plants	22	11	67
Produced first yield	50	25	25
Produced higher yields	67	0	33
Bolted later	57	43	0
Looked more attractive	56	11	33
Tasted better	50	13	38
<i>Preference</i>	88	13	
<i>Recommend to others</i>	80	40	
<i>Overall rating¹</i>	8.22	6.56	

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

General Comments

- Loved them both. Both had killer yields and I dried a lot, gave away a lot, and still had a lot!
- Both germinated at 95%. Really awesome looking plants and smelled great too!
- Both were very good.
- Both had poor germination; ‘Calypso’ a little better. Had a hard time timing the planting to line up with salsa making.
- Did not germinate.

Comments on ‘Calypso’ Cilantro

- Big and beautiful plants. Fended better against wind and rain. We cut it and it gave us a second crop. Great taste and flavor—slightly better than ‘Santo’.
- Better plant and did not get woody right away. It came back after thinning two times. Chopped up better and gave better flavor to dips and soups.
- Better germination. More vigor. Later to bolt.
- Nicely formed leaves. Good flavor.
- Nicer plant.
- Tasted slightly better.

Comments on ‘Santo’ Cilantro

- Plants were less vigorous in the beginning; later they got thicker but yields were less than ‘Calypso’.
- Bloomed earlier (July 23).
- Bloomed earlier (August 15).
- Tipped over from a rain storm.

Conclusions

‘Calypso’ was superior compared to the industry standard ‘Santo’. It produced the first yield and produced more yield. It was slower to bolt and slower to get woody. Its leaves were more attractive and tasted great. ‘Santo’ plants were healthy but could not match the vigor or quality of ‘Calypso’.

Trial 45. Red Cosmos

Varieties (information from seed catalogs)

'Rubenza'

Ruby-red blooms mature to a deep rose. Stunning in gardens and as cut flowers. Height 28 inches.

'Versailles Red'

Eye-catching, bright red blooms with yellow centers. Long, strong stems for cutting. Height 36 inches.

Data

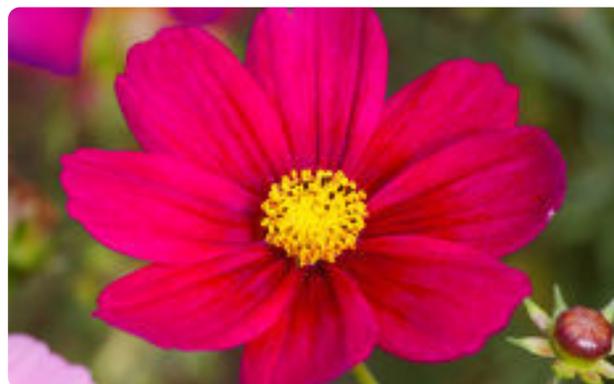
Data were collected at 13 sites in 2014.

Trait	'Rubenza'	'Versailles Red'	Same
Germinated best	23 %	23 %	54 %
Healthier plants	20	30	50
Bloomed earlier	88	0	13
More flowers	36	36	27
More attractive in garden	36	36	27
More attractive in vase	0	0	100
<i>Preference</i>	50	50	
<i>Recommend to others</i>	67	67	
<i>Overall rating¹</i>	8.09	7.50	

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

General Comments

- Germination was excellent. Both had beautiful flowers. There are still blooms on the plant up until the day I pulled them. Beautiful!
- Both of them were quite incredible. They were planted in the area on the south side of the building in soil that is horrible. The seeds germinated and grew, which I declared to be a miracle. The tolerated very bad soil, lots of heat, various amounts of moisture, and even 28°F three nights in a row and they kept on being green and blooming. Both of these varieties were total winners.
- Deer damaged my vegetable garden but left the cosmos alone. They both were beautiful and made my poor struggling garden beautiful. They produced so many flowers. Both lasted well in a cut flower arrangement. They made me so happy.
- I like the cosmos we tested last year ['Bright Lights' and 'Diablo'] much better. They had larger blooms.
- Both had poor germination but nice blooms.
- No seeds germinated.



Comments on 'Rubenza' Cosmos

- Darker color and the blooms lasted longer.
- Bloomed a month earlier. Flowers had a darker color.
- Flowers were smaller with more intense in color.
- Bloomed a full week earlier.
- Every seed germinated. It was great! They just took over the 'Versailles Red'.
- The best!

Comments on 'Versailles Red' Cosmos

- Plants were taller and leafier, but tended to fall over. Flowers had a more vibrant color.
- Grew taller.
- Taller plants—more flowers. Plants were sturdier and stayed healthier longer.
- Flowers looked better.
- Germinated several days earlier. More blooms.
- Good, but slower germination.
- Never germinated.

Conclusions

Most gardeners enjoyed the health and beauty of both varieties. 'Rubenza' bloomed earlier. Its flowers were deep rose in color; darker than the vibrant red colors of 'Versailles Red'. The plants of 'Versailles Red' were taller. Both were attractive in the garden and as a cut flower.

Trial 46. Striped Cosmos

Varieties (information from seed catalogs)

‘Candy Stripe’

Bright rose and red stripes on blush white blooms. No two blooms exactly alike. Plants grow 42 inches.

‘Picotee’

Pure white flowers edged in rose. Bushy 4-foot plants. Adds a soft touch of beauty to the back of a flower bed.

Data

Data were collected at 14 sites in 2014.

Trait	‘Candy Stripe’	‘Picotee’	Same
Germinated best	14 %	57 %	29 %
Healthier plants	8	15	77
Bloomed earlier	29	29	43
More flowers	21	29	50
More attractive in garden	14	50	36
More attractive in vase	0	22	78
<i>Preference</i>	36	64	
<i>Recommend to others</i>	93	100	
<i>Overall rating¹</i>	7.71	8.36	

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

General Comments

- These did great in my garden—grew to over 5 feet tall. Lots of blooms.
- Both reached about 6 feet tall with very heavy stems; up to 15 inches across.
- Both grew very tall; over 5 feet.
- Both grew well and were prolific bloomers.
- Both had beautiful colors.
- It is hard to state a preference as they were equal all season.
- They should have been started indoors earlier to enjoy the bloom earlier. They are both beautiful. Lots of greenery!
- Both did well as a cut flower in a vase for days.
- A cosmos is a cosmos.

Comments on ‘Candy Stripe’ Cosmos

- I liked the deeper color of these; the pink was more vibrant.
- Nicer colors.



- Something ate it to the ground (June 27). I like its lovely colors, its hardiness, and really everything about it.
- Stood tallest and thickest.
- Got too leggy.
- Plants leaned due to the high winds. Bloomed a little longer in the fall.
- Bloomed about a week earlier.
- Flowers were pretty monochromatic.

Comments on ‘Picotee’ Cosmos

- A cuter flower. More flowers on a stem, too.
- I prefer its shade of color.
- Germinated at 85% compared to 70% for ‘Candy Stripe’. Bloomed 3–5 days earlier. I prefer its flowers due to more variation in colors.
- It is still blooming on October 4. I liked its brighter colors and variety of colors.
- Stood up straighter in the garden. Beautiful flowers. Started blooming the end of July.
- Handled high winds better. Straighter and sturdier plants. Bloomed a couple days earlier.
- Slight edge in germination. I liked its color variations in their petals.
- Germinated about 25% better.
- Plants tipped over in the wind.

Conclusions

Gardeners loved both ‘Candy Stripe’ and ‘Picotee’. The plants grew tall and were filled with flowers from late summer until frost. Most gardeners preferred ‘Picotee’ for the brightness and variation of colors in its petals. It was a remarkable garden flower.

Trial 47. White Cosmos

Varieties (information from seed catalogs)

‘Psyche White’

Frilly, scalloped, pure white flowers with golden centers. Bushy 4-foot plants.

‘Sensation Purity’

Masses of large, pure white blooms on ferny, 4-foot plants. Terrific for cutting and in background plantings.



Data

Data were collected at 2 sites in 2014.

Trait	‘Psyche White’	‘Sensation Purity’	Same
Germinated best	0 %	50 %	50 %
Healthier plants	0	0	100
Bloomed earlier	0	50	50
More flowers	0	0	100
More attractive in garden	100	0	0
More attractive in vase	0	0	100
<i>Preference</i>	100	0	
<i>Recommend to others</i>	100	100	
<i>Overall rating¹</i>	8.50	8.00	

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

General Comments

- Very good germination! Both grew very tall—many over 5 feet tall and fully of blossoms. Did not do well with our rain and wind storms. Had to be fenced up. I loved to look out my window and see this row of tall white flowers! They did not bloom until August 22; they seemed to bloom at the same time; seemed late. Both varieties were absolutely covered with flowers from top to bottom. An excellent background flower. Outstanding large flowers. Lasted long as a cut flower.

Comments on ‘Psyche White’ Cosmos

- Very pretty, double flowers.
- I prefer its frillier edges and double layer look. So dainty and beautiful. I will plant this variety next summer.

Comments on ‘Sensation Purity’ Cosmos

- Beautiful; just a little simpler. Beautiful lacy-like greenery.

Conclusions

Both gardeners loved both varieties. The plants grew vigorously and were filled with snowy white blossoms beginning in late summer. Gardeners appreciated the simplicity of the single-petal blooms of ‘Sensation Purity’ but preferred the fuller, frillier flowers of ‘Psyche White’. Both varieties did well as a cut flower.

Trial 48. Marigold, Gold Giant

Varieties (information from seed catalogs)

‘Giant Yellow’

Big 3-inch flowers on sturdy plants. Great for cutting and as a garden flower. Height 36 inches.

‘Jedi Gold’

Giant 4-inch flowers will bloom all summer. Long, sturdy stems for cutting. Height 55–60 inches.

Data

Data were collected at 8 sites in 2014.

Trait	‘Giant Yellow’	‘Jedi Gold’	Same
Germinated best	29 %	43 %	29 %
Healthier plants	14	29	57
Bloomed earlier	33	50	17
More flowers	13	63	25
More attractive in garden	14	43	43
More attractive in vase	33	33	33
<i>Preference</i>	25	75	
<i>Recommend to others</i>	63	88	
<i>Overall rating¹</i>	7.25	7.88	

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

General Comments

- I really enjoyed these marigolds as cut flowers. They stayed nice for almost two weeks without the overpowering smell of most marigolds. They would be good to plant because they bloom well into the fall. I would definitely plant them again.
- Both were attractive—I like marigolds.

Comments on ‘Giant Yellow’ Marigold

- I liked its color better and its thinner stems for cutting.
- Did best all around.
- Stems broke due to heavy blooms. Larger flowers. Petals turned brown much faster. It was a shade lighter.
- Late blooming.
- Did not germinate.



Comments on ‘Jedi Gold’ Marigold

- Prettier color, larger plant, more vigorous.
- First blooms were earlier.
- Plants first bloomed in middle of September.
- More seeds germinated.
- I like the little variation in the color of the flower; it was just a little darker. They stayed good as a cut flower.
- The plants stood up better with the heavy blooms in rain and wind. Both tipped over in the heavy rain, but the ‘Jedi Gold’ popped up again after I trimmed it.

Conclusions

Gardeners enjoyed the vigor and prolific blooming of both varieties. Most preferred ‘Jedi Gold’. It bloomed earlier and produced more flowers. Its flowers were a shade darker. ‘Giant Yellow’ showed no clear advantage over ‘Jedi Gold.’

Trial 49. Marigold, Orange Giant

Varieties (information from seed catalogs)

'Garland'

Large, 4-inch flowers bloom continuously. Long, strong stems. Bushy plants grow 48 inches.

'Jedi Orange'

Giant, frilly flowers. Long, straight stems for cutting. Plants may grow 60 inches tall.

Data

Data were collected at 12 sites in 2014.

Trait	'Garland'	'Jedi Orange'	Same
Germinated best	42 %	0 %	58 %
Healthier plants	58	17	25
Bloomed earlier	50	10	40
More flowers	45	27	27
More attractive in garden	58	8	33
More attractive in vase	60	0	40
<i>Preference</i>	73	27	
<i>Recommend to others</i>	92	92	
<i>Overall rating¹</i>	8.18	7.50	

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

General Comments

- Looked almost identical. Very large flower heads and big bushy plants. Very healthy "hedge" of flowers. I loved them both! It was hard to tell them apart.
- Blossoms were big and had a nice color. The plants got so heavy they needed to be staked. Lots of comments from neighbors and others.
- The flowers were huge! Very pretty.
- With the cool, wet spring they seemed to be slow growing. Both varieties grew only two feet tall. Both looked nice.
- Other than a few more 'Garland' plants, they seemed identical—loved them both!
- Both are good flowers.
- Both varieties were beautiful but huge! They took over that area of the garden. I didn't have slugs on the tomatoes though. I did not use them for cut flowers—too smelly.
- Plants struggled and bloomed too late. Seeds need to be started indoors in March/April.



Comments on 'Garland' Marigold

- Taller plants. First bloom was on August 14 compared to September 6 for 'Jedi Orange'. Blooms were large (3 inches across) and attractive. Greater number of attractive flowers.
- Slightly taller and had more branching. Flower heads were slightly larger.
- A very sturdy plant and produced very well. Big blossoms approximately 4 inches wide.
- Near 100% germination compared to 50% for 'Jedi Orange'. Plants were huge and bushier. Bloomed 14 days sooner. Plants were loaded with blooms and the flowers were huge! Its blooms were enormous and very vibrant. Bloomed for months. Lasted for weeks in a vase.
- Bloomed August 17, five days before 'Jedi Orange'.
- More leaves, more flowers. Nicer orange color.
- Bigger flowers and more orange color.
- Nice color.

Comments on 'Jedi Orange' Marigold

- Bloomed the first week of September; one month earlier than 'Garland'.
- Big, beautiful blossoms. Just caught my eye as being the better of the two.
- Larger flowers.

Conclusions

Both varieties had big bushy plants loaded with big orange flowers. Gardeners recommended both varieties but preferred 'Garland'. It outshone 'Jedi Orange' from the start: better germination, healthier plants, bloomed earlier and bloomed more prolifically. Its plants were sturdy and filled with vibrant orange flowers.

Trial 50. Sunflower, Apricot

Varieties (information from seed catalogs)

‘Apricot Daisy’

Unusual, apricot-peach petals with light orange centers. Pollenless blooms for cutting. Bushy, multi-branched plants grow 60 inches.

‘Peach Passion’

Small, 3-inch blooms with soft peach color. Pollenless blooms for cutting. Four-foot plants bloom prolifically.



Data

Data were collected at 13 sites in 2014.

Trait	‘Apricot Daisy’	‘Peach Passion’	Same
Germinated best	54 %	8 %	38 %
Healthier plants	50	8	42
Bloomed earlier	64	18	18
More flowers	64	18	18
More attractive in garden	64	18	18
More attractive in vase	29	0	71
<i>Preference</i>	82	18	
<i>Recommend to others</i>	92	42	
<i>Overall rating¹</i>	7.91	5.73	

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

General Comments

- Received many compliments as they were at the end of the garden along the entrance to our yard. Strong winds broke several plants off, but the remaining plants did well.
- Hail damaged both, but they bloomed well anyway. They looked great with my zinnias. These were pretty flowers, although I prefer sunflower varieties with larger heads.
- Poor germination (sown June 9). They tolerated quite a windstorm this fall. Blooms lasted a while.
- I had no luck with these. Poor germination and growth. They were not healthy and no flowers opened.

Comments on ‘Apricot Daisy’ Sunflower

- Way better. Germinated better; grew better; produced more flowers.
- Sturdy stalks. Gorgeous color.

- Flowers were more attractive.
- Grew taller (5 feet compared to 3.5 feet for ‘Peach Passion’). I prefer the taller variety.
- More flowers.
- Slightly more flowers. Plant had a nice shape; well balanced. Flowers lasted longer in a vase by 1–2 days. I prefer the size and color of the blooms; worked good in a vase.
- Healthy stem. Nice flower shape.
- Healthier seedlings. Stalk height and flower size were less uniform.

Comments on ‘Peach Passion’ Sunflower

- I love its luminescent color! Plant is a bit puny.
- Germinated first. Bloomed 10 days earlier. Flowers were uniform in size and many blossoms/plant. Nice smaller size for gardens. A little disappointed in the color—didn’t see much of the “peach” color—just yellow.
- Seedlings were sick looking when they germinated and it took a while for the plants to start growing.
- Didn’t do much.
- Only two seedlings emerged.

Conclusions

The size and unique color of their blooms made both varieties well suited for cut flower arrangements. ‘Apricot Daisy’ germinated better, grew more vigorously, had sturdier stalks, bloomed earlier and produced more flowers. ‘Peach Passion’ lacked vigor.

Trial 51. Sunflower, Cutting

Varieties (information from seed catalogs)

'Sunbright Supreme'

Orange, rounded petals. Pollenless blooms and strong stems are good for bouquets. Nonbranching (single flower) stalks grow 60 inches.

'Sunrich Orange'

The standard for cut flowers. Golden petals with a black disk. Pollenless blooms. Nonbranching (single flower) stalks grow 54 inches.



Data

Data were collected 4 sites in 2014.

Trait	'Sunbright Supreme'	'Sunrich Orange'	Same
Germinated best	50 %	25 %	25 %
Healthier plants	25	50	25
Bloomed earlier	75	25	0
More marketable flowers	25	25	50
More attractive in garden	0	50	50
More attractive in vase	33	33	33
<i>Preference</i>	75	25	
<i>Recommend to others</i>	75	100	
<i>Overall rating¹</i>	<i>7.00</i>	<i>7.75</i>	

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

General Comments

- Nearly all heads of both varieties were too large to cut for display.

Comments on 'Sunbright Supreme' Sunflower

- Better germination: 94% compared to 71% for 'Sunrich Orange'.
- I noticed when I cut down the stalks that its stalks were all brown and rotten inside; this was possibly due to diseases or bugs.

Comments on 'Sunrich Orange' Sunflower

- Its flowers were much nicer.

Conclusions

Gardeners enjoyed both varieties but most preferred 'Sunbright Supreme'. It germinated well and bloomed earlier. Its petals were deep yellow compared to golden orange for 'Sunrich Orange', the industry standard. Data are limited.

Trial 52. Sunflower, Double Petal

Varieties (information from seed catalogs)

'Double Goldy'

Fully double, "fluffy" golden yellow flowers with green centers. Branches produce lots of long-lasting flowers. Height 66 inches.

'Greenburst'

Semidouble sunflower with golden petals and a light green disk. Branching type. Pollenless. Height 66 inches.



Data

Data were collected at 5 sites in 2014.

Trait	'Double Goldy'	'Greenburst'	Same
Germinated best	40 %	20 %	40 %
Healthier plants	50	50	0
Bloomed earlier	25	75	0
More flowers	25	50	25
More attractive in garden	0	100	0
More attractive in vase	50	0	50
<i>Preference</i>	25	75	
<i>Recommend to others</i>	40	75	
<i>Overall rating¹</i>	6.20	7.50	

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

General Comments

- The smaller heads were great for cutting. Bigger heads were too heavy for my vases.
- Good germination.
- We planted the seeds into a freshly tilled sod and none of the seeds came up! It could be due to animals (mice and such), the depth we planted the seeds in, or the clumpiness of the sod.

Comments on 'Double Goldy' Sunflower

- Much better germination. Beautiful fluffy heads. Great for putting a few in a vase. The plants kept blooming longer. Didn't make a head with seeds. Blooms were very attractive.
- A number of its plants died midseason. Shorter stalks.
- Gorgeous—huge—tall—prolific. It was a great sunflower.

Comments on 'Greenburst' Sunflower

- Plants were taller. Its bright yellow flowers attracted lots of bees. Flowers were twice the size. Started to bloom on August 15; 'Double Goldy' did not bloom until September 24 (after our average first frost date). The frost struck October 4.
- It was about done blooming when 'Double Goldy' was beginning. Stalks were nice and sturdy; although they did blow over during one windy rain-storm. I popped them back up and they kept growing fine. Not a single stalk of 'Double Goldy' blew over. I liked the overall look of the 'Greenburst' best.
- Only one seed germinated.

Conclusions

Most gardeners preferred 'Greenburst'. It bloomed earlier and more prolifically. Its bright golden, semidouble flowers were very attractive in the garden. Several gardeners enjoyed the fluffy, double-petal heads of 'Double Goldy'. Stalks of both varieties were sturdy and grew 5–6 feet tall.

Trial 53. Sunflower, Pointed Petal

Varieties (information from seed catalogs)

'Frilly'

Fascinating flowers with narrow, golden petals. Plants are adorned with 6-inch blossoms all summer. Great for bouquets. Height 66 inches.

'Irish Eyes'

Heirloom with pointed golden petals and green centers. Showy in gardens. Height 48 inches.



Data

Data were collected at 5 sites in 2014.

Trait	'Frilly'	'Irish Eyes'	Same
Germinated best	0 %	100 %	0 %
Healthier plants	25	75	0
Bloomed earlier	0	67	33
More flowers	0	100	0
More attractive in garden	0	60	40
More attractive in vase	0	67	33
<i>Preference</i>	<i>0</i>	<i>100</i>	
<i>Recommend to others</i>	<i>20</i>	<i>80</i>	
<i>Overall rating¹</i>	<i>5.20</i>	<i>8.40</i>	

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

General Comments

- Germination was disappointing for both, perhaps due to bird damage. Did not see any diseases during summer. There weren't any bugs in the sunflower seeds, which surprised me.
- Planting was set back due to rabbit damage at the start of the season.

Comments on 'Frilly' Sunflower

- Tall and gangly like, with longer stemmed seed heads. The plants toppled over. The plants bloomed longer into the fall.
- Taller plant, not many leaves; kind of scraggly.
- Looked OK.

Comments on 'Irish Eyes' Sunflower

- A smaller, more compact, bushier plant with many more sunflower heads. It seemed to just take care of itself and proudly displayed its cute sunflower heads. Bloomed earlier by a day or so. Multiple blooms, almost like small trees. The flowers were more attractive, one larger at the top and many small heads throughout most of the plant.
- The stalks were not as tall. The flowers lasted longer on the stalk.
- Much fuller plant. More flowers. Nice in the vase, too.
- Looked OK. The stalks only grew 2.0–2.5 feet high, so not as tall as I expected. Not a fantastic plant. I ate its sunflower seeds and they were pretty good.

Conclusions

'Irish Eyes' excelled in all evaluated traits and was clearly superior to 'Frilly'. Plants were fuller and more compact. They bloomed earlier and produced more flowers. The green-disked blooms of 'Irish Eyes' made for a prettier plant in the garden. 'Frilly' stalks were straggly; this variety was unimpressive.

Trial 54. Sweet Pea

Varieties (information from seed catalogs)

‘Mammoth Choice Mix’

Blooms early and withstands heat. Large, fragrant flowers for cutting. Height 66 inches. Requires trellis.

‘Streamers Mix’

Large blossoms in an array of colors; all streaked with white. Very showy. Height 66 inches. Requires trellis.

Data

Data were collected at 16 sites in 2014.

Trait	‘Mammoth Choice Mix’	‘Streamers Mix’	Same
Germinated best	81 %	0 %	19 %
Healthier plants	60	0	40
Bloomed earlier	73	7	20
More flowers	67	7	27
More attractive in garden	43	0	57
More attractive in vase	14	0	86
<i>Preference</i>	93	7	
<i>Recommend to others</i>	93	47	
<i>Overall rating¹</i>	8.20	5.64	

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

General Comments

- The vines grew huge. Both bloomed in early August. Very pretty and fragrant.
- Both had long, sturdy stems.
- They smelled lovely. Lasted several days. We got about a month of bloom before frost.
- Both looked attractive in the vase.
- I liked both of them and would plant them again.
- Both were nice but bloomed later than I would have liked.
- Both varieties took a long time to germinate (sown outdoors June 2014). We had given up on both, but then ‘Mammoth Choice Mix’ appeared, followed several weeks later by ‘Streamers Mix’. Both varieties turned out to be lovely smelling and very hearty. As of October 27, they were still producing flowers after several hard frosts. We would recommend both varieties to gardeners in our area!
- Vines were healthy. The flowers looked really nice in a vase.
- None grew (sown May 31).



Comments on ‘Mammoth Choice Mix’ Sweet Pea

- Large, beautiful blossoms. Its perfume wins the prize!
- Blooms were much more colorful and brighter.
- All of its seedlings sprouted by the time any ‘Streamers Mix’ came up. It was blooming when ‘Streamers Mix’ was just getting tiny buds. Bigger plant. Produced twice as many flowers. Flowers were brighter and larger.
- Germinated better and produced more flowers.
- Better germination led to more flowers.
- Germinated very well and had many nice smelling flowers.
- Earlier to germinate. I like its bright colors.
- My five-year-old daughter prefers ‘Mammoth Choice Mix’ since they smell really good. She wants to grind them up and make them into lotion.
- Vines are vigorous. The cool weather in spring slowed its growth. First bloom was on August 2. Climbed up the trellis and produced many flowers. Lovely fragrance.
- Seemed a little more vigorous overall.
- Grew faster and fuller, but neither variety formed flowers.
- We had heavy rains this summer and this variety seemed to come out on top.

Comments on 'Streamers Mix' Sweet Pea

- Its streaks of colors were pretty cool.
- Flowers were delicate and pretty.
- I prefer its colors.
- Blooms were lilac and white.
- Poor germination and slow to grow. The vine grew flat along the ground; perhaps it would grow better along a brick wall instead of a trellis. Poor flower production.
- Poor germination (six plants).
- Very poor germination (six plants).
- Germinated poorly (three plants).

Conclusions

Gardeners loved 'Mammoth Choice Mix'. Its vines grew vigorously and bloomed prolifically. The flowers were large, bright and fragrant. The streaked flowers of 'Streamers Mix' were fascinating but the vines were slower to grow and bloom.

Trial 55. Zinnia, Cutting

Varieties (information from seed catalogs)

'California Giant Mix'

Bushy plants produce large 5-inch flowers in bright shades of red, orange, yellow, purple and white. Height 36 inches.

'State Fair Mix'

90 days. Giant 4-inch blooms in a mix of colors. Long stems are good for cutting. Height 36 inches.

Data

Data were collected at 44 sites in 2014.

Trait	'California Giant Mix'	'State Fair Mix'	Same
Germinated best	41 %	15 %	44 %
Healthier plants	22	17	61
Bloomed earlier	55	12	33
More flowers	30	30	40
More attractive in garden	33	26	42
More attractive in vase	19	19	61
<i>Preference</i>	64	36	
<i>Recommend to others</i>	86	73	
<i>Overall rating¹</i>	8.05	7.63	

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

General Comments

- Both germinated very quickly. The plants looked great! Both produced a lot of flowers. The flowers looked similar—both wonderful. Both looked great and lasted well as cut flowers.
- Both were very fast to germinate. We planted them in the very first row in the garden and both varieties produced a beautiful and colorful display for a long time! Very pleased with both! Both were great for flower arrangements.
- Strange growing year. Once they came up, they produced like crazy! Great colors, large flowers. I loved the giant flowers this year. So did the butterflies! The cut flowers looked great on the table!
- Near 100% germination for both. Both had great plants. Both bloomed continuously. I had flowers on my table all summer! Both varieties are excellent. Awesome plants!
- Once each variety started blooming they were beautiful with colorful flowers and strong stems.



- Both had almost 100% germination. Plants looked amazing. Bloomed for months. The colors (red, hot pink, orange, yellow and gold) were vibrant and stunning. I gave a lot away and they were loved by all. Superhardy—required little work!
- Both came up great and at the same time.
- Both blew over easily since they were tall plants with large flowers. Both had beautiful, large flowers in all colors.
- Germinated at the same rate. Bloomed at the same time. Both were beautiful.
- Both were beautiful. I love zinnias!
- Both are hardy plant varieties.
- Plants of both were very tall (3–4 feet). Their flowers were colorful and long lasting. The cut flowers stood up well in water.
- I cut some of each and brought them inside where they lasted quite well.
- These varieties are nearly identical.
- Plants were healthy and looked good.
- Germination was exactly the same. Both grew very well.
- Both grew well.
- Both produced many lovely flowers for two months before being killed by frost. Neither variety lasted longer than three days in a vase.
- They were both beautiful flowers. They bloomed at the same time; the plants were the same size and height; and the flowers were very similar.
- Very similar.
- I liked both. Both were full of flowers.
- Healthy plants.
- Both are very nice.
- Only three flowers bloomed on each variety.

Comments on 'California Giant Mix' Zinnia

- The plants were taller and the flowers were bigger. The blooms were huge, up to 7 inches in diameter.
- Had more colors (red, pink, orange, white). Its leaves were bigger making it a little more difficult to arrange in bouquets.
- I liked the flowers better on this variety. Nice petals and more colors: yellow, white, fuchsia, coral. Very bright and pretty in the garden. Very pretty in the vase.
- I like the brighter colors and greater variety of colors. Brighter red, orange, pink, yellow and white.
- Better germination. More plants.
- Large, colorful flowers drew much attention. Stayed upright even with strong winds.
- Best germination. Taller plants. Flowers were big, fuller, and very showy. Frost resistant.
- More variety of colors. Flowers had more petals and were bigger.
- Did everything faster, which is great for our slow growing season.
- Bright and large blossoms. Had comments from people saying how nice the flowers were.
- 'California Giant Mix' had more colors.
- Germinated a bit earlier.
- Much higher germination rate.
- Bigger, more attractive flowers.
- The flowers were numerous and absolutely huge. The blossoms were like globes and gorgeous. The only sad thing is they do not survive 28°F.
- Better germination.
- Germination was nearly 100% compared to 75% for 'State Fair Mix'. Bloomed earlier. Fewer but larger flowers. Made beautiful bouquets.
- Bloomed a couple days earlier.
- Very colorful blooms and many per plant.
- Very prolific.
- Bloomed a few days earlier. Slightly more flowers.
- Better variety of color.
- Taller plants, bigger flowers.
- Taller, fuller plants with larger flower heads.
- I liked its colors better.
- Near 100% germination. Taller plants.
- Taller plants and smaller leaves made it a more versatile cut flower.
- A few less flowers. Seemed to be more sensitive to heat.

- Much better germination (70% compared to 30% for 'State Fair Mix'). Individual plants had more flowers.
- More disease-spotted leaves—strange blooms.

Comments on 'State Fair Mix' Zinnia

- Their flowers are more attractive. They have smaller centers and more petals.
- More robust growth. More flowers and these flowers were larger. Better for cutting. Awesome looking flowers.
- Fuller and more blossoms. The blossoms were at various heights, which made the plants look fuller. Stood up to the wind better. More colors. Plants looked a bit healthier.
- Its plant height was more uniform. I prefer its flower shape and colors.
- Had greater color/size variation which looked more appealing in the garden.
- Greater palette of colors! They produced more side shoots after cutting the initial head flower.
- Bloomed a bit earlier.
- More variety of colors.
- All of the flowers ended up pink.
- All of the flowers were pink.
- Bigger blooms. Mostly pink and rose flowers.
- I prefer its colors.
- Better colors.
- I liked its colors better.
- Grew well and was nice; just not as nice. Colors were limited to red, orange and pink.
- More plants came up.
- Slightly more attractive coloring and nicer looking flowers.
- Overall larger flowers and more of them.
- Brighter colors and more attractive foliage.
- I have raised this variety successfully from transplants, but direct sowing not as good. Germination was 53% compared to 80% for 'California Giant Mix'.

Conclusions

These varieties were outstanding. Zinnias prefer hot weather, but these vigorous types grew well in our cool growing season. They germinated well and developed into sturdy plants filled with big, colorful blooms. The flowers looked great in the garden and as a cut flower. Most gardeners preferred 'California Giant Mix'. It bloomed earlier and often showed a greater variety of colors.

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:

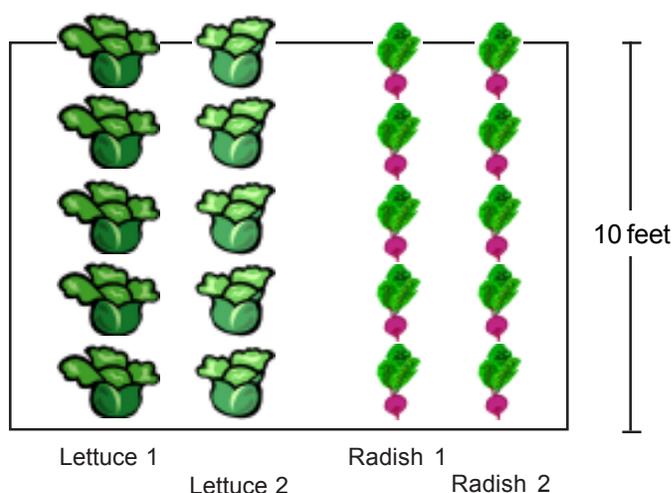
1. Each trial compares two varieties. **You must plant both varieties.**
2. To make it a fair comparison, you need to **treat both varieties in the same manner**. They should get the same amount of sunlight and general care (watering and fertilizing).
3. We want to see how these varieties perform under 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

Researchers

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Ken Anderson	Virginia Eisenzimmer	Brady and Jacob Hendrickson
Vanessa, Bethany, Claire and	Pamela Erickson	Alessa and Miró Herrera
Grant Anderson	Colleen Eslinger	Angela Herman
Orren and Karen Anderson	Brett and Seth Finley	Charles Herrmann
Tanner Anderson	Alice Fitterer	Lydia Hickel
Donna and Hanna Arnott	Lon Flage	Lance Hites
Tehya Azure	Lori Flaten	Lila Hlebichuk
Matt Baer	John and Sidney Fleck	Jordyn Hoff
Jenn and Jacob Barnhart	Clayton Flores	Alicia, Marisa and Stephanie
Jude Barnhart	Nadine J. Florhaug	Hoffarth
Adella Benz	Laura, Addison and Isabelle Forde	Colton Hoiby
Laura Benz	Julie, Carly and Nicole Fornshell	Kim Holloway
Carter and Kelby Berg	Ella and Logan Fossen	Kathy Holte
Avi Bernath	Vada and Vyvyn Fossen	Anthony and Sydney Horner
Alena and Aria Bernhardt	Allianna and Sean Freund	Marge Horner
Richard Biewer	Jacqueline Friedt	Laura Hughes
Bella Bohn	Jordyn and Rori Friesz	Adam and Ben Hulm
Ruth Bornsen	Vijay and Nishita Gaba	Diane Isakson
Harriet Bracken	Nicholas and Olivia Gaebe	Kaylee and Ryan Janish
Damon Brackel	Randall and Theodore Gaebe	Frank and Sally Jerkovich
Sarah Brink	Darci Gahner	Erv Johnson
Cecilia Brown	Geraldine Geiger	Glenna Johnson
Ella and Ava Brown	Bree and Carter Genter	Nancy and Dan Johnson
Emma Brown	Joseph Gerhardt	Sharon Johnson
Alexis Bruhn	Margaret Giese	Hazel May and Nora Jones
Paige Brummond	Emma and Lyla Gillespie	Josh and Mick Kalamaha
Burleigh County 4-H	Garin and Marly Goetz	Joe and Maria Kalb
John Carlson	Marietta Good	John, Brycen and Wes Karhoff
Cassavant Family	Brenda and Adam Gorseth	Gail Kartes
Deb and Avery Chambers	Mindy Graulty	John and Wyatt Kartes
Hailey Chase	Irene Graves	Leroy Kautz
Nancy, Hunter and Torey Charles	Arlene Gray	Melissa, Claire, Craig and Elena
Charlie Dagman	Michael and Joshua Grosz	Keith
Lynn, Andrew and Audrey	Ethan and Evan Grove	Jon Kilber
Davenport	Sage Gusaas	Rod, Braeden and Emily Kinzler
A.J. and Tyler Deitsch	Camren Haase	Brody and Kaden Kirk
Annette Delaney	Damon and Kelan Haberstroh	Breana Kiser
Julie Demke	Kory Hagler	Bryan, Kaden and Layne Korgel
Donna Deplazes	Sue and Jordan Hamilton	Cade, Cody, Kara and Keegan
Patricia Deplazes	Sylvia Hansen	Kostohryz
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Tammy, Jake and Sadie Doll	Adrianna and Sebastian Hayen	Kathy Krein

Mathew and Ethan Krogen
Sue Krohn
Pam Kronbeck
Kaleen Krueger
Ben and Jill Lagein
John and Matthew Lahlum
Judy Larson
Melody Larson
Mary Lass
Gabe Lassila
Carson and Matthew Lawler
Kash and Klay Lee
J. Leffrig
Sharon Lehman
Kimberly Lemieux
Richard Jaxson Leshovsky
Cheyenne and Dawson Liedle
Ellin Lindee
Muriel Lippert
Little Lambs Childcare, Inc.
Danny and Rebecca Littlefield
Krista, Erika and Jacob Littlefield
Michael and Nora Luckenbill
Elli and Ty Lloyd
Roger Lunde
Pat Lynch
Lindsay Maddock
Jean Madsen
Paul Marchell
Cheryl Marshall
Janell Martin
Lori Martin
Megan Martin
Judy Martinson
Vanessa and Anna Masseth
Daria and Devan Mayo
Amy and Jake McCann
Eden and Wyatt McLeod
Claire and Sydney McMillan
Peter, Alena, Bernadette and
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Jacob Meidinger
Darcy, Jerry and Elayna Joy
Meier
Elly and Erik Milender
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Miller
Janice Mills
Darrick, Aubrie, Gabrielle and
Olivia Mischke
Sara Mittelsteadt
Sunne and Cutter Modin
Alex and Chris Moffet
Bjorn and Anna Moors
Hannah and Rebecca Morstad

Megan Muehler
Jon Mueller
Katie, Logan and Madison Muth
Robyn Mygland
Kathy Nash
Dorothea Nelson
Seth Nelson
Wanda Nelson
Linda Ness
Penny Nester
Kip Neva
Forrest and Emily Nielsen
North Dakota State University
Wellness Center Child Care
Daycare
Sarah Mae Nyberg
Celia and Mariska Olson
Cindy Olson
Natanya, Evan and Teagan Olson
Cliff and Marilyn Orgaard
Donald Ost
Wyatt Ostlie
Joel and Kim Owen
Nikki and Rick Owings
Sandi Paulson
Amanda, Gavin and Natalie
Peterson
Chuck Peterson
Donna Peterson
Ralph Peterson
Julia, Evan, Ivana, Leona, Milana
and Mirek Petrovic
Charlotte Pladsen
Laurie Podoll
DeLaine Poppke
Shelley Porter
Carter Ptacek
Sam and Solomon Radermacher
Diane Randle
Tim Rasmussen
Emilie, Brolin, Mikey and Myer
Rath
Landry and Layton Redmann
Billie Jo, Hannah, Maci and Sierra
Reutter
Autumn, Elise, Jacob and Kendra
Roberts
Jenn, Carson, Lainey and Lora
Rockwell
Parker and Tanner Roers
Jean Rolandelli
Rena, Blake and Haylee Rustad
Ashley Sabin
Becky, Austin and Eric Schaefer
Marissa and Wilson Schatz

Isabella Schillinger
Beth Schmaltz
J. Schmidt
Dillon Schmitz
Valerie, Frances and John
Schoepf
Lauren and Sophie Schorsch
Lois and Dennis Schott
Darla, Emma, Luke, Mariah and
Tessa Schroeder
Sharon Schroeder
Blaine and Virginia Schumacher
Paul and Janae Schumacher
Stacy, Elijah and Isaac Schwarz
Nicole, Nolan and Nora
Severance
Haven Sharp
Krissy, Matthew, Ellery, Karly and
Lucas Siebuhr
Ava, Ethan and Kara
Siemieniewski
Alessandra, Andrea and Laura
Simmons
Easton Simon
Dawn, Remington and Ryan
Snively
Kyla Splichal
Courtney and Esther Sprenger
Leslie Stevens
Mason and Parker Striha
Jon Stika
Patricia Stockdill
Cheryl Storhoff
Shelton and Sherwin Strege
Christopher Susie
Lee, Cooper and Tucker Svangstu
Stacey Swanson
Kristi and Dakota Swearingen
Cynthia Tegtmeier
Tamara Thom
Emma and Owen Tichy
Maria, Elizabeth and Katelynn
Toomey
Terri Tranby
AnnaMae Triebold
Bonnie Trom
Erica, Andrina, Carlton, Corynna
and Samantha Turnquist
Julie, Elsie, Jens, Malena and
Solveig Twedt
Ashley, Cody and Gus Ueckert
Unto the Hills Garden and Arbor
Libby, Ellie, Henry, and Margaret
Van Dyke
Greg and Jill Vandal

Angie, Derek, Mya and Precious
Vetter
Linda Volk
Lillian Volochenko
Joyce Waldoek
Bonnie Walter
Ward County Junior Master
Gardeners
Mandy, Ethan, Hannah and
Samantha Weber
Ken Weinzierl
Jane White
Nancy Whiting
Jan Wild
Sue, Garrett, Raelynn and Trent
Williams
Bryn and Max Wilson
Kara Winkler
Caleb and Levi Woodrow
Cynthia Zacher

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Vicente, <http://www.flickr.com/photos/henriquev/41333668/>; **45.** *Red Cosmos* by Dennis Wong, <http://www.flickr.com/photos/denniswong/3375540268/>; **46.** *Beautiful flower "cosmos"* by *hightiger, <http://www.flickr.com/photos/14791745@N05/1787487139/>; **47.** *Cosmos Couple* by Verdance, <http://www.flickr.com/photos/pattym/26701404/>; **48.** *yellow ang (sic) green in harmony* by melis, <http://www.flickr.com/photos/artchemist2007/1426228666/>; **49.** *Summer Sunshine and Rain* by Judy Baxter, <http://www.flickr.com/photos/judybaxter/191326707/>; **50.** *sunflower-peach-passion* by koizumi, http://www.flickr.com/photos/casablanca_moon/554303086/; **51.** *You know you've got it bad....(96/365)* by Mags_cat, <http://www.flickr.com/photos/mk1971/1342077980/>; **52.** *Bright Happy Face Sunflower* by Audrey, <http://www.flickr.com/photos/audreyjm529/197161152/>; **53.** *Sunflowers "Stella Gold"* by Dwight Sipler, <http://www.flickr.com/photos/photofarmer/2883037139/>; **54.** *Here are sweet peas, on tip-toe for a flight* by Nick Kenrick, <http://www.flickr.com/photos/zedzap/7646933916/>; **55.** *Pretty in Pink* by BlueRidgeKitties, <http://www.flickr.com/photos/blueridgekitties/4836624430/>.

Variety Descriptions

This is an academic report published for educational purposes only. The author gratefully acknowledges the sources of the descriptions of the varieties tested in this project: Fedco Seeds, Harris Seeds, Horticultural Products and Services, Kitazawa Seed, Irish Eyes Garden Seeds, Johnny's Selected Seeds, Jung Seed, Maine Potato Lady, Moose Tubers, Osborne Seed, Prairie Road Organic Seed, Reimer Seeds, Seed Savers Exchange, Seeds of Change, Stokes Seeds, Swallowtail Garden Seeds, Territorial Seed and Veseys Seeds.

Appendix 4. Certificate of Recognition



Certificate of Achievement

Presented to

Jenny Gardener

*in recognition of valuable research conducted for the
2014 North Dakota Home Garden Variety Trials*

NDSU EXTENSION SERVICE

Appendix 5. Seed Sources

The following are a few sources where seeds of the varieties tested in 2014 may be found. This list is not meant to be a complete list; many other seed companies 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	Gu = Gurney's	Ha = Harris	HF = Henry Field's
HP = HPS	Hu = Hummert	IE = Irish Eyes	Jh = Johnny's	Jr = Jordan
Ju = Jung	Kz = Kitazawa	MP = Maine Pot. Lady	MT = Moose Tubers	MV = Mtn Valley
Os = Osborne	Pi = Pinetree	PR = Prairie Road	Re = Reimer	SS = Seed Savers
St = Stokes	Sw = Swallowtail	Te = Territorial	Ve = Veseys	Wi = Willhite

1. **Bush Blue Lake 274:** Bu, Fe, Gu, Ha, HF, Hu, HP, IE, Jr, Ju, MV, Os, Pi, Re, St, Wi. **Lewis:** Ha, Os, St.
2. **Crockett:** Ha, Os, Te. **Maxibel:** Fe, Jh, Ju, Os, Pi, Re, Te, Ve, Wi.
3. **Red Ace:** Fe, Ha, Jh, Jr, Ju, MV, Os, Pi, Re, St, Sw, Te, Ve. **Zeppo:** Jh, Os.
4. **Goldfinger:** Ha, Os, St. **Laguna:** Ju, Os.
5. **Purple Haze:** Fe, Gu, Ha, Jh, MV, Re, St, Sw, Te, Ve. **Purplesnax:** Os.
6. **Temptation:** Jr, Os, St. **Trinity:** HP, IE, Jh, Jr, Ju, MV, St.
7. **7002R:** Ha. **Xtra-Tender 274A:** Ha, Jr, St.
8. **7112R:** Ha, Os, Jr. **Xtra-Tender 277A:** Ha, HP, Jh, Jr, Ju, St.
9. **Allure:** Ha, Jh, Jr, St, Te, Ve. **Cuppa Joe:** Ha, Jr, Ju, Os, Ve.
10. **Montauk:** Ha, Jh, Jr, Ju, St, Ve. **Serendipity:** Fe, HP, Hu, Jr, Ju, MV, Os, Te.
11. **Tasty Green¹:** Ha, HP, Hu, Jr, Ju, Kz, MV, Os, Re, St, Ve. **Telegraph Improved:** Fe, Re, Te.
12. **Eureka:** Gu, Ha, HP, Hu, Jr, Ju, Os, Re, St. **Home-made Pickles:** HP, IE, Jr, Ju, Pi, PR, Re, Sw, Te, Wi.
13. **Dasher II:** Ha, Hu, Jr, Os, Re, St, Sw, Wi. **Straight Eight:** Bu, Gu, HF, HP, Hu, IE, Jr, Ju, MV, Re, Sw, Ve, Wi.
14. **Diva:** Ha, HP, Jh, Ju, MV, Pi, Re, Sw. **Muncher:** HP, IE, Ju, MV, Pi, Re.
15. **Black Magic:** Gu, Ha, Ju, Os, St, Ve. **Lacinato²:** Fe, Hu, IE, Jr, MV, Os, Pi, Re, SS, Te, Wi.
16. **Red Cross:** Jh, Sw. **Skyphos:** Fe, Jh, Os, St.
17. **Pablo:** Fe, SS. **Sierra:** Fe, Ha.
18. **Green Forest:** Jh, Re, Ve. **Salvius:** Jh, Os.
19. **Deer Tongue:** Fe, IE, Jh, Jr, Pi, SS, Te. **Slobolt:** Fe, Re, SS.
20. **Royal Oakleaf:** Fe, Ha, IE, Jr. **Salad Bowl:** Bu, Fe, Gu, Ha, Hu, Jh, Jr, Ju, MV, Re, St, Sw, Te, Wi.
21. **Danyelle:** Ha. **Red Salad Bowl:** Fe, Ha, Hu, IE, Jh, Jr, Ju, MV, Re, SS, St, Sw, Ve.
22. **Athena:** Fe, Gu, Ha, HF, HP, Hu, Jh, Jr, Ju, MV, Os, St, Te. **Dutchess:** Jr, Ju, St.
23. **Solstice:** Ha, Ju. **Superstar:** Gu, Ha, Hu, Jr, Ju, Os, Te.
24. **Arava:** Fe, Jh. **Visa:** Os.
25. **Lincoln³:** Fe, Ha, Hu, IE, Jr, Ju, MV, Pi, PR, Re, St. **Progress No. 9:** Fe, HP, Hu, IE, Ju, MV, Os.
26. **Oregon Sugar Pod II:** Bu, Fe, Gu, Ha, HF, Hu, IE, Jr, Kz, MV, Os, Pi, Re, Te, Ve. **Sweet Horizon:** Os, Te.
27. **Yukon Gem:** IE, MP, MT. **Yukon Gold:** Bu, Gu, Hu, IE, Jh, Ju, MP, MT, Pi, Te.
28. **Dark Red Norland:** IE, Jh, MP, MT. **Red Gold:** Gu, IE, Jh, Ju, MP, MT, Pi.
29. **Adirondack Red:** Jh, MP, MT, Pi. **Mountain Rose:** MP, Te.
30. **Peter Wilcox⁴:** IE, Jh, MP, MT. **Purple Viking:** Gu, IE, Ju, MP, MT, Te.
31. **Adirondack Blue:** Jh, MP, MT, Pi. **Purple Majesty:** Bu, Gu, IE, MP, Te.
32. **Dakota Howden:** PR. **Gladiator:** Ha, Hu, Jr, Os, St.

33. **Cronus**: Ha, Os, St. **Super Herc**: Ha, Hu, Os, St.
34. **SV2157VB**: Ha, Os. **Tyee**: Fe, Gu, Ha, IE, Jh, Jr, Ju, MV, Os, Pi, Re, Sw, Te, Ve.
35. **Molokai**: Os. **Olympia**: Fe, Ha, Sw, Te.
36. **Multipik**: Gu, Ha, Jh, Jr. **Slick Pik YS 26**: Fe, Jh.
37. **Raven**: Fe, Jh, Te. **Spineless Beauty**: Fe, Ha, Jr, Ju, MV, St.
38. **Orange Krush**: Gu. **Super Gold**: Os.
39. **Legacy**: Re, Wi. **Sweet Dakota Rose**: Fe, PR.
40. **Blacktail Mountain**: Fe, IE, Re, SS, Te. **Sugar Baby**: Fe, Ha, HF, HP, Hu, IE, Jh, Jr, Ju, MV, Os, Pi, Re, St, Sw, Te.
41. **Lime**: Fe, Jh, Ju, MV, Os, Pi, Re, SS. **Sweet Dani**: Fe, Ha, HP, Ju, MV, Pi, Re, Sw, Te.
42. **Genovese**: Bu, Fe, Hu, IE, Jh, Jr, MV, Os, PR, Re, SS, St, Sw. **Sweet Aroma II**: Jh, Os.
43. **Italian Large Leaf**: HF, Hu, Jh, Jr, Ju, MV, Os, Pi, Re, Sw. **Mammoth Sweet**: Fe, Te.
44. **Calypso**: Bu, Jh, Ju, Os, Sw, Ve. **Santo**: Ha, Jh, Ju, Os, Re, St, Sw, Te, Ve.
45. **Rubenza**: Ha, Ju, Os, St, Sw. **Versailles Red**: Sw.
46. **Candy Stripe**: Sw. **Picotee**: Fe, Ha, HP, Os, Pi, St, Sw.
47. **Psyche White**: Fe, Sw. **Sensation Purity**: Pi, Sw.
48. **Giant Yellow**: Jh. **Jedi Gold**: Os.
49. **Garland**: Ha, HP, St. **Jedi Orange**: Os.
50. **Apricot Daisy**: Ha, Sw. **Peach Passion**: Ha, Jh, Jr, Os, Se.
51. **Sunbright Supreme**: Ha, Jh, Os, St. **Sunrich Orange**: Ha, Jh, Jr, Os, St.
52. **Double Goldy**: Os. **Greenburst**: Ha, Jh, Sw.
53. **Filly**: Bu, Ha, Os. **Irish Eyes**: SS.
54. **Mammoth Choice Mix**: Fe, HP, Jh, Os, St, Te. **Streamers Mix**: Fe, St.
55. **California Giant Mix**: HF, Hu, IE, Jr, MV, Os, Re, Te, Wi. **State Fair Mix**: Bu, Fe, Gu, Ha, HF, Jr, MV, Pi, St, Sw.

¹ Also known as 'Burpless No. 26'.

² Also known as 'Nero di Toscana'.

³ Also known as 'Homesteader'.

⁴ Also known as 'Blue Gold'.

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