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2007 Fall Vegetable Observational Trial

MAFES Truck Crops Branch Experiment Station
Crystal Springs, Mississippi

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INTRODUCTION

For 29 years, the Mississippi Agricultural and Forestry Experiment Station Truck Crops Branch Experiment Station, in cooperation with the Mississippi State University Extension Service and several other state, federal, and county organizations, has conducted a fall vegetable demonstration as part of a public field day, now known as Fall Flower & Garden Fest. Visitors tour ornamental and vegetable demonstration gardens, attend seminars, shop for plants and horticulture-related items, and get information from dozens of experts available during the 2-day event. The majority of attendees are gardeners and the general public, but many commercial growers, farmers, student groups, Extension and outreach professionals, researchers, supplier representatives, and media members also attend each year. The 2007 Garden Fest attracted more than 6,000 attendees.

Each year, two large observational cultivar trials are planted for the Garden Fest: an annuals trial showcasing bedding plants, and a nearly 1-acre vegetable garden featuring more than 350 entries across several dozen species. The vegetable trial is designed to feature traditional and locally available cultivars and species, award-winning cultivars, entries that performed well in previous trials, and new or unique cultivars offering visitors something they may not have seen or tried to grow before. The trial is designed to have entries at peak harvest maturity for the Garden Fest weekend.

This report details subjective observations, notes, and statistical information about the vegetable trial entries from observations made the week after the field day in mid-October 2007.

MATERIALS AND METHODS

Trial Site and Management

The garden trial site is a level area that has been in vegetable production for 29 years. It is maintained in a four-part rotation, with a uniform winter cover crop that in winter 2006-07 was a mixture of ryegrass (*Lolium perene*) cv. Marshall and Austrian winter pea (*Pisum sativum spp*. arvense), after being ryegrass only in the previous few winters. The vegetable crop rotation is squash family (Cucurbitaceae) > cabbage family (Brassicaceae) > tomato family (Solanaceae) > pea and bean family (Fabaceae). Miscellaneous crops, including lettuce, carrot family crops, and others, are planted in the open ends of each block as space permits. The soil is a Providence silt loam (fine-silty mixed, thermic Typic Fragiudalf) (Milbrandt, 1984).

The cover crop is killed with a glyphosate formulation (for example, RoundUp Ultra) at labeled rates in April each year and disked under. For the 2007 trial, the site was fertilized in June based on soil tests run in fall 2006 and recommendations made by the Mississippi State University Soil Testing Laboratory for fertilizing a mixed vegetable garden. Preplant fertilizer included a uniform application of 100 pounds of 0-20-20 applied in late May, providing 0-20-20 pounds of N, P_2O_5, and K_2O, respectively. An application of ammonium sulfate (33-0-0) was applied and tilled into the row before seeding or transplanting, providing 60 pounds of nitrogen per acre preplant. Longer-season crops received one or two side dressings of surface-banded granular calcium nitrate (15.5-0-0) at 3–4 and 6–7 weeks after planting. No foliar or micronutrient applications were made.

All plots were single-row, narrow raised beds made with disk-hillers, 16 feet long, on 42-inch (1.1 m) centers, with no mulch. Crops were either direct seeded or transplanted from greenhouse-grown seedlings, depending on species and customary local practice. In-row spacing for each crop was based on local practice and recommendations of MSU Extension (Nagel, et al., 2006). In the main trial, all crops were grown without physical support except for tomatoes and several peppers, which were staked or caged (indeterminate cherry- and grape-fruited tomato cultivars). Plots were irrigated as needed by overhead impact sprinklers.

More than 350 cultivars and breeding lines were planted in the main garden area and adjacent plots in 2007. Most cultivars were selected for inclusion by consensus of a selection committee, suggestions from growers and extension employees, and decisions of the investigators. Inclusion was based on previous performance in the trial, the crop's and cultivar's place in traditional Mississippi gardens, and perceived uniqueness or potential value to Mississippi gardeners and market farmers. In addition, favor was given to cultivars that had won or were candidates for All-America Selections, Fleuroselect, Mississippi Medallion, and other awards of garden merit. Seeds and planting stock were purchased from retail mail order seed vendors or local Copiah County and Hinds County businesses; some seeds and planting stock were donated to the trial. The trial was open to anyone who wished to submit entries, and no entry fees were collected.

Performance ratings were made on 312 entries in the main trial. Entries in the main trial, seed sources, and planting dates are listed in Table 1. Vegetables in adjacent plots, including a gourd demonstration, organic seed demonstration, perennial vegetable and herb demonstration, and breeding line evaluations, were not rated and are not included in this report. An adjacent ornamental pepper trial will be reported on elsewhere.

Table 1. Cultivars, sources, planting dates, and subjective ratings of crop health, uniformity, yield potential, and overall ratings for vegetables grown for the 2007 Fall Flower and Garden Fest at Crystal Springs, Mississippi.[1]

Crop	Cultivar	Seed source	Greenhouse seeding date	Garden seeding or transplanting date[2]	Health	Uniformity	Maturity	Yield potential	Overall	HUY[3]
Cabbage	King Slaw	Burpee	2-Jul	31-Jul	5	5	3	5	5	5.00
Cabbage	Megaton	Parks	2-Jul	31-Jul	5	5	3	5	5	5.00
Collard	Blue Max	Twilley	23-Jul	20-Aug	5	5	4	5	5	5.00
Eggplant	Casper	Twilley	9-Jul	10-Aug	5	5	4	5	5	5.00
Eggplant	Clara	Johnny's	9-Jul	10-Aug	5	5	4	5	5	5.00
Eggplant	Epic	Twilley	9-Jul	10-Aug	5	5	4	5	5	5.00
Kale	Blue Armor	Twilley	23-Jul	20-Aug	5	5	4	5	5	5.00
Kale	Blue Knight	Twilley	23-Jul	20-Aug	5	5	4	5	5	5.00
Lettuce	New Red Fire	Jung	6-Aug	10-Sep	5	5	4	5	5	5.00
Lima Bean	Burpee's Bush Lima	Burpee	NA[4]	24-Jul	5	5	4	5	5	5.00
Lima Bean	Burpee's Improved Lima	Jung	NA	24-Jul	5	5	4	5	5	5.00
Lima Bean	Dixie White Butterpea	Parks	NA	24-Jul	5	5	4	5	5	5.00
Lima Bean	Eastland	Parks	NA	24-Jul	5	5	4	5	5	5.00
Lima Bean	Fordhook 242	Twilley	NA	24-Jul	5	5	4	5	5	5.00
Lima Bean	Jackson Wonder	Territorial	NA	24-Jul	5	5	4	5	5	5.00
Lima Bean	Thorogreen Bush	VBS	NA	24-Jul	5	5	4	5	5	5.00
Okra	Annie Oakley II	Parks	2-Aug	17-Aug	5	5	4	5	5	5.00
Okra	Cajun Delight	Parks	2-Aug	17-Aug	5	5	4	5	5	5.00
Okra	Clemson Spineless	Parks	2-Aug	17-Aug	5	5	4	5	5	5.00
Okra	Lee	Parks	2-Aug	17-Aug	5	5	4	5	5	5.00
Pepper - bell	Blushing Beauty	Twilley	25-Jun	23-Jul	5	5	4	5	5	5.00
Pepper - bell	Excursion II	Twilley	25-Jun	23-Jul	5	5	4	5	5	5.00
Pepper - bell	Golden Baby Belle	Burpee	25-Jun	23-Jul	5	5	4	5	5	5.00
Pepper - bell	Purple Beauty	Twilley	25-Jun	23-Jul	5	5	4	5	5	5.00
Pepper - sweet	Banana Bill	Totally Tomatoes	25-Jun	23-Jul	5	5	4	5	5	5.00
Pepper - sweet	Gypsy	Totally Tomatoes	25-Jun	23-Jul	5	5	4	5	5	5.00
Snap Bean	Carson	Johnny's	NA	6-Sep	5	5	4	5	5	5.00
Snap Bean	Eureka	Burpee	NA	6-Sep	5	5	4	5	5	5.00
Snap Bean	French Filet	Burpee	NA	6-Sep	5	5	4	5	5	5.00
Snap Bean	Heavyweight II	Burpee	NA	6-Sep	5	5	4	5	5	5.00
Snap Bean	Kentucky Wonder	Parks	NA	6-Sep	5	5	4	5	5	5.00

[1]Health, uniformity, yield potential, and overall ratings are on a 0–5 scale (0 = dead, 5 = optimal or greatest). Maturity rating is on a 1–5 scale (1 = seedlings and very young plants; 2 = young plants without significant development of harvestable organics or flowers; 3 = crop nearing but not at a harvestable stage that may be flowering or fruiting but is not at it's peak point of yield; 4 = ready for harvest, crop is ripe or the harvestable portion is horticulturally mature; and 5 = overmature, peak harvest period has passed). Sweetpotatoes not dug. Ratings based on shoot ratings and previous years' ratings of shoots and dug roots.
[2]Entries without a corresponding seeding date were direct seeded, others were transplanted.
[3]Result is the mean of the three ratings for health, uniformity, and yield potential.
[4]NA: Not applicable.

Ratings

More than 300 entries were subjectively rated in mid-October for crop health, uniformity, maturity, yield potential, and overall performance. All ratings were made by one person over 2 days to keep ratings as uniform as possible.

Health ratings included relative incidence of insect damage and disease symptoms in all aboveground portions of the crop. The rater attempted to minimize the inclusion of natural senescence signs in observation of disease symptoms, so that, for example, yellowing leaves of a mature southernpea crop would not result in a lower health rating compared with that received by another cultivar that was not senescing yet.

Uniformity ratings were based on crop height and width, uniformity of leaf type and fruit type, and maturity stage of the harvested portion. For example, a broccoli crop with uniform plant size and habit, but with some mature heads and some immature heads at the time of rating, would receive a lower uniformity rating than if the heads were all at the same stage of maturity, regardless of what stage that was.

Maturity rating differs in scale and interpretation from the other ratings. Maturity rating was based on crop age relative to peak harvest age on a 1–5 scale (1 = seedlings and very young plants; 2 = young plants without significant development of harvestable organs or flowers; 3 = crop nearing but not at a harvestable stage that may be flowering or fruiting but is not at its peak point of yield; 4 = ready for harvest, crop is ripe or the harvestable portion is horticulturally mature; and 5 = overmature, peak harvest period has past).

Yield potential was a subjective rating of the yield of the traditionally harvested organ of the crop (for example, heads of cabbage and fruit of tomato). Yield potential was rated within crop, not among crops. Thus, tomatoes were not rated relative to pepper, lettuce, or other crop yields, but only against other tomatoes and the rater's perception of reasonable crop load/potential

Table 1 (continued). Cultivars, sources, planting dates, and subjective ratings of crop health, uniformity, yield potential, and overall ratings for vegetables grown for the 2007 Fall Flower and Garden Fest at Crystal Springs, Mississippi.[1]

Crop	Cultivar	Seed source	Greenhouse seeding date	Garden seeding or transplanting date[2]	Health	Uniformity	Maturity	Yield potential	Overall	HUY[3]
Snap Bean	Maxibel	Johnny's	NA	6-Sep	5	5	4	5	5	5.00
Snap Bean	Provider	Johnny's	NA	6-Sep	5	5	4	5	5	5.00
Southernpea	Erectset	Univ. Ark.	2-Aug	17-Aug	5	5	4	5	5	5.00
Southernpea	Arkansas Blackeye No. 1	Univ. Ark.	NA	9-Aug	5	5	5	5	5	5.00
Southernpea	Black Crowder	Univ. Ark.	NA	9-Aug	5	5	4	5	5	5.00
Southernpea	Dixie Lee	Univ. Ark.	NA	9-Aug	5	5	5	5	5	5.00
Southernpea	Early Acre	Univ. Ark.	NA	9-Aug	5	5	4	5	5	5.00
Southernpea	Early Scarlet	Univ. Ark.	NA	9-Aug	5	5	5	5	5	5.00
Southernpea	Empire	Univ. Ark.	NA	9-Aug	5	5	4	5	5	5.00
Southernpea	Encore	Univ. Ark.	NA	9-Aug	5	5	4	5	5	5.00
Southernpea	Epic	Univ. Ark.	NA	9-Aug	5	5	4	5	5	5.00
Southernpea	Excel	Univ. Ark.	NA	9-Aug	5	5	5	5	5	5.00
Southernpea	Excel S	Univ. Ark.	NA	9-Aug	5	5	5	5	5	5.00
Southernpea	Pinkeye Purplehull	Univ. Ark.	NA	9-Aug	5	5	5	5	5	5.00
Southernpea	Top Pick Pinkeye	Copiah Co. Coop.	NA	9-Aug	5	5	5	5	5	5.00
Sweetpotato	Beauregard	Jung	NA	19-Jul	5	5	4	5	5	5.00
Sweetpotato	Centennial	Jung	NA	19-Jul	5	5	4	5	5	5.00
Sweetpotato	Georgia Jet	Jung	NA	19-Jul	5	5	4	5	5	5.00
Sweetpotato	Jewel	Jung	NA	19-Jul	5	5	4	5	5	5.00
Sweetpotato	Vardaman	Jung	NA	19-Jul	5	5	4	5	5	5.00
Turnip	Alamo	Twilley	NA	6-Sep	5	5	4	5	5	5.00
Broccoli	Patriot	Twilley	23-Jul	20-Aug	5	5	3	5	4	5.00
Broccoli	Packman	Harris	23-Jul	20-Aug	5	4	5	5	5	4.67
Broccoli	Southern Comet	Twilley	23-Jul	20-Aug	5	4	4	5	5	4.67
Cabbage	Earliana	Burpee	2-Jul	31-Jul	5	5	5	4	5	4.67
Cabbage	Storage #4	Johnny's	2-Jul	31-Jul	4	5	3	5	5	4.67
Collard	Flash	Twilley	23-Jul	20-Aug	4	5	4	5	5	4.67
Cucumber	Alibi	Territorial	13-Aug	30-Aug	4	5	4	5	5	4.67
Cucumber	Dasher II	Twilley	13-Aug	30-Aug	4	5	4	5	5	4.67
Cucumber	Green Slam	Territorial	13-Aug	30-Aug	4	5	4	5	5	4.67
Cucumber	Indy	Twilley	13-Aug	30-Aug	4	5	4	5	5	4.67

[1]Health, uniformity, yield potential, and overall ratings are on a 0–5 scale (0 = dead, 5 = optimal or greatest). Maturity rating is on a 1–5 scale (1 = seedlings and very young plants; 2 = young plants without significant development of harvestable organics or flowers; 3 = crop nearing but not at a harvestable stage that may be flowering or fruiting but is not at it's peak point of yield; 4 = ready for harvest, crop is ripe or the harvestable portion is horticulturally mature; and 5 = overmature, peak harvest period has passed). Sweetpotatoes not dug. Ratings based on shoot ratings and previous years' ratings of shoots and dug roots.
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[3]Result is the mean of the three ratings for health, uniformity, and yield potential.
[4]NA: Not applicable.

crop load. Root crops were not dug in 2007. Their yield potential was based on aboveground vigor and observed correlation between shoot and root vigor in previous seasons, when roots were dug and their quality and yield potential appeared well correlated with shoot quality and uniformity.

The overall rating was a single rating of the entry on the day of the rating and took into account all of the factors being rated individually. A combined rating of the average ratings for health, uniformity, and yield potential (HUY) was also calculated.

Data Analysis

The mean and standard deviation for overall and HUY rating was calculated for each crop, across entries, using SAS 9.0 PROC UNIVARIATE (SAS Instit., 2006). Correlations of crop rating means and standard deviations with the number of entries per crop were determined with PROC CORR. Crops with only one entry were not included in the correlation tests and are reported here without standard deviations because at least two observations are required for calculation of standard deviation. Certain crops were grouped across types for statistical evaluation, including all tomato entries, all peppers (including all fruit types and all species of Capsicum), all summer squash (zucchini, patty pan, straight and crook neck types), galia and cantaloupe/musk melons, and pickling and slicing cucumbers. Distinct crops, even those of the same species, were grouped separately (for example, the crops in *Brassica oleracea* including cabbage, broccoli, and others).

Table 1 (continued). Cultivars, sources, planting dates, and subjective ratings of crop health, uniformity, yield potential, and overall ratings for vegetables grown for the 2007 Fall Flower and Garden Fest at Crystal Springs, Mississippi.[1]

Crop	Cultivar	Seed source	Greenhouse seeding date	Garden seeding or transplanting date[2]	Health	Uniformity	Maturity	Yield potential	Overall	HUY[3]
Cucumber	Thunder	Twilley	13-Aug	30-Aug	4	5	4	5	5	4.67
Cucumber	Turbo	Twilley	13-Aug	30-Aug	4	5	4	5	5	4.67
Eggplant	Hansel	Seminis-AAS	9-Jul	10-Aug	4	5	4	5	5	4.67
Eggplant	Money Maker #2	Twilley	9-Jul	10-Aug	4	5	4	5	5	4.67
Kohlrabi	Grand Duke	Twilley	23-Jul	17-Aug	4	5	5	5	5	4.67
Lettuce	Salad Bowl	Johnny's	6-Aug	10-Sep	5	4	4	5	5	4.67
Lima Bean	Baby Fordhook	Burpee	NA	24-Jul	5	4	4	5	5	4.67
Lima Bean	Henderson's	VBS	NA	24-Jul	5	4	4	5	5	4.67
Mustard	Red Giant	Twilley	NA	6-Sep	4	5	4	5	5	4.67
Mustard	Savanna	Twilley	NA	6-Sep	4	5	4	5	5	4.67
Mustard	Southern Giant Curled	Twilley	NA	6-Sep	4	5	4	5	5	4.67
Okra	Little Lucy	Parks	2-Aug	17-Aug	5	5	4	4	5	4.67
Okra	North & South	Burpee	2-Aug	17-Aug	5	4	4	5	5	4.67
Okra	Red Burgundy	Twilley	2-Aug	17-Aug	5	5	4	4	5	4.67
Okra	Silver Queen	Parks	2-Aug	17-Aug	5	5	4	4	5	4.67
Pepper - bell	Camelot X3R	Twilley	25-Jun	23-Jul	5	4	4	5	5	4.67
Pepper - bell	Carnival Mix	Burpee	25-Jun	23-Jul	5	5	4	4	5	4.67
Pepper - bell	Islander	Johnny's	25-Jun	23-Jul	5	4	4	5	5	4.67
Pepper - bell	Tequila	Totally Tomatoes	25-Jun	23-Jul	5	4	4	5	5	4.67
Pepper - hot	Mitla	Twilley	25-Jun	31-Jul	5	4	4	5	5	4.67
Pepper - hot	Rooster	Home heirloom	25-Jun	31-Jul	5	4	4	5	5	4.67
Pepper - sweet	Sweet Pickle	Parks	25-Jun	23-Jul	5	4	4	5	5	4.67
Radish	Watermelon	Burpee	NA	6-Sep	4	5	4	5	5	4.67
Snap Bean	Gold Mine	Burpee	NA	6-Sep	5	5	4	4	5	4.67
Snap Bean	Mellow Yellow	Burpee	NA	6-Sep	5	5	4	4	5	4.67
Snap Bean	Top Crop	Jung	NA	6-Sep	4	5	3	5	5	4.67
Southernpea	Zipper Cream	Service Seed	NA	9-Aug	5	4	4	5	5	4.67
Tomato - Det.	Bush Celebrity	Parks	18-Jun	19-Jul	4	5	4	5	5	4.67
Turnip	All Top	Twilley	NA	6-Sep	4	5	4	5	5	4.67
Turnip	Southern Green	Twilley	NA	6-Sep	4	5	4	5	5	4.67
Artichoke	Green Globe	Territorial	17-Apr	12-Jul	5	4	3	5	4	4.67
Artichoke	Violetto	Territorial	17-Apr	12-Jul	5	4	3	5	4	4.67
Asparagus	Jersey Knight	Johnny's	NA	12-Jul	5	4	3	5	4	4.67
Broccoli	Coronado Crown	Parks	23-Jul	20-Aug	4	5	3	5	4	4.67
Broccoli	Diplomat	Johnny's	23-Jul	20-Aug	5	4	4	5	4	4.67
Broccoli	Green Goliath	Burpee	23-Jul	20-Aug	5	4	4	5	4	4.67
Broccoli	Marathon	Johnny's	23-Jul	20-Aug	5	4	3	5	4	4.67
Celery	Starlet	Twilley	25-Jun	27-Aug	5	4	2	5	4	4.67

[1]Health, uniformity, yield potential, and overall ratings are on a 0–5 scale (0 = dead, 5 = optimal or greatest). Maturity rating is on a 1–5 scale (1 = seedlings and very young plants; 2 = young plants without significant development of harvestable organics or flowers; 3 = crop nearing but not at a harvestable stage that may be flowering or fruiting but is not at it's peak point of yield; 4 = ready for harvest, crop is ripe or the harvestable portion is horticulturally mature; and 5 = overmature, peak harvest period has passed). Sweetpotatoes not dug. Ratings based on shoot ratings and previous years' ratings of shoots and dug roots.
[2]Entries without a corresponding seeding date were direct seeded, others were transplanted.
[3]Result is the mean of the three ratings for health, uniformity, and yield potential.
[4]NA: Not applicable.

Table 1 (continued). Cultivars, sources, planting dates, and subjective ratings of crop health, uniformity, yield potential, and overall ratings for vegetables grown for the 2007 Fall Flower and Garden Fest at Crystal Springs, Mississippi.[1]

Crop	Cultivar	Seed source	Greenhouse seeding date	Garden seeding or transplanting date[2]	Health	Uniformity	Maturity	Yield potential	Overall	HUY[3]
Collard	Champion	Harris	23-Jul	20-Aug	4	5	4	5	4	4.67
Collard	Top Pick	Siegers	23-Jul	20-Aug	4	5	4	5	4	4.67
Cucumber	Calypso	Twilley	13-Aug	30-Aug	4	5	4	5	4	4.67
Cucumber	Eureka	Twilley	13-Aug	30-Aug	4	5	4	5	4	4.67
Cucumber	General Lee	Twilley	13-Aug	30-Aug	4	5	4	5	4	4.67
Cucumber	H-19 Little Leaf		13-Aug	30-Aug	4	5	4	5	4	4.67
Eggplant	Black Beauty	Twilley	9-Jul	10-Aug	5	5	4	4	4	4.67
Eggplant	Fairy Tale	Seminis-AAS	9-Jul	10-Aug	5	5	4	4	4	4.67
Leek	Tadorna	Johnny's	.	14-Aug	5	4	3	5	4	4.67
Lettuce	Eruption	Johnny's	6-Aug	10-Sep	5	5	4	4	4	4.67
Lettuce	Magenta	Johnny's	6-Aug	10-Sep	5	4	4	5	4	4.67
Mustard	Green Wave	Johnny's	NA	6-Sep	4	5	4	5	4	4.67
Pepper - bell	Parks Whopper	Parks	25-Jun	23-Jul	5	5	4	4	4	4.67
Pepper - hot	Tabasco	Twilley	25-Jun	31-Jul	5	5	3	4	4	4.67
Snap Bean	Blue Wonder	Parks	NA	6-Sep	5	5	4	4	4	4.67
Snap Bean	Contender	Jung	NA	6-Sep	5	5	4	4	4	4.67
Snap Bean	Derby	Parks	NA	6-Sep	5	5	4	4	4	4.67
Snap Bean	Purple Queen	Burpee	NA	6-Sep	5	5	4	4	4	4.67
Snap Bean	Rocdor	Parks	NA	6-Sep	5	4	4	5	4	4.67
Soybean	Black Jet	Johnny's	NA	20-Aug	5	5	4	4	4	4.67
Sugar beet	cultivar not stated	Holly Hybrids	27-Aug	6-Sep	4	5	3	5	4	4.67
Turnip	Golden Ball	Territorial	NA	6-Sep	5	5	4	4	4	4.67
Leek	Electra	Harris	.	14-Aug	5	4	2	5	3	4.67
Broccoli	Early Dividend	Parks	23-Jul	20-Aug	4	4	5	5	5	4.33
Cabbage	Super Red 90	Twilley	2-Jul	31-Jul	5	5	4	3	5	4.33
Cantaloupe	Ambrosia	Parks	9-Jul	24-Jul	3	5	5	5	5	4.33
Cantaloupe	Maverick	Johnny's	9-Jul	24-Jul	3	5	5	5	5	4.33
Cauliflower	Cassius	Parks	25-Jun	24-Jul	4	5	5	4	5	4.33
Cauliflower	Majestic	Twilley	25-Jun	24-Jul	4	4	5	5	5	4.33
Cauliflower	Violet Queen	Twilley	25-Jun	24-Jul	4	4	5	5	5	4.33
Eggplant	Machiaw	Johnny's	9-Jul	10-Aug	4	5	4	4	5	4.33
Galia	Arava	Johnny's	9-Jul	24-Jul	3	5	5	5	5	4.33
Kohlrabi	Kossak	Parks	23-Jul	17-Aug	4	4	5	5	5	4.33
Okra	Cowhorn	Parks	2-Aug	17-Aug	5	4	4	4	5	4.33
Radish	April Cross	Parks	NA	6-Sep	4	4	4	5	5	4.33
Tomato - Det.	Sun King	Totally Tomatoes	18-Jun	19-Jul	4	4	4	5	5	4.33
Winter Squash	Bush Delicata	Parks	.	23-Jul	3	5	4	5	5	4.33
Broccoli	Premium Crop	Harris	23-Jul	20-Aug	5	4	5	4	4	4.33
Cabbage	Dynamo	Twilley	2-Jul	31-Jul	5	4	3	4	4	4.33
Cabbage	Solid Blue #780	Twilley	2-Jul	31-Jul	4	5	3	4	4	4.33
Cabbage	Stein's Late Flat Dutch	Territorial	2-Jul	31-Jul	5	3	3	5	4	4.33
Cabbage	Tropic Giant	Parks	2-Jul	31-Jul	4	4	4	5	4	4.33
Carrot	Danvers Half Long	Burpee	NA	24-Jul	5	4	4	4	4	4.33
Cauliflower	Snow Crown	Johnny's	25-Jun	24-Jul	4	4	5	5	4	4.33
Eggplant	Beatrice	Johnny's	9-Jul	10-Aug	5	5	4	3	4	4.33
Kale	Toscano	Johnny's	23-Jul	20-Aug	5	4	4	4	4	4.33
Kale	Walking Stick		23-Jul	20-Aug	3	5	4	5	4	4.33
Kale	White Russian	Territorial	23-Jul	20-Aug	4	5	4	4	4	4.33
Kale	Winterbor	Parks	23-Jul	20-Aug	5	4	4	4	4	4.33
Lettuce	Ferrari	Johnny's	6-Aug	10-Sep	5	4	4	4	4	4.33
Lettuce	Simpson Elite	Jung	6-Aug	10-Sep	5	4	4	4	4	4.33
Mustard	Florida Broadleaf	Twilley	NA	6-Sep	4	5	4	4	4	4.33
Pepper - bell	Golden Giant II	Burpee	25-Jun	23-Jul	5	5	4	3	4	4.33
Pepper - bell	Gourmet	Johnny's	25-Jun	23-Jul	5	4	4	4	4	4.33
Pepper - bell	Gusto	Parks	25-Jun	23-Jul	5	5	4	3	4	4.33
Pepper - bell	King Arthur	Twilley	25-Jun	23-Jul	5	4	4	4	4	4.33
Pepper - bell	Muscato	Twilley	25-Jun	23-Jul	5	4	4	4	4	4.33
Pepper - bell	Snapper	Johnny's	25-Jun	23-Jul	5	4	4	4	4	4.33
Pepper - bell	Super Heavy Weight	Twilley	25-Jun	23-Jul	5	4	4	4	4	4.33
Pepper - bell	Yankee Bell	Johnny's	25-Jun	23-Jul	5	4	4	4	4	4.33
Pepper - hot	Tiburon	Parks	25-Jun	31-Jul	5	4	4	4	4	4.33
Radish	Cherry Belle	Twilley	NA	6-Sep	5	4	5	4	4	4.33
Radish	White Icicle	Territorial	NA	6-Sep	5	4	4	4	4	4.33
Snap Bean	Blue Lake 274	Parks	NA	6-Sep	5	5	4	3	4	4.33
Snap Bean	E-Z Pick	Johnny's	NA	6-Sep	5	4	4	4	4	4.33
Snap Bean	Kentucky King	Burpee	NA	6-Sep	5	4	4	4	4	4.33
Snap Bean	Major	Territorial	NA	6-Sep	5	4	4	4	4	4.33
Snap Bean	Roma II	Territorial	NA	6-Sep	5	4	4	4	4	4.33

[1]Health, uniformity, yield potential, and overall ratings are on a 0–5 scale (0 = dead, 5 = optimal or greatest). Maturity rating is on a 1–5 scale (1 = seedlings and very young plants; 2 = young plants without significant development of harvestable organics or flowers; 3 = crop nearing but not at a harvestable stage that may be flowering or fruiting but is not at it's peak point of yield; 4 = ready for harvest, crop is ripe or the harvestable portion is horticulturally mature; and 5 = overmature, peak harvest period has passed). Sweetpotatoes not dug. Ratings based on shoot ratings and previous years' ratings of shoots and dug roots.
[2]Entries without a corresponding seeding date were direct seeded, others were transplanted.
[3]Result is the mean of the three ratings for health, uniformity, and yield potential.
[4]NA: Not applicable.

Table 1 (continued). Cultivars, sources, planting dates, and subjective ratings of crop health, uniformity, yield potential, and overall ratings for vegetables grown for the 2007 Fall Flower and Garden Fest at Crystal Springs, Mississippi.[1]

Crop	Cultivar	Seed source	Greenhouse seeding date	Garden seeding or transplanting date[2]	Health	Uniformity	Maturity	Yield potential	Overall	HUY[3]
Snap Bean	Romano Purpiette	Territorial	NA	6-Sep	5	5	4	3	4	4.33
Snap Bean	Royal Burgundy	Johnny's	NA	6-Sep	5	4	4	4	4	4.33
Tomato - Det.	Valley Girl	Johnny's	18-Jun	19-Jul	3	5	4	5	4	4.33
Tomato - Det.	Mountain Fresh Plus	Twilley	18-Jun	19-Jul	4	5	4	4	4	4.33
Turnip	Purple Top White Globe	Johnny's	NA	6-Sep	4	5	4	4	4	4.33
Turnip	Seven Top	Twilley	NA	6-Sep	4	5	4	4	4	4.33
Turnip	White Lady	Twilley	NA	6-Sep	4	5	4	4	4	4.33
Zucchini	Gold Rush	Territorial	27-Aug	6-Sep	3	5	4	5	4	4.33
Cleriac	Brilliant	Territorial	25-Jun	27-Aug	4	4	2	5	3	4.33
Snap Bean	Benchmark	Territorial	NA	6-Sep	5	5	4	3	3	4.33
Cauliflower	Early Dawn	Territorial	25-Jun	24-Jul	3	4	5	5	5	4.00
Cabbage	Blue Vantage	Twilley	2-Jul	31-Jul	4	4	4	4	4	4.00
Cabbage	Red Express	Johnny's	2-Jul	31-Jul	5	4	4	3	4	4.00
Cabbage	Rio Verde	Twilley	2-Jul	31-Jul	4	4	3	4	4	4.00
Cabbage	Ruby Dynasty	Twilley	2-Jul	31-Jul	5	4	3	3	4	4.00
Cabbage	Stonehead	Jung	2-Jul	31-Jul	4	4	5	4	4	4.00
Cabbage	Super Red 80	Johnny's	2-Jul	31-Jul	5	4	4	3	4	4.00
Cabbage	Tendersweet	Johnny's	2-Jul	31-Jul	4	4	5	4	4	4.00
Cauliflower	Cheddar	Twilley	25-Jun	24-Jul	4	4	3	4	4	4.00
Collard	Georgia Southern	Twilley	23-Jul	20-Aug	4	4	4	4	4	4.00
Collard	Hi Crop	Twilley	23-Jul	20-Aug	4	4	4	4	4	4.00
Collard	Top Bunch	Siegers	23-Jul	20-Aug	4	4	4	4	4	4.00
Cucumber	Marketmore	Service	13-Aug	30-Aug	4	4	4	4	4	4.00
Kohlrabi	Early White Vienna	Burpee	23-Jul	17-Aug	4	4	5	4	4	4.00
Lettuce	Mild Mesclun Blend	Territorial	6-Aug	10-Sep	4	3	4	5	4	4.00
Lettuce	Ovation Greens Mix	Johnny's	6-Aug	10-Sep	4	3	4	5	4	4.00
Lettuce	Summer Glory	Parks	6-Aug	10-Sep	5	3	4	4	4	4.00
Mustard	Tendergreen	Twilley	NA	6-Sep	4	4	4	4	4	4.00
Okra	Baby Bubba	Burpee	2-Aug	17-Aug	5	4	4	3	4	4.00
Pepper - hot	Andy	Johnny's	25-Jun	31-Jul	5	3	4	4	4	4.00
Pepper - hot	College 64L		25-Jun	31-Jul	5	4	4	3	4	4.00
Pepper - hot	Pizza Pepper	Territorial	25-Jun	31-Jul	5	4	4	3	4	4.00
Pepper - sweet	Tennessee Cheese	Territorial	25-Jun	23-Jul	5	4	4	3	4	4.00
Pumpkin	Autumn Gold	Twilley	2-Jul	19-Jul	2	5	4	5	4	4.00
Radishes	Champion	Jung	NA	6-Sep	5	3	4	4	4	4.00
Radishes	Rudolf	Twilley	NA	6-Sep	5	3	4	4	4	4.00
Snap Bean	Tenderpick	Burpee	NA	6-Sep	5	4	3	3	4	4.00
Summer Squash	Early Prolific Straightneck	Burpee	27-Aug	6-Sep	3	4	4	5	4	4.00
Swiss Chard	Bright Lights	Burpee	NA	20-Aug	4	3	4	5	4	4.00
Tomato - Det.	Big Beef	Seminis-AA	18-Jun	19-Jul	3	4	4	5	4	4.00
Tomato - Det.	Celebrity	Twilley	18-Jun	19-Jul	4	4	4	4	4	4.00
Tomato - Indet.	Super Tasty	Burpee	18-Jun	19-Jul	4	4	4	4	4	4.00
Tomato - Indet.	Taxi	Johnny's	18-Jun	19-Jul	3	4	4	5	4	4.00
Tomato - Roma	Saucy	Totally Tomatoes	18-Jun	19-Jul	3	4	4	5	4	4.00
Tomato - Cherry	Cabernet	Territorial	18-Jun	19-Jul	2	5	4	5	4	4.00
Tomato - Cherry	Minicharm	Twilley	18-Jun	19-Jul	2	5	4	5	4	4.00
Tomato - Roma	Razzleberrry	Parks	18-Jun	19-Jul	4	4	4	4	4	4.00
Turnip	Hakurei	Johnny's	NA	6-Sep	4	4	4	4	4	4.00
Turnip	Just Right	Twilley	NA	6-Sep	4	4	4	4	4	4.00
Zucchini	Black Jet	Twilley	27-Aug	6-Sep	3	5	4	4	4	4.00
Zucchini	Cash Flow	Johnny's	27-Aug	6-Sep	3	4	4	5	4	4.00
Zucchini	Sebring	Twilley	27-Aug	6-Sep	3	5	4	4	4	4.00
Brussels sprouts	Diablo	Johnny's	21-May	12-Jul	3	5	3	4	3	4.00
Brussels sprouts	Jade Cross E	Twilley	21-May	12-Jul	3	5	4	4	3	4.00
Cucumber	County Fair	Parks	13-Aug	30-Aug	3	5	4	4	3	4.00
Kohlrabi	Express Forever	Parks	23-Jul	17-Aug	3	5	5	4	3	4.00
Kohlrabi	Pheres	Jung	23-Jul	17-Aug	3	5	5	4	3	4.00
Lettuce	Black Seeded Simpson	Jung	6-Aug	10-Sep	5	4	5	3	3	4.00
Lettuce	Buttercrunch	Jung	6-Aug	10-Sep	5	4	5	3	3	4.00
Onion	Red Barron	Twilley	2-Jul	14-Aug	4	4	2	4	3	4.00
Pepper-hot	Jalapeño M	Parks	25-Jun	31-Jul	5	4	4	3	3	4.00
Soybean	Gren Pearls	Burpee	NA	24-Aug	5	4	4	3	3	4.00
Tomato - Indet.	Better Boy	Burpee	18-Jun	19-Jul	3	5	4	4	3	4.00
Tomato - Indet.	Big Boy	Twilley	18-Jun	19-Jul	4	5	4	3	3	4.00
Tomato - Indet.	Porterhouse	Burpee	18-Jun	19-Jul	4	4	4	4	3	4.00
Tomato - Indet.	Break of Day	Homeowner	18-Jun	19-Jul	4	5	4	3	3	4.00
Beet	Detroit	Service Seed	NA	24-Jul	4	3	4	4	4	3.67
Broccoli	Windsor	Johnny's	23-Jul	20-Aug	4	3	5	4	4	3.67
Cabbage	Arrowhead	Johnny's	2-Jul	31-Jul	4	4	4	3	4	3.67

[1]Health, uniformity, yield potential, and overall ratings are on a 0–5 scale (0 = dead, 5 = optimal or greatest). Maturity rating is on a 1–5 scale (1 = seedlings and very young plants; 2 = young plants without significant development of harvestable organics or flowers; 3 = crop nearing but not at a harvestable stage that may be flowering or fruiting but is not at it's peak point of yield; 4 = ready for harvest, crop is ripe or the harvestable portion is horticulturally mature; and 5 = overmature, peak harvest period has passed). Sweetpotatoes not dug. Ratings based on shoot ratings and previous years' ratings of shoots and dug roots.
[2]Entries without a corresponding seeding date were direct seeded, others were transplanted.
[3]Result is the mean of the three ratings for health, uniformity, and yield potential.
[4]NA: Not applicable.

Table 1 (continued). Cultivars, sources, planting dates, and subjective ratings of crop health, uniformity, yield potential, and overall ratings for vegetables grown for the 2007 Fall Flower and Garden Fest at Crystal Springs, Mississippi.[1]

Crop	Cultivar	Seed source	Greenhouse seeding date	Garden seeding or transplanting date[2]	Health	Uniformity	Maturity	Yield potential	Overall	HUY[3]
Cauliflower	Graffiti	Johnny's	25-Jun	24-Jul	3	4	3	4	4	3.67
Cucumber	Diva	Twilley	13-Aug	30-Aug	3	4	4	4	4	3.67
Cucumber	Park's All Season	Parks	13-Aug	30-Aug	3	4	4	4	4	3.67
Cucumber	Tasty Jade	Johnny's	13-Aug	30-Aug	2	4	4	5	4	3.67
Pumpkin	Sorcerer	Twilley	2-Jul	19-Jul	2	5	4	4	4	3.67
Pumpkin	Wolf	Johnny's	2-Jul	19-Jul	2	5	4	4	4	3.67
Radishes	Easter Egg	Johnny's	NA	6-Sep	4	3	5	4	4	3.67
Summer Squash	Gold Bar	Jung	27-Aug	6-Sep	3	3	4	5	4	3.67
Summer Squash	Yellow Crook	Johnny's	27-Aug	6-Sep	3	4	4	4	4	3.67
Tomato - cherry	Tomatoberrry	Johnny's	18-Jun	19-Jul	2	5	4	4	4	3.67
Turnip	Scarlet Queen Red Stems	Johnny's	NA	6-Sep	4	4	4	3	4	3.67
Watermelon	Starlight	Jung	2-Jul	24-Jul	2	5	5	4	4	3.67
Watermelon	Sweet Beauty	Jung	2-Jul	24-Jul	2	5	5	4	4	3.67
Watermelon	Sweet Flavor		2-Jul	24-Jul	2	5	5	4	4	3.67
Watermelon	Trillion	Jung	2-Jul	24-Jul	2	5	5	4	4	3.67
Zucchini	Spineless Beauty	Twilley	27-Aug	6-Sep	3	4	4	4	4	3.67
Broccoli	Veronica	Territorial	23-Jul	20-Aug	3	4	3	4	3	3.67
Brussels sprouts	Oliver	Johnny's	21-May	12-Jul	3	4	3	4	3	3.67
Brussels sprouts	Vancouver	Territorial	21-May	12-Jul	3	4	3	4	3	3.67
Pepper - hot	Cherry Bomb	Johnny's	25-Jun	31-Jul	5	3	4	3	3	3.67
Pepper - hot	Sierra Fuego	Twilley	25-Jun	31-Jul	5	3	3	3	3	3.67
Pepper - sweet	Italian Sweet	Territorial	25-Jun	23-Jul	5	3	4	3	3	3.67
Rutabaga	Laurentian	Johnny's	28-Jun	31-Jul	3	4	3	4	3	3.67
Snap Bean	La France	Burpee	NA	6-Sep	5	3	3	3	3	3.67
Soybean	Black Pearl	Territorial	NA	21-Aug	4	4	4	3	3	3.67
Soybean	Butterbeans	Johnny's	NA	22-Aug	4	3	4	4	3	3.67
Summer Squash	Multipik	Johnny's	27-Aug	6-Sep	3	4	4	4	3	3.67
Tomato - Indet.	Park's Whopper	Parks	18-Jun	19-Jul	4	4	4	3	3	3.67
Tomato - Det.	Mountain Delight	Totally Tomatoes	18-Jun	19-Jul	4	4	4	3	3	3.67
Turnip	Tokyo Cross	Twilley	NA	6-Sep	4	4	4	3	3	3.67
Zucchini	Black Beauty	Territorial	27-Aug	6-Sep	3	3	4	5	3	3.67
Zucchini	Eight Ball	Twilley	27-Aug	6-Sep	2	4	4	5	3	3.67
Pumpkin	Howden's Howden	Twilley	2-Jul	19-Jul	2	5	4	3	4	3.33
Pumpkin	Orange Smoothie	Burpee	2-Jul	19-Jul	2	5	4	3	4	3.33
Tomato - cherry	Yellow Pear	Burpee	18-Jun	19-Jul	2	4	4	4	4	3.33
Carrot	Thumbelina	Territorial	NA	24-Jul	5	3	4	2	3	3.33
Lettuce	Wildfire Mix	Johnny's	6-Aug	10-Sep	4	3	4	3	3	3.33
Pepper - hot	Hot Mixed	our blend	25-Jun	31-Jul	5	2	4	3	3	3.33
Rutabaga	Bora		28-Jun	31-Jul	2	4	4	4	3	3.33
Rutabaga	Marian	Territorial	28-Jun	31-Jul	2	4	4	4	3	3.33
Snap Bean	Jade	Johnny's	NA	6-Sep	5	2	4	3	3	3.33
Soybean	Shironomai	Parks	NA	25-Aug	4	3	4	3	3	3.33
Spinach	Regal	Territorial	NA	10-Sep	4	3	4	3	3	3.33
Squash - pattypan	Flying Saucer	Johnny's	27-Aug	6-Sep	3	4	4	3	3	3.33
Swiss Chard	Magenta Sunset	Johnny's	NA	20-Aug	4	2	3	4	3	3.33
Tomato - Indet.	Arkansas Traveler	Totally Tomatoes	18-Jun	19-Jul	3	5	4	2	3	3.33
Tomato - Indet.	Goldie		18-Jun	19-Jul	3	4	4	3	3	3.33
Tomato - Indet.	Pruden's Purple	Homeowner	18-Jun	19-Jul	4	4	3	2	2	3.33
Cauliflower	Apex	Harris	25-Jun	24-Jul	3	3	3	3	3	3.00
Pepper - hot	Big Chili II	Johnny's	25-Jun	31-Jul	5	2	4	2	3	3.00
Pumpkin	Baby Bear	Twilley	2-Jul	19-Jul	2	5	4	2	3	3.00
Rutabaga	American Purple Top	Twilley	28-Jun	31-Jul	2	3	4	4	3	3.00
Summer Squash	Enterprise	Parks	27-Aug	6-Sep	3	3	4	3	3	3.00
Summer Squash	Fancycrook	Twilley	27-Aug	6-Sep	3	3	4	3	3	3.00
Summer Squash	Gentry	Johnny's	27-Aug	6-Sep	2	3	5	4	3	3.00
Tomato - Indet.	Delicious	Totally Tomatoes	18-Jun	19-Jul	3	3	4	3	3	3.00
Tomato - Indet.	Good Old Fashioned	Homeowner	18-Jun	19-Jul	3	4	4	2	3	3.00
Cucumber	Orient Express	Burpee	13-Aug	30-Aug	2	3	4	3	3	2.67
Tomato - Indet.	John Baer	Jung	18-Jun	19-Jul	2	4	4	2	3	2.67
Spinach	Lombardia	Johnny's	NA	8-Sep	3	2	4	3	2	2.67
Soybean	Early Hachucho	Parks	NA	23-Aug	4	2	4	2	1	2.67
Spinach	Correnta	Territorial	NA	7-Sep	3	2	4	2	2	2.33
Squash - pattypan	Starship	Johnny's	27-Aug	6-Sep	2	3	4	2	2	2.33
Summer Squash	Daisey	Twilley	27-Aug	6-Sep	2	2	4	2	2	2.00
Spinach	Melody	Burpee	NA	9-Sep	2	1	4	2	1	1.67
Onion	Honeycomb	Shamrock	2-Jul	14-Aug	1	1	1	1	1	1.00
Onion	Pegasus	Seminis	2-Jul	14-Aug	1	1	1	1	1	1.00
Onion	Savannah Sweet	Seminis	2-Jul	14-Aug	1	1	1	1	1	1.00
Spinach	Bloomsdale Longstanding	Burpee	NA	6-Sep	1	1	4	1	1	1.00

[1]Health, uniformity, yield potential, and overall ratings are on a 0–5 scale (0 = dead, 5 = optimal or greatest). Maturity rating is on a 1–5 scale (1 = seedlings and very young plants; 2 = young plants without significant development of harvestable organics or flowers; 3 = crop nearing but not at a harvestable stage that may be flowering or fruiting but is not at it's peak point of yield; 4 = ready for harvest, crop is ripe or the harvestable portion is horticulturally mature; and 5 = overmature, peak harvest period has passed). Sweetpotatoes not dug. Ratings based on shoot ratings and previous years' ratings of shoots and dug roots.
[2]Entries without a corresponding seeding date were direct seeded, others were transplanted.
[3]Result is the mean of the three ratings for health, uniformity, and yield potential.
[4]NA: Not applicable.

Results and Discussion

Weather and Environment

The 2007 season was dry, punctuated by a rainy period in early July, with smaller rain events in late August and early October. Supplemental irrigation was used frequently. All months from June through October had above-normal temperatures. Diseases were present, but overall disease pressure was lower than in some previous years, likely due to the dry weather. Few serious insect pests were observed, although whiteflies were seen on many crops, aphids were particularly abundant on rutabagas, and there was low to moderate damage on several brassicas from imported-cabbageworm feeding.

Crop Ratings

Results from 2007 are similar in many ways to those reported in previous years (Evans et al., 2004; Evans, et al., 2003; Evans et al., 2002; Snyder et al., 2003). Results for all entries are presented in Table 1, sorted by HUY rating, then by crop and by cultivar. Mean HUY and overall ratings for individual entries ranged from less than 2 to a perfect 5. The highest and lowest rated entries, based on HUY and overall rating, are listed in Table 2. Because no replication was done, it is not possible to say the ratings for these entries are significantly better or worse than entries receiving slightly higher or slightly lower ratings.

Mean HUY and overall ratings for all entries within each crop are presented in Table 3. For crops with two or more entries, there were no significant correlations between number of entries and the mean or standard deviation of the HUY or overall ratings (data not shown).

The best performing and most highly recommendable crops for fall production based on this trial are those with high HUY and/or overall ratings, as well as relatively low standard deviation of the ratings among entries of that crop. Such crops would be the most likely to produce good to excellent yields with fewer instances of poor performance than crops with lower mean ratings and/or relatively high standard deviation of the ratings. Just as commercial row-crop farmers have been shown to do (Flood, et al., 1985), gardeners and market growers should select cultivars and crops that perform well, and that perform well consistently (in other words, they have low standard deviations). Based on the HUY ratings and standard deviations in this trial, central Mississippi gardeners planting a fall

Table 2. Highest and lowest rated entries as measured by mean health, uniformity, and yield potential ratings (HUY) and overall rating.[1]

Relative rating	Crop	Cultivars/entries
Highest (Mean HUY and Overall are both 5.0)	Cabbage	King Slaw, Megaton
	Collard	Blue Max
	Eggplant	Casper, Clara, Epic
	Kale	Blue Armor, Blue Knight
	Lettuce	New Red Fire
	Lima Bean/Butter Bean	Burpee's Bush Lima, Burpee's Improved Lima, Dixie White Butterpea, Eastland, Fordhook 242, Jackson Wonder, Thorogreen Bush
	Okra	Annie Oakley II, Cajun Delight, Clemson Spineless, Lee
	Pepper	Blushing Beauty, Excursion II, Golden Baby Belle, Purple Beauty, Banana Bill, Gypsy
	Snapbean	Carson, Eureka, French Filet, Heavyweight II, Kentucky Wonder, Maxibel, Provider
	Southernpea	Erectset, Arkansas Blackeye No. 1, Black Crowder, Dixie Lee, Early Acre, Early Scarlet, Empire, Encore, Epic, Excel, Excel S, Pinkeye Purplehull, Top Pick Pinkeye
	Sweetpotato[2]	Beauregard, Centennial, Georgia Jet, Jewel, Vardaman
	Turnip	Alamo
Lowest (HUY and Overall are both less than or equal to 3.0)	Onion	Honeycomb, Pegasus, Savannah Sweet
	Spinach	Bloomsdale Long Standing, Melody, Correnta, Lombardia
	Summer Squash	Daisy, Starship
	Soybean, Edamame	Early Hachucho

[1]Ratings are on a 0–5 scale (0=dead, 5=best). HUY is the mean of three ratings (health, uniformity, and yield potential) for a given entry. Overall is a separate rating from HUY (0=dead, 5=best).
[2]Sweetpotatoes not dug. Ratings based on shoot ratings and previous years' ratings of shoots and dug roots.

Table 3. Mean and standard deviations, by crop, of subjective ratings for vegetables grown for the 2007 Fall Flower and Garden Fest at Crystal Springs, Mississippi.

Crop	n	(Uniformity+Health+Yield Potential)/3)		Overall	
		Mean[1]	s.d.[2]	Mean	s.d.
Artichoke	2	4.667	0.000	4.000	0.000
Asparagus	1	4.667	NA[3]	4.000	NA
Beet	1	3.667	NA	4.000	NA
Broccoli	11	4.455	0.429	4.182	0.603
Brussels sprouts	4	3.833	0.192	3.000	0.000
Cabbage	17	4.270	0.377	4.294	0.469
Carrot	2	3.830	0.707	3.500	0.707
Cauliflower	8	4.000	0.471	4.375	0.744
Celery	1	4.667	NA	4.000	NA
Celeriac	1	4.333	NA	3.000	NA
Collards	7	4.429	0.418	4.286	0.488
Cucumber	16	4.271	0.599	4.250	0.683
Eggplant	9	4.704	0.261	4.667	0.500
Kale	6	4.556	0.344	4.333	0.516
Kohlrabi	5	4.200	0.298	4.000	1.000
Leek	2	4.667	0.000	3.500	0.707
Lettuce	12	4.250	0.452	3.917	0.669
Lima bean	9	4.926	0.147	5.000	0.000
Musk- and Galia melons	3	4.333	0.000	5.000	0.000
Mustard	6	4.500	0.279	4.500	0.548
Okra	11	4.727	0.327	4.909	0.302
Onion	4	1.750	1.500	1.500	1.000
Peanut	4	ND[4]	ND	4.333	0.577
Pepper	34	4.363	0.502	4.206	0.729
Pumpkin	6	3.500	0.350	3.833	0.408
Radish	7	4.190	0.325	4.286	0.488
Rutabaga	4	3.333	0.272	3.000	0.000
Snap bean	26	4.538	0.422	4.269	0.667
Southernpea	13	4.97	0.092	5.000	0.000
Soybean/Edamame	6	3.667	0.667	2.833	0.983
Spinach	5	2.200	0.901	1.800	0.837
Summer Squash	17	3.471	0.624	3.353	0.702
Sugar Beet	1	4.667	NA	4.000	NA
Sweetpotato[5]	5	5.000	0.000	5.000	0.000
Swiss Chard	2	3.667	0.471	3.500	0.707
Tomato	26	3.795	0.472	3.577	0.703
Turnip	11	4.303	0.433	4.182	0.603
Watermelon	4	3.667	0.000	4.000	0.000
Winter Squash	1	4.333	NA	5.000	NA

[1]Mean of three rating categories on a 0–5 scale (0= dead, 5 = best).
[2]s.d.: Standard deviation.
[3]NA: Not applicable. Calculation of standard deviations requires more than one observation.
[4]ND: Not determined. Yield potential of peanut plants was not estimated during ratings.
[5]Sweetpotatoes not dug. Ratings based on shoot ratings and previous years' ratings of shoots and dug roots.

vegetable garden would most likely have good success with eggplant, kale, leek, mustard, okra, and southernpeas. Sweetpotato received high ratings, but these were based on shoot ratings not root observations, as described in the methodology section. Artichoke also received high ratings but will not likely produce edible crops in the fall, so it would not be a best choice for fall gardens. Both artichoke and leek had few entries, thus the recommendations for these crops should be used with more caution than recommendations for other crops we observed. Most of the crops that performed best are traditional Mississippi garden crops, but eggplant and leeks are not, indicating that gardeners looking for something new to try might have a good chance of success with these two crops.

Many other crops performed quite well and can likely be grown successfully and consistently well in central Mississippi. Some crops had lower overall ratings across entries but had one or more very highly rated entries as listed in Table 2. Some of these not already mentioned include cabbage, lettuce, and snap bean. Cabbage used to be a significant commercial crop in central Mississippi, and our data suggest that more gardeners and market farmers should try growing it in the fall. Informed cultivar selection may improve the likelihood of success with these crops.

Several crops performed uniformly poorly in this trial, or their overall and HUY ratings varied more than most among entries, indicating they may be less reliable and more frustrating to grow than more highly rated and less variable crops. Central Mississippi gardeners would likely face challenges raising these crops in the fall.

Crop ratings in 2007 were similar in many ways to those going back several years. In 2001, another warm and dry year, highly rated crops included collards, cucumbers, kale, lima beans, okra, peppers, and turnips (Evans, et al., 2002). All of these crops also performed well in the 2007 trial. Future work will include analysis of crop ratings and variances over several years to try to strengthen conclusions from each individual year of data and ascertain information about year-to-year variance in performance.

Influence of Uniformity

Ratings and presentation of the data are biased toward rewarding uniform maturation of harvestable plant parts in each plot. Uniformity ratings take uniformity of maturation into account, and a plot's uniformity rating was reduced if the harvestable plant part varied in maturity among plants in the row. However, many gardeners value crops and cultivars that mature over an extended period of time, allowing them to enjoy the harvest longer and not have plants becoming overmature before they can all be consumed or processed. Readers who desire such cultivars can use the maturity rating column of Table 1 in combination with the other ratings presented to select such cultivars.

Conclusions

Many crops performed well. HUY and overall rating among entries in each crop showed at least some variability. The trial gives Mississippi gardeners and others information that can be used to select crops and varieties for fall gardening based on both performance and variance in performance. Using such information in crop and cultivar/variety selection may improve gardening satisfaction and help consumers make better decisions when purchasing vegetable seeds, seedlings, and other planting stock.

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