

North Dakota Home Garden Cultivar Trials

RESULTS
2015

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Introduction

The First Step to Success

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

Gardeners who sow *superior* cultivars can grow plants that yield abundantly, resist diseases, and produce quality food. Gardeners who sow *inferior* cultivars are headed for frustrations. No matter how hard they work in the garden they may have disappointing results.

The benefits of selecting superior cultivars for gardens are great. The National Gardening Association (NGA) estimates approximately one-third of households in North Dakota grow a vegetable garden.¹ This indicates 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 from produce grown in their gardens.

There is an important public health dimension to gardening. Vegetables and fruits are nature's richest source of micro-nutrients, minerals and dietary fiber. A diet rich in vegetables and fruits is associated with a decreased risk of obesity and certain chronic diseases including 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 characteristics of cultivars, but they do not test cultivars 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 stations utilize tractors, large-scale irrigation equipment and herbicides. Backyard gardeners use shovels, hoes (maybe a roto-tiller), 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 *gardeners*, it makes sense to determine which varieties perform best in *gardens* under the management of *gardeners*.

Goals

This program has three major goals:

1. Gardeners will be introduced to new cultivars. This will lead to more productive gardens and healthier diets.

Families in North Dakota reap a profit of over \$49 million per year from produce grown in their gardens.

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

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

³Centers for Disease Control. 2012. North Dakota: State Nutrition, Physical Activity, and Obesity Profile.

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

2. Gardeners will identify superior cultivars of vegetables, herbs and flowers.
3. Youth will develop skills in science, eat a healthier diet, and enjoy increased levels of physical activity.

Selecting Cultivars

Seed catalogs are carefully studied to identify cultivars that are widely available and appear promising for North Dakota. In many situations, a promising new cultivar is compared with a cultivar that is widely grown in the state.

Preparation of Seed Packets

Seeds are ordered in bulk from seed companies. Seeds are subsequently packed into coin envelopes (potato seeds and gladiolus corms are packed into paper bags). Labels containing instructions (cultivar name, vegetable/flower type, time to plant, and recommended spacing for sowing and thinning) are affixed onto packages. Most seeds are untreated; exceptions being most sweet corn trials and a few cucurbit cultivars. No genetically modified organism (GMO) cultivars are used.

Distribution of Seeds

This program is promoted by North Dakota State University (NDSU) Extension Service faculty and staff across the state. Information is available at the web site <http://www.ag.ndsu.edu/homegardenvarietytrials/>. Interested households were allowed to participate in up to seven trials. The fees were \$1 per seed trial and \$1.50 for potato and gladiolus trials. Each child could receive one free trial. A fee of \$4.00 was charged for handling and postage.

Each gardener signs a pledge before receiving seeds, promising to do all they can to evaluate the cultivars fairly.

Besides seeds, growers 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 practices so the cultivars are tested under actual home garden conditions.

Quantity and Quality of Participation

In 2015, approximately 243 households submitted results from their trials. Results from over 852 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 2015

The growing season of 2014 was generally warmer and longer than normal (Figure 1). Dry weather in early spring encouraged many gardeners to sow early. A late frost in early June affected some of these gardens.

Favorable rains in May and June helped gardens get off to a good start. These rains tapered off significantly in August.

There were no reports of flooding or widespread drought.

Several gardeners mentioned severe winds in July. Winds in the Northern Great Plains are not unusual.

The autumn was especially warm, giving our cucumbers and melons extra time to ripen. Frost occurred for most gardeners in mid-October, about two weeks later than normal.

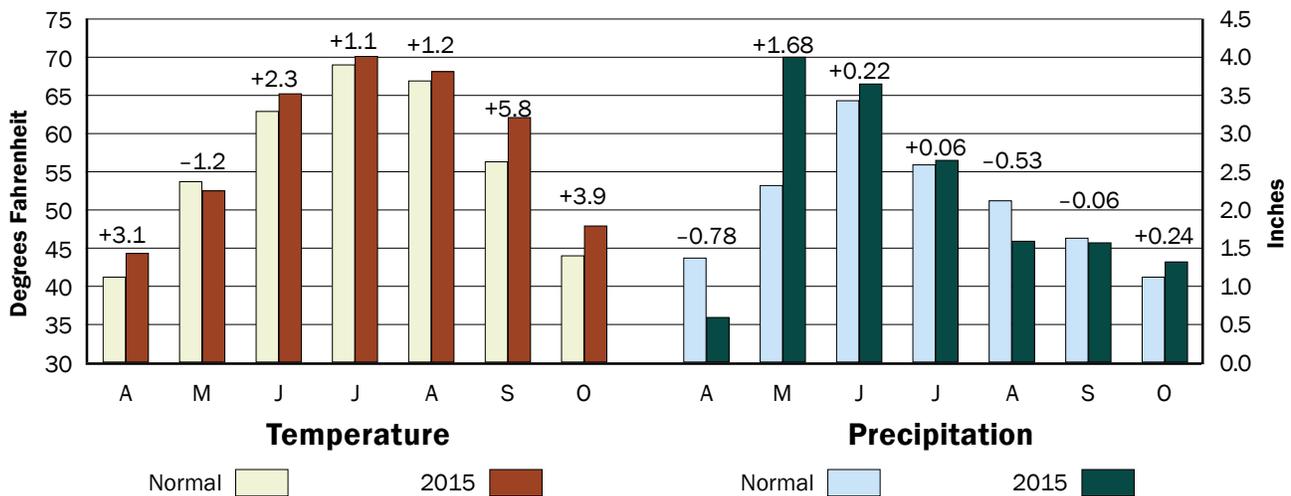


Figure 1. Monthly air temperatures and precipitation amounts in 2015 and normal (1895–2012). The growing season was warmer than usual, especially later in the season. Dry conditions in early spring allowed gardens to be planted early. Showers in May and June got gardens off to a good start. Source: National Oceanic and Atmospheric Association.

Compiling Data

Gardeners compared the two cultivars in each trial for germination rate, plant health, earliness, yield and quality of harvested product. We asked them if they would recommend the cultivars to other gardeners and which of the two cultivars 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 reports showed data with inconsistencies; these reports were eliminated from our analysis.

A selection of representative comments of gardeners on each cultivar is included in this report. Reports of previous years are available online at www.ag.ndsu.edu/homegardenvarietytrials/.

Reporting Final Results

Participating gardeners receive a summary of results (page 4). Results are presented at workshops to over 1,000 gardeners every spring. Newspaper and online columns are written to report findings.

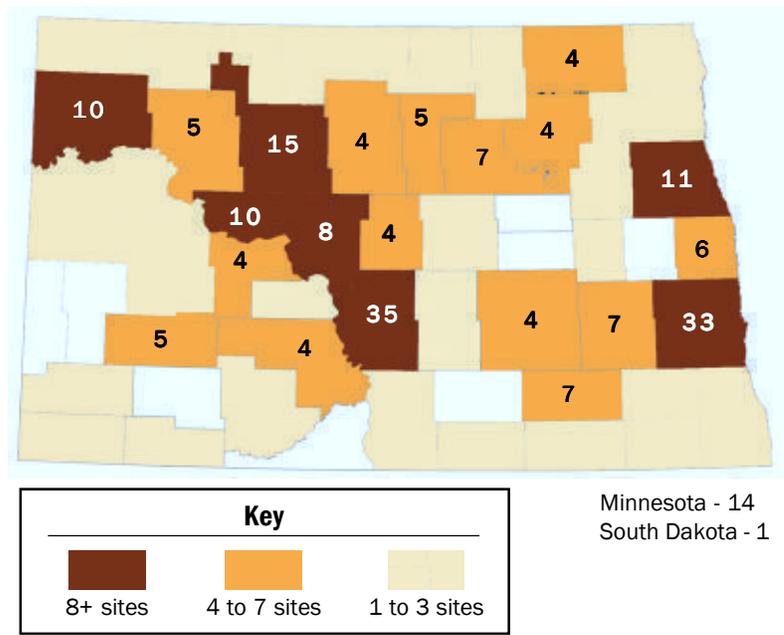


Figure 2. Approximately 243 households submitted results in 2015. Household numbers are shown above for each county with 4+ sites.

Impacts

An evaluation of the project is conducted every two years. A brief impact report is presented (page 98). Our evaluation shows that gardeners are introduced to new cultivars and enjoy more productive gardens and healthier diets. Youth in the project sharpen their skills in science. Youth enjoy healthier diets and increased levels of physical activity.

Summary of Results

Gardeners participated in 62 trials, each trial comparing two promising vegetable, herb or flower cultivars. Gardeners at 243 sites rated the cultivars for plant health, earliness, yield, and food/ornamental quality.

In each trial they noted which of the two cultivars they preferred (Pref) and which of the varieties they would recommend (Rec) to other gardeners. They

rated the performance of each cultivar 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.



Bean, Green

These are good cultivars but neither generated much excitement among gardeners. There was nothing exceptional about them. The edge goes to ‘Bowie’ for its impressive early yields.

Cultivar	Pref (%)	Rec (%)	Rating
Bowie	56	70	7.78
Sybaris	44	50	7.89
			(10 sites)



Bean, Green Filet

Both were exceptional. Gardeners were impressed with their yields and long harvest season. Pods were straight, slender and delicious. ‘Serengeti’ showed better germination and matured earlier. ‘Crockett’ pods were deeper green.

Cultivar	Pref (%)	Rec (%)	Rating
Crockett	41	70	7.48
Serengeti	59	76	7.78
			(34 sites)



Bean, Green Pole

‘Cobra’ matured earlier and was more productive but gardeners preferred ‘Stringless Blue Lake S-7 for its superior pod quality. Its pods were darker green, tenderer and better tasting.

Cultivar	Pref (%)	Rec (%)	Rating
Cobra	36	58	6.18
Blue Lake S. S-7	64	75	7.27
			(12 sites)



Beet, Gold

Both cultivars performed well from start to finish. ‘Boldor’ generated the most excitement with the beauty of its roots. Gardeners enjoyed growing golden beets as a novelty but prefer growing traditional red beets.

Cultivar	Pref (%)	Rec (%)	Rating
Boldor	63	85	7.79
Touchstone Gold	37	75	7.32
			(20 sites)



Carrot, Chantenay

‘Hercules’ has been a reliable performer known for its high yields and uniformity. Only a few gardeners participated this year, but they were impressed with the seedling vigor and attractive roots of ‘Cumbre’. ‘Cumbre’ shows promise.

Cultivar	Pref (%)	Rec (%)	Rating
Cumbre	75	75	8.75
Hercules	25	75	7.75
			(4 sites)



Carrot, Nantes

Both cultivars performed well. Most gardeners preferred ‘Goldfinger’. Its roots were straight, smooth and beautiful. It matched or surpassed the performance of ‘Nelson’ in all traits. Some gardeners thought ‘Nelson’ was more flavorful.

Cultivar	Pref (%)	Rec (%)	Rating
Goldfinger	64	85	7.97
Nelson	36	64	7.13
			(41 sites)



Corn, Bicolor Sugary Enhanced

For the second straight year, ‘Temptation’ outperformed ‘Trinity’, a popular early corn. ‘Temptation’ showed superior germination in cool soil, stronger vigor and higher yields. Its ears were more attractive and tastier.

Cultivar	Pref (%)	Rec (%)	Rating
Temptation	70	90	6.70
Trinity	30	30	4.80
(12 sites)			



Corn, Bicolor Super Sweet

‘Xtra-Tender 274A’ continues to impress gardeners across ND. It germinates well and grows vigorously. ‘XTH20173’ produced good yields of attractive corn but most gardeners preferred ‘Xtra-Tender 274A’ for its superior flavor.

Cultivar	Pref (%)	Rec (%)	Rating
XTH20173	20	80	7.00
X-Tender 274A	80	80	8.00
(6 sites)			



Corn, White Super Sweet

White sweet corn is not popular and our testing is extremely limited. Nevertheless, SSW 2001MR produced good yields of quality corn at all locations. Every evaluator recommended it.

Cultivar	Pref (%)	Rec (%)	Rating
SSW 2001MR	100	67	7.67
XTH3674	0	67	6.67
(3 sites)			



Corn, Yellow Super Sweet

Every gardener preferred ‘Vision XMR’. It was reliable and productive. For the second straight year, gardeners have been absolutely delighted with its sweet and tender kernels. It’s a winner.

Cultivar	Pref (%)	Rec (%)	Rating
Vision XMR	100	88	8.25
XTH1273	0	50	6.25
(8 sites)			



Corn, Bicolor Synergistic

In two years of testing, both cultivars have produced good yields of quality corn. ‘Allure’ generated a lot of excitement but more gardeners recommended ‘Cuppa Joe’. It germinated well in cool soil, was more reliable and matured earlier.

Cultivar	Pref (%)	Rec (%)	Rating
Allure	50	56	7.06
Cuppa Joe	50	69	6.94
(16 sites)			



Cucumber, Burpless

‘Tasty Green’ excelled in all traits. It germinated better and produced the first cucumbers. Its yields were abundant. Gardeners felt its cukes were more attractive and tasty. ‘Tasty Green’ has performed well in previous years too.

Cultivar	Pref (%)	Rec (%)	Rating
Sweeter Yet	35	50	6.96
Tasty Green	65	77	7.50
(27 sites)			



Cucumber, Pickling

‘Homemade Pickles’ has always won our pickling cucumber trials. It matures early and is very productive. Gardeners love its crisp and blocky fruits—perfect for pickling. ‘Sassy’ fruits were darker, slimmer and tapered at their ends.

Cultivar	Pref (%)	Rec (%)	Rating
Home. Pickles	74	81	7.35
Sassy	26	56	6.70
(27 sites)			



Cucumber, Slicing

Gardeners were evenly split on their preferences. ‘Talladega’ produced quick yields and its cucumbers were dark green, straight and long. ‘Raider’ was a reliable performer of good tasting cucumbers. Every gardener recommended ‘Raider.’

Cultivar	Pref (%)	Rec (%)	Rating
Raider	50	100	7.88
Talladega	50	75	7.50
(9 sites)			



Cucumber, Snack

Gardeners enjoyed the flavor of both cultivars. Most gardeners preferred ‘Muncher’. Its vines were more reliably healthy and productive. ‘Mercury’ showed earlier yields. Its cukes were straight and thin skinned.

Cultivar	Pref (%)	Rec (%)	Rating
Mercury	43	65	7.00
Muncher	57	65	6.81
(21 sites)			



Greens, Asian

Our few participants were lukewarm on the performance of both cultivars. ‘Maruba Santoh’ and ‘Tokyo Bekana’ rated similarly for most traits. They both suffered from flea beetles and bolting. Neither cultivar generated excitement.

Cultivar	Pref	Rec	Rating
Maruba Santoh	67	67	5.25
Tokyo Bekana	33	33	6.00
(4 sites)			



Kale, Red

Both cultivars germinated well, grew vigorously, suffered from the same pests and matured at the same time. Most gardeners felt they tasted the same. The notable difference was the frilly leaf of ‘Russian Frills’, which gardeners liked.

Cultivar	Pref	Rec	Rating
Red Russian	38	63	7.75
Russian Frills	63	100	8.63
(9 sites)			



Kale, White

These cultivars grew very well and were rated similarly for leaf appearance and taste. Most gardeners liked both varieties but every gardener preferred ‘White Russian’. Its vigorous growth led to early and productive harvests.

Cultivar	Pref	Rec	Rating
Siberian	0	75	5.75
White Russian	100	100	7.75
(6 sites)			



Lettuce, Green Leaf

‘Tropicana’ has always done well in our trials and 2015 was no exception. It produced a good yield of mild tasting, deep green leaves. It tolerated heat and has been a reliable cultivar.

Cultivar	Pref	Rec	Rating
Green Star	50	75	7.25
Tropicana	50	75	7.75
(5 sites)			



Lettuce, Red Oakleaf

Both cultivars resisted bolting and grew well in our warmer than normal summer. The rows of ‘Mascara’ were fuller and its plants grew more vigorously. This led to earlier harvests and higher yields.

Cultivar	Pref	Rec	Rating
Danyelle	17	33	6.17
Mascara	83	100	8.33
(6 sites)			



Lettuce, Green Romaine

Both cultivars produced dense heads of crisp, tasty lettuce. They grew robustly and resisted bolting. Gardeners showed more enthusiasm toward ‘Starhawk’. It produced larger heads filled with delicious, dark green leaves.

Cultivar	Pref	Rec	Rating
Dragoon	50	73	7.58
Starhawk	50	88	7.62
(28 sites)			



Melon, Cantaloupe

‘Athena’ showed why it is the most popular cantaloupe in the north. It excelled in all traits including earliness, yield and fruit quality. Every gardener recommended it. ‘Aphrodite’ struggled in several gardens.

Cultivar	Pref	Rec	Rating
Aphrodite	33	50	6.83
Athena	67	100	8.50
(6 sites)			



Melon, Specialty Cantaloupe

Gardeners enjoyed the flavor of these melons. Yields were late and poor, even with our unusually long and warm growing season. ‘Origami’ produced larger melons but more gardeners preferred the flavor of ‘Wrangler’.

Cultivar	Pref (%)	Rec (%)	Rating
Origami	33	67	6.33
Wrangler	67	50	6.83
			(6 sites)



Melon, Galia

‘Arava’ is an outstanding melon for us. Its yields are early and reliable. Its melons are sweet and aromatic. Galia melons are a special treat and ‘Arava’ is a proven performer in our state.

Cultivar	Pref (%)	Rec (%)	Rating
Arava	75	78	7.44
Sigel	25	56	6.11
			(9 sites)



Pea, Shell

‘Lincoln’ again proved to be a fine pea. The harvest was early, abundant and delicious. ‘Mr. Big’ frustrated gardeners. Each pod was big but had few peas. It was hard to know when to harvest and it was difficult to shell.

Cultivar	Pref (%)	Rec (%)	Rating
Lincoln	79	84	8.05
Mr. Big	21	42	5.84
			(19 sites)



Pea, Snap

‘Sugar Ann’ showed better germination, healthier vines, earlier and higher yields, and superior flavor. It’s reliable too. The leafless vines of ‘Sugar Lace II’ made it interesting to grow and its stringless pods were a nice feature.

Cultivar	Pref (%)	Rec (%)	Rating
Sugar Ann	57	86	7.50
Sugar Lace II	43	50	6.85
			(14 sites)



Pea, Snow

‘Sweet Horizon’ was introduced two years ago and has performed well. In general, ‘Oregon Sugar Pod 2’ is more likely to give you earlier and higher yields while ‘Sweet Horizon’ will give you straighter, higher quality pods.

Cultivar	Pref (%)	Rec (%)	Rating
Oregon S. Pod 2	50	40	6.67
Sweet Horizon	50	80	7.33
			(6 sites)



Potato, Gold Early

For the second year, ‘Yukon Gem’ was recommended by more gardeners than its famous parent, ‘Yukon Gold’. Its vines were healthy and more productive. Its tubers were uniform but smaller. Gardeners enjoyed the flavor of both.

Cultivar	Pref (%)	Rec (%)	Rating
Yukon Gem	50	82	7.82
Yukon Gold	50	73	7.09
			(11 sites)



Potato, Gold Midseason

Gardeners liked the yield and eating quality of both cultivars. Most preferred ‘Satina’. Its yields were higher and the tubers were larger, rounder and more uniform. It had a moist, smooth texture. ‘Carola’ had a firmer texture.

Cultivar	Pref (%)	Rec (%)	Rating
Carola	43	62	7.43
Satina	57	81	7.43
			(21 sites)



Potato, Gold Late

‘German Butterball’ produced higher yields. Its potatoes were smaller but more attractive. ‘Yellow Finn’ frustrated gardeners with its extensive vines and its failure to dry down before frost, even with a longer than normal season.

Cultivar	Pref (%)	Rec (%)	Rating
German Butter.	55	83	6.92
Yellow Finn	45	58	6.42
			(12 sites)



Potato, Purple

‘Purple Viking’ yields were more reliable and its tubers were larger. The marbled purple/pink skins of the tubers were attractive and its snow white flesh was moist. ‘Peter Wilcox’ was more susceptible to scab. Its golden flesh was flavorful.

Cultivar	Pref (%)	Rec (%)	Rating
Peter Wilcox	44	78	7.06
Purple Viking	56	78	7.83
			(18 sites)



Potato, Red

Most gardeners preferred ‘Dark Red Norland’, a reliable producer of bright red tubers. Its flesh was moist, firm and flavorful. ‘Chieftain’ vines grew well and produced larger pink-red tubers. Its flesh had a fluffier texture.

Cultivar	Pref	Rec	Rating
Chieftain	41	63	7.38
Dk Red Norland	59	79	8.05
			(24 sites)



Pumpkin, Midsize

Among these ‘Howden’ selections, ‘Early Dakota Howden’ was better. It matured earlier (always appreciated in North Dakota) and produced more pumpkins. Its pumpkins were generally larger and more attractive.

Cultivar	Pref	Rec	Rating
E. Dak.Howden	75	75	6.75
Howden XXX	25	75	6.00
			(4 sites)



Pumpkin, Large

Gardeners were pleased with both cultivars. Most preferred ‘Howden Biggie’; it showed superior seedling vigor. Otherwise the performances of the cultivars were very similar, both producing good crops of 30-pound pumpkins.

Cultivar	Pref	Rec	Rating
Captain Jack	40	80	7.80
Howden Biggie	60	100	8.00
			(5 sites)



Pumpkin, Giant

‘Big Moose’ excelled in all traits. Its vines were healthier, very vigorous and more productive. Its pumpkins were generally larger and more attractive. ‘Big Moose’ is easy to grow and will produce giant, bright orange pumpkins.

Cultivar	Pref	Rec	Rating
Big Moose	73	55	7.10
Prizewinner	27	45	5.80
			(11 sites)



Spinach, Savoy Leaf

‘Tye’ outperformed ‘SV2157VB’ in all measured traits including earliness, yield, taste and resistance to bolting. ‘SV2157VB’ struggled from the onset; this is confusing since it performed so well in 2014. Data are limited.

Cultivar	Pref	Rec	Rating
SV2157VB	33	0	2.67
Tye	67	67	6.67
			(4 sites)



Spinach, Smooth Leaf

‘Olympia’ is reliable and its resistance to bolting leads to an extended harvest. It produced good yields and gardeners liked the look and mild flavor of its leaves. ‘SV3580VC’ had darker green, thicker leaves but was more likely to bolt.

Cultivar	Pref	Rec	Rating
Olympia	56	89	7.67
SV3580VC	44	67	6.67
			(9 sites)



Squash, Straightneck

Both cultivars showed amazing yields. ‘Multipik’ has always done well in our trials. Its all-yellow fruits were firm and uniform. Gardeners were delighted with the green ends of ‘Zephyr’. It produced smooth, slender squash.

Cultivar	Pref	Rec	Rating
Multipik	33	78	7.00
Zephyr	67	78	6.44
			(9 sites)



Squash, Zucchini

‘Raven’ produces a fast crop (a valuable trait in ND). This year was longer than usual, allowing ‘Noche’ to catch up and later surpass ‘Raven’ in overall yield. Fruit quality was similar; ‘Raven’ showed darker, thicker skin.

Cultivar	Pref (%)	Rec (%)	Rating
Noche	38	75	8.29
Raven	63	88	8.17
			(8 sites)



Swiss Chard, Orange

Both cultivars were productive. A slight edge went to ‘Oriole’ in most categories including plant health and yield. Every gardener recommended ‘Oriole’. ‘Orange Fantasia’ did not make much of an impression on gardeners.

Cultivar	Pref	Rec	Rating
Orange Fantasia	50	75	7.50
Oriole	50	100	8.25
			(5 sites)



Watermelon, Red

‘Sweet Dakota Rose’ is the most reliable and flavorful watermelon for ND. ‘Shiny Boy’ matched it for earliness and yield but could not match it for taste. Yields were low and half of gardeners did not recommend either cultivar.

Cultivar	Pref	Rec	Rating
Shiny Boy	45	42	5.92
Swt Dakota Rose	55	50	6.46
			(14 sites)



Basil, Italian

Most gardeners liked both cultivars and were evenly split on their preference. ‘Dolly’ germinated better, grew robustly, produced good yields and had stronger flavor. Some gardeners preferred the classic taste of ‘Genovese’.

Cultivar	Pref	Rec	Rating
Dolly	50	63	7.38
Genovese	50	63	7.38
			(8 sites)



Cilantro

‘Calypso’ is a proven performer in our state. Compared to the industry standard ‘Santo’, ‘Calypso’ showed higher yields and better resistance to bolting. Gardeners liked its deep green and flavorful leaves.

Cultivar	Pref	Rec	Rating
Calypso	80	100	8.60
Santo	20	40	6.20
			(6 sites)



Dill, Leafy

These cultivars were developed for foliage and ‘Hera’ was superior. Its plants were productive and rebounded well after multiple cuttings. The foliage was dark green, feathery and aromatic. ‘Hera’ showed better resistance to bolting.

Cultivar	Pref	Rec	Rating
Diana	17	67	7.00
Hera	83	100	8.33
			(6 sites)



Bean, Ornamental

Gardeners liked the bicolor blooms of St. George but they preferred ‘Scarlet Runner’ overall. ‘Scarlet Runner’ was a taller, fuller plant with many more blooms and pods. This trial attracted hummingbirds but did not please bean eaters.

Cultivar	Pref	Rec	Rating
St. George	20	50	7.40
Scarlet Runner	80	90	9.00
			(11 sites)



Cosmos, Striped

‘Picotee’ was preferred by all gardeners. ‘Picotee’ plants were healthier and produced many more blooms. We are not sure why, but germination was a problem with ‘Cosimo Purple Red-White’. We assume it was a poor batch of seeds.

Cultivar	Pref	Rec	Rating
Cosimo P.R.-White	0	0	2.25
Picotee	100	75	6.50
			(6 sites)



Cosmos, Sulphur

Gardeners generally liked both cultivars, but most gave a slight edge to ‘Diablo’. It had a more compact habit and bloomed earlier. It’s been a reliable performer in previous testing, too. Data for this year are limited.

Cultivar	Pref (%)	Rec (%)	Rating
Diablo	67	100	8.00
Tango	33	75	7.00
(4 sites)			



Gladiolus, Blue

‘Blue Sky’ germinated better, bloomed earlier and produced more flowers. Its color was darker and more vibrant. Some gardeners preferred the lighter shades and ruffled edges of ‘Land O’ Lakes’. Stalks of both cultivars required support.

Cultivar	Pref	Rec	Rating
Blue Sky	57	86	8.00
Land O’ Lakes	43	64	7.43
(14 sites)			



Gladiolus, Orange

Gardeners loved the health and beauty of ‘Olympic Flame’. Most sprouts of ‘Sun Kissed’ died before blooming. We evidently received infected corms. The few ‘Sun Kissed’ that bloomed were awesome; although they did bloom late.

Cultivar	Pref	Rec	Rating
Olympic Flame	83	100	8.86
Sun Kissed	17	38	4.14
(14 sites)			



Gladiolus, Pink

Gardeners were enchanted with the beauty of both cultivars. Most gardeners recommended both cultivars but preferred ‘Pink Event’. They liked its earliness and abundance of blooms.

Cultivar	Pref	Rec	Rating
Chit Chat	29	86	7.57
Pink Event	71	86	8.57
(15 sites)			



Gladiolus, Plum

Both cultivars grew well and rated similarly for traits. Most gardeners preferred ‘Plum Tart’. They liked its sturdy stalks and rich, dark petals. ‘Sugar Plum’ was a reliable cultivar; it had lighter plum petals that were equally as appealing.

Cultivar	Pref	Rec	Rating
Plum Tart	57	76	7.76
Sugar Plum	43	86	7.90
(21 sites)			



Gladiolus, Purple

Gardeners split on their preferences. ‘Purple Flora’ bloomed earlier and put on a display of deep purple blooms. ‘Violetta’ produced more blooms and lasted longer as a cut flower. Its light-throated purple blooms were showy.

Cultivar	Pref	Rec	Rating
Purple Flora	50	73	7.70
Violetta	50	73	7.50
(11 sites)			



Gladiolus, Red

Both cultivars produced stunning flowers. ‘Flora Red’ bloomed earlier and in greater abundance. Its blooms were a radiant orange-red. ‘Oscar’ was slightly less reliable. Many gardeners loved its velvety crimson flowers.

Cultivar	Pref	Rec	Rating
Flora Red	50	91	7.78
Oscar	50	64	6.89
(11 sites)			



Gladiolus, Rose

‘Priscilla’ performed well at all sites. It bloomed first and its flowers were large and lovely. The wine blotches on ‘Wine and Roses’ blooms were eye catching. Stalks of both cultivars were filled with blooms and leaned at windy sites.

Cultivar	Pref	Rec	Rating
Priscilla	53	95	8.79
Wine and Roses	47	84	8.53
(22 sites)			



Gladiolus, White

Most gardeners preferred ‘Alaska’. Its stalks were tall, upright and sturdy. Its pure white petals stood out in the garden and in cut flower arrangements. ‘White Prosperity’ also grew well. It was notable for its subtle pink throats.

Cultivar	Pref (%)	Rec (%)	Rating
Alaska	67	82	7.73
White Prosperity	33	73	7.27
(13 sites)			



Gladiolus, Yellow

Gardeners enjoyed both cultivars but most preferred ‘Bananarama’. It bloomed earlier and gardeners were impressed with its warm, vibrant yellow color. ‘Nova Lux’ was nice but less remarkable.

Cultivar	Pref	Rec	Rating
Bananarama	64	88	7.73
Nova Lux	36	75	6.87
(15 sites)			



Gladiolus, Yellow/Orange

Both cultivars were healthy and bloomed early. Their blooms were vibrant and showstoppers in flower beds. Most gardeners preferred ‘Fiesta’. It was the first to bloom. Its stalks were strong, straight and full of compact blooms.

Cultivar	Pref	Rec	Rating
Fiesta	65	88	8.33
Jester	35	75	8.08
(24 sites)			



Sunflower, Orange Cutting

Data are limited. ‘Vincent’s Choice’ looked promising. It germinated well and bloomed reliably. Every gardener recommended it. ‘Sunrich Orange Summer’ from the popular ‘Sunrich’ series also did well.

Cultivar	Pref	Rec	Rating
Sunrich O. Sum.	50	75	7.00
Vincent’s Choice	50	100	8.00
(4 sites)			



Sunflower, Bicolor Dwarf (Spring)

Gardeners enjoyed the beauty of both cultivars in their gardens. ‘Rio Carnival’ displayed large flower heads on compact plants. It was healthy and bloomed quickly. ‘Firecracker’ was a bit taller and just as beautiful.

Cultivar	Pref	Rec	Rating
Firecracker	38	88	7.50
Rio Carnival	63	88	7.50
(7 sites)			



Sunflower, Bicolor Dwarf (Summer)

‘Rio Carnival’ was preferred. It germinated well and bloomed earlier. Its short, full plants were perfect for pots and good for gardens. ‘Firecracker’ had a taller habit and was better suited for growing in gardens than pots.

Cultivar	Pref	Rec	Rating
Firecracker	35	82	6.94
Rio Carnival	65	82	7.41
(47 sites)			



Sunflower, Gold Dwarf (Summer)

‘Solar Chocolate Gold’ produced more blooms and was pretty in gardens. Its stems were longer and good for cutting. The earlier blooming and compact plant habits of ‘Sunny Smile’ made it well suited for pot culture.

Cultivar	Pref	Rec	Rating
Solar Choc. Gold	48	81	7.13
Sunny Smile	52	71	7.27
(40 sites)			



Zinnia, Speckled

The compact plants of ‘Salsiendo Mix’ bloomed early and were filled with vibrant flowers. ‘Peppermint Stick Mix’ bloomed in a wide array of colors and patterns; some gardeners hoped for more red/white peppermint blooms.

Cultivar	Pref	Rec	Rating
Peppermint Stick	50	63	6.48
Salsiendo Mix	50	70	7.15
(30 sites)			

Bean, Green Bush

Cultivars

'Bowie'

56 days. Beautiful dark green, straight pods. Upright plants make harvesting easy.

'Sybaris'

56 days. Deep green, straight pods of exceptional quality. Excellent disease resistance.



These cultivars were good but not exceptional. The edge goes to 'Bowie' for its impressive early yields.

Data

Data were collected at 10 sites in 2015.

Trait	Bowie	Sybaris	Same
Germinated best	20%	40%	40%
Healthier plants	20	0	80
Harvested earlier	50	20	30
Higher yields	44	33	22
More attractive pods	33	22	44
Tasted better	25	25	50
Preference	56	44	
Recommend	70	50	
Mean score ¹	7.78	7.89	
Median score ¹	8.00	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

- Amazing yield the first couple pickings! Pods are slender, straight and uniform. Good flavor.
- Pods were darker green and short.
- An attractive, firm pod.
- Yield was slightly higher. Pods were better looking.
- Easier to harvest.
- Best yield.
- First yield.
- Matured 2 days earlier.

General Comments

- Both germinated well. Excellent health and yields.
- Both were good to eat.
- Very healthy plants.
- Both produced until frost.
- They were similar in most attributes, including plant health. Drought damaged much of the crop in August, but regrowth produced a second batch in September.
- All beans came up very good but then few plants survived to maturity due to spring frost. Those that did had high yields per plant. Overall, a very hit-miss bean crop plant for plant.

Comments on 'Sybaris'

- Produced more beans. The pods were longer (4+ inches) and had a nice size.
- Produced more beans per plant. Larger pods.
- Plants broke off at ground level easily. Pods were tangled within the plant.
- Better flavor and higher production. Produced 16 quarts compared to 7 for 'Bowie'. 'Blue Lake' is still preferred.
- Germinated 2–3 days earlier. Pods were less bitter and overall less seedy on average. Much better taste.
- Germinated a week later and was spotty.

Conclusions

These are good cultivars but neither generated much excitement among gardeners. There was nothing exceptional about them. The edge goes to 'Bowie' for its impressive early yields.

Comments on 'Bowie'

- Matured a few days earlier. Pods had a stronger flavor.

Best green bush bean cultivars

Top choice

Bush Blue
Lake 274

Strong performers

Derby
Espada
Greencrop
Jade
Provider
Strike

Bean, Green Filet

Cultivars

'Crockett'

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

'Serengeti'

55 days. Pods are medium green, slim, straight and tender. Sturdy plants support high yields.



Data

Data were collected at 34 sites in 2015.

Trait	Crockett	Serengeti	Same
Germinated best	13%	52%	35%
Healthier plants	13	38	50
Harvested earlier	17	63	20
Higher yields	23	47	30
More attractive pods	34	34	31
Tasted better	30	36	33
Preference	41	59	
Recommend	70	76	
Mean score ¹	7.48	7.78	
Median score ¹	8.00	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- I really like the color of the beans (beautiful dark green) and also the straightness of the pods. It is very easy to pack them in jars, and also for canning and freezing. These beans are wonderful.
- Both had impressive yields. I picked beans until the end of September.
- As of October 12, I am able to still harvest both cultivars!
- I love growing these beans! The kids and I ate the pods right out of the garden.
- Both cultivars were exceptional producers. Produced until frost.
- Harvest started July 10.
- Nice, bushy plants. Definitely need stakes for stability. Lovely beans.

- They both gave us large quantities of fresh beans. We not only enjoyed them fresh from the garden to the table, but we also made pickled beans.
- Both had nice dark green, slim pods. The vines did dry up during our intense heat as I did not water them.
- Both cultivars were tender and had nice color with uniform size. Both cultivars also had nice texture, but some of the 'Serengeti' were stringy.
- Attacked by leafhoppers as soon as plants had leaves. Both cultivars produced pods that tasted very good.
- Both cultivars germinated well.
- The cold spell in spring reduced germination, especially with 'Crockett'. Plants were beautiful and full. Outstanding yields of both cultivars in spite of limited germination. Their pods were slender, very straight and tasted good.
- Germination was poor (10–25%) but the few plants produced unbelievably well. Fed the neighborhood.
- Plants were very stunted and didn't get to taste any beans from either plant.
- My first attempt growing filet beans. Think I will stick with 'Blue Lake' green beans. The filet bean bushes were only about one foot tall. Not a lot of leaves. Easy to see beans.
- Neither cultivar did well in my garden. I planted several other cultivars and these did the worst.

Both cultivars had impressive yields of slender, straight pods.

Best green file bean cultivars

Top choice
Serengeti

Strong performers
Crockett
Maxibel

‘Crockett’ is an attractive bean with superb culinary characteristics.

Comments on ‘Crockett’

- Very productive. One plant produced 51 pods in a single picking. I especially loved the dark green color of its pods. I enjoyed its flavor just a little better.
- Both did well. ‘Crockett’ did just a little better. I had a bigger yield with ‘Crockett’.
- The flavor and texture was so much better.
- I prefer ‘Crockett’ for the attractiveness of the bean, and overall performance of the plant.
- An attractive bean with superb culinary characteristics. The uniform size and texture along with the lack of stringiness would give this bean a place on the plate at a 5-star restaurant.
- Head and shoulders above ‘Serengeti’. Best beans me and my neighbors ever had.
- Pods were glossier, darker and had a bit more flavor.
- Darker green pods and better taste.
- Harvested for the fourth time on October 1. They were still flowering until the first frost.
- Produced more. Plants were healthier. Pods were small but nice.
- My family preferred its taste by a slight margin, but I could not taste the difference.
- These were best. Pods were uniform and made great bean pickles.
- Pods had excellent flavor. Very straight and good for pickling. Less rust on pods.
- Germination was relatively poor. Sturdier plants with a thicker base to the plant. Produced more beans per plant. Pods were tenderer when cooked.
- For some reason the ‘Crockett’ never came up at all. Not one bean plant! We had this seed last year and we loved it.
- There was a scab on its pods.
- Yields crapped out quickly.

‘Serengeti’ produced earlier and higher yields. Its pods were slender with exceptional taste.

Comments on ‘Serengeti’

- ‘Serengeti’ was a very nice bean. They were long and straight. Tasted very good.
- ‘Serengeti’ produced more consistent pods; good to eat. Best yield, uniform beans and good tasting.
- Many more beans per plant. Plants produced longer.
- Higher yields per plant with larger beans. Still producing at the end of September and producing more blossoms.
- Slimmer, straighter pods. Produced over a longer harvest season.
- ‘Serengeti’ produced flowers and beans earlier than ‘Crockett’. ‘Serengeti’ pods were much sweeter.
- The germination and vigor of the plants was only marginally better for ‘Serengeti’.
- Bounced back stronger after pest attack.
- Plants grew uniform and strong. ‘Serengeti’ grew thin pods that had exceptional taste. First harvest was large but subsequent harvests were a little more sporadic. I had other beans planted (‘Bush Blue Lake 274’ and ‘Kentucky Wonder’) and they all grew poorly. ‘Serengeti’ was the bright row in my garden this year.
- Pods were lighter green. More bean flavor. Higher yields (7 quarts compared to 6.4 for ‘Crockett’).
- Better germination. Strong plants and nice yields.
- Plants were less bushy. Pods are a little more “bean” tasting.
- Earlier by a day or two.
- Superior texture and taste.
- The plants were taller, fuller and more productive. Interesting to grow and tasty, but think I will stick with ‘Blue Lake’ for its better production for canning.

Conclusions

Both cultivars were exceptional. Gardeners were impressed with their yields and long harvest season. Pods were straight, slender and delicious. ‘Serengeti’ showed better germination, sturdier plants and matured earlier. The pods of ‘Crockett’ were deeper green.

Bean, Green Pole

Cultivars

'Cobra'

59 days. European bean with outstanding flavor. Stringless, light green pods on sparsely foliated vines. Early.

'Stringless Blue Lake S-7'

60 days. Vigorous vines but sparsely foliated and easy to pick. Good yields. Famous Blue Lake flavor.



Data

Data were collected at 12 sites in 2015.

Trait	Stringless		
	Cobra	BL S-7	Same
Germinated best	42%	8%	50%
Healthier plants	33	33	33
Harvested earlier	67	25	8
Higher yields	50	33	17
More attractive pods	0	64	36
Tasted better	0	50	50
Preference	36	64	
Recommend	58	75	
Mean score ¹	6.18	7.27	
Median score ¹	6.00	7.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Rabbits ate plants so had to replant later in June. Plants grew well.
- Very susceptible to spray drift.
- We prefer bush beans after this experience.
- Had wind damage so crop was small. Will not try pole beans again.

Comments on 'Cobra'

- Produced a good early crop. Taste was very good.
- Better germination and higher yield.
- Germinated 3 days earlier. Harvested 10 days earlier. More production and grew more like a pole bean.
- Better germination but vines died earlier.

- Its vines were scorched; they can't handle high heat or winds. Produced first.

Comments on 'Stringless Blue Lake S-7'

- Pods were much tastier and tenderer. Pods were a pretty, dark green.
- Both cultivars were tasty but I preferred the darker green color of 'Stringless Blue Lake S-7'.
- Pods were very solid, firm and better tasting.
- Plants looked better. Easier to grow. Produced more beans.
- Took a while until harvest but the yields were greater. Pods were sweet, tastier and tenderer.
- I was happy when I grew these last year too! The vines need a good-sized trellis. Vines kept producing late in the season.

Conclusions

'Cobra' matured earlier and was more productive but gardeners preferred 'Stringless Blue Lake S-7' for its superior pod quality. Its pods were darker green, tenderer and better tasting.

'Stringless Blue Lake S-7' pods were darker green, tenderer and tastier.

Best green pole bean cultivars

Top choice
Fortex

Strong performers

Stringless Blue
Lake S-7
Orient
Wonder

Beet, Gold

Cultivars

'Boldor'

55 days. Dark golden beets. Bright yellow flesh keeps its color when cooked. Sweet.

'Touchstone Gold'

55 days. The standard for quality. Smooth roots with vibrant yellow flesh. Sweet flavor.

Data

Data were collected at 20 sites in 2015.

'Boldor' roots were smooth, colorful and delicious.

Trait	Touchstone		
	Boldor	Gold	Same
Germinated best	28%	40%	61%
Healthier plants	18	6	76
Harvested earlier	31	19	50
Higher yields	31	19	50
More attractive roots	41	18	41
Tasted better	24	12	65
Preference	63	37	
Recommend	85	75	
Mean score ¹	7.79	7.32	
Median score ¹	8.00	7.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both were nice shaped and a very pretty golden color. I made pickled beets and my grandson wanted some “peaches”!
- Golden beets are a staple in my garden from now on. I was not aware of their existence until this trial. Thank you.
- Very good tasting beet—almost sweeter than traditional red beets. The cultivars were evenly matched.
- Very good, mild taste.
- Nearly identical. The greens were great. It was great to eat beets that don't bleed!
- Both performed nicely. Very tasty.
- Both cultivars made many pickles and both had good flavor.
- Germinated well. Plants were healthy.
- Both cultivars showed very low vigor, very small roots and unacceptable yields.
- We had to replant some of both.



- We very much enjoyed both cultivars of golden beets, but prefer red beets.
- Poor crop from both. Not impressed.

Comments on 'Boldor'

- Both were great but 'Boldor' outperformed 'Touchstone Gold' on all counts!
- Slightly sweeter taste. Bigger roots.
- Nicer looking roots and a bit more yield.
- Although its roots cracked more often, 'Boldor' roots were beautiful in shape and color; nice flavor (both tops and roots) and required very little attention. Flavor was less earthy tasting.
- Smoother skin and more symmetrical. Beautiful beets and so sweet.
- Grew faster; larger roots at harvest.
- Showed slightly more vigor.
- Its greens were beautiful, tender and tasted so good. Roots were smaller.

Comments on 'Touchstone Gold'

- Just tasted a little better—sweeter, beetier flavor.
- Performed best overall. Tasted sweeter.
- Roots grew larger.
- Plants started out so slow.

Conclusions

Both cultivars performed well from start to finish. 'Boldor' generated the most excitement with the beauty of its roots. Gardeners enjoyed growing golden beets as a novelty but prefer growing traditional red beets.

Best gold beet cultivars

Top choice
Boldor

Strong performer
Touchstone Gold

Carrot, Chantenay

Cultivars

Cumbre

65 days. Uniform, cone-shaped roots are shorter and have less green shoulders than other Chantenays.

Hercules

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



Data

Data were collected at 4 sites in 2015.

Trait	Cumbre	Hercules	Same
Germinated best	50%	0%	50%
Healthier plants	50	0	50
Harvested earlier	75	0	25
Higher yields	25	25	50
More attractive roots	75	0	25
Tasted better	25	50	25
Preference	75	25	
Recommend	75	75	
Mean score ¹	8.75	7.75	
Median score ¹	8.50	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both germinated well. Tried both in stir fry recipes and both had good flavor.
- Poor production this year for some reason. Very few carrots for the amount of seed planted. Great taste!

Comments on 'Cumbre'

- Its roots were less subject to cracking and splitting.
- The wild rabbits in our yard preferred the 'Cumbre' carrot tops!

Comments on 'Hercules'

- Better flavor, although the plants were slower growing than 'Cumbre'.
- Slightly more plants led to higher yield. Both had good flavor but 'Hercules' was a little tenderer. Not so hard to bite into.

Conclusions

'Hercules' has been a strong and reliable performer in our trials. It is known for its high yields and uniformity. Only a few gardeners participated in this trial, but these gardeners were impressed with the seedling vigor and attractive roots of 'Cumbre'. 'Cumbre' shows promise and warrants further testing.

Gardeners liked the seedling vigor and attractive roots of 'Cumbre', a promising new Chantenay.

Best Chantenay carrot cultivars

Top choice
Hercules

Strong performers
Cumbre
New Kuroda

Carrot, Nantes

Cultivars

'Goldfinger'

69 days. Beautiful, dark orange roots with strong tops. Roots are uniform, smooth, straight and sweet. Early.

'Nelson'

56 days. Deep orange roots are sweet and smooth. Very reliable. Proven performer in North Dakota. Early.



Both cultivars produced well and their plants were healthy. Their roots tasted excellent.

Data

Data were collected at 41 sites in 2015.

Trait	Gold-finger	Nelson	Same
Germinated best	23%	20%	58%
Healthier plants	18	13	68
Harvested earlier	24	8	68
Higher yields	34	26	40
More attractive roots	47	25	28
Tasted better	35	30	35
Preference	64	36	
Recommend	85	64	
Mean score ¹	7.97	7.13	
Median score ¹	8.00	7.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both cultivars produced very well and their plants were healthy. Their roots tasted excellent.
- Both cultivars were straight, medium in length, not stubby.
- Both had healthy foliage. They have wonderful flavor and are tender, even when the roots get a little large.
- Root sizes were approximately the same.
- 'Nelson' tasted better than 'Goldfinger' if eaten raw but 'Goldfinger' tasted better than 'Nelson' when cooked.
- Taste was very similar.
- Both are great cultivars. Short and blocky roots.
- Both yielded well.

- Both germinated at same time. Both had nice healthy looking plants. Roots had good flavor. This is the first time I have had any luck growing carrots in 30+ years of gardening, I planted early (April 28) and in a raised bed.
- Germinated well. Beautiful, long, thick roots.
- Both cultivars had good flavor.
- Both cultivars had attractive roots.
- Germination was 95% for both cultivars.
- I've had much better flavored carrots. Neither was exceptionally sweet raw or cooked—just okay.
- Not enough germination for a fair trial.
- They both came up really good and produced nice carrots. Could not tell much of a difference between the cultivars.
- Neither cultivar produced much green top biomass; was a little nervous about the crop I was going to get. Both cultivars produced nice carrots.
- Both had poor germination. Roots tasted the same.
- Germinated the same day. Similar yields.
- Very few of the seeds germinated. However both cultivars had huge roots! They were so big and deep that they were breaking as I was trying to dig them! We had plenty for eating and sharing.
- Poor germination (only 13 carrots). The roots of the cultivars had the same size and taste.

Best Nantes carrot cultivars

Top choice
Goldfinger

Strong performers
Laguna
Nelson
Scarlet Nantes

Comments on ‘Goldfinger’

- I rated ‘Goldfinger’ higher as the roots were consistently long, smooth and straight.
- Not much difference between the cultivars, but ‘Goldfinger’ had nicer looking roots.
- I think it germinated a little better but both cultivars did well.
- Germinated first, and produce the first nice sized carrots.
- ‘Goldfinger’ germinated later than ‘Nelson’.
- ‘Goldfinger’ had more attractive looking roots and when cooked was a much sweeter tasting vegetable.
- ‘Goldfinger’ had a lot of side roots (more difficult to clean), and doesn’t seem to be keeping as good.
- Straighter roots; better taste; better yield.
- Better tasting.
- Tasted sweeter although both were good.
- Superior color and shape of roots.
- Produced 39.6 pounds compared to 35.8 pounds for ‘Nelson’. Roots were sweeter and less likely to fork.
- Tasted better.
- Taller plants. Smoother taste when cooked—very tasty.
- Nice long roots. Produced well. Didn’t need a frost to improve taste.
- Tasted good and produced more.
- Longer roots.
- Sweeter.
- Family really enjoyed and is still enjoying great carrots!
- Larger carrots overall.
- Germinated at a 50% higher rate. Roots were straighter and more uniform in shape.
- Roots were straighter. Sweeter taste—not so bitter.
- Slightly sweeter but both were wonderful. Great flavor and no “soapy” taste.
- Plants were healthier. Raw carrots were sweeter and juicier. Could not tell the difference between the carrots when cooked.

Comments on ‘Nelson’

- ‘Nelson’ carrots were a little sweeter and had a better taste.
- Both tasted delicious but ‘Nelson’ tasted better.
- ‘Nelson’ had better looking, much straighter and bigger roots. ‘Nelson’ germinated first; we saw the first seedlings after 18 days.
- Tasted better.
- Both cultivars tasted great but would give the slight edge to ‘Nelson’.
- About 30% of roots were forked; this was not seen with ‘Goldfinger’.
- Several forked carrots. Roots were less sweet and stronger in flavor.
- Germinated better, leading to higher yields. Roots were sometimes forked (did not have this problem with ‘Goldfinger’).
- Roots were bigger.
- Produced more. We like raw carrots and we preferred its strong carrot taste.
- Thicker roots.
- Roots were more attractive.
- ‘Nelson’ was a little slower to germinate.
- Germination was sporadic and less healthy.
- ‘Nelson’ roots were sometimes forked and “hairy.” They still tasted good, but were much more difficult to clean up for eating.
- Roots were more subject to splitting and were more crooked.

‘Goldfinger’ roots were consistently long, smooth and straight.

Conclusions

Both cultivars performed well but most gardeners preferred ‘Goldfinger’. Its roots were straight, smooth and beautiful. It matched or surpassed the performance of ‘Nelson’ in all traits. Some gardeners thought ‘Nelson’ was more flavorful.

Corn, Bicolor Sugary Enhanced

Cultivars

'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 12 sites in 2015.

Trait	Tempt- ation	Trinity	Same
Germinated best	58%	0%	42%
Healthier plants	50	10	40
Harvested earlier	40	20	40
Higher yields	67	11	22
More attractive ears	67	22	11
Tasted better	50	38	13
Preference	70	30	
Recommend	90	30	
Mean score ¹	6.70	4.80	
Median score ¹	7.50	4.50	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Our corn was growing very nicely but got knocked down during the multiple windstorms.

Comments on 'Temptation'

- 'Temptation' produced more and larger ears of corn. Some plants had 2 ears and both were filled nicely. 'Trinity' ears were smaller and only produced 1 ear. Preferred the taste of 'Temptation' over 'Trinity'.
- Hardy and great taste.
- Bigger ears.
- The wind did a number of the trial this year. Overall yield was low but 'Temptation' grew full-sized ears and stood up better to the wind. I liked its taste better.

- The 60-mph winds on July 28 took a huge toll on the corn. 'Temptation' made it through and still produced ears, although noticeably smaller than last year.
- Better germination and better yield. Its ears were more attractive and very tasty. Good yield; good tasting; canned well.
- Kernels were big and uneven.
- 'Temptation' did not develop very well. It had very tiny ears.

Comments on 'Trinity'

- 'Trinity' tasted better and had bigger ears.
- Harvested one week earlier.
- 'Trinity' just did not do well for me.
- Pest problems.

Conclusions

For the second straight year, 'Temptation' outperformed 'Trinity', a very popular early corn. 'Temptation' showed superior germination in cool soil, stronger vigor and higher yields. Its ears were more attractive and tastier. 'Temptation's is the finest early sugary enhanced bicolor corn for North Dakota.

'Temptation' showed better germination and better yield. Its ears were more attractive and very tasty.

Best bicolor SE corn cultivars

Top choice
Temptation

Strong performers
Delectable
Luscious

Corn, Bicolor Super Sweet

Cultivars

'XTH20173'

73 days. Very good sweetness and very tender. Kernels contrast beautifully. Requires isolation.

'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 6 sites in 2015.

Trait	XTH X-Tender		Same
	20173	274A	
Germinated best	0%	0%	100%
Healthier plants	33	17	50
Harvested earlier	20	40	40
Higher yields	40	20	20
More attractive ears	40	0	60
Tasted better	0	75	25
Preference	20	80	
Recommend	80	80	
Mean score ¹	7.00	8.00	
Median score ¹	8.00	9.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- This was the best tasting corn we have ever grown.
- The corn became overripe in the field after one week.
- Germination of both cultivars was slow and irregular. I was only ate a couple of early cobs; not enough to test. When they were all about ready to pick, the raccoons beat me to them. Both cultivars must have been good; they took them all.
- Did not like either. The cobs were very small and did not fill on one side.

Comments on 'XTH20173'

- Produced more and had larger ears.

Comments on 'Xtra-Tender 274A'

- 'Xtra Tender 274A' was ready to eat before 'XTH20173' because it germinated earlier. It was also sweeter and tenderer. The biggest difference was that 'XTH20173' had two smaller cobs per stalk compared to one large cob per stalk for 'Xtra Tender 274A'. Both cultivars were good but 'Xtra-Tender 274A' was better.
- The quality of corn was way better. It was sweeter and tenderer. More cobs.
- Earlier. Stayed sweet longer.

'Xtra-Tender 274A' was sweeter and more tender.

Conclusions

'Xtra-Tender 274A' continues to impress gardeners across North Dakota. It germinates well and grows vigorously. 'XTH20173' produced good yields of attractive corn but most gardeners preferred 'Xtra-Tender 274A' for its superior flavor.

Best bicolor Sh₂ corn cultivars

Top choice
Xtra-Tender
274A

Strong performer
Xtra-Tender
277A

Corn, White Super Sweet

Cultivars

'SSW 2001MR'

74 days. Bright white kernels. Its SuperSeedWare® genetic platform offers outstanding seedling vigor. Sturdy stalks. Isolation required.

'XTH3674'

74 days. A favorite among growers. Gourmet quality corn. Tender and very sweet. Isolation required.



'SSW 2001MR'
produced good yields of attractive ears.

Data

Data were collected at 3 sites in 2015.

Trait	SSW 2001MR	XTH 3674	Same
Germinated best	0%	0%	100%
Healthier plants	0	33	67
Harvested earlier	0	33	67
Higher yields	50	0	50
More attractive ears	67	0	33
Tasted better	33	0	67
Preference	100	0	
Recommend	67	67	
Mean score ¹	7.67	6.67	
Median score ¹	7.00	7.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both were pretty much the same. Couldn't tell the difference. I started both of these indoors in 6-cell packs and transplanted them May 23. They were ready to eat July 29. My goal is always fresh corn by the end of July. They both made it.

Comments on 'SSW 2001MR'

- Sweeter taste.
- Kernels were more even.

Comments on 'XTH3674'

- Many stalks produced unfilled ears.

Conclusions

White sweet corn is not popular and our testing is extremely limited. Nevertheless, SSW 2001MR produced good yields of quality corn. Every evaluator recommended it.

**Best white
Sh₂ corn
cultivar**

Top choice
SSW 2001MR

Corn, Yellow Super Sweet

Cultivars

'Vision XMR'

73 days. A rust-resistant strain of 'Vision', a top performer in ND. Outstanding quality. Requires isolation.

'XTH1273'

82 days. An addition to the popular Xtra-Tender series. Superb eating quality. Requires isolation.



Data

Data were collected at 8 sites in 2015.

Trait	Vision XMR	XTH 1273	Same
Germinated best	38%	0%	63%
Healthier plants	33	0	67
Harvested earlier	38	0	63
Higher yields	50	25	25
More attractive ears	38	0	63
Tasted better	88	0	13
Preference	100	0	
Recommend	88	50	
Mean score ¹	8.25	6.25	
Median score ¹	8.50	6.50	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Production yield was within four cobs of each other and germination dates were 3 days apart.
- Poor pollination for both cultivars.
- Must have planted in poor soil. Many ears were small and pollination was poor.

Comments on 'Vision XMR'

- 'Vision XMR' is an excellent corn. Sweet and tender kernels with uniform cobs. One of my family's favorite sweet corns. Planted late to have fresh corn after Labor Day. My family loved it.
- 'Vision XMR' tasted sweeter.
- Tasted slightly better although both were great.
- Tasted better.

- 'Vision XMR' stalks had more of a tendency to tip over when mature.
- 'Vision XMR' kernels were small and sweet. Among these two cultivars I would take 'Vision', but it does not compare to 'Bodacious'. 'Bodacious' is still our favorite. It's perfect.

Comments on 'XTH1273'

- The rows of kernels were spiraled rather than straight. Neither my husband nor I cared for them.

Conclusions

Every gardener preferred 'Vision XMR'. It was reliable and productive. For the second straight year, gardeners have been absolutely delighted with its sweet and tender kernels. It's a winner.

'Vision XMR' is an excellent corn. It has sweet and tender kernels.

Best yellow Sh₂ corn cultivars

Top choice
Vision XMR

Strong performers
Bodacious
Sugar Buns

Corn, Bicolor Synergistic

Cultivars

'Allure'

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

'Cuppa Joe'

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



Data

Data were collected at 16 sites in 2015.

Trait	Cuppa Joe		
	Allure	Joe	Same
Germinated best	27%	27%	47%
Healthier plants	27	7	67
Harvested earlier	27	40	33
Higher yields	47	27	27
More attractive ears	47	27	27
Tasted better	33	40	27
Preference	50	50	
Recommend	56	69	
Mean score ¹	7.06	6.94	
Median score ¹	8.50	7.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both cultivars were tasty and sweet.
- Stalks were healthy and grew 6 feet high.
- Stalks grew about 4 feet tall. The biggest ears were 3 inches long.
- Winds laid the stalks down twice. After packing mud around the roots, it seemed to be okay. No bugs. No smut. Loved the taste of both.
- Prefer 'Bodacious' over these cultivars. Don't know if I'd plant these cultivars again.
- Only one ear per plant. I also grow 'Honey and Pearl'. It is sweeter and you usually get two ears per plant.
- Ears were not beautiful. Poor pollination. Maybe would do better if planted in blocks instead of two rows.

Comments on 'Allure'

- Ears were delicious, sweet and tender.
- Several more plants. Bigger, fuller ears.
- Better taste and a heavier stalk.
- Cobs were fuller and longer.
- 'Allure' never produced much and its taste wasn't there for ears that made it.
- Everyone enjoyed 'Cuppa Joe' but when 'Allure' was ripe, we enjoyed that more.
- Stalks were healthier early in the season. Kernels were slower to harden in the field. Ears were longer.
- Wind blew down the stalks and 'Allure' stalks recovered better.

Comments on 'Cuppa Joe'

- Both appeared to be on pace with each other until about time to pick the corn, and then 'Cuppa Joe' soared ahead for the win in all categories. Large, plentiful and tasty ears of corn per stalk.
- Better all-around performer.
- Sweeter and tasted better.
- Ears were more filled out; tasted better.
- Stalks grew more vigorously.
- Stalks were taller and fuller.

Conclusions

In two years of testing, both cultivars have produced good yields of quality sweet corn. 'Allure' generated a lot of excitement but more gardeners recommended 'Cuppa Joe'. 'Cuppa Joe' germinated well in cool soil. It was more reliable and matured earlier.

Both cultivars were tasty and sweet.

Best bicolor Syn corn cultivars

Top choice

Cuppa Joe

Strong performer

Allure

Cucumber, Burpless

Cultivars

'Sweeter Yet'

48 days. The earliest and one of the most reliable burpless varieties. Smooth, dark green fruits. Harvest when 8–10 inches long.

'Tasty Green'

60 days. Smooth, dark green cukes are thin skinned and bitter free. Easy to grow. Proven performer in North Dakota.



Data

Data were collected at 27 sites in 2015.

Trait	Sweeter Yet	Tasty Green	Same
Germinated best	19%	44%	37%
Healthier plants	8	35	56
Harvested earlier	38	54	8
Higher yields	19	46	35
More attractive cukes	15	46	38
Tasted better	27	46	27
Preference	35	65	
Recommend	50	77	
Mean score ¹	6.96	7.50	
Median score ¹	7.50	7.50	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both cultivars produced super high yields! I took numerous bags to work to share as my veggie bins were so full of these cucumbers!
- Both gave me fantastic, marketable cucumbers!
- Nice slicing cucumbers—great with balsamic vinegar. Neighbors loved them too.
- Both were grown on a fence and I loved to pick those long, straight, beautiful cukes.
- I grew them on vertical trellises and that worked very well.
- Both had thin skin. Both tasted good but did not keep well after picking.

- Yields and the quality of cucumbers were similar. Both tasted very good.
- Germination was good; vines produced well and cukes looked similar.
- They both did well. We didn't have one bitter cucumber at all between the two cultivars.
- Both cultivars were good; not a lot of difference in flavor.
- Neither had high yields; I was disappointed in that. Both had a lot of deformed cukes.
- They were bitter compared to other commercial cukes, especially for eating raw and salads. Very disappointing compared to the time and energy put into them.
- Frost hit us on May 30 but the plants weren't up so I didn't worry. Only two of the nine seeds germinated for 'Tasty Green' and none of the 'Sweeter Yet' grew at all. I replanted on June 25 but the best growing days were over by then.
- Both cultivars struggled and very few came up. I likely planted them too early (sown May 3).
- Not many plants came up (sown May 20). Did not produce well.
- Very poor germination (sown May 26).
- Yields were unbelievable. The cucumbers were totally delicious. Their vines turned yellow early.
- Cucumbers were skinny on one end.

Both cultivars produced good yields of quality cucumbers.

Best burpless cucumber cultivars

Top choice
Tasty Green

Strong performers
Orient
Express II
Sweet Slice
Sweet Success

**‘Tasty Green’
showed
outstanding
yields and kept
producing until
frost. Its
cucumbers
were long,
straight and
superb in
taste.**

Comments on ‘Sweeter Yet’

- Both cultivars were great but ‘Sweeter Yet’ performed just a little better.
- Produced first. Harvested nine cukes on July 14 compared to one for ‘Tasty Green’.
- Produced 1 week earlier but vines stopped producing when weather got hot. ‘Tasty Green’ produced longer, well into September.
- Earlier.
- Tasted better.
- Superior taste and its skin is thinner.
- Had a smoother skin and we liked the taste better.
- Better taste and twice as productive.
- Nice, long, healthier looking cucumbers.
- Sweeter and tastier.
- My garden was damaged by hail at the end of June. Both cultivars came back and ‘Sweeter Yet’ did better. ‘Sweeter Yet’ yielded three times as many cucumbers as ‘Tasty Green’. They were larger and straighter. Overall just a better cucumber.
- The fruit was long, skinny and good tasting.
- Its cukes are shorter, have bulges on ends, less crisp and seedier.
- ‘Sweeter Yet’ cukes tended to curl up more often and their seeds were much bigger.

Comments on ‘Tasty Green’

- Produced twice as many cukes. Kept producing into mid-October. Superb cukes and tough plants. I would gladly plant these again.
- Germinated 3 days earlier. Vines withstood the awful July winds better. More blossoms and kept producing until October 18! Cukes were larger and less seedy. ‘Tasty Green’ is a real trooper!
- ‘Tasty Green’ cucumbers were very prolific and delicious to pick off the vine and eat like an apple! First to germinate and a high percentage of germination. Cucumbers had a nice size and were very tasty.
- Germinated earlier and better. Plants were fuller with blossoms that never

seemed to quit. I picked my last cucumbers in October. More production—a huge harvest. I loved its dark green, smooth skin. Both of our taste testers at home and those who sampled each cultivar thought ‘Tasty Green’ had more flavor.

- Produced first.
- Germinated a few days sooner. Plants were fuller. Harvested a few days sooner.
- Outstanding yields. Still producing.
- Straighter and longer cucumbers.
- Cukes had a milder flavor.
- Better taste.
- Good in salads or with salt and pepper.
- Held up better to higher temps. Harvest lasted longer.
- ‘Tasty Green’ cukes for the most part were longer, straighter and skinnier. They had smaller seeds and I like the taste of them.
- I liked the dark, crisp cucumbers produced.
- Vines turned yellow. Cucumbers had a tendency to curl.

Conclusions

‘Tasty Green’ excelled in all traits. It germinated better and produced the first cucumbers. Its yields were abundant. Gardeners felt its cucumbers were more attractive and tasty. ‘Tasty Green’ has performed well in previous years and its performance in 2015 was a success.

Cucumber, Pickling

Cultivars

'Homemade Pickles'

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

'Sassy'

57 days. Fruits are dark green, tapered, and longer than most picklers. Strong vines produce high yields.



Data

Data were collected at 27 sites in 2015.

Trait	Homemade		
	Pickles	Sassy	Same
Germinated best	52%	16%	32%
Healthier plants	35	17	48
Harvested earlier	71	25	4
Higher yields	44	32	24
More attractive cukes	42	21	38
Tasted better	9	17	74
Preference	74	26	
Recommend	81	56	
Mean score ¹	7.35	6.70	
Median score ¹	8.00	7.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both cultivars did amazing! I honestly ran out of canning jars as these cultivars yielded so many cucumbers!
- Both kinds of cucumbers are very good eating. The flavor is wonderful. Hate to think of the season ending. We were able to make several different kinds of pickles, and ate fresh cucumbers with many meals.
- Real good germination. Vines spread like wildfire. Yields were slow at first but then could hardly keep up. Both made good pickles.
- These cultivars did not suffer leaf mold. Both tasted well.
- Both tasted good.
- Maybe I planted too late (June 19) but I

got only a couple cucumbers from these plants.

- They taste too bitter.
- Neither cultivar had very healthy plants but my other cukes didn't do well either. I suspect the weather and perhaps a cutworm problem.
- Cool spring led to uneven germination. Winds damaged vines, especially those of 'Homemade Pickles'. Both cultivars produced cukes of good flavor.
- Plants did not look especially healthy. Wind damage.
- Both took a toll from the strong wind, but bounced back somewhat.

Comments on 'Homemade Pickles'

- Great for pickling. Early producer and lots of cukes. Uniform size. Cukes can be laid side by side—just right for pickling.
- 'Homemade Pickles' endured the stress of dry weather and produced very well after rains came. A good pickle for our needs.
- Liked the shape and color better. 'Sassy' cukes were longer, skinny and darker green.
- I prefer the size of them, and its great taste. Even in late summer, we are still getting a few cukes.
- Produced the first cucumbers.
- Real tasty pickles.
- They tasted great when pickled and they produced bigger cucumbers.

'Homemade Pickles' yields were early and abundant. Its cukes had a uniform shape.

Best pickling cucumber cultivars

Top choice
Homemade Pickles

Strong performers
Alibi
Calypso
Eureka
Little Leaf H-19

Gardeners preferred the blocky shape and crisp texture of ‘Homemade Pickles’.

More Comments on ‘Homemade Pickles’

- I prefer the block-like shape of ‘Homemade Pickles’. ‘Sassy’ was tapered at one end.
- Better production.
- More cukes.
- A bit hardier; did not stress as bad when it got hot.
- Good yields with smaller cukes for pickling.
- Produced more at one time.
- The cukes turned light and didn’t look as appetizing.
- The pickled product from ‘Homemade Pickles’ had better texture and seemed to taste better. I have grown ‘Homemade Pickles’ before and have had far better results in other years.
- Produce and plants appeared to look a little healthier.
- Better germination, yet still had to reseed both cultivars.
- Didn’t germinate well (sown May 20).

Comments on ‘Sassy’

- Germinated first. Larger leaves and longer vines. Produced first and more pickles. Tasted better fresh, but both made great pickles.
- Harvested several days earlier. Attractive small cukes; very nice for baby dills.
- Its small pickling size looked more attractive. ‘Homemade Pickles’ seemed to be fat and short unless you picked them daily.
- Set fruits later but had more yield overall.
- Produced a lot of cukes for pickling. I liked the taste of the larger ones for fresh eating.
- Produced in abundance.

Conclusions

‘Homemade Pickles’ has always won our pickling cucumber trials. It matures early and is very productive. Gardeners love its crisp and blocky fruits—perfect for pickling. ‘Sassy’ fruits were darker, slimmer and tapered at their ends. It performed well but the vast majority of gardeners preferred ‘Homemade Pickles.’

Cucumber, Slicing

Cultivars

'Raider'

52 days. A leading hybrid in the north noted for its earliness. Dependable yields of straight, dark green cukes.

'Talladega'

50 days. Early. Straight, dark green fruits grow 8.5 inches. Very few spines and almost no yellow belly. Strong plants resist disease.



Data

Data were collected at 9 sites in 2015.

Trait	Raider	Talladega	Same
Germinated best	22%	22%	56%
Healthier plants	25	25	50
Harvested earlier	38	63	0
Higher yields	38	38	25
More attractive cukes	25	38	38
Tasted better	38	13	50
Preference	50	50	
Recommend	100	75	
Mean score ¹	7.88	7.50	
Median score ¹	8.00	7.50	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Great cuke season—no shortage!
- Both cultivars did well. The last couple years we had mold on the leaves, which affected the yields. This year these cultivars did not have much leaf mold.
- I had bad luck with cukes this year. They were slow to start and caught mildew fast. I think I should have waited until later to plant them (sown May 2).
- 'Raider' had two plants that germinated; 'Talladega' didn't have any that germinated (sown May 26).

Comments on 'Raider'

- 'Raider' was a great cultivar. It was a heavy producer and had nice long, uniform cucumbers. When picked at the optimum time the seeds were also not an

issue. 'Talladega' produced shorter, fatter cucumbers and not nearly of the quality or quantity of 'Raider'. This was a trial that had a clear winner as 'Raider' came out on top by a measurable difference.

- In general they are similar but I preferred 'Raider' just slightly for taste and its cukes not getting so big so fast.
- Slightly better looking plants.

Comments on 'Talladega'

- Both cultivars were very good. We rated 'Talladega' higher because the cukes were more attractive (darker green, more uniform and straight) and they produced before 'Raider' did.
- Long, dark green cucumbers. Produced more fruit.
- Better looking fruit and a better shape for slicing.
- Slightly higher yield.
- Its blemished skin was unattractive. Stronger flavor.

Conclusions

Gardeners were split on their preferences. The vines of 'Talladega' raced off to fast yields and its cucumbers were dark green, straight and long. 'Raider' was a reliable performer of good tasting cucumbers. Every gardener in the trial recommended 'Raider.'

Both cultivars produced dark green, straight cucumbers. 'Talladega' produced earlier in the season while 'Raider' was very reliable.

Best slicing cucumber cultivars

Top choice
Dasher II

Strong performers
General Lee
Raider
Straight Eight

Cucumber, Snack

Cultivars

'Mercury'

55 Days. High yields of quality cukes. Excellent taste and crunch. Medium green, slender cukes with thin skins and small seeds.

'Muncher'

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



Data

Data were collected at 21 sites in 2015.

Trait	Mercury	Muncher	Same
Germinated best	10%	25%	65%
Healthier plants	12	35	53
Harvested earlier	48	29	24
Higher yields	33	38	29
More attractive cukes	33	29	38
Tasted better	15	25	60
Preference	43	57	
Recommend	65	65	
Mean score ¹	7.00	6.81	
Median score ¹	7.00	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both had fantastic yields.
- The cukes kept producing even as the plants were dying off, I did not have a killing frost until November. Had so many cukes that we made several trips to the local food pantry.
- Their cukes have a short shelf life.
- Germinated well. Vines looked similar through the season. Produced at about the same time and at similar amounts.
- Flavor of both cultivars was good.
- Both tasted good.
- 100% germination for both.
- Both had 75% germination (sown May 10). Cold spring impacted the plants.
- Both took a long time to germinate. Still yielding at the end of September.
- Germination was excellent. Both had

some bulb-shaped cukes that never lengthened. Both had wonderful flavor. They were not as productive as I expected, but there were plenty for us.

- Plants were beat up by hail (July 4 and 16) and wind (July 28). They never did fully recover.
- Cucumbers looked good and had good flavor. Neither cultivar had good looking plants. Don't think this was a good year for comparison as we were very dry and had some wind damage. They seemed to do better after a good rain. All in all, I would recommend neither cultivar.
- Germination was average to poor (sown May 27).
- Both suffered from attacks by cucumber beetles.

Comments on 'Mercury'

- First harvest was in late June, 5 weeks before 'Muncher'. Vines were exceptionally productive and showed better resistance to powdery mildew. Nice, straight cucumber with sweet flavor. Thin skin. Slight ridging whether trellised or grown on ground. It is nice to have an early crop of cucumbers.
- Best and first producer. Nicer to peel.
- Produced more and better cucumbers. Produced well into September.
- Healthier plants that produced more cukes.
- Cucumbers were deeper in color and more slender.
- Very good salad cukes.

Their vines were not sturdy but their cucumbers had wonderful flavor.

Best snack cucumber cultivars

Top choice
Muncher

Strong performer
Diva

More Comments on ‘Mercury’

- Better flavor.
- Germinated at a higher rate. Matured earlier with first harvest on July 12. Nice cucumber shape even when grown to larger sizes. More cukes.
- More seeds germinated although they took longer to germinate.

Comments on ‘Muncher’

- Consistently the front runner. These plants produced well and many cukes were enjoyed.
- ‘Muncher’ had better flavor. They were nice straight cukes. I loved to eat them unpeeled and with a little salt.
- Better taste.
- Cucumbers have a better size and have fewer seeds. Long harvest season.

- Healthier plants.
- ‘Muncher’ had slightly higher yields.
- Produced more than ‘Mercury’ but still not many.
- Better tasting—less seeds.
- Great producer. Made great pickles too.
- Better germination and higher yields.
- More yield. Cucumbers turned a more appetizing green.
- Some of its vines died.

Conclusions

Gardeners enjoyed the flavor of both cultivars. Most gardeners preferred ‘Muncher’. Its vines were more reliably healthy and productive. ‘Mercury’ showed earlier yields. Its cukes were straight and thin skinned.

‘Mercury’ produced early yields of thin-skinned cukes. ‘Muncher’ vines were healthy and productive.

Greens, Asian

Cultivars

'Maruba Santoh'

35 days. Tender, light green leaves with white petioles. Loose leaf type that grows fast and easy. Tolerates heat.

'Tokyo Bekana'

40 days. Light green leaves with ruffled tips. Mild flavor. Harvest as baby leaves for salads or cut later for stir fries.



Both cultivars bolted and had insect problems.

Data

Data were collected at 4 sites in 2015.

Trait	Maruba Santoh	Tokyo Bekana	Same
Germinated best	25%	25%	50%
Healthier plants	25	25	50
Harvested earlier	25	25	50
Higher yields	25	25	50
More attractive	25	0	75
Tasted better	50	0	50
Preference	67	33	
Recommend	67	33	
Mean score ¹	5.25	6.00	
Median score ¹	5.50	6.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

Comments on 'Maruba Santoh'

- Overall better.
- Better taste; less bitter.

Comments on 'Tokyo Bekana'

- Did way better. Bigger plants, better germination. Much better yield.
- Bolted earlier (July 1).

Conclusions

This was not a popular trial. Our few participants were lukewarm on the performance of both cultivars. 'Maruba Santoh' and 'Tokyo Bekana' rated similarly for most traits. They both suffered from flea beetles and bolting. Neither cultivar generated much excitement.

General Comments

- I liked both as far as taste.
- Both cultivars bolted and had insect problems.
- Treated for flea beetles on May 23. Both cultivars bolted in mid-June. Did not particularly like the taste of either cultivar. I should not have planted these greens as I did not know how to prepare them. One recipe I used was okay but not a "keeper."

Best Asian greens cultivars

Top choice

Mei Qing
Choi

Strong performers

Hon Tsai Tai
Joi Choi
Komatsuna
Mizuna
Osaka Purple
Red Giant
Tatsoi

Kale, Red

Cultivars

'Red Russian'

60 days. Grayish green leaves with purple stems. Popular for its beauty, tenderness and mild flavor. Tolerates temperatures down to the teens. Plants grow 30 inches tall.

'Russian Frills'

55 days. Similar to 'Red Russian' when young but leaves later develop attractive frills. Very hardy. Tender and mild in flavor.



Data

Data were collected at 9 sites in 2015.

Trait	Red Russian	Russian Frills	Same
Germinated best	13%	25%	63%
Healthier plants	25	25	50
Harvested earlier	38	25	38
Higher yields	13	38	50
More attractive	0	75	25
Tasted better	0	33	67
Preference	38	63	
Recommend	63	100	
Mean score ¹	7.75	8.63	
Median score ¹	7.50	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- First time I planted kale though I do buy it. Both cultivars tasted good.
- Lots of kale.
- Very similar overall.
- Bugs got the leaves early on so I didn't have much to eat.
- Both cultivars came up fast due to warm temps!

Comments on 'Red Russian'

- 'Red Russian' had slightly larger, more vigorous plants.
- Produced earlier.
- Similar to what we buy in the store. Soybean midge damaged this cultivar more.
- Tasted bitter; we didn't care for that!

Comments on 'Russian Frills'

- Smaller leaves that were milder and stayed milder longer in the season. Very striking plants.
- I loved the look of the frilled cultivar. It germinated a little better.
- Liked the shorter plants and leaves.
- Preferred the taste and texture of the leaf.
- Lots of creative things I can do with this cultivar.
- Just looked better.
- Tastier.

Conclusions

These cultivars were similar in many ways. They both germinated well, grew vigorously, suffered from the same pests and matured at the same time. Most gardeners felt they tasted the same. The only notable difference were the frilly leaves of 'Russian Frills'. Gardeners liked the frilly leaves and all of them recommended 'Russian Frills'. This cultivar is promising yet remains difficult to find in catalogs.

'Russian Frills' had very striking plants.

Best red kale cultivars

Top choice
Red Russian

Strong performer
Russian Frills

Kale, White

Cultivars

'Siberian'

55 days. Flat, blue-green leaves with frilly edges. Very cold hardy. Height 24 inches.

'White Russian'

60 days. 'Siberian' type with flat, silvery leaves and white veins. Similar to 'Red Russian' but plants are more productive and a few inches taller. Its leaves are deeply cut.



'White Russian'
plants were
more vigorous.

Data

Data were collected at 6 sites in 2015.

Trait	White		
	Siberian	Russian	Same
Germinated best	40%	0%	60%
Healthier plants	0	0	100
Harvested earlier	0	60	40
Higher yields	20	40	40
More attractive	20	20	60
Tasted better	33	33	33
Preference	0	100	
Recommend	75	100	
Mean score ¹	5.75	7.75	
Median score ¹	6.00	8.50	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- No preference; they both produced very well.
- Both got worms in late summer.
- I didn't care for kale.

Comments on 'Siberian'

- Bigger leaf. More tender. Tasted better
- Was 4 inches tall on July 10. Leaves looked fancy but tasted bitter.

Comments on 'White Russian'

- The plants were more vigorous until they were decimated by insect pests.
- Tasted like celery. Delicious in salads and smoothies.

Conclusions

These cultivars were similar in many ways. They both grew very well and were rated similarly for leaf appearance and taste. Most gardeners liked both varieties but every gardener preferred 'White Russian'. It grew vigorously, leading to early and productive harvests.

**Best
white kale
cultivars**

Top choice
Winterbor

**Strong
performers**
Vates
White Russian

Lettuce, Green Leaf

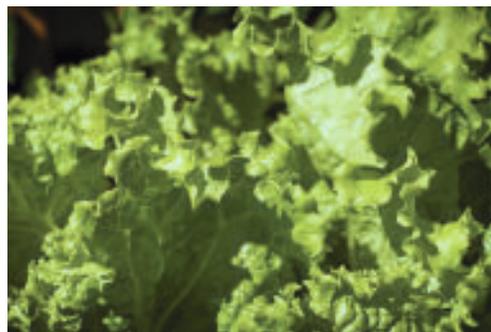
Cultivars

'Green Star'

57 days. Thick, frilly, glossy green leaves form a medium-sized head. Easy to grow and heat tolerant. Very good flavor.

'Tropicana'

55 days. Dark green, heavy leaves form a full head. Tolerates heat. Great flavor. A proven performer in ND.



Data

Data were collected at 5 sites in 2015.

Trait	Green Star	Tropicana	Same
Germinated best	0%	0%	100%
Healthier plants	0	40	60
Harvested earlier	20	20	60
Resisted bolting better	0	0	100
Higher yields	25	50	25
More attractive	25	25	50
Tasted better	25	50	25
Preference	50	50	
Recommend	75	75	
Mean score ¹	7.25	7.75	
Median score ¹	8.00	7.50	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both produced through August.

Comments on 'Green Star'

- The leaf of the 'Green Star' was greener and better shaped.
- Started slower but caught up later in the season. Tasted bitter even at a very small stage.

Comments on 'Tropicana'

- Slightly higher yield over the entire season. Milder flavor.
- Handled heat better. Didn't appear as wilted.

Conclusions

'Tropicana' has always done well in our trials and 2015 was no exception. It produced a good yield of mild tasting, deep green leaves. It tolerates heat and is a reliable cultivar.

'Tropicana' had good yields, mild flavor and handled the summer heat.

Best green leaf lettuce cultivars

Top choice
Slobolt

Strong performers

Deer Tongue
Royal Oakleaf
Salad Bowl
Tropicana

Lettuce, Red Oakleaf

Cultivars

'Danyelle'

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

'Mascara'

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



Data

Data were collected at 6 sites in 2015.

Trait	Danyelle	Mascara	Same
Germinated best	20%	40%	40%
Healthier plants	20	20	60
Harvested earlier	0	80	20
Resisted bolting better	20	20	60
Higher yields	0	40	60
More attractive	20	20	60
Tasted better	0	33	67
Preference	17	83	
Recommend	33	100	
Mean score ¹	6.17	8.33	
Median score ¹	6.50	8.50	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both cultivars grew well. Their taste was similar.
- Both of these cultivars did well even though we had a very hot summer. They were slow to bolt, and I was able to use lettuce from the garden a later than usual. However, I expected a somewhat more 'Buttercrunch' head rather than loose leaf.
- Tasteless and a little dry. Best when mixed with green lettuce in salads.

Comments on 'Danyelle'

- I liked the deeper red color. It is pretty when mixed in salads. The plants were more compact, dense and slower to bolt.
- 'Danyelle' had much smaller plants, not as vigorous; not as many.

Comments on 'Mascara'

- Beautiful color, vigorous, tasty.
- Better taste.
- Germinated first and it had the first yield.
- 'Mascara' was a little better yielding.
- Seemed to go a big longer without getting bitter.

Conclusions

The rows of 'Mascara' were fuller and its plants grew more vigorously. This led to earlier harvests and higher yields. Both cultivars resisted bolting.

'Mascara'
grew more
vigorously and
produced
higher yields.
Both cultivars
resisted
bolting.

Best red leaf lettuce cultivars

Top choice

New Red Fire

Strong performers

Red Sails

Red Salad

Bowl

Red Velvet

Lettuce, Green Romaine

Cultivars

'Dragoon'

43 days. Leaves are crisp and thick. Dense, compact plants. Grows quickly. Height 6 inches.

'Starhawk'

46 days. Mini romaine with glossy, dark green outer leaves. Dense, substantial heads.



Data

Data were collected at 28 sites in 2015.

Trait	Dragoon	Starhawk	Same
Germinated best	33%	22%	44%
Healthier plants	23	15	62
Harvested earlier	33	17	50
Resisted bolting better	32	18	50
Higher yields	25	42	33
More attractive	17	29	54
Tasted better	25	33	42
Preference	50	50	
Recommend	73	88	
Mean score ¹	7.58	7.62	
Median score ¹	7.50	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both of them are absolutely excellent. I was able to share romaine lettuce with many people. They all loved it.
- Great germination. Both were excellent in every way and they both really resisted bolting. Really happy with these—we had great lettuce for months.
- Plants were healthy. Neither bolted—still eating a later planting in September. Both tasted tender and sweet.
- Both tasted good and were slow to bolt.
- Both did well.
- Got a second harvest with both cultivars.
- I've never planted romaine lettuce before and now I'm hooked. Both had good yields. Both were nice and crispy.
- Would plant both again.

- 100% germination for both. Awesome health. Both were very good.
- Nice full robust plants. Yields were similar.
- Both were very tasty.
- Both rows of lettuce were full! They were still producing in mid-September.
- Bolted at the same time.
- Both looked very healthy. Deer ate everything the night before harvest.
- Rabbits and birds were very hard on plants at an early stage.
- Rabbit problems.

Comments on 'Dragoon'

- Better taste and tighter, cleaner heads. Heads had more leaves and were more solid.
- Eating quality lasted longer.
- Matured slower than 'Starhawk' but outperformed it overall.
- Plants held together better, even after a small hailstorm. Thicker grouping of leaves which made more yield. Nice green color.
- Slightly smoother leaves. Flavor was a little sweeter.
- Darker leaves and remained compact longer.
- Produced slightly sooner (3–4 days) and bigger heads with larger leaves.
- Better germination and ready to eat about 5–6 days earlier.
- Heads were smaller.
- Better taste.

Both cultivars produced lots of crisp, tasty lettuce. Both resisted bolting, leading to extended harvests.

Best green romaine lettuce cultivars

Top choice
Green Forest

Strong performers
Crisp Mint
Starhawk

‘Dragoon’ heads were compact and solid while ‘Starhawk’ heads were larger and fuller.

More Comments on ‘Dragoon’

- It definitely resisted bolting better.
- Bolted first but not until mid-September.
- Its leaves were nicer throughout.
- Slightly better tasting.
- Best yield and uniform plants.
- Showed greater resistance to a worm infestation.

Comments on ‘Starhawk’

- Larger, fuller heads. Well-formed heads and beautiful dark green, shiny leaves. Couldn’t ask for more! Excellent color and crispness. I enjoyed its flavor a little more.
- There was a stark contrast in regard to the difference in the size of the plants. ‘Starhawk’ produced much heavier with larger leaves, while ‘Dragoon’ was slower to produce with smaller plants. ‘Starhawk’ is a great tasting and bountiful lettuce.
- Longer leaves and wonderful taste.
- It tasted better and looked better.
- Great producing. Just kept producing.

- Delicious in sandwiches. Yummy!
- Stayed compact longer. Heads were a little bit bigger with more leaves.
- A better performer under tougher conditions (crusty soil).
- Looked better and a rich lettuce taste.
- ‘Starhawk’ was a bushier plant whereas ‘Dragoon’ was more compact and had a smaller head. I would give a slight edge to ‘Starhawk’ based on overall characteristics.
- ‘Starhawk’ responded better after cutting/harvest.
- Very slightly more vigorous.
- I think every seed germinated.

Conclusions

Both ‘Dragoon’ and ‘Starhawk’ produced dense heads of crisp, tasty lettuce. They grew robustly and resisted bolting, leading to a summer full of salads. Gardeners showed more enthusiasm toward ‘Starhawk’. It produced larger, fuller heads and responded well after cutting. Its dark green leaves had a rich lettuce taste.

Melon, Cantaloupe

Cultivars

'Aphrodite'

72 days. An 'Athena' type that matures earlier. Its melons are reported to be larger and have improved netting to prevent cracking.

'Athena'

75 days. An early melon with very good flavor. Melons are 5–6 pounds with thick, orange flesh. Most popular cantaloupe in the north.



Data

Data were collected at 6 sites in 2015.

Trait	Aphro- dite	Athena	Same
Germinated best	17%	67%	17%
Healthier plants	0	67	33
Matured earlier	17	67	17
Higher yields	0	67	33
More attractive fruit	17	50	33
Tasted better	17	50	33
Preference	33	67	
Recommend	50	100	
Mean score ¹	6.83	8.50	
Median score ¹	7.00	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both did great!
- Tasty.
- Both had a lot of vines. They both produced good melons.
- Neither one would grow for me.

Comments on 'Aphrodite'

- I thought the narrow ribs on 'Aphrodite' looked better.
- Only one seed germinated.

Comments on 'Athena'

- I preferred its taste much more but honestly they both were good. This is the second year I've grown 'Athena' and it really does well!
- Grew well. Many flowers. Yield was very good. Melons were larger than those at grocery stores.
- Seeds sprouted quicker. Vines produced later, but had more melons. Melons were sweeter.
- The fruits were really heavy and sweet but the flavor was not fully developed. Harvested 6 melons (28 pounds) on Aug. 30; 4 melons (20 pounds) on Sept. 8; 2 melons (9 pounds) on Sept. 13. None of the 'Aphrodite' fruits ripened.

Conclusions

'Athena' showed why it is the most popular cantaloupe in the north. It excelled in all traits including earliness, yield and fruit quality. Every gardener recommended it. 'Aphrodite' seemed like a promising new cultivar but it struggled in several gardens.

'Athena', the most popular cantaloupe in the north, proved itself a winner.

Best cantaloupe cultivars

Top choice
Athena

Strong performers
Goddess
Solstice
Superstar

Melon, Specialty

Cultivars

'Origami'

82 days. Deep orange flesh is sweet and has fruity dessert flavor. Aromatic. Vigorous, productive vines.

'Wrangler'

76 days. Tuscan cantaloupes are oval fruits with prominent ribs. Very sweet and flavorful.



Data

Data were collected at 6 sites in 2015.

Trait	Origami	Wrangler	Same
Germinated best	17%	0%	83%
Healthier plants	17	17	67
Matured earlier	33	33	33
Higher yields	50	50	0
More attractive fruit	33	33	33
Tasted better	0	50	50
Preference	33	67	
Recommend	67	50	
Mean score ¹	6.33	6.83	
Median score ¹	6.50	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both cultivars had excellent flavor. It was a good year for melons.
- Both cultivars were very good. They both were easy to tell when they were ready to pick.
- We had a hailstorm in mid-June. The vine crops were hit the worst. They did come back but were certainly later than I would have liked. Good thing we did not get an early frost.
- Plants germinated and the vines looked good.
- Both cultivars were very slow to emerge and did not form melons until late in the season. Neither produced much. Both tasted okay; not great.

Comments on 'Origami'

- Fruits were larger but there were fewer per hill.
- Larger melons. Ripe earlier.
- Its flavor was a little too strong for me.
- Neither cultivar produced much, but more from 'Origami', and only got nice large melons from 'Origami'.

Comments on 'Wrangler'

- Earlier to mature. Its flesh was firmer and sweeter.
- Easy to pick—stem pulled easily from plant. Excellent flavor and texture.
- Smaller fruit but more flavor.
- Produced more fruits.

Conclusions

Gardeners enjoyed the flavor of these melons but yields were late and poor. 'Origami' produced larger melons but more gardeners preferred the flavor of 'Wrangler'.

Fruits were delicious but yields were late and poor.

Best specialty melon cultivar

Top choice
Sun Jewel

Melon, Galia

Cultivars

'Arava'

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

'Sigel'

70 days. Very early and easy to grow. Delicious. Fruits slip from vines when ripe.



Data

Data were collected at 9 sites in 2015.

Trait	Arava	Sigel	Same
Germinated best	50%	25%	25%
Healthier plants	38	13	50
Matured earlier	56	33	11
Higher yields	63	25	13
More attractive fruit	33	22	44
Tasted better	38	13	50
Preference	75	25	
Recommend	78	56	
Mean score ¹	7.44	6.11	
Median score ¹	8.00	7.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both were fabulous tasting.
- Good flavor.
- I thought both cultivars did well.
- Both had melons of about the same size. I liked both.
- I recommend trying both in your garden.
- Needs a long growing season.
- Both cultivars had a lot of rotting.

Comments on 'Arava'

- Super sweet and multiple good-sized melons. I never had as sweet a melon.
- I thought 'Arava' tasted better (sweeter). 'Arava' was bigger and easier to slice and serve.
- The 'Arava' melons are ugly but taste good. The vines were reasonable.
- 'Arava' was more productive.
- 'Arava' had a much higher yield.

- Lower germination but higher yields. I like 'Arava' better.
- Only one hill survived.

Comments on 'Sigel'

- Very yummy. Melons were small.
- Better germination and yield.
- 'Sigel' melons were much bigger than those of 'Arava' but did not store as well.
- Several people that tried our 'Sigel' melons commented that the flavor was "distinct" and seemed to like them.

Conclusions

'Arava' is an outstanding melon for us. Its yields are early and reliable. Its melons are sweet and aromatic. Galia melons are a special treat and 'Arava' is a proven performer in our state.

'Arava' is a reliable producer of flavorful melons.

Best Galia melon cultivars

Top choice
Arava

Strong performer
Passport

Pea, Shelling

Cultivars

'Lincoln'

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

'Mr. Big'

67 days. Big 5-inch pods are easy to pick. High yields of sweet, tender peas. Vines grow 2–3 feet w/o support, 5–6 feet with support.



Lincoln was a better all-purpose pea. It was earlier, more productive, easier to shell, and better tasting.

Data

Data were collected at 19 sites in 2015.

Trait	Lincoln	Mr. Big	Same
Germinated best	11%	32%	58%
Healthier plants	21	32	47
Matured earlier	63	21	16
Higher yields	58	21	21
More attractive pods	53	26	21
Tasted better	42	21	37
Preference	79	21	
Recommend	84	42	
Mean score ¹	8.05	5.84	
Median score ¹	8.00	6.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- I had a fantastic crop this year. They actually got too far ahead of me and I couldn't get them all. There was a lot of moisture in June, so they just took off.
- Both cultivars were good in what was ultimately produced, but not a bumper pea crop this year in general.
- Both grew slow. Don't understand why.
- Best crop in years!
- Both grew well on a trellis in our container garden. Tasted great.
- Both had excellent germination.
- Very good germination.
- Both seed cultivars were soaked overnight before planting. Both germinated at 100%.

Comments on 'Lincoln'

- 'Lincoln' pods were fuller in shape with about 6–8 peas in the pod and tasted great. Better yield and pod shape. We've grown 'Lincoln' for the last couple of years and they have always proven to be a very good pea to plant; one of our favorites.
- 'Lincoln' peas were sweeter and easier to shell.
- 'Lincoln' was a much better, all-purpose pea.
- I like the heavy production and uniform pods of 'Lincoln'. I can tell when they are ripe and the pods are always fully of perfectly shaped peas. I was very pleased with the 'Lincoln' and will grow them in the future.
- 'Lincoln' averaged 8–10 peas per pod compared to 3–5 peas per pod for 'Mr. Big'.
- Pods were consistent in look and flavor.
- Germinated first. Matured 5 days earlier. Yields were 34% higher. Longer harvest season. Peas were slightly sweeter and a little tenderer.
- Better yield and considerably better taste.
- Superior taste and production.
- Did not burn up in the July heat.
- 'Lincoln' had thinner pods. The peas completely filled their space and tasted great.
- I prefer 'Lincoln'. There was never a letdown on the number of peas in the pod. These are the peas I grew up with—just what I want in a shelling pea.

Best shelling pea cultivars

Top choice
Lincoln

Strong performers

Early Frosty
Green Arrow
Little Marvel
Maestro
Improved Wando

Comments on ‘Mr. Big’

- ‘Mr. Big’ put on a good show but was all plant and few peas. I had a hard time determining when the peas were ripe because the pods were thick. The peas were rather randomly placed in the pod. ‘Mr. Big’ had fast-growing plants but the peas weren’t as tasty and the yield was not nearly as good.
- Larger and very tasty.
- Produced longer pods but the peas were oddly shaped in the pod. The pods seemed to have so much air in them that it was hard to tell when to pick.
- Produced better, tasted better.
- Nicer pea pods. Tastier—sweet as candy. Better yields.
- ‘Mr. Big’ had huge pods but nothing in them. Took longer to pick them because you had to check each pod first.
- Although pods were much bigger, much of each pod was empty.

- More resistant to powdery mildew. Pods were huge. Gorgeous hanging on the vines. It was difficult to determine when to pick. If picked when the peas filled the pod, they are a little tough and not as sweet.
- ‘Mr. Big’ was hard to shell and peas were tough.
- ‘Mr. Big’ was so attractive and fun for the kids.
- Tasted awful and looked more like a snow pea.

Conclusions

‘Lincoln’ again proved to be the finest all-purpose pea for North Dakota. The harvest was early and abundant. The peas were delicious. ‘Mr. Big’ was frustrating to grow. The pods were big, but it was difficult to determine when to harvest the pods. The pods themselves had few peas inside them. ‘Mr. Big’ was the big loser.

‘Mr. Big’ had huge pods but few peas inside them. The pods were more difficult to shell.

Pea, Snap

Cultivars

'Sugar Ann'

52 days. Very early. The 24-inch vines produce sweet, crisp pods. Remove string from pods before cooking. No trellising required.

'Sugar Lace II'

68 days. Delicious, stringless pods are easily harvested from 30-inch, lacy, nearly leafless vines. Good yields. No trellising required.

Data

Data were collected at 14 sites in 2015.

Trait	Sugar Ann	Sugar Lace II	Same
Germinated best	69%	8%	23%
Healthier plants	50	17	33
Matured earlier	67	17	17
Higher yields	58	8	33
More attractive pods	18	36	45
Tasted better	58	33	8
Preference	57	43	
Recommend	86	50	
Mean score ¹	7.50	6.85	
Median score ¹	8.00	7.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both cultivars did very well. Delicious.
- 'Sugar Lace II' produced earlier but 'Sugar Ann' extended the season. Loved them both!
- This was our favorite trial. The kids loved growing and harvesting these peas.

Comments on 'Sugar Ann'

- Much larger harvest, both in the early season and overall. Superior flavor.
- 'Sugar Ann' was awesomely sweet. Very bountiful! Trellising recommended.
- 'Sugar Ann' was taller and produced the first crop. Larger pods and higher yields.
- Produced longer through the season.
- Nice looking plants with high yield; wonderfully sweet flavor.



Comments on 'Sugar Lace II'

- 'Sugar Lace II' was fun to grow because of the crazy tendrils. Its pods tasted better and were less stringy.
- Better all around.
- Fuller vines. Enjoyed them last year too; was not disappointed.
- 'Sugar Lace II' germinated faster and produced pods earlier.
- Liked that its pods are stringless.
- 'Sugar Lace II' plants were small and had lots of pea tendrils, but not many pods. It would be a good cultivar for anyone selling tendrils to food establishments for garnish purposes.
- Pods were fewer and smaller but sweeter.
- 'Sugar Lace II' had a crazy amount of tendrils—often engulfed pods and inhibiting growth. I didn't like the plant. Hard to control.
- 'Sugar Lace II' became infected resulting in a loss of plants. Peas were bitter and lacking in flavor.
- Germination was sporadic. Birds ate its early shoots, but did not damage 'Sugar Ann'. Yields were lower but the appearance of the pods was more uniform.

Conclusions

'Sugar Ann' showed much better germination, healthier vines, earlier and higher yields, and superior flavor. It's a very reliable performer in North Dakota. The leafless vines of 'Sugar Lace II' made it interesting to grow and its stringless pods were a nice feature, but most gardeners preferred 'Sugar Ann' overall.

'Sugar Ann' produced a much larger harvest, both in the early season and overall. Its pods had superior flavor.

Best snap pea cultivars

Top choice
Sugar Ann

Strong performers
Sugar Sprint
Super Sugar
Snap

Pea, Snow

Cultivars

'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. 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 6 sites in 2015.

Trait	Oregon S. Pod 2	Sweet Horizon	Same
Germinated best	17%	17%	67%
Healthier plants	17	33	50
Matured earlier	50	50	0
Higher yields	50	50	0
More attractive pods	17	67	17
Tasted better	20	40	40
Preference	50	50	
Recommend	40	80	
Mean score ¹	6.67	7.33	
Median score ¹	7.00	7.50	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both were great this year.
- This is a hard one. We didn't really care for either one.

Comments on 'Oregon Sugar Pod 2'

- 'Oregon Sugar Pod 2' had more pods early and they kept coming.
- Produced first and the most pods.
- Some of its pods curled.
- Both germinated well; however 'Oregon Sugar Pod 2' germinated faster.

Comments on 'Sweet Horizon'

- Overall better producer.
- Much better taste and hardier.
- 'Sweet Horizon' was very sweet! Taste was awesome. We thought these plants were done producing. They grew back and produced a second yield!

Conclusions

'Oregon Sugar Pod 2' has done well in our trials for years. It is a reliable producer of quality pods. 'Sweet Horizon' was introduced two years ago and has performed well in both years of testing. In general, 'Oregon Sugar Pod 2' is more likely to give you earlier and higher yields while 'Sweet Horizon' will give you straighter, higher quality pods.

'Oregon Sugar Pod 2' is often more productive while 'Sweet Horizon' produces higher quality pods.

Best snow pea cultivars

Top choice
Sweet
Horizon

Strong performer
Oregon Sugar
Pod 2

Potato, Gold Early

Cultivars

'Yukon Gem'

Tubers have bright gold skin and yellow flesh. Dry, waxy texture. Early to midseason maturity. Yields are good and reliable. Resists scab.

'Yukon Gold'

Very popular for its golden flesh and delicious flavor. Dry, waxy texture. Great storage ability. Very early maturity but relatively low yields. Stores well.



For the second straight year, more gardeners recommended 'Yukon Gem' over its famous parent, 'Yukon Gold'.

Data

Data were collected at 11 sites in 2015.

Trait	Yukon Gem	Yukon Gold	Same
Germinated best	9%	9%	82%
Healthier plants	27	9	64
Higher yields	50	40	10
More attractive tubers	36	45	18
Tasted better	36	36	27
Preference	50	50	
Recommend	82	73	
Mean score ¹	7.82	7.09	
Median score ¹	8.00	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both tasted good.
- Very healthy vines.
- Tubers had smooth skin and a nice shape.
- Both cultivars took a long time to come up. Emerged May 31.
- Both were good.

Comments on 'Yukon Gem'

- Produced 12 pounds compared to 10 pounds for 'Yukon Gold'. Easy to peel. All potatoes were about the same size.
- Higher yields.
- A better potato. Tasted better. More production.
- Nice skin. Looked good.

- It was very good as a baked potato. Its texture was very nice.
- Sprawling vines.
- Tubers were smaller but more uniform. Nicer color.
- More uniform potato.
- Our growing season was extremely dry and these tubers were smaller and inconsistent in size.

Comments on 'Yukon Gold'

- Larger potatoes. Sweeter with better texture.
- More large spuds and retains the yellow color when cooked.
- Tubers were way bigger and much more plentiful under each hill. Vines were more compact and hardy through harvest. Tubers had better taste and smoother texture.
- Some potatoes were hollow, especially the larger potatoes.
- Seemed to develop spots that spoiled.
- There was some type of problem around the potato eyes. Perhaps some type of rot?

Conclusions

For the second straight year, 'Yukon Gem' was recommended by more gardeners than its famous parent, 'Yukon Gold'. Its vines were healthy and more productive. Its tubers were uniform but smaller. Gardeners enjoyed the flavor of both cultivars.

Best gold early potato cultivars

Top choice
Yukon Gem

Strong performers

Superior
Yukon Gold

Potato, Gold Midseason

Cultivars

'Carola'

Yellow tubers and sunny yellow flesh. Moist, firm texture and outstanding flavor. Tolerates drought. Resists scab. High yields. Midseason. Stores well.

'Satina'

Satiny yellow skin with yellow flesh. Moist, smooth and great flavor. Productive vines. Resists scab. Early to midseason. Stores well.



Data

Data were collected at 21 sites in 2015.

Trait	Carola	Satina	Same
Germinated best	10%	15%	75%
Healthier plants	5	15	80
Higher yields	29	48	24
More attractive tubers	26	37	37
Tasted better	26	26	47
Preference	43	57	
Recommend	62	81	
Mean score ¹	7.43	7.43	
Median score ¹	8.00	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Loved these potatoes! These are delicious! The buttery flavor is fantastic and they don't get mushy. They both taste great.
- Outstanding performance by both cultivars—large healthy plants with huge tubers. Did well despite high clay soil and drought conditions. Both had unbelievable quality. I am never going back to my 'German Butterball'. I am completely sold on these two cultivars. The yield and quality of these cultivars are incredible—thus far they are storing well.
- Both had nicely shaped tubers. Both would be good baking potatoes.
- Both produced about a 3-gallon bucketful. Tubers were nice—pretty uniform. Both tasted good.

- We really liked both cultivars and will probably plant them both again in the future.
- Vines were healthy.
- Germinated at the same time. Both cultivars produced attractive tubers.
- Tubers were the same size and taste.
- Vine stayed green a long time. Potatoes had scabs. Flesh was dry.
- Planted in black fabric. Vines grew exceptionally large and bushy like "small trees." Both are still blooming and growing in early October. Produced very abundantly with good-sized potatoes. These are late, not midseason potatoes. Dry flesh. I don't recommend either.
- All tubers came up beautifully and had no diseases.
- 100% germination. Vines had similar size and color. Tubers were disease free.
- I dug them on Sept. 28 when the vines were finally dead.

Comments on 'Carola'

- My family preferred the flavor and creamier texture of the 'Carola' potatoes.
- Twice the yield (10 vs. 5 gallons).
- Produced 19 pounds compared to 16 pounds for 'Satina'.
- Produced about 40% more.
- Produced one-third more. Tubers seemed to be easily damaged by small rocks in the soil. Tubers were somewhat larger in size.
- Better germination. Tubers were more attractive.

Gardeners enjoyed the yields and flavors of 'Carola' and 'Satina'.

Best gold midseason potato cultivars

Top choice
Satina

Strong performer
Kennebec

‘Satina’ tubers were larger, rounder and more uniform. The yellow flesh was moist and flavorful.

More Comments on ‘Carola’

- I really liked its taste.
- Vines seemed bushier. Had first blossoms.
- ‘Fingerling’ type; long, more tubular-shaped potatoes with a shiny skin. Yellow flesh and more flavorful than ‘Satina’ (‘Satina’ was good to eat also).
- Beautiful appearance and texture.
- ‘Carola’ was a drier potato when baked than ‘Satina’.
- I liked the thinner, smoother skin and taste of the ‘Carola’ slightly better, just slightly.
- Although they were less yielding, the flavor was wonderful and made great lefse.
- Yield was 3% higher. Tubers were long and pointed (like sweet potatoes). Starchier, smoother texture and better taste.

Comments on ‘Satina’

- ‘Satina’ produced a larger and more attractive potato and had more potatoes on each vine.
- ‘Satina’ had larger tubers; had a smoother, creamier texture when baked.
- Tasted better. Higher yields.
- Produced a lot more. Larger, rounder potatoes.
- The potatoes were larger. Produced more and rounder potatoes.
- Bigger yield and bigger potato.
- More resistant to scab.

- Better yield.
- Noticeably higher yield. There were some large ‘Satina’ potatoes around 1.5 pounds each.
- Produced larger potatoes.
- The better of the two cultivars but neither is among my favorites.
- Had a better, fresher flavor and was moister. We ate with skins even the larger potatoes—delicious.
- Germination was twice as good. It baked up better and tasted better.
- Tubers were more uniform and moist.
- Bigger vines in the end. ‘Satina’ did produce more by weight and larger tubers than did ‘Carola’.
- Crunchy texture (like carrots).

Conclusions

Gardeners liked the yield and quality of both cultivars. Most preferred ‘Satina’. Its yields were higher and the tubers were larger, rounder and more uniform. It had a moist, smooth texture. ‘Carola’ had a firmer texture and was also enjoyed by gardeners.

Potato, Gold Late

Cultivars

'German Butterball'

Considered by many to be the best tasting potato. Golden skin with deep yellow flesh. Waxy, slightly dry texture. Excellent storage.

'Yellow Finn'

Tan skin with moist, yellow flesh. Prized in Europe. Pear-shaped tubers set widely requiring careful digging. Excellent storage.



Data

Data were collected at 12 sites in 2015.

Trait	German Butterball	Yellow Finn	Same
Germinated best	0%	17%	83%
Healthier plants	18	18	64
Higher yields	42	17	42
More attractive tubers	55	18	27
Tasted better	36	27	36
Preference	55	45	
Recommend	83	58	
Mean score ¹	6.92	6.42	
Median score ¹	8.00	7.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- I like the taste of both and like them mixed for mashed. Would grow again.
- Plants were healthy and didn't die down until the end of August. Potatoes had no size. I would not plant again.

Comments on 'G. Butterball'

- Although its potatoes were smaller, it produced more pounds. Better tasting; sweeter. Nice oval shape. Nice golden color. Skins are a bit tougher.
- Nice large potatoes.
- Plants dried up sooner. Potatoes had such rough skins.
- 'German Butterball' was more robust and tasted better.
- Taste, appearance and yields were exceptional.

- It was slower in coming up and blooming but in the end it did quite well.
- Good yield of tasty but small tubers.
- Several hills didn't germinate. Performed poorly in all categories.

Comments on 'Yellow Finn'

- It sprouted first and bloomed faster. I think it is better for all uses.
- More deep eyes, odd shapes, and was more time consuming to harvest since the vines tend to spread out.
- These plants are the strangest potatoes I've ever had. Some of the vines were almost 5 feet long! Not many potatoes. The plants were green until frost.
- Larger tubers and smoother skin. We enjoyed the texture. I dug these when some vines were still green because I didn't want to do this when it was snowy. I hope they will keep this winter. The skins seemed to be cured enough even though the vines were green. Some of the plants were very tall, up to 3 feet. I had to tie them up to support them.
- Drier flesh.
- 'Yellow Finn' was a very poor producer.

Conclusions

'German Butterball' produced higher yields. Its potatoes were smaller but more attractive. 'Yellow Finn' frustrated several gardeners with its extensive vines and failure to dry before frost. Keep in mind this was a longer than normal growing season. These were our lowest rated potato cultivars.

'German Butterball' produced good yields of tasty, small, golden tubers.

Best gold late potato cultivars

Top choice

German Butterball

Potato, Purple

Cultivars

‘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 18 sites in 2015.

Trait	Peter Wilcox	Purple Viking	Same
Germinated best	33%	33%	33%
Healthier plants	24	18	59
Higher yields	24	41	35
More attractive tubers	24	41	35
Tasted better	24	24	53
Preference	44	56	
Recommend	78	78	
Mean score ¹	7.06	7.83	
Median score ¹	8.00	7.50	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Wow is all I can say! Fantastic harvest!
- Both were very good. We especially liked them fried.
- Both tasted good. Kids really love them!
- Yields were similar.
- Both cultivars had scabs.
- Plants dried up earlier than other potatoes in the garden.
- Did not yield as much as our red potatoes.
- Vines were very tall. Stayed green.
- These cultivars had more white grubs in them compared to our gold-skinned cultivars.

Comments on ‘Peter Wilcox’

- Bloomed first. Tasted a lot better. Loved the dark purple skin. Tubers were more uniformly shaped and had yellow flesh. It’s the big winner!
- I found these potatoes more attractive. They had higher yields as well.
- All hills germinated compared to 80% of ‘Purple Viking’. Plants grew well after mounding. Tubers were very nicely shaped and colored; better looking.
- Better taste.
- Potatoes were larger.
- ‘Peter Wilcox’ was less consistent in size of tubers—kind of ranged all over the place.
- Larger potatoes.
- Smaller potatoes.
- Vines were sprawling. Tubers were inconsistent in size and smaller overall.
- Germinated earlier but at a lower rate. About 20% of its tubers were misshapen and split when dug.
- ‘Peter Wilcox’ had good production and preferable flavor. It showed more damage from scab with larger cankers speckled on tubers. I would grow ‘Peter Wilcox’ for the flavor since it is not commonly found on the grocery store shelf.
- Better germination, which contributed to 15% higher yield. Vines were overall larger and died back 2 weeks later. More, but smaller tubers. Texture was really soft and flavor was more bitter.

‘Peter Wilcox’ tubers were dark purple with a flavorful, buttery yellow flesh.

Best purple potato cultivars

Top choice
Purple Viking

Strong performer
Peter Wilcox

Comments on ‘Purple Viking’

- Tubers were more uniform in shape and more attractive.
- Attractive and wonderful tasting.
- ‘Purple Viking’ was more productive and I preferred the texture of the potato.
- Produced 20 pounds compared to 16 pounds for ‘Peter Wilcox’. Easy to dig. Tubers were a nice shape and size but had some cracks. Tasted better. Peeled easily.
- Starchier and held up better when boiled.
- ‘Purple Viking’ had less scab damage, but the flavor/texture was lacking. Its tubers were larger but fewer; overall yields were similar.
- Sprouted and bloomed first. More compact habit. Vines stayed healthy.
- More resistant to scab. Superior taste.

- Germinated better although neither cultivar did very well.
- Less uniform in size. Suffered from a lot more insect problems.
- Vines grew more vigorously at first.

Conclusions

For the second straight year, most gardeners preferred ‘Purple Viking’. Its yields were more reliable and its tubers were larger. The marbled purple/pink skin of the tubers is uniquely attractive and its snow white flesh has a moist, firm texture. ‘Peter Wilcox’ was more susceptible to scab. Its golden flesh was flavorful.

‘Purple Viking’ tubers had fascinating pink splashes on their purple skins. Yields were reliable.

Potato, Red

Cultivars

'Chieftain'

Pinkish-red skin with floury white flesh. Yields are high. Early to midseason maturity. Resists scab. Fair storage ability.

'Dark Red Norland'

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



Data

Data were collected at 24 sites in 2015.

Trait	Chief- tain	Dark Red Norland	Same
Germinated best	18%	32%	50%
Healthier plants	33	24	43
Higher yields	32	41	27
More attractive tubers	33	38	29
Tasted better	14	29	57
Preference	41	59	
Recommend	63	79	
Mean score ¹	7.38	8.05	
Median score ¹	8.00	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- I was very impressed with both potato cultivars. Lots of potatoes, and grew to be big potatoes. Good tasting. This was an excellent year for growing potatoes.
- Both were just great, even over varying soil conditions. Potatoes ranged in size from half dollar to a few one pounders. Plants got beat up from a windstorm.
- Excellent taste.
- Vines grew to be the same size. Was disappointed in the yield from each plant—not good—maybe it was the weather. Potatoes were very tasty.
- These potatoes are both very good. Both cultivars of potatoes produced approximately 33 to 35 pounds. Both cultivars will make excellent lefse.
- Very comparable; they weren't too different for me.

- Both had a dry texture.
- Vines dried down very easily. The potatoes were nice looking.
- Poor yields. Very dry summer.

Comments on 'Chieftain'

- Hard to pick, but overall this is the winner. The vines were huge and the last to die. The potatoes were huge; one mashed tuber is a meal. The smaller ones get cooked with jackets on. The flesh is snow white and delicious! Its tubers tended to grow out of the ground. We kept covering with dirt or picked and eat. 'Chieftain' had larger potatoes overall. Have never grown 'Chieftain' before and was fun to see how they compared to the 'Dark Red Norland'. They were easy to grow with minimal irrigation.
- Better color and size. The flesh had a nice and white look after cooking compared to the gray flesh of 'Dark Red Norland'.
- Produced 16 pounds compared to 12 pounds for 'Dark Red Norland'. Nice shape.
- Produced much larger potatoes but the overall yield was less.
- Few and small potatoes.
- Produced more potatoes.
- Better sized potatoes.
- Thicker skins.
- Got a little too mushy when cooked.
- A poor producer, low yield.

'Chieftain'
produced
larger tubers.
The flesh was
snow white
and fluffy.

**Best
red potato
cultivars**

Top choice

Dark Red
Norland

**Strong
performer**

Red Gold

Comments on ‘Dark Red Norland’

- ‘Dark Red Norland’ had a brighter skin color. The skin and potato had a better flavor. Sprouted sooner and slightly better overall.
- Nice color; good taste; good for various cooking methods. Kept their shape when cooked.
- The taste and texture of the ‘Dark Red Norland’ potatoes was great.
- My red potatoes suffered low yields with the exception of ‘Dark Red Norland’.
- Better production and taste.
- Really pretty color; good for fries.
- The color is a vibrant red and will look good when prepared on a plate.
- I liked the looks and the taste of ‘Dark Red Norland’; however both cultivars are fine.
- Vines matured earlier.

- I expected ‘Dark Red Norland’ to be better since ‘Red Norland’ is a standard, but its vines were droopy; smaller potatoes; smaller yield.
- Higher overall yield. Lots of small potatoes. Some of the small potatoes tasted bitter.
- Fewer eyes.
- Norland has always been a consistent producer for me. I like how early it is, but it always produces good yield.
- Too red.

Conclusions

‘Dark Red Norland’ has a strong reputation as a flavorful and productive early cultivar. It is a reliable producer of bright red tubers. It performed well again this year and most gardeners preferred it over ‘Chieftain’. ‘Chieftain’ vines grew well and produced larger tubers. Its flesh has a fluffier texture compared to the moist, firm texture of ‘Dark Red Norland’.

‘Dark Red Norland’ has a well-deserved reputation of being a flavorful and productive early cultivar.

Pumpkin, Midsize

Cultivars

‘Early Dakota Howden’

90 days. An early selection of the very popular ‘Howden’ variety. Developed in North Dakota. Its 20-pound fruits make great jack-o’-lanterns.

‘Howden XXX’

115 days. The latest introduction of the famous ‘Howden’ line has strong, large handles. Deep orange, 20-pound fruits. Perfect for Halloween.



Comments on ‘Howden XXX’

- Pumpkins were more uniform in size and shape.
- Matured earlier. Vines died earlier too.
- Average pumpkin weight was 5 pounds compared to 4 pounds for ‘Early Dakota Howden’.

Conclusions

Among these ‘Howden’ selections, ‘Early Dakota Howden’ was better. It matured earlier (always appreciated in North Dakota) and produced more pumpkins. Its pumpkins were generally larger and more attractive.

Data

Data were collected at 4 sites in 2015.

Trait	E. Dak. Howden		
	Howden	XXX	Same
Germinated best	0%	25%	75%
Healthier plants	0	50	50
Harvested earlier	50	25	25
Higher yields	50	25	25
Bigger pumpkins	50	50	0
More attractive	50	25	25
Preference	75	25	
Recommend	75	75	
Mean score ¹	6.75	6.00	
Median score ¹	6.50	6.00	
Mean weight (lbs)	10	6	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both grew well.
- Both had good germination. Lots of vines.

Comments on ‘Early Dakota Howden’

- Bigger pumpkins.
- Twice as many pumpkins. Fruits were approximately twice as large (15 pounds compared to 7 pounds for ‘Howden XXX’). Big, uniform pumpkins; much nicer.

‘Early Dakota Howden’ matured earlier. Its vines produced good yields of attractive jack-o’-lanterns.

Best mid-sized pumpkin cultivars

Top choice

Early Dakota
Howden

Strong performer

Gladiator

Pumpkin, Large

Cultivars

'Captain Jack'

105 days. Upright barrel shape and thick, sturdy handles. Vigorous vines produce good yields of 40-pound fruits with dark orange, thick flesh.

'Howden Biggie'

115 days. A classic big jack-o'-lantern. Dark orange, 45-pound fruits with medium ribs and dark green handles. Productive, vigorous vines.

Data

Data were collected at 5 sites in 2015.

Trait	Captain Howden		
	Jack	Biggie	Same
Germinated best	0%	40%	60%
Healthier plants	20	20	60
Harvested earlier	40	20	40
Higher yields	20	40	40
Bigger pumpkins	20	40	40
More attractive	0	40	60
Preference	40	60	
Recommend	80	100	
Mean score ¹	7.80	8.00	
Median score ¹	7.00	8.00	
Mean weight (lbs)	30	27	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both produced taller fruit. Very similar cultivars.
- Pumpkins of both cultivars averaged 20 pounds each.
- Pumpkins turned orange late as they were planted late (May 27). We should of watched growth better to make sure the pumpkins were upright as they would of been a nicer shape as we had a couple that were oblong and didn't stand up.
- Only half the vines sprouted and lasted. Pumpkins were nice and healthy; above average in size.
- Kids loved them.



Comments on 'Captain Jack'

- More and bigger pumpkins. Produced 20 pumpkins (average weight 39 pounds) compared to 10 pumpkins (average weight 25 pounds) for 'Howden Biggie'.
- It had a more square and uniform shape.

Comments on 'Howden Biggie'

- Its biggest pumpkin weighed 47 pounds, but averaged 36 pounds. Produced nine pumpkins compared to three for 'Captain Jack'. Its pumpkins turned orange earlier.
- Healthier plants.
- Better germination.
- Germinated first.

Conclusions

Gardeners were pleased with the performance of both cultivars. Most preferred 'Howden Biggie'; it showed superior seedling vigor. Otherwise the performances of the cultivars were very similar, both producing good crops of 30-pound pumpkins.

Both cultivars produced good crops of beautiful, 30-pound pumpkins.

Best large pumpkin cultivars

Top choice
Howden
Biggie

Strong performers

Captain Jack
Cronus

Pumpkin, Giant

Cultivars

'Big Moose'

110 days. Extra large fruits go 50–125 pounds. Medium red to orange rind with faint tan stripes. Round shape with slight ribbing. Vigorous vines.

'Prizewinner'

120 days. The biggest pumpkin that looks like a “real” pumpkin. Bright orange, round fruits reach well over 100 pounds. Vigorous vines.

Data

Data were collected at 11 sites in 2015.

Trait	Big Moose	Prize-winner	Same
Germinated best	50%	0%	50%
Healthier plants	50	10	40
Harvested earlier	38	13	50
Higher yields	60	20	20
Bigger pumpkins	56	33	11
More attractive	56	33	11
Preference	73	27	
Recommend	55	45	
Mean score ¹	7.10	5.80	
Median score ¹	8.00	6.50	
Mean weight (lbs)	47	28	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both germinated at the same time. Would not plant either again. We have somewhat limited space in the garden and neither cultivar performed well.
- Oh my gosh! Biggest pumpkins I've ever grown. It was a good year for pumpkins. These two cultivars took over my entire garden. Looked like a jungle! The neighbors took “tours” of my pumpkin patch.
- We were very pleased with the seven huge pumpkins we received. We plan to set them on their bottoms to improve their shape for next year.



- I was disappointed with both of the cultivars. I expected pretty orange pumpkins. They were both a pale orange and the skins were not the same as traditional pumpkins. Each of them produced one big pumpkin, and several small ones. I was expecting more of a traditional pumpkin. They were very similar to each other. I didn't try to bake them; perhaps they would have been a good baking pumpkin. I wanted more of a decorating pumpkin. I would not use these for that purpose.
- Both plants had lots of blossoms but few pumpkins. We planted another cultivar of pumpkins in the same bed and the same happened. Several neighbors reported poor pumpkin crop this year too. We do have honeybees within one-eighth of a mile.
- About half the seeds germinated.

Comments on 'Big Moose'

- These were fun to grow! We have tried to grow 'Dill's Atlantic Giant' with all the water, fertilizer, measuring, shade structure, etc. We were only able to get to 150 pounds and had selected the pumpkins down to two. With 'Big Moose' we just planted the seeds, threw in a little time-release fertilizer and watched them grow! The kids loved the “treasure” hunt when we harvested and were very pleased with the results.
- Biggest! Most orange! Ready by mid-September. Bigger the better—would love even bigger!

A jungle of vines produced some mammoth pumpkins.

Best giant pumpkin cultivars

Top choice
Big Moose

Strong performer
Dill's Atlantic Giant

More Comments on ‘Big Moose’

- Bigger size and nicer looking.
- Its pumpkins had a nice shape. ‘Prize-winner’ pumpkins were not as well developed.
- I planted early (May 5) and 6 plants germinated compared to 4 for ‘Prizewinner’. Bigger plants and leaves. More pumpkins but smaller. Fruit was more uniform.
- Matured earlier.
- This was the only one that produced pumpkins. We planted late and it was a fairly dry year.
- Nice looking plants early on but leaves started to yellow in June.

Comments on ‘Prizewinner’

- Pumpkins were very solid and heavy. Fewer but larger fruit (average of 80 pounds compared to 45 pounds for ‘Big Moose’.
- Pumpkins were large and round. Averaged 17 pounds, just slightly more than the 15 pounds of ‘Big Moose’.

Conclusions

‘Big Moose’ excelled in all traits. Its vines were healthier, very vigorous and more productive. Its pumpkins were generally larger and more attractive. ‘Big Moose’ is easy to grow and will provide gardeners were giant, bright orange pumpkins. ‘Dill’s Atlantic Giant’ will produce the biggest pumpkins, but its fruits are pale, lopsided and look more like squash.

‘Big Moose’ is the best cultivar for gardeners who want to grow giant, bright orange pumpkins.

Spinach, Savoy Leaf

Cultivars

'SV2157VB'

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

'Tyee'

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



Data

Data were collected at 4 sites in 2015.

Trait	SV2157		
	VB	Tyee	Same
Germinated best	25%	50%	25%
Healthier plants	33	67	0
Harvested earlier	33	67	0
Higher yields	33	67	0
Resisted bolting better	0	100	0
More attractive	33	67	0
Tasted better	0	67	33
Preference	33	67	
Recommend	0	67	
Mean score ¹	2.67	6.67	
Median score ¹	1.00	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- I don't really like either one. Short plants, small leaves and bolted (sown May 20).

Comments on 'SV2157VB'

- Bolted at only 6 inches tall. Very short and very small leaves.
- Very poor germination and never developed enough to even taste.

Comments on 'Tyee'

- It lasted longer into the season and we got a much better yield because we were able to harvest much longer into the season.
- Matured better, produced nice leaves, and kept in the refrigerator for weeks.

Conclusions

'Tyee' is the standard savoy-leaf cultivar. It's reliable and resists bolting. It outperformed 'SV2157VB' in all measured traits including earliness, yield, taste and resistance to bolting. 'SV2157VB' struggled from the onset this year; this is confusing since it performed so well in 2014. A lack of gardeners in this trial does not help to address this mystery.

'Tyee' is the standard crinkly-leaf spinach. It is reliable and resists bolting.

Best savoy-leaf spinach cultivars

Top choice
Tyee

Strong performer
Melody

Spinach, Smooth Leaf

Cultivars

'Olympia'

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

'SV3580VC'

50 days. Leaves are extremely dark green and attractive. Upright plants with long petioles are easy to cut and bunch.



Data

Data were collected at 9 sites in 2015.

Trait	SV3580		
	Olympia	VC	Same
Germinated best	11%	22%	67%
Healthier plants	22	22	56
Harvested earlier	33	22	44
Higher yields	44	0	56
Resisted bolting better	50	0	50
More attractive	44	33	22
Tasted better	44	11	44
Preference	56	44	
Recommend	89	67	
Mean score ¹	7.67	6.67	
Median score ¹	8.00	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both cultivars were very nice and hardy plants with good flavor.
- Great!
- Excellent germination.

Comments on 'Olympia'

- I liked the more delicate look of 'Olympia'— the leaves seemed more tender— maybe that was my own prejudice. 'Olympia' produced for several weeks longer.
- Much better germination and larger, more vigorous plants.
- We harvested several rounds before it bolted, even from a later planting (sown June 2).

- Started to yellow in June, even before bolting.

Comments on 'SV3580VC'

- Dark green; more leaves per plant. Remained green after bolting (bolted June 10)
- Bolted before the first harvest and its leaves had a tougher texture than 'Olympia'.
- Nice, dark green leaves. Pretty plant. Good tasting. However it really bolted! I never thought I'd like a spinach with this type of name. It was wonderful spinach. Crisp and dark green.
- I didn't like the thicker, darker leaves of 'SV3580VC'.
- Did not do well in my garden; very low germination/yield. Usually spinach is easy to grow.

Conclusions

'Olympia' always does well in our trials. Its outstanding resistance to bolting leads to a long harvest season. It produced good yields and gardeners liked the look and mild flavor of its leaves. 'SV3580VC' had darker green, thicker leaves but was more likely to bolt early in the summer.

'Olympia'
resistance to bolting makes it a reliable producer of smooth, medium green, mild tasting spinach.

Best smooth-leaf spinach cultivar

Top choice
Olympia

Squash, Straightneck

Cultivars

'Multipik'

50 days. Smooth, bright yellow fruits. No green streaking. Vines produce amazing yields. Great for grilling.

'Zephyr'

54 days. Yellow fruits with thin white streaks and distinctive green ends. Nutty flavor and firm texture.



Data

Data were collected at 9 sites in 2015.

Trait	Multi-pik	Zephyr	Same
Germinated best	25%	13%	63%
Healthier plants	13	0	88
Harvested earlier	38	38	25
Higher yields	44	33	22
More attractive fruits	25	63	13
Tasted better	29	29	43
Preference	33	67	
Recommend	78	78	
Mean score ¹	7.00	6.44	
Median score ¹	7.00	7.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- This was our first year ever growing straightneck squash ... and all I can say is wow! The plants all germinated, were very healthy and produced like crazy! Their fruits looked and tasted excellent.
- Both took off wonderfully! Both had very healthy plants!

Comments on 'Multipik'

- Fruits were firmer and slightly better tasting. Its fruits were better for grilling. Produced a higher yield early in the season but a lower yield later.
- Fruits got bumpy as they got larger.
- 'Multipik' was a brighter yellow and had very tender skin. The fruit has shorter, thicker neck and more uniform in size. It had a problem with blossom end rot.

- Healthier and more prolific plants. Produced fruits 2 weeks earlier. Vigorous, high yielding bush plant—very easy to harvest. Often would harvest 4–5 squash off each plant. Nice yellow fruit with a small bulb end. Delicious, true squash flavor.

Comments on 'Zephyr'

- I liked the green ends on the slender fruit of 'Zephyr' and thought they were more delicate tasting.
- Fruits grew longer and thinner. Skin stayed smoother.
- I enjoyed its green ends. 'Zephyr' adds color to the garden and has an abundance of fruit.
- 'Zephyr' plants grew large and faster. Higher yield and the plants tolerated heat and wind very well. 'Zephyr' was interesting because it has the green on the blossom end of the fruit. 'Zephyr' had a tendency to curve at the neck.
- Its green and yellow fruits are cuter.
- It was easier to pick. The plants were not quite as thick with leaves/vines. I would get scratched up quite a bit by thorns while trying to pick the 'Multipik' plants.
- Grew the best with little moisture.

Conclusions

Both cultivars produced an amazing amount of fruits. 'Multipik' has always done well in our trials. Its all-yellow fruits were firm and uniform. Gardeners were delighted with the green ends of 'Zephyr'. The distinctive cultivar produced smooth and slender squash.

The plants
“produced like
crazy!”
'Multipik'
produced firm,
bright yellow
squash.
'Zephyr'
produced
slender squash
with showy
green ends.

**Best
straightneck
squash
cultivars**

Top choice
Multipik

**Strong
performer**
Zephyr

Squash, Zucchini

Cultivars

'Noche'

48 days. Dark green fruits are easy to harvest from open, spineless plants. Lots of zucchini all summer.

'Raven'

48 days. Very dark green, smooth glossy fruit. Vines have an open habit. Big yields but harvest season is short.



Data

Data were collected at 8 sites in 2015.

Trait	Noche	Raven	Same
Germinated best	11%	38%	50%
Healthier plants	17	17	67
Harvested earlier	14	57	29
Higher yields	60	20	20
More attractive fruits	17	33	50
Tasted better	20	0	80
Preference	38	63	
Recommend	75	88	
Mean score ¹	8.29	8.17	
Median score ¹	8.00	8.50	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both cultivars were good producers.
- Both germinated in 5 days. I liked both. Both tasted good. Both kept producing until frost.
- The fruits looked really nice and had nice flavor. Both suffered from blossom end rot.

Comments on 'Noche'

- Produced more in the latter part of the season. Longer harvest season.
- Vines had bigger leaves and were a little more robust. Produced more fruits. 'Noche' fruits were uniform, long and fairly slender. The skin on the 'Noche' fruits was thinner and lighter colored than the 'Raven' fruits. I prefer its taste.

- 'Noche' produced more fruits and I preferred the taste of its thinner skin.

Comments on 'Raven'

- Produced first.
- Earlier to mature.
- Better germination (100% vs. 90% for 'Noche'). More vigorous seedlings. Plants had smaller, more upright leaves. 'Raven' was the first to flower and the first to produce fruit. Picked first fruits at 53 days. Its fruits were more bottle-shaped—thinner at the neck and larger at the end.
- Healthier plants. Better looking fruit.
- Fruit seemed to stay longer at a fingerling size.

Conclusions

'Raven' is unsurpassed at producing a fast crop. This is a valuable trait in ND, where our growing season is cool and short. This year was longer than usual, allowing 'Noche' to catch up and later surpass 'Raven' in overall yield. The vines of both cultivars were healthy and productive. Gardeners judged overall fruit quality to be similar with 'Raven' showing darker, thicker skin.

'Raven' produced a faster crop while 'Noche' yielded over a longer harvest season.

Best green zucchini cultivars

Top choice
Raven

Strong performer
Spineless Beauty

Swiss Chard, Orange

Cultivars

'Orange Fantasia'

55 days. Bright orange stems and shiny green leaves. Keeps its color when cooked. Harvest baby leaves for salads, or later when mature.

'Oriole'

60 days. Golden orange stems with dark green, slightly crinkly leaves. Harvest when young for salads, or later when mature.



Data

Data were collected at 5 sites in 2015.

Trait	Orange		
	Fantasia	Oriole	Same
Germinated best	0%	60%	40%
Healthier plants	0	40	60
Harvested earlier	0	40	60
Higher yields	0	60	40
More attractive	0	20	80
Tasted better	0	0	100
Preference	50	50	
Recommend	75	100	
Mean score ¹	7.50	8.25	
Median score ¹	7.50	8.50	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both held up very well. They are both still growing and doing well so could have many more meals. There is no way we can eat all they produce.
- I had way too much. Swiss chard does so much better than spinach.
- They performed similarly. There were not any notable differences.
- First time I have eaten chard. Now I know—I don't like chard.

Comments on 'Orange Fantasia'

- No comments.

Comments on 'Oriole'

- Seemed to be a hardier plant, at least in our soil. Both cultivars grew well, but 'Oriole' was clearly the best.
- They were very close in the running but 'Oriole' had a slight edge in performance.
- Looked like it got spots on it later on. Not sure what caused it.

Conclusions

Our testing is limited, but both cultivars were productive. A slight edge went to 'Oriole' in most categories including plant health and yield. Every gardener recommended 'Oriole'. 'Orange Fantasia' did not make much of an impression on gardeners.

There were no notable differences but a slight edge in general goes to 'Oriole'.

**Best orange
Swiss chard**

Top choice
Oriole

Watermelon, Red

Cultivars

'Shiny Boy'

82 days. Deep red flesh is sweet and crisp with tropical flavor. Early. Vigorous vines. Melons grow 16 pounds.

'Sweet Dakota Rose'

85 days. Sweet flesh has very few seeds. Developed in North Dakota. Striped melons grow 10–20 pounds.



Data

Data were collected at 14 sites in 2015.

Trait	Shiny Boy	Swt Dak Rose	Same
Germinated best	50%	21%	29%
Healthier plants	15	23	62
Harvested earlier	50	50	0
Higher yields	50	42	8
More attractive fruit	11	56	33
Tasted better	10	70	20
Preference	45	55	
Recommend	42	50	
Mean score ¹	5.92	6.46	
Median score ¹	6.00	7.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Hard to beat 'Sweet Dakota Rose' but I liked both. Both were great! I will plant both again.
- Both grew nicely. Both tasted yummy.
- Watermelon has never been my best crop. This year proved it again. This year I was excited because I finally had lots of watermelons on the vines. But in the end the taste just wasn't good.
- Very seedy! I'm spoiled by seedless varieties now. Kids loved it though, so it's fun to grow your own watermelon.
- Needed more time for growing. Only got the size of an orange by fall. At first sign of fall, all vines yellowed.
- Poor germination (sown June 1).
- Something ate my watermelon seedlings. One seedling survived; one ripe melon.

Comments on 'Shiny Boy'

- Large melons. About 15 melons, which were bigger than some store melons. I enjoyed seeing my family hardly believing I could grow that large of a melon. Everyone I served was amazed at the texture and wonderful taste.
- Looked better.
- Grew quicker.
- Superior germination. Smaller melons.

Comments on 'Sweet Dakota Rose'

- So much flavor. Best watermelons I've ever grown; so tasty. They were about the size of a basketball.
- Bigger melons. Juicy, sweeter flesh. Always had a streak of white rind going into the melon. Firmer, crisper texture. Tasted better.
- First to ripen. It was very sweet and yummy. Better yield and healthier plants.
- Grew better in my container garden.
- Vines died off early in the season.
- Produced two nice-sized watermelons. Too much effort required for limited flavor and inconvenience of seedy flesh.

Conclusions

'Sweet Dakota Rose' is the most reliable and flavorful watermelon for North Dakota. 'Shiny Boy' matched it for earliness and yield but could not match it for taste. Yields were low as expected and half of the gardeners did not recommend either cultivar.

Growing a good crop of watermelons in North Dakota is difficult. If you're going to try, sow 'Sweet Dakota Rose'.

Best red watermelon cultivars

Top choice
Sweet Dakota Rose

Strong performer
Sugar Baby

Basil, Italian

Cultivars

'Dolly'

70 days. Compact Genovese type selected for high yields. Medium green, large leaves. Height 20 inches.

'Genovese'

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



'Dolly' grew robustly and had strong flavor. 'Genovese' had classic basil flavor.

Data

Data were collected at 8 sites in 2015.

Trait	Dolly	Genovese	Same
Germinated best	43%	14%	43%
Healthier plants	38	38	25
Harvested earlier	29	14	57
Higher yields	38	25	38
More attractive	29	43	29
Tasted better	14	29	57
Preference	50	50	
Recommend	63	63	
Mean score ¹	7.38	7.38	
Median score ¹	8.50	6.50	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- They both produced a lot of basil.
- Neither showed any sign of disease. Was able to harvest at the same time. Both had nicely shaped leaves. The taste of both was good and very similar.

Comments on 'Dolly'

- 'Dolly' was the first to germinate and had a higher percentage of germination. 'Dolly' grew faster and had fuller looking plants. Bigger yield (30% higher) from 'Dolly'. 'Dolly' was quicker to re-grow shoots and came in bushier. Growth on 'Dolly' continues to be robust even though it is getting colder.
- Seemed too strong and a bit bitter.
- Stronger flavor. Heartier plant.

- 'Dolly' had a strong flavor, which is better for sandwiches or small touches. 'Dolly' was affected by something in August that caused its leaves to become lacy and damaged. 'Dolly' leaves wilted very quickly after harvest becoming unusable unless processed within 2 hours of harvesting.
- Good yield. Produced more.

Comments on 'Genovese'

- Although they germinated the same, by midseason the 'Genovese' looked healthier. 'Dolly' had browned leaves with holes in but 'Genovese' did not. 'Genovese' also came back better after multiple harvests. 'Genovese' was milder and suitable for pesto.
- Better basil taste.
- Plants were a little taller and bigger, so there was a higher yield. It went to seed later. We made some great pesto!
- I liked the darker green color of 'Genovese'.

Conclusions

Most gardeners liked both cultivars and were evenly split on their preference. 'Dolly' germinated better, grew robustly and produced good yields. Some gardeners preferred the classic basil taste of 'Genovese'. 'Dolly' had a stronger flavor.

Best Italian basil cultivars

Top choice

Italian Large Leaf

Strong performer

Genovese

Cilantro

Cultivars

'Calypso'

52 days. Easy to grow. Bushy plants and good yields. Extremely slow to bolt. Enhances salsas and curries.

'Santo'

52 days. Grown for its fast growth and resistance to bolting. Pungent leaves for Mexican and Asian dishes.



Data

Data were collected at 6 sites in 2015.

Trait	Calypso	Santo	Same
Germinated best	60%	40%	0%
Healthier plants	0	25	75
Harvested earlier	0	25	75
Higher yields	60	40	0
More attractive	50	25	25
Tasted better	60	20	20
Preference	80	20	
Recommend	100	40	
Mean score ¹	8.60	6.20	
Median score ¹	8.00	7.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both grew well.
- Plants looked healthy and no signs of disease. At 45 days: 'Santo' was over 24 inches high with seed heads and kind of scraggly looking; 'Calypso' was 12 inches high and nice and bushy. The taste of both was good; I couldn't really tell a difference.
- Both cultivars lasted nicely in the fridge and cooked up well.

Comments on 'Calypso'

- Made a great salsa mix. Better taste and resistance to bolting. My wife added it to green chile sauce for making salsa and then froze it.
- 'Calypso' was the first to germinate. It did not bolt which provided a bigger harvest of leaves. When harvested, new

shoots/leaves regrew fast. We have not yet had a frost and 'Calypso' is still going strong.

- 'Calypso' keeps coming back after cutting it to the ground or just harvesting parts of the plant. 'Calypso' was still going strong even 3 weeks after 'Santo' had bolted. Produced a higher yield. Visually, 'Calypso' is darker in color than 'Santo' and I prefer its sweeter taste. This is my family's favorite choice for leafy cilantro.
- Tastier leaves.
- Germination of 'Calypso' was much better.

Comments on 'Santo'

- Bolted after first cutting.
- Although it bolted first, the plants were larger and healthier and it tasted better.
- Was able to harvest leaves from 'Santo' first. At 115 days, harvested one-half cup of seeds from 'Santo' ('Calypso' never bolted).
- The two came up at the same time but 'Santo' had a slight germination rate advantage. 'Santo' has faster initial growth. 'Santo' has a very strong smell making it very attractive for cutting and selling in a market.

Conclusions

'Calypso' is a proven performer in our state. Compared to the industry standard 'Santo', 'Calypso' showed higher yields and better resistance to bolting. Gardeners liked its deep green and flavorful leaves.

'Calypso' showed higher yields and better resistance to bolting. Its leaves were deep green and flavorful.

Best cilantro cultivars

Top choice
Calypso

Strong performer
Caribe

Dill, Leafy

Cultivars

'Diana'

50 days. Upright, compact plants with dense masses of ferny, aromatic leaves. Very slow to bloom. German.

'Hera'

50 days. Masses of feathery blue-green foliage. Slow to bloom. Excellent for bunching. Height 42 inches.



'Hera' is an excellent dill for foliage. Its plants are productive and resist bolting. Its foliage is feathery, richly colored and aromatic.

Data

Data were collected at 6 sites in 2015.

Trait	Diana	Hera	Same
Germinated best	17%	50%	33%
Healthier plants	0	33	67
Harvested earlier	33	67	0
Higher yields	17	50	33
More attractive	33	0	67
Tasted better	0	17	83
Preference	17	83	
Recommend	67	100	
Mean score ¹	7.00	8.33	
Median score ¹	7.00	9.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Loved the foliage; very pretty. Tastewise couldn't tell much difference.
- Very slow coming up, but the cold weather could have been the problem. Very good yields. The terrible windstorm we had really hurt the dill; broke lots of stems. Both cultivars had lacy and attractive plants. We liked the taste of both cultivars. We use and eat dill all through the summer.
- Both were excellent for germination.

Comments on 'Diana'

- 'Diana' was the first to mature and get seed heads.
- Foliage was more lacy and feathery.
- Reached maturity faster.
- More compact plant.

Comments on 'Hera'

- I liked that it did not go to seed as fast.
- Slightly better germination. Highly productive plants. Cut 'Hera' back multiple times—simply couldn't keep up with it! Masses of feathery foliage; plants grew about 4 feet tall. It was lanky and would bend over with a rainfall. Slowest bolting dill plant ever grown in my garden. Leaves had a wonderful aroma—leaves were excellent for cooking. Excellent dill flavor—perfect for pickling or flavoring casseroles or fish dishes. The plant has lovely foliage; a dark green color and very ferny. Very hardy!
- Produced larger heads and more of them.

Conclusions

These cultivars were developed for their foliage and 'Hera' was clearly superior. Its plants were productive and rebounded well after multiple cuttings. The foliage was dark green, feathery and aromatic. 'Hera' showed better resistance to bolting.

Best dill cultivars

Top choice
Bouquet

Strong performer
Hera

Bean, Ornamental

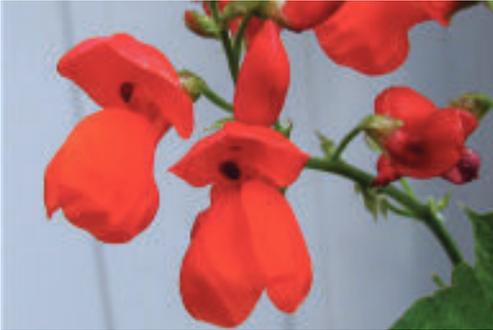
Cultivars

'St. George'

70 days. Stunning red/white bicolor blooms. Harvest pods when young. Requires trellis.

'Scarlet Runner'

70 days. Climbing bean with gorgeous red flowers. Attractive to hummingbirds and butterflies. Edible pods.



Data

Data were collected at 11 sites in 2015.

Trait	St. George	Scarlet Runner	Same
Germinated best	20%	20%	60%
Healthier plants	10	20	70
Bloomed earlier	40	40	20
More blooms	0	63	38
Prettier in garden	20	40	40
More beans	0	89	11
Tasted better	25	25	50
Preference	20	80	
Recommend	50	90	
Mean score ¹	7.40	9.00	
Median score ¹	7.00	9.50	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both were very tall plants and had many blooms. They have grown over 6 feet on our trellis. I probably won't ever plant bush beans again as the flower climbers were so tasty, easy to pick and the hummingbirds loved their nectar. Super planting.
- Both cultivars are still blossoming and producing beans (Sept. 25). They are growing beautifully on our bean teepee and have produced huge yet tender beans.
- Both had close to 90% germination. Both are vigorous climbers; no problems with diseases or insects. They grew on my 5-foot fence; both provided good coverage.

- I planted on teepee-type poles (8-feet high). Need higher poles next year. I would not grow either for the beans; both are rather blah tasting and hard to remove beans from the pod. I love it as a blooming plant; I even used the flowers in bouquets.
- These blooms took a long time to produce a pod. The beans were so fascinating in hues of pink with black, and some black, others white with brown spots. Amazing and they tasted great. Good things come to those who wait.
- Both cultivars germinated close to 100%. They grew well and climbed with enthusiasm. They both started to flower at the same time and flowered constantly. Very pretty flowers. Not an abundance of flowers, but nice. I wanted them to make kind of a screen but they really didn't. I have planted other beans of this kind before and have had hummingbirds attracted to them. I had hummingbirds at my feeder in September, so maybe these helped to attract them again. They actually produced very few beans. Nice beans, just would have liked more foliage.
- I recommend both for their flowers and neither for their beans.

Gardeners liked both cultivars for their flowers and neither cultivar for their beans.

Best ornamental bean cultivars
Top choice
 Scarlet Runner

‘Scarlet Runner’ grew into a taller, fuller plant with many more blooms.

Comments on ‘St. George’

- We liked the bi-color flower on ‘St. George’. They bloomed and produced earlier.
- Bloomed a few days earlier. Its beautiful bicolor flowers are prettier. Tasty beans.
- I liked its bicolored blooms.
- Our taste panel felt it tasted better.
- Aggressive runners.
- Had a white speckled bean and had a good flavor. Very hard to separate beans from pods.

Comments on ‘Scarlet Runner’

- Taller, fuller plants. First to bloom; had more flowers (still blooming on Sept. 23). Had a lot more pods and pods were bigger. The beans were pink and turned ugly gray when cooked—not very tasty. My overall favorite because it was a strong grower, produced a ton of flowers and pods, and the hummingbirds seemed to love it as a flowering plant.
- Bloomed more, climbed higher on the trellis and produced more beans.
- It flowered more; seemed healthier. Very fun, red blooms.
- Fuller leaves and more flowers. Kept flowering and producing beans long after ‘St. George’ had stopped producing.
- ‘Scarlet Runner’ grew taller. My fence is about 8–9 feet and it would have gone higher. ‘St. George’ did not quite make it to the top of the fence.
- Nicer flowers.
- Several plants had brown leaves. Beans were sweeter and tenderer.

Conclusions

Gardeners liked the bicolor blooms of St. George but they preferred ‘Scarlet Runner’ overall. ‘Scarlet Runner’ was a taller, fuller plant with many more blooms and pods. It performed remarkably well at all sites. This trial attracted hummingbirds and butterflies but did not please most bean eaters.

Cosmos, Striped

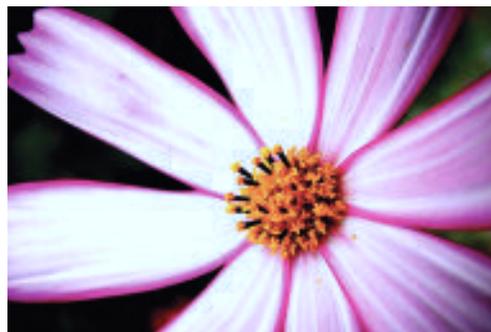
Cultivars

‘Cosimo Purple Red-White’

Masses of purple-red flowers with white accents. Very early. Suitable for cutting. Height 20 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 6 sites in 2015.

Trait	Cosimo		
	PR-W	Picotee	Same
Germinated best	17%	50%	33%
Healthier plants	0	100	0
Bloomed earlier	67	33	0
More blooms	0	100	0
Prettier in garden	0	100	0
Better cut flower	0	100	0
Preference	0	100	
Recommend	0	75	
Mean score ¹	2.25	6.50	
Median score ¹	2.00	7.50	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Hardly any germinated.
- Neither germinated. Direct seeded. Most likely the cool spell in spring did not benefit their germination.
- Poor germination.

Comments on ‘Cosimo Purple Red-White’

- A slower germinator and didn’t produce any flowers for me.
- ‘Cosimo Purple Red-White’ plants and flowers were small, maybe 8 inches in height. They produced only 1 flower cluster per plant.

Comments on ‘Picotee’

- These plants got huge and heavy. Some fell over. A more attractive plant. Somewhat larger flower. Began to bloom the first of August after the ‘Cosimo Purple Red-White’ had finished its first flush.
- ‘Picotee’ had larger plants and seemed healthier and produced tons of flowers and was fantastic! Large, healthy plants and lovely flowers! I really enjoyed ‘Picotee’!
- ‘Picotee’ had more flowers. Bigger plants and more flowers.

‘Picotee’ had large, healthy plants and lovely flowers.

Conclusions

‘Picotee’ was the clear winner; it was preferred by all gardeners. ‘Picotee’ plants were healthier and produced many more blooms. We are not sure why, but germination was a major problem with ‘Cosimo Purple Red-White’. It struggled to germinate and the seedlings never got growing. We assume we got a poor batch of seeds.

Best striped cosmos cultivars

Top choice
Picotee

Cosmos, Sulphur

Cultivars

'Diablo'

75 days. Radiant mix of scarlet blooms. Beautiful in naturalized settings; good for cut flowers. 30 inches.

'Tango'

Masses of flaming red and orange blooms with yellow centers. Easy to grow and terrific for cutting. 48 inches.



Data

Data were collected at 4 sites in 2015.

Trait	Diablo	Tango	Same
Germinated best	50%	0%	50%
Healthier plants	25	25	50
Bloomed earlier	67	33	0
More blooms	33	67	0
Prettier in garden	33	33	33
Better cut flower	0	33	67
Preference	67	33	
Recommend	100	75	
Mean score ¹	8.00	7.00	
Median score ¹	8.00	7.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both varieties were very healthy.
- Wildlife ate the young plants.

Comments on 'Diablo'

- Came up early. Earlier blooming.
- 'Diablo' grew quickly. Had healthier plants with more flowers.
- 'Diablo' had more foliage.

Comments on 'Tango'

- More foliage.
- 'Tango' had brighter colored flowers.

Conclusions

Sulphur cosmos are an easy-to-grow, underutilized annual. This trial was not popular and data are limited. Gardeners generally liked both cultivars, but most gave a slight edge to 'Diablo'. It had a more compact habit and bloomed earlier. It's been a reliable performer in previous testing, too.

'Diablo' had a more compact habit and bloomed earlier.

Best sulphur cosmos cultivars

Top choice
Bright Lights

Strong performer
Diablo

Gladiolus, Blue

Cultivars

'Blue Sky'

Royal purple flowers with lavender throats.

'Land O' Lakes'

Lavender blue with white throats.



Data

Data were collected at 14 sites in 2015.

Trait	Blue Sky	Land O' Lakes	Same
Germinated best	54%	8%	38%
Healthier plants	31	15	54
Bloomed earlier	69	8	23
More blooms	54	31	15
Prettier in garden	23	23	54
Better cut flower	17	17	67
Preference	57	43	
Recommend	86	64	
Mean score ¹	8.00	7.43	
Median score ¹	8.00	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- They were awesome when combined in a bouquet.
- Gorgeous.
- Plants were healthy and bloomed at the same time.
- Plants got very tall and needed support. Long lasting in the vase.
- The blooms on both were equally attractive and they both provided a nice accent to the flower bed.
- Both cultivars had flower spikes that didn't stand up to any wind at all. I think they would tip over if a butterfly landed on them.
- Both came up at the same time; all bulbs grew. Both suffered from rust. They had a similar performance as a cut flower.
- Both were pretty; I love glads.
- Neither stayed standing once blooming.
- Died off early.

Comments on 'Blue Sky'

- More flowers per plant. I enjoyed its darker, vibrant color. It really brings a person's eye directly to it. More attractive and more productive.
- Bloomed 8 days earlier. More people commented on these flowers. The color looked like velvet. I loved its color!
- Bloomed 2–3 weeks earlier. 'Blue Sky' had better color; 'Land O'Lakes' looked faded. 'Blue Sky' grew crooked.
- Bloomed 2 weeks earlier.
- Stalks were straighter.

'Blue Sky' bloomed earlier and produced more flowers. Its petals were darker and eye catching.

Comments on 'Land O' Lakes'

- I preferred its lighter color and ruffled edges, although 'Blue Sky' was pretty.
- Bloomed a little earlier; seemed to last a little longer in the vase.
- Both cultivars did well for us with 'Land O' Lakes' being a slightly more robust gladiolus.
- Prettier flowers.
- 'Land O' Lakes' flowers were on all sides of the spikes.
- More flowers opened at the top.
- I really liked them both but 'Land O' Lakes' was prettier.

Conclusions

'Blue Sky' germinated better, bloomed earlier and produced more flowers. Its color was darker and more vibrant. Some gardeners preferred the lighter shades and ruffled edges of 'Land O' Lakes'. The stalks of both cultivars were weak and required support.

Best blue gladiolus cultivars

Top choice
Blue Sky

Gladiolus, Orange

Cultivars

‘Olympic Flame’

Peachy orange with yellow throat.

‘Sun Kissed’

Bright orange florets kissed with a splash of yellow.



Data

Data were collected at 14 sites in 2015.

Trait	Olympic Flame	Sun Kissed	Same
Germinated best	86%	0%	14%
Healthier plants	93	0	7
Bloomed earlier	85	8	8
More blooms	86	0	14
Prettier in garden	54	15	31
Better cut flower	45	0	55
Preference	83	17	
Recommend	100	38	
Mean score ¹	8.86	4.14	
Median score ¹	9.00	2.50	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

‘Olympic Flame’ was healthy, early blooming and beautiful. The blooms of ‘Sun Kissed’ were striking but our corms were infected with disease.

General Comments

- Plants were healthy and very beautiful.

Comments on ‘Olympic Flame’

- ‘Olympic Flame’ was an incredibly beautiful flower with unique coloration that I really enjoyed!
- Brighter color.
- Bloomed early and then was done.
- Bloomed 2 weeks earlier. It wasn’t as showy in the garden, but up close was equally as nice as a cut flower; just smaller petals.
- Germinated almost 100%. Healthy and produced many beautiful flowers.
- Large, beautiful flowers.
- These were the first ones to bloom. More flowers on each plant.
- Earlier bloomer and more blooms. Attractive plants.
- Superior health and vigor.

Comments on ‘Sun Kissed’

- We thought that ‘Sun Kissed’ was showier. They had striking color and simply appeared majestic. However they also were poor to thrive. Three-quarters of the plants perished prior to them getting to the blossoming stage and we believe it to have been a disease issue with the corms. We believe had it not been for quality issues it would have been our choice.
- Finally bloomed after ‘Olympic Flame’ was done. Only one plant bloomed.
- Only about half of the corms emerged. These turned yellow and died.
- I prefer its deeper, darker orange color.
- Performed well and was attractive.
- ‘Sun Kissed’ hardly germinated (one plant only). It was extremely slow and didn’t produce any flowers to date.
- Bloomed longer in the season. Still have cut flowers today (Oct. 11).
- The one ‘Sun Kissed’ plant that bloomed had awesome; large showy flower stalks.

Conclusions

Gardeners loved the health and beauty of ‘Olympic Flame’. Every gardener recommended it. ‘Sun Kissed’ suffered from disease and most sprouts died before blooming. We evidently received an infected batch of corms. The few ‘Sun Kissed’ that bloomed were awesome and majestic; although they did bloom late, which is a concern. We look forward to trying ‘Sun Kissed’ again.

Best orange gladiolus cultivars

Top choice
Olympic Flame

Gladiolus, Pink

Cultivars

'Chit Chat'

Rose pink with white throats.

'Pink Event'

Pink florets with darker pink throats.



Data

Data were collected at 15 sites in 2015.

Trait	Chit Chat	Pink Event	Same
Germinated best	20%	20%	60%
Healthier plants	21	29	50
Bloomed earlier	7	71	21
More blooms	29	36	36
Prettier in garden	29	29	43
Better cut flower	21	7	71
Preference	29	71	
Recommend	86	86	
Mean score ¹	7.57	8.57	
Median score ¹	8.00	9.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- I enjoyed this trial. All corms came up. Lots of flowers; very beautiful.
- They looked very good together.
- Very healthy plants. Bloomed at the same time.
- Bloomed within 2 days of each other; similar in sprout health and height. Similar performance as a cut flower.
- Both were pretty; love the colors.
- Both were very beautiful.
- Both tipped over.
- They grew too tall. Were more susceptible to wind damage.

Comments on 'Chit Chat'

- Had more flowers and were more attractive. Blooms with white throats were prettier than all-pink blooms.
- Better germination and spectacular color: a darker pink. Held its color nicely.
- Emerged a day or two sooner.

- Had thrips. Over half the stalks turned brown and died.
- The few healthy 'Chit Chat' plants seemed to be taller with more blossoms.
- Large, blossoms, all along the same side.
- 'Chit Chat' was still blooming Oct. 30, long after we normally have had frost. The flower stalks were full and lasted well. My worry is these bloomed past our average frost date.
- Some plants died.

Comments on 'Pink Event'

- Both cultivars were very attractive, but 'Pink Event' stood out more. A better overall cultivar that I would plant again. Maybe it was the color streaking in the blossom. Looked beautiful.
- Bloomed 4–5 days earlier. Stalks were a little taller with bigger blooms.
- Better germination. Prettier flowers. Looked better and healthier.
- Better germination; healthier plants; earlier to blossom.
- Bloomed before 'Chit Chat' had buds. Produced at least double the flowers.

Conclusions

Gardeners were enchanted with the beauty of both cultivars. Most gardeners recommended both cultivars but preferred 'Pink Event'. They liked its earliness and abundance of blooms.

Both cultivars were enchanting but 'Pink Event' stood out for its earliness.

Best pink gladiolus cultivars

Top choice
Pink Event

Strong performer
Chit Chat

Gladiolus, Plum

Cultivars

'Plum Tart'

Dark purplish wine.

'Sugar Plum'

Deep lilac purple.

Data

Data were collected at 21 sites in 2015.

Both had rich, vibrant flowers and healthy, sturdy stalks.

Trait	Plum Tart	Sugar Plum	Same
Germinated best	33%	14%	52%
Healthier plants	14	24	62
Bloomed earlier	43	38	19
More blooms	33	33	33
Prettier in garden	29	33	38
Better cut flower	32	26	42
Preference	57	43	
Recommend	76	86	
Mean score ¹	7.76	7.90	
Median score ¹	8.00	9.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both were beautiful; vibrant in color.
- Healthy. Both were very beautiful.
- Continued to bloom after our first frost.
- Both had nice green sturdy leaves and stalks. Both were pretty in the garden.
- Very pretty. I brought them to church and they received many compliments.
- Emerged from the ground at the same time. Plants were healthy. Nice flower stalks and pretty colors. Some stalks broke off due to terrible wind storms.
- Dark green leaves. Grew very tall and needed support. They bloomed the same week and produced the same amount of flowers. Their cut flowers lasted the same length of time in the vase.
- Plants were tall and needed a strong support. Several bloomed late into fall. Some plants had 4 or 5 spikes from the same corm. Beautiful; wonderful color; showy. The hummingbirds loved them.



Comments on 'Plum Tart'

- Deeper, rich, darker color. A double flower on each stalk.
- Deeper color. It grew taller; although both were very tall.
- 'Plum Tart' flowers are lovely but only half of the bulbs germinated.
- Its hardiness impressed me. Bloomed earlier by a few days.
- Stronger stalks.
- Its stalks were longer. It lasted longer when used as a cut flower.
- Emerged first. Had more blooms.
- Some stalks did not produce flowers.

Comments on 'Sugar Plum'

- 'Sugar Plum' had double and occasional triple flower stalks. I prefer its color.
- All the plants had large flowers. The color was amazing.
- Loved the color.
- I preferred its color. Flowers were a little larger. Strong stem.
- Flowers were fuller.
- More productive; longer lasting blooms.
- Bloomed earlier; larger flowers
- Very few bloomed.

Conclusions

Both cultivars grew well and neither was significantly better for any trait. Most gardeners preferred 'Plum Tart'; they were impressed with its rich, dark petals and tall, sturdy stalks. 'Sugar Plum' was a reliable cultivar with lighter but just as appealing plum petals.

Best plum gladiolus cultivars

Top choice
Sugar Plum

Strong performer
Plum Tart

Gladiolus, Purple

Cultivars

'Purple Flora'

Rich deep purple.

'Violetta'

Violet with light throats.



Data

Data were collected at 11 sites in 2015.

Trait	Purple		
	Flora	Violetta	Same
Germinated best	36%	9%	55%
Healthier plants	18	18	64
Bloomed earlier	67	22	11
More blooms	10	50	40
Prettier in garden	40	30	30
Better cut flower	14	57	29
Preference	50	50	
Recommend	73	73	
Mean score ¹	7.70	7.50	
Median score ¹	9.00	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both produced many flowers.
- Both lovely.
- Neither cultivar had large or showy blooms.
- 100% germination for both cultivars.

Comments on 'Purple Flora'

- Stalks were very strong; the ND wind did not knock them over. Bloomed earlier. Deep purple color. Prettier and fuller blooms.
- 'Purple Flora' bloomed earlier, better and more consistently than 'Violetta'.
- 'Purple Flora' bloomed earlier and the flowers were a deep dark purple—almost black—seemed prettier. Stalks were taller and some started to fall over. Bloomed uniformly at the same time.
- Bloomed 1 week earlier. I prefer its color.
- Better germination (93% compared to

75% for 'Violetta'). Leaves developed small holes. Bloomed one week earlier. Wilted soon after cut.

- 'Purple Flora' came up first, well before 'Violetta' (1 week earlier). 'Purple Flora' had one tall and healthy plant per corm, compared to two slightly shorter plants per corm with 'Violetta'. Bloomed earlier. 'Purple Flora' stalks were taller and much more filled with flowers than those of 'Violetta'.
- 'Purple Flora' had slightly bigger, more vigorous plants.
- Sprouts emerged first.
- 'Purple Flora' was a very poor bloomer.

Comments on 'Violetta'

- I loved its color! The flowers were beautiful and there were a lot of them.
- 'Violetta' had white streaks in the flowers which made them unique. More staggered blooming.
- Withstood wind better.
- Bloomed more consistently.
- Prettier flower.
- 'Violetta' had at least 3 sets of blooms.
- The flowers lasted over a week after I picked them.

Conclusions

Gardeners were split on their preferences. 'Purple Flora' bloomed earlier and put on a display of deep purple blooms. 'Violetta' produced more blooms. Its light-throated purple blooms were showy in the garden. 'Violetta' lasted longer as a cut flower.

'Purple Flora' bloomed earlier and more consistently. 'Violetta' produced more blooms and did especially well as a cut flower.

Best purple gladiolus cultivars

Top choice
Purple Flora

Strong performer
Violetta

Gladiolus, Red

Cultivars

'Flora Red'

Brilliant red.

'Oscar'

Deep crimson red.

Data

Data were collected at 11 sites in 2015.

Trait	Flora		
	Red	Oscar	Same
Germinated best	20%	20%	60%
Healthier plants	18	18	64
Bloomed earlier	67	0	33
More blooms	50	10	40
Prettier in garden	30	30	40
Better cut flower	29	14	57
Preference	50	50	
Recommend	91	64	
Mean score ¹	7.78	6.89	
Median score ¹	8.00	7.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both pretty.
- Both were beautiful.
- No health problems. Although they were slightly different shades of red, both were brilliant and eye catching.
- When I cut these beauties and put them in a vase on my kitchen table, I felt like I had a \$50 bouquet. They were so beautiful and brought such "glad-ness"!
- Performed similarly as a cut flower.
- Neither produced flowers.

Comments on 'Flora Red'

- Bloomed 10 days earlier and is still blooming. Abundant flowers on each stalk. Stunning red. Lasted for about one week once cut and in placed in a vase—this was better than 'Oscar'.
- Beautiful flowers; a radiant orange-red color.
- More orange-red than red.



- More of an orange red. Bloomed a week or two earlier.
- Bloomed earlier. Color was a brilliant happy red.
- Twice the germination rate. Bloomed 12 days earlier. Plants were healthier looking. Spikes were fuller, sturdier and stood upright. Lighter red and became white after a while which wasn't unattractive but was unexpected.

Comments on 'Oscar'

- By far the winner. Larger flowers. More vigor and more size. Gorgeous red blooms.
- Loved its deep red color.
- Germinated best (93% compared to 87% for 'Flora Red').
- Looked stronger but did not bloom.
- Germinated first and had taller plants.
- I liked the deep, velvety red.
- Stems browned quickly and fell over once they were full of blooms. Flowers had a prettier, richer red color.
- More susceptible to insect problems.

Conclusions

Both cultivars produced stunning flowers and gardeners were split on their preferences. 'Flora Red' bloomed earlier and in greater abundance. Its blooms were a radiant orange-red. 'Oscar' was slightly less reliable; nevertheless many gardeners loved its velvety crimson flowers.

Although they were slightly different shades of red, both were brilliant and eye catching.

Best red gladiolus cultivars

Top choice
Flora Red

Gladiolus, Rose

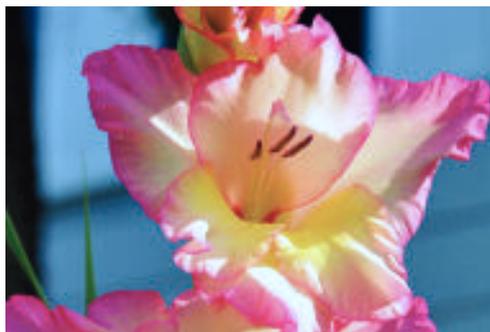
Cultivars

'Priscilla'

Rose with yellow throats on cream background.

'Wine and Roses'

Pink blooms with a blotch of wine.



Data

Data were collected at 22 sites in 2015.

Trait	Wine and		
	Priscilla	Roses	Same
Germinated best	35%	10%	55%
Healthier plants	11	5	84
Bloomed earlier	73	20	7
More blooms	41	24	35
Prettier in garden	5	26	68
Better cut flower	0	7	93
Preference	53	47	
Recommend	95	84	
Mean score ¹	8.79	8.53	
Median score ¹	9.00	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Loved these glads! Large flowers with long stems. Both were beautiful.
- Both germinated well, had very healthy plants, bloomed at the same time and make excellent cut flowers.
- Both were beautiful.
- We really like both. They were great to cut. Abundant bloomers.
- Both came out of the ground with good germination. Pretty colors.
- They all did well even in the extreme heat and dry conditions. The wind did some damage—laid some of them down and broke some off—but all in all they did well. Nice and healthy plants.
- Both came up at the same time. Both were very beautiful.
- Both had an occasional corm produce two stalks.
- Both were nice.

- All corms came up. The flowers were all very beautiful.
- Both were very pretty.
- They could not stand up to wind but still bloomed nicely. Both were very pretty and similar in performance.
- Both germinated at 100%. It was fun to watch these plants grow and finally produce flowers. First flowers were August 15.
- These were very fun to grow!
- Both cultivars leaned.

Comments on 'Priscilla'

- 'Priscilla' had a wow factor. I loved the color and size of the blooms. Only drawback was as flowers continued to open the stalks started to lean. Therefore I cut the flowers and had a lovely bouquet. Neighbor also preferred the appearance of 'Priscilla' blooms to 'Wine and Roses'.
- 'Priscilla' came up about 5 days sooner. Nice big plants with around 10 plus flowers on each plant. Plants were about 4 feet tall.
- Both did well in the 50–60 mph winds but 'Priscilla' in full bloom started to tip as the blossoms matured and more blooms started to show color. Blossoms on 'Priscilla' were larger and more on each stalk. Also, the colors of its blooms were more appealing.
- Beautiful color.
- Bloomed first.
- Blooms lasted longer and were more beautiful.

'Priscilla' had a wow factor. The stalks were filled with large, beautiful blooms.

Best rose gladiolus cultivars

Top choice
Priscilla

Strong performer
Wine and Roses

Gardeners liked 'Wine and Roses'. They were enchanted with the wine blotches on its blooms.

More Comments on 'Priscilla'

- More corms grew and more double plants. Bloomed a few days earlier. Longer flower stalks with more blossoms. I prefer the color of its flowers. When dug in fall, it had one large corm compared to the several small corms developed by 'Wine and Roses'.
- More flowers on each plant.
- Emerged a couple days earlier. Bloomed 2 weeks earlier.
- Bloomed earlier and had more flowers.
- Bloomed earlier and I prefer its color combination.
- Had more flowers.
- 'Priscilla' did better. Both were pretty.

Comments on 'Wine and Roses'

- Had second flower stalks that came after the first were done blooming, which led to a prolonged blooming period. Throats had a dark color.
- 'Wine and Roses' had far more blossoms.
- Nine of the 12 corms produced double stalks, which led to more flowers. Stalks were a little bit taller. First to bloom. Its dark pink center made it my favorite.
- Bloomed a few days earlier.
- Really add color with the deep pink they have in the throats. I prefer it over the color of 'Priscilla'.
- Prettier flowers.
- The coloring was beautiful.

- Flowers were bigger and prettier.
- I love the color of the 'Wine and Roses' flowers. They're both great, but this one was my favorite.
- When corms were dug, 'Wine and Roses' frequently had 2 stalks per corm; however they were smaller than the corms of 'Priscilla'.

Conclusions

Gardeners gave high ratings to both cultivars. 'Priscilla' performed well at all sites. It bloomed first and its flowers were large, lovely and abundant. The wine blotches on 'Wine and Roses' blooms were eye catching. Stalks of both cultivars were filled with blooms and leaned at windy sites.

Gladiolus, White

Cultivars

'Alaska'

Snow white.

'White Prosperity'

Pure white with subtle pink throat.

Data

Data were collected at 13 sites in 2015.

Trait	White		
	Alaska	Prosp'y	Same
Germinated best	8%	31%	62%
Healthier plants	17	8	75
Bloomed earlier	33	33	33
More blooms	44	22	33
Prettier in garden	40	30	30
Better cut flower	29	29	43
Preference	67	33	
Recommend	82	73	
Mean score ¹	7.73	7.27	
Median score ¹	9.00	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both were healthy. Both were nice as a cut flower. Both cultivars did well and our child was excited to see them “boom out.”
- 100% germination.
- All corms emerged but none blossomed.
- Stalks were similar.

Comments on 'Alaska'

- Petals were pure white; 'White Prosperity' petals were pinkish.
- Bloomed a week earlier. Very large, straight stalks with a lot of flowers. The flowers opened on the same side. Very showy in the garden and in a vase.
- Large flower.
- Better in the wind.
- Bloomed first. Stalks grew taller. More plants bloomed.
- 'Alaska' stayed upright and was taller than 'White Prosperity'.



Comments on 'White Prosperity'

- Emerged first. Bloomed a week earlier. Bigger flowers. Longer bloom time.
- Produced two stems of flowers that were slighter and smaller than those of 'Alaska'. The thinner stems made them easier to display.
- 'White Prosperity' was almost too tall to use as a cut flower, and the blooms were more spread out on the stem. I loved the pink detail on the throat of the 'White Prosperity' flower and that it turned pinkish instead of brown as the blooms faded.
- Overall a superior cultivar.
- Emerged first.

Conclusions

Most gardeners preferred 'Alaska'. Its stalks were tall, upright and sturdy. Its pure white petals stood out in the garden and in cut flower arrangements. 'White Prosperity' also grew well. It was notable for its subtle pink throats.

'Alaska' had tall, sturdy stalks with showy, pure white petals.

Best white gladiolus cultivars

Top choice
Alaska

Gladiolus, Yellow

Cultivars

'Bananarama'

Warm golden yellow.

'Nova Lux'

Buttercup yellow.

Data

Data were collected at 15 sites in 2015.

Both were lovely, but 'Bananarama' bloomed earlier. Its blooms were warm and vibrant.

Trait	Banana-rama	Nova Lux	Same
Germinated best	13%	13%	73%
Healthier plants	7	7	87
Bloomed earlier	60	20	20
More blooms	29	36	36
Prettier in garden	31	8	62
Better cut flower	8	17	75
Preference	64	36	
Recommend	88	75	
Mean score ¹	7.73	6.87	
Median score ¹	8.00	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Plants came up the same time. Healthy. Colors were vivid and bright. The blooms lasted the same length of time as a cut flower.
- Both grew well. Both were really pretty.
- Both had smaller flowers than other glads.
- 100% germination.
- Took 2 months to bloom. Both blew over from high winds.
- Both bloomed very late—September (sown May 9).
- No flowers on either. Plants looked similar.

Comments on 'Bananarama'

- Both were lovely, but 'Bananarama' seemed to have deeper tones and looked more velvety.
- Bloomed 5 days earlier. They had a lot more flowers.



- Bloomed 7–10 days earlier. Flowers were prettier and bigger.
- 'Bananarama' was taller and had longer spike of flower (24 inches!).
- Long flower spike.
- Came up first.
- Bloomed 2 weeks earlier. Nice long stems. Color was more vibrant.
- Bloomed earlier. Better looking plants.
- Brighter flowers.
- Curved stems.
- Leaves dried up earlier. Bloomed a week earlier.

Comments on 'Nova Lux'

- Produced fuller flowers with some reddish in it. Very attractive. Lasted longer when cut. Produced two plants from each corm. Flowers were bigger and more beautiful.
- Very easy to grow. Beautiful flower.
- Its straighter stems were better for cut flowers.
- More flowers.
- Plants were healthy but were grew slower and smaller.
- Very pretty.
- Never bloomed before frost.

Conclusions

Gardeners enjoyed both cultivars but most preferred 'Bananarama'. It bloomed earlier and gardeners were impressed with its warm, vibrant yellow color. 'Nova Lux' was nice but less remarkable.

Best yellow gladiolus cultivar

Top choice
Bananarama

Gladiolus, Yellow/Orange

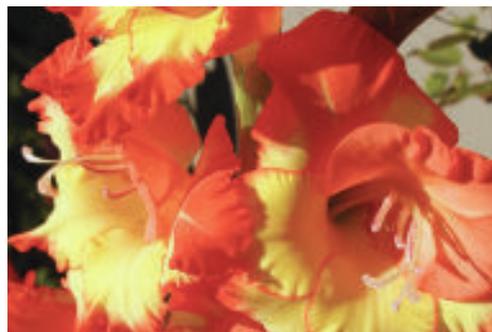
Cultivars

'Fiesta'

Small yellow florets edged in blazing orange.

'Jester'

Yellow florets with radiant orange centers.



Data

Data were collected at 24 sites in 2015.

Trait	Fiesta	Jester	Same
Germinated best	14%	18%	68%
Healthier plants	9	14	77
Bloomed earlier	50	32	18
More blooms	30	15	55
Prettier in garden	26	22	52
Better cut flower	0	21	79
Preference	65	35	
Recommend	88	75	
Mean score ¹	8.33	8.08	
Median score ¹	9.00	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Both of these cultivars were amazing. The colors for both cultivars were so vibrant they really stood out in my flower bed! Received many compliments from the neighbors!
- Both cultivars were very slow to come up. They were 4–5 days behind any other gladiolus. The amazing part is they were the first to bloom! Almost every plant had double flower spikes. Not just a double set of leaves, but two flower spikes from the leaves. Beautiful colors!
- Both were very healthy. Both cultivars had gorgeous flowers. Very showy. Made a striking arrangement together.
- Both very pretty.
- Both were excellent as cut flowers. Lovely. Grew over 3 feet tall.
- They both withstood strong west winds better than I expected.
- They added much color to my garden. It was fun to go and pick the flowers. They are blooming still (Oct. 3) and so well

worth the time. Really enjoyed having glads again. It's been a few years. Thanks for having such good cultivars to enjoy!

- Both were very nice.
- Both had two to three stalks per corm.
- Loved these glads. Gorgeous colors. Both had their last blooms on Sept. 14.
- Loved both.
- I loved both and they complemented each other.
- I would say both were pretty much equal. Both did well in my flower beds. I had many compliments on both cultivars.
- Very good, beautiful flowers. Enjoyed a lot.
- These were so fun. I was worried, as they came up almost 2 weeks after the pink ones, but they were fantastic!

Comments on 'Fiesta'

- I liked the color of 'Fiesta' more. 'Fiesta' also had stronger, straighter flower stalks.
- I liked its color and it had more flowers.
- Bloomed a few days earlier. Smaller bloom; more compact. Produced 19 stalks from 12 corms compared to 16 stalks from the 12 corms of 'Jester'.
- Prettier yellow with a deeper orange throat.
- There's just something about the blaze of red in the middle of the yellow—it looks like a sunset. Its fire kept on burning 'til the end—this was the last surprise gladiolus to bless us this summer. I love the colors!

The two-toned flowers of these cultivars created a lot of excitement.

Best yellow/orange gladiolus cultivars

Top choice
Fiesta

Strong performer
Jester

‘Fiesta’ bloomed first. Its stalks were sturdy and filled with compact, dazzling blooms.

More Comments on ‘Fiesta’

- Brighter flowers.
- ‘Fiesta’ produced a really beautiful flower; two-tone. Prettier than ‘Jester’.
- Bloomed for a longer period of time.
- A miniature glad.
- Eight of 12 corms formed two stalks and produced more cormlets at fall harvest. More stalks and more flowers, but flowers were a little smaller. I loved its orange with yellow flowers. The smaller blossoms fit in an arrangement better.
- ‘Fiesta’ florets opened 2 days before ‘Jester’.
- While I loved them both, ‘Fiesta’ was a better performer. It produced longer and fuller glads. Fuller flowers and longer lasting.
- They were both super pretty, but ‘Fiesta’ had a nicer color mix.
- ‘Fiesta’ had a slightly more beautiful flower.
- Germinated nicely but only one of the plants produced a flower. It was the earliest bloom in my trials.
- Plants of four ‘Fiesta’ corms yellowed and died prior to blooming. I do not know why.
- More susceptible to thrips. Bloomed on Aug. 15, 10 days earlier than ‘Jester’.

Comments on ‘Jester’

- I preferred ‘Jester’ only because of the color. It was mostly yellow with an orange center.
- I liked its color better.
- More attractive.
- Blossoms were much larger.
- 100% germination compared to 75% for ‘Fiesta’. A beautiful, showy flower on a sturdy stem not impacted by the Fargo wind! Easy to grow and insect free!
- Slightly taller and first to bloom.
- Larger blossoms and they lasted a touch longer.
- ‘Jester’ produced more flowers.
- Some of the florets on the ‘Jester’ were different color than the rest on the same spike. Bloomed earlier but were not as pretty.

Conclusions

These cultivars created a lot of excitement. Their blooms were vibrant and showstoppers in flower beds. They were healthy and bloomed early. Most gardeners preferred ‘Fiesta’. It was the first to bloom. Its stalks were strong, straight and full of compact blooms.

Sunflower, Orange Cutting

Cultivars

‘Sunrich Orange Summer’

Orange petals with a black disk. Pollenless blooms. Nonbranching (single flower) stalks grow 54 inches.

‘Vincent’s Choice’

Extra outer ring of rounded petals give flowers a full, refined look. Nonbranching stalks grow 54 inches.



Data

Data were collected at 4 sites in 2015.

Trait	Sunrich Vincent’s		
	O. Sum.	Choice	Same
Germinated best	0%	25%	75%
Healthier plants	0	25	75
Bloomed earlier	0	67	33
More blooms	0	50	50
Prettier in garden	0	0	100
Better cut flower	0	0	100
Preference	50	50	
Recommend	75	100	
Mean score ¹	7.00	8.00	
Median score ¹	7.00	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- The plants were huge this year! My neighbor really enjoyed the bouquet I brought her!
- They were both beautiful flowers. I prefer larger-headed sunflowers, but these were really fun to be able to bring in and put in a vase.

Comments on ‘Sunrich Orange Summer’

- No comments.

Comments on ‘Vincent’s Choice’

- Bigger flowers. Stalks grew about 5 feet tall. Was almost done blooming when ‘Sunrich Orange Summer’ started.

Conclusions

Data are limited for this trial. All we can say is the new cultivar Vincent’s Choice looks promising. It germinated well and bloomed reliably. Every gardener recommended it. ‘Sunrich Orange Summer’ from the popular ‘Sunrich’ series also did well.

‘Vincent’s Choice’ performed well at all sites and looks like a promising cultivar.

Best orange cutting sunflowers

Top choice
ProCut
Orange

Strong performers
Sunbright
Supreme
Sunrich
Orange

Sunflower, Bicolor Dwf (Spring)

Cultivars

'Firecracker'

55 days. A bright display of red and gold petals on dwarf, 30-inch plants. Branching habit.

'Rio Carnival'

55 days. Teardrop petals with yellow tips and red centers. Great for pots and garden borders. Branching. 24 inches.



Data

Data were collected at 7 sites in 2015.

Trait	Fire-cracker	Rio Carnival	Same
Germinated best	29%	29%	43%
Healthier plants	14	43	43
Bloomed earlier	29	71	0
More blooms	43	29	29
Prettier in garden	38	38	25
Better cut flower	25	25	50
Preference	38	63	
Recommend	88	88	
Mean score ¹	7.50	7.50	
Median score ¹	7.50	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- I would grow both again. Both were full of flowers and the bees loved them!
- Both grew very well. A great color addition to any garden.
- Both produced beautiful flowers.
- Both came up well. Both were beautiful.
- Fun trial! Grandkids loved them!

Comments on 'Firecracker'

- Nearly all seeds germinated (approximately 50% of 'Rio Carnival' seeds germinated). Plants were much taller.
- More branching so there were more blooms.
- 'Firecracker' was almost a foot taller with smaller heads.
- While 'Firecracker' was somewhat gangly with smaller flowers.

- 'Firecracker' germinated but did not reach maturity. They just keeled over and dried up.

Comments on 'Rio Carnival'

- I prefer 'Rio Carnival' due to its compact shorter plants and larger flowers. Prettier color; sturdier stem for cuttings in vase.
- 'Rio Carnival' had very attractive coloration. I liked the petite, colorful heads as a cut flower. As a bonus, the deer didn't eat them until late in the season.
- 'Rio Carnival' was much shorter than I expected, but quite lovely.
- 'Rio Carnival' was more compact with larger blooms.
- 'Rio Carnival' was shorter with bigger heads.
- I liked this more compact cultivar.
- It seemed to keep its upright position better.
- Never got tall or bloomed. Only grew to 4 inches.

Conclusions

Gardeners enjoyed the color and beauty of both cultivars in their gardens. Most preferred 'Rio Carnival'. They were impressed by its large flower heads on compact plants. It was healthy and bloomed quickly. 'Firecracker' was a bit taller and just as beautiful.

'Rio Carnival' had shorter plants but larger flowers.

Best bicolor dwarf sunflower cultivars

Top choice
Rio Carnival

Strong performer
Firecracker

Sunflower, Bicolor Dwf (Summer)

Cultivars

'Firecracker'

55 days. A bright display of red and gold petals on dwarf, 30-inch plants. Branching habit.

'Rio Carnival'

55 days. Teardrop petals with yellow tips and red centers. Great for pots and garden borders. Branching. 24 inches.



Data

Data were collected at 47 sites in 2015.

Trait	Fire-cracker	Rio Carnival	Same
Germinated best	20%	33%	47%
Healthier plants	30	33	36
Bloomed earlier	33	58	9
More blooms	31	41	28
Prettier in garden	38	38	25
Prettier in pot	20	45	35
Better cut flower	37	42	21
Preference	35	65	
Recommend	82	82	
Mean score ¹	6.94	7.41	
Median score ¹	7.50	7.50	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- Emerged on the same day. Both looked great in containers and had wonderful color.
- Both germinated very well. Healthy. Both were very nice!
- They both looked nice.
- Both were very nice.
- Dwarf sunflowers were fun to grow.
- Only about half of the plants were healthy. Neither bloomed before frost, 75 days after sowing.
- They bloomed just before the frost hit.
- Both did well as cut flowers in the vase.
- Both germinated in 4 days.
- Both germinated in 6 days. Leaves were ripped by wind.

Comments on 'Firecracker'

- Healthier leaves. Much taller plant. Dark, full leaves. Big and open bloom. It took longer to bloom but is prettier.
- Grew 36 inches tall compared to 22 inches for 'Rio Carnival'. More branches of blooms and longer stems for cut flowers.
- Looks more like a sunflower whereas 'Rio Carnival' looks more like a zinnia.
- Taller, stronger plants.
- Germinated better and had healthy plants.
- Tall plants and pretty colors.
- Bloomed a day earlier. Had more double or triple headed stems.
- Plants were taller but leaves were less attractive.
- Taller plants with smaller leaves. More but smaller flowers.
- Taller plants; more flowers; more attractive.
- Germinated first. Plants wilted more and needed more water. Heads were smaller and stems were long and skinny—easier to cut.
- Taller plants; bloomed earlier and had bigger flowers.
- Germinated better; grew at least 12 inches taller; produced more blooms.
- Longer, thinner stems; good for cutting.
- Plants are a little taller and showier. Longer stems made for a better cut flower.
- Did not bloom before frost (sown July 4).

'Firecracker' displayed a burst of warm colors. Its plants were taller and better suited for gardens.

Best bicolor dwarf sunflower cultivars

Top choice
Rio Carnival

Strong performer
Firecracker

**‘Rio Carnival’
was a
celebration of
bright flowers
on a compact
plant. It’s
perfect for
containers.**

Comments on ‘Rio Carnival’

- A shorter, fuller plant. Larger flowers. Filled the pot better.
- Plants were healthier even though they took longer to bloom. Its shorter, sturdier stems made it a better choice for flower arrangements.
- Greater seedling vigor. All seeds produced flowers. Strong short stalk. Full, open and broad, beautiful petals.
- Bloomed in 66 days. Blooms looked nice but the leaves and stems browned easily in the heat. They would have done better in a protected spot in the yard; perhaps better for pot culture.
- Bloomed 8 days earlier. Multiple blooms on each plant. Smaller, fuller plant.
- Bloomed earlier and had healthier leaves.
- Better germination; earlier blooming; flowers lasted longer in garden.
- I liked its color variation more.
- Developed brown spots on leaves. Broad leaves.
- Prettier.
- A nice flower head.
- More flowers and darker colored leaves.
- Bloomed 3 weeks earlier. Larger blooms. Multiple blooms on a stem.

- Looked healthier.
- Healthier.
- Seedlings grew slowly at first but then really took off.
- Emerged 2 days earlier and bloomed 3 days earlier.
- Liked its overall look a little better.
- Bloomed 3 days earlier. Blooms were close to one another.
- It bloomed first.
- Bigger heads. More colorful.
- Grew much better.
- Bloomed earlier, more blooms.
- Showed more seedling vigor in our droughty soil.
- Germinated in 3 days.
- Barely grew.

Conclusions

Both cultivars added bright, warm colors to the autumn landscape. ‘Rio Carnival’ was the preferred choice. It germinated well and bloomed earlier. Its short, full plants were perfect for containers and good for gardens. ‘Firecracker’ had a taller habit and was better suited for growing in gardens.

Sunflower, Gold Dwarf (Summer)

Cultivars

'Solar Chocolate Gold'

55 days. Golden yellow petals with a dark disk. Bushy, well-branched plants grow 16–24 inches tall. Pollen free; good for cut flowers.

'Sunny Smile'

55 days. Golden-orange petals with a deep brown center. Dwarf, 6–20-inch plants suited for pot culture. Branching habit. Pollen free.



Data

Data were collected at 40 sites in 2015.

Trait	Solar C. Gold	Sunny Smile	Same
Germinated best	34%	16%	50%
Healthier plants	32	24	44
Bloomed earlier	19	58	23
More blooms	47	23	30
Prettier in garden	43	22	35
Prettier in pot	38	29	33
Better cut flower	57	14	29
Preference	48	52	
Recommend	81	71	
Mean score ¹	7.13	7.27	
Median score ¹	7.00	7.50	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- It was nice to see such a yellow bloom toward the middle of autumn.
- I will plant these cultivars again next fall in the garden and pots. Beautiful fall flowers.
- Both were pretty and just the right size!
- I liked their appearance equally. Both grew much shorter than expected.
- Both were very nice.
- Both had strong stems.
- Both germinated quickly and beautifully. Healthy plants.
- Very high germination rate. Neither grew well in a container.
- I would not recommend either cultivar for container planting. No blooms.

- Looked fine in the garden.
- Both were healthy although there was some insect damage on both cultivars.
- Blooms were bright and happy. Both were great in vases/arrangements.
- Both were pretty. Both were really nice as cut flowers.
- Both emerged the same day.
- Both germinated well.
- They germinated and bloomed at the same time.
- They both came up fast and strong. Then a critter got them.

Comments on 'Solar Chocolate Gold'

- Gorgeous!
- Taller plants and longer stems.
- Produced taller stems; better for cutting.
- Produced more flowers and a more golden color.
- Plants grew 4 inches taller. Bloomed a couple days earlier and its coloring was prettier.
- Taller plants. Brighter blooms.
- Taller plants. Produced a second bloom.
- Larger, stronger plants.
- More uniform height.
- Taller plants.
- Centers were very dark brown.
- More attractive colors.
- Was a little limp when used as a cut flower.
- Longer petals; fuller and deeper colored leaves; multiple flowers on a stem.

'Solar Chocolate Gold' was superior in the garden and superior as a cut flower.

Best gold dwarf sunflower cultivars

Top choice
Solar Chocolate Gold

Strong performer
Sunny Smile

**‘Sunny Smile’
bloomed
earlier. Its
short, compact
plants were
well suited for
growing in
containers.**

More Comments on ‘Solar Chocolate Gold’

- They performed much better.
- More resilient; multiple blooms per stem; taller plants.
- Performed better in the container.
- Germinated 3 days earlier. Withstood heat better. A beautiful dwarf sunflower.
- More plants came up. More flowers. Plants looked a little scrawny in comparison.
- Better germination (92% compared to 48% for ‘Sunny Smile’). Longer stems; smaller leaves. Plants grew 18 inches tall, compared to 15–18 for ‘Sunny Smile’.
- More seeds sprouted.
- Leaves had more holes.
- Germinated in 4 days. Leaves developed spots.
- Slower to grow.
- Budded and appeared ready to bloom—but it never did!

Comments on ‘Sunny Smile’

- Plants were healthier. Bloomed earlier. More blooms and branches. The petals were beautiful. More attractive in our garden.
- Bloomed 2 days earlier. Its shorter plants made them look fuller and the blooms stand out more. A pretty flower. Every plant grew multiple flowers.
- Shorter plant with bigger heads of flowers. One large head with a few smaller heads make a nice vase of flowers.
- Leaves look better; fuller. These would look nice in a container or at the front of a garden.
- Denser, but shorter petals. Shorter plant.
- More flowers.
- Looked healthier. More blooms and leafier. Kids liked it better.
- Plants were shorter and fuller. Flowers lasted longer.
- Brown spots on leaves. Blooms opened up wide.
- Germinated first. Bloomed a week earlier. Looked better when grown in a container. Did not get as many brown spots.

- Better germination (90% compared to 81% for ‘Solar Chocolate Gold’). Bigger blooms.
- Suffered from more bug damage. Grew less than 12 inches tall. Petals were more of a golden orange than a true yellow—nice variation.
- Bloomed in 56 days compared to 61 days for ‘Solar Chocolate Gold’.
- Bloomed 5 days earlier and more buds actually bloomed. I liked the color of its blooms better.
- Had a few brown spots on leaves. Bloomed 62 days after sowing.
- Suffered from insect damage.

Conclusions

The golden yellow petals of ‘Solar Chocolate Gold’ contrasted nicely with its dark brown disks. It produced more blooms and was prettier in the garden. Its stems were longer and good for cutting. ‘Sunny Smile’ had cheery, golden yellow petals and bloomed earlier. Its compact habit was well suited for container gardening.

Zinnia, Speckled

Cultivars

'Peppermint Stick Mix'

A bright display of red and gold petals on dwarf, 30-inch plants. Branching habit.

'Salsiando Mix'

Teardrop petals with yellow tips and red centers. Great for pots and garden borders. Branching. 24 inches.



Data

Data were collected at 30 sites in 2015.

Trait	P'mint Stick	Salsi-ando	Same
Germinated best	27%	30%	43%
Healthier plants	27	31	42
Bloomed earlier	28	68	4
More blooms	30	44	26
Prettier in garden	23	42	35
Better cut flower	36	14	50
Preference	50	50	
Recommend	63	70	
Mean score ¹	6.48	7.15	
Median score ¹	7.00	8.00	

¹Rated from 1 to 10; 1 = poor and 10 = excellent.

General Comments

- I loved that it looked great with very little effort on my part through the end of the season. The plants were healthy and colorful through the first frost. Petal color was inconsistent; some flowers were a solid color, some were speckled, and some were half and half.
- Both had nice, tall, sturdy plants. These cultivars were completely different but both were nice.
- Both had good germination rates and looked healthy. Lots of flowers!
- Equal germination. Similar in health. Once both varieties were blooming there were numerous flowers for cutting.
- Both work as cut flowers.
- Very good germination.
- Both were really pretty!
- Liked both.

- I am an avid zinnia grower and save seeds from year to year; however I did not save seeds from either of these two varieties. I was disappointed in the color, pattern and size of the blooms compared to the traditional zinnia.
- Only about half of the seeds I planted germinated (sown May 20). I love the look of both of these.
- Both germinated poorly. Healthy plants. Both make a nice cut flower.
- Very poor germination.

Comments on 'Peppermint Stick Mix'

- Bigger, leafier plants. Bigger blossoms. Toward the end of summer the plants became heavy. Better germination and, despite the name, very different colors.
- Plants branched out more and stayed upright. Hardier in a vase.
- 'Peppermint Stick Mix' had a lot of variations in color patterns. I preferred the color and pattern of these blooms. They also performed well in a dry summer.
- Plants were taller and fuller. Flowers had brighter colors.
- I love these! Every plant had a nice big head. I've grown these before and they are so pretty. I always look forward to seeing how long they last.
- I enjoyed its variety of colors. It really popped!
- Germinated fast. I like its blossoms. Very attractive.

'Peppermint Stick Mix' bloomed earlier. Gardeners liked the variety of colors and patterns in its blooms.

Best speckled zinnia cultivars

Top choice
Peppermint Stick Mix

‘Salsiando Mix’ showed vibrant blooms on sturdy plants.

More Comments on ‘Peppermint Stick Mix’

- More striking.
- Blossoms were very pretty.
- Nice flowers.
- I did not like its colors.
- Subtle stripes on flowers.
- Neither were great flowers but ‘Peppermint Stick Mix’ was better.
- Somewhat drabber in color.
- Only one flower and it was yellow.
- Low germination.

Comments on ‘Salsiando Mix’

- It had a huge variety of vibrant colors. The blossoms were large and longer lasting. It had long stems that were better for cut flowers.
- ‘Salsiando Mix’ performed better in my garden.
- Flowers were more vibrant in color and plants were more attractive.
- Excellent variety of colors.
- I loved its variety of flower colors.
- More colors. Prettier flowers.
- Beautiful flowers. Very sturdy plants that held up very well to bad weather. Its flowers were very attractive.
- Bloomed earlier by a few days.
- Plants put out multiple branches and flowers of mixed colors.
- Lasted a long time as a cut flower. Beautiful!
- Bloomed two weeks earlier.
- Plant was fluffier. Flowers came sooner. Had more attractive flowers.
- I’m not really fond of its fall-colored flowers in summer.
- Brighter colors.
- ‘Salsiando Mix’ had more flowers that matched the red/white coloring I wanted. There were more plants that germinated and lasted through the season.
- ‘Salsiando Mix’ bloomed 2 weeks earlier than ‘Peppermint Stick Mix’. ‘Salsiando Mix’ had more blossoms and stood up to the wind better.
- Smaller flowers.

- ‘Salsiando Mix’ was gangly and had high brittle-snap counts.
- I liked ‘Salsiando Mix’ better early in the season—loved the color and the bloom height variability. By the end of the season, the plants had mildew and the flowers were brown.
- Much better germination in cool soil. There was typically one bloom per plant.
- Never germinated.

Conclusions

Gardeners enjoyed but were not thrilled by these unique zinnias. The sturdy, compact plants of ‘Salsiando Mix’ bloomed early and were filled with vibrant flowers. ‘Peppermint Stick Mix’ bloomed in a wide array of colors and patterns; some gardeners were looking for more red/white classic peppermint blooms.

Appendix 1

Welcome Letter

Dear Gardener,

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:

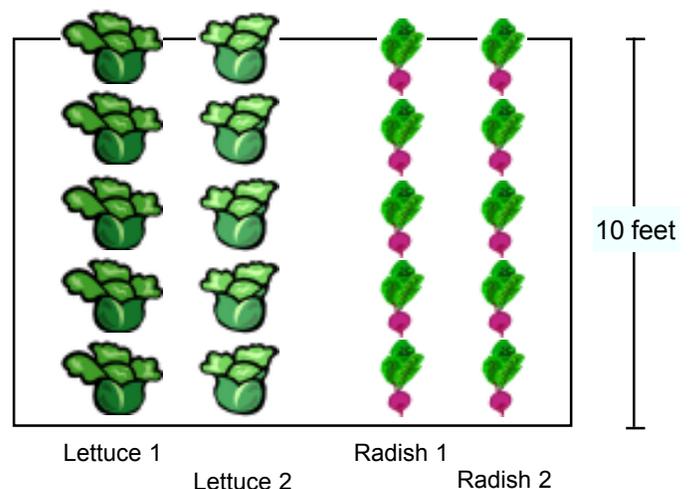
1. Each trial compares two varieties. **You must plant both varieties.**
2. To make it a fair comparison, you need to **treat both varieties in the same manner.** They should get the same amount of sunlight and general care (watering and fertilizing).
3. We want to see how these varieties perform under real-life home garden situations. The seed packets have 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 row marker with string. There is a 10-foot space between the two marks on the string. It's okay if you don't have enough space for 10-foot rows, but try to get a fair look at both varieties. Look at the diagram below. Notice 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. I strongly encourage you to **make a plot diagram after you are done planting** for your future reference in case the plot labels get removed accidentally (this happens a lot with kids in the garden).
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 Zeus
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 Zeus Both Neither

Please write any additional comments on back. They are very helpful!

Appendix 3

Seed Sources

The following are a few sources where seeds of the cultivars tested in 2015 may be found. This list is not meant to be a complete list; many other seed companies offer these cultivars. 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 State University Extension Service is implied.

Key:

Bk = Baker Creek	Bu = Burpee	Fe = Fedco	Gu = Gurney's
Ha = Harris	HF = Henry Field's	HP = HPS	Jh = Johnny's
Jr = Jordan	Ju = Jung	Kz = Kitazawa	MT = Moose Tubers
MV = Mtn Valley	MZ = Maclure & Zim.	Na = Nagel's	NE = NE
Os = Osborne	Pa = Park	Pi = Pinetree	PR = Prairie Road
Re = Reimer	SS = Seed Savers	St = Stokes	Sw = Swallowtail
Te = Territorial	Vr = Vermont Bean	Vs = Veseys	

BEAN. **Bowie:** Ha, St; **Sybaris:** Jr, St.
Crockett: Ha, Os, Te, Vr; **Serengeti:** Pi, Vr.
Cobra: Os, Pa; **Stringless Blue Lake S-7:** HP, Ju, MV.

BEET. **Boldor:** Fe, Gu, Jh, Te, Vs; **Touchstone Gold:** Fe, Gu, Ha, Jh, Os, Pa, Pi, Sw.

CARROT. **Cumbre:** Os; **Hercules:** Jh, Re.
Goldfinger: Ha, Os, St; **Nelson:** Fe, Jh, Ju, Pa, Pi, Te, Vr.

CORN. **Temptation:** Jr, Os, Pa, St;
Trinity: Jh, Jr, Ju, NE, St, Vr. **XTH20173:** Ha, Jh, Os, St; **Xtra-Tender 274A:** Ha, Jr, St. **SSW 2001MR:** Ha, Os; **XTH3674:** St.
Vision XMR: Ha, Jh, Os, St; **XTH1273:** Ha, Jr. **Allure:** Ha, Jh, Jr, St, Te, Vs; **Cuppa Joe:** Ha, Jr, Ju, Os, Vs.

CUCUMBER. **Sweeter Yet:** Bu, Gu, HP, Ju, MV, Re, Vs; **Tasty Green:** Gu, Ha, HF, HP, Jr, Ju, Kz, MV, NE, Os, Pa, Re, St, Vr.
Homemade Pickles: HP, Jr, Ju, NE, Pa, Pi, PR, Re, Sw, Te, Vr; **Sassy:** Fe, Gu, Ha, HF, Os, St. **Raider:** Ha, Jr, Re, Te;
Talladega: HP, Jr, St, Vs. **Mercury:** Os, Vs; **Muncher:** HP, Ju, MV.

GREENS. **Maruba Santoh:** Fe, Kz; **Tokyo Bekana:** Fe, Jh, Kz.

KALE. **Red Russian:** Ba, Bu, Fe, Ha, HF, Jh, Jr, Kz, MV, NE, Os, Pi, Re, SS, St, Te;

Russian Frills: Fe. **Siberian:** Ba, Jh, Kz, Pi, Re, Te; **White Russian:** Fe, Ha, NE, Pa, Pi, Te.

LETTUCE. **Green Star:** Jh, Os; **Tropicana:** HF, Jh, Os. **Danyelle:** Ha, NE. **Mascara:** SS, Te. **Dragoon:** Jh, Os; **Starhawk:** Gu, Os.

MELON. **Aphrodite:** Bu, Ha, HP, Jr, Ju, Os, St, Vr; **Athena:** Fe, Gu, Ha, HF, HP, Jh, Jr, Ju, MV, NE, Os, Pi, St, Te. **Origami:** Os; **Wrangler:** Ha, Jh. **Arava:** Fe, Jh; **Sigel:** NE.

PEA. **Lincoln:** Bk, Bu, Fe, Gu, Ha, Jr, Ju, MV, NE, Pa, Pi, Re, St, Te, Vr; **Mr. Big:** Bu, HP, Os, Pa, Re, St, Vr, Vs. **Sugar Ann:** Bk, Fe, Gu, Jh, Jr, Ju, MV, NE, Os, Re, Te; **Sugar Lace II:** Jr, Pa, Pi, Vs. **Oregon Sugar Pod 2:** Bk, Bu, Fe, Gu, Ha, HF, Jr, Kz, MV, NE, Os, Pi, Re, Te, Vr, Vs; **Sweet Horizon:** Os, Te.

POTATO. **Yukon Gem:** MT; **Yukon Gold:** Bu, Gu, HF, Jh, Ju, MT, Pa, Pi, SS, Te. **Carola:** MT, Pa, Pi, SS; **Satina:** Jh, MT. **German Butterball:** Bu, Gu, Ju, MT, Pa, Pi, SS, Te; **Yellow Finn:** HF, MT. Peter Wilcox: Jh, MT; **Purple Viking:** Ju, MT, Pa, SS, Te. **Chieftain:** MT, Pi; **Dark Red Norland:** HF, Jh, Ju, MT.





Seed Sources (continued)

PUMPKIN. Early Dakota Howden: PR; Howden XXX: Os. Captain Jack: Ha, Os, Pa, Vs; Howden Biggie: Ha, Jr, Ju, MV, Os, Re, St. Big Moose: Ha, Jh, Os, St, Te; Prizewinner: Ha, Jr, Ju, Os, Re, St.

SPINACH. SV2157VB: Ha, Jr, Os; Tyee: Ha, Ju, MV, Pa, Pi, Vr. Olympia: Fe, Ha, Ju, Os, Sw, Te; SV3580VC: Os.

SQUASH. Multipik: Gu, Ha, Jh, Jr; Zephyr: Fe, Gu, Jh. Noche: Jh, Os, St; Raven: Fe, Jh, Pa, Pi, Te, Vr.

SWISS CHARD. Orange Fantasia: Os, Pi, Re, Vs; Oriole: Bk, Jh.

WATERMELON. Shiny Boy: Ha, Ju, MV, Pa, Vr; Sweet Dakota Rose: Bk, Fe, PR.

BASIL. Dolly: Jh; Genovese: Bk, Bu, Jh, Jr, MV, NE, Os, Pa, PR, Re, SS, St, Sw.

CILANTRO. Calypso: Bu, Jh, Ju, Os, Pa, Sw, Vs; Santo: Ha, Jh, Ju, NE, Os, Pa, St, Sw, Te, Vs.

DILL. Diana: Ju, St; Hera: Bu, Jh, Te.

ORNAMENTAL BEAN. St. George: Te, Vr; Scarlet Runner: Bk, Bu, Fe, MV, Pi, PR, SS, St, Vr, Vs.

COSMOS. Cosimo Purple Red-White: Bk, St; Picotee: Fe, Ha, HP, Os, Pi, St, Sw. Diablo: SS; Tango: Fe.

GLADIOLUS. Blue Sky: MZ, Na, Pi; Land O' Lakes: Na, Pi. Olympic Flame: Ju, Na; Sun Kissed: Ha, Ju, MZ, Na, Pi. Chit Chat: Ha, Ju, Na, Pi; Pink Event: Na, Pi. Purple Flora: Ju; Violetta: MZ, Pi. Flora Red: Ha, Ju, MZ; Oscar: Na, Pi. Priscilla: Ha, Na, Pi; Wine and Roses: Na. Alaska: Ha, Ju, MZ; White Prosperity: Na, Pi. Bananarama: Ha, Na, Pi; Nova Lux: Na. Fiesta: Na, Vs; Jester: Na.

SUNFLOWER. Sunrich Orange Summer: Ha, Jh, St, Sw; Vincent's Choice: Ha, Jh, St, Sw. Firecracker: Jh, Sw, Vs; Rio Carnival: Ha. Solar Chocolate Gold: Ha, Te; Sunny Smile: Jh, Jr, Os, Pa, Sw.

ZINNIA. Peppermint Stick Mix: Bk, Ju, Pa, Pi, St, Sw; Salsiendo Mix: St, Sw.

Appendix 4

Acknowledgements

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Ken and Shelley Anderson	Brianna Erp	Asher and Marie Hylton
Orren Anderson	Abigail and Natalie Evensen	Diane and Zeke Isakson
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Cultivar 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.

Making a difference

NDSU EXTENSION SERVICE

NORTH DAKOTA STATE UNIVERSITY

Gardeners try new varieties and reap higher yields

The Situation

Over 93,000 households in North Dakota grow a garden—producing vegetables worth \$56 million. The first step in growing a productive garden is to select a superior variety. A superior variety can lead to major increases in yield, food quality, and protection against plant diseases.

Extension Response

A team of 275 families across the state was formed to evaluate promising vegetable, herb and flower varieties in home gardens. These volunteers evaluated 110 varieties for plant vigor, health, earliness, yield, and food/ornamental quality.

Trials consisted of side-by-side comparisons of two varieties. In most cases we evaluated a new variety versus a well-known variety. An example would be comparing the promising 'Yukon Gem' potato versus 'Yukon Gold', an industry standard.

Results from over 1,000 trials were analyzed. No other program in the USA can match this program for its number of participants and varieties tested.

Impacts

An online survey was conducted to document the impacts of the project. One hundred and forty-six of 255 online gardeners (57%) responded. The survey revealed major impacts during the 2014 season:

- 98% of families were introduced to new varieties.
- 85% of families reported more productive gardens.
- 77% of families who grew vegetables reported healthier diets.

Looking ahead, 94% of families reported their participation in the project will change the way they grow their garden in the future. These persons will be more likely to try new types of vegetables. They will pay more attention to the differences among varieties, including their yields and flavors. They will pay more attention to cultural practices, such as plant spacing and disease management.

An evaluation of this research project's impact on children shows positive impacts:

- 76% of children in families who grew vegetables improved their diets.
- 73% of children increased their level of physical activity.
- 73% of children sharpened their skills in science and math.

These impacts on youth are noteworthy as the Centers for Disease Control and Prevention reported 92% of children in North Dakota do not eat enough vegetables for a healthy diet. An estimated 78% of children do not get enough physical activity (*North Dakota: State Nutrition, Physical Activity and Obesity Profile, 2012*).

Results from testing are presented in educational programs conducted across the state. Over 1,200 gardeners attend these programs every spring. More information and results are published at www.ag.ndsu.edu/homegardenvarietytrials/.

Feedback

"ND gardening trials are the best. The preparation info is very helpful and the trial results have changed the way I garden from year to year."

"We have never planted lettuce before. It will now be a regular in our garden."

"The project has encouraged us to try more varieties. Each year our garden has grown bigger because of it."

"We were growing the old standards but found many of the newer varieties superior in production and taste."

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Vegetable Cultivars for North Dakota

Updated for 2016

The finest cultivars will lead to the finest gardens. North Dakota State University and its team of over 200 gardeners evaluate promising cultivars every summer. The following cultivars have excelled in these and other trials in the Midwest:

Selecting an outstanding cultivar can lead to a bountiful garden.

ASPARAGUS. Jersey Giant, Jersey Knight, Jersey Supreme, Purple Passion.

BEAN. *Bush:* Blue Lake 274, Crockett, Derby, Espada, Greencrop, Jade, Maxibel, Provider, Royal Burgundy, Serengeti, Strike. *Dry:* Arikara Yellow, Great Northern. *Lima:* Fordhook 242, Eastland. *Pole:* Fortex, Orient Wonder, Stringless Blue Lake S-7. *Soybean:* Envy. *Wax:* Carson, Gold Rush, Rocdor, Soleil.

BEET. Boldor, Bull's Blood, Detroit Dark Red, Early Wonder, Merlin, Red Ace.

BROCCOLI. Packman.

BRUSSELS SPROUTS. Jade Cross E.

CABBAGE. *Chinese:* Blues. *Head:* Early Jersey Wakefield, Golden Acre, Ruby Perfection, Stonehead.

CARROT. *Orange:* Cumbre, Goldfinger, Hercules, Laguna, Mokum, Nelson, New Kuroda, Scarlet Nantes. *Other:* Chablis Yellow, Purple Haze, Rainbow.

CAULIFLOWER. Amazing, Cheddar, Snow Crown, Violet Queen.

CORN. *Normal:* Butter & Sugar, Jubilee, Seneca Horizon. *Sbrunken kernel:* Vision, Xtra-Tender 274A and 277A. *Sugary enhanced:* Bodacious, Delectable, Luscious, Sugar Buns, Temptation. *Synergistic:* Allure, Cuppa Joe, Honey Select.

CUCUMBER. *Pickling:* Alibi, Calypso, Eureka, Homemade Pickles, Little Leaf H-19. *Slicing:* Dasher II, Diva, Fanfare,



General Lee, Muncher, Orient Express II, Raider, Salad Bush, Straight Eight, Sweet Slice, Sweet Success, Tasty Green.

EGGPLANT. Black Beauty, Dusky, Fairy Tale, Millionaire, Orient Express.

GREENS. Hon Tsai Tai, Joi Choi, Komatsuna, Mizuna, Mei Qing Choi, Osaka Purple, Red Giant, Tatsoi, Tendergreen, Vegetable Amaranth.

KALE. Black Magic, Red Russian, Vates, White Russian, Winterbor.

KOHLRABI. Early White Vienna, Kolibri, Kossak, Winner.

LETTUCE. *Leaf:* Deer Tongue, New Red Fire, Red Sails, Red Salad Bowl, Red Velvet, Royal Oakleaf, Salad Bowl, Slobolt, Tropicana. *Bibb/Crisphead:* Buttercrunch, Nancy, Nevada, Red Cross, Sierra, Skyphos. *Romaine:* Crisp Mint, Green Forest, Starhawk.

MELON. *Muskmelon:* Athena, Goddess, Solstice, Superstar. *Specialty:* Arava, Earli-Dew, Passport, Sun Jewel.

OKRA. Cajun Delight, Carmine Splendor, Clemson Spineless.

Cultivar selection checklist:

- ✓ Early maturity
- ✓ Flavorful
- ✓ Resists diseases
- ✓ Productive
- ✓ Widely adapted (cool soil, dry weather)

ONION. Ailsa Craig, Candy, Copra, Sweet Sandwich, Walla Walla.

PEA. *Shell:* Early Frosty, Green Arrow, Knight, Lincoln, Little Marvel, Maestro Improved, Wando. ***Snap:*** Sugar Ann, Sugar Sprint, Super Sugar Snap. ***Snow:*** Oregon Giant, Oregon Sugar Pod II, Sweet Horizon.

PEPPER. *Bell:* Bell Boy, Early Sunsatation, Jupiter, New Ace, North Star, Orange Blaze. ***Frying/Roasting:*** Carmen, Flamingo, Giant Marconi, Gypsy. ***Hot:*** Cheyenne, Early Jalapeno, Garden Salsa, Hot Paper Lantern, Hungarian Hot Wax, Mariachi, Mucho Nacho, Tiburon.

POTATO. Dark Red Norland, Kennebec, Peter Wilcox, Purple Viking, Red Gold, Satina, Superior, Yukon Gem, Yukon Gold.

PUMPKIN. *Cooking:* Small Sugar, Rouge Vif D'Etampes. ***Jack-o'-lantern:*** Autumn Gold, Cronus, Early Dakota Howden, Gladiator, Howden, Howden Biggie, Magic Lantern, Neon, Orange Smoothie. ***Giant:*** Big Moose, Dill's Atlantic Giant.

RADISH. *Standard:* Amethyst, Cherry Belle, Easter Egg II, French Breakfast, Pretty in Pink, Rover, White Icicle.

RUTABAGA. American Purple Top.

SPINACH. Bloomsdale Long Standing, Melody, Olympia, SV2157VB, Tye.

SQUASH, SUMMER. *Crookneck:* Sundance. ***Scallop:*** Flying Saucer, Sunburst. ***Straightneck:*** Multipik, Zephyr. ***Zucchini:*** Easypick Gold, Gold Rush, Green Tiger, Portofino, Raven, Spineless Beauty.

SQUASH, WINTER. *Acorn:* Carnival, Table Ace, Table King. ***Buttercup:*** Bon Bon, Burgess. ***Butternut:*** Early Butternut, Waltham. ***Delicata:*** Cornell's Bush Delicata. ***Hubbard:*** Blue Magic. ***Kabocha:*** Ambercup, Sunshine, Sweet Mama.

SWEET POTATO. Beauregard.

SWISS CHARD. Bright Lights, Lucullus, Oriole, Peppermint, Rhubarb.

TOMATO. *Cherry:* Juliet, Sun sugar, Supersweet 100, Sweet Baby Girl, Yellow

Pear. ***Fresh market:*** Big Beef, Bush Early Girl, Celebrity, Early Girl, Goliath, Mountain Fresh Plus. ***Paste:*** Roma VF, Viva Italia. ***Heirloom:*** Brandywine, Cherokee Purple, Striped German, Stupice, Wisconsin 55.

TURNIP. Purple Top White Globe, Tokyo Cross.

WATERMELON. *Seeded:* Early Moonbeam, Sugar Baby, Sweet Dakota Rose. ***Seedless:*** Millionaire.

Seed Sources

The following is a sample of companies offering seeds. This list is provided for educational purposes only; no discrimination is intended and no endorsement is implied.

Baker Creek Heirloom Seed, 2278 Baker Creek Rd., Mansfield, MO 65704; www.rareseeds.com; 417.924.8917.

Burpee Seed, 300 Park Ave., Warminster, PA 18974; www.burpee.com; 800.888.1447.

Fedco Seeds, PO Box 520, Waterville, ME 04903; www.fedcoseeds.com; 207.426.9900.

Gurney's Seed and Nursery, PO Box 4178, Greendale, IN 47025; www.gurneys.com; 513.354.1492.

Harris Seeds, 355 Paul Rd, PO Box 24966, Rochester, NY 14624; www.harriseseeds.com; 800.544.7938.

Henry Fields, PO Box 397, Aurora, IN 47001; www.henryfields.com; 513.354.1494.

Horticultural Products and Services, W. Stroud St., Randolph, WI 53956; www.hpsseed.com; 800.297.3123.

Johnny's Selected Seeds, 955 Benton Ave., Winslow, ME 04901; www.johnnyseeds.com; 877.564.6697.

Jung Seed, 335 S. High St., Randolph, WI 53956; www.jungseed.com; 800.297.3123.

Kitazawa Seed, 201 Fourth St., #206, Oakland, CA 94607; www.kitazawaseed.com; 510.595.1188.

Mountain Valley Seed, 175 W. 2700 S., Salt Lake City, UT 84115; www.mvseeds.com; 801.486.0480.

Osborne Seed, 2428 Old Hwy 99 S. Rd., Mt. Vernon, WA 98273; www.osborneseed.com; 360.424.7333.

Pinetree Garden Seeds, PO Box 300, Gloucester, ME 04260; www.superseeds.com; 207.926.3400.

Prairie Road Organic Seed, 9824 79th St. SE, Fullerton, ND 58441; www.prairieroadorganic.co; 701.883.4416.

Seed Savers Exchange, 3094 N. Winn Rd., Decorah, IA 52101; www.seedsavers.org; 563.382.5990.

Stokes Seeds, PO Box 548 Buffalo, NY 14240; www.stokeseeds.com; 800.396.9238.

Territorial Seed, PO Box 158, Cottage Grove, OR 97424; www.territorialseed.com; 800.626.0866.



All gardeners are invited to join our team of backyard researchers. Go to www.ag.ndsu.edu/homegardenvarietytrials

NDSU EXTENSION SERVICE

Written by Tom Kalb, Extension Horticulturist, North Dakota State University, email: tom.kalb@ndsu.edu. The author gratefully acknowledges the efforts of over 1,000 gardeners in North Dakota and nearby states who evaluated these cultivars.

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For more information on the North Dakota Home Garden Cultivar Trials Program, go to www.ag.ndsu.edu/homegardenvarietytrials/

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