

2009 RESULTS

North Dakota Home Garden Variety Trials

NDSU
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Extension Service

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Table of Contents

	Page	
Chapter 1	Introduction	1
Chapter 2	Summary of Results for 2009	5
Chapter 3	Vegetable Trial Reports for 2009	15
1	Bean, Green ('Bush Blue Lake 274' and 'Espada')	15
2	Bean, Flatpod ('Greencrop' and 'Kentucky Dreamer')	17
3	Bean, Wax ('Carson' and 'Rocdor')	18
4	Bean, Yardlong ('Gita' and 'Liana')	19
5	Beet ('Red Ace' and 'Detroit Supreme')	21
6	Carrot ('Mokum' and 'Nelson')	22
7	Carrot, Purple ('Dragon' and 'Purple Haze')	24
8	Cucumber, Burpless ('Sweet Slice' and 'Sweeter Yet')	26
9	Cucumber, Pickling ('Calypso' and 'Eureka')	28
10	Cucumber, Slicing ('Marketmore 76' and 'Straight Eight')	29
11	Greens, Flower Bud ('Hon Tsai Tai' and 'Summer Jean')	31
12	Greens, Mizuna ('Lime-Streaked Mizuna' and 'Mizuna')	32
13	Greens, Mustard ('Osaka Purple' and 'Red Giant')	33
14	Greens, Mustard Spinach ('Summer Fest' and 'Tendergreen')	34
15	Greens, Pac Choi ('Joi Choi' and 'Mei Qing Choi')	35
16	Greens, Tatsoi ('Tatsoi' and 'Tatsoi Savoy')	36
17	Kohlrabi ('Early White Vienna' and 'Winner')	37
18	Lettuce, Greenleaf ('Salad Bowl' and 'Slobolt')	38
19	Lettuce, Redleaf ('New Red Fire' and 'Red Sails')	39
20	Lettuce, Specialty ('Buttercrunch' and 'Nevada')	41
21	Melon, Cantaloupe ('Goddess' and 'Sweet 'N Early')	42
22	Melon, Galia ('Diplomat' and 'Passport')	44
23	Melon, Specialty ('Earli-Dew' and 'Lambkin')	45
24	Okra ('Annie Oakley II' and 'Cajun Delight')	47
25	Pea ('Dakota' and 'Early Frosty')	48

Table of Contents (continued)

26	Pumpkin, Gray ('Jamboree' and 'Jarrahdale')	50
27	Pumpkin, Jack-O'-Lantern ('Neon' and 'Spirit')	51
28	Pumpkin, Seed ('Kakai' and 'Lady Godiva')	53
29	Radish, Chinese ('Red Meat' and 'Shunkyo Semi-Long')	54
30	Radish, French ('French Breakfast' and 'D'Avignon')	56
31	Radish, Pink ('Lady Slipper' and 'Pink Beauty')	57
32	Radish, Purple ('Amethyst' and 'Plum Purple')	58
33	Radish, White ('Hailstone' and 'Ping Pong')	60
34	Spinach, Fall ('Bordeaux' and 'Space')	61
35	Spinach, Spring ('Melody' and 'Olympia')	62
36	Squash, Summer Romanesco ('Italian Largo' and 'Portofino')	64
37	Squash, Summer Romanesco Hybrid ('Costata Romanesco' and 'Italian Largo')	65
38	Squash, Summer Scallop ('Flying Saucer' and 'Sunburst')	66
39	Squash, Summer Zucchini ('Cashflow' and 'Spineless Beauty')	68
40	Squash, Winter Acorn ('Honey Bear' and 'Table Ace')	70
41	Squash, Winter Butternut ('Early Butternut' and 'Waltham')	71
42	Squash, Winter Hubbard ('Blue Ballet' and 'Blue Magic')	72
43	Swiss Chard ('Bright Lights' and 'Five Color Silverbeet')	74
44	Swiss Chard ('Rhubarb' and 'Sunset Magenta')	76
45	Watermelon ('Mickylee' and 'Sugar Baby')	77
Chapter 4	Flower Trial Reports for 2009	78
46	Cosmos ('Sonata Mix' and 'Versailles Mix')	78
47	Cosmos, Sulphur ('Diablo' and 'Red Crest')	79
48	Sunflower, Gold ('Sunbeam' and 'Sunrich Gold')	81
49	Sunflower, Orange ('Pro Cut Orange' and 'Sunrich Orange')	82
50	Sunflower, Primrose ('Buttercream' and 'Vanilla Ice')	83
51	Sunflower, Red ('Moulin Rouge' and 'Prado Red')	84
52	Sweet Pea ('Cuthbertson Choice Mix' and 'Mammoth Choice Mix')	86
53	Zinnia, Bicolor ('Candy Cane Mix' and 'Peppermint Stick Mix')	87
54	Zinnia, Cactus ('Art Deco Mix' and 'Giant Cactus Mix')	89
55	Zinnia, Green ('Benary's Giant Lime' and 'Envy')	90
56	Zinnia, Semidwarf ('Cut and Come Again' and 'Oklahoma Mix')	92
57	Zinnia, Tall ('Benary's Giant Mix' and 'State Fair Mix')	94
Appendixes		
1.	Welcome Letter	96
2.	Example of Evaluation Form	98
3.	Acknowledgements	99

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 potential impact in the identification of superior varieties for vegetable gardens is great, both in terms of numbers of households affected and economic impact. Using information from the National Gardening Association (NGA), approximately one-third of households in North Dakota grow a vegetable garden. Using this statistic, there are approximately 86,000 households in our state with vegetable gardens.

Garden size can vary, but most research studies show the average vegetable garden in America produces vegetables worth at least \$250. This means that the total value of vegetables grown in North Dakota gardens exceeds \$20 million—and interest in gardening is soaring due to rising food costs.

North Dakota State University currently conducts very little vegetable research at its research stations. These few plots provide 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:

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

- Trials at research farms are managed by University faculty and hired employees. Backyard gardens are managed for different reasons (recreation/exercise/quality food) by people of all ages, gardening experiences, and educational backgrounds.

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 and flowers.
2. Home gardeners will become more aware of new varieties and differences among varieties. This increased level of awareness will affect the way they select vegetable and flower 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 2009, 57 trials were established and a total of 113 vegetable and flower varieties were evaluated.

Preparation of Seed Packets

Seeds are ordered in bulk from seed companies. Seeds are 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. Whenever possible, untreated seed is used. If treated seed is used, a label is affixed on the packet to inform growers to carefully handle and not eat the seed.

Distribution of Seeds and Supplies

This program is promoted by NDSU Extension Service faculty and staff across the state. Information is also available at the web site <www.dakotagardener.com>. Interested gardeners in spring were allowed to participate in up to seven trials. The fee was \$1 per trial along with \$3 for handling and postage.

Gardeners in fall were allowed to participate in two trials per household. Youth researchers were allowed to select one additional trial. There were no fees in fall.

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. Vegetables can be planted in rows while flowers can be planted in rows or clumps.

We rarely test more than two varieties per trials. Two varieties (20 feet of row) of a vegetable or flower is as much of a single vegetable or flower type that most gardeners would like to grow.

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 that the varieties are tested under actual home garden conditions.

Quantity and Quality of Participation

In 2009, approximately 350 households submitted results from their trials (this accounts for approximately 90% of households who received seeds). Results from approximately 1,675 research trials were submitted. Data were obtained in 48 of the state's 53 counties. 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 2009

Our growing season in 2009 started cool and wet (Figure 1). Gardeners were slow to plant their gardens due to the colder than normal temperatures. Seeds of many cucurbit crops rotted; other vegetables simply grew

slower than usual. Many late season crops never matured before frost.

Late frosts in late May and June occurred in the northern and western regions of the state (Table 1), damaging seedlings of frost-sensitive crops. Many cucumber and melon plantings froze out.

Temperatures stayed cooler than normal through the summer until October when temperatures soared above normal.

Rainfall levels were generally lower than normal with the exceptions of a few major storms in the central portion of the state during summer and in the east in October.

Damage from hail was scattered and less prevalent compared to 2008.

Our fall frost came later than unusual in most regions of the state (Table 1). This extension of our growing season in fall helped to make up for the slow start we had in spring.

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 (vegetable or flower). 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. In multi-year trials, emphasis was placed on comments from 2009. Reports of previous years are available on-line to see more comments of growers from previous years.

Reporting the Final Results

The final results are reported to interested seed companies and NDSU educators. Newspaper 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 5) and a certificate to recognize their participation in the program.

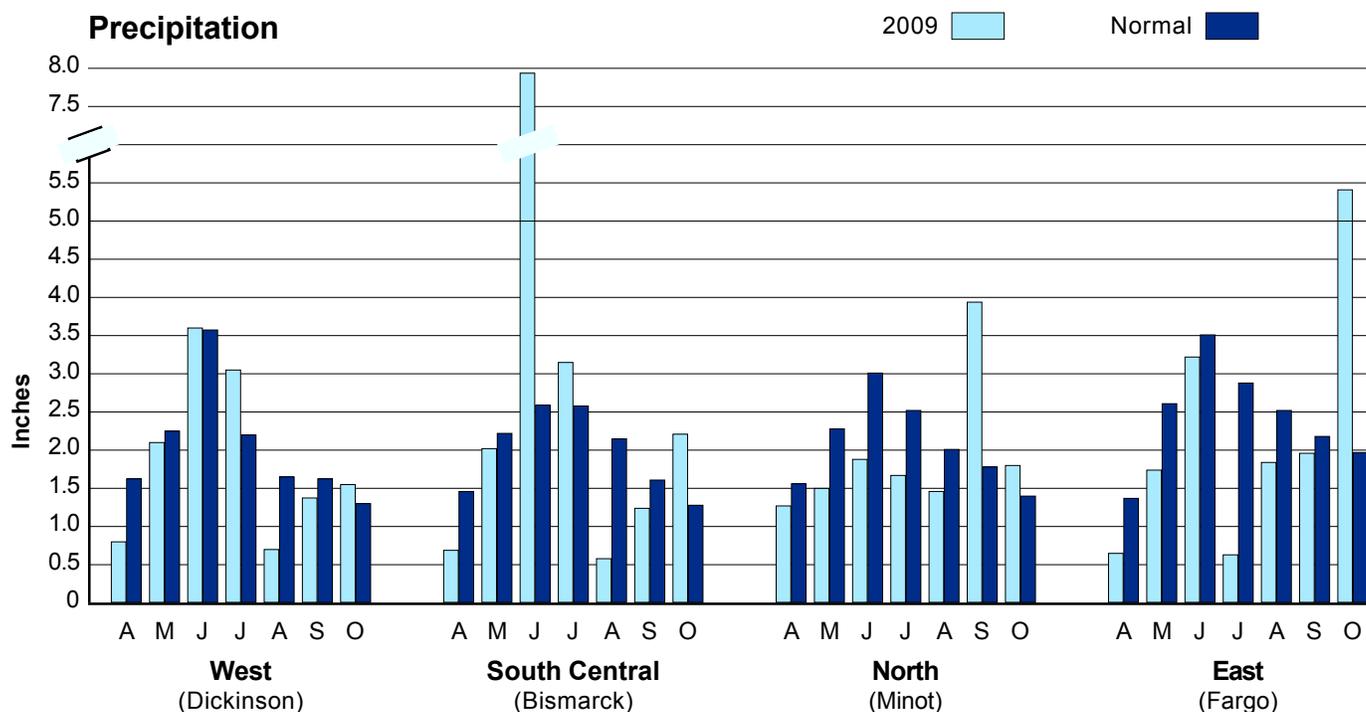
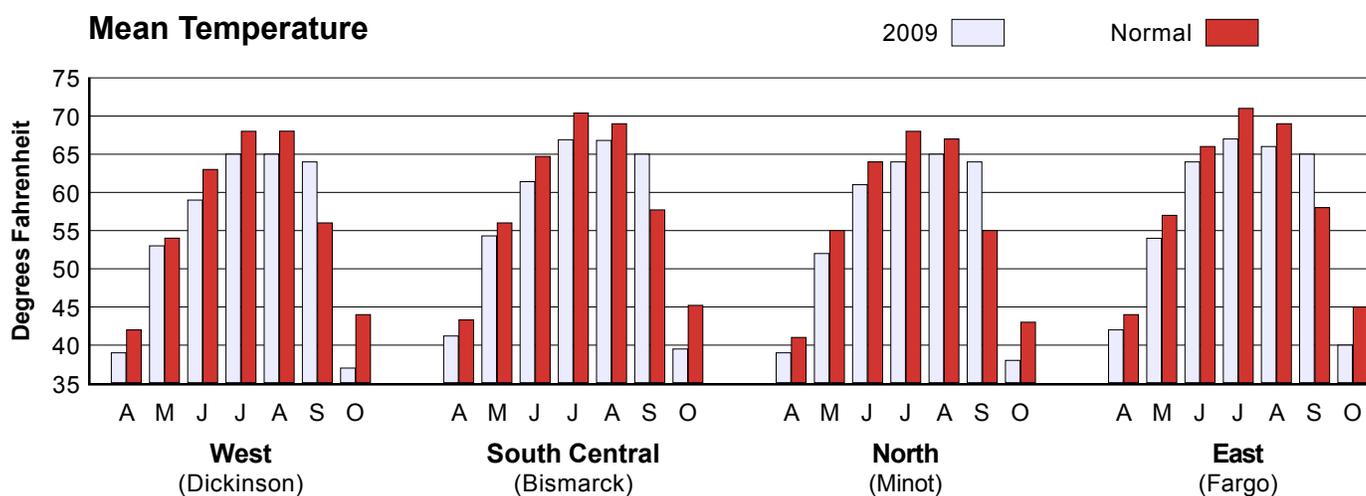
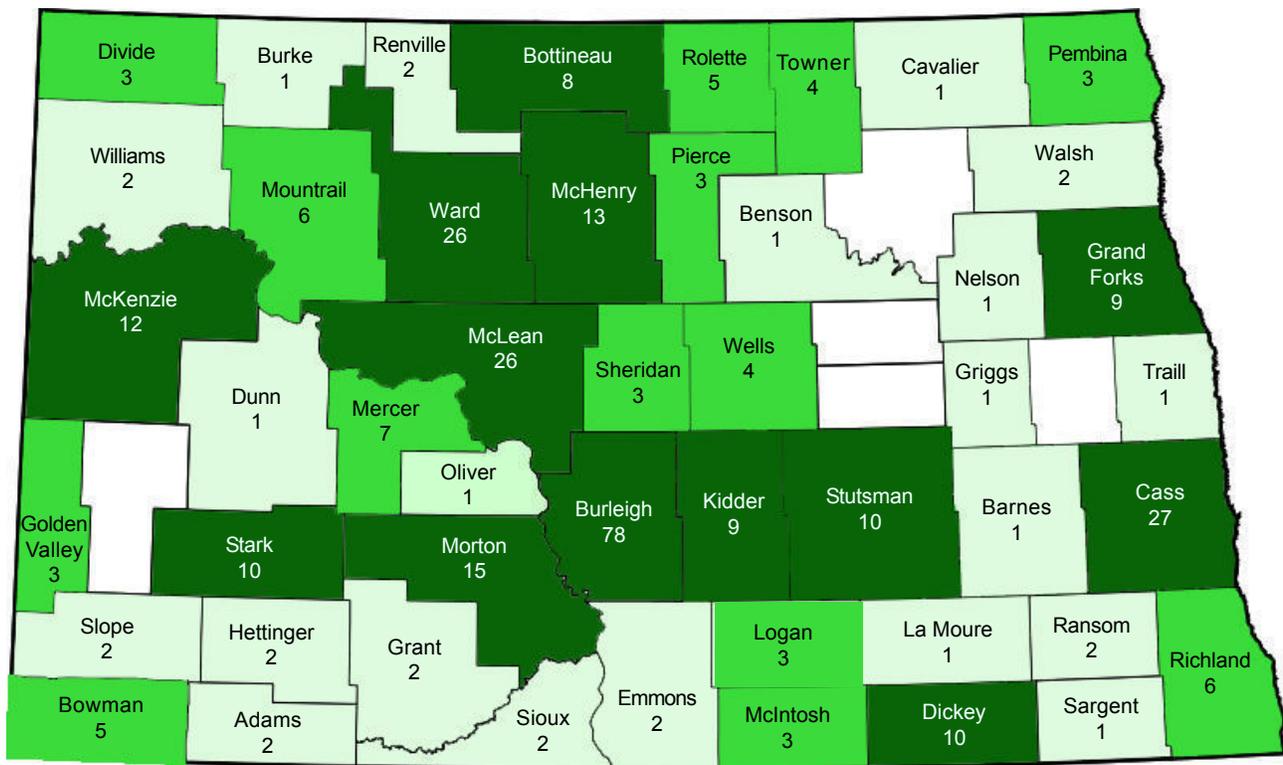


Figure 1. Mean monthly air temperatures and precipitation amounts in 2009 and normal (1971–2008) years for key locations (Source: National Weather Service).

Table 1. Frost dates in 2009 and normal (1971–2000) years for key locations (Source: National Weather Service).

Location	Last spring frost		First fall frost		Frost-free period (days)	
	2009	Normal	2009	Normal	2009	Normal
West (Dickinson)	Jun 06	May 13	Oct 05	Sep 22	140	132
South Central (Bismarck)	May 16	May 14	Oct 08	Sep 21	144	129
North (Minot)	May 23	May 09	Oct 08	Sep 28	137	141
East (Fargo)	May 10	May 10	Oct 08	Sep 27	150	140



Minnesota - 11
 Montana - 1
 South Dakota - 1

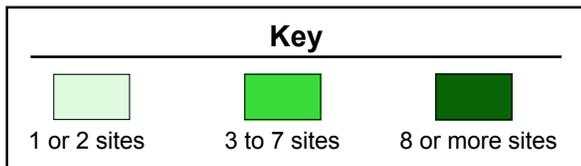


Figure 2. Sites where garden results were reported in 2009. Major cities in North Dakota include Fargo (Cass County), Bismarck (Burleigh County), Grand Forks (Grand Forks County), and Minot (Ward County).

Chapter 2

Summary of Results

Introduction

Approximately 350 households across North Dakota and surrounding states evaluated 113 varieties of vegetables and flowers in their gardens. Varieties were rated for germination, plant health, earliness, yield, and fruit/flower quality.

In each of the trials, gardeners were asked to rate the performance of each variety using a scale of 1 to 10, with 1 = poor and 10 = excellent. They were asked which of the varieties they would recommend to other gardeners, and which of the two varieties they preferred. The following is a summary of the data, including our conclusions for each trial.

Vegetable Trials

#1. Bean, Green. 9 sites in 2008 and 54 sites in 2009. *'Bush Blue Lake 274'* (rating: 7.23; recommended: 81%; preferred: 53%) and *'Espada'* (rating: 7.45; recommended: 78%; preferred: 47%). Both varieties were outstanding. Both performed well across the state and were recommended by the vast majority of gardeners. Both varieties produced good yields of quality beans. The pods of *'Espada'* were darker green; otherwise, there was very little difference between the two varieties.



'Espada' Green Bean

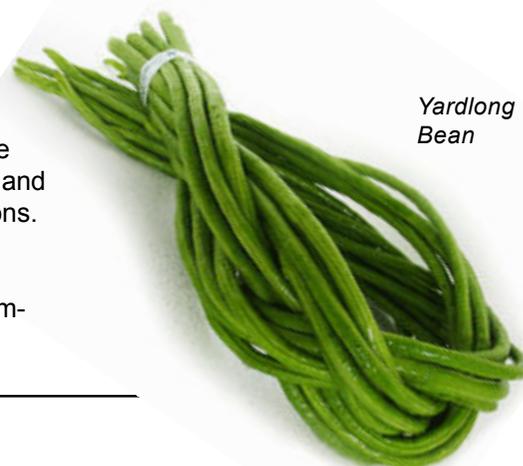
#2. Bean, Flatpod. 14 sites. *'Greencrop'* (rating: 6.86; recommended: 64%; preferred: 46%) and *'Kentucky Dreamer'* (rating: 7.43; recommended: 64%; preferred: 54%). This trial had relatively few participants compared to other bean trials and gardeners were not especially impressed with the performance of either variety. Nonetheless, many growers raved over the long 9-inch pods of *'Greencrop'*, which were remarkably tender for a bean of that size. But a slight majority of gardeners preferred *'Kentucky Dreamer'*. Several of these gardeners noted *'Kentucky Dreamer'* beans matured earlier, were more uniform, did not curl, and tasted better.



'Carson' Wax Bean

#3. Bean, Wax. 5 sites in 2008 and 29 sites in 2009. *'Carson'* (rating: 7.43; recommended: 75%; preferred: 58%) and *'Rocdor'* (rating: 7.69; recommended: 67%; preferred: 42%). Gardeners were impressed with the abundant yields and beautiful pods of both varieties. Most gardeners preferred *'Carson'*—they felt its pods were more uniform, tender, and flavorful. *'Carson'* is white-seeded, a desired trait for freezing/canning. *'Rocdor'*, an heirloom black-seeded type, produced high yields of deep yellow, long, slender pods.

#4. Bean, Yardlong. 13 sites in 2008 and 21 sites in 2009. *'Gita'* (rating: 5.62; recommended: 48%; preferred: 58%) and *'Liana'* (rating: 4.91; recommended: 39%; preferred: 42%). We evaluated these heat-loving bean varieties during two cool summers. Most gardeners had limited success growing both varieties. Most enjoyed the novelty of these beans. Some gardeners liked the asparagus-like flavor and some did not. *'Gita'* showed greater adaptability to our growing conditions. It germinated slightly better. Its vines were generally healthier and produced harvestable pods sooner. *'Gita'* produced higher yields and more attractive beans at more sites than *'Liana'*. *'Gita'* was more highly recommended, although less than half of our gardeners liked it.



Yardlong Bean



'Detroit Supreme' Beet



'Nelson' Carrot



'Purple Haze' Carrot

#5. Beet. 53 sites. 'Detroit Supreme' (rating: 7.57; recommended: 73%; preferred: 54%) and 'Red Ace' (rating: 7.18; recommended: 73%; preferred: 46%). Gardeners liked both 'Detroit Supreme' and 'Red Ace'. There were no major differences between the varieties. Both varieties produced attractive, dark red roots. Both were very sweet and delicious. Both were good for salads and for pickling. Both produced high yields. The roots of both varieties maintained their tenderness when larger. 'Red Ace' may have been more uniform; otherwise, its performance was matched, if not exceeded by 'Detroit Supreme'.

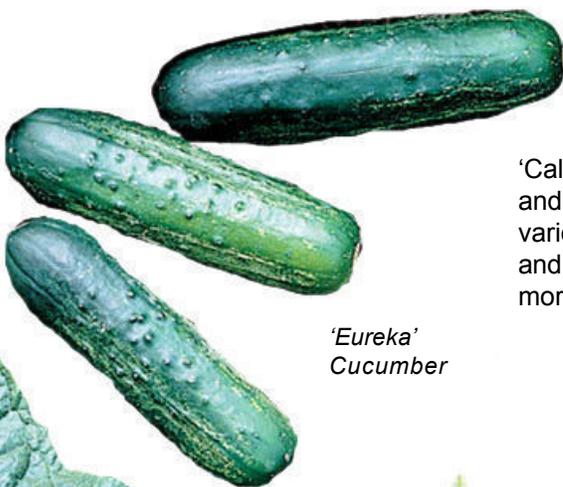
#6. Carrot. 78 sites. 'Mokum' (rating: 6.85; recommended: 69%; preferred: 41%) and 'Nelson' (rating: 7.42; recommended: 77%; preferred: 59%). 'Mokum' and 'Nelson' grew well and produced lots of tasty carrots in most gardens. The majority of gardeners preferred 'Nelson'. They liked its remarkably straight, smooth-skinned, and very uniform carrots. Many gardeners felt it tasted better, especially when eaten raw. Several gardeners noted 'Mokum' produced larger roots and felt these roots had richer flavor and texture.

#7. Carrot, Purple. 19 sites in 2008 and 53 sites in 2009 sites. 'Dragon' (rating: 6.91; recommended: 67%; preferred: 45%) and 'Purple Haze' (rating: 7.33; recommended: 77%; preferred: 55%). Most gardeners preferred 'Purple Haze' for its uniform, tapered carrots with beautiful contrasting colors. It had a sweet, mild flavor that was especially good when eaten raw. When cooked, it retained its color better than 'Dragon', but still created off-colors to many cooked dishes. Many gardeners noted the impressive germination, growth, and yields of 'Dragon'. Most gardeners felt that 'Dragon' was bitter when eaten raw, but very flavorful when cooked. Its roots were burgundy red on the outside but inconsistent in color on the inside. It was less likely to retain its purplish color when cooked. The roots of 'Dragon' were more blunt-tipped and more subject to splitting.

#8. Cucumber, Burpless. 77 sites. 'Sweet Slice' (rating: 6.68; recommended: 67%; preferred: 47%) and 'Sweeter Yet' (rating: 6.34; recommended: 65%; preferred: 53%).

Some results from this trial are unexpected. 'Sweeter Yet' is an ultra-early variety and yet it produced fruit later than 'Sweet Slice' at many of the plots. 'Sweet Slice' has a reputation for productivity, but it produced lower yields than 'Sweeter Yet' at many of the plots. Neither variety excelled under the late spring and cool summer conditions, but gardeners generally liked both varieties. About half of the gardeners liked the yields and slimmer cucumbers of 'Sweeter Yet'. The other half preferred the straighter, more uniform cucumbers of 'Sweet Slice'.

#9. Cucumber, Pickling. 46 sites. 'Calypso' (rating: 6.22; recommended: 69%; preferred: 53%) and 'Eureka' (rating: 6.08; recommended: 54%; preferred: 47%). Many seedlings died from a late frost in spring and both varieties struggled during the cool summer. Neither variety was rated high by gardeners. The plants of 'Eureka' were more vigorous, but its yields were no greater than those of 'Calypso'. The cukes of 'Eureka' were uniform in shape, had a smooth skin, and remained of good quality even when large. This made 'Eureka' a good variety for both pickling and slicing. The cukes of 'Calypso' matured earlier and produced good yields when picked regularly. Its cukes were dark green, more spiny, and outstanding for pickling.



'Eureka' Cucumber

#10. Cucumber, Slicing. 38 sites. *'Marketmore 76'* (rating: 6.94; recommended: 71%; preferred: 57%) and *'Straight Eight'* (rating: 7.03; recommended: 68%; preferred: 43%). *'Straight Eight'* is the most popular cucumber grown in North Dakota, but its performance was matched—if not surpassed—by that of *'Marketmore 76'*. *'Marketmore 76'* rated higher for vine health, earliness, and taste. Most gardeners preferred it over *'Straight Eight'*.



'Marketmore 76' Cucumber

#11. Greens, Flower Bud. 9 sites (Fall). *'Hon Tsai Tai'* (rating: 6.83; recommended: 83%; preferred: 67%) and *'Summer Jean'* (rating: 6.50; recommended: 83%; preferred: 33%). Gardeners liked both varieties. The yield of *'Summer Jean'* was impressive. The reddish-purple stems of *'Hon Tsai Tai'* were appealing and very mild in flavor. All gardeners preferred the taste of *'Hon Tsai Tai'* and most gardeners preferred this variety overall.

#12. Greens, Mizuna. 9 sites (Fall). *'Lime-Streaked Mizuna'* (rating: 6.29; recommended: 71%; preferred: 29%) and *'Mizuna'* (rating: 8.29; recommended: 86%; preferred: 71%). Gardeners were pleased with the delicate flavor and uniquely fringed leaves of this Asian green. Both varieties were easy to grow and found to be a nice addition to a mixed salad. *'Mizuna'* was faster growing and preferred by most gardeners.



'Osaka Purple' Mustard

#13. Greens, Mustard. 6 sites (Fall). *'Osaka Purple'* (rating: 8.00; recommended: 67%; preferred: 60%) and *'Red Giant'* (rating: 7.80; recommended: 67%; preferred: 40%). Both varieties grew well. *'Red Giant'* displayed more robust growth, especially after the initial harvest. *'Osaka Purple'* had a milder flavor that gardeners preferred. Gardeners appreciated the beauty of both varieties in the garden and on the plate.

#14. Greens, Mustard Spinach. 11 sites (Fall). *'Summer Fest'* (rating: 7.25; recommended: 88%; preferred: 57%) and *'Tendergreen'* (rating: 6.13; recommended: 63%; preferred: 43%). Gardeners enjoyed the deep green leaves and mild flavor of *'Summer Fest'*. Nearly all gardeners recommended it. *'Tendergreen'* was especially vigorous and also pleased most gardeners.



'Winner' Kohlrabi

#15. Greens, Pac Choi. 12 sites (Fall). *'Joi Choi'* (rating: 5.78; recommended: 56%; preferred: 44%) and *'Mei Qing Choi'* (rating: 5.67; recommended: 56%; preferred: 56%). *'Joi Choi'* grew robustly and the contrast between its dark green leaves and white stalks was beautiful. But a slight majority of gardeners preferred *'Mei Qing Choi'*; in most cases, due to its superior flavor. Both varieties struggled to mature before the first hard frost and would have benefited from planting earlier (late July/early August) in the fall season or in early spring.

#16. Greens, Tatsoi. 14 sites (Fall). *'Tatsoi'* (rating: 6.33; recommended: 67%; preferred: 100%) and *'Tatsoi Savoy'* (rating: 5.00; recommended: 33%; preferred: 0%). All gardeners preferred *'Tatsoi'* over *'Tatsoi Savoy'*. *'Tatsoi'* plants grew faster and matured earlier. Its plants were sturdy and productive. Gardeners liked the appearance and mild flavor of its fleshy, spoon-shaped leaves. *'Tatsoi Savoy'* did not generate any interest or enthusiasm.

#17. Kohlrabi. 27 sites. *'Early White Vienna'* (rating: 6.83; recommended: 83%; preferred: 45%) and *'Winner'* (rating: 7.43; recommended: 96%; preferred: 55%). *'Winner'* lived up to its name. Gardeners were extremely impressed with its uniformly round bulbs. Yields were good and its bulbs resisted splitting. The uniquely smooth, fruity flavor of *'Winner'* was an enjoyable taste experience for gardeners, including those who have grown kohlrabi for years. *'Early White Vienna'* matured early and produced quality bulbs.



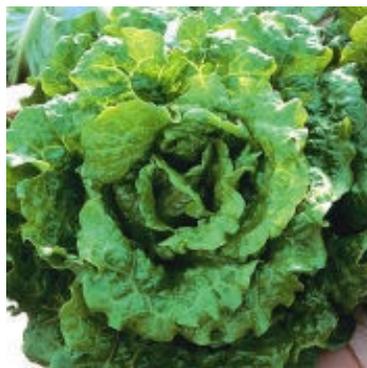
'Mei Qing Choi' Pac Choi



'Slobolt' Lettuce

#18. Lettuce, Greenleaf. 23 sites. 'Salad Bowl' (rating: 7.50; recommended: 77%; preferred: 38%) and 'Slobolt' (rating: 7.91; recommended: 82%; preferred: 62%). 'Salad Bowl' and 'Slobolt' performed well in our trials. Neither variety revealed any weakness. Gardeners were impressed with everything: the germination, health, growth rate, yields, resistance to bolting, and flavor of both varieties. Most gardeners recommended both varieties, but preferred 'Slobolt' for its larger leaves, higher yields, and longer harvest period.

#19. Lettuce, Redleaf. 26 sites. 'New Red Fire' (rating: 8.13; recommended: 79%; preferred: 58%) and 'Red Sails' (rating: 8.08; recommended: 92%; preferred: 42%). 'New Red Fire' and 'Red Sails' were exceptional. Gardeners loved the appearance, yield, and taste of both varieties. 'New Red Fire' was generally preferred for its early season vigor and resistance to bolting. Gardeners liked its bright red, shiny leaves. Nevertheless, almost all gardeners recommended 'Red Sails', which was extremely productive.



'Nevada' Lettuce

#20. Lettuce, Specialty. 34 sites. 'Buttercrunch' (rating: 7.61; recommended: 64%; preferred: 44%) and 'Nevada' (rating: 7.84; recommended: 76%; preferred: 56%). Gardeners were pleased with the performance of both varieties. Both varieties produced good yields of lettuce through the summer. 'Buttercrunch' had a darker green, fuller leaf and its heads were very attractive. 'Nevada' received the highest ratings, usually due to its excellent flavor and high yields. Both varieties are noted for their resistance to warm weather and bolting. The cool summer did not reveal this quality, but our growers certainly didn't mind harvesting lettuce until frost.

#21. Melon, Cantaloupe. 52 sites. 'Goddess' (rating: 6.38; recommended: 59%; preferred: 55%) and 'Sweet 'N Early' (rating: 5.87; recommended: 52%; preferred: 45%). This was a hard year for melons. Late spring frosts often froze seedlings. Then came a cool summer. Melon yields were low or nil. Even these two extra early varieties struggled to produce ripe fruit. 'Goddess' was the winner. Its melons ripened earlier. Its melons were more attractive and tasted much better. A few gardeners found 'Goddess' to be worthy of its heavenly name, indeed, the best cantaloupe they have ever grown. 'Sweet 'N Early' was more productive, but its fruits were small and less tasty.



'Goddess' Melon

#22. Melon, Galia. 9 sites in 2008 and 9 sites in 2009. 'Diplomat' (rating: 5.23; recommended: 50%; preferred: 25%) and 'Passport' (rating: 6.45; recommended: 67%; preferred: 75%). 'Passport' was superior, although both varieties struggled in our cool summer weather. 'Passport' produced higher yields and its melons tasted much better. Yields of both varieties were low as many melons never ripened before frost. The melons of both varieties had a tendency to crack, too.

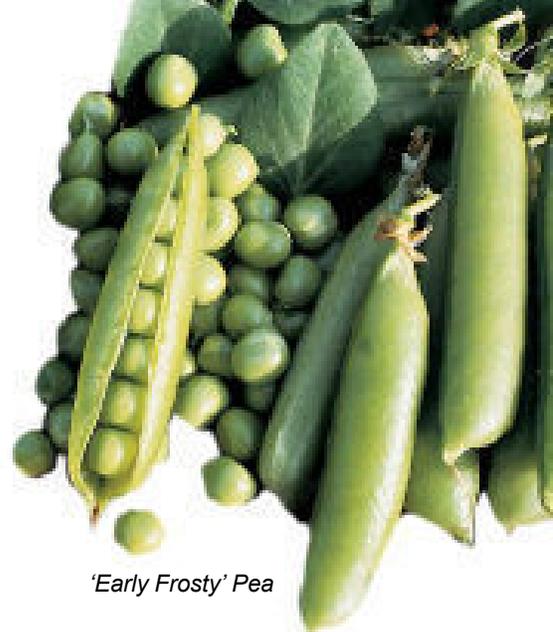
#23. Melon, Specialty. 25 sites. 'Earli-Dew' (rating: 5.79; recommended: 70%; preferred: 56%) and 'Lambkin' (rating: 5.47; recommended: 50%; preferred: 44%). Both varieties struggled due to the cool summer temperatures. In many cases, no fruit ripened before the frost. There is no reliable honeydew variety for our region, but 'Earli-Dew' showed again that it is the best. 'Lambkin' may be the biggest disappointment in this year's trials. This new All-America Selections Winner was extremely promising since it was reported to mature early and could provide a new taste sensation for melon lovers. Unfortunately, the most notable characteristic of 'Lambkin' Christmas melon was the unique mottling of its rind (and not its flavor or yield).

'Earli-Dew' Melon



#24. Okra. 11 sites. *'Annie Oakley II'* (rating: 6.57; recommended: 60%; preferred: 50%) and *'Cajun Delight'* (rating: 6.71; recommended: 50%; preferred: 50%). Okra loves hot weather; unfortunately our summer was very cool. Both varieties struggled mightily. *'Cajun Delight'* ripened earlier and produced higher yields (although yields of both varieties were very low).

#25. Pea. 78 sites. *'Dakota'* (rating: 5.46; recommended: 40%; preferred: 26%) and *'Early Frosty'* (rating: 7.52; recommended: 81%; preferred: 74%). *'Early Frosty'* was the clear winner. Its vines were more vigorous, much higher yielding, and produced peas for a longer time period (in many cases into August). Many gardeners thought its peas were sweeter, too. Most gardeners did not like *'Dakota'*—its yields were too low. *'Dakota'* is only suited for freezing/canning. It produces a single crop and very early, at least one week earlier than *'Early Frosty'*. Its compact vines do not need support. Some gardeners did not like either variety compared to other pea varieties they have grown in the past.



'Early Frosty' Pea

#26. Pumpkin, Gray. 9 sites in 2008 and 14 sites in 2009. *'Jamboree'* (rating: 7.17; recommended: 73%; preferred: 67%) and *'Jarrahdale'* (rating: 6.95; recommended: 59%; preferred: 33%). *'Jamboree'* was preferred by most gardeners. Its fruits matured earlier and tasted better (similar to a buttercup). Its fruits were smooth-skinned and extremely attractive as decorations. The vines of both varieties—especially those of *'Jarrahdale'*—were vigorous. This extra vigor displayed by *'Jarrahdale'* led to a stronger performance under the unfavorable weather conditions of 2009. Gardeners liked the look of these *'Jarrahdale'* pumpkins, too.



'Jamboree' Pumpkin

#27. Pumpkin, Jack-O'-Lantern. 41 sites. *'Neon'* (rating: 7.38; recommended: 75%; preferred: 68%) and *'Spirit'* (rating: 6.81; recommended: 67%; preferred: 32%). The performance of *'Neon'* was a pleasant surprise. This extra-early variety produced pumpkins that turned orange in *summer*. This was especially valuable during the cool growing season of 2009. Its vines were healthy and its yields were very good. Its pumpkins were deep orange in color and uniform in size. *'Spirit'* produced larger pumpkins, but these pumpkins were fewer in number and less uniform. Both varieties had semi-bush vines, which did not overrun the garden.



'Shunkyo Semi-Long' Radish

#28. Pumpkin, Seed. 6 sites in 2008 and 13 sites in 2009. *'Kakai'* (rating: 5.56; recommended: 75%; preferred: 57%) and *'Lady Godiva'* (rating: 5.37; recommended: 64%; preferred: 43%). The seeds of both varieties struggled to germinate in the cool soil. Once established, *'Lady Godiva'* showed the capacity to produce lots of small orange fruits, which are suited for decorations and edible seeds. The fruits of *'Kakai'* are fewer in number but larger. The seeds of *'Kakai'* are plumper and tastier. Overall, most gardeners prefer *'Kakai'*, but ratings for both varieties were low.

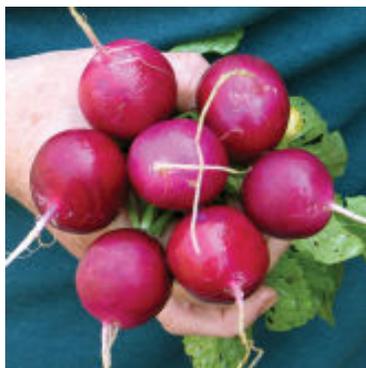
#29. Radish, Chinese. 18 sites (Fall). *'Red Meat'* (rating: 3.75; recommended: 13%; preferred: 12%) and *'Shunkyo Semi-Long'* (rating: 6.69; recommended: 81%; preferred: 88%). *'Shunkyo Semi-long'* was the clear winner. This Chinese radish outperformed *'Red Meat'* in every way. It grew better, produced higher yields, looked better, and tasted better. Growers were especially impressed with its hardiness and suitability for fall planting. *'Red Meat'* needed more time—it never got started in most cases. It needs to be planted as a spring/early summer crop or perhaps in July for fall harvest.



'Neon' Pumpkin



'French Breakfast' Radish



'Amethyst' Radish



'Bordeaux' Spinach

'Olympia' Spinach



#30. Radish, French. 17 sites (Fall). 'D'Avignon' (rating: 5.71; recommended: 71%; preferred: 43%) and 'French Breakfast' (rating: 6.00; recommended: 64%; preferred: 57%). Neither variety excelled in this fall season test. Gardeners liked the earliness and mild flavor of D'Avignon'. 'French Breakfast' showed more robust growth and higher yields. Its roots were attractive and its performance was more consistent.

#31. Radish, Pink. 18 sites (Fall). 'Lady Slipper' (rating: 6.47; recommended: 87%; preferred: 47%) and 'Pink Beauty' (rating: 7.13; recommended: 93%; preferred: 53%). Gardeners were very impressed by both varieties. 'Lady Slipper' grew vigorously and produced high yields of oval-shaped roots. Gardeners were even more impressed with the beauty and flavor of 'Pink Beauty'. The pearl-shaped roots of this variety were very attractive, mild, and crispy.

#32. Radish, Purple. 42 sites in Spring 2009 and 11 sites in Fall 2009. 'Amethyst' (rating: 7.10; recommended: 71%; preferred: 73%) and 'Plum Purple' (rating: 5.19; recommended: 38%; preferred: 27%). Gardeners liked the dark purple skin color of 'Amethyst' and enjoyed the mild taste of this radish. It grew vigorously and produced good yields in both spring and fall plantings. Gardeners were not impressed with 'Plum Purple'. This variety produced low yields, was less attractive, hotter tasting, and more subject to bolting.

#33. Radish, White. 6 sites (Fall). 'Hailstone' (rating: 5.33; recommended: 20%; preferred: 50%) and 'Ping Pong' (rating: 6.33; recommended: 40%; preferred: 50%). Few gardeners were interested in this trial and these gardeners were not impressed with either variety. Neither variety was recommended by half of the gardeners, which is a rare and disappointing result. At this time, 'Hailstone' seems to be more attractive and better tasting, but much more testing is needed.

#34. Spinach, Fall. 30 sites (Fall). 'Bordeaux' (rating: 5.83; recommended: 68%; preferred: 53%) and 'Space' (rating: 6.39; recommended: 86%; preferred: 47%). Gardeners liked the vigor and yields of 'Space'. Although 'Bordeaux' did not grow as well in the fall, many gardeners preferred it. Its unique red stems and arrow-shaped leaves were very appealing. Several of these trials in fall would have benefited from an earlier planting.

#35. Spinach, Spring. 35 sites. 'Melody' (rating: 7.27; recommended: 80%; preferred: 41%) and 'Olympia' (rating: 7.47; recommended: 89%; preferred: 59%). Gardeners were impressed with both varieties. Even first-time spinach growers succeeded in producing bountiful crops of tasty leaves.

Given the choice, most gardeners preferred 'Olympia'. They preferred its larger, smoother (easier to clean) leaves and its superior resistance to bolting. In grower-initiated tests, both of these hybrids produced higher yields and resisted bolting better than 'Bloomsdale Long Standing', the standard variety grown in the state.

#36. Squash, Summer Romanesco. 6 sites. 'Costata Romanesco' (rating: 6.17; recommended: 67%; preferred: 50%) and 'Italian Largo' (rating: 7.00; recommended: 67%; preferred: 50%). In our limited testing, we found most gardeners liked, but only a few gardeners loved these varieties. Half preferred 'Costata Romanesco', noting its earliness and flavor. The other half preferred 'Italian Largo', noting its higher yields and more uniformly shaped fruit.

#37. Squash, Summer Romanesco Hybrid. 5 sites in 2008 and 8 sites in 2009. *'Italian Largo'* (rating: 6.31; recommended: 46%; preferred: 38%) and *'Portofino'* (rating: 6.93; recommended: 54%; preferred: 62%). Neither variety performed very well. Only about half of gardeners could recommend either variety. As to which variety is better, there was no consistent winner in this two-year trial. *'Portofino'* excelled in 2008, but *'Italian Largo'* was superior in 2009. The uniform and narrow shape of *'Portofino'* fruits impressed many gardeners. *'Italian Largo'* produced higher yields both years—this is a positive attribute, but productivity is rarely a concern with zucchini.



'Flying Saucer'
Summer Squash

#38. Squash, Summer Scallop. 6 sites in 2008 and 15 sites in 2009. *'Flying Saucer'* (rating: 7.24; recommended: 80%; preferred: 68%) and *'Sunburst'* (rating: 6.81; recommended: 70%; preferred: 32%). Gardeners liked both varieties, but most preferred *'Flying Saucer'* for its eye-catching fruits. The contrast between the bright yellow and green colors of the fruit was beautiful and its deeper ribs added even more visual interest. Both varieties were productive, mild in flavor, and good for cooking. *'Sunburst'* showed good early season vigor and produced earlier. Its fruits were more tender and easier to prepare for cooking.



'Portofino' Summer Squash

#39. Squash, Summer Zucchini. 30 sites. *'Cashflow'* (rating: 7.00; recommended: 57%; preferred: 32%) and *'Spineless Beauty'* (rating: 8.11; recommended: 82%; preferred: 68%). *'Spineless Beauty'* was the superior variety in this trial. Gardeners liked the open habit and spineless stems of the plants. This variety was more vigorous, matured earlier, and produced higher yields. Its fruits were more uniform and attractive. *'Cashflow'* was fine, but it was outperformed in every way by *'Spineless Beauty'*.

#40. Squash, Winter Acorn. 24 sites. *'Honey Bear'* (rating: 6.50; recommended: 43%; preferred: 57%) and *'Table Ace'* (rating: 6.91; recommended: 74%; preferred: 43%). Our gardeners preferred *'Table Ace'*. It germinated better and its plants were more vigorous and productive. Gardeners generally liked the flavor of both varieties. *'Honey Bear'* may have a niche as a variety suitable for small gardens, but the fact that less than half of our gardeners recommend it is disconcerting.



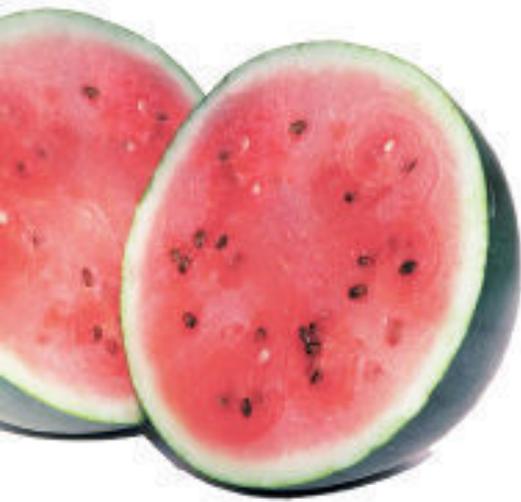
'Table Ace' Winter Squash

#41. Squash, Winter Butternut. 15 sites. *'Early Butternut'* (rating: 6.85; recommended: 62%; preferred: 42%) and *'Waltham'* (rating: 7.47; recommended: 62%; preferred: 58%). Both varieties struggled under the unusually cool temperatures and short growing season of 2009. Many gardeners reported low or no yields. *'Early Butternut'* got off to a strong start and its fruits often matured earlier. Its semibush vine habit is especially useful for gardeners with limited space. *'Waltham'* showed robust growth and produced a higher yield. Gardeners liked the taste of both varieties.

#42. Squash, Winter Hubbard. 4 sites in 2008 and 16 sites in 2009. *'Blue Ballet'* (rating: 5.70; recommended: 56%; preferred: 47%) and *'Blue Magic'* (rating: 5.45; recommended: 63%; preferred: 53%). Both varieties struggled during the two cool summers of testing. Neither variety generated much excitement among gardeners. *'Blue Ballet'* matured earlier and its fruits were uniform and attractive in appearance. These fruits were relatively small (about 4 pounds), but still plenty big for today's smaller families. *'Blue Magic'* had more vigorous vines and larger fruits (about 6 pounds). The flavor of both varieties was mild, perhaps bland. The fine texture of the flesh of *'Blue Magic'* squash was appreciated by gardeners.



'Blue Magic'
Winter Squash



'Sugar Baby' Watermelon



'Bright Lights' Swiss Chard



'Diablo' Sulphur Cosmos

'Sonata Carmine' Cosmos



#43. Swiss Chard, Multicolor. 15 sites in Spring 2008, 20 sites in Spring 2009, and 20 sites in Fall 2009. 'Bright Lights' (rating: 7.90; recommended: 83%; preferred: 69%) and 'Five Color Silverbeet' (rating: 7.41; recommended: 68%; preferred: 31%). Gardeners were impressed with both varieties for their beauty, taste, and production. Both varieties tolerated cool temperatures in spring and fall. Most gardeners preferred 'Bright Lights' for its brighter colors and slightly higher yields. Other gardeners were impressed with the vigor and flavorful stalks of 'Five Color Silverbeet'.

#44. Swiss Chard, Red. 11 sites (Fall). 'Rhubarb' (rating: 6.85; recommended: 50%; preferred: 57%) and 'Sunset Magenta' (rating: 6.85; recommended: 38%; preferred: 43%). We tried this as a fall crop and generally failed. The plants only got a few inches tall and most gardeners were not interested in harvesting baby greens. There was no clear standout among the two varieties. We'll learn from this trial and limit testing of Swiss chard to spring plantings in the future.

#45. Watermelon. 34 sites. 'Mickeylee' (rating: 4.50; recommended: 42%; preferred: 40%) and 'Sugar Baby' (rating: 5.35; recommended: 63%; preferred: 60%). 'Sugar Baby' is well liked across the nation for its reliability and our trials reinforced this reputation. 'Sugar Baby' outperformed 'Mickeylee' in a year marked by snowfall in June and a cold summer overall. Its vines were healthier and produced more melons. Its melons were earlier, better looking, and better tasting. However, neither variety grew well. Neither variety received high marks or rave reviews. Many gardeners had to replant due to the cold spring and some gardeners did not harvest a ripe melon.

Flower Trials

#46. Cosmos. 7 sites in 2008 and 37 sites in 2009. 'Sonata Mix' (rating: 7.34; recommended: 78%; preferred: 62%) and 'Versailles Mix' (rating: 7.09; recommended: 73%; preferred: 38%). Both varieties performed well—both in the garden and as a cut flower. Most gardeners preferred 'Sonata Mix' for its earlier blooms. Its compact (24-inch) habit was less sensitive to wind damage, too. If a taller (42-inch) plant is preferred, 'Versailles Mix' would be a good choice.

#47. Cosmos, Sulphur. 40 sites. 'Diablo' (rating: 7.79; recommended: 83%; preferred: 55%) and 'Red Crest' (rating: 7.63; recommended: 81%; preferred: 45%). Many gardeners mentioned these varieties were almost identical—and they liked both. Both 'Diablo' and 'Red Crest' produced lots of vibrant red-orange flowers throughout the summer. Plants were healthy and bushy. Individual flowers were short lived and not suited for cutting.

#48. Sunflower, Gold. 10 sites. 'Sunbeam' (rating: 5.33; recommended: 56%; preferred: 12%) and 'Sunrich Gold' (rating: 6.67; recommended: 89%; preferred: 88%). Sunrich Gold clearly outperformed 'Sunbeam'. It bloomed weeks earlier and looked more attractive in the garden. The 'Sunrich' series is the most popular series of cut sunflowers and 'Sunrich Gold' did not disappoint—its blooms were very attractive as a cut flower.

#49. Sunflower, Orange. 7 sites in 2008 and 22 sites in 2009. 'Pro Cut Orange' (rating: 7.10; recommended: 71%; preferred: 62%) and 'Sunrich Orange' (rating: 7.10; recommended: 64%; preferred: 38%). Both varieties were outstanding, especially for cut flower production. 'Pro Cut Orange' blooms very early and reliably. The flowers of 'Sunrich Orange' bloom later, but are larger, more uniform, and especially attractive. The slender stems of 'Sunrich

Orange' make this variety easier to use in flower bouquets, too. These varieties complement one another for cut flower production with 'Pro Cut Orange' serving the role as an early maturing variety that extends the harvest season. The single-headed trait of these varieties limits their use in gardens since their season of bloom is short. Multibranching varieties, in contrast, produce many more blooms and have a longer display of color.

#50. Sunflower, Primrose. 24 sites. *'Buttercream'* (rating: 7.39; recommended: 78%; preferred: 73%) and *'Vanilla Ice'* (rating: 4.91; recommended: 43%; preferred: 27%). *'Buttercream'* was superior in all measured categories. Its larger seed led to a higher germination rate. Its plants were healthy and bloomed much earlier compared to those of *'Vanilla Ice'*. *'Buttercream'* produced a higher number of flowers, more attractive flowers, and were more useful for cutting. It's an impressive new variety which adds a soft primrose color to the ever expanding palette of sunflower colors available for gardeners. Beautiful and lovely!



'Buttercream'
Sunflower

#51. Sunflower, Red. 37 sites. *'Moulin Rouge'* (rating: 7.31; recommended: 68%; preferred: 64%) and *'Prado Red'* (rating: 6.69; recommended: 68%; preferred: 36%). *'Moulin Rouge'* continues to impress gardeners. It has displayed strong vigor under all kinds of weather conditions. In this trial, it produced flowers earlier and in greater abundance compared to *'Prado Red'*. Gardeners loved the unusual flower colors of both varieties: dark red in the case of *'Moulin Rouge'* and a deeper, darker red in the case of *'Prado Red'*. Both would be fascinating additions to any flower garden.



'Moulin Rouge' Sunflower

#52. Sweet Pea. 45 sites. *'Cuthbertson Choice Mix'* (rating: 6.12; recommended: 59%; preferred: 32%) and *'Mammoth Choice Mix'* (rating: 6.45; recommended: 70%; preferred: 68%). The plants of both varieties started slowly due to very cool weather. Several gardeners did not see blooms until August and some did not see any flowers at all. *'Mammoth Choice'* was generally preferred for its earlier display of flowers. Its vines were strong and vigorous, producing more flowers compared to those of *'Cuthbertson Choice'*. Both varieties did well as cut flowers.



'Mammoth Choice Mix' Sweet Pea

#53. Zinnia, Bicolor. 14 sites in 2008 and 37 sites in 2009. *'Candy Cane Mix'* (rating: 6.71; recommended: 70%; preferred: 41%) and *'Peppermint Stick Mix'* (rating: 7.65; recommended: 85%; preferred: 59%). Gardeners fell in love with the bright, splashy colors of both varieties. Plants of both varieties were sturdy and well suited for cutting. Most gardeners felt *'Peppermint Stick Mix'* showed a greater intensity and broader range of colors in its blooms. Its plants were more robust and produced more flowers.

#54. Zinnia, Cactus. 47 sites. *'Art Deco Mix'* (rating: 6.91; recommended: 73%; preferred: 40%) and *'Giant Cactus Mix'* (rating: 7.67; recommended: 87%; preferred: 60%). Gardeners loved *'Giant Cactus Mix'*. They especially liked the giant size and color variation of its flowers. Its plants grew vigorously and produced lots of eye-catching blooms. The performance of *'Art Deco Mix'* was solid—not spectacular—and generally inferior to that of *'Giant Cactus Mix'*.



'Peppermint Stick Mix' Zinnia



'Benary's Giant Mix' Zinnia

#55. Zinnia, Green. 6 sites in 2008 and 22 sites in 2009. *'Benary's Giant Lime'* (rating: 7.02; recommended: 72%; preferred: 44% and *'Envy'* (rating: 7.17; recommended: 80%; preferred: 56%). Gardeners liked both varieties, but neither variety distinguished itself from the other. Both varieties produced lots of blooms, which were often used for cut flower arrangements. Our gardeners were split as to which variety had showier flowers. Some preferred the flatter, more open blooms of *'Envy'*, while others preferred the fuller, rounder blooms of *'Benary's Giant Lime'*. *'Benary's Giant Lime'* generally performed better than *'Envy'* as a cut flower. Gardeners were also split on whether or not they would ever grow a green zinnia again; several were disappointed with the lack of brilliance in the petals, while others marveled at the novel color.



#56. Zinnia, Semidwarf. 14 sites in 2008 and 39 sites in 2009. *'Cut and Come Again'* (rating: 7.76; recommended: 80%; preferred: 47%) and *'Oklahoma Mix'* (rating: 7.67; recommended: 82%; preferred: 53%). Both varieties were very impressive. They grew vigorously, resisted powdery mildew, and produced lots of gorgeous flowers. Their blooms were outstanding both in the garden and in the vase. Some gardeners noted the vigor of *'Cut and Come Again'*, whether it was recuperating from a storm or a harvesting of flowers. Its long stems were favored for cut flowers. Gardeners who liked *'Oklahoma Mix'* were especially impressed with the variety and brilliance of colors in the mix.

#57. Zinnia, Tall. 9 sites in 2008 and 22 sites in 2009. *'Benary's Giant Mix'* (rating: 8.00; recommended: 85%; preferred: 63%) and *'State Fair Mix'* (rating: 7.68; recommended: 74%; preferred: 37%). Both varieties grew well and produced lots of large flowers. The blooms of *'State Fair Mix'* were especially big and impressive. Nonetheless, most gardeners preferred *'Benary's Giant Mix'*, which produced a much greater number of blooms. These blooms were slightly smaller, but had more petals, making them look fuller. The blooms of *'Benary's Giant Mix'* were especially vibrant and maintained their brightness when used as a cut flower.

'Benary's Giant Lime' Zinnia

Photo credits: Burpee (*'Detroit Supreme'*); Gurney's (*'Portofino'*); Harris (*'Espada'*, *'Eureka'*, *'Marketmore 76'*, *'Mei Qing Choi'*, *'Slobolt'*, *'Goddess'*, *'Earli-Dew'*, *'Early Frosty'*, *'Neon'*, *'French Breakfast'*, *'Olympia'*, *'Table Ace'*, *'Blue Magic'*, *'Benary's Giant Lime'*, *'Benary's Giant Mix'*); Johnny's (*'Carson'*, *'Osaka Purple'*, *'Purple Haze'*, *'Winner'*, *'Shunkyo Semi-Long'*, *'Amethyst'*, *'Bordeaux'*, *'Flying Saucer'*, *'Bright Lights'*, *'Sugar Baby'*, *'Buttercream'*, *'Moulin Rouge'*, *'Mammoth Choice Mix'*); Jung (*'Nelson'*); Seed Garden Store (yardlong bean); Seed Savers Exchange (*'Diablo'*); Twilley (*'Jamboree'*); and Vesey's (*'Nevada'*).

'Pro Cut Orange' Sunflower



Chapter 3

Vegetable Trial Reports

Trial 1. Bean, Green

Varieties (information and photos from seed catalogs)



Harris

'Bush Blue Lake 274'

58 days. Sturdy, bush plants bear a heavy crop over a long season. The pods are round, 6 inches long, very meaty, and stringless. Seeds are white and slow to develop, maintaining a long, smooth pod of delicious quality. Disease-resistant plants.

'Espada'

56 days. Bush plants bear heavy crops of slender, dark green, 6-inch pods which retain their flavor whether fresh, cooked, or frozen. Plants resist strains of bean common mosaic virus, halo blight (race 2), and anthracnose. White seeded.



Harris

Data

Data were collected at 9 sites in 2008 and 54 sites in 2009.

Trait	2008			2009			Weighted Total		
	'BBL274'	'Espada'	Same	'BBL274'	'Espada'	Same	'BBL274'	'Espada'	Same
Germinated best	33 %	0 %	67 %	34 %	13 %	53 %	34 %	11 %	55 %
Healthier plants	11	11	78	25	23	52	23	21	56
Matured earlier	44	44	11	40	40	20	41	41	19
Higher yields	33	33	33	39	31	31	38	31	31
More attractive pods	22	33	44	27	35	39	26	35	40
Tasted better	11	33	56	20	22	59	19	24	59
<i>Recommend to others</i>	78	89		82	76		81	78	
<i>Preference</i>	56	44		52	48		53	47	
<i>Overall rating¹</i>	7.11	7.67		7.25	7.41		7.23	7.45	

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

General Comments

2009

- Both tasted very good.
- Really I couldn't tell the difference between the varieties—they were both very good.
- Both varieties produced well all season.
- Both varieties did very well—slow start because of a cool spring. I have always planted 'Bush Blue Lake' but both varieties produced until frost.
- Plants of both varieties were very healthy.
- This was the best vegetable—my family just loved these beans.
- We canned these and they are fabulous.
- Both are great! Very good yields.
- We had a wonderful crop. They both tasted great.
- Both had a good yield and taste.
- Plants of both varieties were very vigorous.
- The beans of both varieties were short and curly (even though watered well). We didn't think they had good flavor either.
- Neither produced well.

Comments on 'Bush Blue Lake 274' Bean

2009

- I prefer this variety for its higher yield.
- More beans on a plant. Larger plants.
- Slightly better yield. Remained crisp and tender.
- Slightly earlier.
- Plants were a little larger—until the grasshoppers arrived.
- A higher yielding, better tasting bean even if you have to wait a bit longer.
- Liked the taste of 'Bush Blue Lake 274' better.
- Plants were healthier in late summer/fall.
- Healthy plants, early, and nice pods.
- Fuller pods; easier to prepare for cooking.
- Produced more especially during the second picking.
- Pods sized up quicker.
- Very heavy producer—a strong, firm bean.
- Plants were larger and healthier. Produced more beans. Larger pods.
- A slight edge on seedling emergence and on yield.
- Pods were thin and their taste was yummy.
- Pods were more attractive.
- Bigger, nicer plant.
- Produced the larger first picking but then dried up.
- Better tasting with abundance of flowers and pods.

Comments on 'Espada' Bean

2009

- I've canned 'Blue Lake' for years and thought they couldn't be beat, but 'Espada' did it. Preparing beans for canning is a chore but the beans of 'Espada' are all straight and so much easier to prepare.
- I had a dozen good picking from both varieties but 'Espada' went through the last week of September. It had a finer bean as well. Plants were more lush.

- The pods stayed mild and crisp even when a little larger. Very meaty.
- Better yield—more attractive pods.
- Good quality—produced for one month plus.
- Pods were uniform and delicious. Some of the best tasting beans I have ever eaten.
- Pods are darker green and more eye appealing.
- Beans were much longer and more uniform.
- Neither variety performed the same as last year, but 'Espada' seemed the more tender of the two.
- Didn't have the real green bean taste.
- Its pods did seem to not get as tough and bore later, well into late September.
- I preferred the size of this bean.
- Higher yields—bore longer.
- Nice long beans—very productive.
- Produced early; had larger pods; produced more.
- Better taste and pods are slower to get big. Pods are smooth and slightly darker green in color.
- Matured a few days earlier. Plants seemed to regenerate new yields faster. Plants were more prolific—gave me a long, thin, young bean, which I prefer.
- I would probably grow both again but liked the appearance of the 'Espada' bean a little better.
- Plants bore a week earlier and continued longer into the season.
- Tastier!
- Matured slightly earlier. Plants continued to bear longer. Beans were longer, thinner and more tender—especially later in the season.

Conclusions

'Bush Lake 274' and 'Espada' were outstanding. Both performed well across the state and were recommended by the vast majority of gardeners. Both varieties produced good yields of quality beans. The pods of 'Espada' were darker green; otherwise, there was very little difference between the two varieties.

Trial 2. Bean, Flatpod

Varieties (information and photos from seed catalogs)



Burpee

'Greencrop'

51 days. This leading flat-pod variety produces crisp, stringless, 7-inch pods. Excellent flavor. Former All-America winner.

'Kentucky Dreamer'

54 days. New! An improvement over the popular 'Kentucky Wonder 125'. Concentrated set of tender pods are borne on top of upright 17-inch plants. White seeded.



Twilley

Data

Data were collected at 14 sites in 2009.

Trait	Greencrop'	'Kentucky Dreamer'	Same
Germinated best	14 %	43 %	43 %
Healthier plants	36	29	36
Matured earlier	36	50	14
Higher yields	43	29	29
More attractive pods	29	50	21
Tasted better	29	43	29
<i>Recommend to others</i>	64	64	
<i>Preference</i>	46	54	
<i>Overall rating¹</i>	6.86	7.43	

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

General Comments

- Both had nice plants that were easy to harvest; pods hung above the ground.
- Started picking on July 25 and continued for two months—good! I would plant both varieties again.
- Both had excellent yield.
- Both had long pods—some were 9 inches.
- There was no difference in taste; even with the 'Greencrop' being much larger.
- Both varieties performed poorly. Had we had warmer weather, I think it would have been different.

Comments on 'Greencrop' Bean

- Larger and more pods. Very tender and flavorful.
- Its beans were much larger and tasted better.
- Huge pods, some up to 9 inches!

- Tender, mellow taste.
- Excellent raw.
- Delicious!
- Pods tended to curl and get quite large if not harvested right away.

Comments on 'Kentucky Dreamer' Bean

- It is a decent variety, but is susceptible to rust.
- Long (6–8") pods. Very prolific. Uniform size, beautiful pods. Nice for serving without breaking into pieces. A stronger plant. Produced more.
- Firmer pod and tastes better.
- Sturdier plants. Held pods off ground better.
- Pods were more tender and sweeter.
- 'Greencrop' was more tender, but all four members of our family felt 'Kentucky Dreamer' tasted better. It "squeaks" when you chew it!
- Pods were more uniform and did not curl.

Conclusions

This trial had relatively few participants compared to other bean trials and gardeners were not especially impressed with the performance of either variety. Nonetheless, many growers raved over the long 9-inch pods of 'Greencrop', which were remarkably tender for a bean of that size. But a slight majority of gardeners preferred 'Kentucky Dreamer'. Several of these gardeners noted 'Kentucky Dreamer' beans matured earlier, were more uniform, did not curl, and tasted better.

Trial 3. Bean, Wax

Varieties (information and photos from seed catalogs)

Johnny's



'Carson'

52 days. New in 2007. Slim pods average 5.5 inches and are flavorful and tender. Plants are vigorous and productive.

'Rocdor'

52 days. Deep yellow, slender, and meaty pods are especially long, up to 6.5 inches. Upright plants. Black seeds germinate well in cool soils.



Johnny's

Data

Data were collected at 5 sites in 2008 and 29 sites in 2009.

Trait	2008			2009			Weighted Total		
	'Carson'	'Rocdor'	Same	'Carson'	'Rocdor'	Same	'Carson'	'Rocdor'	Same
Germinated best	20 %	60 %	20 %	38 %	14 %	48 %	35 %	21 %	44 %
Healthier plants	20	60	20	28	10	62	27	17	56
Matured earlier	20	20	60	41	26	33	38	25	37
Higher yields	20	60	20	32	39	29	30	42	28
More attractive pods	40	60	0	43	25	32	43	30	27
Tasted better	0	20	80	39	7	54	33	9	58
<i>Recommend to others</i>	40	60		59	41		75	67	
<i>Preference</i>	50	50		82	68		58	42	
<i>Overall rating¹</i>	5.00	7.75		7.85	7.68		7.43	7.69	

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

General Comments

2009

- Unbelievable amount of beans per plant.
- They both produced very abundant yields.
- The rows look the same. We ate pods of both varieties and could not tell the difference.
- I thought they tasted the same, but my wife liked 'Carson' better. Really it was hard to see any difference in plant height, vigor, and yield, or taste.
- Our daughters prefer 'Rocdor' but my husband and I thought both varieties tasted the same.
- Both varieties produced very well—at least eight pickings. I couldn't taste any difference.
- Neither suffered from rust disease.
- Both did very well overall, but suffered from rust late in the season.
- Both varieties suffered from disease in August.

Comments on 'Carson' Bean

2008

- Its pods were yellow from tip to tip—more attractive than those of 'Rocdor'—and I would like to grow this variety again.

2009

- Pods were slim, uniform, and had beautiful color.
- Better yield. Nice long beans.
- Pods were more uniform and more tender.
- Flavor was more delicate. Tasted better raw, too.
- Yields were 3–5 days later, but produced much longer and were much higher overall. Pods were nice, slim and straight, very tender, and a good length for pickling.
- Very straight beans with crisp taste. Great beans to can.

Comments on 'Rocdor' Bean

2008

- Plants grew more vigorously. Produced three times the yield. Much better overall. It is a waste of space to plant 'Carson'.
- Larger, more vigorous plants. Pods were set higher on the plants. The pods were straighter and lasted well on the plants for farmers market. They canned much better—the ends of pods did not look rusty after canning.

2009

- Very high yield. Nice long, straight beans. Excellent flavor.
- Germinated and grew better early in summer.

- Did not like notable black bean bumps in pod.
- Pods were darker in color and better tasting.
- Yielded 8 gallons vs. 5.5 gallons for 'Carson'.
- Nice long pods, but bland.
- Pods grew straighter.
- Larger pods.

Conclusions

Gardeners were impressed with the abundant yields and beautiful pods of both varieties. Most gardeners preferred 'Carson'—they felt its pods were more uniform, tender, and flavorful. 'Carson' is white-seeded, a desired trait for freezing/canning. 'Rocdor', an heirloom black-seeded type, produced high yields of deep yellow, long, slender pods.

Trial 4. Bean, Yardlong

Varieties (information and photos from seed catalogs)



Johnny's

'Gita'

78 days. Dark green pods, thin as a pencil and up to 20 inches long. Widely adapted, but grows better under warm conditions. Needs a tall trellis. Black seeds.

'Liana'

80 days. Tender, dark green pods have asparagus-like flavor when steamed or stir-fried. Pods grow up to 25 inches long. Vines grows best under warm temperatures, reaching up to 8 feet tall. Black seeds.



Territorial

Data

Data were collected at 13 sites in 2008 and 21 sites in 2009.

Trait	2008			2009			Weighted Total		
	'Gita'	'Liana'	Same	'Gita'	'Liana'	Same	'Gita'	'Liana'	Same
Germinated best	42 %	25 %	33 %	37 %	26 %	37 %	39 %	26 %	35 %
Healthier plants	42	17	42	41	18	41	41	18	41
Matured earlier	33	25	42	53	35	12	45	31	23
Higher yields	25	25	50	38	25	38	33	25	43
More attractive pods	18	18	64	38	19	44	30	19	52
Tasted better	9	9	82	33	13	53	24	11	64
<i>Recommend to others</i>	54	54		44	28		48	39	
<i>Preference</i>	42	58		71	29		58	42	
<i>Overall rating¹</i>	5.85	5.69		5.47	4.47		5.62	4.91	

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

General Comments

2008

- We picked at least four times and had at least one and a half 5-gallon pails each time. The pods of both varieties tasted the same.
- I've never grown these beans before but they taste great! Cool temperatures, hail, and strong winds set maturity back.
- Both germinated well. Both were very "viney" and needed support. My family did not really care for the flavor and texture of either of the beans.

2009

- I grew these beans last year and liked 'Gita' better. This year they seemed to produce about the same. I planted later and the weather was a factor.
- This is the second year that I tested these varieties. Last year was a complete failure. This year we had a few beans.
- Both varieties had lots of problems getting started, but took off in August. 'Gita' produced by far the best crop. Picked first crop on Labor Day.
- Liked the taste of both.
- The pods of these varieties looked the same.
- Wasn't too impressed with either variety; may have been the cool summer.
- I did not like the taste of these at all.
- Both sprouted very well even though the weather was cool and rainy. I really couldn't find a way to prepare them that made me like either.
- Needed to reseed as the first plants froze. Both varieties made excellent pickled beans.
- I did not like these beans—they did not germinate well, the beans were tough and tasteless. Did I do something wrong? I am guessing I planted too early.
- Both varieties are yellow and stunted; do they need an inoculant? Very poor yields from both. Neither is adapted to our climate. Tastes best when only lightly cooked.

Comments on 'Gita' Yardlong Bean

2008

- The plants were especially healthy and produced more pods than 'Liana'.
- It was a healthier, nicer looking plant. It barely produced any pods, although the plants of 'Liana' produced even less.

- Its overall performance was nearly identical to 'Liana', but I appreciate its earlier maturity.

2009

- Germinated slightly better. Produced a week earlier and went on and on and on.
- Slight edge to 'Gita' due to its earlier yield.
- Higher yields.
- Taste was better (less "woody").
- Did not like its taste.
- Vines grew better but I did not enjoy its flavor.
- Tasted better; 'Liana' produced strings when overmature.
- Kept growing late into the season.

Comments on 'Liana' Yardlong Bean

2008

- More seeds germinated and the plants grew faster. Matured one week earlier and produced longer pods. Better performance overall.
- Better germination. Hail hit us two weeks after germination—the 'Liana' plants withstood the hail better.
- More attractive pods and higher yields than 'Gita'. Great tasting.

2009

- Produced well whereas 'Gita' froze.
- Produced first.
- Yields began in late August. Yields were larger and pods were slightly longer.
- Had a higher initial yield (1.5 vs. 1.2 pounds), but not much difference besides that.

Conclusions

We evaluated these heat-loving bean varieties during two cool summers. Most gardeners had limited success growing both varieties. Most enjoyed the novelty of these beans. Some gardeners liked the asparagus-like flavor and some did not. 'Gita' showed greater adaptability to our growing conditions. It germinated slightly better. Its vines were generally healthier and produced harvestable pods sooner. 'Gita' produced higher yields and more attractive beans at more sites than 'Liana'. 'Gita' was more highly recommended, although less than half of our gardeners liked it.

Trial 5. Beet

Varieties (information and photos from seed catalogs)



Burpee

'Detroit Supreme'

59 Days. Special selection of popular 'Detroit Dark Red'. Dark red roots with very light zoning. Smooth globe shape. Medium tops for bunching. Heavy yields.

'Red Ace'

50 days. One of the best all-around beets. The round, smooth, deep red roots develop quickly, with high uniformity. They maintain their sweet tenderness when larger and older. Medium tall, red-veined greens.



Harris

Data

Data were collected at 53 sites in 2009.

Trait	'Detroit Supreme'	'Red Ace'	Same
Germinated best	15 %	30 %	55 %
Healthier plants	22	28	50
Matured earlier	36	34	30
Higher yields	33	31	37
More attractive roots	37	31	33
Tasted better	22	15	63
<i>Recommend to others</i>	73	73	
<i>Preference</i>	54	46	
<i>Overall rating¹</i>	7.57	7.18	

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

General Comments

- Both had dark red roots. They were both extremely sweet. Very delicious!
- Both canned beautifully. I could not detect a taste difference.
- The roots on both looked nice and tasted very good—good for pickling also.
- Neither got woody, even when larger. Great as table beets and beet pickles.
- Both were delicious!
- Both produced well and were very sweet.
- Both need more flavor, especially when cooked.
- Neither produced very well.

Comments on 'Detroit Supreme' Beet

- Stronger, healthier plants from germination to harvest. Richer flavor.

- It produced good yields of extremely sweet, tender, and very delicious roots. Great for freezing and pickling.
- A showier plant—darker bulb, firm, symmetrical and color throughout. Not woody.
- Beets didn't get very large. Tops looked great.
- More rapid growth to maturity.
- Yielded more. Earlier. Rounder beets.
- Produced faster and higher yields.
- Smaller tops.
- Deep red color throughout the beet.
- Produced bigger beets before 'Red Ace'.
- I harvest my beets in fall—these beets were the right size—the beets of 'Red Ace' grew too large.
- Tasted good; looked good; nice size.
- Matured a week earlier.
- Healthier plants and larger yield.
- Darker roots for pickling. Tastes great.
- Better taste. Slightly higher yield.
- Much larger roots (tennis ball versus racquet ball size). Larger yield.
- Bigger yields, bigger beets.
- Four to five days earlier. More uniform roots.
- Healthier plants. Earlier.
- Its skin was smoother. Taste was similar, but we preferred 'Detroit Supreme'.

Comments on 'Red Ace' Beet

- Produced about 25% more yield. The greens were large and tasty—the roots were tasty, too.
- Normally I grow 'Detroit's', but these were really awesome! These were prolific—more hearty.
- 'Red Ace' was different from what I usually plant. It was tasty and the beets were more attractive.

More Comments on 'Red Ace' Beet

- Grew faster and looked better.
- Better flavor and more uniform shape.
- Both developed nice sized beets, but the beets of 'Red Ace' were more uniform.
- Larger roots, but tinge of light yellow inside.
- Roots are more attractive longer—smooth-skinned throughout the season. Retained more red color when cooked.
- Plants looked dark green and vigorous. Matured 6–10 days earlier. Tastier greens. I could leave these beets in the ground and they would not get so big, which allowed me to make great pickled beets.
- Tops had better color.
- Attractive, healthy plants. Beets had a darker red color.

- Roots had a nice shape. Better color and taste. Made better pickled beets—stayed firm.
- Produced more (7 vs. 3 pounds), and larger beets.
- Produced a nicer stand in the garden. Matured at least one week earlier. Nice, large beets.
- Higher yields and tasted better.

Conclusions

Gardeners liked both 'Detroit Supreme' and 'Red Ace'. There were no major differences between the varieties. Both varieties produced attractive, dark red roots. Both were very sweet and delicious. Both were good for salads and for pickling. Both produced high yields. The roots of both varieties maintained their tenderness when larger. 'Red Ace' may have been more uniform; otherwise, its performance was matched, if not exceeded by 'Detroit Supreme'.

Trial 6. Carrot

Varieties (information and photos from seed catalogs)



Johnny's

'Mokum'

54 days. A very early variety 'Nantes' type with very sweet flavor. Slender roots are good for bunching. Short tops. Widely adapted.

'Nelson'

55 days. A very early variety with sweet flavor and outstanding tolerance to heat. The roots of this hybrid are deep orange, smooth, 6 inches long, with blunt tips.



Park

Data

Data were collected at 78 sites in 2009.

Trait	'Mokum'	'Nelson'	Same
Germinated best	28 %	25 %	47 %
Healthier plants	14	24	61
Matured earlier	28	24	49
Higher yields	30	28	42
More attractive roots	26	46	28
Tasted better raw	24	40	37
Tasted better cooked	18	25	57
<i>Recommend to others</i>	69	77	
<i>Preference</i>	41	59	
<i>Overall rating¹</i>	6.85	7.42	

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

General Comments

- Both germinated well and had good foliage with strong tops. Both were tasty.
- Both were very healthy. They both produced very well! I love these carrots—they are so sweet whether they are cooked or not.
- Both grew nicely and I would grow both again. Matured at the same time. Very few odd-shaped carrots. Both had good taste but I didn't think they were overly sweet or tasty.
- These two varieties and 'Yaya' are outstanding. My favorite carrots!
- Lots of carrots. Beautiful tops.
- Both had strong tops.
- Both tasted great raw and cooked.

More General Comments

- Both have very long roots.
- Both varieties grew well and tasted good.
- Both produced very well. Both make excellent cake and bread!
- Both produced very well. I had enough carrots to share with my sister and mother.
- Both were generally smaller in size than normal carrots.
- Both produced mostly bizarre and multi-legged carrots.
- Neither variety did well in our cool, late spring/early summer. Neither was as sweet or flavorful as I would like—most disappointing.

Comments on 'Mokum' Carrot

- Plants grew faster. Its carrots were bigger, less orange, and had lots of ridges down the carrot.
- They grew very well. A large, long carrot. It was great in a gumbo-type soil.
- Tasted sweeter and had a bigger burst of flavor.
- Sweeter, more carrot flavor.
- Larger, thicker roots. Very sweet and crisp.
- Much larger, more even roots. Very good!
- Many had odd roots.
- Sweeter and more tender.
- Better tasting and overall bigger carrot.
- Roots were straighter.
- Carrots were longer and thinner. Sweeter when raw and better tasting when cooked.
- Carrots were drier and turned woody early.
- Looked very good! Tasted very sweet!
- More misshaped roots.
- Nice carrot flavor—both cooked and raw. Nice even color.
- Got soft in the refrigerator after picking.
- We prefer its crisper texture.
- Slightly more consistent in shape/length.
- Longer roots; didn't grow into funny shapes; easy to grow.
- A longer, thinner, sweeter carrot.
- Got very large (up to 12 inches) and broad (4 inches diameter) on top.
- Earlier and larger roots.
- A little sweeter and produced excellent!

Comments on 'Nelson' Carrot

- Deep orange color and smoother shape. Not at all crooked either. Easier to clean.
- Smooth skins—rich orange color. Crunchy and sweet. Delicious fresh, cooked and frozen.
- Roots split less often. The best carrots I have ever planted—grew long and straight.
- Plants looked better and had better foliage. Matured about one week earlier. Nice, straight carrots, but some had green cores. Canned much better than 'Mokum'.
- Very uniform and high yields.
- Very sweet raw and good flavor when cooked.
- Exhibited these carrots at the North Dakota State Fair, Future Farmers of America Division and got Reserve Champion. Sweeter and look nice.
- Nicer, straighter roots for peeling.
- A lot larger carrot. Seemed to cook better.
- Tasted better (more flavor) and better root shape.
- Roots were slender and matured earlier.
- More uniform carrot.
- Straighter roots and a lot sweeter.
- Sweet when cooked, but rather flavorless raw.
- Very nice and straight. No fingers on them.
- More split, uneven roots.
- More crunchy and sweeter.
- A bit nicer looking. We leave our carrots in the ground until frost, for sweetness. 'Nelson' did not overgrow.
- Less forking/splitting. Earlier, though not by much. Cooked up crisper than 'Mokum', but could not decide which one tasted better.
- Nice, big (but not huge), fairly straight carrots.
- More woody.

Conclusions

'Mokum' and "Nelson" grew well and produced lots of tasty carrots in most gardens. The majority of gardeners preferred 'Nelson'. They liked its remarkably straight, smooth-skinned, and very uniform carrots. Many gardeners felt it tasted better, especially when eaten raw. Several gardeners noted 'Mokum' produced larger roots and felt these roots had richer flavor and texture.

Trial 7. Carrot, Purple

Varieties (information and photos from seed catalogs)

Seed Savers Exchange



'Dragon'

90 days. A most refined purple carrot. The beautiful reddish-purple exterior provides an attractive contrast with the yellowish-orange interior when peeled or sliced. Sweet, almost spicy flavor.

'Purple Haze'

70 days. The roots are smooth with purple exterior and bright orange centers. The color presentation when cut is vivid. Its flavor is excellent both raw and cooked, but the purple color dissolves with cooking. Vigorous tops.



Johnny's

Data

Data were collected at 19 sites in 2008 and 53 sites in 2009.

Trait	2008			2009			Weighted Total		
	'Dragon'	'PHaze'	Same	'Dragon'	'PHaze'	Same	'Dragon'	'PHaze'	Same
Germinated best	58 %	11 %	32 %	41 %	16 %	43 %	45 %	15 %	40 %
Healthier plants	35	18	47	20	8	71	24	11	65
Matured earlier	41	35	24	27	31	42	31	32	37
Higher yields	53	41	6	40	26	34	43	30	27
More attractive roots	18	65	18	52	28	20	43	38	19
Tasted better raw	24	59	18	30	52	17	28	54	17
Tasted better cooked	38	23	38	30	20	50	32	21	47
<i>Recommend to others</i>	53	88		72	72		67	77	
<i>Preference</i>	31	69		50	50		45	55	
<i>Overall rating</i> ¹	6.19	8.00		7.17	7.09		6.91	7.33	

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

General Comments

2008

- Purple carrots are fun to grow, but didn't seem as sweet as regular orange carrots. (Comment from 2008)

2009

- Plants of both varieties were healthy. The kids liked to eat both varieties. We froze some of each—the first batch we tried of each variety maintained their taste and color after freezing.
- These were such fun to grow. No bug problems. As thinned, the small carrots were good in salads. Grandchildren liked both raw.
- Very healthy plants. Matured earlier than I expected. Very large yields.
- Plants of both varieties were robust. Yields were similar. They both tasted sweet and flavorful.
- Neither variety produced a good crop but I am thinking the cool summer had a lot to do with it.
- I was very satisfied with these novel, but very good carrots. Both tasted good raw, all the time.
- This was fun for kids. Both varieties had a strong carrot taste.
- Both were crisp and had a sweet taste to them when eaten raw. Tasted excellent when cooked.
- When you pickle with them, the carrots turn the juice colors. The carrots then turn orange and it looks awesome.
- Similar yields. Neither tasted that great when cooked.
- I really didn't care much for either variety. They weren't as sweet as 'Danvers' nor did they produce as well.

More General Comments

- Beautiful tops and large yields!
- I definitely will plant both again.
- I don't recommend these varieties since I do not like their purple color.
- Both varieties had a tendency to split when we had a large amount of rain.

Comments on 'Dragon' Carrot

2008

- Grew better, produced higher yields, and had a little more flavor.
- Better germination. Straighter roots. Looked better from the outside, but was inconsistent in color when cut; sometimes the core was yellowish. The roots tasted bitter when eaten raw.
- Developed into harvestable size up to one month earlier than 'Purple Haze'. Higher yields, but many large roots split prior to harvest. Has more a traditional carrot taste when cooked.

2009

- Roots were uniform early in the season but later 'Purple Haze' looked nicer. Became moister after cooking. An interesting color in carrot cake!
- Matured two weeks earlier. Plants were larger.
- Better suited for my heavy soil. Its shorter roots were easier to dig.
- More of a true carrot flavor—better when cooked. The color of its roots lighten up when cooked, while those of 'Purple Haze' retain their color.
- Color was nicer—real burgundy.
- Bigger and more attractive roots.
- Roots grew larger quicker. Roots had a tendency to split.
- Taller plants and higher yields. Ready to pick earlier. Yields were 10% higher. Roots had a nice shade of purple and sweeter flavor. Roots cooked nicely with a sweet mild flavor.
- More vigorous. Higher yield. Harvested after frost and saw that many of the carrots were huge, but had a tendency to split. Tastes as good as any standard orange carrot for cooking.
- A lot of foliage but the roots weren't as large. The roots had a tendency to split lengthwise as they got larger.
- Color is superior, but not quite as flavorful raw.
- Roots had a tendency to split as they matured. Color was more even.

- Roots were a pretty, bright red color, and larger.
- Tasted sweeter.
- More uniform—would be great for market gardeners.
- Produced more large carrots. Produced 7 pounds compared to 4 pounds for 'Purple Haze'.
- Fast growing—two weeks ahead of 'Purple Haze'. Nice purple color—looked appetizing—but had an almost bitter aftertaste.
- Sized up quicker. More of an old-fashion carrot flavor.
- Tasted so much better.
- Some bolting.
- Produce huge carrots—some split.
- Stumpy shape.

Comments on 'Purple Haze' Carrot

2008

- Its dark purple color goes one-quarter ways through the carrot. Bright orange core.
- My grandchildren preferred this variety because of the color being darker and deeper into the carrot. The color contrasted nicely.
- Grew slower in spring, but caught up later. Kids loved them as a raw snack. Tender when cooked.
- More uniform roots. Sweeter taste (especially when eaten raw). Didn't split when kept in ground to mature. Retained its eye appeal after peeling.

2009

- Slightly higher yields. Darker purple roots. I really liked the purple of 'Purple Haze'—it even retained color when cooked.
- More uniform. The purple color went deeper. Higher yields.
- The contrasting orange and purple color was very attractive.
- Looked cool when sliced but not as good unsliced. Better flavor—sweeter.
- The color of the roots was a very deep, almost black purple.
- My hands were stained when working with this variety.
- Much bigger root and more purple when cooked.
- Roots were straighter and longer.
- Tasted much better when cooked and when eaten raw. When cooked and canned it produced gray disgusting water—worked okay in soups, stews.
- I like the purple color of 'Purple Haze', but it changes the color of my soups.

More Comments on 'Purple Haze' Carrot

- A larger, narrower root. A great shape and sweet carrot flavor.
- Grew better and tasted better raw—sweeter.
- Crisper and the purple color goes deeper into the carrot.
- Roots were a deeper purple color, whereas those of 'Dragon' were redder, like a beet. 'Purple Haze' produced a nicer root—longer, straighter, and narrower.
- Harvested after first frost—these carrots were less sweet—kind of woody.
- Picture perfect roots and very consistent in size. Remains purple after peeling. Excellent when eaten raw. Don't you dare cook them—you'll be sorry.

Conclusions

Most gardeners preferred 'Purple Haze' for its uniform, tapered carrots with beautiful contrasting colors. It had a sweet, mild flavor that was especially good when eaten raw. When cooked, it retained its color better than 'Dragon', but still created off-colors to many cooked dishes. Many gardeners noted the impressive germination, growth, and yields of 'Dragon'. Most gardeners felt that 'Dragon' was bitter when eaten raw, but very flavorful when cooked. Its roots were burgundy red on the outside but inconsistent in color on the inside. It was less likely to retain its purplish color when cooked. The roots of 'Dragon' were more blunt-tipped and more subject to splitting.

Trial 8. Cucumber, Burpless

Varieties (information and photos from seed catalogs)



Veseys

'Sweet Slice'

63 days. Very mild and sweet. The skin is tender and free of bitterness, so the cukes can be eaten without peeling. Harvest when cukes are 8 inches long. Disease-resistant vines produce high yields over a long season.

'Sweeter Yet'

45 Days. Very early. Dark green, crisp fruit with a pleasingly sweet flavor. Best harvested at 10–12 inches. Compact, semi-bush plants bear continuously.



Veseys

Data

Data were collected at 77 sites in 2009.

Trait	'Sweet Slice'	'Sweeter Yet'	Same
Germinated best	37 %	17 %	45 %
Healthier plants	22	32	47
Matured earlier	49	40	11
Higher yields	30	50	20
More attractive cukes	38	40	21
Tasted better	29	27	45
<i>Recommend to others</i>	67	65	
<i>Preference</i>	47	53	
<i>Overall rating¹</i>	6.85	7.42	

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

General Comments

- Both did better than the varieties I've used in previous years. Both were vigorous growers with lots of fruit.
- They both grew lots of cucumbers. I supplied lots of friends with cucumbers.
- I only get many—only about three cucumbers per plant—but they were a treat to eat.
- Both had great vines, excellent yields, attractive cukes, and great flavor.
- Vines turned yellow. Poor growth and yields.
- Both varieties will satisfy the palette. Their plants looked tough; didn't think they would yield much; but were impressed on how many cukes were produced by just a few plants.

More General Comments

- Neither became “seedy” when large.
- Many fruits were misshaped. I would like to re-evaluate these cukes next year.
- Really didn’t like either of them. They both produced cukes that curled.
- Not much difference between the varieties—both were good producers.
- We had endless cukes from these trials! Kept producing until frost.
- Both had odd-shaped cucumbers. Not uniform. Skins were tough and spiny. Neither seemed to have flavor.
- Both had strong plants, even as indoor seedlings. Once the harvest started we ate them non-stop, even in the combine!
- Both froze on 10 June.

Comments on ‘Sweet Slice’ Cucumber

- We had very good luck with ‘Sweet Slice’. The vines were healthier and the cukes were sweeter and more uniform.
- We liked the crispness and looks of ‘Sweet Slice’.
- ‘Sweet Slice’ is earlier and seemed to produce continually through the summer.
- Produced nine days earlier and produced later into the fall. The cucumbers seemed to have a firmer crunch and were uniform in shape.
- A little more productive.
- Produced throughout the season.
- Firmer fruits and tasted sweeter.
- Cukes were straighter but shorter.
- More deformed cukes compared to ‘Sweeter Yet’.
- They were a nice slicer; not prone to getting fat!
- Plants were not as prone to browning. They produced one week earlier and produced 30% more cucumbers. A nice mild, juicy flavor.
- Fruit had a tendency to curl.
- Fruit were straighter and longer—easier to slice. Seeds seemed smaller.
- Plants were hardier in early spring. Cucumbers had tough skin and were not real tasty.
- Very straight fruit.
- A few days earlier. Cukes were better looking.
- Higher yields, Cucumbers were more slender—and less seeds. The skin was a little more tender.
- Produced a more uniform product.
- Even-sized cukes. Great for pickling.

Comments on ‘Sweeter Yet’ Cucumber

- They had nicer plants and the cukes were a lot like the more expensive English cukes at the store. They were a little curled, but crisp and good!
- Fantastic yield, even with cold summer. Fruits look almost like an English cucumber. Incredible taste. Kept producing even after we had mildew problems. We liked both varieties but ‘Sweeter Yet’ was a favorite of everyone.
- Better looking plants. Produced cukes three days earlier. Produced larger, and better looking cukes. Tasted great.
- As soon as the cukes started to get big they curled up and the inside browned.
- Very vigorous grower and very prolific yields. Cukes had better form, size and color, but were a bit sour tasting. Inner seeds were bigger.
- Steady stream of consistent fruit. We ate 5 gallons of pickles and still had plenty to share!
- Produced much higher yields later in the season.
- Tasted better; matured faster; shape was good.
- Very few seeds inside fruit.
- Nice shaped (straight and uniform) fruits that tasted great.
- Very poor yield and the cucumbers tended to be misshapen.
- Cukes were more crisp and had less seeds, but lacked flavor.
- Low yields.
- Sweet taste and the fruit is long and narrow—loved them!
- Healthier plants and produced much better.
- Did not survive the cool spring weather.
- The cucumbers taste good (extremely good in cucumber salad), but sometimes look funny.
- Better slicers and more attractive fruit. Tasted better.
- Produced like no other cucumber. I was surprised how many we got. The cucumbers were slim and long. Milder flavor. The cucumbers did not get so bitter—you can eat the skins—seed were no problem.
- Better yield and straighter cukes.
- A little more productive. Sweet and juicy—none were bitter tasting.
- Held up better to not-so-ideal conditions. Just a little better taste.
- Produced a much higher yield.
- Were very tasty! Produced well.
- Bigger yield and longer harvest season. Good

More Comments on 'Sweeter Yet'

taste.

- Produced longer cucumbers, but had a tendency to curl tightly.
- Produced first and a few more.

Conclusions

Some results from this trial are unexpected. 'Sweeter Yet' is an ultra-early variety and yet it produced cukes later than 'Sweet Slice' at many of the plots. 'Sweet Slice' has a reputation for productivity, but it produced lower yields than 'Sweeter Yet' at many of the plots. Neither variety excelled under the late spring and cool summer conditions, but gardeners generally liked both varieties. About half of the gardeners liked the yields and slimmer cucumbers of 'Sweeter Yet'. The other half preferred the straighter, more uniform cucumbers of 'Sweet Slice'.

Trial 9. Cucumber, Pickling

Varieties (information and photos from seed catalogs)

Veseys



'Calypso'

51 days. Very productive pickler. The compact vines tolerate several diseases. Medium-dark green fruits. Widely adaptable.

'Eureka'

55 Days. Dark green fruits are good for both pickling and for slicing. Vigorous, disease-resistant vines. Good yields.



Harris

Data

Data were collected at 46 sites in 2009.

Trait	'Calypso'	'Eureka'	Same
Germinated best	20 %	44 %	37 %
Healthier plants	11	32	58
Matured earlier	51	26	23
Higher yields	32	32	35
More attractive cukes	26	43	31
Tasted better	17	13	70
<i>Recommend to others</i>	69	54	
<i>Preference</i>	53	47	
<i>Overall rating¹</i>	6.22	6.08	

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

General Comments

- Both produced okay and made great pickles.
- All plants were vigorous and very productive. Cukes of both varieties were attractive and I could not taste any difference between the two.
- Both were awesome for pickles.
- From both put up a lot of pickles and still eating on salads on 27 September.
- Neither did very well. I prefer 'Chicago Pickling', which I have used for years.
- It was a cool spring—the plants came up and died. All of my neighbors had trouble with cucumbers, too.
- Did not get enough of either variety to make a decision. A bad year for cukes—too cool.
- Came up, looked good, turned yellow and died.
- Not very impressed with either.
- Fussy delicate plants—don't grow well in a windy area like mine. Poor yields for both varieties.
- My vines dried up and died.

Comments on 'Calypso' Cucumber

- The cukes were longer, not stubby. I have been growing 'Calypso' for years. I market garden and have found them to be very good yielders and nice looking picklers. I have also used 'Alibi', which seem even earlier than both these varieties.
- The few I got were very nice for pickling.
- Produced first and seemed to have more cukes per plant.
- Good for small garden spot due to its more compact vines.
- More attractive and better tasting.
- Beautiful dark green color. Great for dill pickles.
- Better shape for pickling.
- They came up and survived even after the snow we had.
- More cukes—produced longer.
- Higher yields and nicer looking cukes.
- Produced first.
- Not bitter at all! 'Calypso' had a good cucumber flavor while 'Eureka' was bland. It also had a small seed cavity and somewhat darker, nicer shaped fruit. The healthy, vigorous vines produced two cukes per node. Very impressed!
- Much better yield. 'Eureka' is fine if you plant just for eating raw, but if you want cukes for pickling, 'Calypso' is definitely a better producer (two times the yield). At this time, there seems to be no difference in how well the pickles are keeping.
- Good eating raw as well.

Comments on 'Eureka' Cucumber

- Survived our frost in late spring. Vines produced well and the cukes made good picklers.
- They started producing quicker. It wasn't a good season for cucumbers.
- Produced and produced, even when cukes were larger they were good.
- Produced more fruit—nice and straight.
- Longer vines, more fruit, full of flowers.
- Stronger plants; more attractive cukes.
- The cukes washed easier (not as prickly as 'Calypso'). Seemed to have a better shape.
- Higher yield and more uniform form.
- Just outperformed 'Calypso'—produced better (130 vs. 86 cukes) and had a better taste.
- Seemed to have nicer cukes when they were grown to a bigger size.
- Light, crisp taste. Makes great little dill pickles—stays crisp—skin is not tough.

Conclusions

Many seedlings died from a late frost in spring and both varieties struggled during the cool summer. Neither variety was rated high by gardeners. The plants of 'Eureka' were more vigorous, but its yields were no greater than those of 'Calypso'. The cukes of 'Eureka' were uniform in shape, had a smooth skin, and remained of good quality even when large. This made 'Eureka' a good variety for both pickling and slicing. The cukes of 'Calypso' matured earlier and produced good yields when picked regularly. Its cukes were dark green, more spiny, and outstanding for pickling.

Trial 10. Cucumber, Slicing

Varieties (information and photos from seed catalogs)



Harris

'Marketmore 76'

68 days. Very popular main-season slicer. Disease-resistant vines set dependable yields of glossy, dark green fruits. Sweet, mild flavor. Open-pollinated (nonhybrid).

'Straight 8'

60 Days. Popular early variety. Straight, dark green fruits with small seed cavities. Former All-America winner. Open-pollinated (nonhybrid) plants. Vines are vigorous but lack resistance to many diseases.



Burpee

Data

Data were collected at 38 sites in 2009.

Trait	'Marketmore 76'	'Straight Eight'	Same
Germinated best	28 %	22 %	50 %
Healthier plants	38	28	34
Matured earlier	52	35	13
Higher yields	40	37	23
More attractive cukes	43	37	20
Tasted better	40	30	30
<i>Recommend to others</i>	71	68	
<i>Preference</i>	57	43	
<i>Overall rating¹</i>	6.94	7.03	

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

General Comments

- Both did very well! Produced more cukes than I could keep up with.
- Both were good.
- Cukes of both varieties were very prickly.
- Neither produced even close to the burpless varieties.
- Both suffered from mildew. Neither yielded very well.
- No bitterness in either variety.
- I did not like either variety—they were both very bitter—poor yields this year!

Comments on 'Marketmore 76'

- Nice size. Very good quality.
- Matured a week earlier. Produced straighter and more uniform cukes—dark green. A little more flavor. They were good to eat fresh and for pickling.
- I liked its flavor better.
- All kids preferred 'Marketmore 76' for flavor, size, smaller seed cavity, and lack of bitterness.
- Our granddaughter is selective in eating cukes and she loved these! They look and taste as great as sweet and dill pickles.
- It was healthier, produced cucumbers first, and produced a few more.
- More cukes.
- Darker green cukes.
- Had healthier plants and produced longer into the season. Less bitter tasting.
- Produced more. Matured two weeks earlier.

Crisper and better taste.

- They weren't as seedy and kept their quality longer—even when they got large. Longer and thinner cukes.
- Its vines stayed healthier longer. Its cukes were more attractive (slimmer) and tasted better.
- Greater yield. Larger cukes.

Comments on 'Straight Eight' Cucumber

- Everything was about the same for both varieties except the 'Straight Eight' cucumbers were more uniform and aesthetically pleasing.
- Bloomed and produced cukes about 7–10 days earlier.
- I prefer its larger cukes.
- Produced first. I have always planted 'Straight Eight' for years.
- I have always planted 'Straight Eight'. This year was not a good year for many things.
- These are delicious. I would raise them again.
- Better size—nice smooth skin.
- They produced early and produced until frost.
- High yields. Nice long cukes.
- Both varieties germinated well, but 'Straight Eight' survived the late spring frost better than 'Marketmore 76'. Plants started looking better by the end of July.
- Many of its leaves turned yellow.
- Its vines started to die in late summer.
- Produced uniform cukes. Great for pickling or slicing.
- Better yield and more attractive.
- Produced healthy vines with lots of flowers, once it got going and weather warmed up. Good for pickling when picked small and for slicing when larger.
- More traditional shape. Good taste.

Conclusions

'Straight Eight' is the most popular cucumber grown in North Dakota, but its performance was matched—if not surpassed—by that of 'Marketmore 76'. Marketmore 76' rated higher for vine health, earliness, and taste. Overall, most gardeners preferred it over 'Straight Eight'.

Trial 11. Greens, Flower Bud

Varieties (information and photos from seed catalogs)



Johnny's

'Hon Tsai Tai'

37 days. This Chinese specialty crop is prized for its mild mustard flavor. The reddish-purple stems and tender buds are used in salad mixes and lightly cooked in stir fries, soups, and other Asian dishes. Easy to grow.



Johnny's

'Summer Jean'

35 days. Dark green leaves with tiny, tender flower buds. This hybrid matures early and regrows vigorously after cutting. Used in salad mixes or lightly cooked in stir fries. Mild flavor.

Data

Data were collected at 9 sites in Fall 2009.

Trait	'Hon Tsai Tai'	'Summer Jean'	Same
Germinated best	25 %	50 %	25 %
Healthier plants	14	43	43
Matured earlier	0	43	57
Higher yields	17	67	17
More attractive	50	33	17
Tasted better	100	0	0
<i>Recommend to others</i>	83	83	
<i>Preference</i>	67	33	
<i>Overall rating¹</i>	6.83	6.50	

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

General Comments

- Grew well.
- Bugs ate both varieties. Not many leaves remained on either variety to even sample.

Comments on 'Hon Tsai Tai' Greens

- Very mild in flavor.
- Red color was more appealing. Tasted slightly better. Stronger looking plants.
- I like the taste of 'Hon Tsai Tai' better.
- Both were very tasty, but I preferred 'Hon Tsai Tai'.

Comments on 'Summer Jean' Greens

- Taste was worse but plants were more attractive. Grew to six inches tall.
- Sharper taste—very good.
- Although a bit bitter, it produced a lot more and faster. Dressings can address the slight bitterness.

Conclusions

Gardeners liked both varieties. The vigor and yield of 'Summer Jean' was impressive. The reddish-purple stems of 'Hon Tsai Tai' were appealing and very mild in flavor. All gardeners preferred the taste of 'Hon Tsai Tai' and most gardeners preferred this variety overall.

Trial 12. Greens, Mizuna

Varieties (information and photos from seed catalogs)

Harris



'Lime-Streaked Mizuna'

21 days baby; 40 days full size. A special mizuna with lime green leaves that add sparkle to a salad. Mild flavor. Its upright habit makes it easy to harvest. Cold tolerant and easy to grow.

'Mizuna'

21 days baby; 40 days full size. Unique Japanese mustard with bunches of narrow leaves with white ribs. These deeply fringed leaves add a delicate touch of beauty and mild flavor to salads.



Harris

Data

Data were collected at 9 sites in Fall 2009.

Trait	'Lime-Streaked Mizuna'	'Mizuna'	Same
Germinated best	11 %	44 %	44 %
Healthier plants	13	63	25
Matured earlier	0	50	50
Higher yields	50	33	17
More attractive	43	43	14
Tasted better	29	14	57
Tasted better cooked	18	25	57
<i>Recommend to others</i>	71	86	
<i>Preference</i>	29	71	
<i>Overall rating¹</i>	6.29	8.29	

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

General Comments

- Both varieties germinated at the same time, thrived and were green and luscious, matured at the same time, were beautiful, and were tasty with a slightly bitter but pleasant flavor.
- Difficult to clean.
- Both had a gritty texture.
- Both tasted a little bitter.
- They were both bitter alone, but with other greens melded nicely.
- Didn't have time to mature.
- I would like to try both of these again.

Comments on 'Lime-Streaked Mizuna'

- Thicker leaves. Nice color.
- Came back thicker after cutting first growth.
- I liked the funny look of this variety.
- What little there was, was better tasting.
- Had a higher yield.
- Wildlife liked nibbling on this one more than 'Mizuna'.
- Only produced baby greens, which were dirty from heavy rain splashing dirt on the plant.

Comments on 'Mizuna' Greens

- Seemed to grow faster, mature a little faster, and looked fuller. Had a little more flavor, and regrew faster.
- Produced a quick crop. Nice flavor. More tolerant of my lack of watering. Took off once I gave it some water.
- Its sheer volume of yield is very superior, with nice flavor—really zips up a late summer salad! We needed almost no dressing...
- We liked its peppery taste.
- Tasted good.
- Withstood frost longer and lasted until temps dropped below 25 °F.

Conclusions

Gardeners were pleased with the delicate flavor and uniquely fringed leaves of this Asian green. Both varieties were easy to grow and found to be a nice addition to a mixed salad. 'Mizuna' was faster growing and preferred by most gardeners.

Trial 13. Greens, Mustard

Varieties (information and photos from seed catalogs)



Johnny's

'Osaka Purple'

21 days baby; 40 days full size. An early, highly refined mustard with light flavor. Its purple-veined leaves are medium-green with tinges of purple. Easy to grow.

'Red Giant'

21 days baby; 45 days full size. A very popular mustard from Japan. Purple, wavy leaves have mild spicy flavor. Used in salads (mixed and by itself), stir fries, and steamed dishes.



Harris

Data

Data were collected at 6 sites in Fall 2009.

Trait	'Osaka Purple'	'Red Giant'	Same
Germinated best	17 %	50 %	33 %
Healthier plants	17	33	50
Matured earlier	17	33	50
Higher yields	17	50	33
More attractive	0	17	83
Tasted better	40	0	60
<i>Recommend to others</i>	67	67	
<i>Preference</i>	60	40	
<i>Overall rating¹</i>	8.00	7.80	

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

General Comments

- Both seemed healthy. Both were ready to harvest at the same time. Both were very tasty—a sharp pepper flavor.
- Both were beautiful plants. Both needed a longer season and more sun/heat.
- Strong flavors, but I was not familiar with uses of these plants. Both looked nice.
- Both were good until after hard frost in October.

Comments on 'Osaka Purple' Greens

- Amazing flavor.
- Nicer, bigger leaves.
- Greens were more tender.

Comments on 'Red Giant' Greens

- Emerged first and appeared stronger. Nearly twice the yield. Produced an overall better quality plant.
- Larger leaves and more leaves. Overall strong plants, sending out new growth quickly after each harvest. Good raw (peppery with lemony undertones), but excellent sautéed with onion, bacon, spinach, and vinegar. Real beauty, too.
- Grew faster and bigger, especially as a second planting.

Conclusions

Both varieties grew well. 'Red Giant' displayed more robust growth, especially after the initial harvest. 'Osaka Purple' had a milder flavor that gardeners preferred. Gardeners appreciated the beauty of both varieties in the garden and on the plate.

Trial 14. Greens, Mustard Spinach

Varieties (information and photos from seed catalogs)

Johnny's



'Summer Fest'

35 days. These mild, tender greens from Japan are ideal for salads, steaming, and stir-frying. Upright plants with green stems and lustrous dark green leaves.

'Tendergreen'

45 days. Its tender leaves are widely used raw in salads as well as cooked in stir fries. Flavor is a blend of cabbage, spinach and mustard. Thick, smooth leaves have rich green color. Very easy to grow.



Burpee

Data

Data were collected at 11 sites in Fall 2009.

Trait	'Summer Fest'	'Tendergreen'	Same
Germinated best	18 %	27 %	55 %
Healthier plants	11	33	56
Matured earlier	0	38	63
Higher yields	25	38	38
More attractive	71	0	29
Tasted better	50	17	33
<i>Recommend to others</i>	88	63	
<i>Preference</i>	57	43	
<i>Overall rating¹</i>	7.25	6.13	

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

General Comments

- Both are good since they mature in only 30 days—good for North Dakota gardeners.
- Both grew well. Both were large and dark green. Both were ready at the same time. Neither had much mustard flavor.
- These greens were very similar. I had some of both and blanched and froze some. Just not much difference.
- Flea beetles wiped them out. Only a few plants survived.
- Got one-half inch high and something ate all of them.
- Didn't germinate well and it snowed too soon.
- Didn't have time to mature. Both tasted bitter at first; now they taste slightly better.

Comments on 'Summer Fest' Greens

- A milder, spinach flavor.
- More uniform size, milder flavor, and didn't bolt.
- Greener leaves. Looks healthier and good yield. Better taste.
- Stronger flavor—a little after taste. Tasted better cooked. Its leaves stayed much more uniform so was a nicer looking plant in late September.
- Had a really nice, sharp flavor.
- Its leaves have a little bit nicer shape.

Comments on 'Tendergreen' Greens

- Came back after flea beetles and grew two times the size of 'Summer Fest'. We prefer this variety for its taste and the shape of the leaves.
- Tender—large plant.
- Bigger leaves. Milder flavor.
- Tasted better than 'Summer Fest' when eaten raw, but was chewy when cooked. Its leaves got very big.
- A bitter taste.

Conclusions

Gardeners enjoyed the deep green leaves and mild flavor of 'Summer Fest'. Nearly all gardeners recommended it. 'Tendergreen' was especially vigorous and also pleased most gardeners. Flea beetles were a problem for these greens.

Trial 15. Greens, Pac Choi

Varieties (information and photos from seed catalogs)



Johnny's

'Joi Choi'

50 Days. Bright white stalks contrast nicely with the dark green leaves. Vigorous plants develop into heavy bunches.



Harris

'Mei Qing Choi'

45 Days. Light green stalks with rich green leaves. Outstanding flavor. Compact plants grow 8–10 inches tall. Easy to grow.

Data

Data were collected at 12 sites in Fall 2009.

Trait	'Joi Choi'	'Mei Qing Choi'	Same
Germinated best	27 %	27 %	45 %
Healthier plants	40	30	30
Matured earlier	38	13	50
Higher yields	50	25	25
More attractive	50	25	25
Tasted better	43	43	14
<i>Recommend to others</i>	56	56	
<i>Preference</i>	44	56	
<i>Overall rating¹</i>	5.78	5.67	

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

General Comments

- We are now in November and I still have plants of both varieties growing in raised beds. They survived temps in the mid 20s.
- Didn't get much yield from either variety. Both had poor germination and were eaten by insects.
- Neither made it to the table. The season was too short.

Comments on 'Joi Choi' Pac Choi

- The clear winner. Grew faster and bigger.
- Prettier. Better tasting—not bitter at all—almost sweet.
- A taller plant.
- Tasted better. A nicer, milder taste.

- A nice color contrast to the leaves.
- Has a very “meaty” mouth feel to it. I would love to make a frittata with it!
- Very few seeds germinated but the plants looked nice.

Comments on 'Mei Qing Choi' Pac Choi

- Yummy flavor, both fresh and cooked. Kept for a long time in the refrigerator, too—prolonged enjoyment!
- A more compact, neater looking plant. The leaves stay nice looking longer than 'Joi Choi'. Also it suffered less insect damage. A little more 'mustardy' tasting.
- Its seedlings were healthier before the insects came.
- Slightly higher yields and had a better taste.
- Did not grow well at all.
- Grew well but could have used more time before the first frost.

Conclusions

'Joi Choi' grew robustly and the contrast between its dark green leaves and white stalks was beautiful. But a slight majority of gardeners preferred 'Mei Qing Choi'; in most cases, due to its superior flavor. Both varieties struggled to mature before the first hard frost and would have benefited from planting earlier (late July/early August) in the fall season or in early spring.

Trial 16. Greens, Tatsoi

Varieties (information and photos from seed catalogs)

Harris



'Tatsoi'

21 days baby; 45 days full size. Its crisp leaves are very popular in salads and stir-fry dishes. Spoon-sized leaves grow into attractive rosettes. Easy to grow.

'Tatsoi Savoy'

21 days baby; 45 days full size. Dark green, crinkly leaves. Crunchy, mild mustard taste.



Harris

Data

Data were collected at 14 sites in Fall 2009.

Trait	'Tatsoi'	'Tatsoi Savoy'	Same
Germinated best	29 %	14 %	57 %
Healthier plants	27	9	64
Matured earlier	50	25	25
Higher yields	50	25	25
More attractive	100	0	0
Tasted better	100	0	0
<i>Recommend to others</i>	67	33	
<i>Preference</i>	100	0	
<i>Overall rating¹</i>	6.33	5.00	

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

General Comments

- Very nice, attractive plants.
- Both came up quickly, but something at the seedlings while we were gone for two days.
- Flea beetles consumed plants as they came up. No plants were left to compare.
- Taste very similar. Something ate the seedlings when they were 2–3 inches tall!
- Unfortunately wind blew my rabbit fence down and before I found it and repaired it, the bunnies invaded all of their friends for a banquet. They didn't leave a single leaf for me to try.

Comments on 'Tatsoi' Greens

- Sturdier plants. Faster maturation. Prettier plants. Slightly milder flavor.
- Fleshier leaves for salad/stir fry.
- Compact and cute. Less bitter. Tastes better cooked.
- A heartier plant.
- Had a very good flavor. Bigger plants.

Comments on 'Tatsoi Savoy' Greens

- Slow to grow.

Conclusions

All gardeners preferred 'Tatsoi' over 'Tatsoi Savoy'. 'Tatsoi' plants grew faster and matured earlier. Its plants were sturdy and productive. Gardeners liked the appearance and mild flavor of its fleshy, spoon-shaped leaves. 'Tatsoi Savoy' did not generate any interest or enthusiasm.

Trial 17. Kohlrabi

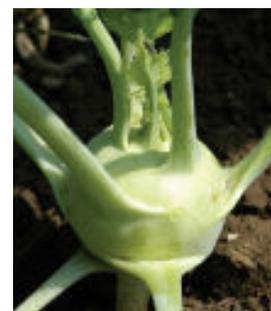
Varieties (information and photos from seed catalogs)



Burpee

'Early White Vienna'

60 days. Flat, globe-shaped bulbs with a pale green to white skin and flesh. Flesh is tender, juicy, and mild. Distinct small tops. Freezes well.



Johnny's

'Winner'

50 days. This kohlrabi hybrid has a fresh, fruity taste. High yields of large, pale green bulbs.

Data

Data were collected at 27 sites in 2009.

Trait	'Early White Vienna'	'Winner'	Same
Germinated best	17 %	29 %	54 %
Healthier plants	5	32	64
Matured earlier	45	27	27
Higher yields	18	45	36
More attractive bulbs	9	50	41
Tasted better	24	24	52
<i>Recommend to others</i>	83	96	
<i>Preference</i>	45	55	
<i>Overall rating¹</i>	6.83	7.43	

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

- Both were all right, but not great.
- Extreme flea beetle pressure—not enough survival to observe any differences.
- Insects virtually stripped the leaves, in spite of applications of Sevin. And then they moved to the bulbs and forked them as well. Not a good experience.

Comments on 'Early White Vienna'

- Bulbs formed earlier. Bulbs were moister.
- Produced first.
- Slightly earlier and slightly prettier at serving, but really not much difference.
- Ready to pick 3–7 days earlier. Some bulbs split, especially late in the season.
- Better flavor and appearance.
- I liked its taste better. The texture of 'Winner' was smoother—more like a potato. Milder tasting, too. We preferred Early White Vienna for its flavor.
- Got larger but never got woody.
- More flavor, but not quite as much crunch.
- Better tasting, but very close.
- Performed poorly from start to finish. Most plants did not produce bulbs big enough to harvest.

General Comments

- The bulbs of both varieties stayed tender even when large.
- Both varieties were healthy, produced well, and had a good taste.
- We really like kohlrabi. I usually plant 'Grand Duchess', which we like. 'Early White Vienna' was very similar to that variety. 'Winner' was a new taste and texture—we really enjoyed and preferred it. We hope to plant 'Winner' in the future.
- Plants of both varieties were healthy. Both types had nice size bulbs. Couldn't tell a taste difference. Bulbs were large and not woody.
- Both remained tender and mild all season long.
- Neither variety was as large as varieties I've planted previously.
- I believe the cool season was helpful.

Comments on 'Winner' Kohlrabi

- Larger, rounder bulbs.
- Preferable for a market gardener since they were a bit more uniform in size.
- Plants grew faster and the bulbs were more uniform in shape.
- Healthy plants. Nice bulbs. Some of bulbs of 'Early White Vienna' got long and narrow.

More Comments on 'Winner' Kohlrabi

- Both varieties were much the same—I liked 'Winner' because the fruit was round and easy to pick. Its bulbs grew very large—a disadvantage.
- Slightly better flavor.
- Grew big and some bulbs became woody, but still were okay when cooked.

Conclusions

'Winner' lived up to its name. Gardeners were extremely impressed with its uniformly round bulbs. Yields were good and its bulbs resisted splitting. The uniquely smooth, fruity flavor of 'Winner' was an enjoyable taste experience for gardeners, including those who have grown kohlrabi for years. Come to think of it, 'Early White Vienna' also lived up to its name. It matured very early and produced good quality, white bulbs.

Trial 18. Lettuce, Greenleaf

Varieties (information and photos from seed catalogs)

Johnny's



'Salad Bowl'

50 days. Nicely curled, tender, lime green leaves. Outstanding quality. Will not become bitter under hot temperatures. Former All-America Selections winner.

'Slobolt'

52 days. Frilly, light green leaves with great flavor. Best of the 'Grand Rapids' varieties. Grows rapidly in spring and tolerates heat during summer.



Harris

Data

Data were collected at 23 sites in 2009.

Trait	'Salad Bowl'	'Slobolt'	Same
Germinated best	22 %	22 %	57 %
Healthier plants	23	14	64
Matured earlier	33	19	48
Higher yields	14	41	45
More attractive	27	27	45
Tasted better	27	32	41
<i>Recommend to others</i>	77	82	
<i>Preference</i>	38	62	57
<i>Overall rating¹</i>	7.50	7.91	

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

General Comments

- Both varieties were great. There was a long harvesting season without getting bitter.
- These were two wonderful types of seeds. I have never had such lovely lettuce. I will try to get this seed again.

- I like both varieties very much. They are all around excellent. I would be glad to purchase seed of these varieties.
- Both varieties were very healthy and tasted good.
- Both did not get bitter long into the summer—enjoyed the taste of both.
- Both had excellent germination, were very healthy, grew quickly, and had great yields.
- Both had excellent yields and good taste.
- These were so similar it was hard to tell apart. They both grew very well and had great yields.
- Deer liked both varieties.

Comments on 'Salad Bowl' Lettuce

- Better color. Fuller leaf structure.
- Nice large leaves that lasted all season.
- A more compact plant.
- More attractive leaves.
- Better vigor, taste, looks, and production.
- Better taste.
- Good flavor—not bitter. Nice firm leaf.
- Very bitter taste.

Comments on 'Slobolt' Lettuce

- Better taste.
- Did not bolt as early. Better regrowth, too.
- Larger plants. A hint of bitterness to its taste.
- Better germination, higher yields, healthier plants.
- Better taste, earlier maturing (5 day difference), larger leaves.
- Larger leaves and higher yields. Better flavor but neither variety became bitter.
- It produced a fuller plant than 'Salad Bowl' and as the name implies, it didn't bolt until end of August.
- Easier to wash.

- A slight edge to 'Slobolt' because it is still producing into September.
- Leaves were very nice and fully shaped. Tasted good for a longer period of time.
- Bolted one week later.

Conclusions

'Salad Bowl' and 'Slobolt' performed well in our trials. Neither variety revealed any weakness. Gardeners were impressed with everything: the germination, health, growth rate, yields, resistance to bolting, and flavor of both varieties. Most gardeners recommended both varieties, but preferred 'Slobolt' for its larger leaves, higher yields, and longer harvest period.

Trial 19. Lettuce, Redleaf

Varieties (information and photos from seed catalogs)

Harris



'New Red Fire'

45 days. Very early and reliable. Intense, ruby red color carries well down into each leaf. Outstanding heat tolerance. Doesn't become bitter. Forms a heavy, loose leaf head. Very popular among commercial growers.

'Red Sails'

55 days. Burgundy leaves turn to green at the base. Crinkly, deeply frilled leaves. Slow bolting and stays mild without tasting bitter. Former All-America Selections winner is a favorite among gardeners.



Harris

Data

Data were collected at 26 sites in 2009.

Trait	'New Red Fire'	'Red Sails'	Same
Germinated best	42 %	13 %	46 %
Healthier plants	26	13	61
Matured earlier	33	21	46
Higher yields	29	38	33
More attractive	33	17	50
Tasted better	18	18	64
<i>Recommend to others</i>	79	92	
<i>Preference</i>	58	42	
<i>Overall rating¹</i>	8.13	8.08	

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

General Comments

- Both varieties were the best garden lettuce I have ever grown! Both looked attractive. Both had excellent flavor all season long. No bitterness! Produced through September.
- Love the red leaves!
- Both varieties grew at equal paces and had healthy color and vigor. Similar yields. Awesome taste; no bitterness. I'd plant either again. They did really well in my garden and my family enjoyed the taste. They also consistently produced over the summer.
- They both tasted great in sandwiches.
- Both lettuces were excellent. Both germinated well, were vigorous, and kept producing. Tasted excellent!
- Both of them were gorgeous.

More General Comments

- Both were beautiful—dark-tinged lettuce with very frilly leaves. Good regrowth on both varieties after cutting.
- I am impressed with both varieties. I am used to ‘Black-Seeded Simpson’ and both of these outperformed it hands down. Both lasted well into August for harvest.
- These were slow growing, but they didn’t bolt despite 90 °F. Both were beautiful. I heartily recommend both. I picked most of the leaves in September before it snowed. I noticed they still were growing when I was cleaning out my garden in October and November. We prefer to mix these red-leaf types with green lettuce in salads. These varieties would be a nice complement to a quick growing lettuce (for example, ‘Black-Seeded Simpson’). I love red lettuce but I had never considered growing it. Both my mom and I enjoyed these.
- Both bolted fairly early; definitely more delicate than the green leaves as far as the leaf strength.
- Both are excellent leaf lettuces for eating right from the garden.
- Both were very tasty and bountiful. These varieties were so similar, it’s hard to tell which was a little better!

Comments on ‘New Red Fire’ Lettuce

- Germinated better, produced more, and matured 7–10 days earlier.
- Better germination. Better tolerance to the rare heat we had. Less damage by cutworms—can’t explain that one.
- Its extra crinkly leaves look more attractive. It is worth growing for its looks alone!
- Brighter red leaves. Came up better and was slower to bolt.

- Better regrowth. Brighter, shinier leaves. Kept producing longer in the season.
- More attractive leaves.
- Crispier.
- Not quite as bitter.
- Better vigor and seemed more resistant to insects.

Comments on ‘Red Sails’ Lettuce

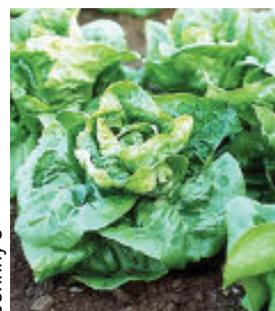
- Lush and dense. Bright green inside, reddish outer edges. Really great in sandwiches or salads.
- Better taste, yield, and appearance.
- Larger leaves. Extremely productive.
- Lasted all summer long and tasted great all summer.
- Darker red color.
- Had real staying power after they matured. Thrived in our cool summer weather.
- Bolted faster. Tasted more bitter. Leaves showed a greater contrast of colors.
- Bolted ten days sooner than ‘New Red Fire’, but kept better in cold storage—roughly two weeks versus ‘New Red Fire’, which started to rot after eight days of refrigeration.

Conclusions

‘New Red Fire’ and ‘Red Sails’ were exceptional. Gardeners loved the appearance, yield, and taste of both varieties. ‘New Red Fire’ was generally preferred for its early season vigor and resistance to bolting. Gardeners liked its bright red, shiny leaves. Nevertheless, almost all gardeners recommended ‘Red Sails’, which was extremely productive. It will be interesting to evaluate these varieties under less than ideal conditions to see if any weaknesses would be revealed.

Trial 20. Lettuce, Specialty

Varieties (information and photos from seed catalogs)



Johnny's

'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.

'Nevada'

56 days. Thick, shiny, lime green leaves are crisp and delicious. Large, loose heads. Slow bolting and resistant to tipburn. Considered the best green "summer-crisp" variety.



Data

Data were collected at 34 sites in 2009.

Trait	'Bcrunch'	'Nevada'	Same
Germinated best	30 %	39 %	30 %
Healthier plants	32	16	52
Matured earlier	33	30	37
Higher yields	35	39	26
More attractive	43	33	23
Tasted better	27	33	40
<i>Recommend to others</i>	64	76	
<i>Preference</i>	44	56	
<i>Overall rating¹</i>	7.61	7.84	

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

General Comments

- Both varieties continued to produce all summer.
- Both were excellent with the cool summer!
- Both varieties withstood the heat and did not get bitter.
- Both looked good and I liked their taste.
- Both yielded large quantities—we ate all we could and then gave some to charity. I will probably try to plant some of each in future years as both were very good lettuces.
- They would both be attractive in a mixed green salad.
- Both were beautiful. Picked first leaves 30 days after sowing and full heads 6 weeks after sowing. Both were slow to bolt. Both were delicious.
- The flavors of both varieties were kind of bland. I prefer spring mixes. Both varieties looked good throughout the summer.

Comments on 'Buttercrunch' Lettuce

- Leaves had more texture and a little more flavor. I liked its compact tight leaves. Plants were healthier from the get go.
- A much darker green, fuller leaf.
- Tasted bitter.
- Lasted the longest with our last picking on Labor Day.
- Better taste, texture, and color. Kept longer.
- Bolted too soon and had poor regrowth.
- A spicy flavor—our taste test selected this one. Firmer leaf. Lasted longer in the refrigerator.
- Much better flavor.
- Produced higher yields. Tasted better. Bigger leaves for sandwiches.
- I liked the taste of 'Buttercrunch'. It also stayed very crisp when washed and put into the refrigerator for next day use.
- The taste of the early season 'Buttercrunch' is great! I'll look for it in stores.
- Better taste, texture, and more productive. Larger plants. Darker leaves.

Comments on 'Nevada' Lettuce

- Extremely hardy plants and were great at heat tolerance. 'Nevada' held up longer after harvest. It refrigerated up to three weeks and was still fresh and good. Lasted longer in the garden without getting bitter. Friends and family want to know where to get seed for next year.
- Produced larger heads.
- Tasted much better, produced more, matured earlier, and looked better. Large, nice heads.
- Stayed nicer much longer. Produced quite a bit late in the season.

More Comments on 'Nevada' Lettuce

- Better regrowth and you could enjoy it longer into the season.
- Took longer to make the central leaves. Stayed tender longer; produced more.
- Very fine leaf—not too dense.
- More attractive and somewhat better flavor.
- Tender, tasty, long producing.
- I liked the lighter color and taste of 'Nevada'.
- Definitely healthier. Grew faster. Yielded much better. Looked fuller and fewer leaf blemishes. A nicer crunch and appealing taste. I like its lighter color.
- We were able to eat 'Nevada' until frost.
- An excellent mild, buttery flavor.

- Tasted better and definitely had a higher yield. Larger leaves. Matured two days earlier.
- Better yield and better taste.
- Bolted ten days before 'Buttercrunch'.

Conclusions

Gardeners were pleased with the performance of both varieties. Both varieties produced good yields of lettuce through the summer. 'Buttercrunch' had a darker green, fuller leaf and its heads were very attractive. 'Nevada' received the highest ratings, usually due to its excellent flavor and high yields. Both varieties are noted for their resistance to warm weather and bolting. The cool summer did not reveal this quality, but our growers certainly didn't mind harvesting lettuce until frost.

Trial 21. Melon, Cantaloupe

Varieties (information and photos from seed catalogs)



Harris

'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.

'Sweet 'N Early'

66 days. Very early and productive. Bright peach flesh is sweet and delicious. Smallish fruits at about 2 pounds. Corky and slightly ribbed rinds.



Burpee

Data

Data were collected at 52 sites in 2009.

Trait	'Goddess'	'Sweet 'N Early'	Same
Germinated best	33 %	20 %	48 %
Healthier plants	39	10	52
Matured earlier	65	23	12
Higher yields	29	55	16
More attractive melons	46	29	25
Tasted better	46	27	27
<i>Recommend to others</i>	59	52	
<i>Preference</i>	55	45	
<i>Overall rating¹</i>	6.38	5.87	

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

General Comments

- Both produced lots of beautiful melons.
- Seedlings froze.
- Cutworms killed most of the plants. They didn't bother anything else in the garden—just the melons.
- Both were fantastic! They were tough—survived the cold and even getting overrun by squash vines.
- We usually do not have success with melons, so this trial was a pleasant surprise!
- Our summer was too cool for good melons.
- I always raise several varieties of muskmelons. None produced well this year. Instead of bushels, we had only a couple ripen before frost.
- Neither variety reached maturity. Both had fruits about the size of baseballs.

More General Comments

- None ripened before frost.
- Neither variety germinated well—no produce harvested.

Comments on ‘Goddess’ Cantaloupe

- Awesome taste! Sweet and juicy—not mealy at all—the best homegrown melon I’ve ever tasted!
- Absolutely the best cantaloupe I’ve ever eaten, and my friends and family all agree. The melons were wonderful—melt in your mouth goodness. Wonderful texture and color.
- Large fruits, good flavor and texture, orange color.
- Larger fruit and better tasting.
- Its melons tasted very sweet.
- Had larger melons but all are still green.
- Earlier and better size melons.
- Much larger melons. Nice and sweet.
- More melons and better flavor.
- Melons were juicy but had a shorter shelf life.
- Large and delicious melons.
- Wonderful flavor.
- More ripe melons. Flesh had a smoother texture and was sweeter.
- I liked its taste better, although I prefer honeydews over cantaloupes in general.
- Excellent flavor. Very sweet. Really good.
- Never ripened all the way.

Comments on ‘Sweet ‘N Early’

- This variety is so cute! A perfect personal melon.
- Juicy, sweet, flavorful melons—and many per plant.
- Excellent taste, but didn’t get as big in size. More melons though.
- Produced many more melons, better taste, and more healthy plants.
- Very sweet.
- I like its smaller size—good for a meal or so.
- Lots of fruit but it is very late this year. Fruits are too small.
- Tasted sweeter. Harvested first.
- Lots of melons, but there were tiny, green, and never ripened.
- My kids really liked these melons. The ‘Goddess’ melons never ripened.
- Even though the melons were small, they were very tasty.
- Good flavor, but the melons were very small and very seedy.

Conclusions

This was a hard year for melons. Late spring frosts often froze seedlings. Then came a cool summer. Melon yields were low or zero. Even these two extra early varieties struggled to produce ripe fruit. ‘Goddess’ was the winner. Its melons ripened earlier. Its melons were more attractive and tasted much better. A few gardeners found ‘Goddess’ to be worthy of its heavenly name; indeed, the best cantaloupe they have ever grown. ‘Sweet ‘N Early’ was more productive, but its fruits were small and less tasty.

Trial 22. Melon, Galia

Varieties (information and photos from seed catalogs)

Johnny's



'Diplomat'

71 days. New in 2008. Large, 5–6-pound melons ripen very early. Aromatic, sweet green flesh and small seed cavity. Vines resist powdery mildew.

'Passport'

73 days. Large, 5–6 pound melons ripen early. Unusual green flesh and small seed cavity. Vigorous vines with some resistance to gummy stem blight. Widely adapted. From University of New Hampshire.



Veseys

Data

Data were collected at 9 sites in 2008 and 9 sites in 2009.

Trait	2008			2009			Weighted Total		
	'Dplmat'	'Pport'	Same	'Dplmat'	'Pport'	Same	'Dplmat'	'Pport'	Same
Germinated best	11 %	33 %	56 %	67 %	11 %	22 %	39 %	22 %	39 %
Healthier plants	22	0	78	11	22	67	17	11	73
Matured earlier	67	11	22	22	67	11	45	39	17
Higher yields	22	22	56	0	50	50	11	36	53
More attractive melons	0	11	89	22	22	56	11	17	73
Tasted better	22	44	33	14	86	0	18	65	17
<i>Recommend to others</i>	67	56		33	78		50	67	
<i>Preference</i>	37	63		12	88		25	75	
<i>Overall rating</i> ¹	5.78	6.89		4.67	6.00		5.23	6.45	

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

General Comments

2008

- Melons of both varieties got small cracks after cool, wet weather—causing spoilage.
- I didn't really like these melons.
- Many fruit were set, but none of them ripened before frost. I harvested a few of them the night before our first frost, but after two weeks in the garage they had failed to ripen and were getting soft and rotten.

2009

- Both varieties grew well and set a good number of fruit, but few matured because of weather.
- Neither had much taste. Not very impressed. Neither produced much.

- Plants of both varieties were vigorous and both produced lots of melons. Melons had a tendency to split open and crack. Tasted good though.
- Not a great season for melons.
- No harvest. Both germinated so late that no melons ripened. Lots of baseball-size melons.
- These melons are not attractive.

Comments on 'Diplomat' Melon

2008

- I like the taste of 'Diplomat' much better than the taste of 'Passport'.
- Tasty and sweet—best tasting.
- Produced melons one week earlier, but did not have a good flavor at all.

More Comments on 'Diplomat' Melon

2009

- A little sweeter and bigger fruit.
- Its vines looked more vigorous but its melons never ripened.

Comments on 'Passport' Melon

2008

- Higher yields, more attractive melons, and tasted sweeter.
- Its melons tasted good—better than those of 'Diplomat'— but not that great.

2009

- Matured a few days earlier. Very tasty melon.
- Taste is important and 'Passport' was better.

- Its vines did a better job of surviving the cool, wet weather. The melons were sweet and very juicy.
- These melons tasted so good.
- Excellent tasting!
- Not what we were expecting, but our family of six all agreed it tasted very good.
- Great taste!

Conclusions

'Passport' was superior, although both varieties struggled in our cool summer weather. 'Passport' produced higher yields and its melons tasted much better. Yields of both varieties were low as many melons never ripened before frost. The melons of both varieties had a tendency to crack, too.

Trial 23. Melon, Specialty

Varieties (information and photos from seed catalogs)



Harris

'Earli-Dew'

75 days. The most reliable honeydew for the north. Smooth-skinned fruits range 2–3 pounds in weight. Lime green flesh has flavor and texture. Fruits slip off the vine when ready.

'Lambkin'

70 days. New! All-America Selections winner. Very sweet, aromatic "Christmas" melon stores several weeks longer in the refrigerator than other melons. Yellow mottled skin and juicy white flesh. Early.



Harris

Data

Data were collected at 25 sites in 2009.

Trait	'Earli-Dew'	'Lambkin'	Same
Germinated best	4 %	21 %	75 %
Healthier plants	22	17	61
Matured earlier	56	33	11
Higher yields	39	22	39
More attractive melons	31	50	19
Tasted better	36	27	36
<i>Recommend to others</i>	70	50	
<i>Preference</i>	56	44	
<i>Overall rating¹</i>	5.79	5.47	

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

General Comments

- I would grow both to extend your melon harvest. The 'Earli-Dew' melons are long gone, but still have 'Lambkin' in the fridge. I want to see how close to Christmas it gets!
- Both were very sweet and tasted amazing.
- Both were healthy. Both were ripe about the same time. Both produced vigorously. Both were sweet.
- They did not have a long enough season to ripen—weather was too cool.
- Both were sweet.
- I was very disappointed that neither one amounted to anything.
- None ripened.

More General Comments

- The melons were small but looked interesting. I'd like to try both again. I'm sure it would have helped to have the ground warmer for planting and earlier germination times.
- Something happened to the melons. I only had a couple (both 'Lambkin') and they split before they were ready. I want to try these varieties again with different soil and hopefully warmer weather.
- Poor germination. Poor yields. We enjoyed the taste of the few melons harvested.
- Both had small fruit compared to what the seed packages suggested.
- Never germinated.

Comments on 'Earli-Dew' Melon

- We prefer the taste of Earli-Dew, which was super sweet and soft. Plants showed more vigor.
- Tasted better, produced earlier, and were larger.
- Larger, better looking fruit with a sweet flavor. Reminded us of honeydew. More fruit. Can eat the flesh right down to the skin whereas 'Lambkin' melons are bitter the closer to the rind.
- Tasted better.
- Very pretty melons but it is hard to tell when ripe. We don't think the melons got quite ripe.
- Sweeter flavor. Melons were smaller and a deeper green flesh.
- Have grown 'Earli-Dew' for years and liked it, but it doesn't always mature before frost.
- It needed just a bit more time to ripen.
- Melons have a tendency to crack.
- Melons were sweet but cracked with heavy rains.

Comments on 'Lambkin' Melon

- The melons of both varieties tasted great, but 'Lambkin' has a more unique flavor.
- We prefer its flavor. One of my daughters really liked it. The melons looked almost ugly.
- We like the unique coloration on the rind and it ripened one week earlier.
- Has a beautiful green shell. The melons are sweet and crisp. Very productive.
- Delicate flavor—good with prosciutto ham.
- 'Lambkin' was firmer but also had great flavor.
- Late setting melons. Never ripened.
- Mild taste.
- Tastes like a cucumber.

Conclusions

Both varieties struggled due to the cool summer temperatures. In many cases, no fruit ripened before the frost. There is no reliable honeydew variety for our region, but 'Earli-Dew' showed again that it is the best. 'Lambkin' may be the biggest disappointment in this year's trials. This new All-America Selections Winner was extremely promising since it was reported to mature early and could provide a new taste sensation for melon lovers. Unfortunately, the most notable characteristic of 'Lambkin' Christmas melon was the unique mottling of its *rind* (and not its flavor or yield).

Trial 24. Okra

Varieties (information and photos from seed catalogs)



Burpee

'Annie Oakley II'

57 days. Heavy yields of tender, green pods. Sturdy, 4.5-foot plants provide a concentrated harvest.

'Cajun Delight'

49 days. Exceptional yields of attractive, dark green pods. Compact 4-foot plants bear early and over a long season. Former All-America Selections winner.



Harris

Data

Data were collected at 11 sites in 2009.

Trait	'Annie Oakley II'	'Cajun Delight'	Same
Germinated best	33 %	33 %	33 %
Healthier plants	13	50	38
Matured earlier	14	71	14
Higher yields	29	43	29
More attractive pods	14	43	43
Tasted better	0	0	100
<i>Recommend to others</i>	60	50	
<i>Preference</i>	50	50	
<i>Overall rating¹</i>	6.57	6.71	

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

General Comments

- Both were slow to germinate due to cool weather. Powdery mildew problems. Blackened curling edges on leaves early in the season. I suspect this might not have been the best year for okra. I've used 'Annie Oakley II' in the past with much better yields and more vigorous plants than either variety produced this year.
- Seeds could not germinate in cold, snow-covered soil.
- The pods of both varieties were attractive and tasty.
- The cold weather was tough on both varieties. I was disappointed in the flowers—small and short-lived.

- Both varieties seemed very similar in performance and suffered from disease pressure. I enjoyed the blossoms, but did not care for the taste of the pods.
- Cutworm damage on both varieties.

Comments on 'Annie Oakley II' Okra

- Germinated better and produced 20% higher yields.
- Nice, big, dark green leaves. Longer, slimmer pods—better to work with.

Comments on 'Cajun Delight' Okra

- Plants had broader leaves. Pods matured two weeks earlier.
- More productive, although neither variety looked healthy.
- More fruits that matured. It was a cold summer—another summer might be different.
- Plants and pods grew better. More flavor.

Conclusions

Okra loves hot weather; unfortunately our summer was very cool. Both varieties struggled mightily. 'Cajun Delight' ripened earlier and produced higher yields, although yields of both varieties were very low.

Trial 25. Pea

Varieties (information and photos from seed catalogs)

Twiley



'Dakota'

57 days. Very early and productive. Disease-resistant, 22-inch vines bear a concentrated crop of 4-inch pods. Pods are filled with sweet, green peas. Excellent for freezing. Does not require trellising.

'Early Frosty'

64 days. Excellent variety for freezing. Strong, 28-inch vines bear a heavy crop of dark green, 3.5-inch pods. Pods are borne on the top of the vine, making harvesting easy. Does not require trellising.



Harris

Data

Data were collected at 78 sites in 2009.

Trait	'Dakota'	'Early Frosty'	Same
Germinated best	20 %	30 %	49 %
Healthier plants	11	52	37
Matured earlier	75	21	5
Higher yields	11	68	21
More attractive pods	13	67	21
Tasted better	9	42	49
<i>Recommend to others</i>	40	81	
<i>Preference</i>	26	74	
<i>Overall rating¹</i>	5.46	7.52	

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

General Comments

- The cold weather and snow did not affect either variety.
- I like them both—sweet, plump peas. Delicious raw and cooked. They like cool weather. Strong vines and healthy. Both extremely productive.
- Both produced a lot.
- Would grow either variety based on this year. Would like to see how a hot June would change results.
- Both had tasty peas.
- Both germinated poorly and did not produce much. I would not plant either variety again.
- Neither produced very great. Neither impressed me—I usually plant 'Little Marvel', which even when planted this year on 4 July still produced better than either of these and I feel taste better (especially raw).

- Neither variety was very productive—pods were either small and hard to shell, or thick with few peas inside. Wasn't impressed with either variety.
- I don't think I would ever plant either variety. Nothing beats 'Lincoln' peas.
- Neither was worth planting. All the other varieties I have ever grown have produced higher yields.
- Neither suffered from powdery mildew—very unusual.
- Both had mildew late in the season.

Comments on 'Dakota' Pea

- Hardier plants. Survived frost better and had good yields.
- Hardier plant. Better germination.
- Super early—picked before 4th of July. Very small pods. Not as sweet.
- Very early. Harvested second week of July. Compact plants. Great taste (a little sweeter than 'Early Frosty' but small yield. Pods were stubby and fat.
- We had our first meal of peas on 27 July. They were very tasty but the pods were small.
- Germination was not as good as I expected, but had high yield.
- Peas were plentiful until warm weather set in late July/August.
- Excellent pea. Germinated well. Healthy looking plants. Produced lots of peas.
- We have extremely sandy soil. We haven't had much luck with peas in the past—glad to see these grew.
- Delicious right in the garden. Production not great.

More Comments on 'Dakota' Pea

- Produced earlier and had higher yields with a more compact plant, which was better for my garden space.
- Produced quickly. Harvested by 10 July. Peas are delicious. Would have liked to have seen higher yields, but this was definitely a treat! Kept yielding well into August.
- Bigger plants. Produced nice amount of pea pods.
- A good early pea.
- Produced two weeks earlier. Smaller plants and smaller pods.
- Early, which is great to eat when you're so anxious for the first fresh vegetable.
- Smaller pods, filled well. Low yield—a 10-foot row will probably provide a family of two with two meals.
- Pods were much smaller—2–3 inches only and not as many.
- Small vine size is nice in a way; otherwise, it really performed poorly (small yield, small pods, short harvest period).
- Continued to bloom and produce pods for a longer time period.
- Very short season for picking! Smaller pods.
- Produced the first yield. Nice full pods, but not many pods. Smaller plants and poor producer. Very low heat tolerance.
- Its vines did not require support. Produced two weeks earlier, but stopped after two weeks.
- Tasted better, and got a second wind when the weather got cooler.
- Could eat these until I got sick! Love the flavor! I just wish these plants would appear fuller. Produced many pods but the plant itself was short.
- Yummy peas. Easy to shell. My two-year-old could help.

Comments on 'Early Frosty' Pea

- Its seedlings recovered better from deer damage. Hardier plants and longer harvest interval.
- Better emergence; nicer plants; much higher yield.
- Sweeter and smaller peas. My grandchildren loved picking these peas and eating them right in the garden. Started to pick a week later, but produced more peas and for three weeks longer.

- Started producing at least two weeks later but the yield was five times as much. Very uniform and long pods.
- Produced nice, long pods. Eight to nine peas in each pod.
- Sweeter pea and larger plant. Still producing in August.
- More and larger pods. More peas per pod. Nice large pods—filled nicely. A little sweeter.
- More peas; better pods; longer harvest season; healthier plants.
- Very nice looking plants and produced very well. Produced 290 pods compared to 131 pods for 'Dakota'.
- More of a tender pea.
- Got tons of peas.
- More peas per pod. Bigger, more uniform pods. More peas per pod—bigger yield.
- By far a better producer.
- Pods were larger, straighter, and fuller, 3–4 inches long. Peas seemed to taste juicier also.
- By far the better of the two varieties for eating raw.
- Tasted better—the peas never got as hard.
- Easier to pick and yielded more.
- Healthier plants—three times the size. Bore heavier yields and for a much longer time.
- Vines were tall and needed a fence. Kept picking until late September. Pods were easier to shell.
- Had a beautiful plant, but seemed to not handle pests as well.

Conclusions

'Early Frosty' was the clear winner. Its vines were more vigorous, much higher yielding, and produced peas for a longer time period (in many cases into August). Many gardeners thought its peas were sweeter, too. Most gardeners did not like 'Dakota'—its yields were too low. 'Dakota' is only suited for freezing/canning. It produces a single crop and very early, at least one week earlier than 'Early Frosty'. Its compact vines do not need support. Some gardeners did not like either variety compared to other pea varieties they have grown in the past.

Trial 26. Pumpkin, Gray

Varieties (information and photos from seed catalogs)



Twilley

'Jamboree'

95 days. The lightly ribbed fruits are smooth and hard-shelled with a greenish-blue-gray color. They weigh 9–11 pounds. The sweet orange flesh has flavor that compares with buttercup squash. Vigorous, high-yielding vines.



Johnny's

'Jarrahdale'

100 days. Slate-gray fruits are great for both eating and decorations. The medium-sweet, orange flesh has good quality. The heavily ribbed fruits are useful for fall displays. Fruits average 6–10 pounds. Good for storage.

Data

Data were collected at 9 sites in 2008 and 14 sites in 2009.

Trait	2008			2009			Weighted Total		
	'Jmbree'	'Jrrhdle'	Same	'Jmbree'	'Jrrhdle'	Same	'Jmbree'	'Jrrhdle'	Same
Germinated best	33 %	22 %	44 %	31 %	15 %	54 %	32 %	18 %	50 %
Healthier plants	33	33	33	8	33	58	18	33	48
Matured earlier	50	13	38	27	36	36	36	27	37
Higher yields	67	33	0	20	50	30	38	43	18
More attractive fruits	67	22	11	30	60	10	44	45	10
Tasted better	50	17	33	67	33	0	60	27	13
<i>Recommend to others</i>	100	33		54	77		73	59	
<i>Preference</i>	89	11		50	50		67	33	
<i>Overall rating¹</i>	8.33	6.22		6.42	7.42		7.17	6.95	

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

General Comments

2008

- I think they'd make great seasonal decorations—a nice color contrast to orange. They are deeply ribbed, so probably would not be as good for carving jack- o'-lanterns.
- The vines of both varieties really spread throughout the garden. The pumpkins of both varieties baked up well—not watery—and made good pies.

2009

- Poor year for pumpkins—both varieties took a long time to germinate. Very few pumpkins produced, but they looked great as fall decorations.
- Plants had vigorous growth and many blossoms. Vines were very healthy until frost.
- Both had plants that grew like crazy! As of October 1, the pumpkins were only softball size.

- Beautiful flowers but very slow to mature.
- The vines bloomed but did not produce.

Comments on 'Jamboree' Pumpkin

2008

- Fruits are a little smoother with fewer blemishes. We prefer the taste of 'Jamboree'. It has a richer taste—similar to buttercup.
- Better yields and a superior, sweeter taste.
- Would grow for decoration only—not very tasty.

2009

- We bake the seeds and the seeds of 'Jamboree' were smaller with thinner "shells".
- These pumpkins were more attractive, but we liked the pumpkins of both varieties.

More Comments on 'Jamboree' Pumpkin

- A little sweeter—more like winter squash.
- Very nice pumpkins—heavy, too!
- Produced more, but smaller pumpkins. Lost them to frost.
- Produced more pumpkins that were fuller sized.
- Excelled in both color of flesh and fruit—reminded me of a butternut squash.
- A sweeter taste. Tastes more like a buttercup squash.
- Its vines were slightly more vigorous and set fruit first. The fruits were greater in number and in size (30 inches in circumference compared to 26 inches for 'Jarrahdale'). Fruits were more uniform, prettier, and grayer (the fruits of 'Jarrahdale' were greener).
- We bake the seeds and the seeds of 'Jamboree' were smaller with thinner "shells".

2009

- Prettier than 'Jamboree' for decorating. Flesh was lighter in color and tasted more like an acorn squash.
- Vines of both varieties were huge, especially those of 'Jarrahdale'. More productive. Larger fruits.
- Produced the first pumpkins a few days earlier. Seemed to tolerate frost better. Good size, nice shape, and interesting color. Pumpkins were larger, with more meat per pumpkin. The inside meat was a healthy looking orange color, and rather surprising given the grayish green exterior. The seeds were easy to remove. It made an excellent pumpkin pie. I froze most of the pumpkin and look forward to using it in my holiday baking.
- Larger size (4–5 pounds compared to 1.5 pounds). Firm fruit with great gray color. Very productive. Matured earlier.

Comments on 'Jarrahdale' Pumpkin

2008

- These pumpkins have a unique look.
- Larger plants. Pumpkins taste good—would grow to eat.
- Very strong plants.
- Its immature fruits are much paler than those of 'Jamboree'.

Conclusions

'Jamboree' was preferred by most gardeners. Its fruits matured earlier and tasted better (similar to winter squash). Its fruits were smooth-skinned and extremely attractive as decorations. The vines of both varieties—especially those of 'Jarrahdale'—were vigorous. This extra vigor displayed by 'Jarrahdale' led to a stronger performance under the unfavorable weather conditions of 2009. Gardeners liked the look of these 'Jarrahdale' pumpkins, too.

Trial 27. Pumpkin, Jack-O'-Lantern

Varieties (information and photos from seed catalogs)



Harris

'Neon'

65 days. One of the earliest ripening varieties. Pumpkins are vivid orange, medium ribbed, and grow 7–8 pounds in weight and 10–12 inches in diameter. Handles are dark and strongly attached. Semi-bush vines.

'Spirit'

98 days. Pumpkins are bright orange, smooth-skinned. They average 10–12 pounds in weight and 10–12 inches in diameter. Flesh is good for pies and canning. Pumpkins ripen early and keep well. Semi-bush vines.



Jordan

Data

Data were collected at 41 sites in 2009.

Trait	'Neon'	'Spirit'	Same
Germinated best	38 %	13 %	50 %
Healthier plants	28	10	63
Matured earlier	49	20	31
Higher yields	51	20	29
More attractive fruits	41	21	38
Tasted better	14	14	71
<i>Recommend to others</i>	75	67	
<i>Preference</i>	68	32	
<i>Overall rating¹</i>	7.38	6.81	

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

General Comments

- Both varieties were planted with sweet corn and behaved themselves very well by not sprawling all over—still with good yields. In our area, a lot of pumpkins didn't finish, but both of these did. I would plant both varieties again.
- A nice texture to their flesh—tasted great.
- I like how these were more of a bush plant and did not spread as much as regular pumpkins.
- Both were very healthy and had a terrific yield. The vines *do* overrun the garden.
- Neither variety produced as well as my gray pumpkin varieties.
- Neither was really the typical size desired for jack-o'-lanterns. Too small.
- Neither grew healthy past two weeks after germination. Both completely succumbed to powdery mildew.

Comments on 'Neon' Pumpkin

- They were orange from day one, Perfect little jack-o'-lantern pumpkins. They were nicely shaped. Produced more pumpkins.
- 'Neon' is wonderful for our short season. Only problem was that kids thought Halloween was just around the corner with orange pumpkins in the garden in August! Produced more pumpkins than 'Spirit' by two to one margin.
- 'Neon' gets a slight nod. It went from yellow to orange very early, even with our cool temps.
- Fruit were better shaped and matured earlier.
- 'Neon' pumpkins were more size consistent and orange early on—added beauty from early in the season. Matured a week earlier but fruits were slightly smaller.

- Healthier vines. Pumpkins were good for small jack-o'-lanterns.
- Healthier vines and over twice the number of pumpkins.
- Set fruit early and started out yellow and turned an intense orange. Lots of pumpkins. Even though they are on the small size, they are nicely shaped. We enjoyed the showy color all summer on the vine.
- Bright orange color was very attractive. Visitors noticed the color immediately.
- Much larger plants, although both varieties overran the garden. Both are great varieties but I prefer 'Neon' since its pumpkins were a more uniform size.
- The pumpkins of 'Neon' turned orange very quickly, but were quite small. They turned into a dark orange color and tasted better (less watery) than 'Spirit'.
- Liked its color—deep orange. Healthier vines.
- The fruit was rounder and more uniform. I got 30 pumpkins from 'Neon' and 20 from 'Spirit'.
- Produced 19 pumpkins compared to 10 for 'Spirit'.
- There were twice as many pumpkins. Very nice looking pumpkins.

Comments on 'Spirit' Pumpkin

- Germinated earlier, had nicer looking pumpkins, and seemed to hold up better.
- Little bigger pumpkins. Turned orange very early.
- Liked the color and shape. Size was good also.
- Larger pumpkins.
- Pumpkins were twice as big, which I prefer.
- Pumpkins were bigger—nicer—and more of them.
- I really thought both were excellent but I liked the shape and color of 'Spirit' better.
- 'Spirit' had a nice size; 'Neon' was a bit on the smaller side. Produced one more pumpkin than 'Neon'.

Conclusions

The performance of 'Neon' was a pleasant surprise. This extra-early variety produced pumpkins that turned orange in *summer*. This was especially valuable during the cool growing season of 2009. Its vines were healthy and its yields were very good. Its pumpkins were deep orange in color and uniform in size. 'Spirit' produced larger pumpkins, but these pumpkins were fewer in number and less uniform. Both varieties had semi-bush vines, which did not overrun the garden.

Trial 28. Pumpkin, Seed

Varieties (information and photos from seed catalogs)



Johnny's

'Kakai'

100 days. Black-striped fruits produce large, dark green, hullless seeds; delicious when roasted. Semi-bush short vines produce 2–3 fruits per plant. Medium-size (5–8-pound) pumpkins can be used for jack o'lanterns.

'Lady Godiva'

95 days. Grown for its naked, hullless, greenish seeds. Seeds are nutritious and rich in protein; great roasted or raw. Fruits are good for jack o'lanterns but the flesh is not suitable for eating. Each vine can produce 12–15 fruits.



Seed Savers Exchange

Data

Data were collected at 6 sites in 2008 and 13 sites in 2009.

Trait	2008			2009			Weighted Total		
	'Kakai'	'LGodiva'	Same	'Kakai'	'LGodiva'	Same	'Kakai'	'LGodiva'	Same
Germinated best	0 %	33 %	67 %	10 %	70 %	20 %	7 %	58 %	35 %
Healthier plants	33	0	67	11	11	78	18	8	75
Matured earlier	0	75	25	25	50	25	17	58	25
Higher yields	0	75	25	25	63	13	17	67	17
More attractive fruits	25	50	25	29	29	43	28	36	37
Tastier seeds	33	0	67	80	0	20	65	0	35
<i>Recommend to others</i>	75	83		63	50		75	64	
<i>Preference</i>	60	40		56	44		57	43	
<i>Overall rating¹</i>	7.00	6.60		4.90	4.80		5.56	5.37	

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

General Comments

2008

- Germination was poor, but both varieties produced many pumpkins.
- Both were late maturing. It's mid-August and no fruit have been set.

2009

- Seeds of both varieties were pretty small for roasting.
- Poor germination and slow growth. Not the best year for vine crops.
- These seeds never germinated; whereas, my other pumpkin varieties produced like crazy.
- I only got four of seven hills to germinate. Vines were vigorous—overran everything.

Comments on 'Kakai' Pumpkin

2008

- Bush-like plants. Fruits turned orange while those of 'Lady Godiva' stayed green. Larger fruits and plumper seed. Seeds are tastier (nutty flavor).
- Suffered less powdery mildew compared to vines of 'Lady Godiva'.

2009

- Seeds had a more nutty taste and matured earlier—just barely in time. Pumpkins were bigger (7 pounds compared to 6 pounds).
- Bigger pumpkin (8 pounds compared to 5.5 pounds). Fleshier seeds.
- Had problems germinating and grew less vigorously. Fruits are sometimes misshaped. Slightly better flavor.

More Comments on 'Kakai' Pumpkin

- I like the look of 'Kakai'. It held its color better.
- Did not come up.
- Seeds were not truly hullless.

Comments on 'Lady Godiva' Pumpkin

2008

- We like the size (3 pounds) of 'Lady Godiva' pumpkins. They were beautiful. The seeds were all right. Yields were low and maturity was late.

2009

- Three times more pumpkins. We like the seeds, and the small fruits can be used as little jack-o'-lanterns.

- More fruits. A nice, small size for decorating.
- Better germination.
- Good yields of fruit and seeds per fruit.
- Only two seeds germinated ('Kakai' had none). The plants were healthy and grew well but were really late. No fruits were ripe before frost.
- Matured earlier, produced higher yields, and fruits were more attractive. Did not try to eat seeds.

Conclusions

The seeds of both varieties struggled to germinate in the cool soil. Once established, 'Lady Godiva' showed the capacity to produce lots of small orange fruits, which were suited for decorations and edible seeds. The fruits of 'Kakai' were fewer in number but larger. The seeds of 'Kakai' were plumper and tastier. Overall, most gardeners preferred 'Kakai', but ratings for both varieties were low.

Trial 29. Radish, Chinese

Varieties (information and photos from seed catalogs)

Johnny's



'Red Meat'

50 days. Large, 2–4-inch radishes are white with bright pink centers. Very special. Surprisingly sweet taste. Also known as watermelon radish.

'Shunkyo Semi-Long'

32 days. Cylindrical, 4–5-inch roots are deep pink with white flesh. Taste is reported to be both hot and unusually sweet. Upright tops with pink stems. A specialty radish from Northern China.



Johnny's

Data

Data were collected at 18 sites in Fall 2009.

Trait	'Red Meat'	'Shunkyo Semi-long'	Same
Germinated best	12 %	47 %	41 %
Healthier plants	12	53	35
Matured earlier	13	69	19
Higher yields	6	75	19
More attractive roots	27	67	7
Tasted better	15	77	8
<i>Recommend to others</i>	13	81	
<i>Preference</i>	12	88	
<i>Overall rating¹</i>	3.75	6.69	

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

General Comments

- Both had fast growth from start of germination.
- Both varieties germinated well and the tops of plants looked healthy.
- Froze before they were mature.
- Both germinated well and the plants of both varieties looked good until frost.
- Neither variety filled out. I would have liked to try both in spring so they had more time to fill out.
- Both were pretty hot.
- Neither one of these varieties performed nearly as good as 'Amethyst'.
- Plants looked good until the grasshoppers came. These are still growing in mid-early November.

Comments on 'Red Meat' Radish

- Roots were smaller, round, and a little bit nicer flavor.
- Seemed to show greater resistance to pests. Matured one week earlier. Better taste.
- Did not produce even one root large enough to eat.
- Took a long time to make a globe.
- Stopped growing after the first frost. Radishes were pretty red inside but tasted too hot.
- No yield.
- Needed more time to mature. It would be okay planted in the spring.
- Very bitter and tough. Needed more time to mature.

Comments on 'Shunkyo Semi-long'

- I was shocked—they were planted so late I had given up on them—went to garden on 15 November and they were still green after multiple frosts. The 'Shunkyo' had actually grown into nice sized, tasty radishes. Very hardy! Mild and tasty. I will plant radishes in the fall from now on.
- Much earlier, much better yield. Well adapted to North Dakota.
- Strong tops. Matured whereas 'Red Meat' did not. Produced a lovely, crisp, consistent radish.
- Higher yields. Excellent taste and stored well several days after harvest. Large, long size with

very few maggot problems.

- Tops were taller and darker green. Much larger radishes—almost all grew. Radishes were long, cracked, and hard to eat.
- Did very well and was fun to grow. Harvested in the second week of October.
- Quick germination, awesome looking foliage, better looking radishes, higher yields, but slightly worse in taste.
- Hard to harvest—the roots got stuck in the ground.
- Ready in 33 days. A good size and taste.
- Spicy but not too hot.
- Nice root size (2.5–3.0 inches long and 0.50–0.75 inches wide). Produced numerous nice roots by 22 November. Taste was firm, moist, sweet, and pleasant.
- By far a better tasting radish.
- Looked better.

Conclusions

'Shunkyo Semi-long' was the clear winner. This Chinese radish outperformed 'Red Meat' in every way. It grew better, produced higher yields, looked better, and tasted better. Growers were especially impressed with its hardiness and suitability for fall planting. 'Red Meat' needed more time—it never got started in most cases. It needs to be planted as a spring/early summer crop or perhaps in July for fall harvest.

Trial 30. Radish, French

Varieties (information and photos from seed catalogs)

Johnny's



'D'Avignon'

21 days. Slender, 3–4-inch radishes are red with sparkling white tips. Medium tops. Traditional variety from Southern France.

'French Breakfast'

28 Days. Popular variety. Bright scarlet roots grow 2 inches long with white tips. Blunt shape. Crisp and flavorful.



Harris

Data

Data were collected at 17 sites in Fall 2009.

Trait	'D'Avignon'	'French Breakfast'	Same
Germinated best	20 %	27 %	53 %
Healthier plants	13	27	60
Matured earlier	42	25	33
Higher yields	8	58	33
More attractive roots	25	42	33
Tasted better	50	33	17
<i>Recommend to others</i>	71	64	
<i>Preference</i>	43	57	
<i>Overall rating¹</i>	5.71	6.00	

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

General Comments

- Both were really good.
- Both varieties produced lots of attractive radishes.
- Both had good yields, but roots were twisted and odd shaped.
- It was too hot and then too cold for the radishes to grow. Then the bugs ate the leaves.
- Insect pests ate the tops right after they germinated. 'French Breakfast' never came back while we had poor yields of 'D'Avignon'.
- Frost killed them. Only got two inches high.
- Never germinated.

Comments on 'D'Avignon' Radish

- Ready to eat in three weeks. I like the size. Milder flavor and crisp. We would like to grow this again.
- Looks better.

- Matures one week earlier. We preferred its texture and taste.
- I prefer this variety since it is milder.
- Plants and leaves look healthier. Smoother skin and slightly better taste (not as strong).
- 'D'Avignon' never recovered from the grasshopper; a few 'French Breakfast' plants did okay.

Comments on 'French Breakfast' Radish

- A better taste and yield.
- Matured faster, leading to higher yields before frost.
- Withstood our temperature variations for a longer amount of time, but neither variety produced harvestable roots.
- Color and shape was a little better—deeper red color and more uniform.
- Matured earlier. Slightly spicier.
- Heartier leaves. Larger roots, but too hot.
- More bitter. The lower part of the radish had scale-like growths on them. Slightly higher yields.
- Flavor was bland compared to spring radishes.

Conclusions

Neither variety excelled in this fall season test. Gardeners liked the earliness and mild flavor of 'D'Avignon'. 'French Breakfast' showed more robust growth and higher yields. Its roots were attractive and its performance was more consistent.

Trial 31. Radish, Pink

Varieties (information and photos from seed catalogs)



Condor

'Lady Slipper'

28 days. The roots have a special soft pink color and plump, elongated shape. Flavor is crisp, mild, and refreshing. Roots stay crisp in the garden a long time.



Johnny's

'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.

Data

Data were collected at 18 sites in Fall 2009.

Trait	'Lady Slipper'	'Pink Beauty'	Same
Germinated best	17 %	17 %	67 %
Healthier plants	38	13	50
Matured earlier	33	33	33
Higher yields	40	27	33
More attractive roots	7	53	40
Tasted better	13	47	40
<i>Recommend to others</i>	<i>87</i>	<i>93</i>	
<i>Preference</i>	<i>47</i>	<i>53</i>	
<i>Overall rating¹</i>	<i>6.47</i>	<i>7.13</i>	

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

General Comments

- These were the best radishes to come out of the garden this year! I would definitely grow each of these again—they were sweet and crisp. They really only differed in size, shape, and color. Both were attractive, exceptionally mild, and crisp.
- We could not agree; we each preferred the taste of a different variety. We never tried fall planting before. Our fall radishes grew fast and were better tasting and more plentiful than spring ones. We will plant fall radishes again and may try other vegetables too.
- Both were tender.
- Both produced a nice size of radish; not woody and had a mild radish taste. I definitely would grow both of these again.
- Some of the best radishes we've ever grown. Very good flavor for both.
- They both had some hot ones in the bunch.

- Plants of both varieties looked good and healthy. Low yields on both—needed more time.
- Both were devoured by flea beetles.
- They never matured—it was a fickle fall season.

Comments on 'Lady Slipper' Radish

- Emerged quicker and had larger plants. Slightly earlier and slightly more productive. Roots were oval and bright pink.
- Very crisp and a nice looking radish.
- A nice radish that was mild.
- Slightly hotter in flavor.
- Didn't do well at all.

Comments on 'Pink Beauty' Radish

- Dark pink, round roots. Slightly sweeter.
- More uniform in shape and size.
- It was a little spicier.
- Milder taste and nice pink color. Plants were shorter but produced earlier. Uniform, good round shape.
- Bigger and better flavor. Nice and crispy.
- Ready to pick 3–4 days earlier.
- Bigger radishes.
- Prettier and bigger bulbs.

Conclusions

Gardeners were very impressed by both varieties. 'Lady Slipper' grew vigorously and produced high yields of oval-shaped roots. Gardeners were even more impressed with the beauty and flavor of 'Pink Beauty'. The pearl-shaped roots of this variety were very attractive, mild, and crispy.

Trial 32. Radish, Purple

Varieties (information and photos from seed catalogs)

Johnny's



'Amethyst'

30 days. Striking purple skin contrasts beautifully with the snowy white flesh. Round, 1-inch radishes are crisp and mild.

'Plum Purple'

28 Days. Deep purple skin and firm white flesh. Mild flavor.



Seed Savers Exchange

Data

Data were collected at 42 sites in Spring 2009 and 11 sites in Fall 2009.

Trait	Spring 2009			Fall 2009			Weighted Total		
	'Amthst'	'PlmPur'	Same	'Amthst'	'PlmPur'	Same	'Amthst'	'PlmPur'	Same
Germinated best	13 %	20 %	67 %	30 %	10 %	60 %	17 %	18 %	66 %
Healthier plants	28	17	55	40	20	40	30	18	52
Matured earlier	48	24	28	75	0	25	54	19	27
Higher yields	48	14	38	63	25	13	51	16	33
More attractive roots	52	10	38	67	22	11	55	12	32
Tasted better	48	24	28	50	0	50	48	19	33
<i>Recommend to others</i>	65	38		100	38		71	38	
<i>Preference</i>	69	31		86	14		73	27	
<i>Overall rating¹</i>	7.00	5.24		7.50	5.00		7.10	5.19	

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

General Comments

Spring 2009

- Both were healthy and gave great yields. Neither one got woody in full maturity.
- Both produced good yields. Both were edible until mid July because of the cool weather.
- Both varieties came up very well. Both had healthy, sturdy plants. Both were smooth skinned and tasted great.
- Both became overgrown very fast.
- Did not have good luck with radishes. They were all tops and the radishes were woody.
- Our 'German Giant' outproduced both by a long way. We would not plant either of these varieties in the future.
- Both tasted too strong, even at early harvest (my children would not touch either).

- Didn't like any of the radishes. Won't grow these again. Too hot!
- Neither of these did particularly well.

Fall 2009

- Both germinated quickly. The plants of both varieties look identical. We could eat radishes of both varieties at the same time. They were both good tasting—we cut them up and couldn't tell the difference—both had a very strong flavor.
- Both had a mild taste.

Comments on 'Amethyst' Radish

Spring 2009

- A much better variety. Nice round roots, dark purple color, tastes great.
- Nice size and very tasty. I would plant these again.
- Pretty color and nice shape.
- Fun to watch grow. Not a tasty veggie. Mostly tops—greens only.
- Root shape varied—some like a radish and some like a carrot. Flowered earlier.
- Better yield, taste and didn't bolt as fast.
- Similar growing rate to 'Cherry Belle' but 'Amethyst' by far produced a bigger root and higher yield with firmer quality. Very smooth taste. Excellent color. Matured earlier but went to seed later than 'Cherry Belle'. The best radish I have ever grown or eaten. If I had a choice I would plant it every year in place of any other kind of radish.
- Size and taste were fabulous. They did not become woody the larger they grew.
- Matured faster, had higher yields, had better flavor, and didn't come woody.
- Outside of taste, it seemed to be better overall.
- Produced nice roots. Good taste—some were hot but we grew them in a warm location.
- Larger size; mellower flavor.
- Good flavor; not woody and not hot. Nice color.
- Matured three days earlier. Milder flavor.
- Strong tasting—bolted early.
- Very good taste. Zesty. Great germination (almost 100%). Nice size. Very, very satisfied.
- Roots were more globular compared to those of 'Purple Plum' which were shaped more like a carrot.
- Tougher outer skin; not as sweet.

Fall 2009

- Performed better overall.
- Better appearance. Globe shaped with small tap root. Slightly stronger taste.
- Earlier maturity—tastes better (not as bitter)—better yield.
- Radishes were dug 20 October and only 'Amethyst' had produced a bulb, although the plant had a very nice taproot. Bulbs were almost one-inch in diameter. It's good to know that 'Amethyst' was still able to produce an edible bulb under the most unfriendly weather conditions.

- Produced five times the yield of 'Plum Purple'. Beautiful shape and color. Mild, juicy, and crispy. I left my radishes in the ground until 2 November—they did double in size after our first freeze. The roots of 'Amethyst' were fabulous in size, color, and taste!
- Tasted slightly milder. The majority were bigger, more uniform, and brighter in color.

Comments on 'Plum Purple' Radish

Spring 2009

- Better flavor—not quite as hot.
- Nicer radish overall.
- Larger tops; bigger roots; went to seed earlier.
- Went to seed. Not as colorful or uniform. Large roots.
- Very even, productive, and tasted better.
- All tops.
- Very hot flavor.
- Tasted better—not as strong. More elongated shape compared to 'Amethyst'.
- Large leaves—dominated the carrots I interplanted within the row.
- Went to seed before harvestable.
- Stronger flavor. Stored well in refrigerator.

Fall 2009

- Roots were oblong and didn't get very big.
- Much larger radishes, but no cracks. They were a very dark purple.

Conclusions

Gardeners liked the dark purple skin color of 'Amethyst' and enjoyed the mild taste of this radish. It grew vigorously and produced good yields in both spring and fall plantings. Gardeners were not impressed with 'Plum Purple'. This variety produced low yields, was less attractive, hotter tasting, and more subject to bolting.

Trial 33. Radish, White

Varieties (information and photos from seed catalogs)

Seed Savers Exchange



'Hailstone'

25 days. White, 1.5-inch roots with globular shape. Its firm flesh stays crisp a long time. Heirloom.

'Ping Pong'

30 days. White roots with uniformly round shape. Mild flavor and crisp texture. Contrasts nicely when bunched with radishes of other colors. Hybrid quality.



Johnny's

Data

Data were collected at 6 sites in Fall 2009.

Trait	'Hailstone'	'Ping Pong'	Same
Germinated best	0 %	17 %	83 %
Healthier plants	0	25	75
Matured earlier	33	33	33
Higher yields	33	33	33
More attractive roots	67	33	0
Tasted better	67	33	0
<i>Recommend to others</i>	<i>20</i>	<i>40</i>	
<i>Preference</i>	<i>50</i>	<i>50</i>	
<i>Overall rating¹</i>	<i>5.33</i>	<i>6.33</i>	

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

General Comments

- Both varieties produced an abundance of mature roots. We were amazed at how beautifully perfect these varieties were—so round—would be beautiful on a relish try with red and purple ones. In both varieties some were mellow, others hot. Neither split open.
- Both healthy plants.
- Neither matured in time for me. These white radish varieties did not do nearly as well as the pink ones.
- Eaten by insect pests.

Comments on 'Hailstone' Radish

- Produced big radishes; not as hot. First to eat and it produced higher yields.
- 'Hailstone' plants were bigger but not necessarily healthier. Roots were more uniform in shape, slightly larger, and more tender.

Comments on 'Ping Pong' Radish

- We prefer its size and taste. It was more productive.

Conclusions

Few gardeners were interested in this trial and these gardeners were not impressed with either variety. Neither variety was recommended by half of the gardeners, which is a rare and disappointing result. Additional testing is needed.

Trial 34. Spinach, Fall

Varieties (information and photos from seed catalogs)



Johnny's

'Bordeaux'

21 days baby; 32 days full size. Dark green leaves with distinctive red veins. Adds color to salads and cooked meals.

'Space'

39 days. Smooth, dark green leaves are easy to clean. Plants resist bolting (going to seed), allowing for an extended harvest. Easy to grow.



Johnny's

Data

Data were collected at 30 sites in Fall 2009.

Trait	'Bordeaux'	'Space'	Same
Germinated best	4 %	50 %	46 %
Healthier plants	8	46	46
Matured earlier	10	43	48
Higher yields	24	57	19
More attractive	50	20	30
Tasted better	37	21	42
<i>Recommend to others</i>	68	86	
<i>Preference</i>	53	47	
<i>Overall rating¹</i>	5.83	6.39	

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

General Comments

- Both were prolific, quick to raise, very tasty, and kept well in the refrigerator.
- Both had good flavor.
- Both were great. Both a must for me.
- Both varieties were pretty sparse. Very little growth—unable to see much difference at this stage—they didn't grow very much. I will try these varieties next spring.
- Both were picked on the same day. Both had dark green leaves.
- We are still harvesting both varieties as of 22 November. Temps have dipped to 21 °F and there seems to be no difference in cold hardiness between the varieties.
- Poor germination for both varieties.
- Flea beetles are a big concern.

Comments on 'Bordeaux' Spinach

- I like the red veins. I wish I had planted more. My kids loved it.
- I did like its smooth leaves—they wash so easily. 'Bordeaux' would also make a striking side-dish with its red vein. I do enjoy the "earthy" flavor, but it may not be for everyone.
- Flatter leaves—easier to clean. More tender texture.
- Nice red stems, but a bit leggy.
- It looked better, had bigger leaves. It would look and taste better in a salad.
- Tasted both varieties raw. From our small sample, we much preferred the taste of 'Bordeaux'.
- Plants were very healthy, pretty and tasted good. Larger leaves.
- Its red color/veining was attractive.
- A nice color treat in salads. Slightly bitter taste.
- It was beautiful looking spinach. The rabbit in the garden seemed to prefer 'Bordeaux'—it ate every leaf of it.
- Small leaves, dry spots, and little yield. Although it had unhealthy plants, it tasted better—sort of a sweet flavor.
- Looks better. Strong regrowth after cutting. More tender.
- Very thick, arrow-shaped leaves. Tasted better. Its thick leaves were noticeable when eating and added something different to the flavor. We really enjoyed how the 'Bordeaux' looked because of the different shape and color.

Comments on 'Space' Spinach

- Bigger leaves, less stem. Best spinach I have ever tasted! Extremely sweet. Yields were low—should be planted earlier.
- Easier to grow.
- Better germination. Matured a few days sooner. Plants were very short with few leaves. Taste was a little bland—almost like lettuce.
- Better germination; overall more productive during the short fall season.
- 'Space' gave a much bigger yield (four times more) and looks like the more expected spinach shape. It has the expected spinach taste. Its leaves have some wrinkles, so not as easy to wash clean.
- Excellent flavor (quite mild) and fast growing.

- Greener leaves, bigger leaves. More plants.
- It was earlier and had better germination.
- Larger plant.
- Produced greater yield due to earlier harvest and due to more plants.
- Produces a little more. More leaves per plant.

Conclusions

Gardeners liked the vigor and yields of 'Space'. Although 'Bordeaux' did not grow as well in the fall, many gardeners preferred it. Its unique red stems and arrow-shaped leaves were very appealing. Several of these trials in fall would have benefited from an earlier planting.

Trial 35. Spinach, Spring

Varieties (information and photos from seed catalogs)



'Melody'

43 days. Heavy yields of deep green, savoy (crinkly) leaves. Plants grow quickly and are slow to bolt. Very popular savoy variety.

Burpee

'Olympia'

45 days. Leaves are smooth, making them easy to clean. Excellent for fresh salads. Plants grow fast and are slow to bolt. High yields. Excellent flavor. Upright, 10-inch plants are easy to harvest. Reliable.



Harris

Data

Data were collected at 35 sites in 2009.

Trait	'Melody'	'Olympia'	Same
Germinated best	30 %	15 %	55 %
Healthier plants	29	14	57
Matured earlier	36	25	39
Higher yields	31	31	38
More attractive	24	21	55
Tasted better	14	14	72
<i>Recommend to others</i>	80	89	
<i>Preference</i>	41	59	
<i>Overall rating¹</i>	7.27	7.47	

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

General Comments

- Both varieties produced healthy plants! We had a bumper crop to share with several friends. Both looked great and tasted excellent! Both varieties are excellent choices for North Dakota.
- First time I planted spinach—my family loved it!
- This was a big surprise! They were both wonderful varieties and both so tasty!! I will try both of them again!
- Both showed vigorous growth and were ready in 35 days. Both had nice upright growth patterns.
- This was my first attempt to grow spinach and I was surprised by the good taste and acceptability of all my family. It was very bountiful, too!

More General Comments

- Both grew healthy and produced high yields. Both varieties were good, but neither jumped out at me.
- I'd never grown spinach before, and am not a regular consumer of spinach. It was OK, but it seemed to yield little for the space it was allotted in my garden.
- Grew healthy—no issues. Matured at the same time, showed similar yields, and kept producing into July.
- Not much difference between the two regarding plant health, days to maturity, and taste.
- 'Bloomsdale Long Standing' went to seed on July 17, while 'Melody' and 'Olympia' were growing great, especially 'Olympia'. 'Melody' went to seed on July 23. The weather was very hot and the last picking of 'Olympia' was on August 2. The planting I made two weeks ago for fall is up and thriving.
- Both varieties were very close in all areas.
- Both suffered similarly from a frost in late spring.
- Tastes the same when cooked. I also planted 'Bloomsdale Long Standing', which bolted quickly and didn't taste as good as either of these.
- Both were sweet and non bitter!
- We were able to take multiple harvests of each variety.
- Both varieties grew but always looked sickly.
- Neither were strong producers; therefore, I cannot give either a very strong rating.
- Both had good yield and good flavor.
- Very small difference among the varieties.
- We liked the taste of both.

Comments on 'Melody' Spinach

- Nicer, dark green leaves. I like the texture of its leaves better.
- Leaves are pretty but hard to clean.
- Looked more attractive early in the season and less attractive late in the season. Leaves were a little softer.
- Slightly slower to bolt. A little smaller leaf.
- More tender.
- Less susceptible to bugs and was more plentiful.
- Didn't produce as much and went to seed earlier. Last picking was July 27.
- Germinated much better. The plants were more vigorous and lasted longer for salads.
- Produced slightly better and was still providing

edible leaves later in the season.

- Plants went to seed very early due to hot weather at the time they were maturing.
- Seemed to produce a little better.

Comments on 'Olympia' Spinach

- I definitely prefer 'Olympia'—bigger leaves and quicker to regrow after picking. Longer harvest period, too.
- I prefer 'Olympia' because of its large, smooth leaves. Very productive.
- Slightly better production.
- Produced more spinach—even late.
- Didn't go to seed as early as other varieties I have grown.
- Superior flavor as both fresh and frozen. "My 6-year-old son says "tastes like sweet peas." Leaves are less savoyed. Slower to bolt. Better tasting.
- Grew faster and slower to bolt.
- Better yield and didn't go to seed as quickly.
- Not much difference overall, but 'Olympia' tasted better in my opinion.
- Slightly better yield.
- Higher yields and looks more attractive.
- Leaves were a little larger.
- Slightly better appearance.
- A milder flavor. Easier to wash and bolted a week later than 'Melody'.
- Higher yields. Some blemishes (white spots) on some leaves.
- Healthier and larger leaves. Matured five days earlier. Bolted much later. I bought more 'Olympia' seed and planted it again—I think it does well in North Dakota.

Conclusions

Gardeners were impressed with both varieties. Even first-time spinach growers succeeded in producing bountiful crops of tasty leaves. Given the choice, most gardeners preferred 'Olympia'. They preferred its larger, smoother (easier to clean) leaves and its superior resistance to bolting. In grower-initiated tests, both of these hybrids produced higher yields and resisted bolting better than 'Bloomsdale Long Standing', the standard variety grown in the state.

Trial 36. Squash, Summer Romanesco

Varieties (information and photos from seed catalogs)

Johnny's



'Costata Romanesco'

55 days. Italian zucchini with prominent pale green ribs. The big, large-leaved bush produces only half the yield of hybrids, but its fruits are better tasting. A good producer of heavy male blossom buds for cooking, too.

'Italian Largo'

59 days. This hybrid is very long, ribbed, and contains very few seeds. Skin is thin with alternate light green and dark green stripes. The nutty flavor is much different than zucchini. Plants are an open bush-type.



Jung

Data

Data were collected at 6 sites in 2009.

Trait	'Costata Romanesco'	'Italian Largo'	Same
Germinated best	50 %	0 %	50 %
Healthier plants	33	33	33
Matured earlier	50	33	17
Higher yields	33	50	17
More attractive fruits	33	67	0
Tasted better	50	33	17
<i>Recommend to others</i>	67	67	
<i>Preference</i>	50	50	
<i>Overall rating¹</i>	6.17	7.00	

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

General Comments

- Gave a lot of them away as both varieties produced an abundant supply of squash.
- In August when it was cooler and we had rains, the plants started to rot due to not enough warm days between the rains. This was noted on both varieties.
- Sowed seed in muddy, cold ground. Plants grew slowly in the beginning but they outdid themselves by fall.

Comments on 'Costata Romanesco'

- Matured at least one week earlier. Plants are dark green and three times as big as those of 'Italian Largo'. Taste was very similar, but 'Costata Romanesco' had more tender skin. Everyone here who has tried it has loved it!

- Matured about one week earlier. Flavor was tender and moist.
- More susceptible to powdery mildew. Plants stopped producing after first squash matured. Darker green stripes and deeper grooves on fruit. Sweet/nutty/slight winter squash flavor.
- Fruit did not grow straight.

Comments on 'Italian Largo' Squash

- More consistent production.
- They were good tasting and grew straight.
- Ready earlier.
- Leaves were fuller, although there was some browning. 'Italian Largo' was the first to produce and produced many right away. Produced 40% more squash. Fruit had a very shiny appearance. Squash were nice, straight, generally long, and thinner than those of 'Costata Romanesco'. The flavor was very mild—not woody.
- Plants were more compact. Fruit had a deep rich color outside.

Conclusions

In our limited testing, we found most gardeners liked, but only a few gardeners loved these varieties. Half preferred 'Costata Romanesco', noting its earliness and flavor. The other half preferred 'Italian Largo', noting its higher yields and more uniformly shaped fruit.

Trial 37. Squash, Summer Romanesco Hybrid

Varieties (information and photos from seed catalogs)



Veseys

'Italian Largo'

59 days. This hybrid is very long, ribbed, and contains very few seeds. Skin is thin with alternate light green and dark green stripes. The nutty flavor is much different than zucchini. Plants are an open bush-type.

'Portofino'

55 days. A hybrid variety with outstanding appearance and flavor. Narrow, dark green fruits with contrasting light green ridges. Firm, crisp flesh with nutty flavor. Open, bush-type plants make it easy to harvest.



Gurney's

Data

Data were collected at 5 sites in 2008 and 8 sites in 2009.

Trait	2008			2009			Weighted Total		
	'ItaLargo'	'Portof'	Same	'ItaLargo'	'Portof'	Same	'ItaLargo'	'Portof'	Same
Germinated best	20 %	20 %	60 %	50 %	13 %	38 %	38 %	16 %	46 %
Healthier plants	0	0	100	50	25	25	31	15	54
Matured earlier	0	60	40	75	25	0	46	38	15
Higher yields	60	20	20	63	38	0	62	31	8
More attractive fruits	0	60	40	38	38	25	23	46	31
Tasted better	20	40	40	38	13	50	31	23	46
<i>Recommend to others</i>	20	80		71	43		46	54	
<i>Preference</i>	0	100		71	29		38	62	
<i>Overall rating¹</i>	5.60	7.80		6.75	6.38		6.31	6.93	

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

General Comments

2008

- Plants of both varieties were healthy.
- Powdery mildew developed on plants of both varieties. I use overhead watering.
- Fruits of both varieties got overgrown too quickly. I need to hand peel the fruits when they grew large and did not like the hard yellowish ribs on the surface.

2009

- Very attractive squash. They tasted similar—both taking on the flavors of other veggies they were cooked with.
- Yields for both were much smaller than in 2008. Both varieties produced some oddly shaped squash this year and several that shriveled before maturity.

Comments on 'Italian Largo' Squash

2008

- Its first fruits were later, but 'Italian Largo' steadily produced through the season and produced a higher overall yield.
- Higher yield than 'Portofino', but lower than other summer squash I've grown.
- I like the thin, tender skins of this variety.

2009

- The skins stayed edible and seeds small even with large squash. Great producer. Very mild. I thought it was very similar to zucchini taste.
- Plants recovered faster after heavy rain.
- More taste—the taste has an edge similar to eggplant. Even the large squash have few seeds. Good for cakes and breads, and for stuffing. Loved them small. Shared many with neighbors.

Comments on 'Portofino' Squash

2008

- I was picking 'Portofino' fruits before any had set on the 'Italian Largo' plants. The shape of the fruits was more uniform and conducive to grilling. They weren't as moist as regular zucchini.
- I love its striped look. I prefer the taste and shape of 'Portofino'; but overall, I prefer yellow summer squash to either of these varieties.
- It produced more marketable fruits, especially after the first picking.
- Did not develop overgrown fruits as quickly.

2009

- Both performed well, but 'Portofino' outproduced 'Italian Largo' by three to one margin. Exceptional taste.

- Very vigorous plants. Exceptional yield—the neighbors ran and hid when they saw me coming! The fruit was long and featured a small diameter. They did not get fat.
- Very mild taste.

Conclusions

Neither variety performed very well. Only about half of gardeners could recommend either variety. As to which variety is better, there was no consistent winner in this two-year trial. 'Portofino' excelled in 2008, but 'Italian Largo' was superior in 2009. The uniform and narrow shape of 'Portofino' fruits impressed many gardeners. 'Italian Largo' produced higher yields both years—this is a positive attribute, but productivity is rarely a concern with zucchini.

Trial 38. Squash, Summer Scallop

Varieties (information and photos from seed catalogs)



Johnny's

'Flying Saucer'

50 days. New in 2007. Fruits are a beautiful mix of bright yellow and dark green. They are more highly ribbed than other patty pans for an "alien" look. Fruits are dense, nutty, and flavorful. High night temps result in greener fruits.

'Sunburst'

51 days. Early and productive. The bright, tender squash has succulent buttery flavor. Vigorous plant. 1985 All-America Selections winner.



Johnny's

Data

Data were collected at 6 sites in 2008 and 15 sites in 2009.

Trait	2008			2009			Weighted Total		
	'FlyScr'	'Sburst'	Same	'FlyScr'	'Sburst'	Same	'FlyScr'	'Sburst'	Same
Germinated best	33 %	33 %	33 %	27 %	40 %	33 %	29 %	38 %	33 %
Healthier plants	17	17	67	27	20	53	24	19	57
Matured earlier	17	50	33	27	47	27	24	48	29
Higher yields	67	33	0	33	47	20	43	43	14
More attractive fruits	67	33	0	47	27	27	53	29	19
Tasted better	17	17	67	31	15	54	27	16	58
<i>Recommend to others</i>	67	67		86	71		80	70	
<i>Preference</i>	83	17		62	38		68	32	
<i>Overall rating</i> ¹	7.83	6.33		7.00	7.00		7.24	6.81	

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

General Comments

2008

- Cute, but not much flavor.
- It was a good substitute for zucchini when baking as it kept the baked product moist.
- We sliced the squash, dipped the slices into egg and flour, and fried it. It tasted like zucchini but with the scalloped edges, it looked nicer than zucchini on the plate.

2009

- Very colorful fruits and healthy plants.
- Wow—these both grew well!
- Both varieties produced great quantities.
- This was not a planting—this was an invasion! After both varieties settled in, both were “leggy” and took some time to develop their third leaves—these plants were close to five-feet tall. Huge yield! Both were a little long cooking for a summer squash. Unfortunately the plants developed mildew.
- Both were eager to grow and produce. They were similar in flavor. I had a pleasure growing both. The shape of the fruit, “pie-like,” was similar to a squash my Mom grew in the 40’s and 50’s, when I was a kid. The fruit of both varieties can be used in recipes calling for zucchini. I liked them sautéed or dipped in batter and corn meal and fried in oil/butter. I never peeled them at any time—skin very tender.
- I wouldn’t recommend either—too difficult to cut up for way you get. There wasn’t much taste to either. Would only use for ornamental.
- At one picking, I had 35 pounds of squash with three-fourths of it ‘Sunburst’. Workers from a southern Texas company knew what these were and really enjoyed them. The local North Dakota people did not know what they were—and had never tasted them. Once they did, they thought the squash was pretty good, and some said they were excellent.
- Neither was tasty. I would grow for ornamental use only.

Comments on ‘Flying Saucer’ Squash

2008

- Larger and healthier plants. Much better yields. The fruits were cute. Customers at the farmers market loved them for decorations—they last a long time. Customers preferred its nutty taste.

2009

- They are so cute. Sweeter, juicier.
- The fruit looked like a flower on bottom—very attractive and a surprise to all—grandsons said “it looks like a flower, Grandma!”
- Better taste. Stored in refrigerator longer. Grilled better.
- Fruits have beautiful shape. The texture was more like zucchini and skins very thin. Had a really large harvest throughout summer—gave to friends and family. I would leave skins on the very small ones and cut into quarters, wrap in foil with butter and garlic powder and cook on grill—cooks quite fast—then melt cheese on top just prior to finish—really delicious.
- Plants were darker green. Fruits were different—eye-catching—and tastier.
- Plants were huge and more resistant to powdery mildew disease.

Comments on ‘Sunburst’ Squash

2009

- Make them stop—they are so prolific that I was giving away grocery bags of these.
- Plants were more robust and full.
- Higher yields. Multiple fruit at center of plant.
- Emerged sooner. Higher yields (three to one difference).
- Fruits are easier to cut. They are smaller, easier to make use of after harvesting.
- Better, meatier taste. Easier to cook/peel.
- Somewhat easier to prepare and eat.
- Plants broke in the wind after transplanting (‘Flying Saucer’ plants did not break).
- Earlier maturing and higher yields. Flavor is too mild, but would still be a good choice to cook or bake and even grill. With more seasoning, tomatoes and cheese, they were delicious.

Conclusions

Gardeners liked both varieties, but most preferred ‘Flying Saucer’ for its eye-catching fruits. The contrast between the bright yellow and green colors of the fruit was beautiful and its deeper ribs added even more visual interest. Both varieties were productive, mild in flavor, and good for cooking. ‘Sunburst’ showed good early season vigor and produced earlier. Its fruits were more tender and easier to prepare for cooking.

Trial 39. Squash, Summer Zucchini

Varieties (information and photos from seed catalogs)

Johnny's



'Cashflow'

48 days. Very high yields of attractive, dark green fruits. Fruits are slightly tapered and average 8 inches in length. Plants are large in size and have an open habit.

'Spineless Beauty'

43 days. Easy to harvest. Medium-green, waxy, uniform, 8-inch fruits. Plants are medium in size, have an open habit, and produce high yields over an extended season. Delicate flavor.



Harris

Data

Data were collected at 30 sites in 2009.

Trait	'Cashflow'	'Spineless Beauty'	Same
Germinated best	13 %	47 %	40 %
Healthier plants	17	43	40
Matured earlier	28	52	21
Higher yields	28	52	21
More attractive fruits	14	43	43
Tasted better	12	20	68
<i>Recommend to others</i>	<i>57</i>	<i>82</i>	
<i>Preference</i>	<i>32</i>	<i>68</i>	
<i>Overall rating¹</i>	<i>7.00</i>	<i>8.11</i>	

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

General Comments

- Germination was poor, but I'm glad I didn't have more plants considering how well they produced. This must have been a banner year for zucchini. I harvested over 300 fruits from four plants. Unbelievable. I shared zucchini with lots of people!
- They are both lovely and so tender. When cooked or eaten raw they are both delicious!
- It took forever to get these coveted summer squash, but they finally came. We ate them fresh, in casserole, baking, and jams. Gave a few away.
- Plants did well but didn't produce.
- Both tasted great. Both suffered from some fruit rot on ends.
- Both produced smooth fruits—very nice. Both were tasty.

- Both varieties suffered from powdery mildew and fruit rotting on the end. Neither were as good as other varieties that I had.
- Both of these varieties went crazy as far as yield. We had over 200 squash from these two varieties! And they would have produced more. We finally "killed" the plants since we had no more room in the freezer—we were getting pretty tired of eating zucchini—and our friends were begging, "please don't give us any more zucchini". I've never had zucchini produce this well, or plants grow this large. I'm not sure if it was the varieties of just a great year for zucchini.
- Neither of these produced a fruit. A lot of blossoms but no zucchini. I have grown zucchini before—first time they didn't produce.
- Both suffered from end rot on their fruits.
- Started harvesting 17 July. It was difficult to make a preference because they are both equally good. And the yields—oh my! It is so fun to go to the garden and see how many zucchinis we will get and how big they get in a few short days. Both varieties produced heavy yields until the first part of October. Amazing the number of zucchinis that came off the plants.
- All zucchini tastes the same.
- Neither had much of a flavor or color because skins were tough so had to be peeled.
- Both plants have healthy, large leaves. Both varieties had some problems at first with zucchinis drying up after setting—then produced well. Fruits were uniform in diameter with tender skin and good tasting.

Comments on 'Cashflow' Squash

- Better germination, more vigorous plants, matured earlier by one week, much higher yield. This variety would give me all the zucchini I need—from the end of June to September—with a small planting.
- Better and earlier production.
- Lighter skin color; more tender and moist—better for baking.
- 'Cashflow' lived up to its name—produced a bit too much yield!
- Even though 'Cashflow' did not germinate as well as the other, its rate of growth and production excelled.
- More uniform fruits.
- Fruits started to curl in October.
- A little better tasting.
- More susceptible to powdery mildew.

Comments on 'Spineless Beauty' Squash

- I have grown a lot of zucchini, but 'Spineless Beauty' was a bit different. The plants were more open, and tended to sprawl out a bit less. Because of this, it was easier to pick, and they plant was indeed less "spiny". Conditions were not ideal, but this variety was a true joy—one of the most successful plants in the garden this year.

- Higher productivity (168 vs. 140 fruits).
- Produced and produced and produced. Thirty-five squash from one plant! No spines—nice.
- Did better in the cool start we had.
- Produced very well and early.
- Nice straight fruits. Earlier to mature.
- Tasted better—grows faster.
- More uniform growth.
- Most of the zucchinis were of a nice shape and solid with good color.
- Better, more mellow taste.
- Plants were twice as large. Way more yield! More attractive fruit overall, although some were deformed.
- Grew more vigorously. Higher yields.
- Better all around performance.
- Healthier plants and higher yields.

Conclusions

'Spineless Beauty' was the superior variety in this trial. Gardeners liked the open habit and spineless stems of the plants. This variety was more vigorous, matured earlier, and produced higher yields. Its fruits were more uniform and attractive. 'Cashflow' was fine, but it was outperformed in every way by 'Spineless Beauty'.

Trial 40. Squash, Winter Acorn

Varieties (information and photos from seed catalogs)

All-America Selections



'Honey Bear'

85 days. Smaller, 1-pound fruits are just the right size when halved for single servings. The dark green fruits have yellow-orange flesh that is "sweet as honey." Its vines spread only 4–5 feet. Tolerant to powdery mildew.

'Table Ace'

70 days. Very early. The fruits have an attractive, near black skin. Its golden flesh is smooth and sweet. Vines are compact and productive.



Harris

Data

Data were collected at 24 sites in 2009.

Trait	'Honey Bear'	'Table Ace'	Same
Germinated best	14 %	50 %	36 %
Healthier plants	19	38	43
Matured earlier	32	42	26
Higher yields	24	57	19
More attractive fruits	16	21	63
Tasted better	21	21	58
<i>Recommend to others</i>	43	74	
<i>Preference</i>	43	57	
Overall rating¹	6.50	6.91	

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

General Comments

- Both were very tasty. I loved them.
- Both had good taste but a little dry in texture.
- They both produced many squash. Fruits of both varieties looked similar. I liked both very much.
- Taste was very similar. Delicious!
- I didn't really like the taste. They were a little stringy. I much prefer butternut or buttercup squash. I don't think I would plant these again.
- Neither variety produced well. Very small squash.

Comments on 'Honey Bear' Squash

- Good for a small garden/square foot garden even though it produced less and smaller fruit.
- Tasted the best by far! Rounder fruits.
- Earlier but lower yields (15 compared to 20 fruits for 'Table Ace').

- Matured 10–14 days earlier. Fruits were fewer in number, smaller in size, cuter, and sweeter in taste. Baked well and tasted great—great for one or two people.
- Vines were not as robust, but bore fruit sooner. Fruits were smaller and fewer in number. Fruit size was good for two servings—cooked well. Tasted better by far.
- Fruits were rounder, like a pumpkin. The flesh was soft and smooth when baked (consistency of baby food) and little flavor.
- Barely came up.

Comments on 'Table Ace' Squash

- Grew better and had a higher yield. Nice shaped fruits. We loved the taste of these.
- Fruits had the typical shape, firmness of flesh, and taste of acorn squash (which we prefer).
- Spread all over the place, but would be good for a very large garden.
- Much healthier looking plants.
- Lighter colored flesh and was stringy.
- Plants were twice the size. More fruits (9 per hill compared to 4 for 'Honey Bear'). Fruits were larger—almost twice the size.
- Produced better (12 vs. 8 fruits).

Conclusions

Our gardeners preferred 'Table Ace'. It germinated better and its plants were more vigorous and produced higher yields. It matured earlier. Gardeners generally liked the flavor of both varieties. 'Honey Bear' may have a niche as a variety suitable for small gardens, but the fact that less than half of our gardeners recommend it raises concerns.

Trial 41. Squash, Winter Butternut

Varieties (information and photos from seed catalogs)



Harris

'Early Butternut'

85 days. This award winner matures early and grows on a compact vine. The fruit average 8 inches long with the typical "bell" on the blossom end. The uniformity of size and shape is excellent and yields are impressive.

'Waltham'

85 days. This award winner matures early and grows on a compact vine. The fruit average 8 inches long with the typical "bell" on the blossom end. The uniformity of size and shape is excellent and yields are impressive.



Johnny's

Data

Data were collected at 15 sites in 2009.

Trait	'Early Butternut'	'Waltham'	Same
Germinated best	50 %	14 %	36 %
Healthier plants	29	29	43
Matured earlier	36	21	43
Higher yields	21	43	36
More attractive fruits	17	25	58
Tasted better	10	20	70
<i>Recommend to others</i>	62	62	
<i>Preference</i>	42	58	
<i>Overall rating¹</i>	6.85	6.85	

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

General Comments

- Poor production on both due to snow and freezing weather through third week of June. Needed more time—froze first week of September!
- Neither one got very big. I had very bad luck with these.
- Neither variety produced a ripe fruit.
- I discovered I really don't like this type of squash.
- All froze out before harvest time.

Comments on 'Early Butternut' Squash

- Vines were more vigorous in the early season. More squash (40 compared to 35 fruits).
- Much better yield (41 fruits compared to 22 for 'Waltham') and healthier plants.
- Matures earlier but lower yield.
- A few days earlier.

Comments on 'Waltham' Squash

- More fruit and better plants.
- Larger fruit. Tasted better. I prefer its firm, moist texture; not stringy.
- Very slow growing. Had blossoms but no squash.
- These ripened a bit earlier and were larger overall. Very sweet!
- Bigger plants (twice as big) and bigger yields.
- Seemed to be a bit healthier and stronger.

Conclusions

Both varieties struggled under the unusually cool temperatures and short growing season of 2009. Many gardeners reported low or no yields. 'Early Butternut' got off to a strong start and its fruits often matured earlier. Its semibush vine habit is especially useful for gardeners with limited space. 'Waltham' showed robust growth and produced a higher yield. Gardeners liked the taste of both varieties.

Trial 42. Squash, Winter Hubbard

Varieties (information and photos from seed catalogs)

Johnny's



'Blue Ballet'

95 days. Smooth-skinned, blue-gray fruits average 4–6 pounds, with sweeter, bright orange, fiberless flesh. Stores well. Average yield is 2 fruits/plant.

'Blue Magic'

100 days. New in 2007. The 4–6-pound fruit are produced on semi-vining plants and have the typical blue-gray rind color found on standard blue hubbard squash. Fine-grained, tasty flesh.



Harris

Data

Data were collected at 4 sites in 2008 and 16 sites in 2009.

Trait	2008			2009			Weighted Total		
	'BBallet'	'BMagic'	Same	'BBallet'	'BMagic'	Same	'BBallet'	'BMagic'	Same
Germinated best	50 %	25 %	25 %	7 %	20 %	73 %	16 %	21 %	63 %
Healthier plants	25	75	0	0	23	77	5	33	62
Matured earlier	50	0	50	31	38	31	35	30	35
Higher yields	50	50	0	31	46	23	35	47	18
More attractive fruits	100	0	0	8	31	62	26	25	50
Tasted better	0	50	50	0	29	71	0	33	67
<i>Recommend to others</i>	33	33		62	69		56	63	
<i>Preference</i>	67	33		42	58		47	53	
<i>Overall rating¹</i>	3.67	2.67		6.21	6.14		5.70	5.45	

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

General Comments

2008

- The fruits of both varieties had lots of flesh and were mild tasting.
- The fruits of both varieties tasted bland. I don't care for either variety.

2009

- Both plants grew well and produced many blossoms. Both plants appeared healthy up until frost. Both produced squash that were attractive.
- Vines of both varieties grew very well but did not really fruit until the temperatures turned warm.
- Both varieties grew well. The fruits of both were a good size (10 inches by 12 inches) and tasted good.
- If you wanted size, pick 'Blue Magic', but for cooking/baking size, choose 'Blue Ballet'.
- My garden was overrun with these squash plants. They need lots of room and continued to bloom until frost (29 Sep).
- Both varieties produced fruits too large for an average family. Flesh of both varieties was very dry.
- These were a huge disappointment. The season was not long enough to produce fruit of any size. They both only got as big as baseballs and froze on the vine.
- They are too similar to have a preference. Neither variety showed the vigor that a normal squash vine does.
- This was a difficult year for the trial—cold spring—no summer—late heat—early frost. Four inches of rain—water covered the plants for a full day—we thought they wouldn't survive—but they did.

Comments on 'Blue Ballet' Squash

2008

- Fruits matured earlier and were more uniform in size.
- Higher overall yield, but smaller fruits. Fruits of 'Blue Ballet' ranged from 4–7 pounds each, while fruits of 'Blue Magic' weighed up to 12 pounds.
- Flesh had a nice dark orange color.
- Its vines started out well, but were attacked by cucumber beetles and could not recover. The vines of 'Blue Magic' did recover from the same attack.

2009

- A higher yield.
- Vines were more compact and produced very small squash. Later to ripen.
- It produced earlier—'Blue Magic' did not ripen before frost.
- Its fruits were more uniform in size and had a better appearance.
- Matured earlier, but fruit were much smaller—about the size of a buttercup. I think you can more easily prepare the smaller squash for eating.

Comments on 'Blue Magic' Squash

2008

- Vines were taller and vigorous. Its fruits were larger and later to mature.
- Much larger plants. The fruits were sweeter and had more flavor. Their large seed cavities produced lots of seeds for roasting.

2009

- Better texture, flavor.
- Better size, very sweet taste, but very hard skin. Higher yields, too. Larger squash. Was surprised I got one even though we had a cold summer.
- The taste of both of them was rather bland, but 'Blue Magic' had more potential because of its texture.
- Both are doing poorly this year, but 'Blue Magic' is two times as vigorous and has slightly larger (although very small) fruits—but neither variety matured in time.

Conclusions

Both varieties struggled during the two cool summers of testing. Neither variety generated much excitement among gardeners. 'Blue Ballet' matured earlier and its fruits were uniform and attractive in appearance. These fruits were relatively small (about 4 pounds), but still plenty big for today's smaller families. 'Blue Magic' had more vigorous vines and larger fruits (about 6 pounds). The flavor of both varieties was mild, perhaps bland. The fine texture of the flesh of 'Blue Magic' squash was appreciated by gardeners.

Trial 43. Swiss Chard, Multicolor

Varieties (information and photos from seed catalogs)

Johnny's



'Bright Lights'

55 days. Stems come in a brilliant array of colors including gold, pink, orange, red, and white. Slightly less cold hardy and milder tasting than normal chard. Developed in New Zealand. 1998 All-America Selections winner.

'Five Color Silverbeet'

55 days. Leaves have a spectacular range of colors throughout the season. This is a re-selected strain from Australia; seed crops of all the different colors are grown in isolation to maintain a proper balance of colors.



Seed Savers Exchange

Data

Data were collected at 15 sites in Spring 2008, 20 sites in Spring 2009, and 20 sites in Fall 2009.

Trait	Spring 2008			Spring 2009			Fall 2009			Weighted Total		
	'BL'	'FCS'	Same	'BL'	'FCS'	Same	'BL'	'FCS'	Same	'BL'	'FCS'	Same
Germinated best	27 %	20 %	53 %	45 %	15 %	40 %	21 %	26 %	53 %	31 %	20 %	48 %
Healthier plants	29	14	57	25	15	60	20	20	60	24	17	59
Matured earlier	23	15	62	35	10	55	23	0	77	27	8	65
Higher yields	43	21	36	25	10	65	33	25	42	33	18	49
More attractive	62	23	15	42	11	47	15	15	69	38	16	46
Tasted better	8	25	67	20	7	73	8	31	62	12	21	67
<i>Recommend</i>	69	69		90	71		85	62		83	68	
<i>Preference</i>	57	43		84	16		58	42		69	31	
<i>Overall rating¹</i>	7.77	7.36		8.45	7.70		7.46	7.15		7.90	7.41	

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

General Comments

Spring 2008

- Both varieties produced continually, even after frost.
- It was difficult to differentiate between the varieties. Overall they were both excellent, both in taste and production.
- I've never grown Swiss chard before, but it looks pretty growing in the garden.
- This was our first experience with this veggie. It adds flavor to salads and sandwiches. My neighbors and I will plant it next year. This would also be an interesting focal point in a flower pot.
- I did not like the taste of either. I thought it was going to taste like spinach.
- Light frost had no affect on seedlings. Both varieties came back vigorously after a bad hailstorm

on June 24. Both were ready for consumption at the same time. Both produced high yields. No difference in taste.

Spring 2009

- Very healthy. Very good yields for both. Nice color and could not taste the difference.
- Both varieties appeared healthy—there was no difference. Both produced similar yields. Plants look good and robust.
- Terrific yields on both. Both were beautiful until hard freeze. Both tasted very good!
- First time I've ever planted Swiss chard. Enjoyed trying it different ways: raw, steamed, in stir fry.
- These plants grew very well and full. The plants were very healthy but I could not get over the bitter taste.
- Both did well with the cool weather and resisted freezing.

Fall 2009

- Both were very attractive. We harvested them when young.
- Both showed good health. Both were attractive. Similar yields.
- Both emerged well. Both were harvested on 12 October. Both had good yields.
- Impossible to taste any difference between the two. They were a great addition to a fall garden—keeping us in greens after others were done.
- Came up very nice and both looked great. Both were about 5–6 inches tall and then we had a very hard freeze.
- Both germinated well. Both were ready about the same time. Yields were very similar. Both were colorful and were about the same in appearance when the frost ended the season. I would be happy with either of these varieties.
- Plants were green and healthy but did not mature before killing frost on 7 October.
- Deer ate most of them before they got big. They only got about 3 inches tall. Did not care for the taste of either.
- Grasshopper problems.

Comments on ‘Bright Lights’ Swiss Chard

Spring 2008

- Taller and larger plants. Suffered hail damage, but came back nicely. Stalks had brighter colors, particularly yellow.
- Suffered a few necrotic spots. Deeper, more distinctive colors. ‘Bright Lights’ is more vigorous, has better color, and is the better choice.

Spring 2009

- Hardier.
- Tender and tasty steamed or in a salad.
- Matured earlier and didn’t have a bitter taste.
- Yielded 15% more. Plants were taller and could see more color variety. Better flavor.
- I prefer ‘Bright Lights’ better because I thought the color was a little better, but they were both very similar. Its colors had a little deeper color.
- The only difference I could find is quicker germination and greater vigor in the early season.
- More colorful stalks; otherwise, there was very little difference among the two.

Fall 2009

- Very comparable in taste—‘Bright Lights’ slightly milder.
- Even germination, very colorful, better height and color.
- Produced much better.
- A bit larger plants. Mature a couple days earlier. Had more yellow stalks. Slightly more colorful and tender.
- Looked healthier and more colorful.

Comments on ‘Five Color Silverbeet’

Spring 2008

- Germinated two weeks earlier than ‘Bright Lights’. Plants were healthy and very productive. We harvested it several times. It was delicious, whereas ‘Bright Lights’ was bland.
- More flavorful.
- Seemed to withstand heat better. Its stalks were thicker and the veins on the leaves were more colorful and pronounced.

Spring 2009

- Smoother looking leaves.
- Leaves were larger and fuller.
- Only difference: ‘Five Color Silverbeet’ had a better root system—perhaps this would be of benefit in a dry year.
- Large leaves—fast recover—vigorous. An excellent producer.

Fall 2009

- Nicer flavor—but close call.
- Preferred to eat this variety in salads while young and tender.
- Very attractive and tasty/tender.
- Germination was very spotty. Not much growth at all.
- Our plants were all the same color.
- Higher yield. Nice mild flavor.

Conclusions

Gardeners were impressed with both varieties for their beauty, taste, and production. Both varieties tolerated cool temperatures in spring and fall. Most gardeners preferred ‘Bright Lights’ for its brighter colors and slightly higher yields. Other gardeners were impressed with the vigor and flavorful stalks of ‘Five Color Silverbeet’.

Trial 44. Swiss Chard, Red

Varieties (information and photos from seed catalogs)

Harris



'Rhubarb'

28 days baby; 55 days full size. Dark reddish-green, heavily crumpled leaves with bright crimson veins and stalks. Adds beautiful color in salads or may be steamed with other greens.

'Sunset Magenta'

28 days baby; 55 days full size. Smooth leaves with brilliant pink stalks. Its mild flavor is well suited for salad mixes.



Johnny's

Data

Data were collected at 11 sites in Fall 2009.

Trait	'Rhubarb'	'Sunset Magenta'	Same
Germinated best	60 %	20 %	20 %
Healthier plants	67	22	11
Matured earlier	43	29	29
Higher yields	43	43	14
More attractive	29	29	43
Tasted better	33	17	50
<i>Recommend to others</i>	50	38	
<i>Preference</i>	57	43	
<i>Overall rating¹</i>	5.43	5.14	

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

General Comments

- Both looked medium green with good thick leaves.
- Didn't have time to mature.
- Plants got about 2 inches tall before they were hit by frost.
- Neither one yielded very much. Both were slow to come up and didn't set very big.
- Did not harvest either because season ended. Would like to try planting them again next spring.
- The plants never matured. They were only one inch high.
- These were not hardy enough to be planted so late, although it was a cold season this year. Would like to try again earlier in the growing season.

Comments on 'Rhubarb' Chard

- It did the better of the two. Maybe we needed to plant earlier.
- These plants were bigger and were a nicer color. We really enjoy the taste of 'Rhubarb'.
- Looked more colorful.
- Harvested as baby green—tasted slightly salty. A little more flavor than 'Sunset Magenta'.
- Better germination and color.

Comments on 'Sunset Magenta' Chard

- Better germination.
- Better germination and more robust plants.
- Picked twice—higher yields. Nice mild flavor with the cool weather.

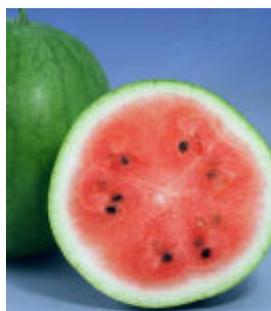
Conclusions

We tried this as a fall crop and generally failed. The plants only got a few inches tall and most gardeners were not interested in harvesting baby greens. There was no clear standout among the two varieties. We'll learn from this trial and limit testing of Swiss chard to spring plantings in the future.

Trial 45. Watermelon

Varieties (information and photos from seed catalogs)

Hollar



'Mickylee'

82 days. An icebox type with delicious, bright red flesh. The rind is light gray and speckled. Melons average 8–10 pounds. Stores well. Small seeds.

'Sugar Baby'

80 days. Very popular icebox type with good keeping quality. Round melons average 8–10 pounds. Its distinctive, dark green rind is thin, but fairly tough. Flesh is deep red, crisp, and very sweet. Small seeds.



Johnny's

Data

Data were collected at 34 sites in 2009.

Trait	'Mickylee'	'Sugar Baby'	Same
Germinated best	15 %	45 %	39 %
Healthier plants	19	46	35
Matured earlier	29	67	4
Higher yields	32	48	20
More attractive fruits	36	50	14
Tasted better	26	53	21
<i>Recommend to others</i>	42	63	
<i>Preference</i>	40	60	
<i>Overall rating¹</i>	4.50	5.35	

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

General Comments

- Both melons had a wonderful taste. Neither grew very well due to lack of rain and a cool summer.
- My plants hardly grew—finally saw fruit in September—but only got baseball-size fruits that did not mature before frost.
- Neither variety grew—I got one melon just before the frost—and it was the size of a baseball.
- Lots of blooms but no fruits. Germination was good but then everything stood still in the garden for so long.
- Another vine crop without a happy ending—I'll try again though.

Comments on 'Mickylee' Watermelon

- Tasted better, seemed to have healthier plants, and produced higher yields. None were perfectly ripe when harvested—I harvested due to frost.

- Healthier vines, better yield, faster growing. Tastier.
- Fruit were larger, more beautiful inside and out, and sweeter—delicious.
- I'm still eating 'Mickylee' and it is the end of November. They store better than 'Sugar Baby'.
- Melons had way more seeds.

Comments on 'Sugar Baby' Watermelon

- Its vines were more aggressive. Matured two weeks earlier. Higher yields, although we did not have more than eight of either one. Richer color and more consistent size. Sweeter and juicier.
- Produced better, got bigger, and tasted sweeter.
- Had the first edible fruit. Produced more fruit, although they were smaller.
- Earlier and tasted great. More attractive inside and out.
- Melons ripened earlier, were larger and tasted better. Its flesh was pretty red. Its vines were more aggressive early on.
- Some nice-size melons. Ripened earlier. Better taste and quantity.

Conclusions

'Sugar Baby' is well liked across the nation for its reliability and our trials reinforced this reputation. 'Sugar Baby' outperformed 'Mickylee' in a year marked by snowfall in June and a cold summer overall. Its vines were healthier and produced more melons. Its melons were earlier, better looking, and better tasting. However, neither variety grew well. Neither variety received high marks or rave reviews. Many gardeners had to replant due to the cold spring and some gardeners did not harvest a ripe melon.

Flower Trial Reports

Trial 46. Cosmos

Varieties (information and photos from seed catalogs)



'Sonata Mix'
Large graceful blooms in bright shades of red, white, carmine, pink and rose. Semidwarf, erect plants, free-flowering habit. Showy for the garden and excellent for cutting. Height is 24 inches.



'Versailles Mix'
Extra large flowers are produced on sturdy 42-inch stems. Makes an excellent bedding plant and cut flower. Mixture of white, blush pink, carmine, and pink with a deep pink eye. Strong stems. Developed for cutting.

Data

Data were collected at 7 sites in 2008 and 37 sites in 2009.

Trait	2008			2009			Weighted Total		
	'Sonata'	'Verslls'	Same	'Sonata'	'Verslls'	Same	'Sonata'	'Verslls'	Same
Germinated best	14 %	0 %	86 %	19 %	27 %	54 %	18 %	23 %	59 %
Healthier plants	17	0	83	11	22	68	12	19	70
Matured earlier	83	0	17	50	26	24	55	22	23
Produced more flowers	33	0	67	31	31	39	31	26	43
More attractive in garden	17	17	67	26	11	63	25	12	64
Better cut flower	0	0	100	14	18	68	12	15	73
<i>Recommend to others</i>	100	75		78	73		78	73	
<i>Preference</i>	67	33		62	38		62	38	
<i>Overall rating¹</i>	8.13	8.00		7.19	6.92		7.34	7.09	

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

General Comments

2008

- The flowers of each variety were beautiful.

2009

- I had other cosmos varieties in my garden, but these varieties catch your eye.
- Both varieties had healthy plants with lots of blooms of awesome colors.

- Both varieties are blooming now—one tall and one short—and look very nice.
- Plants of both varieties were very healthy.
- Both varieties survived the hail we had in June.
- Both grew vigorously. Their flowers lasted well in cut bouquets.
- Both varieties had almost a hedge-like quality. Lots of foliage but not so many blooms.
- Neither lasted very long in the garden or fared well in partial shade and wind.

Comments on 'Sonata Mix' Cosmos

2008

- Bloomed earlier; more time to enjoy. I loved these flowers and will plant them again.

2009

- Flowered earlier. Shorter plants—less subject to wind damage.
- Bloomed 10 days earlier. Bloomed more consistently. I like its larger blooms and sturdier stems—good for cut flowers.
- 'Sonata Mix' is covered with flowers and on nice compact plants that withstand strong wind. Flowers are bigger and nicer. Better colors.
- Looked fuller and flowered earlier.
- More flowers that lasted longer and looked nice.
- Shorter plants and bloom earlier. Would make a good mix with taller varieties to make a broader wall of cosmos in the garden.

Comments on 'Versailles Mix' Cosmos

2008

- I like its brighter colors.
- Good color and heartiness.
- Taller plants and later to bloom.

2009

- As I looked out my kitchen window, I could see these flowers swaying in the breeze. They look very attractive.
- Larger plants. More beautiful, fuller flowers.
- Nice flowers, but plants are tall and when out in the open the wind would blow them down.
- Longer stems.
- Looked more like a hedge and more uniform than 'Sonata Mix'.
- So big they are ugly. They could also be a border shrub, but are not suitable for my garden.
- More blooms over a longer time. A prolific bloomer. A better color variety. More showy.

Conclusions

Both varieties performed well—both in the garden and as a cut flower. Most gardeners preferred 'Sonata Mix' for its earlier blooms. Its compact (24-inch) habit was less sensitive to wind damage, too. If a taller (42-inch) plant is preferred, 'Versailles Mix' would be a good choice.

Trial 47. Cosmos, Sulphur

Varieties (information and photos from seed catalogs)



Seed Savers Exchange

'Diablo'

A beautiful display of fiery scarlet flowers. The 30-inch, bushy plants are drought tolerant. Former All-America Selections Winner.

'Red Crest'

Reddish-orange blooms are slightly cupped and frilled at the edges, giving them a crested appearance. Free-flowering, 24-inch bushy plants make an attractive border. Great for cut flowers.



Territorial

Data

Data were collected at 40 sites in 2009.

Trait	'Diablo'	'RedCrest'	Same
Germinated best	25 %	42 %	33 %
Healthier plants	18	15	68
Bloomed earlier	38	26	35
Produced more flowers	21	21	59
More attractive in garden	25	9	66
Better cut flower	11	16	74
<i>Recommend to others</i>	83	81	
<i>Preference</i>	55	45	
<i>Overall rating¹</i>	7.79	7.63	

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

General Comments

- There was very little difference between the two varieties—both were a beautiful, vibrant addition to the garden.
- Couldn't tell the difference between the two—nearly identical!
- Both were healthy. Plants looked about the same (height, bushiness, etc.). Neither seemed to last very long as a cut flower.
- Both varieties had vibrant colors but blooms didn't withstand winds well.
- They both were beautiful and produced all summer so beautifully. I loved them both.
- Very similar. I enjoyed the foliage.
- The plants were not attractive for my taste. Very spindly, spidery. Blossom color was very nice. I did enjoy several vases of cut flowers indoors, but the blooms quickly turned to seed and dropped petals.
- Took 10 weeks to bloom. Beautiful now! Great in our North Dakota winds. No difference between the two.
- Didn't really think either of these varieties was great.
- Neither variety had as many flowers as the traditional pink cosmos.
- Both grew well and produced large quantities of flowers.
- Both are beautiful flowers. I used these flowers as centerpieces for our son's wedding in September! They were gorgeous!
- Both did well—flowered all season.
- Bees loved them both. I cut them but they did not last as long as I expected them to last.

- Very hard to tell a difference. These were both terrific—I could cut dozens of blooms every 2–3 days.
- Prolific! Awesome—I hope some volunteer plants appear in my garden next year.

Comments on 'Diablo' Cosmos

- Prolific bloomer.
- The leaves were as attractive as the flowers. They bloomed first and lasted longer.
- I liked its color better.
- Bloomed one week earlier.
- Very large plants—must have sufficient garden space for them to look at their best.

Comments on 'Red Crest' Cosmos

- This was an eye-catcher.
- Was very pleased. Plants are healthy and are continuing to bloom. Beautiful contrast with purple Russian sage. They started slowly but started to shine in August.
- Bloomed a much longer time—thicker stand. Plants were twice as tall. These are beautiful fire orange flowers. Bloomed in the end of July—two weeks earlier than 'Diablo'.
- Its flowers seemed to vary from orange to a deep red orange more. Slightly deeper colors.
- Blooms faded fast.
- Taller and bushier with more flowers.
- Longer stems; better cut flower.
- A beautiful orange-red color!
- Color was a little more bold and seemed to hold onto their blooms longer.
- I hardly got any flowers. It was a waste of space.

Conclusions

Many gardeners mentioned these varieties were almost identical—and they liked both. Both 'Diablo' and 'Red Crest' produced lots of vibrant red-orange flowers throughout the summer. Plants were healthy and bushy. Individual flowers were short lived and not suited for cutting.

Trial 48. Sunflower, Gold

Varieties (information and photos from seed catalogs)



Johnny's

'Sunbeam'

Golden yellow rays with a chartreuse disk. Noted for its vigorous growth and high quality flowers. Plants are single stemmed and the flowers are pollenless. Plants grow 60–72 inches and bloom in 70–80 days.



Johnny's

'Sunrich Gold'

Flowers have golden yellow petals and bright green disks. Nonbranching, pollenless sunflowers are ideal for cutting. Blooms in 60–70 days. Stalks grow 48–60 inches.

Data

Data were collected at 10 sites in 2009.

Trait	'Sunbeam'	'Sunrich Gold'	Same
Germinated best	10 %	10 %	80 %
Healthier plants	0	40	60
Bloomed earlier	10	60	30
Produced more flowers	13	25	63
More attractive in garden	0	56	44
Better cut flower	33	67	0
<i>Recommend to others</i>	56	89	
<i>Preference</i>	12	88	
<i>Overall rating¹</i>	5.33	6.67	

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

Recommendations and Preferences

'Sunbeam' was recommended by 5 of 9 (56%) gardeners while 'Sunrich Gold' was recommended by 8 of 9 (89%) gardeners. When asked to state a preference, 7 of 8 (88%) gardeners selected 'Sunrich Gold'.

General Comments

- Excellent germination. Heads were too big for cut flowers in the home.

Comments on 'Sunbeam' Sunflower

- Its heads bow down so you can save some seeds from the birds.
- More diseased leaves. Plants were shorter. Not a good variety.

Comments on 'Sunrich Gold' Sunflower

- Heads were beautiful—very showy.
- I prefer the color and size of its flowers for cutting.
- The color and shape of its blooms were more pleasing.
- I prefer this variety—its plants were shorter and heads were a little smaller.
- Leaves became dry and unsightly in late summer.
- Earlier flowers—six weeks earlier!

Conclusions

'Sunrich Gold' clearly outperformed 'Sunbeam'. It bloomed weeks earlier and looked more attractive in the garden. The 'Sunrich' series is the most popular series of cut sunflowers and 'Sunrich Gold' did not disappoint—its blooms were very attractive as a cut flower.

Trial 49. Sunflower, Orange

Varieties (information and photos from seed catalogs)

Veseys



'Pro Cut Orange'

Bright orange 3–4-inch flowers with very dark center. This pollenless, single-stemmed variety was bred especially for the cut flower market and makes a great addition to any garden. Very early blooming (only 50–60 days).

'Sunrich Orange'

Flowers have golden yellow rays with a black disk. Considered the industry standard, 'Sunrich' varieties are ideal for cut flower production because they are pollenless and non-branching. Blooms in 65–70 days.



Harris

Data

Data were collected at 7 sites in 2008 and 22 sites in 2009.

Trait	2008			2009			Weighted Total		
	'PCutO'	'SunrO'	Same	'PCutO'	'SunrO'	Same	'PCutO'	'SunrO'	Same
Germinated best	43 %	0 %	57 %	41 %	23 %	36 %	41 %	17 %	41 %
Healthier plants	14	14	71	28	28	44	25	25	51
Matured earlier	86	0	14	78	11	11	80	8	12
Produced more flowers	14	14	71	42	16	42	35	16	49
More attractive in garden	14	29	57	30	20	50	26	22	52
Better cut flower	40	20	40	27	45	27	30	39	30
<i>Recommend to others</i>	86	86		67	57		71	64	
<i>Preference</i>	57	43		63	37		62	38	
<i>Overall rating¹</i>	7.71	7.71		6.90	6.90		7.10	7.10	

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

General Comments

2008

- Plants of both varieties were healthy and their flowers were beautiful.

2009

- On both varieties, the large central flower was so large and heavy that it bent over almost immediately. I don't want to plant sunflowers again.
- The grasshoppers made them look really rough. I cut some of each variety and brought them inside—I enjoyed both.
- Both were susceptible to aphids.
- Both very pretty.

Comments on 'Pro Cut Orange' Sunflower

2009

- Bloomed several days earlier. Nice foliage. Larger, more colorful flowers. Not as tall.
- Bigger flowers and flowers appeared earlier.
- Bloomed two weeks earlier. A few small flowers came from offshoots from main stem (these small flowers were good as cut flowers).
- Larger heads.
- 'Pro Cut Orange' was completely headed out before 'Sunrich Orange' even started to head out.
- Earlier flowering and more uniform in row.
- Very thick stems and beautiful flowers!
- The flowers seemed to dry up too soon in the garden.

Comments on 'Sunrich Orange' Sunflower

2008

- Flowers were more in proportion—petal to center. The stems were more slender, making them easier to use in an arrangement.
- Heads seemed to be very uniform in size and more attractive.

2009

- Had fewer flowers—but they were bigger and fuller.
- Stood up better. Heads were smaller and would work better in arrangements.
- Plants were of better color and taller. Bigger heads and held up better in the garden.
- Slightly larger flowers.

Conclusions

Both varieties were outstanding, especially for cut flower production. 'Pro Cut Orange' blooms very early and reliably. The flowers of 'Sunrich Orange' bloom later, but are larger, more uniform, and especially attractive. The slender stems of 'Sunrich Orange' make this variety easier to use in flower bouquets, too. These varieties complement one another for cut flower production with 'Pro Cut Orange' serving the role as an early maturing variety that extends the harvest season. The single-headed trait of these varieties limits their use in gardens since their season of bloom is short. Multibranching varieties, in contrast, produce many more blooms and have a longer display of color.

Trial 50. Sunflower, Primrose

Varieties (information and photos from seed catalogs)



Johnny's

'Buttercream'

Pale, butter-yellow flowers with brown centers add a delicate touch of beauty to the garden. Side branches provide 4-inch blooms for several weeks. Pollenless. Blooms in 50–60 days. Plants grow 48–60 inches.

'Vanilla Ice'

Clusters of light yellow and cream flowers with dark chocolate centers. Plants grow 60–72 inches.



Burpee

Data

Data were collected at 24 sites in 2009.

Trait	'Butter-cream'	'Vanilla Ice'	Same
Germinated best	67 %	17 %	17 %
Healthier plants	50	10	40
Bloomed earlier	75	15	10
Produced more flowers	71	14	14
More attractive in garden	62	10	29
Better cut flower	46	8	46
<i>Recommend to others</i>	78	43	
<i>Preference</i>	73	27	
<i>Overall rating¹</i>	7.39	4.91	

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

General Comments

- Both varieties produced flowers looking like those of volunteer sunflowers. Neither one had stems long enough for cut flowers.
- Both had small flower heads.

Comments on 'Buttercream' Sunflower

- Beautiful!
- Simply lovely plants; required very little work.
- Flowers were so soft looking—dainty.
- Better for a cut flower—longer stems and bigger flowers.
- Bloomed earlier and longer. Flowers are large on strong stems—beautiful.

More Comments on 'Buttercream'

- Stronger plants and stems; very nice flowers.
- Produced flowers sooner and they were prettier.
- Nice cut flowers. Many flowers on each stalk.

Comments on 'Vanilla Ice' Sunflower

- Very few plants germinated.
- I really like its color.
- A more bushy, wildflower-like plant. It would be great for the back of a flower garden.
- It was better in arrangements.
- Its late bloom and petal shape made for late season interest in the garden.

- Stayed upright better under heavy winds.
- Flowers looked faded—even new blooms.
- Flowers were small, not attractive, and late.

Conclusions

'Buttercream' was superior in all measured categories. Its larger seed led to a higher germination rate. Its plants were healthy and bloomed much earlier compared to those of 'Vanilla Ice'. 'Buttercream' produced a higher number of flowers, more attractive flowers, and were more useful for cutting. It's an impressive new variety which adds a soft primrose color to the ever expanding palette of sunflower colors available for gardeners. Beautiful and lovely!

Trial 51. Sunflower, Red

Varieties (information and photos from seed catalogs)

Johnny's



'Moulin Rouge'

One of the darkest red sunflowers, this hybrid produces pollenless blooms on 6-foot plants. Plants will branch with attractive dark stems. Used in borders and flower arrangements. Blooms in 65–70 days.

'Prado Red'

Deep red and gold petals with dark centers provide a special display. Multi-branching habit provide lots of flowers for cutting. Pollenless. Plants grow 48 inches.



Veseys

Data

Data were collected at 37 sites in 2009.

Trait	'Moulin 'Rouge'	'Prado Red'	Same
Germinated best	44 %	15 %	41 %
Healthier plants	32	24	44
Bloomed earlier	48	32	19
Produced more flowers	60	27	13
More attractive in garden	34	34	31
Better cut flower	24	18	59
<i>Recommend to others</i>	74	68	
<i>Preference</i>	64	36	
<i>Overall rating¹</i>	7.31	6.69	

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

General Comments

- They are both gorgeous!
- Both were beautiful and unusual.
- Both did well. Great color. Both made great additions to my cut flower bouquets.
- Both had sturdy, healthy plants. Both flowered abundantly.
- Both grew well. Would try both again.
- Both have pretty purple stems.
- Both were healthy. Both were pretty. I dried some of each and they dried nicely.
- Both are not made to withstand North Dakota winds.
- I planted the trial three times and rabbits ate the seedlings each time.
- Deer devoured them before they bloomed.
- The deer in my area love baby sunflowers.

Comments on 'Moulin Rouge' Sunflower

- Its flowers were more vibrant in color.
- Taller, stronger plants with bigger, more attractive heads. Earlier.
- Slightly taller, Flowers were more red (not black). Flowers lasted longer.
- Seemed to hold its petals longer after being cut.
- I liked its color better.
- I loved the true red in this blossom. Multiple blossoms on each branch.
- Taller plants, larger flowers. Its thicker stalks were able to withstand winds.
- Earlier, larger (two times the height), and much more attractive. Brighter flowers. Better cut flower.
- The plants were healthier and lasted longer. I still had flowers in mid September.
- Very healthy throughout the season.
- Much taller and fuller plants. Bloomed two weeks earlier. Produced many flowers. The dark flowers are beautiful.
- Flowers were too big to use as a cut flower.
- Produced four times more flowers, although they were smaller in size.

Comments on 'Prado Red' Sunflower

- Very rich color. Nice.
- I loved the dark color! Beautiful! I prefer this variety for its size and color of flowers. These flowers won first place at the Golden Valley Fair.
- This variety was more bushy and shorter, which I liked better in my compact garden.
- The plants were shorter. The flowers had an interesting yellow halo.
- Grew taller than expected. A very deep red bloom.
- The plants were lovely in bloom, and larger than the 'Moulin Rouge'.
- More flowers and not deformed.
- Loved the color!

Conclusions

'Moulin Rouge' continues to impress gardeners. It has displayed strong vigor under all kinds of weather conditions. In this trial, it produced flowers earlier and in greater abundance compared to 'Prado Red'. Gardeners loved the unusual flower colors of both varieties: dark red in the case of 'Moulin Rouge' and a deeper, darker red in the case of 'Prado Red'. Both would be fascinating additions to any flower garden.

Trial 52. Sweet Pea

Varieties (information and photos from seed catalogs)

Johnny's



'Cuthbertson Choice Mix'

Deep shades of purple, red, salmon, lavender, and pink. Large blossoms on long stems for cutting. Height is 60–72 inches. Blooms in 84–98 days.

'Mammoth Choice Mix'

Large flowers on long stems make this excellent for cutting. Mix of deep rose, pink, scarlet, blue, lavender, white, and more. Early-flowering, fragrant, and heat tolerant. Height is 60–72 inches. Blooms in 74 days.



Johnny's

Data

Data were collected at 45 sites in 2009.

Trait	'Cuthbrtn 'Choice'	'Mammth Choice'	Same
Germinated best	19 %	36 %	45 %
Healthier plants	19	25	56
Bloomed earlier	31	39	31
Produced more flowers	22	42	36
More attractive in garden	9	39	52
Better cut flower	6	17	78
<i>Recommend to others</i>	<i>59</i>	<i>70</i>	
<i>Preference</i>	<i>32</i>	<i>68</i>	
<i>Overall rating¹</i>	<i>6.12</i>	<i>6.45</i>	

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

General Comments

- I always grow sweet peas and this was the first year they didn't do good. Wet weather in spring slowed their germination. They did not come up until June 25. They were loaded with buds when the first frost of fall came.
- I was quite surprised that these didn't come up sooner—very late blooming—could be the season this year.
- Both had long stems for cutting.
- Both produced nice healthy plants. Neither produced the amount of flowers I expected—could have been the weather. I would be interested in trying these again in a warmer year.
- They both made a good cut flower.
- I will definitely plant sweet peas again. Friends even came to pick them.
- Both looked good initially but I believe mildew took both varieties prematurely.

- I've never seen sweet peas grow so tall.
- Both were late bloomers. Didn't have flowers until the end of August.
- Both produced very well. Both were gorgeous.
- Neither variety seemed to be as fragrant as sweet peas in other years.
- Both germinated well and were healthy. They spread out instead of growing up. Both were popular as cut flowers. I grew these with 'Old Spice Mix', which bloomed two weeks earlier, had smaller—but brighter—flowers on shorter stems.
- Both were fragrant and attractive.
- I was really pleased with the sweet peas! The fragrance of the flowers was light. Beautiful!
- Had nice fragrance, although neither the varieties grew as nice and full as my sweet peas have in the past, when I planted them in the same area with a trellis for support in full sun.

Comments on 'Cuthbertson Choice Mix'

- I haven't had sweet peas like this in years! Large blossoms; straight, long stems. The cool summer helped. But this variety was outstanding.
- I have tried for years to grow sweet peas like my mother did. This is the closest I have come, but still not as good as hers in terms of sturdy plants and number of flowers.
- Produced a wide variety of nice flowers; very fragrant; tall plants.
- Its flowers seemed more brilliant in color.
- I prefer this variety for its brighter colors.
- A greater variety of colors.
- Very fragrant. Bloomed earlier.
- Very floriferous. Overall performance was better.
- First to bloom and had more flowers.

Comments on 'Mammoth Choice Mix'

- Bloomed two weeks earlier. It gives more flowers over the summer season.
- Bloomed one week earlier. Lots more flowers.
- Taller and fuller plants. The blossoms opened a couple weeks before the other.
- Bloomed one week earlier. Lots more flowers.
- The smell was sweeter. Color was very nice.
- The vines stood more erect. Flowers had bright colors. Bloomed a week earlier.
- Produced more flowers. They were more attractive but less fragrant.
- Strong plant. Even with the late start it thrived and flourished.
- Vines were more compact and sturdier.

Conclusions

The plants of both varieties started slowly due to very cool weather. Several gardeners did not see blooms until August and some did not see any flowers at all. 'Mammoth Choice' was generally preferred for its earlier display of flowers. Its vines were strong and vigorous, producing more flowers compared to those of 'Cuthbertson Choice'. Both varieties did well as cut flowers.

Trial 53. Zinnia, Bicolor

Varieties (information and photos from seed catalogs)



Burpee

'Candy Cane Mix'

A bright mix of double-flowered pinks, reds and golds, streaked with white and bronze. Eye-catching 4-inch blooms on 18-inch plants. Suitable for cut flowers.

'Peppermint Stick Mix'

Gold, yellow, cream and pink flowers, all splashed and striped with red, purple, rose or scarlet for a unique appearance. Double blooms with a small percentage of solids. Plants grow 24–28 inches. Suitable for cutting.



Harris

Data

Data were collected at 14 sites in 2008 and 37 sites in 2009.

Trait	2008			2009			Weighted Total		
	'CCane'	'PStick'	Same	'CCane'	'PStick'	Same	'CCane'	'PStick'	Same
Germinated best	29 %	36 %	36 %	18 %	41 %	41 %	21 %	40 %	40 %
Healthier plants	14	21	64	15	42	42	15	36	48
Matured earlier	36	21	43	24	42	33	27	36	36
Produced more flowers	29	36	36	18	48	33	21	45	34
More attractive in garden	7	36	57	42	39	18	32	38	29
Better cut flower	9	27	64	26	26	47	21	26	52
<i>Recommend to others</i>	86	100		66	78		70	85	
<i>Preference</i>	31	69		45	55		41	59	
<i>Overall rating¹</i>	7.14	8.00		6.55	7.52		6.71	7.65	

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

General Comments

2008

- The seeds of both varieties germinated well in spite of the cool weather. Plants were healthy and full of blooms with very unique, splotchy colors. Their blooms lasted long as cut flowers.
- Both are fun flowers!
- I loved these two-toned flowers.
- Both produced lots of flowers.
- Both remained healthy through the season. Both began blooming on July 24.

2009

- I loved growing these—my first year! They attracted butterflies and hummingbirds! As of 1 October, they are still blooming!
- They were both attractive in the garden and as a cut flower.
- My wife and I disagreed on which variety was more beautiful. Both of them were a conversation piece—always—once they started blooming. Visitors to the garden always gave them a second look (neighborhood kids liked them too).
- Both produced well even though some of the small plants were beaten down by heavy rain and small hail in early June.
- Both varieties had strong plants.
- Both varieties made long lasting arrangements.
- I would plant both again.
- I prefer standard zinnias over these. Both of these varieties produced heavy flowers that quickly turned brown.

Comments on 'Candy Cane Mix' Zinnia

2008

- Tall, hardy stalks. Began flowering by 15 August and still flowering when I pulled them out on 18 October. Thick heads on the flowers. Good variety of colors.
- Flowers were bigger and multicolors were more evident.
- A lighter pastel palette of golds, whites, cream, and pink. Produced slightly more flowers.
- Fuller plants. Its flowers were mostly white and yellow with a little pink at times. Its blooms lasted a few days longer as a cut flower compared to those of 'Peppermint Stick Mix'.

2009

- I loved 'Candy Cane Mix' for the more colorful and vibrant flowers. Looked great in the garden and in bouquets.
- Very strong plants. Lovely blooms.
- Earlier to bloom. More attractive flowers. Healthier plants.
- Blooms were bright and lasted well after cutting.
- I used them in bouquets and like the way they fit in.
- Fuller head for cut bouquets.
- Brighter colors and bigger blooms.
- Much more colorful flowers, Blooms had more varied colors and a nicer shape.
- I liked its flowers better. They were bigger and had a nicer looking variegation of color.
- I liked its larger, more colorful flowers.
- Nice tall plants—big flowers too! The flowers had nice long streaks of white in them!
- Bloomed four days earlier. Its flowers were much more vibrant and showy.
- Its blooms seemed to droop more.

Comments on 'Peppermint Stick Mix'

2008

- The 'Peppermint Stick Mix' blossoms were slightly fuller and the color seemed brighter.
- I am simply delighted with the colors of 'Peppermint Stick Mix'! I loved the pink striped ones, those with cream flecks, and those with mainly gold petals and red flecks.
- More variation in flowers (red and yellow, white and red, and yellow and red).
- Much better germination. Its flowers are cute little puffs. Earlier blooms and more of them, too. Nice flowers. Taller and fuller plants.

2009

- The plants seemed healthier. Once they started blooming, they just didn't stop. I loved its colors and the patterns on the blooms and how compact the blooms were.
- Sturdier plants—more drought resistant. Bushier plants led to more flowers.
- More variety in colors and were more distinct in stripes.
- Both are good flower varieties, but 'Peppermint Stick Mix' is prettier in the garden and as a cut flower.

More Comments on 'Peppermint Stick Mix'

- I like both varieties, but 'Peppermint Stick Mix' performed the best; its colors were brilliant.
- Much larger plants, but only two colors: white and yellow (with red streaks).
- Healthier plants. Larger flowers.
- Plants looked fuller. Flowers were more attractive and lasted longer.
- Looked best. Strong stalks. Beautiful bicolor flowers with many buds.
- Plants were healthier.
- Very beautiful flower.
- More cold hardy in spring.
- More susceptible to insect pests.

Conclusions

Gardeners fell in love with the bright, splashy colors of both varieties. Plants of both varieties were sturdy and well suited for cutting. Most gardeners felt 'Peppermint Stick Mix' showed a greater intensity and broader range of colors in its blooms. Its plants were more robust and produced more flowers.

Trial 54. Zinnia, Cactus

Varieties (information and photos from seed catalogs)

Territorial



'Art Deco Mix'

Big and bold cactus-style flowers are stunning in the garden. Colors include pink, purple, red, and lavender. Plants grow 36 inches.

'Giant Cactus Mix'

Large cactus-style blooms in a dazzling array of colors. Great for the garden and in bouquets. Sturdy plants grow 30–36 inches.



Veseys

Data

Data were collected at 47 sites in 2009.

Trait	'Art Deco'	'Giant Cactus'	Same
Germinated best	22 %	37 %	41 %
Healthier plants	22	36	42
Bloomed earlier	27	45	27
Produced more flowers	13	44	42
More attractive in garden	22	44	33
Better cut flower	35	29	35
<i>Recommend to others</i>	73	87	
<i>Preference</i>	40	60	
<i>Overall rating¹</i>	6.91	7.67	

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

General Comments

- Both varieties really add to an arrangement.
- Both were very long lasting as a cut flower.
- Neither had very brilliant color.

Comments on 'Art Deco Mix' Zinnia

- Plants were more uniform in height, providing for a more "formal" appearance.
- Loved the colors.
- Very beautiful. Lasted a long time after cut.
- Had more flowers and lasted longer.
- Produced a bumper crop of flowers. A wide array of colors! Simply beautiful right up to freeze up!
- A few days faster. Lasted longer after cut. An all around better flower.

More comments on 'Art Deco Mix'

- Flowers were larger with brighter color. Plants were taller with longer stems.
 - A little more colorful.
 - Just seemed to do better. Weather may have been a factor.
 - Held up better. Flowered longer in the garden and better as a cut flower.
 - Flowers were all salmon/pink color.
 - I liked its variety of colors and cactus-like appearance.
 - Large sturdy plants. Bloomed a full week earlier. Ten times more flowers and the flowers were larger. Everyone commented on how great it was—they walked right by the 'Giant Cactus Mix'. Kept blooming after the first frost.
 - Plants were only half the size of 'Giant Cactus Mix' and produced no flowers.
 - Plants laid over early. Mostly pink flowers.
- Bloomed earlier. I liked the way they looked.
 - The plants are taller and the flowers were prettier with more robust color.
 - Came up quicker, grew taller, and its flowers lasted longer.
 - Produced healthier—more colorful flowers.
 - Flowers were more brilliant in color and lasted longer when cut.
 - Had a lot more flowers—more variety of colors. Bigger flowers.
 - I liked its colors and ruffled petals.
- Bigger blossoms—they were beautiful.
 - Stronger, sturdier, more productive plants.
 - A little more hardy. Its flowers are more interesting.
 - Very strong, sturdy, and colorful!
 - Flowers appeared a week earlier. More flowers per plant led to more color in our garden bed.

Comments on 'Giant Cactus Mix' Zinnia

- 'Giant Cactus Mix' was truly giant and stood up well to the strange weather. The blooms lasted weeks and weeks in the garden. Beautiful!
- Thicker stand and more color variation. Its flower petals are more like cactus.
- More variety of flower heads and colors.

Conclusions

Gardeners loved 'Giant Cactus Mix'. They especially liked the giant size and color variation of its flowers. Its plants grew vigorously and produced lots of eye-catching blooms. The performance of 'Art Deco Mix' was solid—not spectacular—and generally inferior to that of 'Giant Cactus Mix'.

Trial 55. Zinnia, Green

Varieties (information and photos from seed catalogs)



Johnny's

'Benary's Giant Lime'

Popular lemon-lime shade of the 'Benary's Giant' series, which is outstanding for cut flowers. Plants tolerate diseases and have longer vase life compared to other varieties. Long, straight stems. Height is 24–26 inches.

'Envy'

Your neighbors will be jealous of your special chartreuse-green zinnias. Blooms are semi-double with attractive flat petals. A longtime favorite. Height is 24 inches.



Harris

Data

Data were collected at 6 sites in 2008 and 22 sites in 2009.

Trait	2008			2009			Weighted Total		
	'BGLime'	'Envy'	Same	'BGLime'	'Envy'	Same	'BGLime'	'Envy'	Same
Germinated best	67 %	17 %	17 %	18 %	41 %	41 %	29 %	36 %	36 %
Healthier plants	50	17	33	16	11	74	23	12	65
Matured earlier	67	17	17	29	38	33	37	34	30
Produced more flowers	33	17	50	17	22	61	20	21	59
More attractive in garden	50	0	50	21	26	53	27	20	52
Better cut flower	83	0	17	23	15	62	36	12	52
<i>Recommend to others</i>	80	80		70	80		72	80	
<i>Preference</i>	83	17		32	68		44	56	
<i>Overall rating¹</i>	7.83	6.50		6.80	7.35		7.02	7.17	

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

General Comments

2008

- Both varieties really add to an arrangement.
- Neither had very brilliant color.
- Both were very long lasting as a cut flower.

2009

- I thought both looked pretty strange but the wife took them to her office and the women thought them to be very interesting.
- Both of these varieties were great as a backdrop for more colorful varieties in my old fashioned garden—worked well to accent these in a bouquet with button zinnias in bright colors.
- Both were very nice and did well under severe drought conditions.
- They produced the same number of flowers. Their flowers lasted a similar amount of time in a vase.
- Lots of flowers produced by both varieties.
- Both had very healthy plants and the blooms were attractive.
- I probably wouldn't plant them again. The flowers blended in the foliage and were not showy from a distance.
- They were so much the same. They both did well and looked the same, but the color is a little boring.
- I was disappointed in the color. I was expecting a brighter green—mine were a paler green.
- I don't like either of them. I don't recommend them unless you are Irish.

Comments on 'Benary's Giant Lime'

2008

- Flowers were much fuller, almost globular in shape.
- Earlier to bloom and a better cut flower. The blooms were fuller and compact.
- These were pretty flowers and lasted longer in the house.
- Flowers were larger and lasted very long into September.
- 'Benary's Giant Lime' is a misnomer—its flowers were not large.
- Germinated slightly earlier and bloomed slightly earlier. After three days, 'Envy' is going downhill while 'Benary's Giant Lime' still looks good. Flower color is a little greener.

2009

- More production, stronger plants, more growth.
- Plants were a bit taller. The centers of the blooms were more colorful.
- More uniform, mumlike flowers. Full and perfect.
- This was a better cut flower and seemed to grow a little better.
- Larger flowers.

Comments on 'Envy' Zinnia

2009

- Bloomed a few days earlier. Had a few more blooms. I arrange flowers in our little country church—the 'Envy' seemed to be a bit showier with more petals.
- I prefer its petal shape and texture.
- Bigger flowers and smooth petals.
- Bloomed sooner. Looked brighter. Flowers lasted a long time.
- Long stems—liked the shape of 'Envy'.
- More flowers and earlier.
- Had a few more flowers.
- Nicer flower heads.

Conclusions

Gardeners liked both varieties, but neither variety distinguished itself from the other. Both varieties produced lots of blooms, which were often used for cut flower arrangements. Our gardeners were split as to which variety had showier flowers. Some preferred the flatter, more open blooms of 'Envy', while others preferred the fuller, rounder blooms of 'Benary's Giant Lime'. 'Benary's Giant Lime' generally performed better than 'Envy' as a cut flower. Gardeners were also split on whether or not they would ever grow a green zinnia again; several were disappointed with the lack of brilliance in the petals, while others marveled at the novel color.

Trial 56. Zinnia, Semidwarf

Varieties (information and photos from seed catalogs)

Harris



'Cut and Come Again'

A showy mix of double, 2.5-inch blooms on 24–26-inch upright plants. Colors include orange, soft yellow, pink, salmon and scarlet. Long stems are well suited for cut flower production.

'Oklahoma Mix'

Recommended by the Association of Specialty Cut Flower Growers. Prolific, 2-inch, double and semidouble blooms. Bright colors, excellent vase life, and low susceptibility to powdery mildew. Height is 30–40 inches.



Johnny's

Data

Data were collected at 14 sites in 2008 and 39 sites in 2009.

Trait	2008			2009			Weighted Total		
	'CCome'	'Okla'	Same	'CCome'	'Okla'	Same	'CCome'	'Okla'	Same
Germinated best	29 %	14 %	57 %	29 %	29 %	42 %	29 %	25 %	46 %
Healthier plants	31	15	54	21	29	50	24	25	51
Matured earlier	42	25	33	35	41	24	37	37	26
Produced more flowers	38	23	38	25	31	44	28	29	42
More attractive in garden	25	25	50	25	25	50	25	25	50
Better cut flower	18	9	73	30	17	52	27	15	58
<i>Recommend to others</i>	83	83		78	81		80	82	
<i>Preference</i>	58	42		44	56		47	53	
<i>Overall rating¹</i>	8.58	8.00		7.47	7.55		7.76	7.67	

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

General Comments

2008

- These were both beautiful in the garden and lasted a long time as cut flowers.
- Both varieties showed no disease problems, were very attractive in the garden, and held up very well as cut flowers.
- Long lasting blooms.
- Tons of flowers on both varieties—even with minimal deadheading. No powdery mildew. Both cut well and made nice bouquets.
- Plants were very healthy and grew vigorously.
- These zinnias were very nice in my garden. I would purchase either variety.

2009

- These were both beautiful in the garden and lasted a long time as cut flowers.
- Both produced quite a few flowers. They were both gorgeous.
- Awesome for cut flowers!
- Both zinnia mixes did very well. Both varieties had some leaves with hail damage (June storm), but both varieties recovered nicely. With the cool damp nights this summer, I was concerned about mildew. Both varieties did not get mildew (so far!). I liked both varieties.
- Flowers bloomed non-stop. Long lasting in the garden. Great for cutting.
- Both were so nice and colorful. I will plant zinnias again. What a long lasting treat they are! My new favorite!
- Both had small flowers—neither was impressive.
- I liked both of these. I've never planted zinnias before, but will definitely do so. Mine were planted quite close together, but every plant bloomed. Powdery mildew was a problem in late summer.
- Both varieties grew strong even with our cold weather and late start. Plants grew over four feet tall. They had great flower heads, sturdy stalks, and attractive leaves—good for cutting. I did not think that zinnias were attractive to butterflies, but our stand was a monarch refuge at the end of summer!
- Both produced beautiful colors, with those of 'Oklahoma Mix' being more bright and vibrant. I recommend mixing both varieties together or planting them side by side (which is what I did). Looked beautiful in my garden.
- Both were beautiful and did okay with very dry summer weather.

- Both did really well but were a bit taller than I like.
- Both put on a great display in the garden, even with minimal deadheading.

Comments on 'Cut and Come Again'

2008

- It seemed to show more flower regrowth after cutting. Earlier blooms, too.
- Recuperated better after our hailstorm on 19 July.

2009

- Plants were a bit bushier. Stems were longer making them easier to put in a vase.
- Came up earlier and the plants were "healthier" looking. Color variety was great!
- More colorful flowers.
- An abundance of flowers. Looked gorgeous and very eye-catching.
- Slow to start but caught up and grew vigorously.
- I love how tall and beautiful they got—lasted until the hard frost.
- First to flower. Most flower colors were muted—mauve pink, pale lilac, peach. One was orange with purple inside, a favorite.
- Colors were faded out—only white, pink, and purple.
- More color variation. More pinks and reds, whereas 'Oklahoma Mix' had primarily yellow flowers.

Comments on 'Oklahoma Mix' Zinnia

2008

- Plants were healthy and much fuller. Definitely a much more prolific plant. I will plant 'Oklahoma Mix' again.
- Its plants were sturdier against the wind.

2009

- Its flowers were more brilliant. The shape of flowers was very nice and even.
- First bloomed on 25 July, several days before 'Cut and Come Again'.
- I liked its color mix better. It had more reds and yellows while 'Cut and Come Again' had more pinks and magentas.
- They had such bright vivid colored flowers that lasted longer in the garden.

More Comments on 'Oklahoma Mix'

- A greater variety of color.
- Germinated earlier and flowered earlier, with more vigor.
- A variety of deep yellow, red, and pink blossoms.
- Flower colors were more vibrant. The blooms looked healthier and lasted longer.
- So colorful! I liked its bright colors.
- More bright colored flowers. Produced considerably more flowers.
- Double the number of flowers; tillers everywhere. Deep rich colors—pinks, purple, red, and orange—very vibrant.
- Lasted longer as a cut flower.
- Hardier—more heat tolerant. More flowering.
- Bright color and nice foliage.

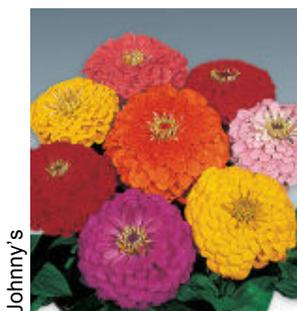
- Seemed to have larger and healthier plants. It produced slightly more flowers and its colors were more vibrant. Flowers were larger and lasted a long time in the vase.

Conclusions

Both varieties were very impressive. They grew vigorously, resisted powdery mildew, and produced lots of gorgeous flowers. Their blooms were outstanding both in the garden and in the vase. Some gardeners noted the vigor of 'Cut and Come Again', whether it was recuperating from a storm or a harvesting of flowers. Its long stems were favored for cut flowers. Gardeners who liked 'Oklahoma Mix' were especially impressed with the variety and brilliance of colors in the mix.

Trial 57. Zinnia, Tall

Varieties (information and photos from seed catalogs)



Johnny's

'Benary's Giant Mix'

Large, 3–4-inch blooms come in an array of bright colors, including dark red, pink, rose, gold, orange, white, coral, and lavender. Strong, thick stems on 30-inch plants. Great for garden displays and for cutting.

'State Fair Mix'

The classic old-fashioned zinnia. Huge, 4-inch, single and double blooms in scarlet, rose, salmon, orange, yellow, white, and more. Long stems. Height is 36 inches.



Johnny's

Data

Data were collected at 9 sites in 2008 and 22 sites in 2009.

Trait	2008			2009			Weighted Total		
	'BGiant'	'SFair'	Same	'BGiant'	'SFair'	Same	'BGiant'	'SFair'	Same
Germinated best	0 %	33 %	67 %	37 %	16 %	47 %	26 %	21 %	53 %
Healthier plants	0	38	63	26	11	63	18	19	63
Matured earlier	25	50	25	42	16	42	37	26	37
Produced more flowers	25	25	50	55	10	35	46	14	39
More attractive in garden	13	25	63	30	30	40	25	29	47
Better cut flower	43	14	43	15	15	69	23	15	61
<i>Recommend to others</i>	75	100		89	63		85	74	
<i>Preference</i>	50	50		68	32		63	37	
<i>Overall rating¹</i>	8.13	8.50		7.95	7.35		8.00	7.68	

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

General Comments

- Both were great—I had a vase of these on my table almost all summer! Pretty and colorful.
- Both of these were very good. Both had pretty, bright colors.
- Both produced nice-sized flowers in beautiful colors.
- It is hard to put one over the other because they both did very well for me. Both stood up well with wind. Colors were pretty.
- The plants were very full of beautiful flowers—an excellent presentation. Cut flowers lasted long.

Comments on ‘Benary’s Giant Mix’ Zinnia

2008

- Bloomed earlier—by a week. Flowers were larger with more petals (made them look fuller)—colors were vibrant.
- Showed a greater variety of colors.
- More blooms and their blooms hold their color better.

2009

- Had a greater color variety.
- Brighter colors, fuller flowers. They are pretty in the garden.
- Flowers were bright and larger.
- Slightly earlier. More flowers, although they were smaller. I liked its bushier look. They had more blossoms and were thus a little more colorful.
- I love the color of these flowers. Huge, fully double, flower cushion look.
- Too plain. Not as much color.
- Very prolific bloomer and had lots of branching—strong plant! Very large flowers—great colors. I cut bouquets weekly. My overall favorite zinnia!
- Taller plants. Flowers were fuller with more petals. Good variety of colors.
- Too many green flowers.
- Had a nicer color mix with reds, yellows, whites, pinks and lavender, with consistently good flower form. Strong plants. Bloomed several days earlier and continued to produce more flowers compared to ‘State Fair Mix’.
- Bloomed three days earlier. Their blooms do not have as strong a stem near the blossom, causing some of the heads to tip over, kink, and decline.
- Slightly fuller blooms. Quick to bloom.

- Slightly more flowers.
- Plants fell over—I had to stake them.

Comments on ‘State Fair Mix’ Zinnia

2008

- Bigger flowers, but fewer of them.
- Fuller plants. Bloomed much earlier. Its plants were more vigorous and its blooms had great color.
- Healthy plants and bloomed early.
- Taller plants and attractive blooms.
- Bloomed earlier. Taller plants.

2009

- Flowers were huge on heavier stalks.
- Larger flowers. Produced longer. Healthier plants.
- Bigger flowers, but fewer of them.
- Fuller plants. Bloomed much earlier. Its plants were more vigorous and its blooms had great color.
- More pinks and less of a color mix.
- I prefer this variety for its colors—mostly red and pink.
- Only shades of pink. No white, yellow, or orange. Stronger plants.
- Bigger flowers and more variety of colors. They have huge flowers the first time, then a little smaller the next times.
- Had misshaped flowers and only shades of pink with one exception, which was white.

Conclusions

Both varieties grew well and produced lots of large flowers. The blooms of ‘State Fair Mix’ were especially big and impressive. Nonetheless, most gardeners preferred ‘Benary’s Giant Mix’, which produced a much greater number of blooms. These blooms were slightly smaller, but had more petals, making them look fuller. The blooms of ‘Benary’s Giant Mix’ were especially vibrant and maintained their brightness when used as a cut flower.

Appendixes

Appendix 1. Welcome Letter

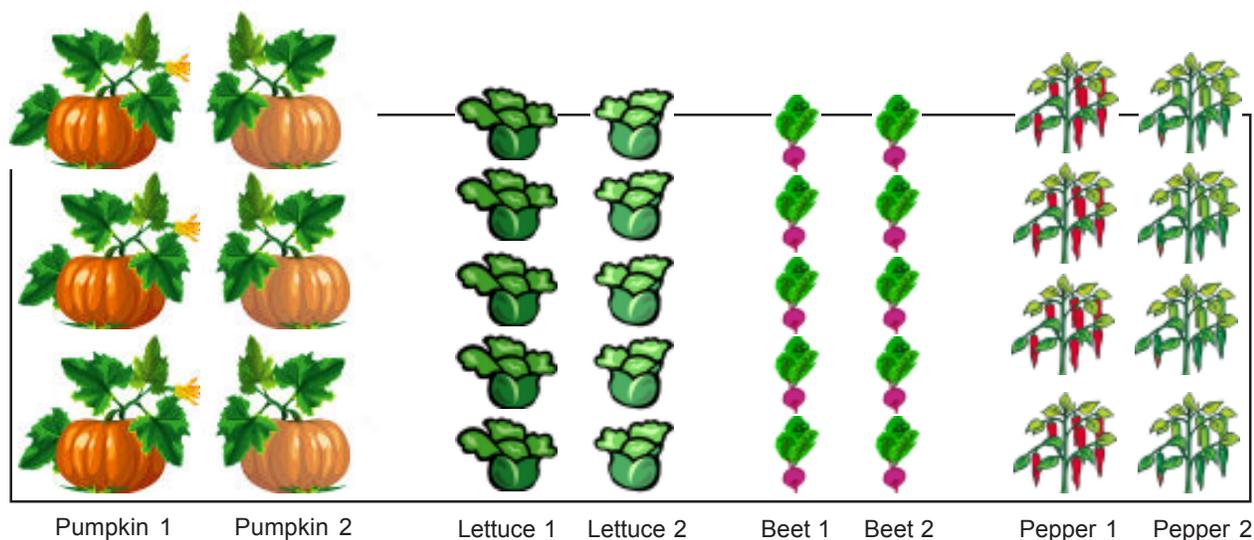
Spring 2009

Dear Gardener,

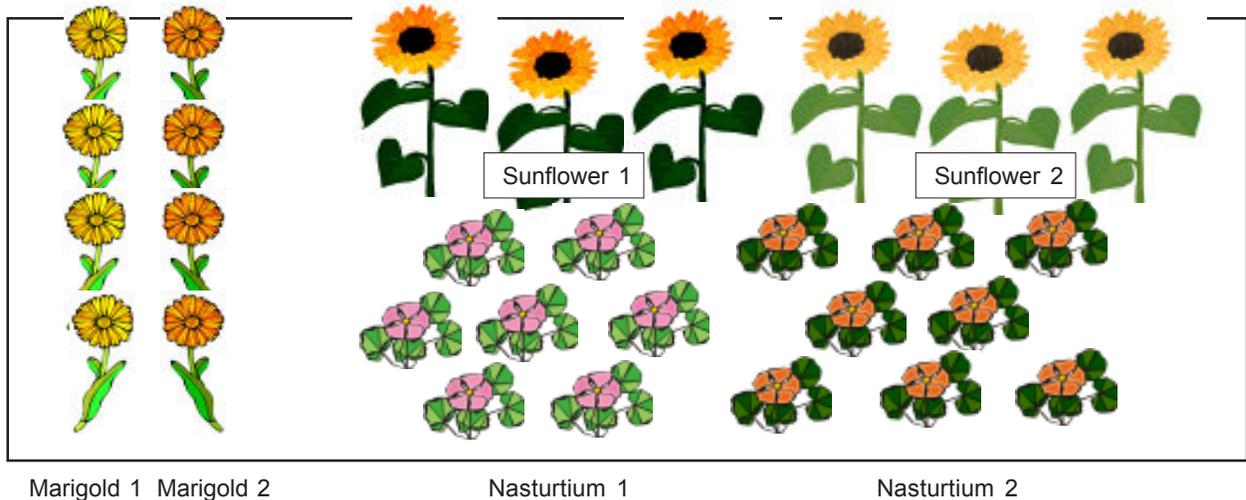
Welcome to our research team! It will be fun to work with you this summer. Enclosed are the seeds you ordered. If you are missing anything, please let me know.

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 a similar amount of sunlight and general care (watering, fertilizing and staking, if applicable).
3. We want to see how these varieties perform under real-life home garden situations under the management of home gardeners. The seed packets have some basic guidelines 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 vegetables in rows next to each other**. You have enough seeds to grow at least 10 feet of each variety. To make it easier for you, I've enclosed a row marker with string. There is a 10-foot space between the two 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.



Most people don't like growing flowers in rows. That is understandable. So **flowers can be planted in rows or in groups**. See the diagram below. In this diagram, the marigolds are planted in rows, while the nasturtium and sunflower varieties are planted in groups. Either way is acceptable.



5. Notice that **some of the vegetable seeds are treated with chemicals**. If so, this is indicated with a fluorescent “Mr. Yuck” sticker on the back of the packet. It is a standard practice in agriculture to treat vegetable seeds with chemicals to protect them from diseases in the soil. In our trials, Thiram is used in most cases (our pea seeds are treated with Captan and spinach seeds are treated with Apron-Thiram or Apron Orange Defender-Thiram). These seeds are safe to use if you use your common sense when handling the seeds. **Don't eat the seeds. Wash your hands after sowing.** You can choose to wear plastic gloves to minimize exposure to the chemicals. The vegetables produced from these seeds are completely safe.

Untreated seeds have a shiny “happy face” sticker on the back of the packet.

6. **Use the plot labels** that are enclosed. This will help you remember which variety is which. Labels can fade. I strongly recommend that you **make a plot diagram after you are done planting** for your future reference. The plot labels sometimes fade in the sun during summertime.

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,

Thomas Kalb, Ph.D.
Horticulture Educator
tom.kalb@ndsu.edu

Appendix 2. Example of Evaluation Form

Muskmelon Variety Trial

2008 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 Zeus

Please state the reason(s) for your preference:
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.

Recommendation

Circle the varieties you recommend for North Dakota gardeners:
 Apollo Zeus Both Neither

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

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

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Jennifer Barnhart	DLMR Castle	Rita Haag
Dwain Barondeau	Bonnie Dockter	Anita Haakenson
Jane Bartlett	Steve Dockter	Erin Hagemeister
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Mavis M. Bautz	Virginia Dohms	Dennis Hagen
Ron Bear	Fay Knudson Doll	Donald Hagler
Pat Beaver	Kelsey L. Dunnell	Sue Hamilton
Trisha Rae Beckman	Joan Dybdahl	R. E. Hankins
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Beneda Yard Service	Joyce Eggert	Lauri Hanson
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Kim Boguslawski	Sandra Fettig	Muriel Hedrick
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Alice Grove Bon	Lon Flage	Jim Henry
Kathryn Bosch	Lori Flaten	Will Heppner
Harriet A. Bracken	Nadine J. Florhaug	Angela Herman
Lorna D. Bradbury	Dan Folske	Jonas E. Heyl
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Joan M. Breiner	Jacqueline Friedt	Alica Hoffarth
Jay and Pam Brennan	Diane Fyilling	Kellie Hoffman
Lori Brown	Lori Ganje	Pam Holscher
June Brown	Angie Gapp	The Hope Family
Betty K. Brown	Tony, Jaidy, and Jarett Gebhardt	Marjorie Horner
June Brown		Catherine Howery
Janice Buchholz		Katie A. Hutchens
Krista Burman		Arlene L. Isaak

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Tyra Jerome
Trisha Jessen
Damon Johnson
Erv Johnson
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Jill Johnson
Sam Johnson
Tony Johnson
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Marie L. Kaiser
Jerome Kapaun
Katy Kassian
Michelle R. Keller
Betty J. Kennedy
Mike Kiernan
Mary Ellen Kirking
Karen Kirmis
Kathleen Kittleson
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Jeff Klein
Allen Knudson
Dawn and Gene Korynta
June Krapp-Detmer
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Connie F. Krinke
Sue Krohn
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Holly Laverdure
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Laverna Lesmieux
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Kathy Lund
Angela Mack
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Cheryl Marshall
Jackie Mason
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Jo Matz
Eileen McEnroe
Mark McGarvey
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Peter Meberg
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Eileen Morris
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Danna Nechiporenko
Linda Ness
Lynnae Neuberger
Forrest & Emily Nielsen
Kathy Northrup
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Cheyenne Olien
Harold Olsen
Aaron and Carrie Opdahl
Sheila Ostrem
Barbara Owens
Rita Parker
Elizabeth, Owen, and Kari
Patterson
Rose Paulson
Jane Pesek
Chuck Peterson
Mike and Sheri Peterson
Donna Plesuk
PM Gardeners
John O'Meara & Laurie Podoll
Megan Porter
Shelley Porter
Melanee and Lucy Jean Pulver
Jean & Fraye Ranstrom
Tim Rasmussen
Carmen J. Rath-Wald
Patty Reeves

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Sandy Rittel
Arlene Ritzke
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Cherie Sanstead
Susan Sattler
Rich Saxlund
Troy and Evan Sayler
Alta Schaar
Erv Schadler
Robert Schank
Gail Schatz
Sylvia Schell
Wanda Schepp
Chad and Monica Schlemmer
Mary Schmidt
Maynard Schmidt
Rebecca Schmidt
Susan Schmidt
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Dawn and Ashley Ueckert
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Candy Vogel
Mark Volk
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Lilian Wacker
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