



**North Dakota
Home Garden
Variety Trials
2011 Results**

NDSU EXTENSION SERVICE

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Chapter 1

Introduction

The Need for Better Research

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

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

The benefits of selecting superior varieties for gardens are great. The National Gardening Association (NGA) estimates approximately one-third of households in North Dakota grow a vegetable garden.¹ Thus, there are approximately 86,000 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 \$45 million per year in their gardens.

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

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

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

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

The Bottom Line

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

Objectives

This program has three major objectives:

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

Selecting Varieties to be Tested

Seed catalogs are carefully studied to identify varieties that are widely available and appear promising for North Dakota. In many situations, a promising new variety is compared with a variety that is widely grown in the state. In 2011, 60 trials were established.

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

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

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

Preparation of Seed Packets

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

Distribution of Seeds and Supplies

This program is promoted by North Dakota State University (NDSU) Extension Service faculty and staff across the state. Information is also available at the web site <http://www.dakotagardener.com>. Interested gardeners in Spring 2011 were allowed to participate in up to five trials. The fee was \$1 per trial along with \$2.50 for handling and postage. Any interested child was allowed to receive seeds of one trial for free.

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

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

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

Quantity and Quality of Participation

In 2011, approximately 172 households submitted results from their trials (this accounts for approximately 75% of households who received seeds). Results from approximately 820 research trials were submitted. Data were obtained in 41 of the state's 53 counties (Figure 2). No other program in the USA can match this program for its scope of participation and number of varieties tested.

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

Weather in 2011

The growing season of 2011 will be remembered as a miserable one for most of the state's gardeners, especially in the north and central parts of the state. This region, which includes Minot and Bismarck/Mandan, experienced historic levels of flooding due to excessive precipitation in winter and spring (Figure 1). Many gardens were washed out or never planted. Cool spring temperatures further delayed planting or caused seedlings to rot in the damp ground.

Crops that survived the disastrous spring generally did well in the warm, moist summer. Warm, dry conditions accelerated the maturation of crops in the garden during late summer and fall.

Much of the state suffered a light frost in mid-September, approximately two weeks earlier than usual. Crops that survived this scare had another month of growing season until a hard frost hit the state in mid-October, which is normal.

Compiling the Data

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

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

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

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

Reporting the Final Results

The final results are reported to interested seed companies and NDSU educators. Newspaper and online columns are written to report findings and public presentations are made to garden clubs and University faculty. Participating gardeners receive a summary of the results (see page 4) and a certificate to recognize their participation in the program.

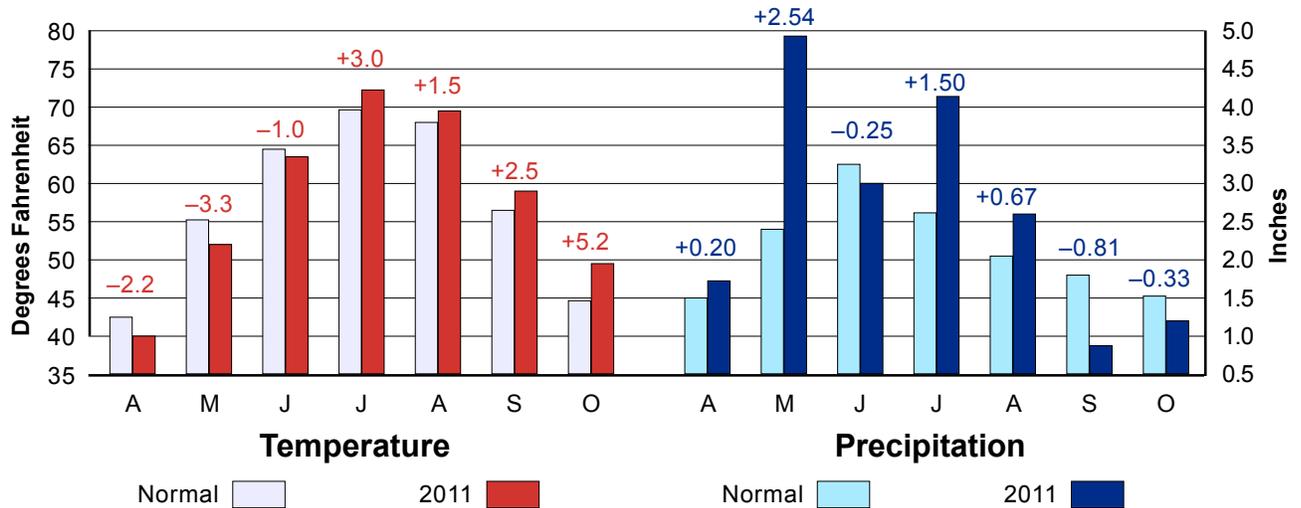


Figure 1. Composite mean monthly air temperatures and precipitation amounts in 2011 and normal (1971–2000) years for key locations (Fargo, Mandan, Minot, and Dickinson) scattered across the state. The growing season was cold and very wet in spring, favorable in summer, and hot and dry in fall. Source: North Dakota Agriculture Weather Network.

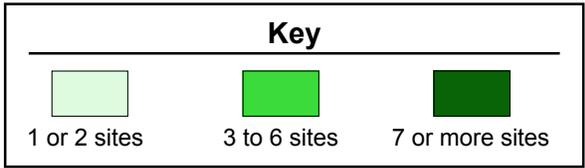
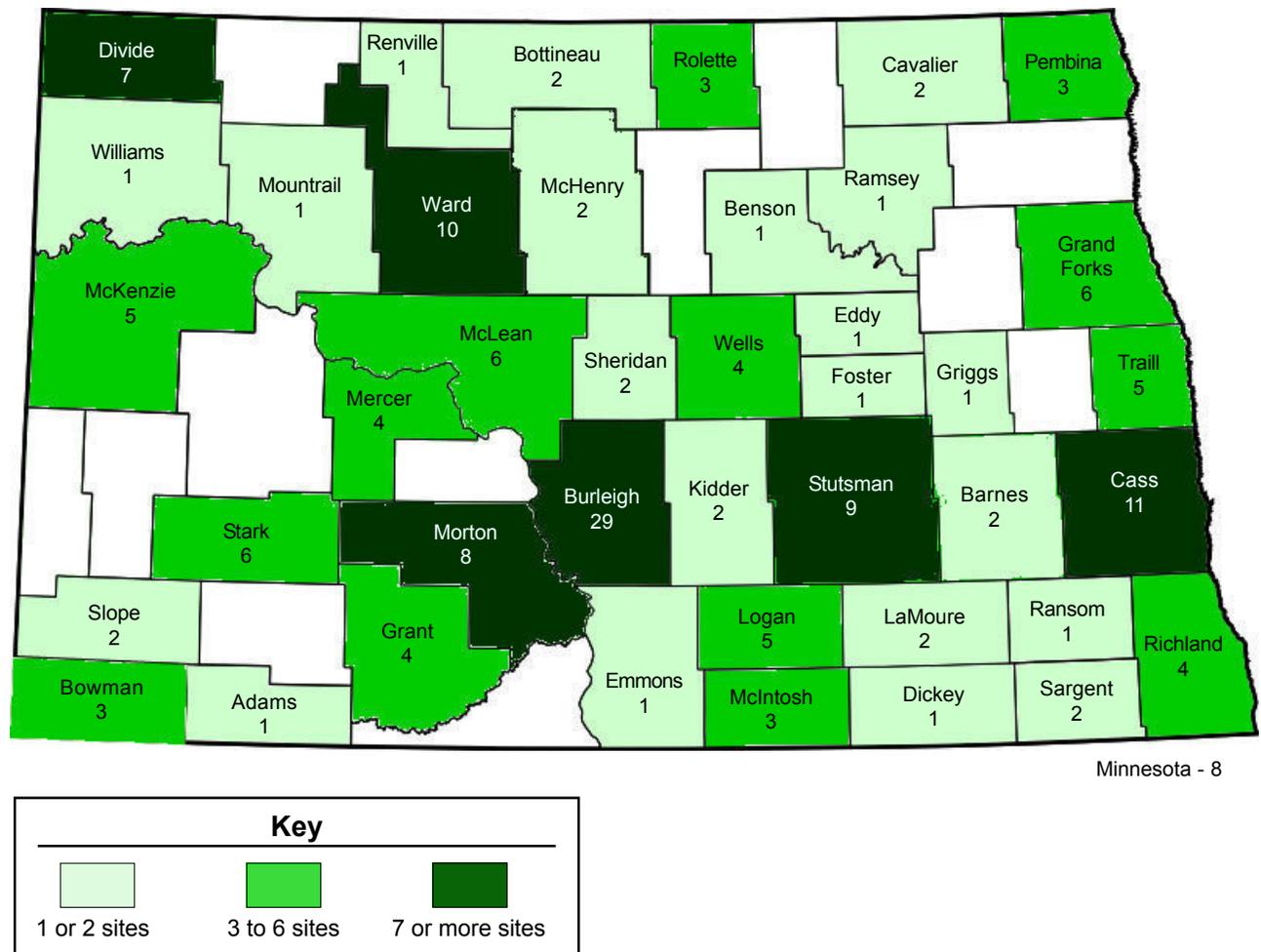


Figure 2. Households reporting variety trial results in 2011.

Chapter 2

Summary of Results

Over 200 households across North Dakota and northern Minnesota evaluated 120 varieties of vegetables and flowers in their gardens in 2011. Extremely wet, cold weather in spring led to delayed planting, spotty germination, and reduced yields in many cases. Several gardens were washed out by historic levels of flooding. Conditions in summer were generally favorable and unusually warm temperatures in autumn accelerated the maturation of crops. A light frost hit pockets of the state in mid-September (two weeks earlier than normal), but the first hard frost struck most gardens in mid-October, which is normal.

In each of the trials, gardeners compared varieties for a series of traits including germination rate, plant health, earliness, yield, and quality of harvested product. See individual trial reports for this data. Gardeners rated the performance of each variety using a scale of 1 to 10, with 1 = poor and 10 = excellent. Gardeners noted which of the varieties they preferred (Pref) and which of the varieties (none, one, or both) they would recommend (Rec) to other gardeners. The following is a summary of the data, including our conclusions for each trial:



1. Bean, Dry

Developed in North Dakota, 'Great Northern' showed superior vigor and much higher yields. Its creamy white seeds cooked quickly and were mild. Every gardener preferred it over 'Keneary Yellow', a popular bean of the Northeast.

Variety	Pref	Rec	Rating
<i>Great Northern</i>	100	100	8.33
<i>Keneary Yellow</i>	0	0	6.17
			(6 sites)



2. Bean, Green Bush

Gardeners were delighted with the long, tender pods of both varieties. Yields were impressive and continuous until frost. 'Jade' pods were darker green and beautiful. 'Derby' showed more reliable seedling vigor; its pods were very straight.

Variety	Pref	Rec	Rating
<i>Derby</i>	48	77	7.69
<i>Jade</i>	52	85	8.12
			(30 sites)



3. Bean, Green Pole

'Fortex' germinated better, grew stronger, matured earlier, and produced higher yields. Its pods were very long (up to 10 inches), stringless, and delicious. Some gardeners preferred the blue-green color and taste of 'Kentucky Blue'.

Variety	Pref	Rec	Rating
<i>Fortex</i>	78	82	7.18
<i>Kentucky Blue</i>	22	64	6.73
			(12 sites)



4. Bean, Purple

Gardeners liked the beauty of both varieties. Several years of testing show these varieties to be quite similar, giving a slight edge to 'Royal Burgundy' for earliness and 'Royalty Purple Pod' for yield. Yields and flavor were acceptable.

Variety	Pref	Rec	Rating
<i>Royalty Burgundy</i>	37	75	7.65
<i>Royal Pur. Pod</i>	63	88	7.98
			(24 sites in 2010 and 8 sites in 2011)



5. Bean, Vegetable Soybean

'Envy' again proved it is the best variety for the north. It was healthier, earlier to mature, and much more productive. Its pods were more attractive, flavorful, and often filled with three seeds (compared to two seeds for 'Beer Friend' pods).

Variety	Pref	Rec	Rating
<i>Beer Friend</i>	0	40	4.50
<i>Envy</i>	100	100	7.75
			(7 sites)



6. Bean, Wax

Gardeners liked both varieties and were especially impressed with their productivity. Both had healthy plants, bright yellow pods, and high yields. Some gardeners preferred the flavor of 'Gold Rush'.

Variety	Pref	Rec	Rating
<i>Gold Rush</i>	60	80	8.80
<i>Slenderwax</i>	40	80	8.00
			(5 sites)



7. Beet

Gardeners were pleased with both varieties. Most preferred 'Early Wonder' for its vigor and sweet flavor. The roots of 'Detroit Supreme' were smoother, more globular, and deeper red. Gardeners were divided on yield and flavor preferences.

Variety	Pref	Rec	Rating
<i>Detroit Supreme</i>	38	44	7.00
<i>Early Wonder</i>	63	67	7.40
			(11 sites)



8. Carrot, Orange Chantenay

Gardeners liked 'Royal Chantenay' but loved 'Hercules'. The roots of 'Hercules' were smoother, crisper, and sweeter. Gardeners liked its size and preferred its flavor, too. Both varieties grew well in this challenging year.

Variety	Pref	Rec	Rating
<i>Hercules</i>	89	89	7.78
<i>Royal Chantenay</i>	11	67	6.56
			(9 sites)



9. Carrot, Orange Nantes

Gardeners in this popular trial were especially impressed with 'Nelson'. Its roots were deep orange, very smooth, and especially uniform. Roots of 'Yaya' were more susceptible to splitting. Both varieties had outstanding flavor.

Variety	Pref	Rec	Rating
<i>Nelson</i>	62	78	7.85
<i>Yaya</i>	38	59	6.90
			(42 sites)



10. Carrot, Purple

Gardeners recommended both varieties, but mostly as a novelty. 'Deep Purple' was healthy and productive, but gardeners did not like its coarse texture or mild flavor. 'Purple Haze' roots were more uniform, smoother, and sweeter.

Variety	Pref	Rec	Rating
<i>Deep Purple</i>	23	77	6.23
<i>Purple Haze</i>	77	85	7.77
			(13 sites)



11. Corn, Bicolor

'Trinity' germinated much better and matured earlier. Its ears looked and tasted good. The germination of 'Pay Dirt' was terrible. It is reported to germinate better than other synergistic types but it failed, even when replanted in June.

Variety	Pref	Rec	Rating
<i>Pay Dirt</i>	21	16	3.56
<i>Trinity</i>	79	63	6.22
			(24 sites)



12. Corn, White

There was minimal interest in this trial. Both 'Country Gentleman' and 'Stowell's Evergreen' germinated well and grew vigorously but matured very late. Yields were very poor and the quality of the corn was substandard.

Variety	Pref	Rec	Rating
<i>Country Gentle.</i>	50	50	5.50
<i>Stowell's Ever.</i>	50	0	5.00
			(2 sites)



13. Corn, Yellow

Comments were lukewarm and gardeners did not express a clear preference. Germination of the untreated seed was a problem in the cold, wet soil. Stalks of 'Sugar Buns' were sturdier and ears were attractive; 'Spring Treat' was earlier.

Variety	Pref	Rec	Rating
<i>Spring Treat</i>	45	64	6.62
<i>Sugar Buns</i>	55	73	6.23
			(15 sites)



14. Cucumber, Pickling

The vines of 'Homemade Pickles' were more vigorous and produced earlier. Gardeners enjoyed the productivity of both varieties as well as the shape and firmness of the cucumbers for pickling.

Variety	Pref	Rec	Rating
<i>Alibi</i>	47	69	7.07
<i>Homemade P.</i>	53	75	7.40
(16 sites)			



15. Cucumber, Slicing Burpless

The fruits of 'Burpless 26' were more uniform in shape, straighter, smoother, and less spiny. Gardeners preferred its flavor, too. 'Orient Express II' had impressive yields, but fruits were spiny and curled when grown on the ground.

Variety	Pref	Rec	Rating
<i>Burpless 26</i>	67	85	7.77
<i>Orient Exp. II</i>	33	69	7.46
(15 sites)			



16. Cucumber, Slicing Classic

'Straight Eight' excelled in the cool growing conditions. It produced earlier and produced more. Its cucumbers showed a more uniform shape and were well suited to both slicing and pickling.

Variety	Pref	Rec	Rating
<i>Marketmore 76</i>	43	57	7.43
<i>Straight Eight</i>	57	86	7.86
(9 sites)			



17. Cucumber, Slicing Gourmet

'Diva' cukes were smooth skinned, more uniform, smaller seeded, and tasted better. Yields were comparable with 'Sultan'. In the big picture, neither variety excelled. Concerns include lack of vigor and low yields.

Variety	Pref	Rec	Rating
<i>Diva</i>	58	67	6.65
<i>Sultan</i>	42	53	5.81
(19 sites in 2010 and 23 sites in 2011)			



18. Cucumber, Slicing Hybrid

'General Lee' produced higher yields under our adverse conditions. Yields were surprisingly early. The quality of its cukes was as good, if not better than 'Olympian'. We were surprised at the lack of interest in this trial.

Variety	Pref	Rec	Rating
<i>General Lee</i>	75	80	7.20
<i>Olympian</i>	25	60	6.60
(5 sites)			



19. Lettuce, Bibb

'Buttercrunch' germinated better, looked healthier, and produced more. Gardeners preferred its darker green leaves and enjoyed its flavor. 'Nancy' had lighter green leaves with a crisp, mild taste. Both were productive and resisted bolting.

Variety	Pref	Rec	Rating
<i>Buttercrunch</i>	62	79	7.79
<i>Nancy</i>	38	57	6.93
(16 sites)			



20. Lettuce, Leaf

We lack sufficient data to conclude very much, but both of these heat-resistant varieties produced good yields of dark green leaves throughout the spring and summer. Most gardeners preferred the taste of 'Tropicana'.

Variety	Pref	Rec	Rating
<i>Tropicana</i>	67	100	8.67
<i>Two Star</i>	33	67	6.67
(3 sites)			



21. Lettuce, Romaine

Both varieties were healthy and productive. 'Winter Density' matured earlier and was more compact. The leaves of 'Coastal Star' were larger and heavier. Gardeners were split on appearance and taste preferences.

Variety	Pref	Rec	Rating
<i>Coastal Star</i>	52	67	7.96
<i>Winter Density</i>	48	82	7.70
(29 sites)			



22. Melon, Asian

'Sun Jewel' showed great potential for North Dakota. Its vines were healthy and productive. Yields were reliable even in a cool summer. Its white flesh was sweet and refreshing. 'Swan Lake' looked promising but did not ripen in time.

Variety	Pref	Rec	Rating
<i>Sun Jewel</i>	100	83	9.40
<i>Swan Lake</i>	0	0	3.60
			(7 sites)



23. Melon, Cantaloupe Early

Neither variety excelled under the cool conditions. 'Goddess' matured earlier. Gardeners liked the fuller netting on the rind of 'Halona'. Yields were comparable; both were susceptible to cracking/splitting. No clear winner on taste.

Variety	Pref	Rec	Rating
<i>Goddess</i>	40	50	5.91
<i>Halona</i>	60	45	5.91
			(16 sites)



24. Melon, Cantaloupe Main Season

Most gardeners recommended 'Athena'. Its plants were generally healthier and its yields were higher. Gardeners were divided on which variety was better looking or tasting. The cool summer severely reduced yields of ripe melons.

Variety	Pref	Rec	Rating
<i>Athena</i>	50	67	6.60
<i>Superstar</i>	50	50	5.80
			(7 sites)



25. Galia Melon

'Passport' is a fine green-flesh melon variety for the north. Gardeners in our trial liked its early maturity, high yields, and attractive melons. Most gardeners preferred the taste of 'Arava'. Its melons were sweeter and full of flavor.

Variety	Pref	Rec	Rating
<i>Arava</i>	42	40	7.35
<i>Passport</i>	58	67	8.15
			(5 sites in 2010 and 6 sites in 2011)



26. Green-Flesh Melon

Both varieties matured too late. 'Jenny Lind' was preferred because it was more productive and tasted better. Not a single gardener was impressed with either of these small-fruited varieties.

Variety	Pref	Rec	Rating
<i>Eden's Gem</i>	25	25	5.00
<i>Jenny Lind</i>	75	25	6.20
			(9 sites)



27. Mustard Spinach

'Komatsuna' produced higher yields, looked more attractive, and tasted better. Gardeners liked its dark green leaves. It withstood heat better and lasted longer into the summer. Both varieties were susceptible to flea beetle damage.

Variety	Pref	Rec	Rating
<i>Komatsuna</i>	60	60	6.80
<i>Tendergreen</i>	40	50	6.20
			(10 sites)



28. Okra

'Star of David' matured earlier and was more productive. Both varieties grew well. One gardener preferred 'Clemson Spineless' for its more slender pod; the other gardener picked 'Star of David' for superior flavor.

Variety	Pref	Rec	Rating
<i>Clemson Spinel.</i>	50	50	5.00
<i>Star of David</i>	50	50	6.00
			(2 sites)



29. Shelling Pea

'Lincoln' matured earlier; otherwise, gardeners rated the varieties similarly. Plants were vigorous and healthy. Gardeners were evenly divided on which variety produced more pods or tasted better.

Variety	Pref	Rec	Rating
<i>Green Arrow</i>	52	61	7.26
<i>Lincoln</i>	48	78	7.65
			(26 sites)



30. Pea, Snap

'Sugar Sprint' produced an impressive early crop before fading. The vines of 'Cascadia' lasted longer in the season and matched, if not exceeded 'Sugar Sprint' for overall yield. 'Cascadia' pods were more attractive but not as sweet.

Variety	Pref	Rec	Rating
<i>Cascadia</i>	49	53	6.13
<i>Sugar Sprint</i>	51	64	6.16
(32 sites in 2010 and 16 sites in 2011)			



31. Pea, Snow

'Oregon Sugar Pod 2' germinated well, grew vigorously, matured earlier, and was extremely productive. The beauty and size of 'Oregon Giant' pods were remarkable and several gardeners preferred its flavor. Both were tender and delicious.

Variety	Pref	Rec	Rating
<i>Oregon Giant</i>	29	41	5.89
<i>Oregon S. Pod 2</i>	71	82	7.33
(18 sites)			



32. Pumpkin, Jack-O'-Lantern

Both varieties were good but not great. Plants were healthy and produced beautiful jack-o'-lanterns. 'Racer Plus' was earlier, which often led to higher yields in this cool summer. Gardeners were divided on which pumpkin looked better.

Variety	Pref	Rec	Rating
<i>Magic Lantern</i>	50	67	6.18
<i>Racer Plus</i>	50	56	5.82
(23 sites)			



33. Radish, Pink

Gardeners liked the novel color of both varieties. They loved the bright pink color and mild taste of 'Pretty in Pink' and were impressed with the uniform size and globular shape of 'Pink Beauty'.

Variety	Pref	Rec	Rating
<i>Pink Beauty</i>	31	91	7.28
<i>Pretty in Pink</i>	69	81	7.03
(8 sites in 2010 and 3 sites in 2011)			



34. Radish, Purple

'Amethyst' produced higher yields. Its roots were larger, deeper purple in color and more attractive; they tasted milder, too. 'Plum Purple' grew more vigorously and matured earlier, but its roots were of inferior quality.

Variety	Pref	Rec	Rating
<i>Amethyst</i>	67	75	6.92
<i>Plum Purple</i>	33	50	6.00
(12 sites)			



35. Radish, Red

In limited testing, the hybrid 'Rover' outperformed the popular standard 'Cherry Belle' in all traits. It showed earlier maturity, higher yields, more attractive roots, and better taste. Its roots were brighter red and more globular.

Variety	Pref	Rec	Rating
<i>Cherry Belle</i>	0	25	4.33
<i>Rover</i>	100	75	8.00
(4 sites)			



36. Squash, Summer Crookneck

There was minimal interest among gardeners for this trial and no data were submitted.

Variety	Pref	Rec	Rating
<i>Early Gold Sum.</i>	-	-	-
<i>Gentry</i>	-	-	-
(0 sites)			



37. Squash, Summer Scallop

Most gardeners did not like either variety. Plants were healthy but yields were poor. The taste of the squash was bland. 'Peter Pan' matured earlier. Yield comparisons were mixed.

Variety	Pref	Rec	Rating
<i>Benning's G. T.</i>	40	20	4.20
<i>Peter Pan</i>	60	40	5.00
(5 sites)			



38. Squash, Summer Straightneck

This was not a popular trial and data are very limited. ‘Superpik’ gets an edge for earlier maturity and higher yields. Its fruits were slightly longer. ‘Multipik’ received higher marks on looks and flavor.

Variety	Pref	Rec	Rating
<i>Superpik</i>	50	50	5.00
<i>Multipik</i>	50	50	4.50
(2 sites)			



39. Squash, Summer Zucchini

‘Spineless Beauty’ was the clear winner. It was healthier, matured earlier, and produced more zucchini than ‘Plato’. Gardeners liked its dark, smooth fruits. ‘Plato’ could match it for taste, but nothing else.

Variety	Pref	Rec	Rating
<i>Plato</i>	11	67	4.89
<i>Spineless Beauty</i>	89	78	7.11
(9 sites)			



40. Squash, Winter Acorn

Plants were healthy and produced decent yields of delicious squash. The slight edge went to ‘Table King’, which matured earlier. ‘Honey Bear’ plants were more compact and their fruits were smaller, rounder, and more uniform in shape.

Variety	Pref	Rec	Rating
<i>Honey Bear</i>	42	54	6.17
<i>Table King</i>	58	69	6.49
(11 sites in 2010 and 3 sites in 2011)			



41. Squash, Winter Buttercup

‘Burgess’ was preferred for its earlier maturity, higher yields, and uniformly shaped fruit. It was more reliable. Gardeners enjoyed the flavor of both. Some gardeners marveled at the sweet, dry flavor of ‘Uncle David’s Dakota Dessert’.

Variety	Pref	Rec	Rating
<i>Burgess</i>	59	78	7.33
<i>Uncle David’s D.</i>	42	63	6.80
(34 sites in 2010 and 21 sites in 2011)			



42. Swiss Chard, White

This was not a popular trial and data are limited. Both varieties were rated similarly for health and yield. ‘Lucullus’ gets an edge for its more attractive, crinkly leaves and slightly smoother taste.

Variety	Pref	Rec	Rating
<i>Fordhook Giant</i>	25	50	5.50
<i>Lucullus</i>	75	67	6.84
(3 sites in 2010 and 3 sites in 2011)			



43. Watermelon, Red

Gardeners were surprised to harvest melons during a cool year. Both varieties had healthy vines and acceptable yields. Their melons were of similar size, appearance, and flavor. ‘Sweet Dakota Rose’ was earlier and more productive.

Variety	Pref	Rec	Rating
<i>Sweet Dak. Rose</i>	61	61	7.11
<i>Sweet Favorite</i>	39	56	6.67
(23 sites)			



44. Watermelon, Red Large

Both varieties grew well, but ‘Legacy’ was earlier to ripen and higher yielding. The dark green rind and extra large size of ‘Verona’ was appealing, but most of its melons did not ripen before frost. No comments were made on taste.

Variety	Pref	Rec	Rating
<i>Legacy</i>	67	67	5.83
<i>Verona</i>	33	50	4.17
(6 sites)			



45. Watermelon, Yellow

Both varieties struggled in the cool weather. Gardeners liked the earliness, bright yellow flesh, and sweetness of ‘Yellow Doll’. They marveled at the large size (10–15 pounds), and productive vines of ‘Yellow Crimson’, which had peach flesh.

Variety	Pref	Rec	Rating
<i>Yellow Crimson</i>	50	50	5.25
<i>Yellow Doll</i>	50	75	6.00
(12 sites)			



46. Marigold, Cutting

Gardeners loved both varieties. Their blooms were big and bright; their stems were sturdy and well suited for cutting. 'Crackerjack' seed is inexpensive; it matched, if not exceeded the new 'Giant' hybrid in health and beauty.

Variety	Pref	Rec	Rating
<i>Crackerjack</i>	50	100	8.33
<i>Giant</i>	50	89	7.67
(9 sites)			



47. Sunflower, Dwarf

'Teddy Bear' was the clear winner. Its plants were healthier; they bloomed earlier and more prolifically. Both 'Teddy Bear' and 'Dwarf Sungold' produced double-petal, golden flowers and were attractive in the garden.

Variety	Pref	Rec	Rating
<i>Dwarf Sungold</i>	29	38	5.00
<i>Teddy Bear</i>	71	75	8.83
(8 sites)			



48. Sunflower, Orange Cutting

Data for this trial are very limited. Both varieties were easy to grow, bloomed early, and produced gorgeous orange flowers for cutting. 'Zohar' is a new organic variety and looks promising; 'Pro Cut Orange' has done well for years.

Variety	Pref	Rec	Rating
<i>Pro Cut Orange</i>	67	67	7.33
<i>Zohar</i>	33	100	7.33
(3 sites)			



49. Sunflower, Primrose Yellow

All gardeners recommended both varieties; however, their comments lacked much enthusiasm. 'Buttercream' was preferred for its earlier bloom and the intensity of its primrose color. Both are lovely additions to a garden.

Variety	Pref	Rec	Rating
<i>Buttercream</i>	80	100	7.00
<i>Valentine</i>	20	100	6.60
(5 sites)			



50. Sunflower, Red

The plants of 'Moulin Rouge' were more vigorous, bloomed earlier, and produced more flowers. It was more beautiful in the garden. Its burgundy-tipped flowers delighted gardeners. 'Chocolate' blooms were cute.

Variety	Pref	Rec	Rating
<i>Chocolate</i>	18	50	6.00
<i>Moulin Rouge</i>	82	91	8.36
(14 sites)			



51. Sweet Pea, Tall

Wet weather often delayed planting, but in most cases both varieties grew well and pleased gardeners with their beauty and fragrance. 'Mammoth Choice' bloomed earlier and more prolifically. 'Royal' showed a greater diversity of colors.

Variety	Pref	Rec	Rating
<i>Mammoth Choice</i>	63	56	6.44
<i>Royal</i>	38	63	6.06
(18 sites)			



52. Zinnia, Bicolor

'Swirls' germinated better, bloomed earlier, and produced more flowers. Its blooms were especially showy in bouquets. Most gardeners felt the unique color combinations found in both 'Swirls' and 'Whirligig' were attractive in the garden.

Variety	Pref	Rec	Rating
<i>Swirls</i>	67	67	7.58
<i>Whirligig</i>	33	67	6.33
(12 sites)			



53. Zinnia, Cactus

Gardeners enjoyed both varieties and rated them similarly. They liked the size and brightness of the blooms. A slight preference was shown for 'Burpeeanna Giants' for its uniform habit, earliness, and vibrant colors.

Variety	Pref	Rec	Rating
<i>Burpeeanna G.</i>	50	82	8.00
<i>Giant Cactus</i>	50	82	7.11
(11 sites)			



54. Zinnia, Candy Cane

Plants of both varieties were healthy and produced a similar number of flowers. 'Peppermint Stick' showed a little more vigor. Its blooms included a wider array of colors and tones, including golden petals with red stripes and flecking.

Variety	Pref	Rec	Rating
<i>Candy Cane</i>	27	64	6.27
<i>Peppermint Stick</i>	73	64	6.64
(12 sites)			



55. Zinnia, Cutting

The sturdy, well-branched plants of both varieties produced lots of 2-inch blooms for cutting. 'Oklahoma' was more reliable and produced more blooms than 'Cut & Come Again'. Gardeners were split on which had brighter or prettier flowers.

Variety	Pref	Rec	Rating
<i>Cut & Come Ag.</i>	60	73	7.27
<i>Oklahoma</i>	40	91	7.55
(11 sites)			



56. Zinnia, Giant Classic

Both varieties produced lots of giant, beautiful flowers. 'California Giants' bloomed earlier, but most gardeners gave a slight edge to 'State Fair' for the fullness of its blooms and overall vigor of its plant.

Variety	Pref	Rec	Rating
<i>California Giants</i>	25	100	8.00
<i>State Fair</i>	75	100	8.00
(4 sites)			



57. Zinnia, Giant Lime

Gardeners enjoyed both, but preferred 'Queen Lime'. Its vigorous, disease-resistant plants produced slightly more blooms and larger blooms. It was more attractive in the garden. Both varieties were good for cutting.

Variety	Pref	Rec	Rating
<i>Benary's G. Lime</i>	27	73	6.45
<i>Queen Lime</i>	73	91	7.18
(13 sites)			



58. Zinnia, Giant Pink

The plants of 'Benary's Giant Bright Pink' produced more flowers. Its flowers were fuller, more rounded, and vibrant. It made for a better show in the garden and in the vase. 'Giant Dahlia Bright Pink' was very good, but inferior in all respects.

Variety	Pref	Rec	Rating
<i>Ben. G. B. Pink</i>	80	100	8.80
<i>G. Dahlia B. Pink</i>	20	20	7.80
(6 sites)			



59. Zinnia, Giant Purple

'Benary's Giant Purple' was outstanding. Its plants were strong and sturdy. It produced bigger flowers, more flowers, and bloomed earlier. 'Giant Dahlia Violet' was liked by most gardeners, but was outclassed in this trial.

Variety	Pref	Rec	Rating
<i>Benary's G. Pu.</i>	78	89	9.00
<i>Giant Dahlia Vio.</i>	22	56	6.67
(9 sites)			



60. Zinnia, Giant Scarlet

Every gardener recommended 'Benary's Giant Scarlet'. Its flowers were large, showy, bright, and bold. Its plants were healthy and sturdy. 'Giant Dahlia Scarlet' produced beautiful flowers too, but not as many.

Variety	Pref	Rec	Rating
<i>Benary's G. Sc.</i>	67	100	8.00
<i>Giant Dahlia Sc.</i>	33	57	7.00
(8 sites)			

Chapter 3

Trial Reports

Trial 1. Bean, Dry

Varieties (information from seed catalogs)

‘Great Northern’

85 days. Flavorful, large white seeds. Bush plants produce good yields. Very popular in the north. Originated from the Oscar H. Will Co. of Bismarck, ND.

‘Kenealy Yellow’

90 days. Plump white beans with yellow eyes. Very popular in the northeastern USA where it is used for baked beans and creamy soups.



Data

Data were collected at 6 sites in 2011.

Trait	‘Great Northern’	‘Kenealy Yellow’	Same
Germinated best	67 %	17 %	17 %
Healthier plants	50	17	33
Matured earlier	0	50	50
Higher yields	100	0	0
More attractive seeds	33	17	50
Tasted better	60	0	40
<i>Preference</i>	100	0	
<i>Recommend to others</i>	100	0	
<i>Overall rating¹</i>	8.33	6.17	

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

General Comments

- Nearly all seeds germinated; but those of ‘Kenealy Yellow’ were later.

Comments on ‘Great Northern’ Bean

- Higher yield and better taste.
- Did not germinate as well. Its plants were more productive (1131 pods versus 564 pods for ‘Kenealy Yellow’).
- Produced 3.5 pounds compared to 2.25 pounds for ‘Kenealy Yellow’.
- Seemed to hold up to our “crazy” summer and appear less stressed.
- More attractive seeds.

Comments on ‘Kenealy Yellow’ Bean

- Very pretty—little spot of color.
- Tasted mushier.
- Plants remained more upright. Larger seeds. Took longer to cook and had a stronger taste.

Conclusions

Developed in North Dakota, ‘Great Northern’ showed superior vigor and much higher yields. Its creamy white seeds cooked quickly and were mild. Every gardener preferred it over ‘Kenealy Yellow’, a popular bean of the Northeast.

Trial 2. Bean, Green Bush

Varieties (information from seed catalogs)

‘Derby’

57 days. Very tender pods and impressive yields. Pods are round, thin, and 7 inches long. White seeds.

‘Jade’

60 days. Long, straight pods with excellent color and flavor. Strong, upright plants hold pods above the ground, which reduces curling and tip rot. Pale green seeds.



Data

Data were collected at 30 sites in 2011.

Trait	‘Derby’	‘Jade’	Same
Germinated best	42 %	15 %	42 %
Healthier plants	35	23	42
Matured earlier	36	48	16
Higher yields	28	40	32
More attractive pods	31	38	31
Tasted better	19	23	58
<i>Preference</i>	<i>48</i>	<i>52</i>	
<i>Recommend to others</i>	<i>77</i>	<i>85</i>	
<i>Overall rating¹</i>	<i>7.69</i>	<i>8.12</i>	

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

General Comments

- Germination of both varieties was good and their plants were equally healthy and robust. Attractive pods. Heavy yields. Could not taste any difference between the two.
- Neither germinated well. The few that did come up looked rusty and pathetic.
- My beans both produced all summer long. Both had the longest beans I’ve ever had in my garden. They are still producing!
- No preference; both good.
- Both did well in our very sandy soil. Produced well for a fairly long period.
- Both varieties were much healthier than our standard ‘Contender’ beans and didn’t get mold problems even with the wet weather we had. Nice upright habit kept the pods off the ground.
- Good flavor—no noticeable difference. Both had nice pods.
- Almost every seed germinated. Pods were long and nice. We loved them both.

- Both were extremely productive. Best crop of beans I’ve ever had.
- Both bloomed and produced well into October! We kept them covered.
- Both varieties showed a lot of rust; however, we had a lot of rain and fog and the plants were in shade from the neighbor’s tree.
- Plants looked great and their pods were great eating.
- Both produced a good yield, producing for over one month.

Comments on ‘Derby’ Bean

- Produced about seven days earlier.
- Taller plants. Tastes more like green beans (less mild compared to ‘Jade’).
- Produced quite a few really long beans!
- Had nicer pods and were easier to pick. Seeds germinated first.
- For some reason the ‘Derby’ seed came up better.
- Plants were so bushy; it was hard to pick the beans.
- Pods were longer and straighter.
- High yield and easier to pick.
- Seemed a little more disease resistant and had long, straight beans. A day or two earlier.
- Quicker germination, healthier plants, and better tasting.
- Much straighter, better looking pods.
- Nice straight pods. Most 5 inches long!
- Tasted better.
- Produced better.

Comments on 'Jade' Bean

- Easy to find the beans. Pods were clustered for easy picking. Awesome taste. Great yield. I've never had a bean I liked better.
- Darker green pods—more appetizing. More uniform beans. Milder flavor. Higher yield (1830 g versus 945 g).
- We prefer the rounded pods of 'Jade' compared to the flat ones of 'Derby'.
- Produced earlier (by one week).
- A little more frost resistant and kept producing after the first few light frost. Larger plants.
- Slightly earlier and higher yield.
- Kept producing tasty beans all the way until frost! Our six-year-old daughter chose 'Jade' for taste every time we asked her. We had a lot of beans!
- Noticeably better germination. All plants were healthy. Matured one week earlier.
- Produced longer and tasted great. Beans never got oversized. No rust spots.
- Prettier green pods. Plants showed a little rust.
- Higher yields and germinated better.
- Its pods kept in the refrigerator longer and the pods were the darkest.
- Faster and produced more.

Conclusions

Gardeners were delighted with the long, tender pods of both varieties. Yields were impressive and continuous until frost. 'Jade' pods were darker green and beautiful. 'Derby' showed more reliable seedling vigor; its pods were very straight.

Trial 3. Bean, Green Pole

Varieties (information from seed catalogs)

'Fortex'

60 days. Delicious, stringless pods will grow over 10 inches long. Vigorous vines produce all summer. Walnut brown seeds.

'Kentucky Blue'

57 days. A cross between two popular pole beans: 'Kentucky Wonder' (great taste) and 'Blue Lake' (tender). Productive vines produce straight, 6–8-inch pods. White seeds.



Data

Data were collected at 12 sites in 2011.

Trait	'Fortex'	'Kentucky Blue'	Same
Germinated best	75 %	8 %	17 %
Healthier plants	58	17	25
Matured earlier	50	33	17
Higher yields	50	17	33
More attractive pods	17	25	58
Tasted better	9	36	55
<i>Preference</i>	78	22	
<i>Recommend to others</i>	82	64	
<i>Overall rating¹</i>	7.18	6.73	

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

General Comments

- Germination was not good for either variety.
- The plants of both varieties did not look great, but they have gone through some pretty tough weather.
- Both tasted good.

Comments on 'Fortex' Bean

- Pods were longer and slender. Plants grew faster and produced an earlier harvest.
- Germinated better. Produced earlier and longer in the season. Pods were crisp, less stringy, and sweeter.
- Better bean overall.
- Faster maturing and better pods.
- Better yields and longer production.
- Poor germination and production.

Comments on 'Kentucky Blue' Bean

- Its beans were a very pretty blue-green and tasted so good. Yummy! We ate a lot raw.
- Beautiful green pods and best taste.
- Thicker pods and better color. More pods, too.
- Pods were bitter and ragged.

Conclusions

'Fortex' germinated better, grew stronger, matured earlier, and produced higher yields. Its pods were very long (up to 10 inches), stringless, and delicious. Some gardeners preferred the blue-green color and taste of 'Kentucky Blue'.

Trial 4. Bean, Purple

Varieties (information from seed catalogs)

'Royal Burgundy'

52 days. Pods are 5 inches long, stringless, and tender. Upright, hardy plants. Dark purple pods turn green when cooked. Buff-colored seeds.

'Royalty Purple Pod'

52 days. Stringless, 5-inch pods are tender. Germinates well in cool soil. Distinctive purple foliage and pods. Pods turn green when cooked.



Data

Data were collected at 24 sites in 2010 and 8 sites in 2011.

Trait	2010			2011			Weighted Total		
	'Royal Burgundy'	'Royalty P. Pod'	Same	'Royal Burgundy'	'Royalty P. Pod'	Same	'Royal Burgundy'	'Royalty P. Pod'	Same
Germinated best	10 %	15 %	75 %	13 %	0 %	88 %	11 %	11 %	78 %
Healthier plants	26	16	58	25	0	75	26	12	62
Matured earlier	47	26	26	38	25	38	45	26	29
Higher yields	16	42	42	13	25	63	15	38	47
More attractive pods	17	22	61	25	13	63	19	20	62
Tasted better	16	21	63	0	38	63	12	25	63
<i>Preference</i>	33	67		50	50		37	63	
<i>Recommend to others</i>	67	88		100	88		75	88	
<i>Overall rating¹</i>	7.49	8.06		8.13	7.75		7.65	7.98	

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

General Comments

2010

- Both looked great.
- Both were gorgeous! I would plant either of these varieties.
- Both produced plants from every seed sown. Both plants seemed and looked equally healthy. Produced at the same time. Produced a lot of beans!
- Both varieties germinated very well. Produced early and equally.
- Very attractive pods. Both had a string when cooked that was very inedible.

2011

- Both produced very well.
- Neither variety produced as well as green beans.
- They were delicious.
- Both came up quickly despite a hard rain the day after sowing. The plants of both varieties

appeared virtually identical. Both produced very good harvests. Pods were very long and straight; very meaty and wonderful tasting. Purple beans are always my favorite. The color makes picking so easy.

Comments on 'Royal Burgundy' Bean

2010

- Crisper pod; better taste. Matured a few days earlier.
- Straighter pods.
- Tasted better. Surprised that they turned green when cooked!
- It produced more. Better texture.
- Produced slightly better.
- Pods have tough strings.
- Each pods had a thick string.

More Comments on 'Royal Burgundy' Bean

2011

- Nicer plants; straighter and longer pods; two days earlier.
- Earlier beans.
- They were the first to produce.

Comments on 'Royalty Purple Pod' Bean

2010

- I've grown 'Royal Burgundy' for years—but like 'Royalty Purple Pod'. Produced later and had a better second crop late in the season.
- Pods cooked to a more attractive green color and were not as dry.
- Nice color and large, longer pods.
- Produced longer and stayed tender longer.
- Earlier and yielded better.
- Matured one week earlier.
- Produced more and tasted better.
- More beans and sometimes a bigger plant.
- Pods had a better overall texture.
- Beans were straighter. Interesting to grow, cook, and eat.
- Pods were more juicy and tasty.
- Better flavor and texture.
- Pods filled better.
- Bitter aftertaste.

2011

- Produced a little larger yield and a little earlier.
- Better taste and texture.
- Better taste.

Conclusions

Gardeners liked the beauty of both varieties. Several years of testing show these varieties to be quite similar, giving a slight edge to 'Royal Burgundy' for earliness and 'Royalty Purple Pod' for yield. Yields and flavor were acceptable.

Trial 5. Bean, Vegetable Soybean

Varieties (information from seed catalogs)

‘Beer Friend’

87 days. Robust plants produce heavy yields of pods, each containing with 3–4 plump beans. Often used as a snack in Asia.

‘Envy’

75 days. The favorite in short-season areas. Upright 2-foot plants bear an early crop of bright green beans. Earlier maturing but lower yielding than other varieties. Prepare in meals as you would lima beans, or boil in the pod for edamame.



Data

Data were collected at 7 sites in 2011.

Trait	‘Beer Friend’	‘Envy’	Same
Germinated best	0 %	67 %	33 %
Healthier plants	0	50	50
Matured earlier	17	67	17
Higher yields	0	60	40
More attractive pods and seeds	0	80	20
Tasted better	0	40	60
<i>Preference</i>	0	100	
<i>Recommend to others</i>	0	40	
<i>Overall rating</i> ¹	4.50	7.75	

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

General Comments

- Nearly every seed germinated. Lots of pods.

Comments on ‘Beer Friend’ Soybean

- Pods were much less hairy.
- Less than half the germination. Pods sometimes only had one or two seeds inside.
- Pods were larger and easier to harvest. I harvested when pods were mature. The boiled seeds were delicious. Tasted like mild peanuts.

Comments on ‘Envy’ Soybean

- More productive and hardy.
- Better germination.
- Its germination totally blew ‘Beer Friend’ off the charts. Its plants grew almost 7 inches taller and had very stocky stems. Its pods were big and always had three beans to a pod. This is a variety I’d suggest for our crop rotation—it was just a fantastic variety.
- I prefer the seed pods that are larger for eating steamed. Easier to pick, clean and eat. Usually three seeds per pod, compared to two for ‘Beer Friend’.

Conclusions

‘Envy’ again proved it is the best variety for the north. It was healthier, earlier to mature, and much more productive. Its pods were more attractive, flavorful, and often filled with three seeds (compared to two seeds for ‘Beer Friend’ pods).

Trial 6. Bean, Wax

Varieties (information from seed catalogs)

‘Gold Rush’

54 days. Long, straight pods hang in clusters near the main stem, making them easy to pick. Great tasting. Pods maintain their quality on the vine.

‘Slenderwax’

56 days. Attractive, rich yellow pods are straight and smooth. Excellent eating quality. A consistently good performer.



Data

Data were collected at 5 sites in 2011.

Trait	‘Gold Rush’	‘Slenderwax’	Same
Germinated best	60 %	0 %	40 %
Healthier plants	20	40	40
Matured earlier	20	20	60
Higher yields	25	0	75
More attractive pods	20	20	60
Tasted better	40	0	60
<i>Preference</i>	60	40	
<i>Recommend to others</i>	80	80	
<i>Overall rating¹</i>	8.80	8.00	

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

General Comments

- No preference; both were prolific producers.
- Matured five days apart, which was great and extended the season for fresh eating. Terrific yields. Beautiful bright pods. Wonderful to eat, either fresh or frozen.
- Both came up quickly despite hard rain the day after sowing. Beautiful plants, large leaves. They made the garden look great.
- Both had substandard germination, which was probably due to the environment. Both produced well and tasted excellent!

Comments on ‘Gold Rush’ Bean

- Sweeter and less “woody” tasting.
- Better yield. Better tasting. I had so many, I froze bazillions!
- Weaker stems, which caused plants to lie down and be subject to white mold. Its beans were dirty and harder to wash. Its pods seemed to stay green longer.
- Five days earlier.

Comments on ‘Slenderwax’ Bean

- Even its smallish pods turned yellow quickly so I could pick them sooner.
- Produced 1190 pods, 60 more than ‘Gold Rush’.
- A poor performer. Pods were thin and small.

Conclusions

Gardeners liked both varieties and were especially impressed with their productivity. Both varieties had healthy plants, bright yellow pods, and high yields. Some gardeners preferred the flavor of ‘Gold Rush’.

Trial 7. Beet

Varieties (information from seed catalogs)

'Detroit Supreme'

59 Days. A selection of America's most popular beet variety. Early, very dark red, and sweet. Thinned plants can be used as greens.

'Early Wonder'

60 days. Popular variety, especially for its greens. Its tops are tall, bright green with red veins. Its roots are deep red and well suited for bunching and canning.



Data

Data were collected at 11 sites in 2011.

Trait	'Detroit Supreme'	'Early Wonder'	Same
Germinated best	36 %	27 %	36 %
Healthier plants	30	20	50
Matured earlier	20	30	50
Higher yields	30	30	40
More attractive roots	43	43	14
Tasted better	13	25	63
<i>Preference</i>	38	63	
<i>Recommend to others</i>	44	67	
<i>Overall rating¹</i>	<i>7.00</i>	<i>7.40</i>	

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

General Comments

- None reported.

Comments on 'Detroit Supreme' Beet

- Germinated best. Produced higher yields and tasted better.
- Even, globe-shaped roots. Tasted nice and sweet. Won Honorable Mention and a blue ribbon at the Eddy County 4-H Achievement Days.
- Smoother skin and cleaned up easier for cooking. Deep red color, but bitter.
- Roots were little larger and led to a higher yield.

Comments on 'Early Wonder' Beet

- Higher yield.
- Better production.
- Plants were bigger, but roots were cone shaped.
- Lighter red roots, but sweeter.
- Nicer looking roots.
- Wonderful taste!
- Overall better in all categories.

Conclusions

Gardeners were pleased with both varieties. Most preferred 'Early Wonder' for its vigor and sweet flavor. The roots of 'Detroit Supreme' were smoother, more globular, and deeper red. Gardeners were evenly divided on yield and flavor preferences.

Trial 8. Carrot, Orange Chantenay

Varieties (information from seed catalogs)

'Hercules'

65 days. *New in 2011!* Strong tops with cone-shaped roots. Stores well. Especially good in heavy or rocky soils, where other carrots struggle.

'Royal Chantenay'

70 days. Standard main crop variety especially suited for heavy soils. Roots have a broad, blocky shape. Good flavor and texture.



Data

Data were collected at 9 sites in 2011.

Trait	'Hercules'	'Royal Chantenay'	Same
Germinated best	22 %	22 %	56 %
Healthier plants	22	22	56
Matured earlier	29	0	71
Higher yields	44	11	44
More attractive roots	56	22	22
Tasted better raw	67	11	22
Tasted better cooked	17	17	67
<i>Preference</i>	89	11	
<i>Recommend to others</i>	89	67	
<i>Overall rating¹</i>	7.78	6.56	

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

General Comments

- Both varieties germinated surprisingly well.
- It was hard to tell the two varieties apart; they're about an equal match. You couldn't tell them apart unless you looked at the marker. Taste results came up hard to distinguish also. They were the largest carrots I've ever grown; I would gladly grow them again.
- Both tasted good when cooked.
- My husband and I disagreed on which variety tasted better.
- Everything grew way too big this year!

Comments on 'Hercules' Carrot

- Roots were smoother, sweeter, firmer, and stored better.
- Tops were shorter and seemed to produce a longer well-shaped root.
- Grew better, tasted better, but roots were smaller.
- Roots had a nice uniform size. Great taste; kids loved them. Canned well. Taste is fresher; very crispy. Nice size roots.
- Superior flavor and a deeper orange color.
- Straighter; fewer splits—easier to peel!
- Better taste.

Comments on 'Royal Chantenay' Carrot

- Tall tops with short stubby roots.
- Higher yields (5 pounds versus 2.5 pounds) and better taste.
- Its roots had a hairier appearance when they got larger.
- Plants were more tolerant to weather.

Conclusions

Gardeners liked 'Royal Chantenay' but loved 'Hercules'. The roots of 'Hercules' were smoother, crisper, and sweeter. Gardeners liked its size and preferred its flavor, too. Both varieties grew well in this challenging year.

Trial 9. Carrot, Orange Nantes

Varieties (information from seed catalogs)

‘Nelson’

56 days. Sweet flavor and outstanding tolerance to heat. This hybrid’s roots are deep orange, smooth, and 6 inches long with blunt tips. Medium tops.

‘Yaya’

56 days. This Nantes hybrid sizes up early—perfect for baby carrots and bunching. Smooth skin and outstanding flavor.



Data

Data were collected at 42 sites in 2011.

Trait	‘Nelson’	‘Yaya’	Same
Germinated best	28 %	28 %	45 %
Healthier plants	24	8	68
Matured earlier	25	17	58
Higher yields	28	23	49
More attractive roots	63	18	18
Tasted better raw	38	30	33
Tasted better cooked	23	27	50
<i>Preference</i>	62	38	
<i>Recommend to others</i>	78	59	
<i>Overall rating¹</i>	7.85	6.90	

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

General Comments

- Both grew very well in my raised bed garden.
- These were both excellent carrots.
- Both tasted good, especially ‘Yaya’.
- Both varieties looked “lumpy” and unattractive.
- They were both nice sized and we ate them all by the end of July. They ate them raw and they were equally good.
- Both tasted wonderful.
- The health of the plants was excellent!
- Both varieties survived deer munching on their tops.
- Germinated poorly; too wet and cold.
- Neither variety germinated as good as expected.

Comments on ‘Nelson’ Carrot

- Yielded more; more attractive.
- Carrots were longer—more uniform shape.
- I prefer carrots raw, and ‘Nelson’ was tender, sweet, and nicely shaped. Good dark color, too.
- Nice mild taste.
- Longer, skinny, and less core.
- Grew faster; a nicer product.
- More germinated; plants were larger and greener. Carrots were longer in the early season. Carrots grew larger with fewer deformities; long and straight.
- Tasted better.
- These are the nicest carrots I have ever raised! I am sure the amount of rain helped.
- Germinated better.
- Longer root.
- The carrots look better. They are nicely shaped. I was a little worried about how ‘Nelson’ would develop as some plants had gone to seed right away, but they were good.
- High yields and much sweeter (we ate them raw).
- Better color.
- Carrots were sweeter and crisper.
- Better flavor and size.
- Came up fast and grew well.

Comments on ‘Yaya’ Carrot

- Fresher, cleaner taste.
- Won the grandchildren’s taste test!
- Slightly more prolific.
- More twin roots and bigger around and more splits.
- Higher yield and better taste.

More Comments on 'Yaya' Carrot

- I prefer its milder taste, both raw and cooked.
- I usually cook garden carrots and these tasted better.
- Straighter roots.
- Had more cracked/split carrots. Slightly bitter aftertaste.
- More and larger carrots.
- Had little bumps on the roots. The roots were darker orange and tasted great when eaten raw.
- Better germination and larger carrots.
- Tended to be split and not as uniform.
- Better seedling emergence; higher yield (45 compared to 31 carrots for 'Nelson'); better taste; and slightly smoother roots.
- Matured much later and the carrots were smaller.
- Had more deformed roots, but the flavor was exceptional. Sweet.
- Larger carrot.
- Better taste, small and tender. I would have liked to have seen them grow larger.

Conclusions

Gardeners in this popular trial were especially impressed with 'Nelson'. Its roots were deep orange, very smooth, and especially uniform. Roots of 'Yaya' were more susceptible to splitting. Both varieties had outstanding flavor.

Trial 10. Carrot, Purple

Varieties (information from seed catalogs)

‘Deep Purple’

73 days. The 8-inch roots are dark purple in color almost to the core. Sweet flavor. Tops are strong and healthy. Color fades when cooked.

‘Purple Haze’

70 days. The tapered 10-inch roots are smooth with purple exterior and bright orange centers. The color presentation when cut is vivid and the flavor of the raw carrots is sweet. Flavor when cooked is also excellent, but the purple color dissolves with cooking. Sturdy tops.



Data

Data were collected at 13 sites in 2011.

Trait	‘Deep Purple’	‘Purple Haze’	Same
Germinated best	23 %	23 %	54 %
Healthier plants	42	8	50
Matured earlier	17	8	75
Higher yields	46	23	31
More attractive roots	17	75	8
Tasted better raw	8	58	33
Tasted better cooked	9	55	36
<i>Preference</i>	23	77	
<i>Recommend to others</i>	77	85	
<i>Overall rating¹</i>	6.23	7.77	

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

General Comments

- Neither variety came up well.
- Both tasted the same when young. I gave several of both varieties away but people didn’t care for the purple carrots; they only like orange carrots.
- I really liked both varieties. Both were attractive—fun for a relish tray.
- Neither were strong producers.
- They had a very strong, sharp taste when raw, and a sweet taste when cooked. They canned well. We made dill carrot pickles and plain canned carrots. My brother, sister and I enjoyed raising purple carrots.
- Both are beautiful.

Comments on ‘Deep Purple’ Carrot

- Produced more but also got infested with bugs and had to throw most of the carrots away. Tasted more like a radish.
- Larger, coarser roots; many were deformed.
- Much better germination. Stays purple when cooked—too much like a beet. Very deep roots.
- Multiple roots per carrot. When cooked, it reminded us of beets.
- Very long and very deep in color. Very sweet and tender, but did not have enough “carrot” flavor.
- Produced higher yields. Flavor was mellow.

Comments on ‘Purple Haze’ Carrot

- Long, shapely roots and sweeter tasting.
- Uniform roots.
- Seemed to be a little sweeter.
- Roots were uniform in shape.
- Tasted better.
- Much sweeter and more tender.
- Had a slightly bitter overtone, but sweetened up with cooking.
- Sweeter.
- A little tastier.

Conclusions

Gardeners recommended both varieties, but mostly as a novelty. ‘Deep Purple’ was healthy and productive, but gardeners did not like its coarse texture or mild flavor. ‘Purple Haze’ roots were more uniform, smoother, and sweeter.

Trial 11. Corn, Bicolor

Varieties (information from seed catalogs)

'Pay Dirt'

69 days. Early bicolor that grows exceptionally well in cool soil. This new synergistic type of corn is much sweeter than normal sweet corn.

'Trinity'

68 days. Very popular for its earliness and superb taste. The 8-inch ears have tender yellow and white kernels. Grows well in cool soils. Sugary enhanced (se+) type is sweeter than normal sweet corn.



Data

Data were collected at 24 sites in 2011.

Trait	'Pay Dirt'	'Trinity'	Same
Germinated best	13 %	65 %	22 %
Healthier plants	10	40	50
Matured earlier	20	60	20
Higher yields	26	58	16
More attractive ears	20	50	30
Tasted better	0	30	70
<i>Preference</i>	21	79	
<i>Recommend to others</i>	16	63	
<i>Overall rating¹</i>	3.56	6.22	

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

General Comments

- I have nothing really to report on this trial as neither variety germinated for me—not a single plant. I don't think I did anything wrong, as I usually plant some corn every year and this has never happened before.
- Only six 'Pay Dirt' plants germinated, while 'Trinity' did not germinate at all.
- Poor producers.
- Poor germination in both.
- I had to replant due to soil insects.
- The taste and size of ears were the same. Neither variety germinated very well.
- Cool wet weather resulted in only three 'Trinity' plants germinating and no 'Pay Dirt' seeds. Neither variety was productive.
- Who knows with this spring's weather if that's what affected germination. I also grow 'Sugar Dolls' and that turned out tall and great and sweet!

Comments on 'Pay Dirt' Corn

- Complete crop failure. I did not get a single plant.
- Did not germinate.
- None germinated, even after replanting.
- Had some smut.
- Hardly any came up and what did grow fine.
- Only four seeds came up; only three stalks produced any ears, and the ears they produced were no larger than 3 inches long and did not fully ripen. The stalks that did come up were no taller than 4 feet and not healthy looking.

Comments on 'Trinity' Corn

- Held its sugar content longest.
- Better yield; stronger plants; larger ears. Excellent taste.
- Sweeter corn and smaller kernels.
- Ears were large and full.
- Good yield; ears looked good but tasted bland. Did not have much taste compared to locally grown corn we bought at the store.
- Sweet, medium-sized ears are perfect for our in-town garden.
- Germinated better and had a higher yield.
- We thought it was the best corn ever.
- Stalks were over 6 feet tall, produced well, and were evenly fully. Nice color and tasted good.

Conclusions

'Trinity' germinated much better and matured earlier. Its ears looked and tasted good. The germination of 'Pay Dirt' was terrible. It is reported to germinate better than other synergistic types but it failed, even when replanted in June.

Trial 12. Corn, White

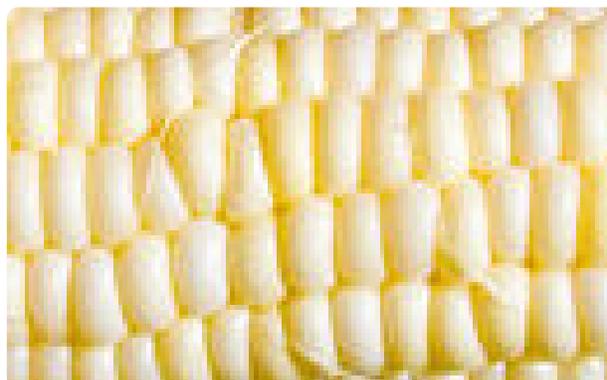
Varieties (information from seed catalogs)

‘Country Gentleman’

90 days. Famous for scattered (non-row) spacing of kernels on ear. Slender 7-inch ears grow on sturdy, productive 7-foot stalks. Developed in 1890.

‘Stowell’s Evergreen’

90 days. A late corn known for its long 8-inch ears and tender kernels. Keeps its sweet flavor longer than most traditional corns. Developed in the early 1800s.



Data

Data were collected at 2 sites in 2011.

Trait	‘Country Gentleman’	‘Stowell’s Evergreen’	Same
Germinated best	50 %	0 %	50 %
Healthier plants	50	50	0
Matured earlier	50	0	50
Higher yields	50	0	50
More attractive ears	100	0	0
Tasted better	50	0	50
<i>Preference</i>	50	50	
<i>Recommend to others</i>	50	0	
<i>Overall rating¹</i>	5.50	5.00	

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

General Comments

- Both germinated well and grew more robustly compared to our other sweet corn. Ripened very late and very poor yields.

Comments on ‘Country Gentleman’ Corn

- None reported.

Comments on ‘Stowell’s Evergreen’ Corn

- Higher yielding, but overall yields were low and very late.

Conclusions

There was minimal interest in this trial. Both ‘Country Gentleman’ and ‘Stowell’s Evergreen’ germinated well and grew vigorously but matured very late. Yields were very poor and the quality of the corn was substandard.

Trial 13. Corn, Yellow

Varieties (information from seed catalogs)

'Spring Treat'

66 days. Very early and easy to harvest. Does well in cool soils. Good quality. Very sweet yellow kernels. This sugary enhanced (se) type is sweeter than normal sweet corn.

'Sugar Buns'

70 days. Slender ears remain tender for up to two weeks in the field. Very sweet yellow kernels. Sugary enhanced (se+) type is sweeter than normal sweet corn.



Data

Data were collected at 15 sites in 2011.

Trait	'Spring Treat'	'Sugar Buns'	Same
Germinated best	33 %	40 %	27 %
Healthier plants	31	54	15
Matured earlier	54	38	8
Higher yields	46	38	15
More attractive ears	18	45	36
Tasted better	33	42	25
<i>Preference</i>	45	55	
<i>Recommend to others</i>	64	73	
<i>Overall rating¹</i>	6.62	6.23	

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

General Comments

- Very good tasting; no discernable differences.
- Both types were laid over by the wind and rain several times. Yields were not good and ears were small; I blame weather stresses.
- Neither did a good job. Spotty germination and small ears.
- Both varieties struggled due to our cold, wet soil in spring.
- Both germinated poorly.
- Approximately 75 percent germination. The tastes of both were nice and sweet and tender. Both are good for an early corn but likely aren't optimal for preserving due to smaller, shallower kernels.

Comments on 'Spring Treat' Corn

- Ears were well filled and uniform in size.
- Better germination. Higher yields (26 vs. 15 ears).
- Sweeter. Stalks only grew 2–3 feet but still produced ears. Slower to germinate; had only 50 percent germination.
- Slightly better taste. My daughter stated it had a rich, creamy taste; whereas 'Sugar Buns' just tasted like corn.
- Came up sooner and more germinated. Plants grew about twice the height of 'Sugar Buns'. More ears. It tasted good.

Comments on 'Sugar Buns' Corn

- Ears had more insect damage. Its ears were smaller and not as fully filled.
- It matured earlier and tasted better. I'd be interested in planting it again and hope for a better growing season.
- Tasted better.
- Better germination, more vigorous plants, and more attractive ears. Rows of kernels were even and uniform. Stalks produced multiple ears.
- Plants were more vigorous and taller. First to tassel and slightly higher yields. Slightly better.
- Grew faster.
- Sturdier stalk. Matured three days earlier.

Conclusions

Comments were lukewarm and gardeners did not express a clear preference. Germination of the untreated seed was a problem in the cold, wet soil. Stalks of 'Sugar Buns' were sturdier and ears were attractive; 'Spring Treat' was earlier.

Trial 14. Cucumber, Pickling

Varieties (information from seed catalogs)

'Alibi'

49 days. Attractive, dark green fruits are good for fresh eating or pickling. Vines are shorter than those of most varieties. High yield potential. White spines.

'Homemade Pickles'

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



Data

Data were collected at 16 sites in 2011.

Trait	'Alibi'	'Homemade Pickles'	Same
Germinated best	27 %	47 %	27 %
Healthier plants	13	40	47
Matured earlier	27	47	27
Higher yields	33	33	33
More attractive cukes	27	40	33
Tasted better	13	13	73
<i>Preference</i>	47	53	
<i>Recommend to others</i>	69	75	
<i>Overall rating¹</i>	7.07	7.40	

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

General Comments

- Almost all but a few seeds germinated. Both of these varieties were amazing! I had to give tons away as I couldn't keep up with how many the plants produced. I was getting cucumbered out!
- Wow, once they started to grow, they really produced! It's hard to pick the one that's best!
- I've grown both of these before and would grow both again. You can pickle them at any size and they would stay crunchy and good.
- I planted my old favorite 'Chicago Pickling' along side these. Both were earlier than 'Chicago Pickling', but did not produce as well long term.

Comments on 'Alibi' Cucumber

- Produced almost twice as much. Had a more extended period of when it was producing; also it had more uniform size cukes.
- A lot of cukes.
- A few days earlier.
- Higher yields.
- Its germination and survival was poor.

Comments on 'Homemade Pickles' Cucumber

- Produced a good crop of cucumbers at a pace and amount that fit my pickling needs. Every couple of days I could pick and pickle—and seldom had overly large cucumbers.
- More attractive small cukes for canning baby dills.
- Larger plants, but they produced quickly and molded.
- Produced a bit better.
- Was getting good yields until grasshoppers invaded.
- Germinated earlier and produced cukes first.
- While 'Alibi' produced well in 2010, this year 'Homemade Pickles' was an overall better producer.
- Better yield.

Conclusions

The vines of 'Homemade Pickles' were more vigorous and produced earlier. Gardeners enjoyed the productivity of both varieties as well as the shape and firmness of the cucumbers for pickling.

Trial 15. Cucumber, Slicing Burpless

Varieties (information from seed catalogs)

'Burpless 26'

60 days. Smooth, dark green fruits are thin-skinned, burpless, and bitter free. Harvest when 8–10 inches long.

'Orient Express II'

64 days. Slender fruits grow 12 inches long and only 1 inch in diameter. Burpless quality. Disease-free vines produce heavy yields. Mild flavor. Trellis for straight fruits.



Data

Data were collected at 15 sites in 2011.

Trait	'Burpless 26'	'Orient Exp. II'	Same
Germinated best	29 %	21 %	50 %
Healthier plants	15	23	62
Matured earlier	38	38	23
Higher yields	29	36	36
More attractive cukes	92	0	8
Tasted better	50	8	42
<i>Preference</i>	67	33	
<i>Recommend to others</i>	85	69	
<i>Overall rating¹</i>	7.77	7.46	

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

General Comments

- Both germinated poorly due to environment. Both flowered and set at the same time. Both produced loads of cukes. Tasted the same.
- Germination was not good. Plants were equally healthy.
- Only half the seeds germinated. Very good year for cukes. I've never had yields like this before.
- Neither one was burpless.

Comments on 'Burpless 26' Cucumber

- They got too large (25 inches by 2.5 inches).
- I liked the smooth/sleek look of the fruits. Good producer and tastes great (no aftertaste). Easy to grow once they got going.
- Disease-free plants. Straighter fruits, with less sharp spines so were easier to clean.
- Fruits looked more like what we are used to.
- Fruits were straighter and had more flavor.

- More uniform shape and better tasting.
- Nicer appearance. Smooth, uniformly green.
- Matured four days earlier. Fruits were longer, larger, more uniform in shape, smoother, and less spiny. Slightly better taste.

Comments on 'Orient Express II' Cucumber

- Awesome yields. My little sister will eat these!
- Taste was better and the size stayed uniform.
- Produced noticeably more cukes, but many had crooked necks. Some plants developed rust spots early but did grow out of them.
- Matured seven days earlier and produced 10 percent more fruits.
- Fruits had long skinny necks with longer "bottoms" (blossom ends).
- This was the only variety that grew any plants. Had nice size cukes. Tasted okay.
- They started producing earlier and produced more and were better tasting with smaller seeds. The exterior was spiny, but they were overall far superior.
- My colleagues preferred the flavor of this variety at our office party. Greater percentage of misshapened fruits.

Conclusions

The fruits of 'Burpless 26' were more uniform in shape, straighter, smoother, and less spiny. Gardeners preferred its flavor, too. 'Orient Express II' had impressive yields, but fruits were spiny and curled when grown on the ground.

Trial 16. Cucumber, Slicing Classic

Varieties (information from seed catalogs)

‘Marketmore 76’

68 days. Popular main-season slicer. Disease-resistant vines set dependable yields of glossy, dark green fruits. Open-pollinated (non-hybrid).

‘Straight Eight’

58 days. Popular early variety. Straight, dark green fruits grow 8 inches long. Small seed cavity. Excellent for slicing or making dill pickles. Open pollinated.



Data

Data were collected at 9 sites in 2011.

Trait	‘Marketmore 76’	‘Straight Eight’	Same
Germinated best	29 %	14 %	57 %
Healthier plants	25	13	63
Matured earlier	13	63	25
Higher yields	13	50	38
More attractive cukes	14	43	43
Tasted better	25	13	63
<i>Preference</i>	43	57	
<i>Recommend to others</i>	57	86	
<i>Overall rating¹</i>	7.43	7.86	

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

General Comments

- Neither produced any cukes—planted too late and growing season was horrible.
- Germination was not that good for either variety—they just couldn’t get going.
- Very good germination. Very healthy looking vines with lots of flowers on both.

Comments on ‘Marketmore 76’ Cucumber

- Came up first and plants looked bigger and better.
- Cukes were crisper, never bitter; great taste. Very straight but not as long.
- Many of its cukes were thick on one end and thin on the other. Hard to fit in jars.
- Produced 138 cucumbers compared to 87 for ‘Straight Eight’. This was a surprise since ‘Straight Eight’ has a great reputation.

Comments on ‘Straight Eight’ Cucumber

- Cukes had smoother skin.
- Prolific plants produced fruit longer.
- Cucumbers had a beautiful shape.
- Produced like crazy. Great taste. Just a good all around cucumber. If picked small they are super nice for pickles. If picked larger, they are excellent for slicing.

Conclusions

‘Straight Eight’ excelled in the cool growing conditions. It produced earlier and produced more. Its cucumbers showed a more uniform shape and were well suited to both slicing and pickling.

Trial 17. Cucumber, Slicing Gourmet

Varieties (information from seed catalogs)

‘Diva’

58 Days. Gourmet quality. The all-female flowers don't require pollen to set fruit, so yields are higher and fruits are nearly seedless. Lots of bright green, spineless cukes. No peeling is required of its skin.

‘Sultan’

58 Days. Crispy, sweet cukes are produced on a vigorous vine. A Middle Eastern type that yields well through summer.



Data

Data were collected at 19 sites in 2010 and 23 sites in 2011.

Trait	2010			2011			Weighted Total		
	‘Diva’	‘Sultan’	Same	‘Diva’	‘Sultan’	Same	‘Diva’	‘Sultan’	Same
Germinated best	24 %	35 %	41 %	43 %	30 %	26 %	34 %	32 %	33 %
Healthier plants	29	43	29	29	19	52	29	30	42
Matured earlier	29	64	7	50	36	14	41	49	11
Higher yields	46	54	0	30	30	39	37	41	21
More attractive cukes	30	30	40	40	10	50	35	19	45
Tasted better	50	8	42	24	10	67	36	9	56
<i>Preference</i>	50	50		64	36		58	42	
<i>Recommend to others</i>	58	58		74	48		67	53	
<i>Overall rating¹</i>	5.86	5.47		7.30	6.09		6.65	5.81	

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

General Comments

2010

- Both were nice, long and slender cukes. Both tasted great; they had thin skins I didn't have to peel; they were very crisp and tasty with small seeds.
- We like the taste of both varieties.
- Both had high yields and lacked bitterness.
- Both varieties produced nice plants but yield was overall fair at best.
- Our other cucumbers produced 8-inch cukes before either variety flowered.
- Neither germinated well. Both produced nice looking cucumbers with nice flavor.
- Both were very tasty, but did not keep well. They had to be used right away or they got mushy.
- The freeze on May 8 prevented any seeds from germinating.
- Rabbits liked both varieties equally as well.

2011

- Smooth skin and small, tender seeds. Loved the mild flavor of both. Light flesh color.
- Both had robust plants. Nice production and good flavor.
- Both grew well. Very good yields. I did find a lot of seeds in these cukes; preferred last year's trials which included 'Sweeter Yet'.
- Neither produced firm fruit. Less firm compared to 'Straight Eight'.
- Only had one plant of each germinated.
- My wife thought the 'Straight Eight' cucumbers planted alongside tasted better.
- Almost all of the seeds I planted came up. So many cukes! Awesome yields from both. Both tasted great. I gave so many bags of cukes away because I couldn't eat them fast enough.
- I was really impressed with both varieties. They were both great producers; taste was great and had enough to share with friends and family.

More General Comments

- Neither variety produced well. I've never had much luck with cucumbers.
- Both came up quickly; strong plants. Plants were flimsy. Poor yields. Cucumbers had a poor appearance. Both were watery and tasteless with many large, tough seeds no matter what size I picked them.
- Both germinated great (92 percent).

Comments on 'Diva' Cucumber

2010

- Grew better and produced more.
- Gave the most cukes (65 vs. 52). The vines weren't as aggressive and took up less space. It was slower to get started, but once it got started it was good.
- Produced slightly more. I like the look of its cukes better. Much better taste.
- Produced more and was more vigorous. Tasted better.
- Cukes were light green—not as pretty.

2011

- Seemed to rot at ground level—cool, damp spring. Very mild flavor—yummy!
- Became less bitter as season progressed.
- Stronger plant. Earlier yield. I liked its smooth skins.
- Only half as many seeds germinated and its yield was significantly lower than 'Sultan', it was still okay, and I liked its cukes better. They had smaller seeds and tasted better.
- Smaller seeds.
- Better producer.
- Germinated sooner; produced earlier, and longer.
- Had a nice shape; crisp and good taste; and productive. I'll grow it again. We also planted 'Sweeter Yet' and we prefer 'Diva' because its shape is more usual and less curved. I thought they tasted the same, but my husband liked 'Diva' better.
- Crisper, firm cukes.
- I loved the smooth skin and no spines. Matured earlier by 1 day. Tasted good and had a better appearance.
- Overall, this variety was least distasteful to me.
- Cukes looked uniform. Tasted better; produced more. Matured one day earlier (July 15). Plants grew more.

Comments on 'Sultan' Cucumber

2010

- Tasted way better.
- Performed better overall.
- Healthier plants.
- More plants came up. Cukes weren't as uniform. They were harder to eat because the seeds were big.
- Enormous yield.
- Neither was great but 'Sultan' was tougher.
- Developed a blight disease.
- Had some browning on the leaves. Produced a few days earlier and produced 20% more overall. Brighter green cucumbers.

2011

- Matured slightly ahead of 'Diva'.
- Much higher yield. Its cucumbers were lovely and tasty and oh so many!
- None of its seeds germinated in our greenhouse and very few when sown directly in the garden.
- Fruit was nicer and narrower.
- Didn't germinate even after two plantings.
- Did not come up.
- Only got one cucumber (none from 'Diva').
- Matured a few days sooner.
- Tasted slightly better.
- Cukes tended to get smaller on ends. Had a different aftertaste.

Conclusions

'Diva' cukes were smooth skinned, more uniform, smaller seeded, and tasted better. Yields were comparable with 'Sultan'. In the big picture, neither variety excelled. Concerns include lack of vigor and low yields.

Trial 18. Cucumber, Slicing Hybrid

Varieties (information from seed catalogs)

'General Lee'

66 days. Very productive, main-season slicer. Disease-resistant vines set good yields even under adverse conditions. Dark green fruits with white spines.

'Olympian'

52 days. Dark green, straight, 8-inch fruits are crisp with refreshing flavor. Vines resist diseases and are productive throughout the summer.



Data

Data were collected at 5 sites in 2011.

Trait	'General Lee'	'Olympian'	Same
Germinated best	75 %	0 %	25 %
Healthier plants	50	50	0
Matured earlier	75	25	0
Higher yields	75	25	0
More attractive cukes	50	25	25
Tasted better	50	25	25
<i>Preference</i>	75	25	
<i>Recommend to others</i>	80	60	
<i>Overall rating¹</i>	7.20	6.60	

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

General Comments

- Both produced well, but we prefer the beit alpha types.
- Both varieties had very vigorous vines. Their cucumbers were acceptable for eating fresh and for making pickles.

Comments on 'General Lee' Cucumber

- Produced more.
- Fruits had a better shape.

Comments on 'Olympian' Cucumber

- Tender, crisp, juicy with palatable seeds. Stayed fairly slim.
- Its plants held up better to the wet year.

Conclusions

'General Lee' produced higher yields under our adverse conditions. Yields were surprisingly early. The quality of its cukes was as good, if not better than 'Olympian'. We were surprised at the lack of interest in this trial.

Trial 19. Lettuce, Green Bibb

Varieties (information from seed catalogs)

‘Buttercrunch’

64 days. Longtime favorite. Sweet, crisp leaves are surrounded by thick, dark green outer leaves, making this an attractive Bibb type. A vigorous variety that grows well in spring, summer and fall. Resists bolting.

‘Nancy’

56 days. Medium-green leaves make a tightly packed, large head. Crisp texture. Excellent quality and easy to grow.



Data

Data were collected at 16 sites in 2011.

Trait	‘Buttercrunch’	‘Nancy’	Same
Germinated best	60 %	13 %	27 %
Healthier plants	60	13	27
Matured earlier	54	23	23
Higher yields	54	8	38
More attractive	62	15	23
Tasted better	33	17	50
<i>Preference</i>	62	38	
<i>Recommend to others</i>	79	57	
<i>Overall rating¹</i>	7.79	6.93	

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

General Comments

- Both varieties didn’t produce for very long—short season. Both were very flavorful and tender.
- Planted some more in the fall. Still tastes great!
- We often ate them together so we could have dark and light colored salads.
- Both produced abundantly.
- Both are excellent. Did not bolt in the heat. It’s August and we’re still enjoying both varieties.
- The two varieties together make an awesome salad!
- Both germinated, grew, and looked good. Both were somewhat bitter to taste, with little flavor.

Comments on ‘Buttercrunch’ Lettuce

- Twice as many plants germinated. Larger leaves. Mild flavor.
- Had a real mild taste. I really liked it.
- Leaves are darker and plants are more compact.
- Greener leaves. You could pick and it would keep filling in again with more leaves of lettuce.
- I love it for its crispy texture!
- Tender, tasted good, and developed quickly.
- We love ‘Buttercrunch’—it’s the best.
- Slightly more prone to bolting. Ten percent of its plants bolted compared to none of ‘Nancy’.

Comments on ‘Nancy’ Lettuce

- Matured a little earlier. Tasted more “lettucey.”
- Its leaves reminded my son of iceberg lettuce.
- Germinated well. Matured earlier. I preferred its milder flavor while my husband preferred ‘Buttercrunch’.
- Came up sparse. Didn’t bolt as soon and made nicer heads.
- Tasted better and produced more heads.
- Didn’t look healthy, but it was.

Conclusions

‘Buttercrunch’ germinated better, looked healthier, and produced more. Gardeners preferred its darker green leaves and enjoyed its flavor. ‘Nancy’ had lighter green leaves with a crisp, mild taste. Both were productive and resisted bolting.

Trial 20. Lettuce, Green Leaf

Varieties (information from seed catalogs)

'Tropicana'

52 days. Full, heavy heads of deep green leaves. Very resistant to heat and bolting. Easy to grow.

'Two Star'

51 days. Heavy, dark green leaves are sweeter and less frilly than others. Heat resistant and easy to grow.

Data

Data were collected at 3 sites in 2011.

Trait	'Tropicana'	'Two Star'	Same
Germinated best	33 %	33 %	33 %
Healthier plants	33	0	67
Matured earlier	33	33	33
Higher yields	33	0	67
More attractive	33	0	67
Tasted better	67	0	33
<i>Preference</i>	67	33	
<i>Recommend to others</i>	100	67	
<i>Overall rating¹</i>	8.67	6.67	

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



General Comments

- Both varieties did well. I had many cuttings from both.
- Beautiful plants that produced leaf lettuce until mid-August!
- Our family couldn't tell any difference in taste and liked both equally well.

Comments on 'Tropicana' Lettuce

- Tasted better.
- Produced first and significantly more leaves.

Comments on 'Two Star' Lettuce

- Seemed a little bitter.
- Matured earlier.

Conclusions

We lack sufficient data to conclude very much, but both of these heat-resistant varieties produced good yields of dark green leaves throughout the spring and summer. Most gardeners preferred the taste of 'Tropicana'.

Trial 21. Lettuce, Romaine

Varieties (information from seed catalogs)

‘Coastal Star’

57 days. Large, heavy leaves are dark green with sweet flavor. Heat tolerant.

‘Winter Density’

54 days. Compact bibb-romaine looks like a tall ‘Buttercrunch’. Very tightly folded, 8-inch leaves. Popular heirloom from France.



Data

Data were collected at 29 sites in 2011.

Trait	‘Coastal Star’	‘Winter Density’	Same
Germinated best	25 %	14 %	61 %
Healthier plants	18	25	57
Matured earlier	29	50	21
Higher yields	26	22	52
More attractive	41	37	22
Tasted better	33	37	30
<i>Preference</i>	52	48	
<i>Recommend to others</i>	67	82	
<i>Overall rating¹</i>	7.96	7.70	

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

General Comments

- Both had very good germination and were healthy due to lots of rain. Both had excellent taste!
- I was happy with both varieties. Both were productive and healthy.
- Both germinated at 95–100 per cent. Plants were healthy and very attractive.
- I really liked both. I have never planted romaine before. I shall plant it every year now. It stayed tasty a long time in the garden and refrigerator.

Comments on ‘Coastal Star’ Lettuce

- Much tighter heads and milder flavor.
- Had nice heads! Looked better than what is in the grocery store! Didn’t bolt for a long time. Took a little longer to mature but lasted longer.
- Its plant leaves were tougher in texture.
- Germinated 20% better. Its leaves were smaller, stayed green longer, and were less bitter.

- Nice shape and size for storing. Tasted better and looked better.
- Plants were larger/taller, produced more greens and were slightly milder tasting.
- Could not handle the heat and produced smaller leaves.
- It formed heads, but ‘Winter Density’ did not.

Comments on ‘Winter Density’ Lettuce

- Sweet flavor, more tender and more ornamental.
- Better by far in all traits.
- I planted a few seeds of each for a fall crop and ‘Winter Density’ was surprisingly hardy in some cold temperatures.
- I liked its texture. Its leaves are more dense. Very uniform germination.
- Each plant looked like a large green rose!
- Leaves were shaped more upright and compact. Tasted better and looked more attractive.
- Plants were smaller but its texture was softer; perfect to use without breaking up or tearing. Almost buttery texture.
- Plants were more compact.
- I was very impressed with its all around quality.
- Had a deeper, sturdier root system and stood up to all the crazy wind and torrential rain better.
- Matured a few days earlier. Stayed milder and more tender longer; we ate it until October.

Conclusions

Both varieties were healthy and productive. ‘Winter Density’ matured earlier and was more compact. The leaves of ‘Coastal Star’ were larger and heavier. Gardeners were split on appearance and taste preferences.

Trial 22. Melon, Asian

Varieties (information from seed catalogs)

‘Sun Jewel’

68 days. Very early and productive. Oblong fruits are lemon with white ribs. The flesh is white and crisp. Vines resist diseases. Fruits slip off vine when ripe. Very easy to grow.

‘Swan Lake’

90 days. Very flavorful flesh is white with unique swirls of peach and salmon. Melons average 2–3 pounds and slip from the vine when ripe. Rind is smooth and yellow with white ribs.

Data

Data were collected at 7 sites in 2011.

Trait	‘Sun Jewel’	‘Swan Lake’	Same
Germinated best	50 %	33 %	17 %
Healthier plants	50	0	50
Matured earlier	100	0	0
Higher yields	83	0	17
More attractive melons	67	0	33
Tasted better	80	0	20
<i>Preference</i>	100	0	
<i>Recommend to others</i>	83	0	
<i>Overall rating¹</i>	9.40	3.60	

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

General Comments

- Once established, they really took off!
- I didn’t care for the taste of either. Perhaps they are an acquired taste?
- Both smelled great—like a good melon—but did not taste good.



Comments on ‘Sun Jewel’ Melon

- Ripened, but tended to split before it slipped from the vine. Produced 15 fruits, compared to 4 for ‘Swan Lake’.
- Awesome! This is a great new find. This is my son’s favorite melon. My church congregation loved them as well. As the year went on the texture changed and quality slipped—they tasted best in the early season.
- Matured three days earlier, with the first harvest on September 5. Produced 58 fruits, compared to 33 for ‘Swan Lake’. The best performer.
- Healthy plants. First harvest on September 1. Produced more melons. We loved it and so did everyone else.

Comments on ‘Swan Lake’ Melon

- Was too late; never ripened.
- Needs a longer growing season.
- Plants were bigger and thicker; healthy; set many melons. Never did get quite ripe. Needed another week or so. September was cool and cloudy; maybe in a normal year it would ripen.

Conclusions

‘Sun Jewel’ showed great potential for North Dakota. Its vines were healthy and productive. Yields were reliable even in a cool summer. Its white flesh was sweet and refreshing. ‘Swan Lake’ looked promising but did not ripen in time.

Trial 23. Melon, Cantaloupe Early

Varieties (information from seed catalogs)

‘Goddess’

70 days. Excellent early yields. Fruits range 4–6 pounds in weight. Rinds are finely netted with shallow ribs. Very sweet, bright orange flesh. Disease-resistant vines.

‘Halona’

73 days. This early melon has outstanding flavor and good size (4–6 pounds). Vines resist diseases.



Data

Data were collected at 16 sites in 2011.

Trait	‘Goddess’	‘Halona’	Same
Germinated best	38 %	38 %	23 %
Healthier plants	18	18	64
Matured earlier	55	18	27
Higher yields	36	45	18
More attractive melons	33	44	22
Tasted better	33	33	33
<i>Preference</i>	<i>40</i>	<i>60</i>	
<i>Recommend to others</i>	<i>50</i>	<i>45</i>	
<i>Overall rating¹</i>	<i>5.91</i>	<i>5.91</i>	

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

General Comments

- I never dreamed we’d have cantaloupe! They were smaller, but we loved them!
- This was not a good year for trials. Extreme weather delayed planting to the end of June.
- Flavor of both varieties was somewhat bland and not real sweet.
- Neither variety grew well.
- It was a horrible spring—cold with flooding. It’s very surprising any came up at all (50 percent germination). Both produced well.

Comments on ‘Goddess’ Cantaloupe

- A much sweeter, firmer textured melon. Much larger.
- Bigger melons.
- Could not survive our growing conditions.
- Did not germinate (sown May 20).
- Sweeter. Sometimes split, but not as often as ‘Halona’. Bad year for cantaloupe.

Comments on ‘Halona’ Cantaloupe

- More, larger melons. A sweeter, richer flavor. Everyone chose this as their favorite.
- Better yield.
- Its melons looked more like the ones in the store, only smaller.
- Better germination (90 versus 60 percent). Its melons were smaller but there were more of them. Cracked and split early. Smoother rind.
- Ripened three to four days earlier. Its rinds split as they ripened and if you did not pick them immediately the cracks became infested with wasps, ants and assorted other critters. Its texture was somewhat mealy.
- Germinated, but plants later died. No melons.

Conclusions

Neither variety excelled under the cool conditions. ‘Goddess’ matured earlier. Gardeners liked the fuller netting on the rind of ‘Halona’. Yields were comparable; both were susceptible to cracking/splitting. No clear winner on taste.

Trial 24. Melon, Cantaloupe Main Season

Varieties (information from seed catalogs)

'Athena'

85 days. Easy to grow. Melons are large (7 pounds) with deep ribs and good netting. The salmon-orange flesh is thick and sweet. Vines resist Fusarium wilt.

'Superstar'

90 days. Heavy yields of football-shaped fruits, ranging 4–8 pounds in weight. Hard shelled with firm, sweet flesh. Does well in the Midwest.



Data

Data were collected at 7 sites in 2011.

Trait	'Athena'	'Superstar'	Same
Germinated best	29 %	14 %	57 %
Healthier plants	43	0	57
Matured earlier	40	40	20
Higher yields	57	14	29
More attractive melons	40	40	20
Tasted better	33	33	33
<i>Preference</i>	50	50	
<i>Recommend to others</i>	67	50	
<i>Overall rating¹</i>	6.60	5.80	

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

General Comments

- Both are very good in every way.
- Poor germination (sown May 22).
- None ripened.
- We had frost before they could be tasted. We planted late (June 10).
- Almost every seed germinated. The plants were very healthy. Neither ripened very well; the spring was too cold.

Comments on 'Athena' Cantaloupe

- Could not survive our growing conditions.
- Did not germinate (sown May 20).
- Sweeter. Sometimes split, but not as often as 'Halona'. Bad year for cantaloupe.
- Bigger melons.
- A much sweeter, firmer textured melon. Much larger.
- Only one plant germinated (none of 'Superstar' germinated). Only one melon ever really grew; two others began but appear to have frozen.
- Produced lots of vines. Matured 10 days earlier. Melons were real sweet; looked like melons from a grocery store. Nice round sized and even in shape. Outyielded 'Superstar' by three to two margin.

Comments on 'Superstar' Cantaloupe

- Matured a little earlier. Produced more melons (36 compared to 28 for 'Athena'). I like its deep ribs. I would like to try them in a warmer year.
- This variety will produce more large melons.

Conclusions

Most gardeners recommended 'Athena'. Its plants were generally healthier and its yields were higher. Gardeners were divided on which variety was better looking or tasting. The cool summer severely reduced yields of ripe melons.

Trial 25. Melon, Galia

Varieties (information from seed catalogs)

'Arava'

77 days. Green-fleshed melon named for a valley in Israel. A good yielder even in cool conditions. Rinds are smooth and lightly netted with no ribbing. Melons average 3 pounds. Vines resist powdery mildew.

'Passport'

73 days. Large, 5–6-pound melons ripen early. Unusual green flesh has a "tropical" flavor. Small seed cavity. Vigorous vines. Widely adapted. From New Hampshire.



Data

Data were collected at 5 sites in 2010 and 6 sites in 2011.

Trait	2010			2011			Weighted Total		
	'Arava'	'Passport'	Same	'Arava'	'Passport'	Same	'Arava'	'Passport'	Same
Germinated best	25 %	25 %	50 %	67 %	0 %	33 %	48 %	11 %	41 %
Healthier plants	25	25	50	25	50	25	25	39	36
Matured earlier	25	75	0	25	75	0	25	75	0
Higher yields	25	75	0	25	50	25	25	61	14
More attractive melons	25	50	25	50	25	25	39	36	25
Tasted better	50	50	0	75	25	0	64	36	0
<i>Preference</i>	20	80		32	68		42	58	
<i>Recommend to others</i>	40	100		73	83		40	67	
<i>Overall rating¹</i>	5.60	8.80		6.68	7.63		7.35	8.15	

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

General Comments

2010

- Both varieties grew okay and tasted good. They both got ripe well before frost.

2011

- Plants of both varieties were grown under plastic and their growth picked up with the heat. Their melons looked great.
- Both tasted good. In total we had 80 melons from six plants.
- Neither variety looked very healthy.

Comments on 'Arava' Melon

2010

- Tasted more like a typical honeydew melon, which I prefer. Slightly higher yield.
- Both varieties were eaten early by rabbits; the vines of 'Arava' recovered best, but its melons were very slow to mature.

2011

- Better germination.
- Produced 34 melons compared to only 11 for 'Passport'. Tasted better.
- Earlier, sweet, and juicy. Melons were 9 to 10 inches across and full of flavor.
- We much prefer its sweeter, milder taste.

Comments on 'Passport' Melon

2010

- Very tasty and much earlier.
- Big, juicy, and nice looking.
- Produced more.
- Has a more unique and different taste, but was still pretty good.

2011

- Ripened earlier.
- Matured August 27, nine days before 'Arava'.
- Matured August 23, ten days before 'Arava'. Its melons were bigger and more of them. Prettier melons. Flavor was too strong.
- Only one plant survived but it yielded very well. Awesome taste!

Conclusions

'Passport' is a fine green-flesh melon variety for the north. Gardeners in our trial liked its early maturity, high yields, and attractive melons. Most gardeners preferred the taste of 'Arava'. Its melons were sweeter and full of flavor.

Trial 26. Melon, Green Flesh

Varieties (information from seed catalogs)

'Eden's Gem'

72 days. Also called 'Rocky Ford', this heirloom has small, 1-pound fruits with a complex spicy flavor and smooth texture. Fruits slip from the vigorous vines when ripe.

'Jenny Lind'

75 days. Soft, juicy, lime-green flesh with mild flavor. The small, 1-pound fruits have coarse netting with a button on their blossom ends. Rind blushes when ripe.



Data

Data were collected at 9 sites in 2011.

Trait	'Eden's Gem'	'Jenny Lind'	Same
Germinated best	25 %	13 %	63 %
Healthier plants	38	25	38
Matured earlier	25	25	50
Higher yields	14	57	29
More attractive melons	17	33	50
Tasted better	25	75	0
<i>Preference</i>	25	75	
<i>Recommend to others</i>	25	25	
<i>Overall rating¹</i>	<i>5.00</i>	6.20	

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

General Comments

- Nothing matured before frost. Only one fruit set.
- Both had to be picked a tad early before they were ripe or just as they got ripe; otherwise they rotted and got bugs even if I was a day or two late. I liked the small size of both varieties.
- An early frost killed plants. I covered some but they never ripened. They smelled sweet but no taste.
- Only one melon of each variety was ripe for our killing frost on September 15.
- It was not a good year for these plants. The melons were set very late; they were small and most failed to ripen.
- The vines of both varieties were loaded with fruit. It was very disappointing that none ripened before frost.
- Their vines take up more space than the amount of their produce justifies.

Comments on 'Eden's Gem' Melon

- Plants were small but full of blooms.
- Its melons came earlier, but still not until mid to late August.
- Tasted better, but not as good as 'Diplomat'.
- Fruits were very small.

Comments on 'Jenny Lind' Melon

- First melon ripened on August 15. Produced slightly more melons and tasted a lot better.
- More melons on vines. It ripened first, but not until September 10.
- It did fairly well in very wet conditions and a short growing season.

Conclusions

Both varieties matured too late. 'Jenny Lind' was preferred because it was more productive and tasted better. Not a single gardener was impressed with either of these small-fruited varieties.

Trial 27. Mustard Spinach

Varieties (information from seed catalogs)

'Komatsuna'

35 days. Mild, tender greens from Japan. Dark green leaves and light green ribs. Heat tolerant.

'Tendergreen'

35 days. Easy-to-grow, mild green. Smooth, dark green leaves with pale green ribs. Heat tolerant.

Data

Data were collected at 10 sites in 2011.

Trait	'Komatsuna'	'Tendergreen'	Same
Germinated best	22 %	11 %	67 %
Healthier plants	56	33	11
Matured earlier	33	33	33
Higher yields	67	33	0
More attractive	56	22	22
Tasted better	71	29	0
<i>Preference</i>	60	40	
<i>Recommend to others</i>	60	50	
<i>Overall rating¹</i>	6.80	6.20	

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

General Comments

- Bugs attacked both. Very few edible leaves.
- I did not know how to use the crop. Both suffered from small holes in leaves. Neither tasted good raw.
- Holes in leaves caused by bugs.



Comments on 'Komatsuna' Greens

- Ready to harvest earlier.
- Nice dark green color. Also seems to withstand the heat more than the 'Tendergreen'.
- Attacked by bugs—totally eaten up.
- It tasted better, lasted longer into the summer, and had denser, firmer leaves.
- Germinated better. Good leaves and flavor.
- Better yield and less bitter taste.
- More plants. Nice plants with dark green leaves. Produced well and continued to grow into the summer. Nice flavor. Performed better with my soil and the cool wet weather conditions we had this year.

Comments on 'Tendergreen' Greens

- Headed out early.
- Tended to be more weather resistant. Flavor had less after taste when eaten raw.
- Germinated much better and the leaves were lusher when I steamed them. Produced and tasted best by far. I still prefer regular spinach because it is so good raw.
- It thrived without rust on leaves.

Conclusions

'Komatsuna' produced higher yields, looked more attractive, and tasted better. Gardeners liked its dark green leaves. It withstood heat better and lasted longer into the summer. Both varieties were susceptible to flea beetle damage.

Trial 28. Okra

Varieties (information from seed catalogs)

‘Clemson Spineless’

60 days. The most popular variety in the USA. Medium green pods are tapered, spineless, and good quality. Productive plants grow 4 feet tall.

‘Star of David’

70 days. The ribbed pods show the Star of David when cross-sliced. The pods are thick and best harvested young (3 inches). Tall, 7-foot plants.

Data

Data were collected at 2 sites in 2011.

Trait	‘Clemson Spineless’	‘Star of David’	Same
Germinated best	50 %	0 %	50 %
Healthier plants	0	0	100
Matured earlier	0	100	0
Higher yields	0	100	0
More attractive pods	50	50	0
Tasted better	0	50	50
<i>Preference</i>	50	50	
<i>Recommend to others</i>	50	50	
<i>Overall rating¹</i>	5.00	6.00	

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



General Comments

- Plants were nice and green.

Comments on ‘Clemson Spineless’ Okra

- I prefer its more slender pod.

Comments on ‘Star of David’ Okra

- Plants were taller and had more pods on them. Pods were long, skinny, and in the shape of Star of David. Tasted a lot better; not as crunchy.
- Seemed to handle the frost better.

Conclusions

‘Star of David’ matured earlier and was more productive. Both varieties grew well. One gardener preferred ‘Clemson Spineless’ for its more slender pod; the other gardener picked ‘Star of David’ for superior flavor.

Trial 29. Pea, Shelling

Varieties (information from seed catalogs)

'Green Arrow'

70 days. Impressive yields of long, slim pods each with 9–11 small, flavorful peas. Pods are borne in pairs along the 28-inch vines. Trellising optional.

'Lincoln'

65 days. Another excellent variety for freezing. Pods are 3.5 inches long with 8–10 small, tender peas inside. Excellent flavor. Vines tolerate heat and resist diseases.



Data

Data were collected at 26 sites in 2011.

Trait	'Green Arrow'	'Lincoln'	Same
Germinated best	23 %	23 %	54 %
Healthier plants	17	17	67
Matured earlier	39	48	13
Higher yields	41	36	23
More attractive pods	35	43	22
Tasted better	26	30	43
<i>Preference</i>	52	48	
<i>Recommend to others</i>	61	78	
<i>Overall rating¹</i>	7.26	7.65	

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

General Comments

- Germinated equally well. Plants were equally healthy. Produced equally well.
- Both had such poor yields, they were a waste of my garden space.
- Both produced well.
- Both had abundant yields. The peas never made it to the house—perfect garden snack.
- On September 6, we had our third picking. This is very unusual—no mildew on any of my peas.
- Nothing came up.
- Not much yield; barely one meal per picking.
- The first planting (May 29) did not come up so I replanted (June 22). 'Lincoln' did not germinate well either time.
- Plants were big and healthy. Loaded with pods.
- Both varieties grew tall. Staking is recommended.

- Peas died from high water while they were flowering.
- Both varieties did very well, despite a very wet, cold spring (probably why they did better). There was hardly any difference in taste.

Comments on 'Green Arrow' Pea

- Its vines did not dry up as quickly. Tasted great raw and cooked. I've always planted 'Lincoln' but will branch to other varieties.
- The plants were healthier.
- The wet weather induced disease, but only on this variety. Its pods were nice and long but did not fill well. Excellent taste.
- More peas.
- Came up quicker. Matured two to three weeks earlier.
- Longer pods. Longer blossom time. Higher yields (5.25 pounds compared to 4 pounds for 'Lincoln').
- I liked its pods. They were long with many peas inside.
- Produced slightly more.
- Pods were large and thinner skinned. Peas were sweeter and a little more tender.
- The plants were stronger. Had more pods and more peas. Long, full pods.
- Definitely produced more, even with the poor germination. Long pods; better taste.
- Much better taste.

Comments on 'Lincoln' Pea

- Filled out four days earlier. Sweeter flavor.
- Almost 100 percent germination (compared to 80 percent for 'Green Arrow').
- Earlier by several days.
- More peas per pod; quicker maturity.
- Pods were darker green. They popped open for eating. Very sweet even when very large and over-ripe.
- Matured six days earlier.
- Faster growing and nicer taste.
- Produced a higher yield.
- Peas were good size.
- Nice long pods, very tasty peas. The only thing is that you need to put up a tall fence. My vines fell over and were hard to pick. Produced 7.5 pounds compared to 4.5 pounds for 'Green Arrow'.
- Almost double the yield. More peas in pods.
- Pods looked nicer and tasted better whether eaten raw or cooked.
- Were the best tasting.
- Twice the germination. Earlier by a few days. More pods. Larger peas.

Conclusions

'Lincoln' matured earlier; otherwise, gardeners rated the varieties similarly. Plants were vigorous and healthy. Gardeners were evenly divided on which variety produced more pods or tasted better.

Trial 30. Pea, Snap

Varieties (information from seed catalogs)

‘Cascadia’

65 days. The 2.5-foot vines produce a cascade of delicious, dark green peas. Vines tolerate diseases. Trellising is optional.

‘Sugar Sprint’

58 days. Short, 2-foot vines produce 3-inch, nearly stringless pods. Excellent eating quality. Does not require trellising.



Data

Data were collected at 32 sites in 2010 and 16 sites in 2011.

Trait	2010			2011			Weighted Total		
	‘Cascadia’	‘Sugar Sprint’	Same	‘Cascadia’	‘Sugar Sprint’	Same	‘Cascadia’	‘Sugar Sprint’	Same
Germinated best	42 %	35 %	23 %	7 %	47 %	47 %	30 %	39 %	31 %
Healthier plants	45	19	35	40	20	40	43	19	37
Matured earlier	42	32	26	0	69	31	28	44	28
Higher yields	47	37	17	38	46	15	44	40	16
More attractive pods	40	20	40	33	17	50	38	19	43
Tasted better	17	59	24	31	15	54	22	44	34
<i>Preference</i>	50	50		46	54		49	51	
<i>Recommend to others</i>	55	64		50	64		53	64	
<i>Overall rating¹</i>	6.38	6.43		5.62	5.62		6.13	6.16	

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

General Comments

2010

- Both had great flavor. It’s the first veggie gone off the veggie trays!
- Taste better shelled. Not as good as ‘Sugar Ann’.
- Both got a moldy appearance on the leaves, but continued to produce.
- Nice, healthy plants.
- Neither produced very high yield.
- Produced at the same time and the pods looked the same.

2011

- Plants had a lot of blooms, but not a lot of produce. Loved what little produce we got.
- The plants for both varieties were very small. We didn’t get many peas.
- Very few came up.
- Spotty germination.

- We had so much water. Plants did not thrive as they should have.
- The rabbits loved both varieties so much—they chewed both down to the ground when the plants were approximately 4 inches high. I couldn’t believe how both varieties came back and grew into fabulous plants.
- I didn’t like either as I had very few plants and few peas.
- I love the snap peas as much as the kids do! I think we only had one cooked meal of these—all the rest were eaten raw. Even these “missed” ones that got fat tasted OK—not bitter. Growing them in the shade helped them to produce right through July and August.
- We really had a good season—our best year yet for peas. We picked peas from July until October. We had enough peas or more than several meals, plus all of the snacking out of the garden.

Comments on 'Cascadia' Pea

2010

- Pods were bigger, but less tender.
- Vines were taller. Produced three to four days earlier. Produced more pods and produced later into the summer—into the middle of August.
- Just performed better overall. Had a nice, juicy, plump taste.
- Less powdery mildew. Vines climbed better.
- Nice, long pods.
- About 30 percent better yield.
- Came up better, was healthier and tasted better—all around better than 'Sugar Sprint'.
- Yield was average compared to most peas I have grown in the past.

2011

- Both varieties were looking good to begin with, but 'Cascadia' became the clear winner after a few weeks. It had healthier plants and more attractive pods. I would prefer 'Sugar Ann' over either variety, though.
- Much healthier vines. Peas tasted sweeter. Produced over 2 pounds, about ten times more than 'Sugar Sprint'.
- Produced more pods.
- Tasted a little better.
- Longer, fuller pods. Higher yields.

Comments on 'Sugar Sprint' Pea

2010

- We ate them like candy. Produced nice big pods. Nice, pale green, wide pods each with five to six peas. Pods were tender, stringless, and held up to the summer heat.
- Grew the best in our garden and produced first. With our short growing season I like plants that produce fast.
- Produced pods earlier. Didn't require trellising.
- One week earlier. Plants looked and were healthy and sturdy. Sweeter and more pods.
- Better germination and plants looked healthier. More pods. Had the taste my family preferred.
- Sweeter. This would be great for someone who was limited on space.
- Tasted much better; the pod was sweet.
- Better tasting and produced more.
- Produced a single, good-sized picking; then plants shrank and died.

2011

- Looked greener and tasted sweeter.
- Produced first (they were a shorter plant). Sweeter taste.
- More pods. Came first.
- Germinated first.

Conclusions

'Sugar Sprint' produced an impressive early crop before fading. The vines of 'Cascadia' lasted longer in the season and matched, if not exceeded 'Sugar Sprint' for overall yield. 'Cascadia' pods were more attractive but not as sweet.

Trial 31. Pea, Snow

Varieties (information from seed catalogs)

‘Oregon Giant’

65 days. The 2.5-foot vines produce a cascade of delicious, dark green peas. Vines tolerate diseases. Trellising is optional.

‘Oregon Sugar Pod 2’

58 days. Short, 2-foot vines produce 3-inch, nearly stringless pods. Excellent eating quality. Does not require trellising.



Data

Data were collected at 18 sites in 2011.

Trait	‘Oregon Giant’	‘Oregon Sugar Pod 2’	Same
Germinated best	19 %	63 %	19 %
Healthier plants	18	29	53
Matured earlier	24	59	18
Higher yields	24	71	6
More attractive pods	41	24	35
Tasted better	28	22	50
<i>Preference</i>	29	71	
<i>Recommend to others</i>	41	82	
<i>Overall rating¹</i>	5.89	7.33	

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

General Comments

- Excellent flavor.
- Healthy plants. Pods tasted good.
- Both germinated well; germination of ‘Oregon Sugar Pod 2’ was 100 percent. Healthy plants.
- Very healthy, fast-growing plants. Both produced very high yields for a surprisingly long time; well past what I expected. Pods were tender and not stringy.
- Both varieties froze well.

Comments on ‘Oregon Giant’ Pea

- Yields were higher; came over a longer period.
- While I had fewer plants because of the lower germination rate (50 percent compared to 80 percent for ‘Oregon Sugar Pod 2’), each plant produced a healthy number of pods. Pods were much sweeter, more tender, and more flavorful.

- Did much better; it seemed to thrive better with excessive water all summer.
- Flavor was more neutral; slightly sweet.
- The pods are too big for what we use them for.

Comments on ‘Oregon Sugar Pod 2’ Pea

- Better yields (2.9 pounds compared to 0.4 pounds for ‘Oregon Giant’); better taste. Healthier plants.
- Earlier; much greater yield; pods yellowish.
- Stronger plants and better yield of pods.
- Much better germination and yield. Earlier by a day or two. Vines were loaded.
- Germinated better; produced generously; pods were crisp and sweet.
- Much better germination. Matured July 3, two days earlier than ‘Oregon Giant’. Produced three times as many pods; harvest continued into early August. Pods had more taste: earthier and sweeter.
- Much better germination.
- Matured five days earlier. Pods were nice and sweet. We ate them in the garden.
- Higher yields.
- Better looks; better taste.
- Higher yields. Kids loved picking daily and eating on the spot. Vines were bushier.
- Pods had a more consistent size.

Conclusions

‘Oregon Sugar Pod 2’ germinated well, grew vigorously, matured earlier, and was extremely productive. The beauty and size of ‘Oregon Giant’ pods were remarkable and several gardeners preferred its flavor. Both were tender and delicious.

Trial 32. Pumpkin, Jack-O'-Lantern

Varieties (information from seed catalogs)

'Magic Lantern'

115 days. Space-saving vines produce dark orange pumpkins. Pumpkins average 16–24 pounds.

'Racer Plus'

85 days. Blocky, deep orange pumpkins. Vines are compact (good for smaller gardens) and resist diseases. Pumpkins average 14–18 pounds and have long, thick handles.



Data

Data were collected at 23 sites in 2011.

Trait	'Magic Lantern'	'Racer Plus'	Same
Germinated best	43 %	24 %	33 %
Healthier plants	24	18	59
Matured earlier	31	50	19
Higher yields	41	53	6
More attractive fruits	36	21	43
Tasted better	50	50	0
<i>Preference</i>	50	50	
<i>Recommend to others</i>	67	56	
<i>Overall rating¹</i>	6.18	5.82	

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

General Comments

- I really liked both of these varieties. The pumpkins were all very nice jack-o'-lantern pumpkins and had a nice shape and orange color.
- Neither germinated.
- Enjoyed lots of pumpkins.
- Both are good performers. Yields were very good. The vines of both spread more than those of 'Neon', my favorite.
- Beautiful plants and lots of pumpkins!
- Drowned out on two different planting dates.
- Only one seed came up.
- None matured. Wet spring and hailstorm in July.

Comments on 'Magic Lantern' Pumpkin

- Five plants came up and produced a total of 11 pumpkins (compared to one plant and 10 pumpkins for 'Racer Plus').

- Only one plant germinated. It produced six pumpkins. Fruits were nice looking and made a great pie. The color of its flesh is more yellow than orange. My son received grand prize at the Bowman County Fall Harvest for his pumpkins. More and riper fruit.
- Nice round fruit; perfect for jack-o'-lanterns.
- Its pumpkins looked better. I liked its smoother look.
- Plant was pretty healthy. Lots of blossoms.

Comments on 'Racer Plus' Pumpkin

- Always a very nice size consistency for jack-o'-lanterns that aren't too large and a beautiful color.
- Produced two very small pumpkins; 'Magic Lantern' produced none.
- Germinated slightly better and matured slightly earlier and yielded a little better.
- Plants were greener. Matured a week earlier. We preferred it for its nice large size and bright orange color; pumpkins were more uniform.
- More uniform in size. Nice for baking and to use for pies, desserts, etc.
- Pumpkins were rounder and easier to carve.
- Fruits were more uniformly round but subject to more problems such as rot.
- More fruit (34 compared to 16), although they were smaller. They were nicely shaped.

Conclusions

Both varieties were good but not great. Plants were healthy and produced beautiful jack-o'-lanterns. 'Racer Plus' was earlier, which often led to higher yields in this cool summer. Gardeners were divided on which pumpkin looked better.

Trial 33. Radish, Pink

Varieties (information from seed catalogs)

'Pink Beauty'

26 Days. Eye-catching, pastel pink roots have a crisp texture and taste. Maintains its quality in the garden a long time. Uniformly globe-shaped roots.

'Pretty in Pink'

28 days. Bright pink skin surrounds crunchy white flesh on a 1–2-inch globe. Very attractive when bunched with radishes of other colors. Resists pithiness.



Data

Data were collected at 8 sites in 2010 and 3 sites in 2011.

Trait	2010			2011			Weighted Total		
	'Pink Beauty'	'Pretty in Pink'	Same	'Pink Beauty'	'Pretty in Pink'	Same	'Pink Beauty'	'Pretty in Pink'	Same
Germinated best	0 %	29 %	71 %	0 %	67 %	33 %	0 %	39 %	61 %
Healthier plants	14	29	57	0	0	100	10	21	69
Matured earlier	57	29	14	0	67	33	41	39	19
Higher yields	29	29	43	0	0	100	21	21	59
More attractive roots	14	57	29	0	0	100	10	41	48
Tasted better	29	71	0	0	67	33	21	70	9
<i>Preference</i>	43	57		0	100		31	69	
<i>Recommend to others</i>	100	86		67	67		91	81	
<i>Overall rating¹</i>	7.88	7.29		5.67	6.33		7.28	7.03	

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

General Comments

2010

- Both were very good—flavor was mild.
- Fast germination and rapid growth. Plants looked great. Both looked very pink.

2011

- Both varieties produced only tops (sown May 26).

Comments on 'Pink Beauty' Radish

2010

- These were very good in color and taste.
- Nice size and shape.
- Slightly more foliage. Roots were superior in looks (no cracks), taste (milder), and size.
- They did not get as hot. They seemed to mature earlier.
- Larger and more radishes.
- More scarring on them.

2011

- Roots split when they got bigger.

Comments on 'Pretty in Pink' Radish

2010

- Five days earlier. Milder. Nice pink color.
- Matured faster and tasted better. It looked very nice; but all in all, just average overall.
- Roots were a little bit larger.
- Better yields.

2011

- Milder taste. Good all around.

Conclusions

Gardeners liked the novel color of both varieties. They loved the bright pink color and mild taste of 'Pretty in Pink' and were impressed with the uniform size and globular shape of 'Pink Beauty'.

Trial 34. Radish, Purple

Varieties (information from seed catalogs)

'Amethyst'

30 days. Bright purple skins contrast beautifully with the crisp white flesh. Slow to get woody. Strong, medium-sized tops.

'Plum Purple'

26 days. Plum-colored round roots are mild and slow to get pithy. Very uniform and easy to grow.



Data

Data were collected at 12 sites in 2011.

Trait	'Amethyst'	'Plum Purple'	Same
Germinated best	8 %	42 %	50 %
Healthier plants	17	42	42
Matured earlier	0	50	50
Higher yields	58	25	17
More attractive roots	64	27	11
Tasted better	50	0	50
<i>Preference</i>	67	33	
<i>Recommend to others</i>	75	50	
<i>Overall rating¹</i>	6.92	6.00	

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

General Comments

- Plants looked nice with large leaves. We started eating both at the same time.
- Both tasted hot—maybe I waited a little too long before we harvested them.
- Poor yield for both varieties. Both tasted woody (sown June 2). Both bolted too soon.
- I always plant white radishes such as 'Hailstone', 'Burpee White', and 'White Prince'. Both of these purple radishes were hotter than and not as good as one of the whites. I also plant the multicolored 'Easter Egg' and I would not plant 'Plum Purple' or 'Amethyst' over that.

Comments on 'Amethyst' Radish

- Roots were larger; milder tasting. Roots were beautiful.
- Plants were greener and bushier. Roots were a richer purple in color. Very smooth taste and were non-woody no matter the size.

- Better yields and more consistent size.
- Plants were larger and stronger. Bolted on July 5. Milder taste; so much sweeter.
- Larger radishes. Higher yields.
- Mild and sweet with a very smooth, tender texture; no woodiness.
- Smaller, bushier plants. Nice little globe-shaped radishes. I really enjoyed growing these. They could even be used as an early garden border because of their compact habit.
- I was surprised at the nice size of its roots since the plants were so much smaller. Roots were more uniformly round. Milder flavor. Deeper reddish color.

Comments on 'Plum Purple' Radish

- All tops.
- Matured a little earlier and did not go to seed.
- Crisp roots with a strong radish flavor. Bolted first.
- Plants grew kind of lanky. Bolted first. Roots were elongated.
- Plants were larger and grew more quickly. Flavor has more kick to it.
- I would like to try this again to see if another year's weather would make a difference.
- It was all around a better radish.
- Germination was twice as high. More plants led to more radishes. Flavor was less hot.

Conclusions

'Amethyst' produced higher yields. Its roots were larger, deeper purple in color and more attractive; they tasted milder, too. 'Plum Purple' grew more vigorously and matured earlier, but its roots were of inferior quality.

Trial 35. Radish, Red

Varieties (information from seed catalogs)

'Cherry Belle'

23 days. Bright cherry red, round roots. Flesh is pure white, crisp, and mild. Its short tops are good for bunching. Tolerates poor soils. Former All-America Selections Winner.

'Rover'

21 days. Newer variety with very smooth, dark red skin. Flesh is crisp and mild. Easily grown.



Data

Data were collected at 4 sites in 2011.

Trait	'Cherry Belle'	'Rover'	Same
Germinated best	0 %	50 %	50 %
Healthier plants	0	50	50
Matured earlier	0	100	0
Higher yields	0	100	0
More attractive roots	0	100	0
Tasted better	0	75	25
<i>Preference</i>	<i>0</i>	<i>100</i>	
<i>Recommend to others</i>	<i>25</i>	<i>75</i>	
<i>Overall rating¹</i>	<i>4.33</i>	<i>8.00</i>	

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

General Comments

- All tops—not much under ground (sown May 18).
- Both germinated at 95 percent or higher. Both had healthy green tops.

Comments on 'Cherry Belle' Radish

- Flavor was more mild and sweet.
- Very inferior.

Comments on 'Rover' Radish

- Had a few nice radishes—'Cherry Belle' didn't have any before it went to seed.
- Ready to eat earlier. Bigger radishes. The roots were round and bright red compared to the longer and not as pretty roots of 'Cherry Belle'. Flavor was a more distinct radish taste.
- In this difficult season, 'Rover' produced well even in very wet conditions (sown June 4).
- Bigger; thicker; not as bitter.

Conclusions

In limited testing, the hybrid 'Rover' outperformed the popular standard 'Cherry Belle' in all traits. It showed earlier maturity, higher yields, more attractive roots, and better taste. Its roots were brighter red and more globular.

Trial 36. Squash, Summer Crookneck

Varieties (information from seed catalogs)

'Early Golden Summer'

58 days. Yellow, warty fruits with buttery flavor and firm texture. Grown in the Americas since the 1700s. Pick when 4 to 5 inches long. Vines are late to get started but then very productive until frost.

'Gentry'

48 days. Butter yellow, smooth skin with mild sweet flavor. Hybrid vines are very productive, even under stress.



Data

No data were submitted for this trial.

General Comments

- No comments.

Comments on 'Early Golden Summer' Squash

- No comments.

Comments on 'Gentry' Squash

- No comments.

Conclusions

There was minimal interest among gardeners for this trial and no data were submitted.

Trial 37. Squash, Summer Scallop

Varieties (information from seed catalogs)

'Benning's Green Tint'

63 days. Pale green, tender squash. Vigorous bushes produce good yields. Harvest when 2 to 3 inches across for finest flavor and texture.

'Peter Pan'

50 days. Light green fruits are meaty, tender, and slow to develop tough skins and seeds. Best picked when 3 to 4 inches across. Compact plants.



Data

Data were collected at 5 sites in 2011.

Trait	'Benning's Green Tint'	'Peter Pan'	Same
Germinated best	0 %	60 %	40 %
Healthier plants	0	0	100
Matured earlier	0	75	25
Higher yields	60	40	0
More attractive fruits	0	40	60
Tasted better	25	25	50
<i>Preference</i>	40	60	
<i>Recommend to others</i>	20	40	
<i>Overall rating¹</i>	4.20	5.00	

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

General Comments

- Germination for both was near 100 percent.
- Neither of the varieties matured.
- I did not like the taste of either variety.
- Both have extremely hard, impenetrable shells. Most of the produce of these two varieties were taken to the dump grounds.

Comments on 'Benning's Green Tint' Squash

- Never germinated (sown May 20).
- The taste was lighter and the size was smaller and more manageable for table.
- "All hat, no cattle." In other words, great plants, very little fruit.

Comments on 'Peter Pan' Squash

- Much earlier. Higher yields. Sowed a second crop in August and received a small additional crop. Great in stir fry.
- Developed fruit earlier. Large leaves.

Conclusions

Most gardeners did not like either variety. Plants were healthy but yields were poor. The taste of the squash was bland. 'Peter Pan' matured earlier. Yield comparisons were mixed.

Trial 38. Squash, Summer Yellow Straightneck

Varieties (information from seed catalogs)

‘Multipik’

50 days. Very high yielding squash of excellent quality. Its precocious gene ensures fruits turn yellow when young and avoids green streaking caused by viruses. Vigorous, semi-bush plants. Good producer of male blossoms for cooking.

‘Superpik’

50 days. Similar to ‘Multipik’ with longer fruits. Precocious yellow fruits resist streaking caused by viruses. Very productive.

Data

Data were collected at 2 sites in 2011.

Trait	‘Multipik’	‘Superpik’	Same
Germinated best	50 %	50 %	0 %
Healthier plants	50	50	0
Matured earlier	0	50	50
Higher yields	0	50	50
More attractive fruits	50	0	50
Tasted better	100	0	0
<i>Preference</i>	50	50	
<i>Recommend to others</i>	50	50	
<i>Overall rating¹</i>	4.50	5.00	

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



General Comments

- Germination for both was near 100 percent.
- Neither of the varieties matured.
- I did not like the taste of either variety.

Comments on ‘Multipik’ Squash

- Preferred its taste. Nice produce.

Comments on ‘Superpik’ Squash

- Plants were healthier.

Conclusions

This was not a popular trial and data are very limited. ‘Superpik’ gets an edge for earlier maturity and higher yields. Its fruits were slightly longer. ‘Multipik’ received higher marks on looks and flavor.

Trial 39. Squash, Summer Zucchini

Varieties (information from seed catalogs)

'Plato'

48 days. Very dark green fruits. Disease-resistant plants are open and spineless, making it easy to harvest.

'Spineless Beauty'

43 days. The few spines on its vines make this variety easy to harvest. Medium-green, uniform, 8-inch fruits. Plants have an open habit, and produce high yields over an extended season. Delicate flavor. Extra early.



Data

Data were collected at 9 sites in 2011.

Trait	'Plato'	'Spineless Beauty'	Same
Germinated best	11 %	67 %	22 %
Healthier plants	13	50	38
Matured earlier	0	50	50
Higher yields	0	78	22
More attractive fruits	29	71	0
Tasted better	0	29	71
<i>Preference</i>	<i>11</i>	<i>89</i>	
<i>Recommend to others</i>	<i>67</i>	<i>78</i>	
<i>Overall rating¹</i>	<i>4.89</i>	<i>7.11</i>	

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

General Comments

- Both germinated well; 'Plato' one day earlier. Taste about the same.
- Both matured quite early. Both varieties produced high yields of flavorful zucchini. We didn't notice any large differences in flavor.
- Very low yield.
- Both came up quickly. Both varieties bloomed and set zucchini at the same time. Both had very good flavor and were very meaty.
- Both had healthy plants. The weather was cold and wet—it was hard to harvest mature fruit. They would grow a little, form a ball at the end and that was it. Also had spoilage issues.

Comments on 'Plato' Squash

- Sown May 29 and did not germinate. Resown June 22 and the plant that germinated was small and I never got a zucchini off of it.

- Prettier squash.
- Solid green—even color. Nicer appearance.
- Had more fruits that yellowed and died early on; but later fruits were nice. Fruits had more with fat ends and skinny bottoms.
- Did not grow at all.

Comments on 'Spineless Beauty' Squash

- Faster to germinate. Produced first. More abundant flowering and large yield. Moist and made great zucchini bread.
- Flowered earlier and produced better looking zucchini. Good flavor.
- I loved its very dark, smooth surface.
- I wasn't pleased with its texture and taste. Sort of mushy and "green" tasting. Plants never seemed as healthy as other zucchini and summer squash in my garden, and were the first to mildew late in the season. Production was surprisingly small for zucchini. But I did cover plants through the early frosts and continued to harvest an occasional zucchini.
- Healthier plants and higher yields.
- Plants were a bit more spindly in the beginning and the early hailstorm caused more damage to this variety. Plants produced more zucchini and over a longer period of time. Fruits were paler with thinner rind; I stir fry and never peel them so this is important to me.

Conclusions

'Spineless Beauty' was the clear winner. It was healthier, matured earlier, and produced more zucchini than 'Plato'. Gardeners liked its dark, smooth fruits. 'Plato' could match it for taste, but nothing else.

Trial 40. Squash, Winter Acorn

Varieties (information from seed catalogs)

'Honey Bear'

85 days. Smaller, 1-pound fruits have yellow-orange flesh that is "sweet as honey." Its compact vines spread only 4–5 feet and produce 3–5 fruits. Tolerant to powdery mildew. All-America Selections Winner.

'Table King'

75 days. Compact bush produces impressive yields of quality fruits. The glossy, dark green fruits are full-sized (2 pounds). The pale orange flesh is delicious and will improve in storage. All-America Selections Winner.



Data

Data were collected at 11 sites in 2010 and 3 sites in 2011.

Trait	2010			2011			Weighted Total		
	'Honey Bear'	'Table King'	Same	'Honey Bear'	'Table King'	Same	'Honey Bear'	'Table King'	Same
Germinated best	9 %	36 %	55 %	0 %	33 %	67 %	7 %	35 %	58 %
Healthier plants	10	40	50	0	33	67	8	39	54
Matured earlier	25	38	38	0	33	67	20	37	44
Higher yields	40	40	20	33	0	67	39	31	30
More attractive fruits	44	33	22	33	33	33	42	33	24
Tasted better	17	33	50	0	50	50	13	37	50
<i>Preference</i>	40	60		50	50		42	58	
<i>Recommend to others</i>	50	60		67	100		54	69	
<i>Overall rating¹</i>	5.67	5.80		8.00	9.00		6.17	6.49	

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

General Comments

2010

- Nice healthy plants. The fruits looked nice and my family enjoyed eating them.
- Both had good taste.
- Only about five fruits per plant.
- No production.
- They were both dry and tasteless.

2011

- Both produced good numbers of fruits. They tasted equally good.
- Preference depends on the size of fruit you want. I highly recommend both varieties.

Comments on 'Honey Bear' Squash

2010

- Plants were very healthy. They produced five fruits compared to none for 'Table King'. I would like to try 'Honey Bear' again.
- Tasted much sweeter, produced more, stayed compact, and were very nice small round squash. I would microwave the whole thing for four to five minutes and then cut it in half, and it was perfect for two people. 'Table King' was okay for an acorn squash, but 'Honey Bear' was so much better.
- Higher yields (10 versus 8 fruits). My grandkids prefer the taste of this variety, although they enjoyed the fruits of both varieties.
- Spots were all over the fruits.

More Comments on 'Honey Bear' Squash

2011

- Fruits are a better shape—round and uniform; but smaller.

Comments on 'Table King' Squash

2010

- Larger squash; better color; produced more.
- Plants showed more vigor.
- Slightly bigger fruit and a little heavier yielder.
- Produced better in the wet weather this year.
- Slow to germinate and plants were very small. Seems to mature too late for our area.
- Better taste and better germination.
- Had the first blossoms.

2011

- Sweeter taste.
- Vines were a bit taller and vines were a bit longer; but the plants of both varieties were healthy. Fruits are bigger and more irregular.

Conclusions

Plants were healthy and produced decent yields of delicious squash. The slight edge went to 'Table King', which matured earlier. 'Honey Bear' plants were more compact and their fruits were smaller, rounder, and more uniform in shape.

Trial 41. Squash, Winter Buttercup

Varieties (information from seed catalogs)

'Burgess'

85 days. A popular winter squash variety. Dark green fruits weigh about 3 pounds and have a distinct cup on the bottom. The flesh is golden, dry, sweet, and full of flavor. Excellent for storage and freezing.

'Uncle David's Dakota Dessert'

100 days. Developed in North Dakota. Its thick, golden flesh is very flavorful. The vines are vigorous and produce good yields.



Data

Data were collected at 34 sites in 2010 and 21 sites in 2011.

Trait	2010			2011			Weighted Total		
	'U.D. Dakota 'Burgess'	'U.D. Dakota Dessert'	Same	'U.D. Dakota 'Burgess'	'U.D. Dakota Dessert'	Same	'U.D. Dakota 'Burgess'	'U.D. Dakota Dessert'	Same
Germinated best	33 %	20 %	47 %	35 %	35 %	30 %	34 %	26 %	41 %
Healthier plants	21	21	57	41	6	53	29	15	55
Matured earlier	50	17	33	44	13	44	48	15	37
Higher yields	37	33	30	50	19	31	42	28	30
More attractive fruits	23	18	59	44	13	44	31	16	53
Tasted better	30	20	50	25	42	33	28	42	44
<i>Preference</i>	56	44		63	38		59	42	
<i>Recommend to others</i>	76	65		82	59		78	63	
<i>Overall rating¹</i>	7.41	7.41		7.19	5.81		7.33	6.80	

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

General Comments

2010

- Plants were healthy and the squash of both varieties tasted very good.
- Both taste excellent.
- Vines of both varieties were okay, nice, and compact. Similar yields.
- These were so equal all the way through the season. Couldn't really pick one over the other.
- Both had healthy plants.
- The plants of neither variety were healthy. They did not produce any fruits.
- Vines were very small and didn't produce fruit.
- Beautiful plants but neither variety produced many fruit.
- Overall yields for both were not great.
- Neither produced squash big enough to eat.

2011

- Both varieties were very productive.
- Seeds never came up (sowed in June).
- The plants of never variety were impressive. Very poor at producing or setting any of fruit.
- Both grew well.

Comments on 'Burgess' Squash

2010

- Produced three to four times more fruits, but its taste wasn't very sweet.
- I like both, but 'Burgess' has a higher yield.
- We are amazed at the great yield and flavor even after freezing.
- Very deep flesh and not as dry.
- Faster maturing; larger fruit.
- Squash were larger and tastier.
- Higher yield and faster maturity. Fruits were larger (twice as big) and nicer looking.
- Plants turned brown and died while those of 'Uncle David's Dakota Dessert' stayed healthy.

2011

- Fruits are a better shape—round and uniform; but smaller.
- Fruits have a blockier shape. Flavor is sweeter and moister.
- Nice firm fruit.
- High yields.
- Healthier plants, more fruits matured before frost.
- Ripened and cured faster. Fruits had an even size with deep shells.
- More fruit and larger size.
- This variety always does well.
- Better yield.

Comments on 'Uncle David's Dakota Dessert' Squash

2010

- Its flesh was very sweet.
- Slightly more productive. Has a denser and less moist flesh. I prefer a drier flesh for eating.
- I liked the texture of its fruits better (smoother and creamier), and the flavor was just a little more robust, too.
- Beautiful, uniform squash. We harvested 28 squash.
- This summer we faced all kinds of elements—hail, wind, lots of rain—but this variety was sturdier. Produced more squash.
- Smoother skin. Moister flesh.

2011

- Produced about 85 usable fruits (compared to 60 for 'Burgess'), but fruits were slightly smaller. Fruits are shaped like flying saucers with a knob on the bottom. Flavor is thicker and a little smoother in texture but not as sweet.
- Wonderful dry fruit. I've never had a sweet dry squash like this.
- Tasted sweeter.
- Better germination rate.
- Never germinated.
- Did not grow well; not sure what happened. Was very happy with 'Burgess'; it was no trouble getting it to grow.
- Tasted really great with an extra kick.
- Very productive.
- The first planting was damaged by wildlife. In the second planting (June 4), the fruit of this variety didn't get large or mature enough before frost.
- Better taste, milder, sweeter. Plants got off to a strong start.

Conclusions

'Burgess' was preferred for its earlier maturity, higher yields, and uniformly shaped fruit. It was more reliable. Gardeners enjoyed the flavor of both. Some gardeners marveled at the sweet, dry flavor of 'Uncle David's Dakota Dessert'.

Trial 42. Swiss Chard, White

Varieties (information from seed catalogs)

'Fordhook Giant'

25 days baby, 50 days full size. Leaves are medium green and crinkled with white veins and broad, white stems. A popular and productive variety. Grows 24–28 inches.

'Lucullus'

25 days baby, 50 days full size. Large, green leaves with celery-like stalks. Very crinkly. Mild flavor. Grows 28 inches.



Data

Data were collected at 3 sites in 2010 and 3 sites in 2011.

Trait	2010			2011			Weighted Total		
	'Fordhook Giant'	'Lucullus'	Same	'Fordhook Giant'	'Lucullus'	Same	'Fordhook Giant'	'Lucullus'	Same
Germinated best	67 %	0 %	33 %	33 %	33 %	33 %	50 %	17 %	33 %
Healthier plants	0	33	67	0	33	67	0	33	67
Matured earlier	0	67	33	0	33	67	0	50	50
Higher yields	0	0	100	33	33	33	17	17	67
More attractive	0	67	33	0	33	67	0	50	50
Tasted better	0	33	67	0	67	33	0	50	50
<i>Preference</i>	0	100		50	50		25	75	
<i>Recommend to others</i>	33	67		67	67		50	67	
<i>Overall rating¹</i>	6.00	7.00		5.00	6.67		5.50	6.84	

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

General Comments

2010

- Both varieties stood tall and produced well. Very good production. Could not taste any difference; both were good.
- I love to cook and eat vegetable greens, but did not like the flavor of either of these varieties. I will not grow them again.

2011

- Seemed very similar in health, yield, and attractiveness.
- Poor results with both varieties.

Comments on 'Fordhook Giant' Chard

2010

- I did not like its wider, longer stalk.

2011

- More productive.

Comments on 'Lucullus' Chard

2010

- Its leaves were very crinkly and attractive.
- Leaves were more uniformly green in color.

2011

- Slightly smoother taste.
- This was the only variety that grew at all.

Conclusions

This was not a popular trial and data are limited. Both varieties were rated similarly for health and yield. 'Lucullus' gets an edge for its more attractive, crinkly leaves and slightly smoother taste.

Trial 43. Watermelon, Red

Varieties (information from seed catalogs)

'Sweet Dakota Rose'

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

'Sweet Favorite'

79 days. Early and popular in the north. Striped melons average 10–12 pounds. Bright red, sweet flesh.



Data

Data were collected at 23 sites in 2011.

Trait	'Sweet Dakota Rose'	'Sweet Favorite'	Same
Germinated best	30 %	30 %	40 %
Healthier plants	28	17	56
Matured earlier	67	33	0
Higher yields	40	40	20
More attractive melons	37	11	53
Tasted better	41	29	29
<i>Preference</i>	61	39	
<i>Recommend to others</i>	61	56	
<i>Overall rating¹</i>	7.11	6.67	

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

General Comments

- Glad I did the watermelon trial. Most melons did ripen by September 15. We are enjoying them. I'm still amazed that in this cool year they ripened!
- This was the first time our family grew watermelon so we really didn't know what to expect. The plants were healthy looking, but the melons grew slowly ... Right before the first frost, we picked 25 watermelons (about two-thirds were 'Sweet Dakota Rose'). They were small ones but ripe and sweet. We still have several in the house and the kids are enjoying them.
- Germination was okay but not great (raised bed sown May 24).
- I wouldn't recommend either unless you are a grower like me who likes to plant lots of varieties. 'Legacy', Starbrite', 'Jubilee', 'Peddler', and 'Pronto' to name a few all produce larger, more uniform fruit and all are tastier than 'Sweet Dakota Rose' and 'Crimson Sweet'.

- Vines looked great.
- Both were okay, but not great in taste or texture. I prefer varieties with crisper texture.
- Both emerged at the same time with 70 percent germination. Vines were healthy.
- They both tasted delicious.
- I don't believe that where I live (northeast North Dakota) I will ever be able to grow any type of melon and have it fully ripen. Both varieties were slow coming up. They both produced fruit, but neither one fully ripened. I left them on the vine for as long as possible, but they were getting soft and rotting.

Comments on 'Sweet Dakota Rose' Watermelon

- Seemed to be a littler earlier and germinated better. Survived our hailstorm better.
- We had an early frost (mid September) this year. 'Sweet Dakota Rose' produced plentiful fruit before the frost. 'Sweet Favorite' did not produce ripe fruit.
- Never germinated (sown May 16). 'Sweet Favorite' came up but not doing all that well.
- I liked it for its very fine yet sweet texture.
- Sweet and delicious. Hardy.
- Melons ripened 10 days earlier. The melons of both varieties tasted good but 'Sweet Dakota Rose' was sweeter.
- Sweet tasting, easy to maintain, and were not bothered by deer or mice.
- It yielded better and continually looked better. Melons had a nice round shape. My two hills produced eight or so melons that weighed 12 pounds.

More Comments on 'Sweet Dakota Rose' Watermelon

- First melon ripened on August 30, 13 days before the first one of 'Sweet Favorite'.
- My six-year-old daughter thought this was sweeter.

Comments on 'Sweet Favorite' Watermelon

- Better yield, but not as tasty.
- Flesh was light in color. Lots of seeds. No flavor.
- Ripened earlier. Good flavor.
- Sweet, but coarser ground and tasted like all the melons at Walmart.
- I expected the taste test would be a slam dunk for 'Sweet Dakota Rose' until I ate 'Sweet Favorite', which was much sweeter. It has a very good taste but its vines were just not up to par with my other watermelon varieties and so a lot less fruit were set. Produced approximately six melons; three of these weighed 8 pounds and two weighed maybe 5 pounds (with tapered ends), and one was very small.
- It produced more melons.
- It was much sweeter and also had a richer, red color. Ripened earlier and produced higher yields of larger melons.
- Twelve ripe fruits (97.2 pounds) compared to eleven fruits (87.1 pounds) for 'Sweet Dakota Rose'. It tasted a little sweeter. Dad and others thought this was the best watermelon ever.
- Never got a ripe melon.

Conclusions

Gardeners were surprised to harvest melons during a cool year. Both varieties had healthy vines and acceptable yields. Their melons were of similar size, appearance, and flavor. 'Sweet Dakota Rose' was earlier and more productive.

Trial 44. Watermelon, Red Large

Varieties (information from seed catalogs)

'Legacy'

85 days. Flesh is red, crisp, and very sweet. Reliable producer. Striped melons weigh up to 22 pounds. Large seeds.

'Verona'

80 days. The earliest and best tasting of the 'Black Diamond' types. Melons average 20 pounds with dark green, smooth rinds. Flesh is firm and sweet.



Data

Data were collected at 6 sites in 2011.

Trait	'Legacy'	'Verona'	Same
Germinated best	83 %	17 %	0 %
Healthier plants	50	17	33
Matured earlier	50	17	33
Higher yields	67	17	17
More attractive fruits	40	40	20
Tasted better	40	40	20
<i>Preference</i>	67	33	
<i>Recommend to others</i>	67	50	
<i>Overall rating¹</i>	5.83	4.17	

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

General Comments

- Both seemed healthy and grew well. Neither ripened very well. Set a lot of melons.
- Hard to determine when melons are ripe.
- Only one seed germinated (sown June 2). No melons were produced on this 'Legacy' plant.

Comments on 'Legacy' Watermelon

- Better in every way.
- Earlier.
- Nearly all seeds germinated.
- Germinated much earlier. Vines spread all over. Its first melon ripened one month earlier than that of 'Verona'. Normal looking (striped) rinds. We took it to our celebration.

Comments on 'Verona' Watermelon

- Only three melons ripened.
- I liked the looks of the dark green 'Verona'. It was larger than 'Legacy'. I think on a good year the 'Verona' would be the biggest and prettiest melon.

Conclusions

Both varieties grew well but 'Legacy' was earlier to ripen and higher yielding. The dark green rind and extra large size of 'Verona' was appealing, but most of its melons did not ripen before frost. No comments were made on taste.

Trial 45. Watermelon, Yellow

Varieties (information from seed catalogs)

‘Yellow Crimson’

80 days. Bright yellow flesh with good taste. Striped, round melons weigh 20–25 pounds. Large black seeds.

‘Yellow Doll’

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

Data

Data were collected at 12 sites in 2011.

Trait	‘Yellow Crimson’	‘Yellow Doll’	Same
Germinated best	50 %	17 %	33 %
Healthier plants	50	17	33
Matured earlier	50	50	0
Higher yields	50	25	25
More attractive fruits	25	50	25
Tasted better	33	33	33
<i>Preference</i>	50	50	
<i>Recommend to others</i>	50	75	
<i>Overall rating¹</i>	5.25	6.00	

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

General Comments

- They took over one week to germinate (sown May 1). They both grew well and produced their first fruits at the same time. Similar yields.
- Neither tasted very sweet.
- No seeds of either variety germinated. Too much rain—a first for our area—clay soil—a swampy mess.
- The heavy rains created a crust on the soil surface. Really set back both varieties. Neither variety ripened completely.
- Neither germinated (sown May 19).
- Only one seed germinated. Not sure why.



Comments on ‘Yellow Crimson’ Watermelon

- Germinated sooner and produced larger fruit.
- Its vines were healthy and productive.
- Better germination. Higher yields. Larger fruits 10–15 pounds compared to 3–6 pounds for ‘Yellow Doll’. Crisper flesh. Sweet and delicious. Not really a yellow, but more an orange. I have planted ‘Yellow Doll’ for over 30 years. My kids loved ‘Yellow Crimson’. I will plant ‘Yellow Crimson’ again next year. Usually I give varieties at least a two-year trial. Definitely a thumbs up for ‘Yellow Crimson’.
- The melons were bigger and looked like a red watermelon. Flesh was more of a peach color.
- The melons were eaten by deer before they were ripe.

Comments on ‘Yellow Doll’ Watermelon

- They were sweeter and more yellow.
- Almost 100 percent germination. Earlier. Excellent performer.
- Seemed to grow faster. Smaller melons.
- Did not germinate at all.

Conclusions

Both varieties struggled in the cool weather. Gardeners liked the earliness, bright yellow flesh, and sweetness of ‘Yellow Doll’. They marveled at the large size (10–15 pounds), and productive vines of ‘Yellow Crimson’, which had peach flesh.

Trial 46. Marigold, Cutting

Varieties (information from seed catalogs)

'Crackerjack'

85 days. Mix of orange, yellow, and gold double blooms. Sturdy 30-inch plants.

'Giant'

80 days. Gold and yellow flowers on sturdy plants. Height 36 inches.

Data

Data were collected at 9 sites in 2011.

Trait	'Crackerjack'	'Giant'	Same
Germinated best	11 %	33 %	56 %
Healthier plants	0	0	100
Bloomed earlier	22	11	67
More flowers	33	0	67
More attractive in garden	22	33	44
More attractive in vase	40	20	40
<i>Preference</i>	50	50	
<i>Recommend to others</i>	100	89	
<i>Overall rating¹</i>	8.33	7.67	

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

General Comments

- The plants are huge! Thick strong stalks. Awesome colors. My four-year-old couldn't wait to pick one!
- Strong, sturdy plants. Lots of flowers on both. Both very attractive.
- I really couldn't notice much difference. Both have lovely large flowers.
- From now on I'll mix them in the same row. They are different yet both beautiful for a cut flower.
- Both grew about 3 feet tall.
- Both produced healthy plants.



Comments on 'Crackerjack' Marigold

- First out of the ground and earlier to bloom.
- A taller, more robust plant.
- Beautiful, big snowball blooms.
- More flowers per plant and were prettier.
- Seemed to be continually in bloom.

Comments on 'Giant' Marigold

- Germinated a little better.
- More compact plant. Earlier flowering (17 days earlier).
- More formal, tighter flowers, brighter colors. Their orange colors are stunning.
- I was very pleased with how it looked. They looked so nice.

Conclusions

Gardeners loved both varieties. Their blooms were big and bright; their stems were sturdy and well suited for cutting. 'Crackerjack' seed is inexpensive; it matched, if not exceeded the new 'Giant' hybrid in health and beauty.

Trial 47. Sunflower, Dwarf

Varieties (information from seed catalogs)

‘Dwarf Sungold’

60 days. Easy to grow and fun for kids. Golden blooms on sturdy, 24-inch stems. Sheds pollen.

‘Teddy Bear’

60 days. Very popular variety. Golden yellow, double-petal type. Height 24 inches. Sheds pollen.

Data

Data were collected at 8 sites in 2011.

Trait	‘Dwarf Sungold’	‘Teddy Bear’	Same
Germinated best	13 %	63 %	25 %
Healthier plants	0	57	43
Bloomed earlier	0	71	29
More flowers	13	63	25
More attractive in garden	13	38	50
More attractive in vase	0	60	40
<i>Preference</i>	29	71	
<i>Recommend to others</i>	38	75	
<i>Overall rating¹</i>	5.00	8.83	

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

General Comments

- Planted late (June 22) due to all the rain. Was amazed how they grew and bloomed so fast.
- Neither produced flowers.



Comments on ‘Dwarf Sungold’ Sunflower

- Its head was just plain ugly.
- Produced multiple smaller flowers after the main flower dried up.
- Very short and hardly got any flowers.

Comments on ‘Teddy Bear’ Sunflower

- More flowers; healthier plants.
- More flowers; larger flowers (5–7 inches compared to 2–3 inches for ‘Dwarf Sungold’); and a stronger, healthier plant.
- Looked great in a flower arrangement. Grew fast.
- Did not germinate at all.
- There was a huge difference. ‘Teddy Bear’—all the way.

Conclusions

‘Teddy Bear’ was the clear winner. Its plants were healthier; they bloomed earlier and more prolifically. Both ‘Teddy Bear’ and ‘Dwarf Sungold’ produced double-petal, golden flowers and were attractive in the garden.

Trial 48. Sunflower, Orange Cutting

Varieties (information from seed catalogs)

'Pro Cut Orange'

55 days. Very early. Single stem, pollenless type for cutting. Height 60–72 inches.

'Zohar'

55 days. Organic sunflower with orange petals surrounding dark centers. Pollenless. Height 48–60 inches.

Data

Data were collected at 3 sites in 2011.

Trait	'Pro Cut Orange'	'Zohar'	Same
Germinated best	0 %	50 %	50 %
Healthier plants	0	50	50
Bloomed earlier	0	33	67
More flowers	0	0	100
More attractive in garden	33	33	33
More attractive in vase	0	0	100
<i>Preference</i>	67	33	
<i>Recommend to others</i>	67	100	
<i>Overall rating¹</i>	7.33	7.33	

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

General Comments

- None.



Comments on 'Pro Cut Orange' Sunflower

- Plants showed more leaf disease.
- I prefer its better size of bloom.

Comments on 'Zohar' Sunflower

- Earlier flowers.

Conclusions

Data for this trial are very limited. Both varieties were easy to grow, bloomed early, and produced gorgeous orange flowers for cutting. 'Zohar' is a new organic variety and looks promising; 'Pro Cut Orange' has done well for years.

Trial 49. Sunflower, Primrose Yellow

Varieties (information from seed catalogs)

'Buttercream'

55 days. Pale yellow petals and chocolate centers. Branching habit. Pollenless blooms good for cutting.

'Valentine'

75 days. Pale yellow petals with dark centers. Height 60 inches. Pollenless.

Data

Data were collected at 5 sites in 2011.

Trait	'Butter-cream'	'Valentine'	Same
Germinated best	75 %	0 %	25 %
Healthier plants	25	0	75
Bloomed earlier	75	25	0
More flowers	50	25	25
More attractive in garden	0	0	100
More attractive in vase	0	0	100
<i>Preference</i>	80	20	
<i>Recommend to others</i>	100	100	
<i>Overall rating¹</i>	7.00	6.60	

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

General Comments

- Both were attractive.



Comments on 'Buttercream' Sunflower

- It produced flowers earlier.
- Bloomed three days earlier. Its color was more vibrant and the flowers were bigger.
- Better plant overall despite difficult season (too wet!).

Comments on 'Valentine' Sunflower

- More deer resistant. Nice, uniform plants.

Conclusions

All gardeners recommended both varieties; however, their comments lacked much enthusiasm. 'Buttercream' was preferred for its earlier bloom and the intensity of its primrose color. Both are lovely additions to a garden.

Trial 50. Sunflower, Red

Varieties (information from seed catalogs)

'Chocolate'

60 days. Reddish-brown petals. Branching type with long stems. Height 36–60 inches. Pollenless.

'Moulin Rouge'

65 days. Deep burgundy petals surround a dark center. Height 60–80 inches. Pollenless.



Data

Data were collected at 14 sites in 2011.

Trait	'Chocolate'	'Moulin Rouge'	Same
Germinated best	9 %	55 %	36 %
Healthier plants	0	82	18
Bloomed earlier	0	73	27
More flowers	11	67	22
More attractive in garden	10	60	30
More attractive in vase	20	60	20
<i>Preference</i>	<i>18</i>	<i>82</i>	
<i>Recommend to others</i>	<i>50</i>	<i>91</i>	
<i>Overall rating¹</i>	<i>6.00</i>	<i>8.36</i>	

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

General Comments

- Both germinated equally well. Both looked great in bouquets (with zinnias). Both withstood some pretty strong winds. I love planting sunflowers for the birds and bees. I will plant these again.
- Both roared out of the ground. I wouldn't plant either variety again. The plants were about 6–7 feet high, shaded everything, and were not attractive.

Comments on 'Chocolate' Sunflower

- Had two to three flowers on every plant!
- More compact plant. Nicer flower color.
- Blooms did not mature.
- Plants were slower to germinate and seemed a little more spindly.
- Most flowers were only 2.5–3.0 inches wide. They were smaller and cute as all heck. Wonderful color.

Comments on 'Moulin Rouge' Sunflower

- A lot more plants came up early. Taller; bigger leaves; a better looking plant. Bigger flowers.
- Stronger plant and larger flowers.
- Grew faster and larger.
- Earlier and larger flowers.
- Slightly taller plant. More branching/flowers. I loved its dark flowers. Had some solid brown/burgundy flowers.
- Bloomed, but were kind of ugly.
- The color of the flower is brighter. Looks more vibrant. Its plants looked healthier.
- Larger plant; more flowers; prettier flowers.
- Its stalks were a lot thicker and held up in the wind.

Conclusions

The plants of 'Moulin Rouge' were more vigorous, bloomed earlier, and produced more flowers. It was more beautiful in the garden. Its burgundy-tipped flowers delighted gardeners. 'Chocolate' blooms were cute.

Trial 51. Sweet Pea, Tall

Varieties (information from seed catalogs)

'Mammoth Choice'

74 days. Blooms early and withstands heat. Large, fragrant flowers. Long stems for cutting. Height 60–72 inches. Requires trellis.

'Royal'

90 days. Large blossoms in bright mix of colors. Outstanding fragrance. Long stems for cutting. Height 72 inches. Requires trellis.



Data

Data were collected at 18 sites in 2011.

Trait	'Mammoth Choice'	'Royal'	Same
Germinated best	25 %	6 %	69 %
Healthier plants	7	20	73
Bloomed earlier	60	13	27
More flowers	47	27	27
More attractive in garden	27	27	47
More attractive in vase	10	30	60
<i>Preference</i>	63	38	
<i>Recommend to others</i>	56	63	
<i>Overall rating¹</i>	6.44	6.06	

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

General Comments

- Beautiful flowers from both. Both are vigorous climbers. I didn't like the fragrance of either one.
- Both had several die as young plants.
- Both varieties filled in nicely on my fence as season progressed. Both were very similar looking in the vase.
- Neither produced much and they were difficult to use as cut flowers.
- I enjoyed them both—long stems, huge fragrant flowers—mostly purple—but foliage was awfully thick. I'll do them again, I hope.
- Wet soil led to late planting. Our sweet peas did not do as well this year as other years.
- None of these came up.
- Both had vigorous and healthy plants. 'Mammoth Choice' only produced a few flowers and 'Royal' produced no flowers. Not sure why.
- They were not that attractive as they had small flowers; but were fragrant.

Comments on 'Mammoth Choice' Sweet Pea

- Produced more flowers earlier.
- Bloomed although I planted late (June 20).
- Larger blossoms.
- Nicer looking plants.
- Best sweet pea I have ever grown.
- More blossoms.
- Bloomed 19 days earlier. Produced a large number of flowers in a timely manner.
- A little brighter. Bloomed way into September.

Comments on 'Royal' Sweet Pea

- More flowers and in more colors.
- More variety of flower color.
- More color variety.
- Bigger, more colorful blooms.
- More wilt problems. Appeared to need a longer growing season. Didn't bloom until August 31.
- Bloomed earlier and lasted longer.
- Nicer plants!

Conclusions

Wet weather often delayed planting, but in most cases both varieties grew well and pleased gardeners with their beauty and fragrance. 'Mammoth Choice' bloomed earlier and more prolifically. 'Royal Mix' showed a greater diversity of colors.

Trial 52. Zinnia, Bicolor

Varieties (information from seed catalogs)

'Swirls'

80 days. Brilliant blooms of rose and white or red and yellow. The 4-inch flowers are fully double to semi-double with ruffled flat petals. Height 24 inches.

'Whirligig'

80 days. Gorgeous mix of bicolors including gold/crimson and red/white. Height 28 inches.



Data

Data were collected at 12 sites in 2011.

Trait	'Swirls'	'Whirligig'	Same
Germinated best	67 %	8 %	25 %
Healthier plants	33	25	42
Bloomed earlier	58	25	17
More flowers	42	17	42
More attractive in garden	25	33	42
More attractive in vase	50	0	50
<i>Preference</i>	67	33	
<i>Recommend to others</i>	67	67	
<i>Overall rating¹</i>	7.58	6.33	

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

General Comments

- I was very disappointed in both. Only 40–50 percent germination. Both had either solid pink or light yellow flowers; very few were bicolored. I grew a lot of different zinnias this year; these were my least favorite and looked the worst.
- Slow to bloom.

Comments on 'Swirls' Zinnia

- Germinated quite a bit better. Many more flowers. I really liked how colorful these were.
- Grew a little faster.
- Nice design and flower head.
- More branching.
- Unusual, really nice color combinations. Very nice in bouquets and always gets a comment.
- Very small flowers; interesting design.
- Many more flowers.
- Very attractive and I received many compliments on it. I will definitely get the 'Swirls' again.

Comments on 'Whirligig' Zinnia

- Produced flowers earlier and more of them.
- Was behind the whole season. Fewer plants that were smaller and the flowers less showy. Flowers also lost their petals first.
- Showy.
- Its color combinations were beautiful.
- Nicer flowers.

Conclusions

'Swirls' germinated better, bloomed earlier, and produced more flowers. Its blooms were especially showy in bouquets. Most gardeners felt the unique color combinations found in both 'Swirls' and 'Whirligig' were attractive in the garden.

Trial 53. Zinnia, Cactus

Varieties (information from seed catalogs)

'Burpeeanna Giants'

80 days. Huge 6-inch flowers in a bright array of colors. Height 36 inches.

'Giant Cactus'

80 days. Extra large, fully double, cactus-type flowers. Height 30 inches.

Data

Data were collected at 11 sites in 2011.

Trait	'Burpeeanna Giants'	'Giant Cactus'	Same
Germinated best	36 %	18 %	45 %
Healthier plants	20	30	50
Bloomed earlier	45	18	36
More flowers	18	18	64
More attractive in garden	27	9	64
More attractive in vase	14	14	71
<i>Preference</i>	50	50	
<i>Recommend to others</i>	82	82	
<i>Overall rating¹</i>	8.00	7.11	

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

General Comments

- Both were great.
- Of all my trials, these varieties germinated best.
- Very prolific blooming. Beautiful flowers. Long lasting cut flower. Enjoyed both. They produced well into the fall until the hard frost.
- Neither variety lived up to expectations because of late/wet season. Just not a good year for many things. Think both of these would do well in a good year.
- Did not like these—ugly.



Comments on 'Burpeeanna Giants' Zinnia

- Better germination. Bloomed one day later. More uniform plants.
- Germinated 60 percent better, which led to more flowers. Taller plants. Its first flowers bloomed four days earlier than those of 'Giant Cactus Mix'. The flowers were fuller and the stems were straighter.
- Plants appeared healthier. Plants were larger and the flowers were more vibrant in color.
- Brighter colors.
- Bloomed earliest.

Comments on 'Giant Cactus' Zinnia

- Huge flowers. Pretty—very bright color—showy.
- Much better germination. Larger plants; more flowers per plant.
- Larger flowers.

Conclusions

Gardeners enjoyed both varieties and rated them similarly. They liked the size and brightness of the blooms. A slight preference was shown for 'Burpeeanna Giants' for its uniform habit, earliness, and vibrant colors.

Trial 54. Zinnia, Candy Cane

Varieties (information from seed catalogs)

'Candy Cane'

80 days. Mix of double-flowered pinks, reds and golds, splashed and streaked with white and bronze. Height 18 inches.

'Peppermint Stick'

80 days. White, pale yellow, pink and orange medium-size flowers all splashed with cherry red. Height 28 inches.



Data

Data were collected at 12 sites in 2011.

Trait	'Candy Cane'	'Peppermint Stick'	Same
Germinated best	27 %	27 %	45 %
Healthier plants	20	10	70
Bloomed earlier	20	50	30
More flowers	0	30	70
More attractive in garden	10	40	50
More attractive in vase	14	14	71
<i>Preference</i>	<i>27</i>	<i>73</i>	
<i>Recommend to others</i>	<i>64</i>	<i>64</i>	
<i>Overall rating¹</i>	<i>6.27</i>	<i>6.64</i>	

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

General Comments

- These are both very attractive varieties.
- I loved the color pattern on both! Would like to plant these in a normal year.
- Great in containers. Small, compact stems. Lovely colors. Loved them both!
- Loved both. Flowers lasted a long time and colors were beautiful.
- Didn't like either of these—low germination, slow flowering, small flowers.
- Poor germination.

Comments on 'Candy Cane' Zinnia

- Fuller, larger flowers. Beautiful.
- The flowers were more attractive and pretty.

Comments on 'Peppermint Stick' Zinnia

- Its flowers just looked better.
- These seemed to have more variety in the flowers; some solid reds and some flowers were half red and half yellow (which I thought was neat looking).
- Larger plants with more flowers. More true colors in the flowers.
- They started with stripes in all the flowers; whereas 'Candy Cane' flowers had some plain ones.

Conclusions

Plants of both varieties were healthy and produced a similar number of flowers. 'Peppermint Stick' showed a little more vigor. Its blooms included a wider array of colors and tones, including golden petals with red stripes and flecking.

Trial 55. Zinnia, Cutting

Varieties (information from seed catalogs)

‘Cut & Come Again’

80 days. A never ending display of double and semi-double flowers for cutting. Flowers are 2.5 inches across and slightly ruffled. Height 24 inches.

‘Oklahoma’

80 days. Bright colors, excellent vase life, and resistance to mildew. Lots of 2-inch blooms. Outstanding for cut flowers. Height 30–40 inches.



Data

Data were collected at 11 sites in 2011.

Trait	‘Cut & Come Again’	‘Oklahoma’	Same
Germinated best	9 %	27 %	64 %
Healthier plants	0	18	82
Bloomed earlier	36	45	18
More flowers	18	45	36
More attractive in garden	9	27	64
More attractive in vase	20	10	70
<i>Preference</i>	60	40	
<i>Recommend to others</i>	73	91	
<i>Overall rating¹</i>	7.27	7.55	

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

General Comments

- These are both very attractive varieties.
- I loved the color pattern on both! Would like to plant these in a normal year.
- Great in containers. Small, compact stems. Lovely colors. Loved them both!
- Both varieties produced very small blooms.
- Both had good germination. Plants were very tall and sturdy; wind didn’t blow them over. Their flower heads were the same size with a lot of nice colors. Good for cutting.
- Very nice plants. Lots of flowers. Enjoyed all of the colors.
- Poor germination.
- Didn’t like either of these—low germination, slow flowering, small flowers.

Comments on ‘Cut & Come Again’ Zinnia

- Prettier colors. Some were hot pink and coral/orange.
- Bigger plants and a little bit healthier.
- Produced more flowers later in the season.
- Sharper colors.
- Grew a little faster and had brighter colors.

Comments on ‘Oklahoma’ Zinnia

- More productive and more colors.
- Withstood our winds better.
- Taller, stronger stalks. Loved the colors.
- A good, sturdy, and colorful plant.

Conclusions

The sturdy, well-branched plants of both varieties produced lots of 2-inch blooms for cutting. ‘Oklahoma’ was more reliable and produced more blooms than ‘Cut & Come Again’. Gardeners were split on which had brighter or prettier flowers.

Trial 56. Zinnia, Giant Classic

Varieties (information from seed catalogs)

'California Giants'

80 days. Bushy plants produce lots of 5–6-inch double flowers in bright colors. Height 36 inches.

'State Fair'

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

Data

Data were collected at 4 sites in 2011.

Trait	'California Giants'	'State Fair'	Same
Germinated best	25 %	0 %	75 %
Healthier plants	0	25	75
Bloomed earlier	75	0	25
More flowers	0	25	75
More attractive in garden	0	25	75
More attractive in vase	25	0	75
<i>Preference</i>	25	75	
<i>Recommend to others</i>	100	100	
<i>Overall rating¹</i>	8.00	8.00	

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

General Comments

- Both were beautiful!
- They looked almost exactly the same. They both looked really great, and flowered until a hard freeze. I could hardly see any difference between the two.



Comments on 'California Giants' Zinnia

- Slightly better germination and earlier bloom (10 days earlier).

Comments on 'State Fair' Zinnia

- Its flower heads looked a little fuller.
- They produced flowers longer.
- Bigger flowers and a sturdier plant.

Conclusions

Both varieties produced lots of giant, beautiful flowers. 'California Giants' bloomed earlier, but most gardeners gave a slight edge to 'State Fair' for the fullness of its blooms and overall vigor of its plant.

Trial 57. Zinnia, Giant Lime

Varieties (information from seed catalogs)

‘Benary’s Giant Lime’

80 days. Huge flowers on long, sturdy stems. Fully double flowers up to 6 inches wide. Resists mildew. Excellent cut flower. Height 40–50 inches.

‘Queen Lime’

80 days. Well-branched plants create lots of chartreuse flowers. Flowers are medium in size and fully double. Excellent vase life.



Data

Data were collected at 13 sites in 2011.

Trait	‘Benary’s G. Lime’	‘Queen Lime’	Same
Germinated best	0 %	45 %	55 %
Healthier plants	9	27	64
Bloomed earlier	27	36	36
More flowers	18	45	36
More attractive in garden	9	45	45
More attractive in vase	13	25	63
<i>Preference</i>	27	73	
<i>Recommend to others</i>	73	91	
<i>Overall rating¹</i>	6.45	7.18	

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

General Comments

- Very few blooms on both.
- Both were nice and did great as a cut flower, lasting about five days.
- Both did well despite difficult conditions this year.

Comments on ‘Benary’s Giant Lime’ Zinnia

- The flowers had a nice globular shape.
- Larger flowers and bloomed first.
- Plants suffered from a fungus, while the ‘Queen Lime’ had nothing.
- These were prettier.
- More blooms. Healthy and uniform blooms.

Comments on ‘Queen Lime’ Zinnia

- Bigger flowers. Lasted longer as a cut flower. Handled the frost better.
- A very nice flower.
- A little bigger and looked more like a zinnia.
- Deeper green, more rounded, and more uniform.
- More and bigger flowers.
- More blooms per plant.
- Nice stately plant—larger. A more prominent variety.

Conclusions

Gardeners enjoyed both, but preferred ‘Queen Lime’. Its vigorous, disease-resistant plants produced slightly more blooms and larger blooms. It was more attractive in the garden. Both varieties were good for cutting.

Trial 58. Zinnia, Giant Pink

Varieties (information from seed catalogs)

'Benary's Giant Bright Pink'

80 days. Huge flowers on long, sturdy stems. Fully double flowers up to 6 inches wide. Resists mildew. Excellent cut flower. Height 40–50 inches.

80 days. Large flowers up to 6 inches wide. Single, semi-double and double flower types. Excellent cut flower. Height 40–50 inches.



Data

Data were collected at 6 sites in 2011.

Trait	'Benary's G. B. Pink'	'Giant D. B. Pink'	Same
Germinated best	40 %	20 %	40 %
Healthier plants	20	0	80
Bloomed earlier	40	0	60
More flowers	60	20	20
More attractive in garden	60	20	20
More attractive in vase	67	0	33
<i>Preference</i>	80	20	
<i>Recommend to others</i>	100	20	
<i>Overall rating¹</i>	8.80	7.80	

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

General Comments

- I didn't think either of these was a dahlia type.
- Good branching and bushy habit on both.

Comments on 'Benary's Giant Bright Pink' Zinnia

- Filled out better.
- Flowers were fuller and were slightly darker pink (less faded). Looked beautiful with the 'Benary's Giant Lime' in a vase.
- Plants were taller; healthier; more uniform growth. Flowers were fuller, more rounded. More flowers.

Comments on 'Giant Dahlia Bright Pink' Zinnia

- A prettier flower and color. Also a fuller plant.

Conclusions

The plants of 'Benary's Giant Bright Pink' produced more flowers. Its flowers were fuller, more rounded, and vibrant. It made for a better show in the garden and in the vase. 'Giant Dahlia Bright Pink' was very good, but inferior in all respects.

Trial 59. Zinnia, Giant Purple

Varieties (information from seed catalogs)

‘Benary’s Giant Purple’

80 days. Huge flowers on long, sturdy stems. Fully double flowers up to 6 inches wide. Resists mildew. Excellent cut flower. Height 40–50 inches.

‘Giant Dahlia Violet’

80 days. Large flowers up to 6 inches wide. Single, semi-double and double flower types. Excellent cut flower. Height 40–50 inches.



Data

Data were collected at 9 sites in 2011.

Trait	‘Benary’s G. Purple’	‘Giant D. Violet’	Same
Germinated best	44 %	11 %	44 %
Healthier plants	44	0	56
Bloomed earlier	67	22	11
More flowers	67	11	22
More attractive in garden	33	0	67
More attractive in vase	17	0	83
<i>Preference</i>	78	22	
<i>Recommend to others</i>	89	56	
<i>Overall rating¹</i>	9.00	6.67	

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

General Comments

- Both looked more hot pink than purple.
- Cold spring—bloomed late. Nice, tall background. Both had nice flower heads.
- Lasted about five days as a cut flower.

Comments on ‘Benary’s Giant Purple’ Zinnia

- Lots of flowers. Stood up well to wind.
- Had a nice shape to the flowers.
- Bigger flowers.
- More flowers.
- Larger, more show stopping blooms!
- Gorgeous plant. Our favorite out of all the zinnia varieties that we tried! Very big flowers and tall plant.

Comments on ‘Giant Dahlia Violet’ Zinnia

- I liked its color better.
- Overall it was better.

Conclusions

‘Benary’s Giant Purple’ was outstanding. Its plants were strong and sturdy. It produced bigger flowers, more flowers, and bloomed earlier. ‘Giant Dahlia Violet’ was liked by most gardeners, but was outclassed in this trial.

Trial 60. Zinnia, Giant Scarlet

Varieties (information from seed catalogs)

'Benary's Giant Scarlet'

80 days. Huge flowers on long, sturdy stems. Fully double flowers up to 6 inches wide. Resists mildew. Excellent cut flower. Height 40–50 inches.

'Giant Dahlia Scarlet'

80 days. Large flowers up to 6 inches wide. Single, semi-double and double flower types. Excellent cut flower. Height 40–50 inches.



Data

Data were collected at 8 sites in 2011.

Trait	'Benary's G. Scarlet'	'Giant D. Scarlet'	Same
Germinated best	29 %	29 %	43 %
Healthier plants	29	14	57
Bloomed earlier	43	29	29
More flowers	43	14	43
More attractive in garden	29	14	43
More attractive in vase	0	0	100
<i>Preference</i>	67	33	
<i>Recommend to others</i>	100	57	
<i>Overall rating¹</i>	8.00	7.00	

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

General Comments

- They looked the same as they came up.
- I honestly couldn't tell the difference.

Comments on 'Benary's Giant Scarlet' Zinnia

- More compact; uniform. Flowers looked attractive longer.
- Bright and bold color—eye-catching from a distance—great up to the frost. Large flowers.
- More flowers.
- More showy.

Comments on 'Giant Dahlia Scarlet' Zinnia

- Flowered first.
- Bloomed three days earlier.
- I loved the head of this flower and its color.
- Nice flower.

Conclusions

Every gardener recommended 'Benary's Giant Scarlet'. Its flowers were large, showy, bright, and bold. Its plants were healthy and sturdy. 'Giant Dahlia Scarlet' produced beautiful flowers too, but not as many.

Appendixes

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:

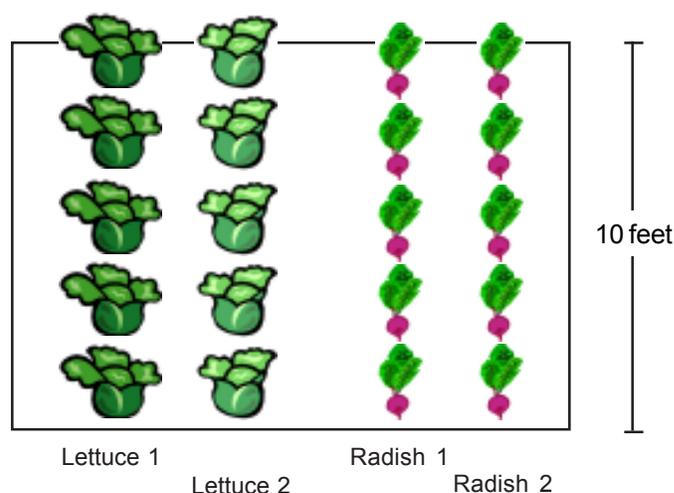
1. Each trial compares two varieties. **You must plant both varieties.**
2. To make it a fair comparison, you need to **treat both varieties in the same manner**. They should get the same amount of sunlight and general care (watering and fertilizing).
3. We want to see how these varieties perform under real-life home garden situations. The seed packets have some instructions on how to sow your seeds, but you may use your own gardening practices. For example, I sow my cucumber seeds in a *row*, but you can plant them in *hills*, if you wish. It's up to you.
4. When possible, **grow the varieties for each trial in rows next to each other**. You have enough seeds to grow at least 10 feet of each variety. To make it easier for you, I've enclosed a yellow row marker with string. There is a 10-foot space between the two black marks on the string. It's okay if you don't have quite enough space for 10-foot rows, but try to sow close to that much area. We want to get a fair look at both varieties. Look at the diagram below. Notice that the varieties being compared are grown next to each other. In this way, they are most likely to get the same amount of sunlight and care.
5. Most people don't like to grow flowers in rows. It's okay to plant them in groups or clumps instead. Just remember to give both varieties the same general location and care.
6. **Use the plot labels** that are enclosed. This will help you remember which variety is which. I recommend you **make a plot diagram after you are done planting** for your future reference. The plot labels sometimes fade in the sun during summer.

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: Ima Gardener

County: Golden Valley

Date Sown: May 30

Which variety?	Apollo	Zeus	Same	Comments
Germinated best?		X		Both had near 100% germination, but Zeus seedlings showed more vigor
Had healthier plants?		X		Apollo vines turned gray in fall
Produced the first ripe melons?	X			Three days earlier than Zeus
Produced higher yields?		X		Zeus produced 10 good melons; Apollo produced only 6
Had more attractive melons?		X		Zeus had larger fruits and brighter orange flesh
Tasted better?		X		Zeus was heavenly; Apollo was not quite as sweet

Overall Performance Rating	Apollo	Zeus
Rate each variety on a scale of 1 to 10, with 1 = poor and 5 = good and 10 = excellent. Don't give both a "10". Be very critical!	5	9

Preference		
Circle the variety you prefer. Don't circle both—make a choice!	Apollo	<u>Zeus</u>
Please state the reason(s) for your preference: <i>Zeus was outstanding. Good yields of large, sweet fruits. The vines looked healthy all summer. Apollo ripened early, but the vines were weak and the melons tasted bland.</i>		

Recommendation
Circle the varieties you recommend for North Dakota gardeners: Apollo <u>Zeus</u> Both Neither

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

Send to Tom Kalb, NDSU-Extension, 3715 East Bismarck Expressway, Bismarck, ND 58501.

E-mail: <tom.kalb@ndsu.edu>. Thanks for your participation!

Appendix 3. Acknowledgements

Gardeners

North Dakota State University Extension Service is very thankful to the following gardeners who provided results from their research plots:

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Ruth Bornsen	Devon Haugen	Terri Miller
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Barbara Braun	Muriel Hedrick	Darrick, Olivia, and Aubrie Mischke
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Deb Chambers	Sharon Hoffman	Jon Mueller
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Harriet A. Deplazes	Hope Family	Carolyn Nyberg
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Judith Schaar	Pamela Stewart	Cheryl Wegner
Robert Schank	Patricia Stockdill	Kenneth Weinzierl
Sylva Schell	Judy Sturma	Marleen Wells
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Laura Schumacker	Gilberta Taylor	Holly D. Wyman
Charlotte Schwab	Cynthia Tegtmeier	Jasmin N. Yoder
Peg Seidel	Rebecca Ternes	Cyndy Zacher
Dorothy Shertzer	Jerry Thom	
Joanne Slanger	Chad Trautman	
Deb Sletten	Erica, Andrina, Carlton, Corynna, and Samantha Turnquist	
Larry Simpson		

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- 42: *Swiss Chard* by Robb & Jessie Stankey, <http://www.flickr.com/photos/robbplusjessie/2786212493/>;
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- 48: *Sunflowers* by Brian M Forbes, http://www.flickr.com/photos/brizo_the_scot/3840761441/;
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