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1993
*Annual
Trial Gardens
Results*

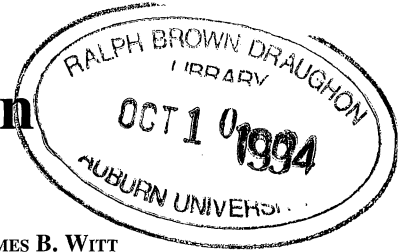


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1993 Annual Trial Garden Results



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NEARLY 230 VARIETIES of annual plants were evaluated from June through September, 1993, in a trial garden at the E.V. Smith Research Center in Shorter, 15 miles east of Montgomery, Ala. (latitude 32° 30' N, longitude 85° 40' W). The research center is part of the Alabama Agricultural Experiment Station. The garden was designated an All America Selections Display Garden in 1993.

Seeds were donated by several companies and grown by professional horticulturalists in a commercial greenhouse in Alabama. Before planting, nitrogen, phosphorus, and potassium were applied at a rate of 60 pounds per acre in the form of calcium nitrate, muriate of potash, and triple superphosphate, respectively. Beds were tilled and fumigated with methyl bromide two weeks before planting. White plastic mulch covered the beds. Twelve plants per entry were spaced nine inches on center in a double row. Transplants were planted on May 21, 1993. Plants were irrigated weekly with drip tubes under the plastic. Throughout the growing season, a commercial grade of liquid calcium nitrate was applied through the drip tubes at the rate of 12 pounds of N per acre. Supplemental irrigation was applied as needed throughout the summer. All plants were grown in full sun.

Table 1 shows average daily light levels, average daily temperature, and monthly rainfall during the trial period. Figure 1 shows the minimum and maximum temperatures that occurred during the same period. In comparison to other years, 1993 had above-average temperatures and below-average rainfall.

¹Behe is an associate professor; Deneke is a former assistant professor; Witt is superintendent of the E.V. Smith Research Center Horticulture Farm; Beckett is a former research associate; and Montgomery is a M.S. candidate and graduate research assistant.

TABLE 1. SUNLIGHT, TEMPERATURE, AND RAINFALL FROM APRIL-SEPTEMBER, 1993, FOR AUBURN, ALABAMA¹

Month	Average sunlight <i>W/Sq. M²</i>	Average temperature <i>°F</i>	Monthly rainfall <i>In.</i>
April	6215.8	59.9	1.62
May	6214.5	70.8	3.10
June	6783.8	80.2	3.35
July	6893.6	84.0	2.76
August	5902.1	81.3	5.64
September	5368.7	76.2	3.10

¹Auburn is approximately 30 miles from the E.V. Smith Research Center in Shorter.

²Solar radiation is measured in watts per square meter.

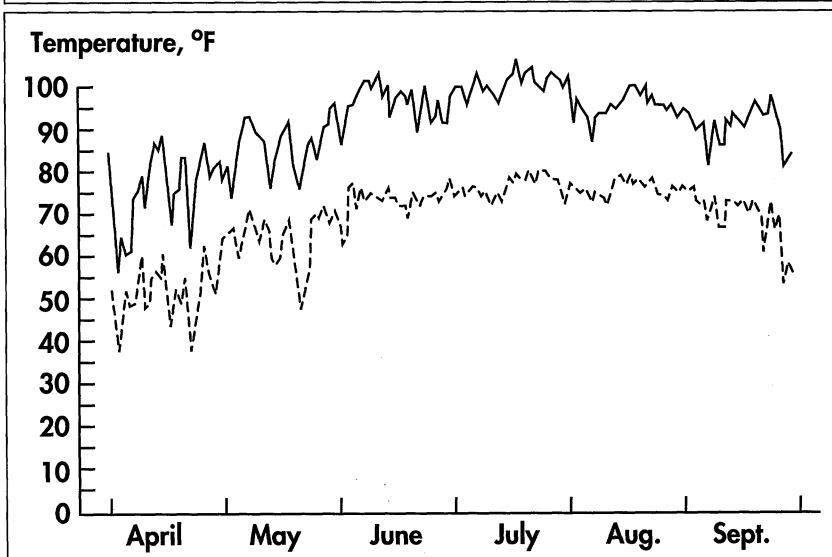


Figure 1. Daily minimum and maximum temperatures for Auburn, Ala., from April through September, 1993.

Height (h), width at the widest point (w_1), and the width perpendicular to the widest point (w_2) for the center eight of 12 plants were measured at mid-season and at the end of the study. A growth index was calculated $[(h + w_1 + w_2) / 3]$ as a measure of overall size. The mid-season growth index (July 26), end-of-season growth index (September 20) and average heights at those times are shown in Table 2. Comparisons among varieties can be made for relative size and height at mid- and end-of-season. Eight of the 12 plants were periodically evaluated using a scale similar to that used in other test gardens. The outer four plants were used as guard rows.

TABLE 2. GROWTH INDICES AND AVERAGE HEIGHTS¹

Crop	Cultivar	Midpoint index ² <i>cm</i> ³	Terminal index <i>cm</i>	Midpoint height <i>cm</i>	Terminal height <i>cm</i>
Achillea	Summer Pastels	26.5	38.0	30.2	41.5
Canna	Tropical Rose	29.8	52.7	29.3	75.5
Celosia	Castle Pink	33.7	39.1	34.1	36.9
Coreopsis	Early Sunrise	18.5	*	21.8	*
Dianthus	Ideal Violet	12.0	*	10.6	*
Dianthus	Telstar Picotee	12.1	*	11.9	*
Gaillardia	Red Plume	25.7	*	25.6	*
Gazania	Talent	21.2	*	18.9	*
Gazania	Talent Mix	*	*	13.1	*
Geranium	Freckles	12.2	*	11.8	*
Marigold	Golden Gate	27.3	44.5	31.8	41.3
Melampodium	Medallion	47.8	*	61.9	*
Melampodium	Showstar	47.7	77.7	61.6	72.4
Nierembergia	Mont Blanc	19.3	25.5	10.4	16.4
Salvia	Lady in Red	41.7	58.8	54.8	85.5
Verbena	novalis Deep Blue	19.2	*	16.4	*
Verbena	Peaches and Cream	22.7	23.8	19.5	24.8
Verbena	Sandy White	12.8	*	11.6	*
Verbena	speciosa Imagination	28.8	52.9	14.3	60.6
Zinnia	Scarlet Splendor	41.3	*	58.3	*

¹Asterics indicate where one or more plants were missing from the trial.

²A growth index is calculated by measuring a plants height (h), width at the widest point (w_1), and width perpendicular to the widest point (w_2). These data are used in the formula, $(h+w_1+w_2)/3$, to determine the growth index.

³One centimeter equals 0.3937 inch.

TABLE 2, CONTINUED. GROWTH INDICES AND AVERAGE HEIGHTS¹

Crop	Cultivar	Midpoint index ² <i>cm</i> ³	Terminal index <i>cm</i>	Midpoint height <i>cm</i>	Terminal height <i>cm</i>
Zinnia	angustifolia Orange Classic	40.3	48.2	52.8	60.4
Zinnia	angustifolia White Classic	37.9	46.5	50.9	60.5
Vinca	Polka Dot	35.3	51.5	44.3	61.8
Vinca	Blush Cooler	37.6	77.6	40.3	59.5
Vinca	Tropicana Blush	37.0	75.8	40.5	61.4
Vinca	Grape Cooler	36.0	68.9	40.3	59.8
Vinca	Tropicana Pink	34.6	48.1	39.4	62.1
Vinca	Pretty in Rose	38.5	52.6	45.9	67.3
Vinca	Tropicana Rose	38.6	47.5	46.8	60.5
Vinca	Peppermint Cooler	33.6	46.0	42.3	62.6
Vinca	Tropicana Bright Eye	36.0	48.5	43.3	67.1
Vinca	Landscaper White	36.8	43.7	45.9	56.6
Vinca	Pretty in White	37.5	45.1	46.4	66.1
Petunia	Candypops Burgundy	41.6	*	47.8	*
Petunia	Falcon Burgundy	33.0	*	34.8	*
Petunia	Ultra Burgundy	33.9	*	38.9	*
Petunia	Carnival Scarlet	30.7	*	29.5	*
Petunia	Highlight Scarlet	32.3	*	35.1	*
Petunia	Candypops Red	29.7	*	32.5	*
Petunia	Cloud Red	32.0	26.3	52.5	21.9
Petunia	Countdown Red	34.7	*	35.9	*

¹Asterics indicate where one or more plants were missing from the trial.

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TABLE 2, CONTINUED. GROWTH INDICES AND AVERAGE HEIGHTS¹

Crop	Cultivar	Midpoint index ² <i>cm</i> ³	Terminal index <i>cm</i>	Midpoint height <i>cm</i>	Terminal height <i>cm</i>
Petunia	Dreams Red	33.1	*	37.1	*
Petunia	Falcon Red	26.0	*	37.6	*
Petunia	Falcon Red Morn	27.3	*	41.3	*
Petunia	Falcon Red Vein	29.8	*	34.6	*
Petunia	Flash Red	32.7	*	40.6	*
Petunia	Supercascade Red	35.1	*	41.8	*
Petunia	Ultra Red	28.6	*	42.4	*
Petunia	Frost Fire	31.9	*	47.1	*
Petunia	Frost Cherry	33.7	*	48.6	*
Petunia	Hula hoop Red	32.3	*	42.9	*
Petunia	Picotee Red	24.3	*	31.4	*
Petunia	Celebrity Burgundy	32.1	34.8	41.3	28.1
Petunia	Madness Burgundy	33.1	34.4	45.5	29.6
Petunia	Primetime Burgundy	28.7	*	41.8	*
Petunia	Carpet Red	31.2	*	43.5	*
Petunia	Celebrity Red	29.5	*	42.9	*
Petunia	Celebrity Red Morn	36.8	*	53.5	*
Petunia	Freedom Red	31.7	33.2	43.4	28.8
Petunia	Horizon Ruby	35.7	*	53.0	*
Petunia	Landscaper Red	31.0	*	45.3	*
Petunia	Madness Red	33.2	*	49.5	*

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TABLE 2, CONTINUED. GROWTH INDICES AND AVERAGE HEIGHTS¹

Crop	Cultivar	Midpoint index ² <i>cm</i> ³	Terminal index <i>cm</i>	Midpoint height <i>cm</i>	Terminal height <i>cm</i>
Petunia	Merlin Red	27.9	*	45.6	*
Petunia	Polo Red	29.4	29.6	43.1	24.0
Petunia	Polo Red Target	30.8	*	38.3	*
Petunia	Primetime Red	27.9	*	37.0	*
Petunia	Primetime Red Frost	31.0	*	42.5	*
Petunia	Primetime Red Veined	30.9	*	37.9	*
Petunia	Candytops Deep Rose	29.4	*	42.8	*
Petunia	Falcon Deep Rose	27.3	*	39.0	*
Petunia	Cloud Rose	38.9	*	57.4	*
Petunia	Falcon Rose	29.3	*	41.0	*
Petunia	Flash Rose	30.0	*	45.1	*
Petunia	Prism Rose Halo	29.3	*	49.7	*
Petunia	Ultra Rose	32.8	*	44.8	*
Petunia	Celebrity Raspberry Ice	28.7	26.6	40.8	23.0
Petunia	Celebrity Summer Ice	37.1	26.0	54.4	24.9
Petunia	Freedom Summertime	34.6	*	49.6	*
Petunia	Horizon Deep Rose	34.3	*	44.3	*
Petunia	Madness Summer Imp.	35.1	*	47.1	*
Petunia	Merlin Cherry Rose	30.5	25.7	39.8	21.9
Petunia	Carpet Rose	29.2	*	44.5	*
Petunia	Horizon Rose Halo	28.5	27.0	48.5	24.3

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TABLE 2, CONTINUED. GROWTH INDICES AND AVERAGE HEIGHTS¹

Crop	Cultivar	Midpoint index ² <i>cm</i> ³	Terminal index <i>cm</i>	Midpoint height <i>cm</i>	Terminal height <i>cm</i>
Petunia	Merlin Rose	34.0	*	54.6	*
Petunia	Polo Rose	32.0	30.3	47.1	27.6
Petunia	Polo Rose Flare	31.6	29.2	41.4	26.8
Petunia	Primetime Rose	32.8	26.2	40.0	23.5
Petunia	Cloud Salmon	29.4	33.3	37.0	28.6
Petunia	Dreams Salmon	29.1	33.8	40.9	23.3
Petunia	Falcon Pastel Salmon	28.5	26.1	43.5	22.9
Petunia	Falcon Salmon	28.8	34.4	43.9	28.0
Petunia	Flash Salmon	29.6	25.8	48.8	23.4
Petunia	Ultra Salmon	29.7	30.4	41.4	26.4
Petunia	Celebrity Salmon	34.0	34.5	47.0	28.9
Petunia	Madness Simply	32.7	*	54.0	*
Petunia	Madness Spring	33.0	31.8	47.8	25.6
Petunia	Merlin Salmon	32.4	29.2	38.5	24.4
Petunia	Polo Salmon	32.0	32.6	46.6	27.5
Petunia	Polo Salmon-Veined	33.7	30.4	50.3	25.3
Petunia	Primetime Salmon	32.8	34.7	48.9	28.0
Petunia	Falcon Coral	30.5	25.8	41.1	20.8
Petunia	Flash Coral	28.0	27.9	38.4	21.9
Petunia	Prism Coral	25.9	29.1	35.4	22.9
Petunia	Prism Coral Halo	29.9	26.2	49.6	22.4

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TABLE 2, CONTINUED. GROWTH INDICES AND AVERAGE HEIGHTS¹

Crop	Cultivar	Midpoint index ² <i>cm</i> ³	Terminal index <i>cm</i>	Midpoint height <i>cm</i>	Terminal height <i>cm</i>
Petunia	Cloud Pink	36.1	36.0	44.3	28.3
Petunia	Dreams Pink	29.6	30.3	37.6	26.3
Petunia	Falcon Pink Vein	35.1	31.8	48.4	27.3
Petunia	Falcon Bluish Pink	32.6	30.8	43.1	26.9
Petunia	Flash Pink	33.9	38.3	52.4	38.9
Petunia	Flash Pink Centre	30.4	*	38.3	*
Petunia	Supercascade Pink	31.6	*	42.6	*
Petunia	Ultra Peppermint	28.7	23.0	42.4	19.8
Petunia	Carpet Flame	28.4	28.3	39.1	24.9
Petunia	Freedom Coral	29.8	28.3	47.0	27.4
Petunia	Horizon Coral Halo	33.8	*	50.6	*
Petunia	Carpet Pink	28.5	20.9	45.4	19.0
Petunia	Celebrity Hot Pink	30.8	32.4	48.3	32.1
Petunia	Celebrity Pink Morn	32.8	*	52.0	*
Petunia	Celebrity Strawberry Ice	29.4	30.0	43.3	27.3
Petunia	Freedom Pink	32.2	28.0	49.4	25.6
Petunia	Freedom Raspberry Vein	26.0	*	37.4	*
Petunia	Madness Pink	31.8	34.5	48.4	26.8
Petunia	Madness Sheer	27.5	32.6	39.1	23.5
Petunia	Merlin Pink	27.8	28.4	41.3	21.5
Petunia	Polo Pink	28.3	35.0	41.1	28.1

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TABLE 2, CONTINUED. GROWTH INDICES AND AVERAGE HEIGHTS¹

Crop	Cultivar	Midpoint index ² <i>cm</i> ³	Terminal index <i>cm</i>	Midpoint height <i>cm</i>	Terminal height <i>cm</i>
Petunia	Polo Pink Veined	33.2	35.5	53.1	35.4
Petunia	Primetime Pink	28.9	37.5	42.3	30.5
Petunia	Primetime Pink Veined	28.4	26.5	39.6	24.0
Petunia	Primetime Light Pink Veined	33.5	*	43.1	*
Petunia	Carnival Purple	32.8	29.9	44.3	25.5
Petunia	Daddy Sugar Imp.	27.7	19.9	41.0	22.6
Petunia	Flash Velvet	35.6	38.8	57.4	37.0
Petunia	Frost Velvet	25.4	23.5	33.9	16.6
Petunia	Falcon Plum Vein	26.5	30.8	39.9	26.1
Petunia	Ultra Plum	24.6	18.3	37.5	20.6
Petunia	Carpet Plum	26.8	15.0	38.5	14.9
Petunia	Madness Plum	33.1	28.3	54.3	26.1
Petunia	Madness Plum Crazy	28.3	20.9	43.9	17.5
Petunia	Carpet Velvet	34.0	*	42.8	*
Petunia	Polo Velvet	35.1	26.7	48.8	25.3
Petunia	Cloud Orchid	31.8	*	42.5	*
Petunia	Daddy Orchid	29.9	26.6	41.4	23.9
Petunia	Falcon Lilac	31.6	29.2	40.1	26.4
Petunia	Supercascade Lilac	27.5	*	42.4	*
Petunia	Celebrity Lilac	28.2	31.6	45.3	29.0
Petunia	Celebrity Orchid Ice	31.6	28.1	53.1	30.6

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TABLE 2, CONTINUED. GROWTH INDICES AND AVERAGE HEIGHTS¹

Crop	Cultivar	Midpoint index ² <i>cm</i> ³	Terminal index <i>cm</i>	Midpoint height <i>cm</i>	Terminal height <i>cm</i>
Petunia	Madness Lilac	34.0	28.4	51.3	29.5
Petunia	Madness Orchid	33.3	*	49.6	*
Petunia	Madness Sugar	33.9	32.1	49.5	30.1
Petunia	Polo Orchid Veined	46.5	33.1	49.9	37.8
Petunia	Countdown Navy Blue	31.0	*	36.1	*
Petunia	Dreams Midnight	42.5	*	40.4	*
Petunia	Candypops Blue	46.5	29.4	47.3	27.0
Petunia	Cloud Blue	51.3	*	52.3	*
Petunia	Daddy Blue	45.7	19.9	49.5	17.6
Petunia	Electra Blue	33.7	22.4	32.9	21.0
Petunia	Falcon Blue	40.2	*	44.0	*
Petunia	Falcon Mid Blue	39.4	21.5	42.4	18.6
Petunia	Flash Blue	55.3	23.8	56.8	23.6
Petunia	Highlight Blue	34.1	*	32.4	*
Petunia	Supercascade Blue	55.4	*	58.5	*
Petunia	Ultra Blue	49.8	26.5	51.5	26.3
Petunia	Frost Blue	42.9	24.7	42.1	24.9
Petunia	Hulahoop Blue	38.5	17.5	35.3	16.0
Petunia	Picotee Blue	45.4	*	44.4	*
Petunia	Madness Midnight	52.0	*	47.0	*
Petunia	Carpet Blue Lace	55.6	*	52.3	*

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TABLE 2, CONTINUED. GROWTH INDICES AND AVERAGE HEIGHTS¹

Crop	Cultivar	Midpoint index ² <i>cm</i> ³	Terminal index <i>cm</i>	Midpoint height <i>cm</i>	Terminal height <i>cm</i>
Petunia	Celebrity Blue	42.1	23.6	37.5	24.1
Petunia	Celebrity Sky Blue	65.7	29.8	63.5	30.8
Petunia	Freedom Blue	39.2	20.6	37.6	20.6
Petunia	Merlin Blue	46.4	28.3	45.3	27.4
Petunia	Polo Blue	42.1	*	44.8	*
Petunia	Primetime Blue	48.3	32.5	52.4	29.3
Petunia	Carnival White	33.3	*	32.4	*
Petunia	Cloud Snow	41.1	16.8	44.9	16.8
Petunia	Countdown White	32.8	*	36.5	*
Petunia	Dreams White	36.3	*	35.4	*
Petunia	Falcon White	37.2	*	37.5	*
Petunia	Flash White	42.3	*	45.4	*
Petunia	Supercascade White	*	*	*	*
Petunia	Ultra White	*	*	*	*
Petunia	Carpet White Imp.	*	*	*	*
Petunia	Celebrity White	36.1	*	40.8	*
Petunia	Celebrity Chiffon Morn	33.5	27.9	30.8	24.1
Petunia	Celebrity Blue Ice	47.0	*	48.4	*
Petunia	Freedom White	50.5	*	52.6	*
Petunia	Landscaper White	45.7	*	44.0	*
Petunia	Madness White Imp.	43.2	26.0	41.3	24.8

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Crop	Cultivar	Midpoint index ² <i>cm</i> ³	Terminal index <i>cm</i>	Midpoint height <i>cm</i>	Terminal height <i>cm</i>
Petunia	Merlin White	40.4	26.9	36.1	23.9
Petunia	Polo White	54.1	*	55.9	*
Petunia	Primetime White	38.9	*	38.3	*
Petunia	Calypso	46.5	*	47.1	*
Petunia	Falcon Red and White	37.5	*	37.6	*
Petunia	Ultra Red Star	45.6	*	50.0	*
Petunia	Ultra Rose Star	39.9	*	48.0	*
Petunia	Flash Rose and White	*	*	*	*
Petunia	Flash Blue and White	33.0	*	48.3	*
Petunia	Ultra Blue Star	34.0	21.7	44.5	18.8
Petunia	Telstar	40.0	*	50.1	*
Petunia	Flash Purple and White	42.2	*	57.3	*
Petunia	Ultra Crimson Star	33.9	*	37.9	*
Petunia	Madness Burgundy Star	43.5	27.5	45.3	24.1
Petunia	Polo Burgundy Star	39.2	31.0	39.0	27.5
Petunia	Primetime Burgundy Star	45.3	33.8	53.8	31.1
Petunia	Primetime Red Star	36.8	22.8	42.1	19.4
Petunia	Celebrity Rose Star	43.5	38.2	53.5	29.9
Petunia	Madness Rose Star	39.3	35.3	43.1	27.4
Petunia	Primetime Rose Star	58.4	42.6	58.5	34.4
Petunia	Polo Blue Star	36.5	*	41.0	*

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Crop	Cultivar	Midpoint index ² <i>cm</i> ³	Terminal index <i>cm</i>	Midpoint height <i>cm</i>	Terminal height <i>cm</i>
Petunia	Primetime Blue Star	33.4	*	40.6	*
Petunia	Carnival Mix	37.3	*	46.8	*
Petunia	Countdown Mix	33.2	*	36.3	*
Petunia	Electra Mix	39.2	*	45.9	*
Petunia	Highlight Mix	34.8	29.2	35.3	27.1
Petunia	Hulahoop Mix	40.8	28.5	42.3	22.5
Petunia	Picotee Mix	47.6	*	51.1	*
Petunia	Horizon Mix	40.6	*	43.6	*
Petunia	Landscaper Mix	42.0	*	43.6	*
Petunia	Merlin Picotee Mix	37.6	*	34.3	*
Petunia	Giant Double Grandiflora Mix	36.2	*	34.9	*
Petunia	Madness Double Burgundy	38.7	*	34.9	*
Petunia	Madness Double Rose, White	40.1	34.6	40.0	29.6
Petunia	Madness Double Sheer	35.3	31.9	38.6	28.1
Petunia	Madness Double Silver	*	*	*	*

¹Asterics indicate where one or more plants were missing from the trial.

²A growth index is calculated by measuring a plants height (h), width at the widest point (w_1), and width perpendicular to the widest point (w_2). These data are used in the formula, $(h+w_1+w_2)/3$, to determine the growth index.

³One centimeter equals 0.3937 inch.

All but 37 of the 230 entries in the evaluation were petunia varieties. Among the 37 non-petunia entries, performance in the landscape widely varied.

The top performers of the non-petunias were melampodium, salvia, vinca, and zinnia. Melampodium Showstar outperformed Medallion longer in the trial. Salvia Lady in Red, the only salvia evaluated, performed well most of the season, with some decline in September. All of the vincas performed well, especially Blush, Grape and Peppermint Cooler, and Tropicana Blush. Other vinca varieties were somewhat slower to flower and/or declined somewhat in September. Both colors of zinnia angustifolia (or zinnia linearis) performed well.

Verbena speciosa Imagination strongly out-performed the other three verbena through nearly all of the season. Canna Tropical Rose, the only canna evaluated, performed well until mid-season but declined in August. Achillea, celosia, corepéosis, dianthus, gaillardia, gazania, geranium, and nirembergia did not perform well.

TABLE 3. BEST-PERFORMING PETUNIA VARIETIES BY COLOR AND FLOWER TYPE WITH NUMBER OF VARIETY COMPARISONS IN EACH CATEGORY

Color	Flower Type	No.	Variety	Supplier
red	grandiflora	20	Candypops Burgundy	Grimes
			Falcon Red Vein	Sakata
			Flash Red	Sluis & Groot
red	multiflora	16	Madness Burgundy	Ball
			Horizon Ruby	Clause
			Madness Red	Ball
rose	grandiflora	7	Flash Rose	Sluis & Groot
rose	multiflora	12	Primetime Rose	Goldsmith
salmon	grandiflora	6	Falcon Salmon	Sakata
salmon	multiflora	7	Celebrity Salmon	Bodger
			Primetime Salmon	Goldsmith
pink	grandiflora	13	Flash Pink	Sluis & Groot
pink	multiflora	17	Celebrity Hot Pink	Bodger
			Primetime Pink	Goldsmith
purple	grandiflora	6	Flash Velvet	Sluis & Groot
purple	multiflora		Madness Plum Crazy	Ball
lilac	grandiflora	4	Falcon Lilac	Sakata
			Madness Orchid	Ball
lilac	multiflora	6	Madness Sugar	Ball
			Supercascade Blue	Pan American
blue	grandiflora	14		
blue	multiflora	8	Celebrity Sky Blue	Bodger
white	grandiflora	8	Falcon White	Sakata
white	multiflora	10	Madness White Imp.	Ball
star	grandiflora	10	Ultra Rose Star	Goldsmith
star	multiflora	9	Polo Burgundy Star	AAS
mix	grandiflora	6	Highlight Mix	Sakata
mix	multiflora	3	Merlin Picotee Mix	Sakata

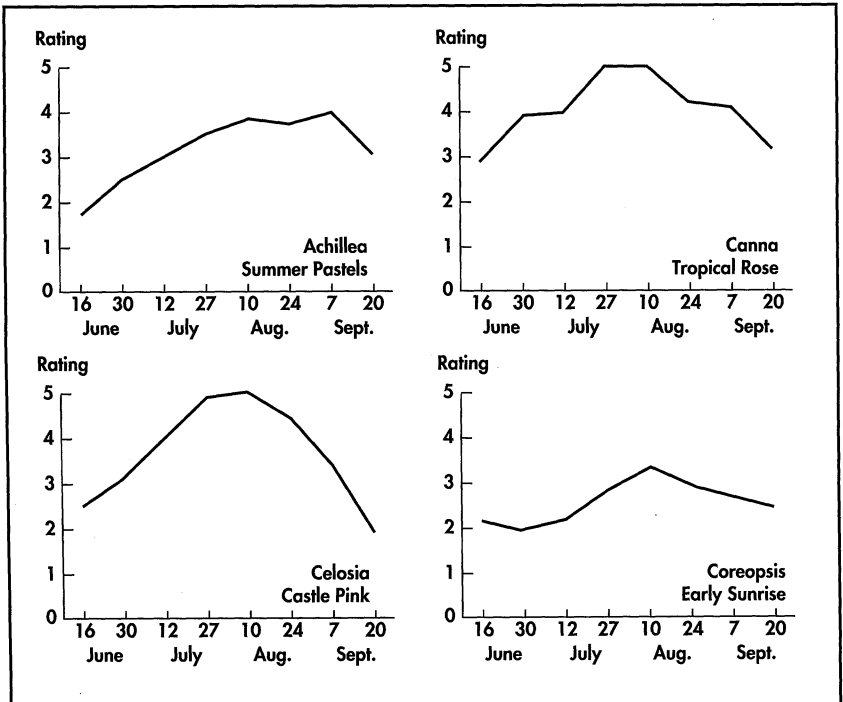
Petunias were evaluated all season, but were pruned to approximately six inches on July 27 (mid-season). This cultural practice was performed to encourage a second flush of growth. Top-performing varieties in each category of color and flower size were selected (Table 3).

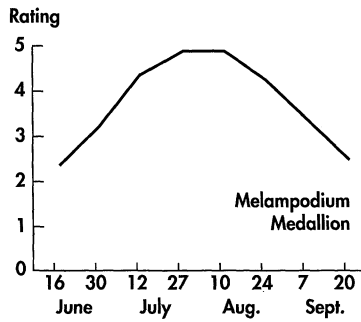
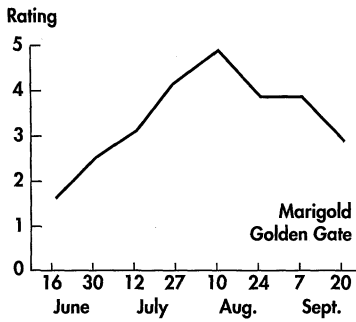
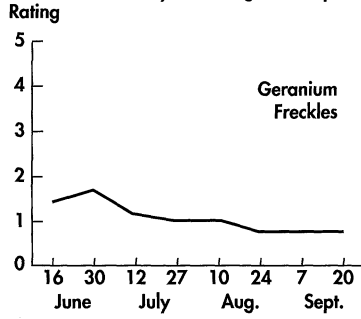
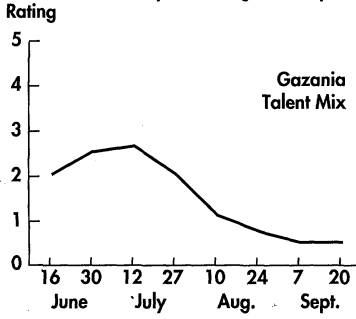
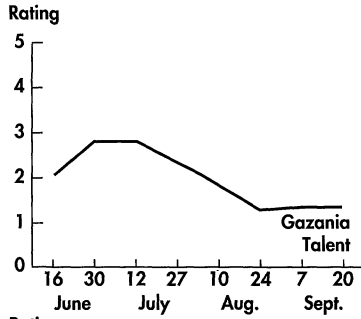
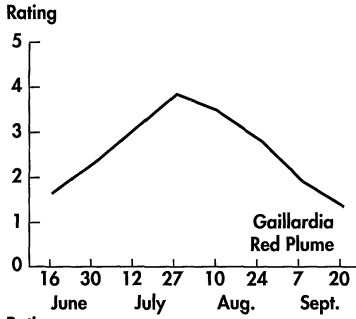
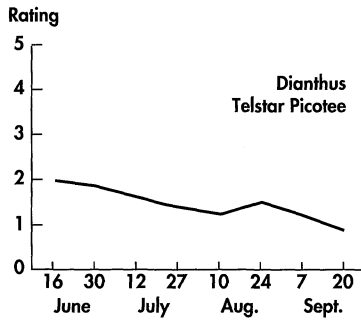
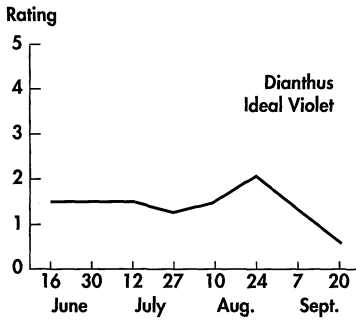
Generally, multifloras outperformed grandifloras in most color categories. Reds, including rose and pinks, generally outperformed other colors. Purples, whites, blues, lilacs, and stars did not perform as well as the reds. Doubles performed so poorly that none were selected as top performers. Flash Velvet was selected as a good-performing purple grandiflora, but it was late in reaching peak color. However, its re-growth and flowering were relatively good after pruning; more so than others in its class. None of the blue or white petunias were very impressive in the trial. Madness White Improved performed well until August and had only modest regrowth and flowering after pruning. Ultra Rose Star performed well only early in the season.

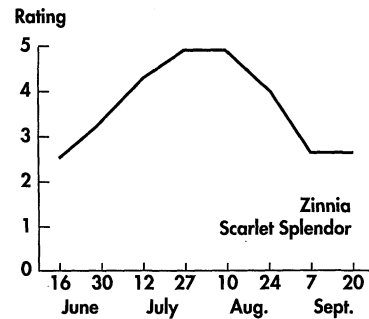
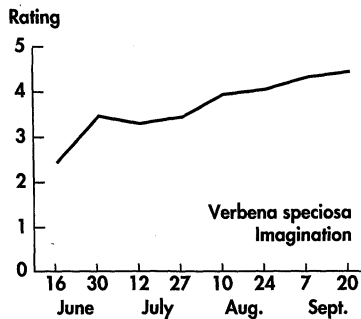
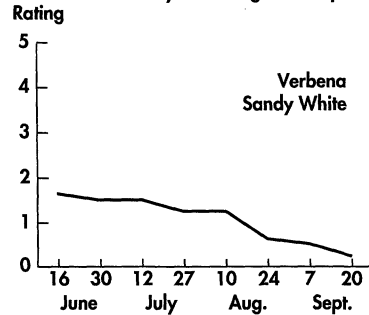
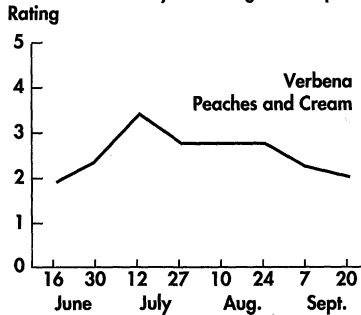
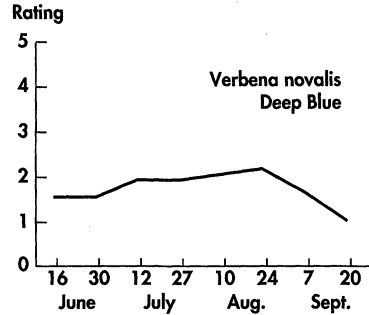
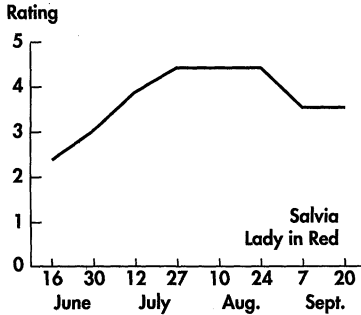
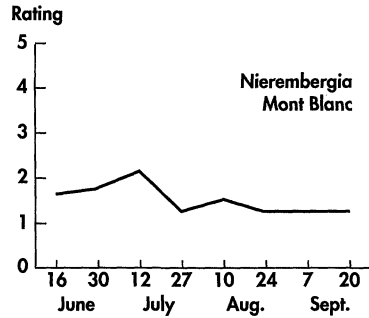
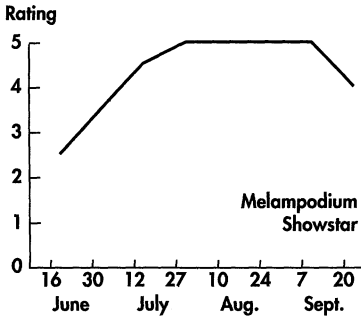
RATINGS FOR EACH ENTRY

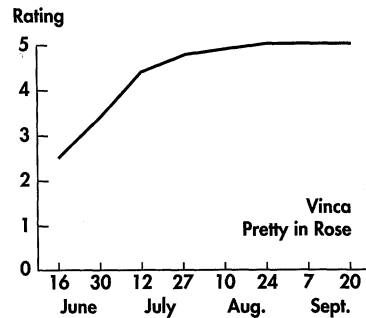
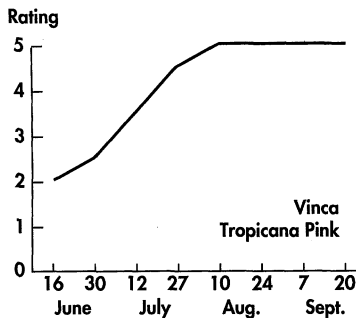
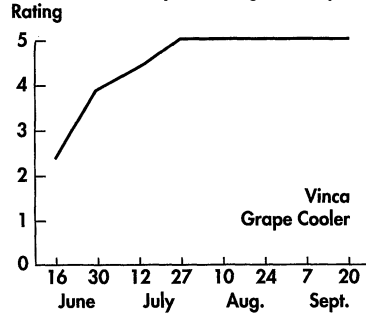
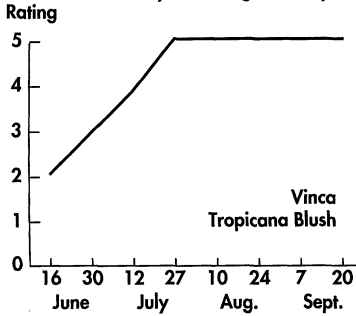
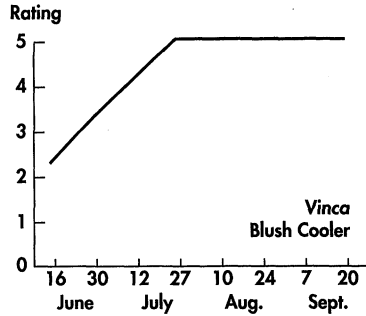
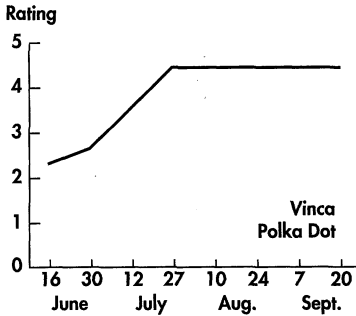
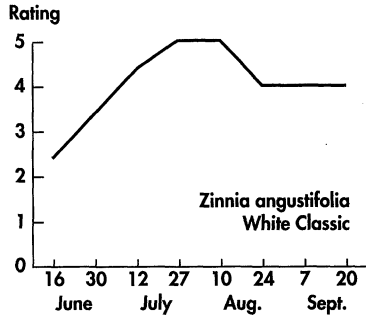
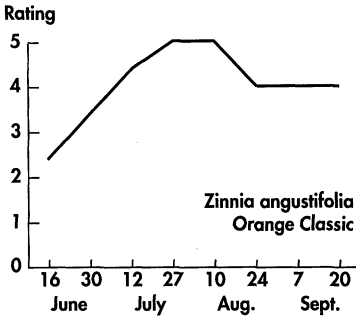
Entries were evaluated every two weeks from June 16 through September 20. Plants were visually rated each time by the same individual using a scale of 1-5. Flowering plants were rated primarily on their floral display, but size, shape, and freedom from insect or disease blemishes also were considered. Ratings were made in whole number units. Average ratings were calculated based on the eight plants evaluated and plotted over the 16-week evaluation period. This plot shows flowering performance throughout the summer.

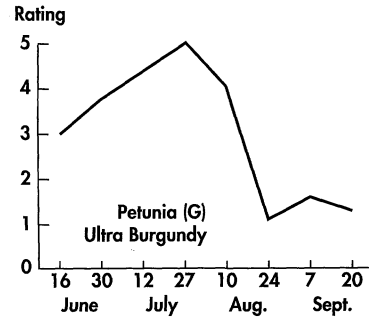
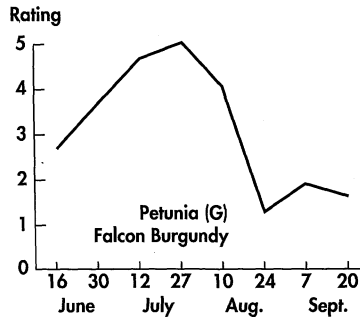
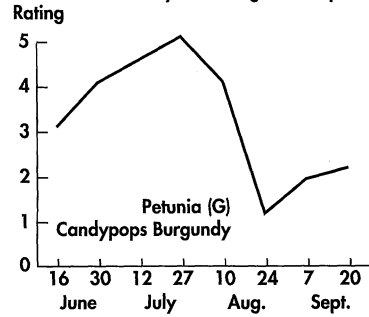
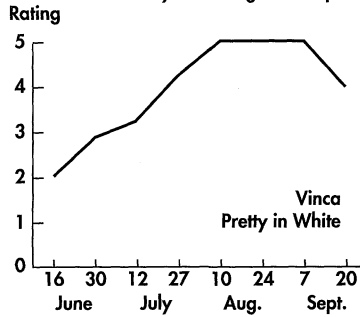
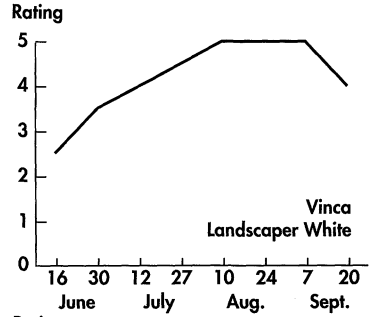
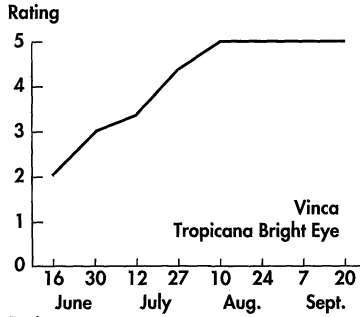
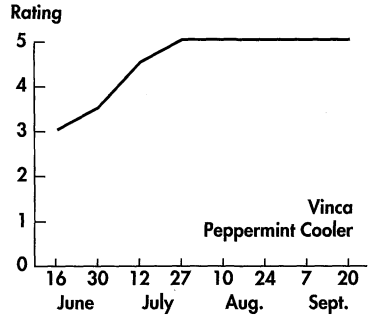
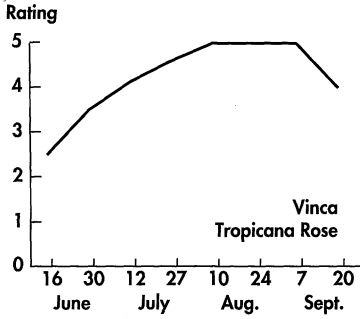
RATING SYSTEM: 0 = plant died; 1 = small amount of foliage relative to plants of the same species with no flowers present; 2 = adequate amount of foliage with no flowers or only a few buds showing; 3 = adequate to large amount of foliage and a relatively small floral display; 4 = sufficient foliage and floral display to be attractive in the landscape; 5 = superior floral display and sufficient foliage display.

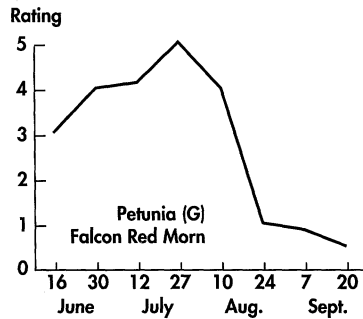
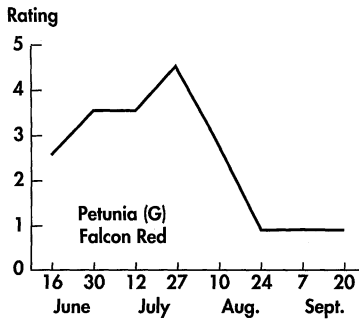
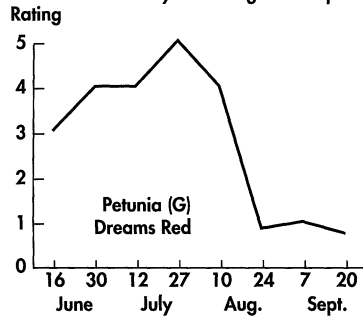
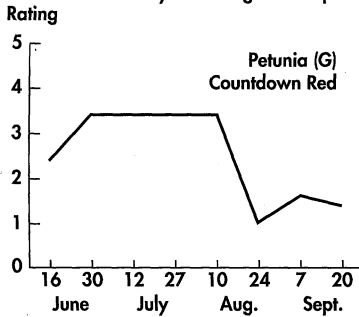
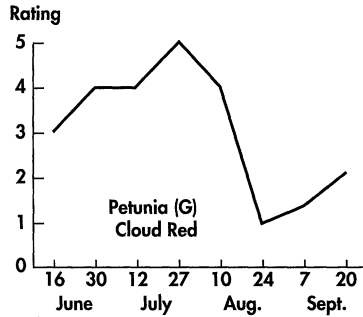
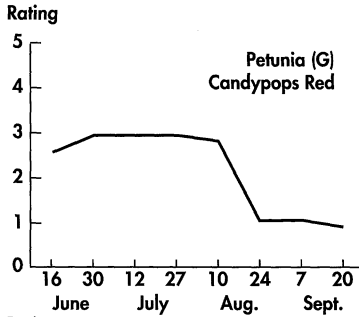
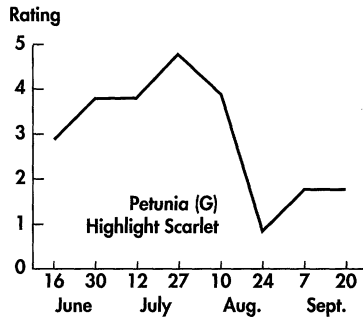
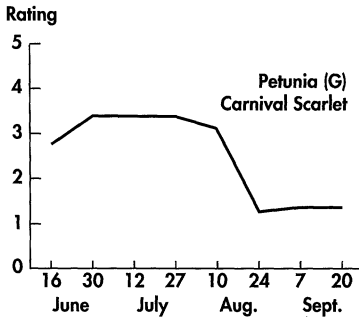


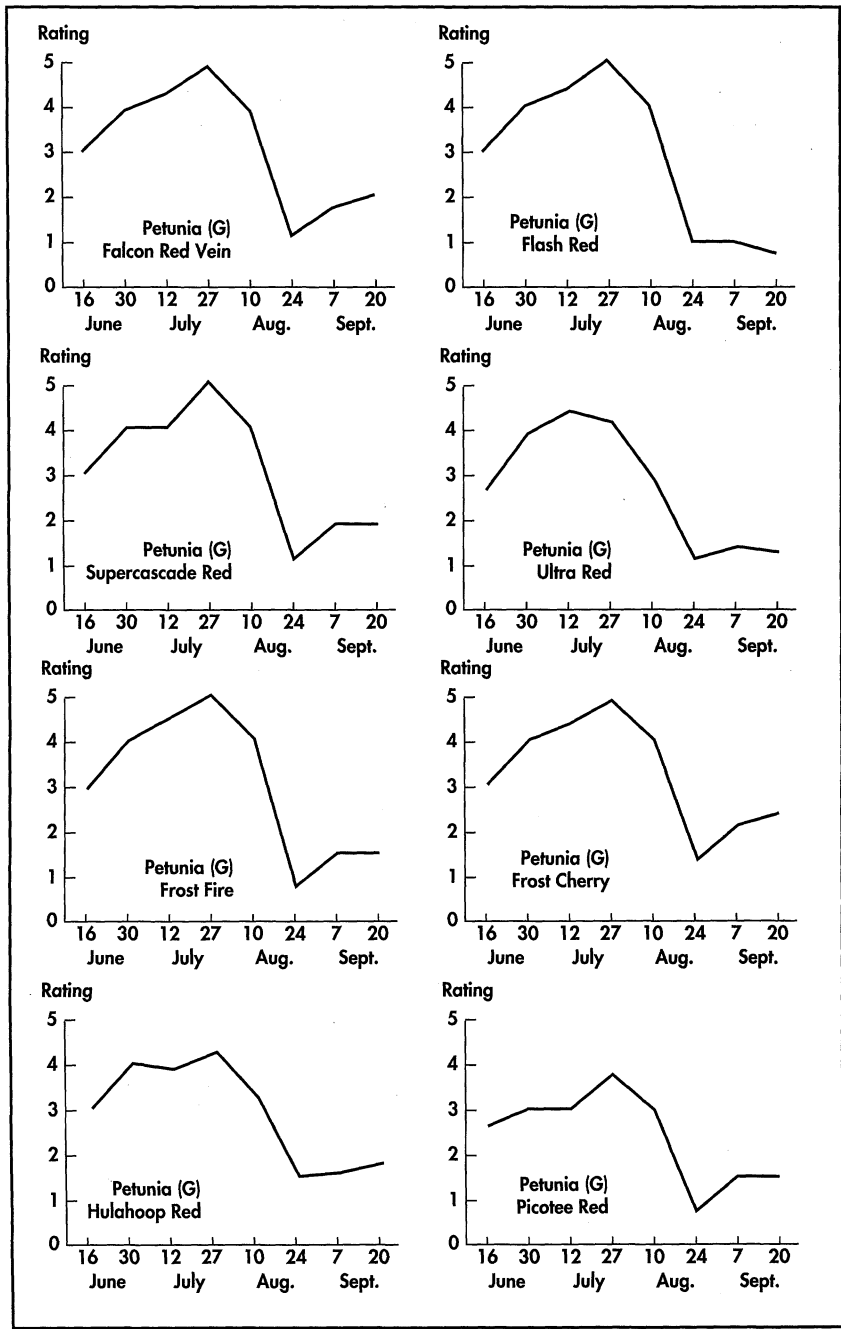


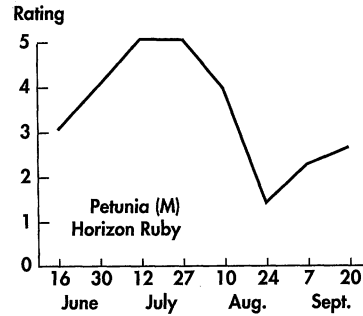
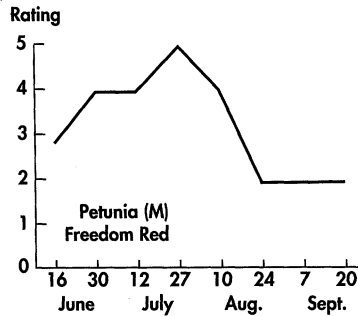
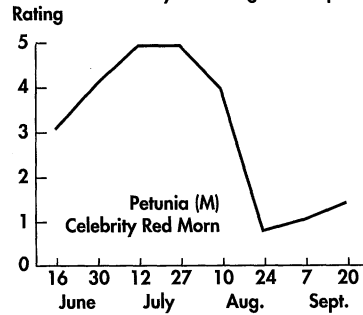
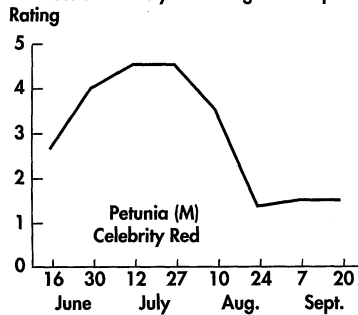
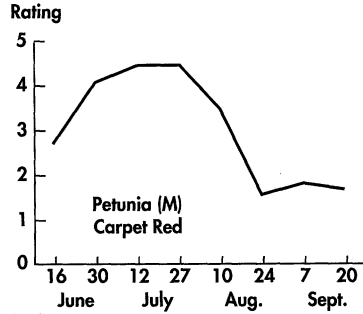
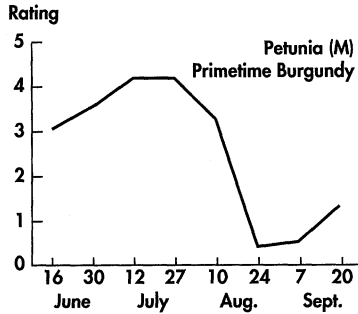
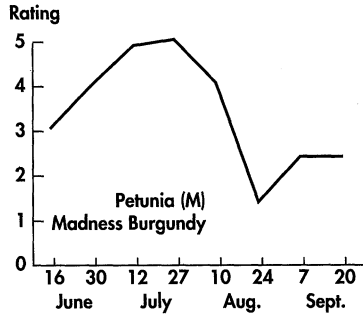
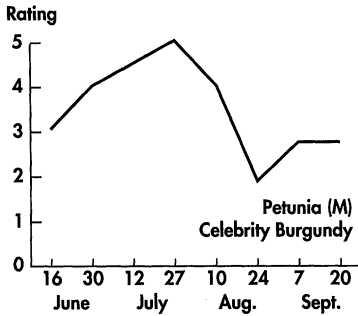


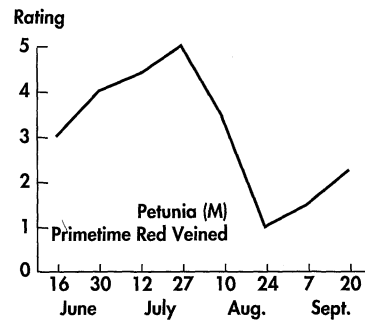
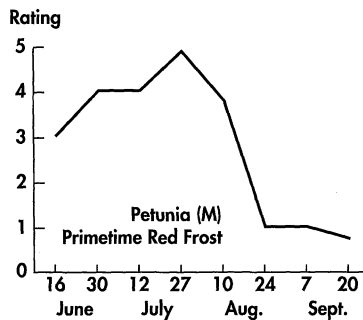
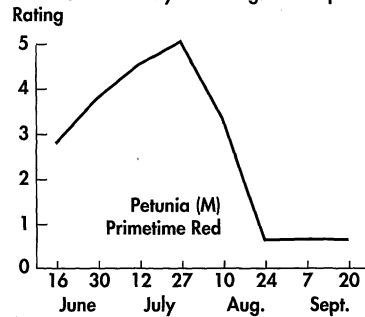
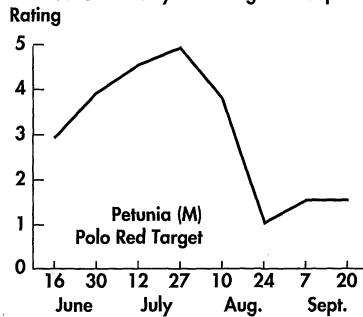
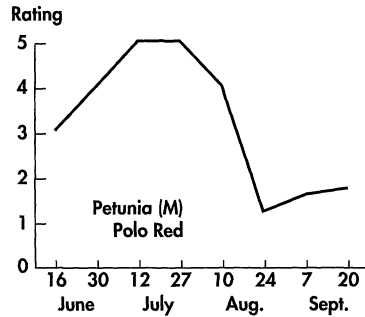
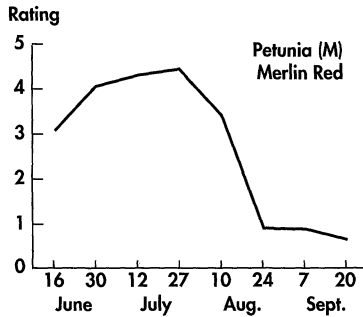
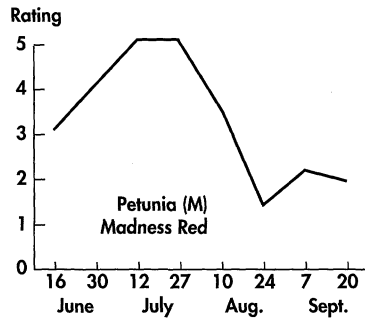
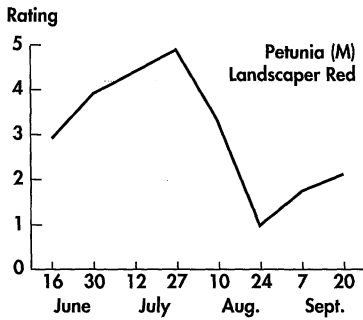


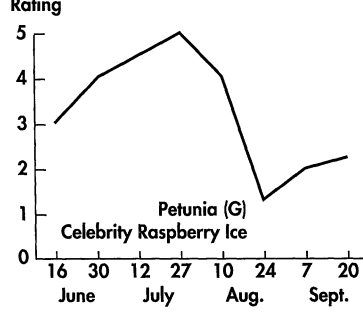
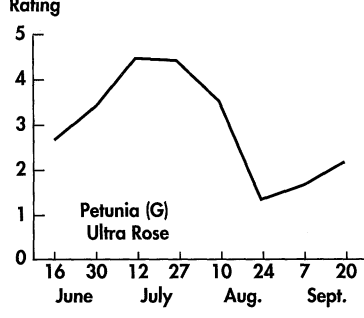
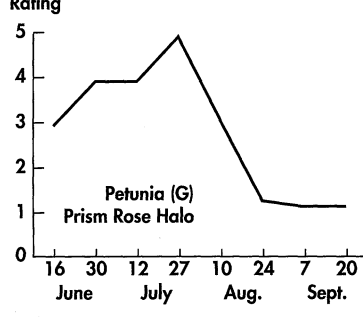
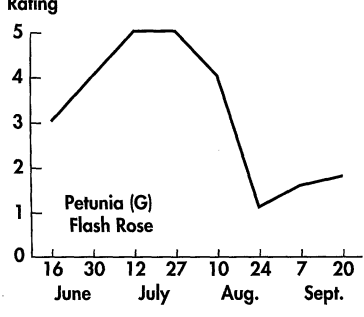
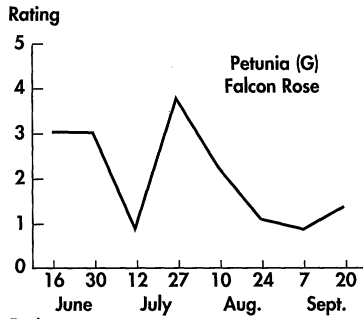
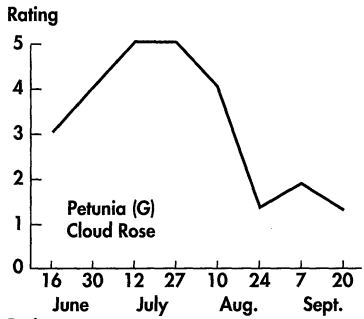
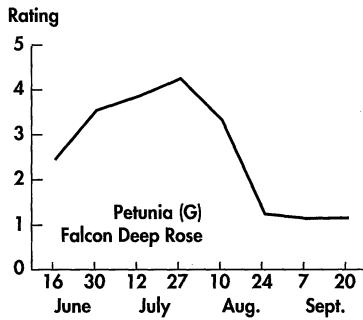
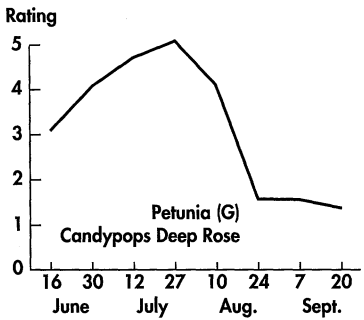


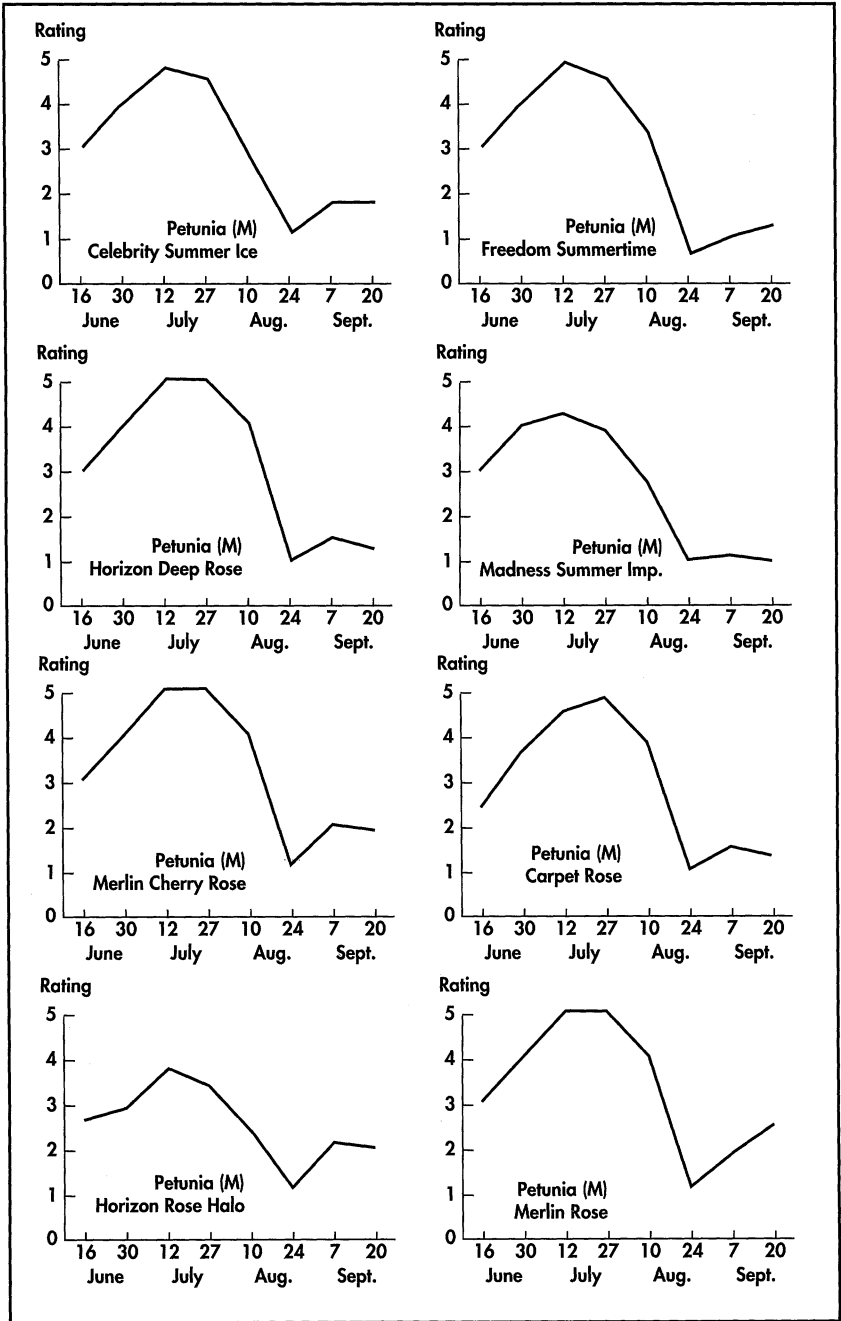


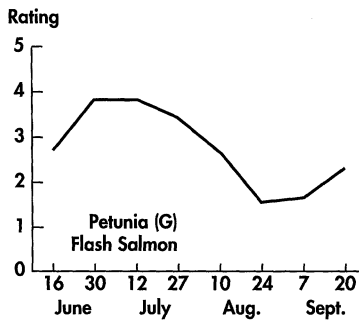
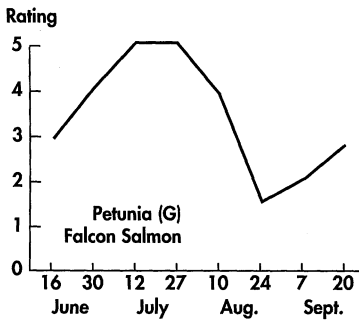
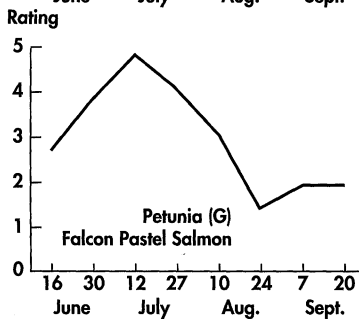
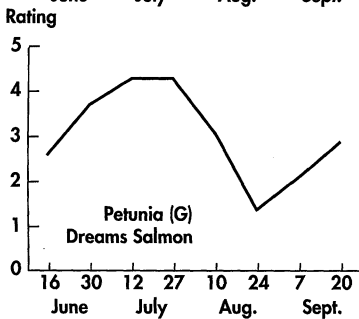
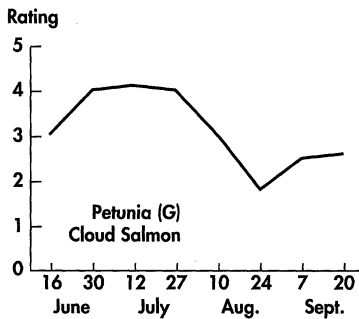
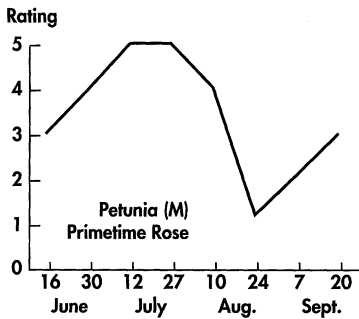
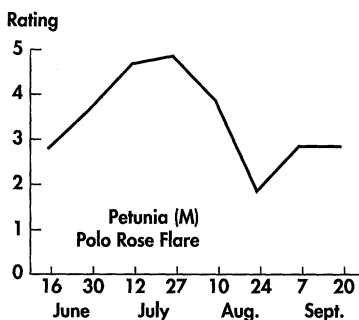
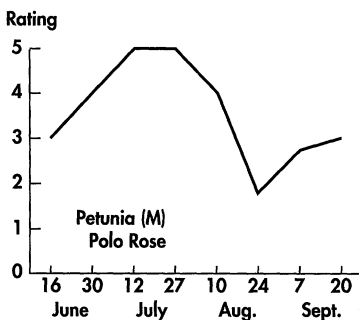


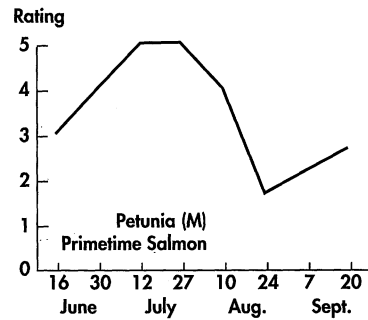
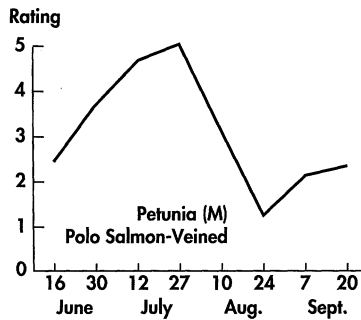
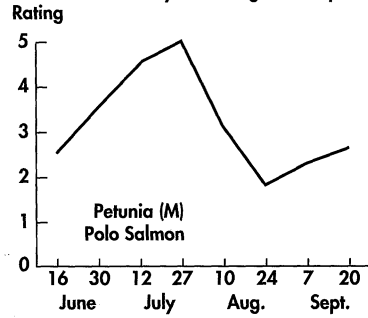
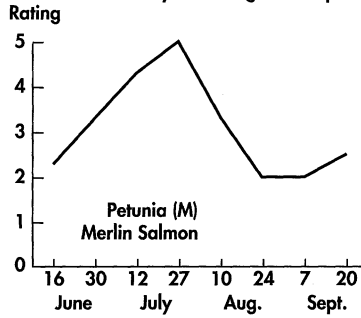
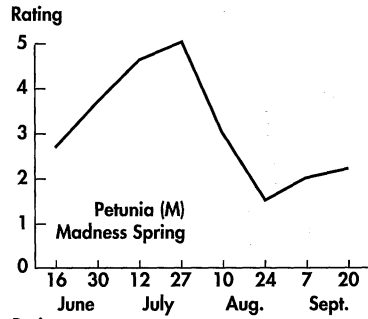
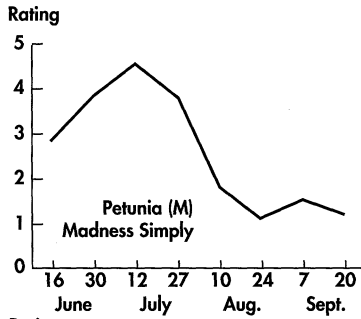
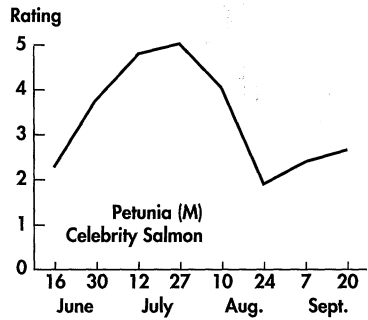
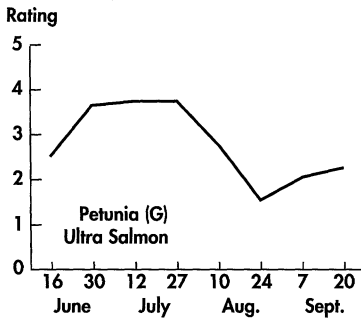


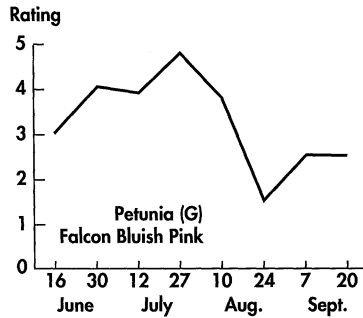
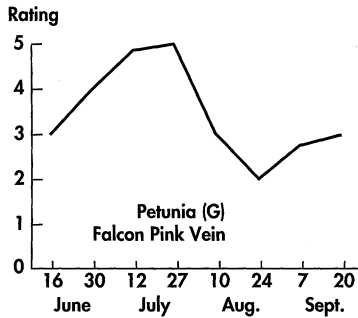
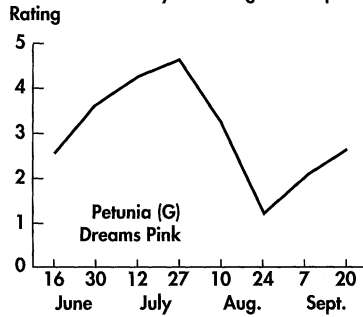
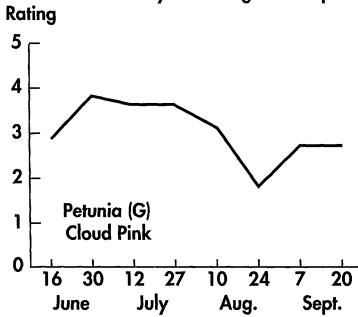
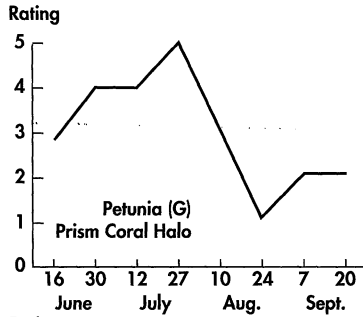
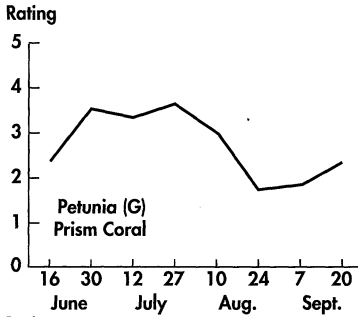
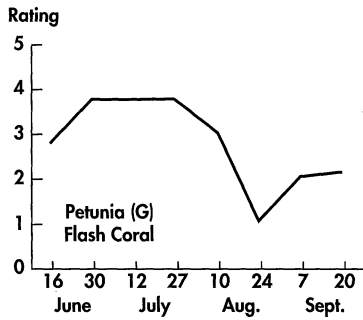
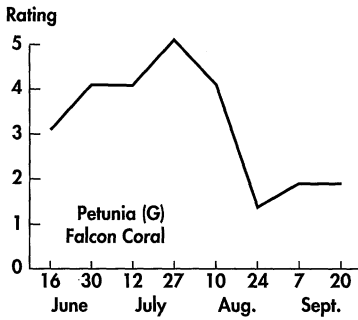


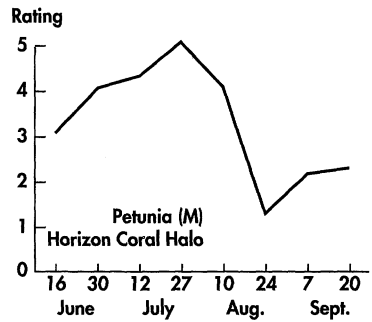
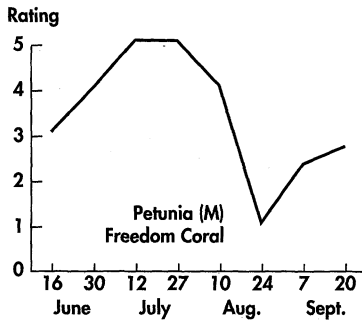
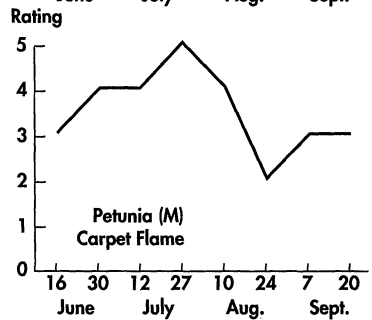
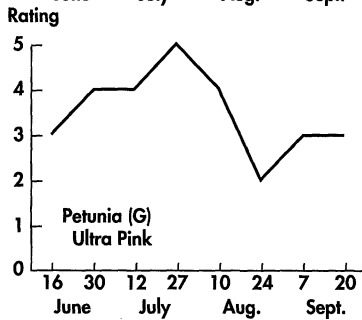
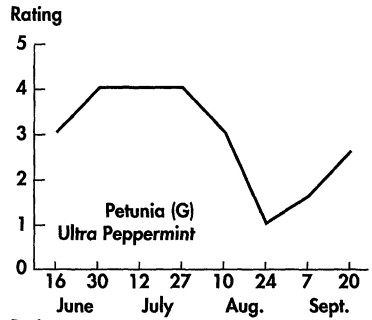
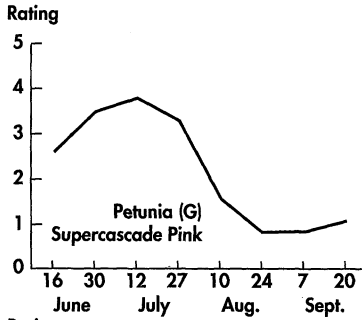
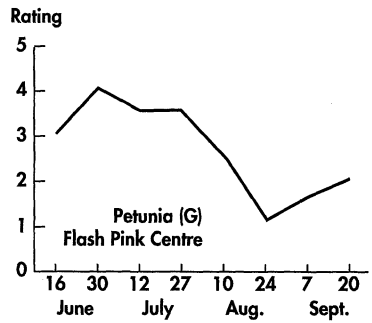
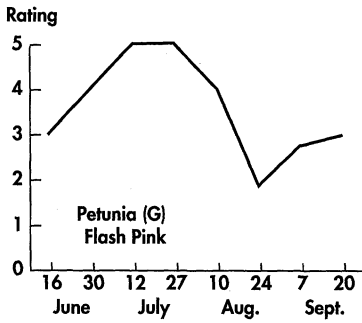


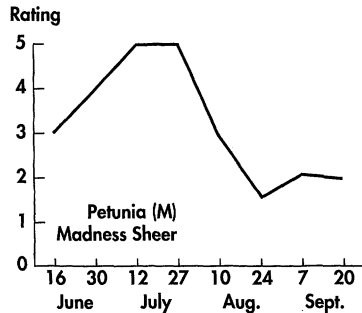
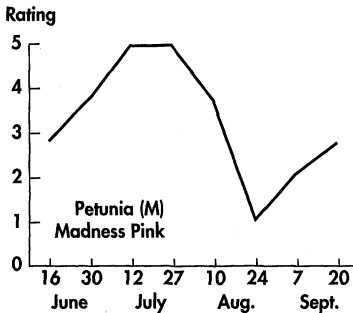
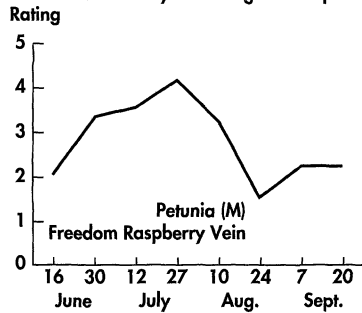
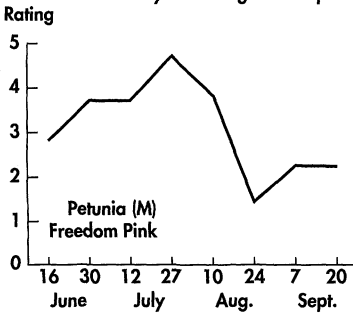
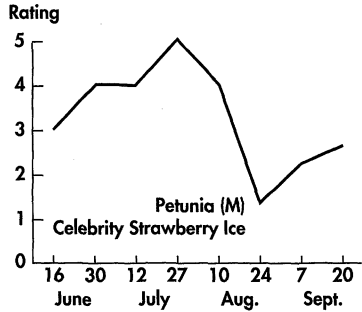
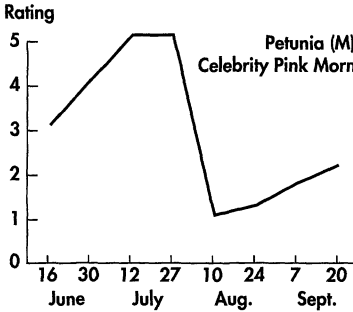
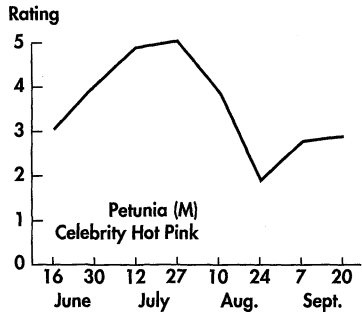
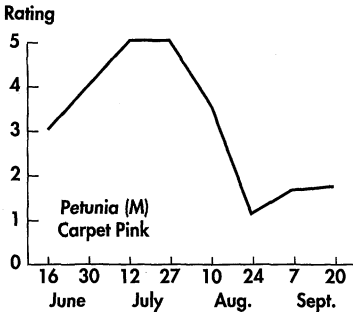


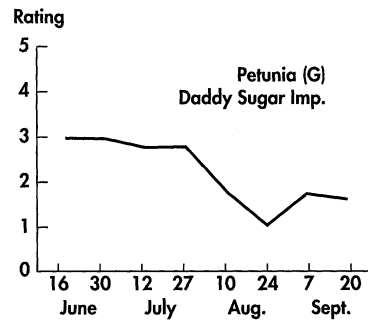
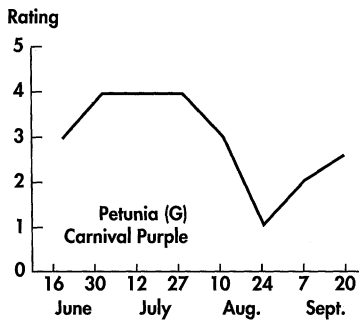
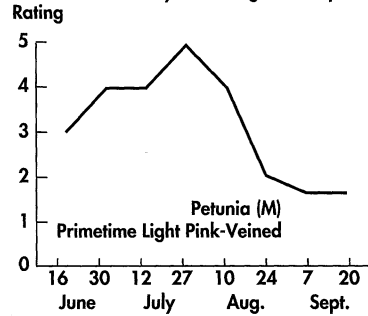
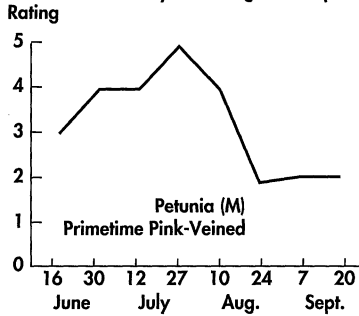
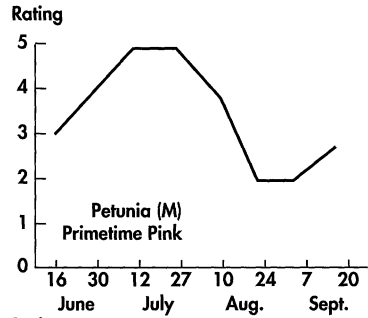
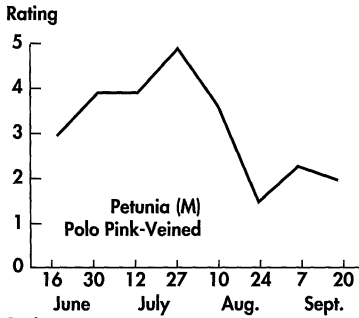
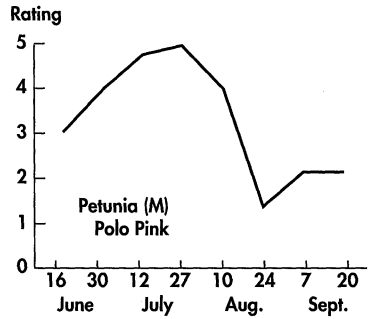
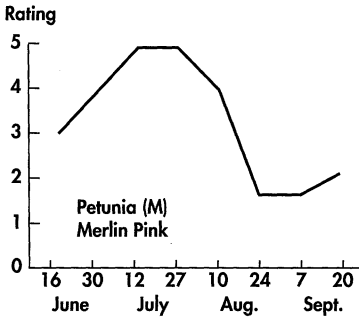


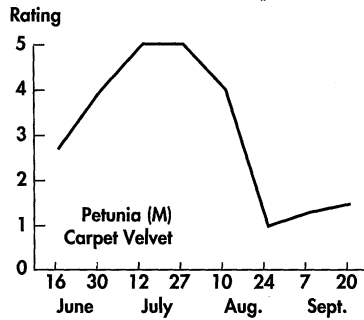
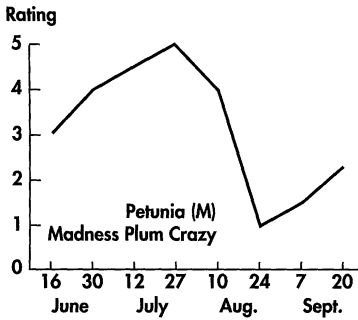
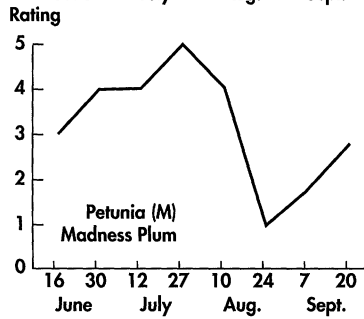
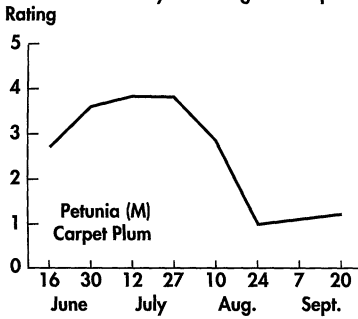
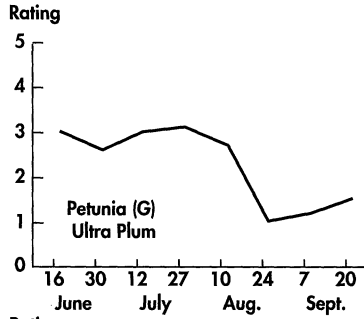
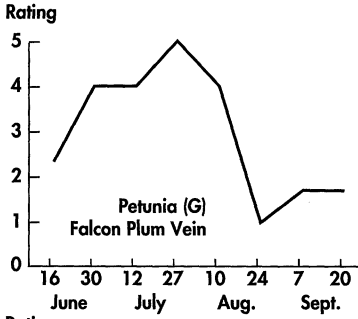
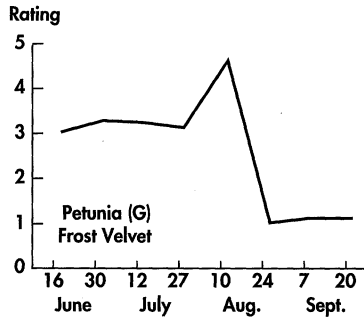
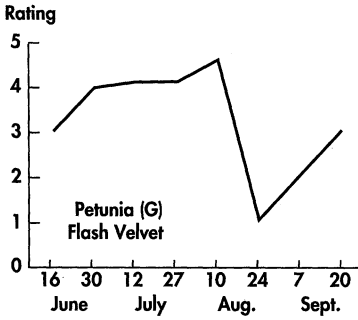


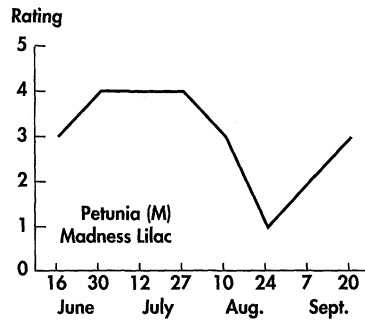
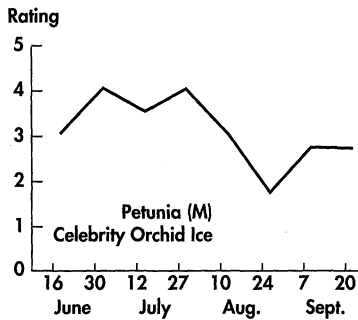
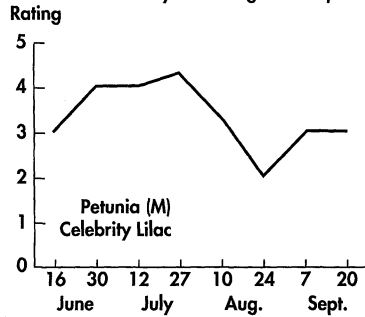
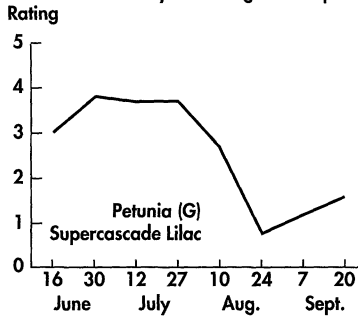
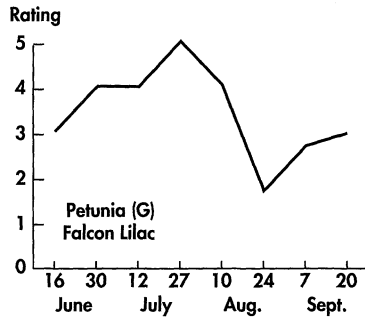
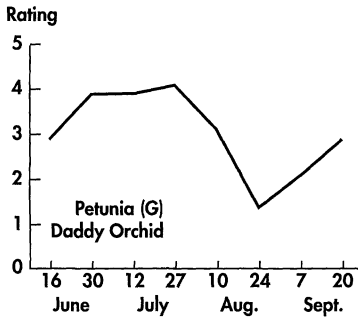
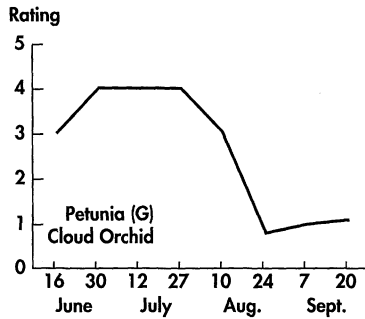
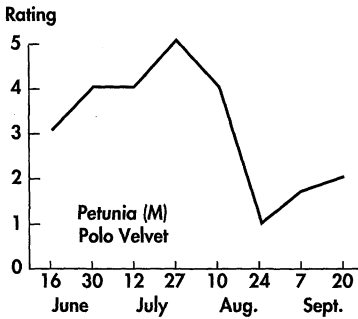


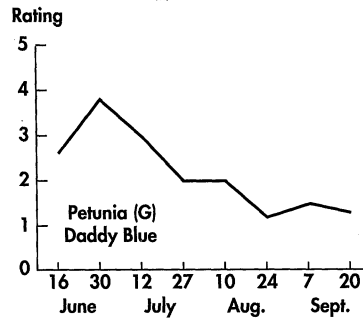
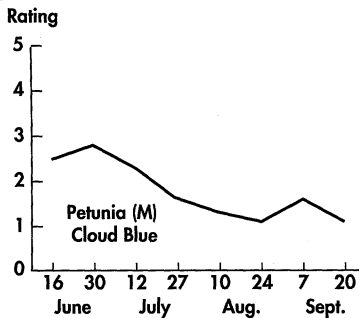
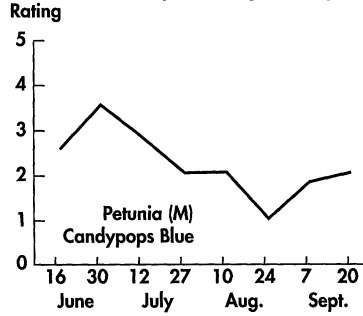
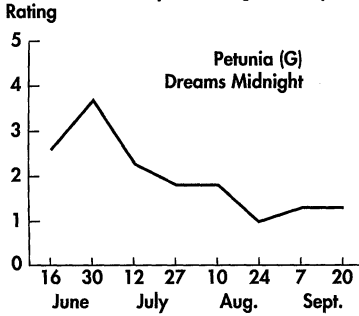
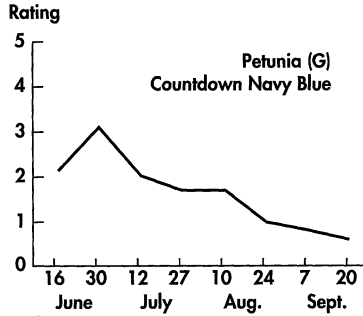
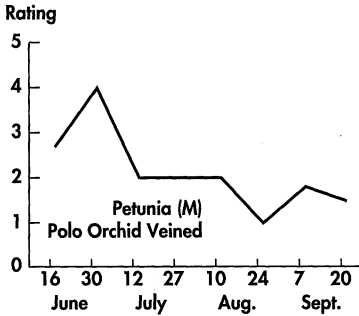
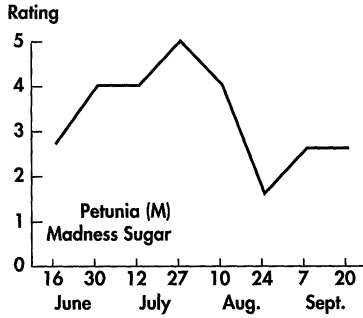
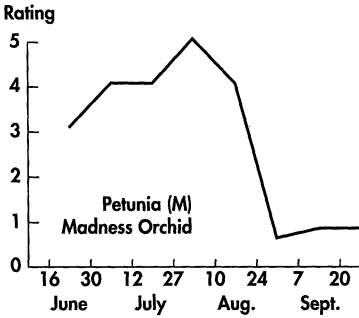


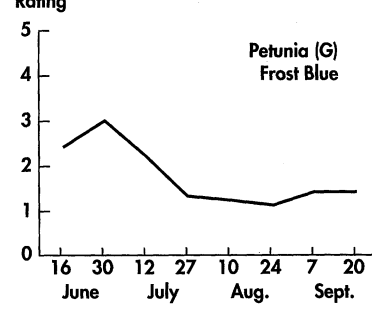
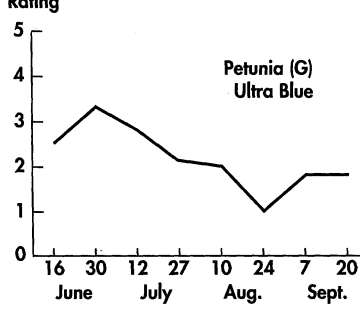
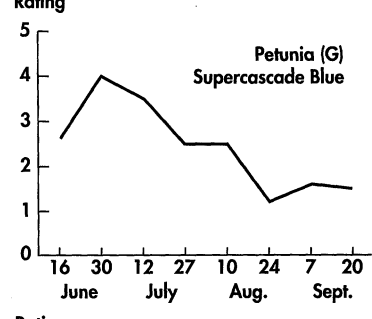
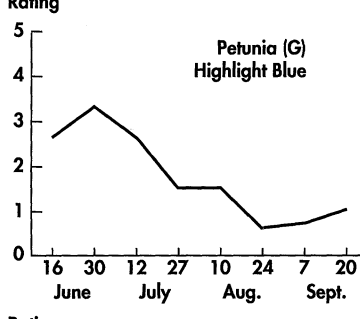
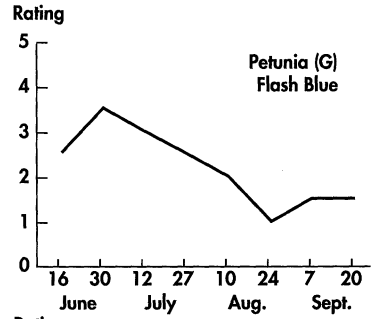
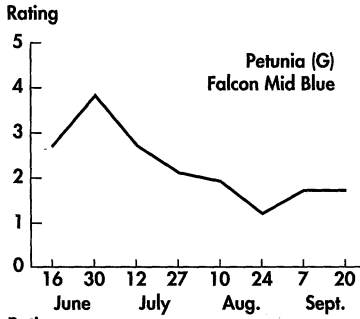
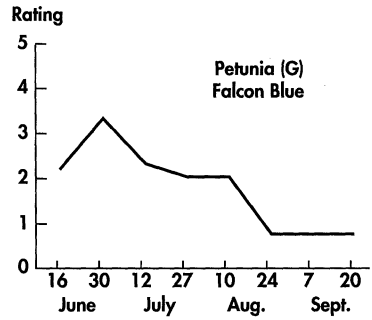
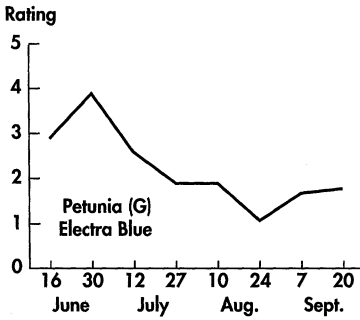


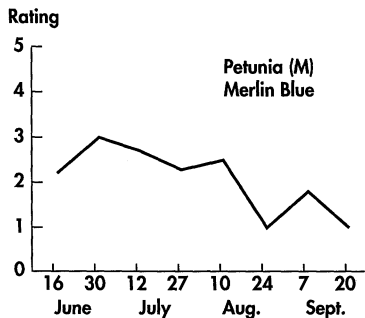
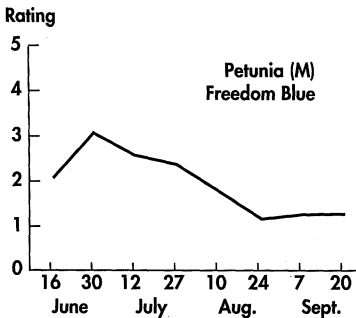
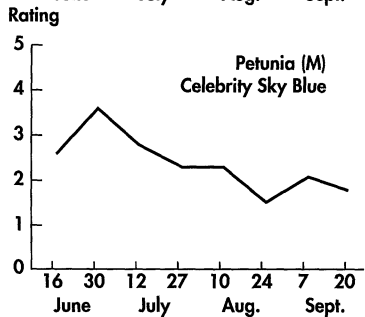
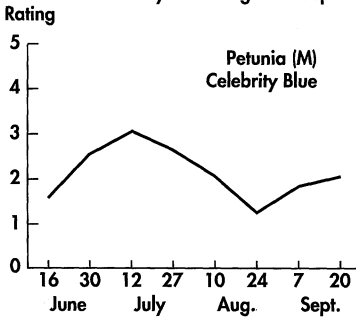
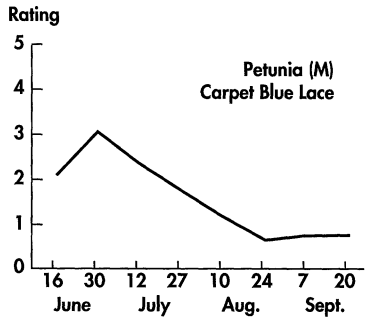
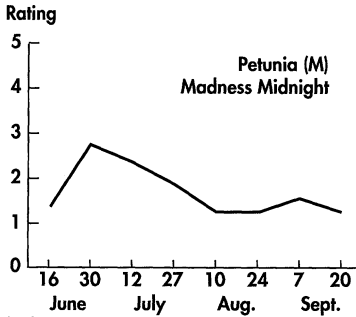
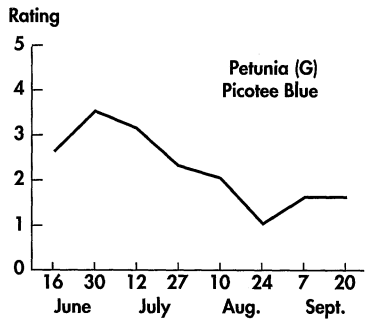
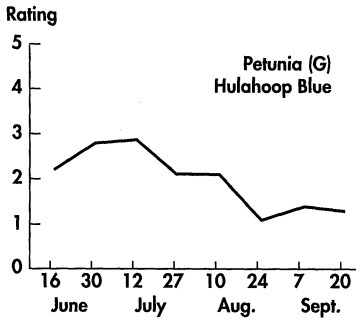


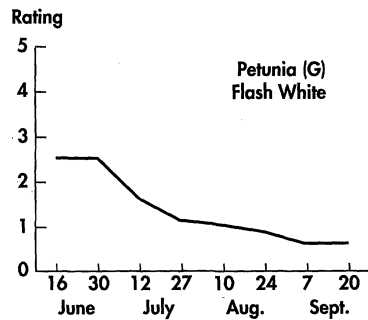
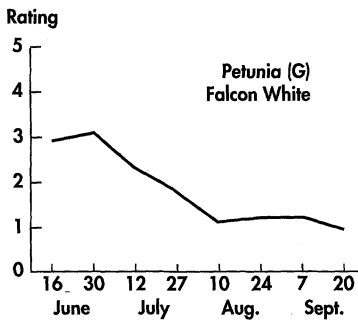
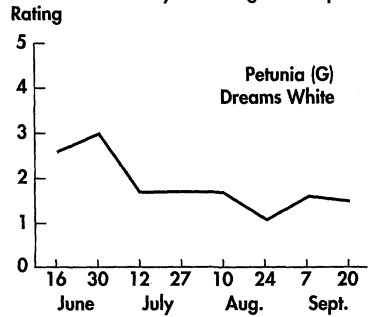
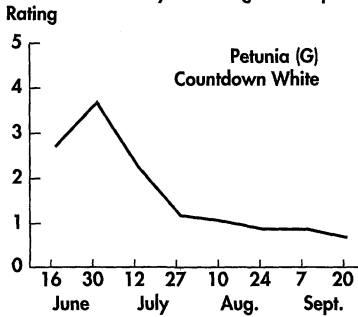
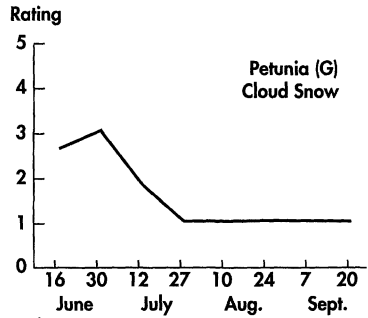
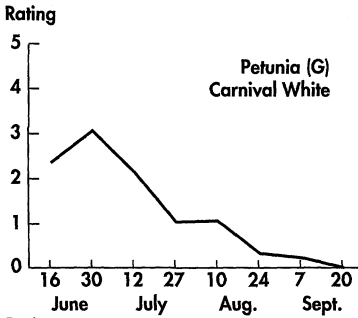
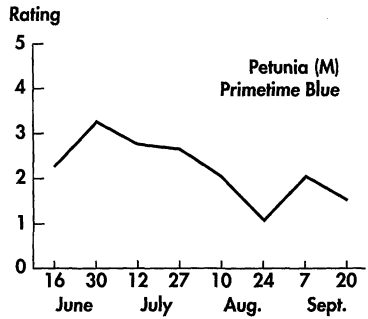
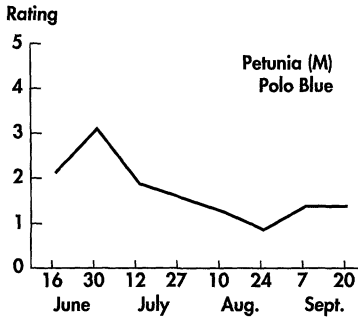


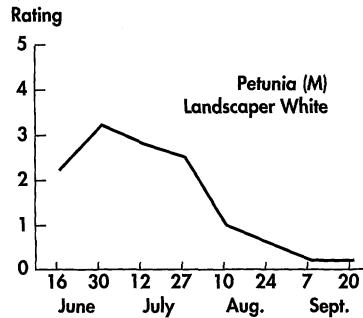
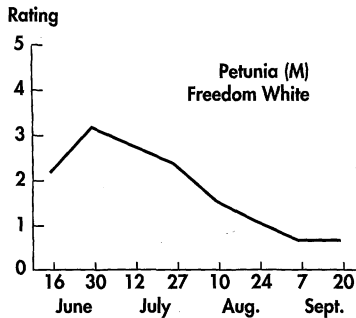
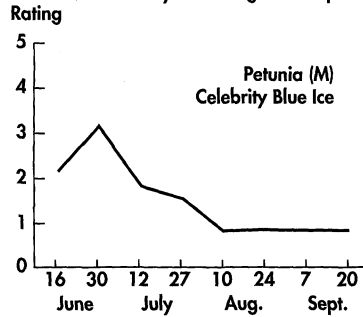
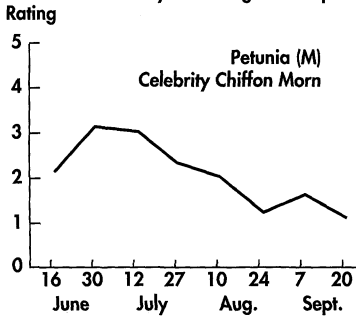
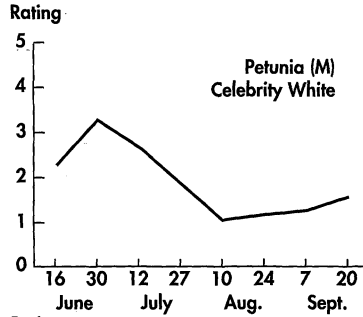
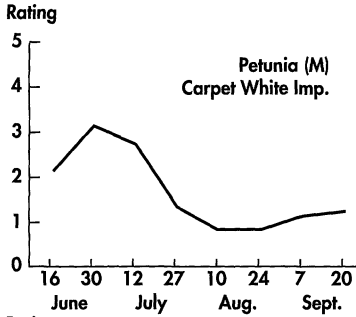
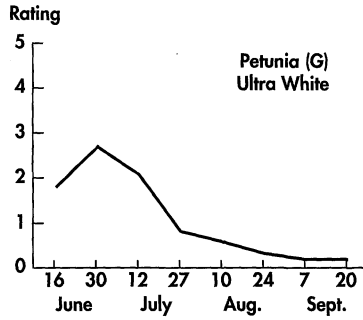
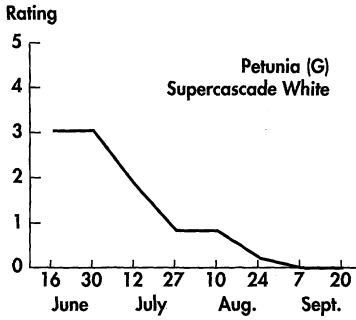


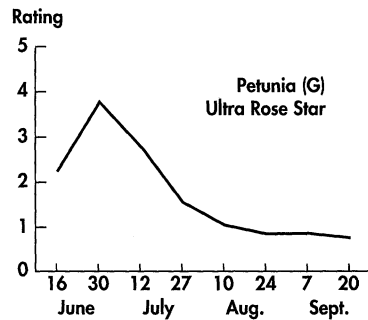
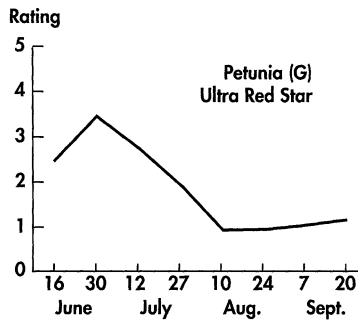
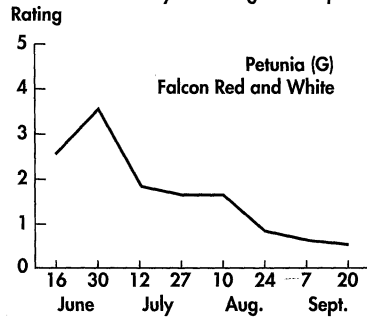
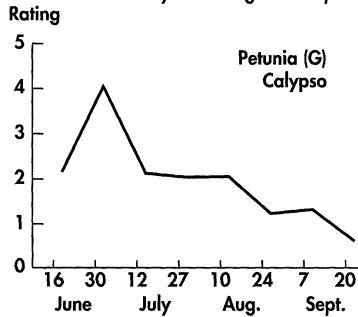
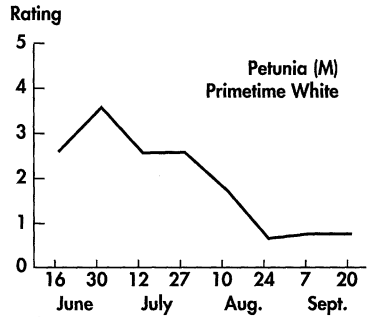
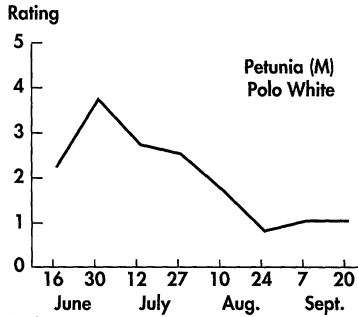
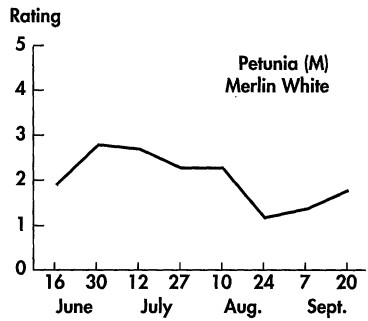
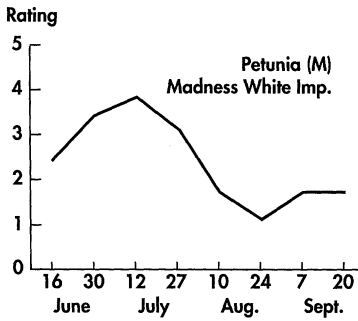


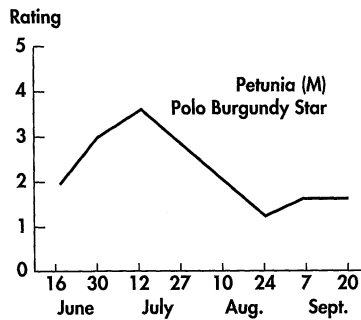
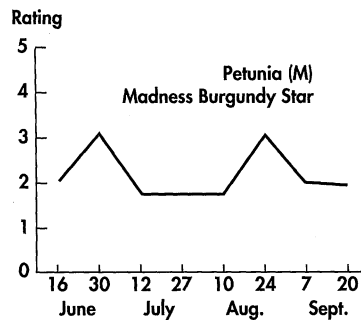
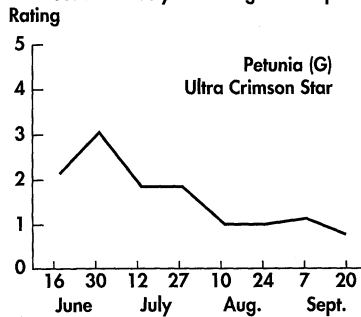
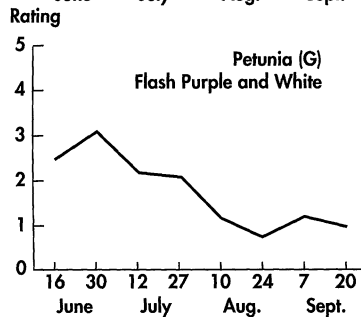
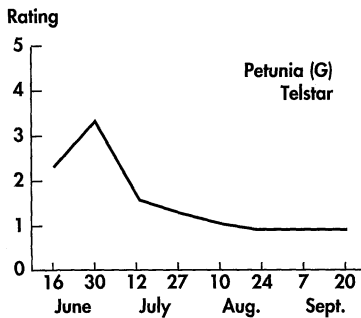
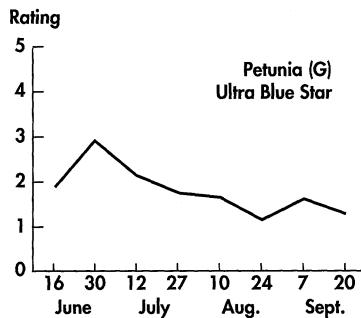
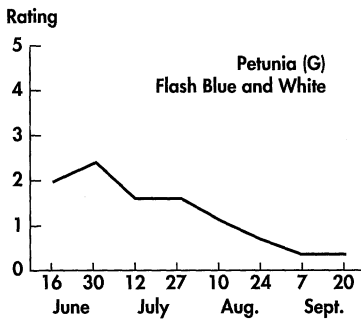
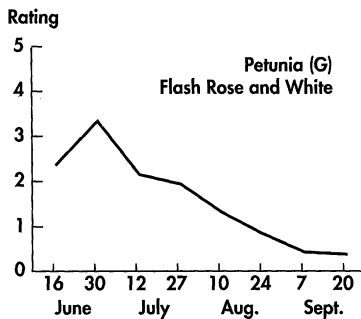


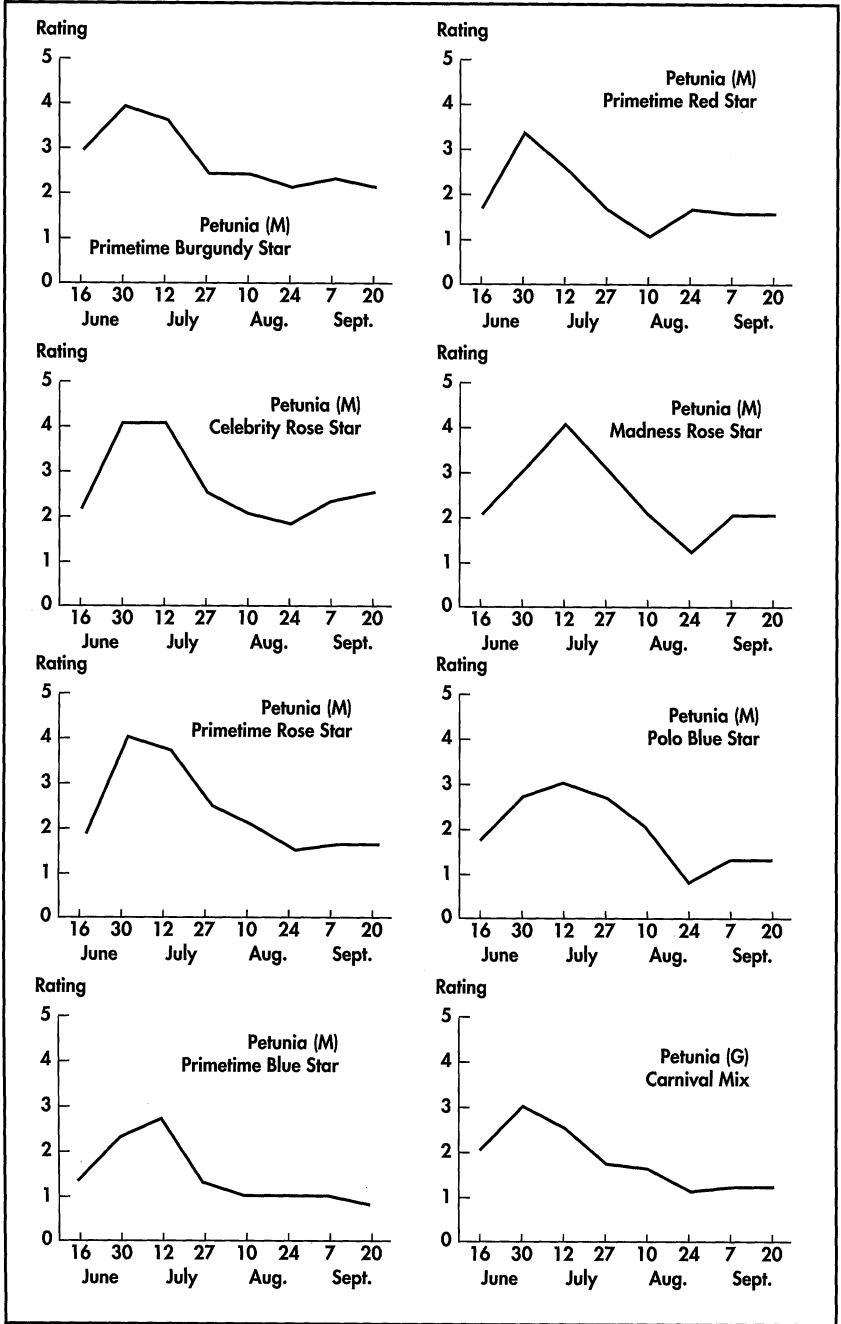


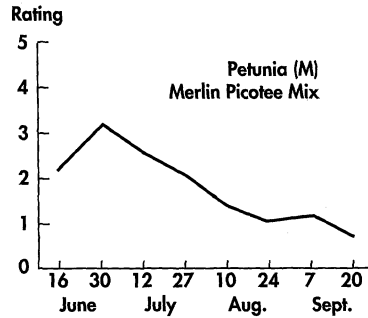
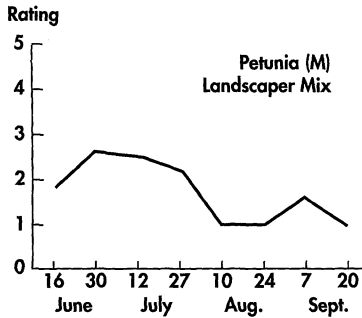
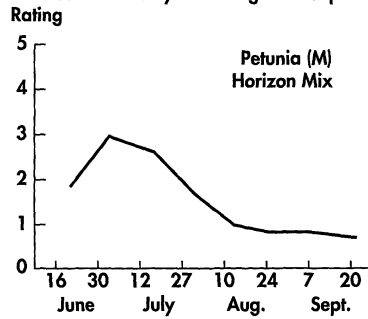
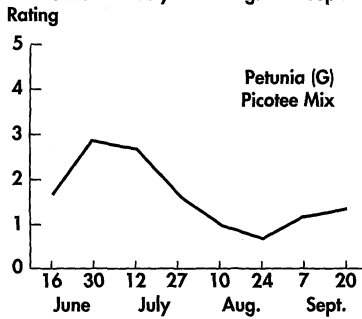
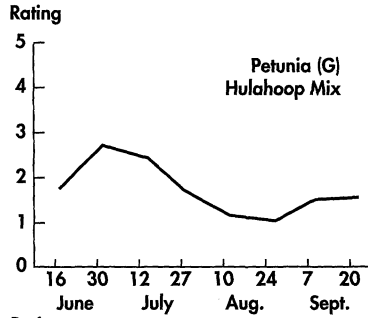
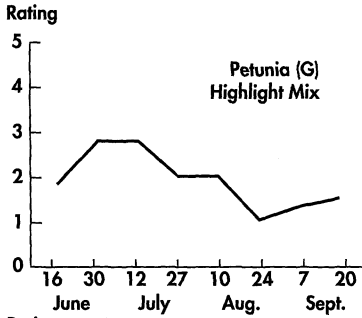
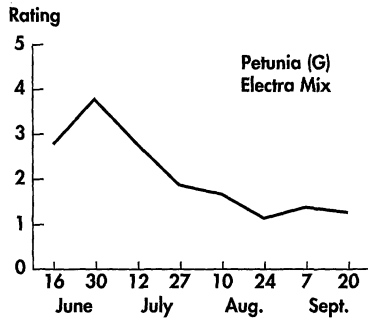
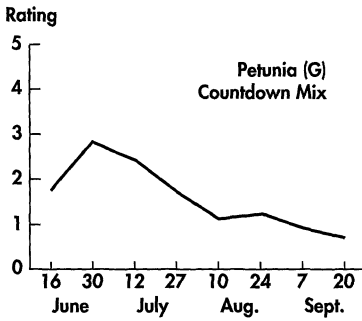


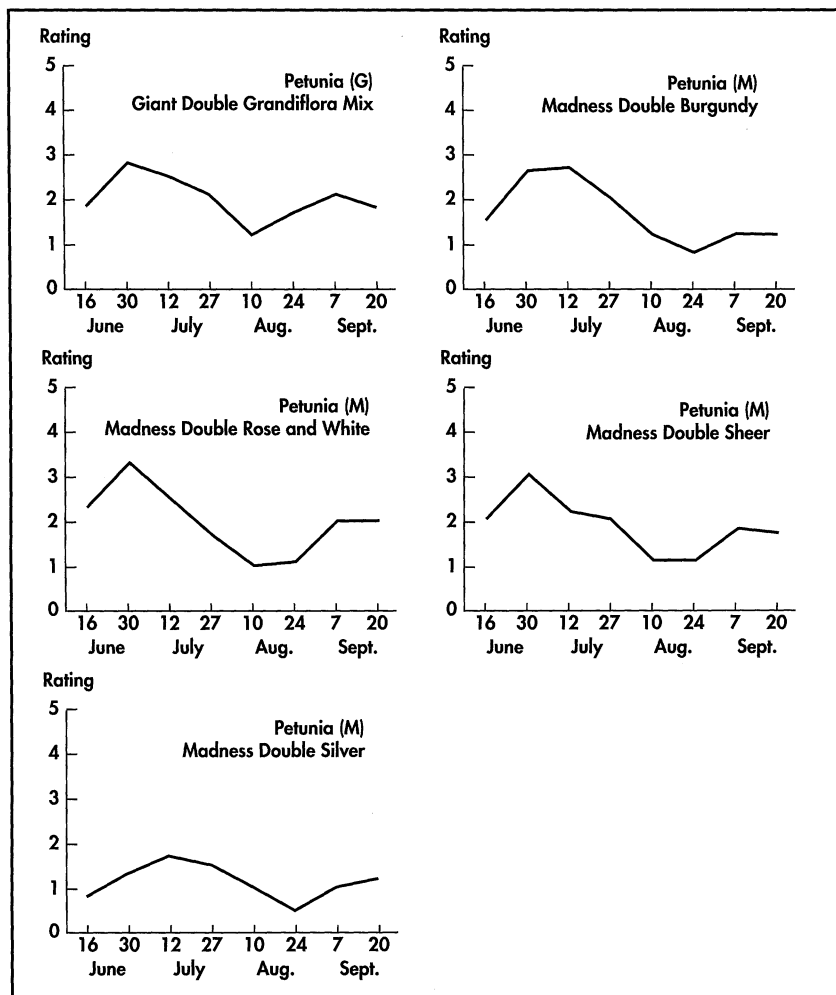












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This research was made possible by the generosity of many individuals. David and Martha Wright, owners of Wright's Nursery and Greenhouse, Inc., in Plantersville, Ala., continue to produce every transplant from seed (without charge) in their commercial greenhouse. Without their generous donation of time and talent, this annual evaluation would not be possible.

Several companies donated seed, plants, or fertilizer for the trial garden, and their generosity is also appreciated:

All America Selections; American Takii, Inc.; Benary Seed Co.; Ball Seed Co.; Bodger Seeds, Ltd.; Clause Seed Co.; Goldsmith Seeds, Inc.; Grimes Seed; Pan American Seed Co.; Park Seed Co.; Pursell Industries; Sakata Seed Co.; Sandhill Nurseries; Sluis & Groot; Waller Flowerseed Co.; and Young's Plant Farm.

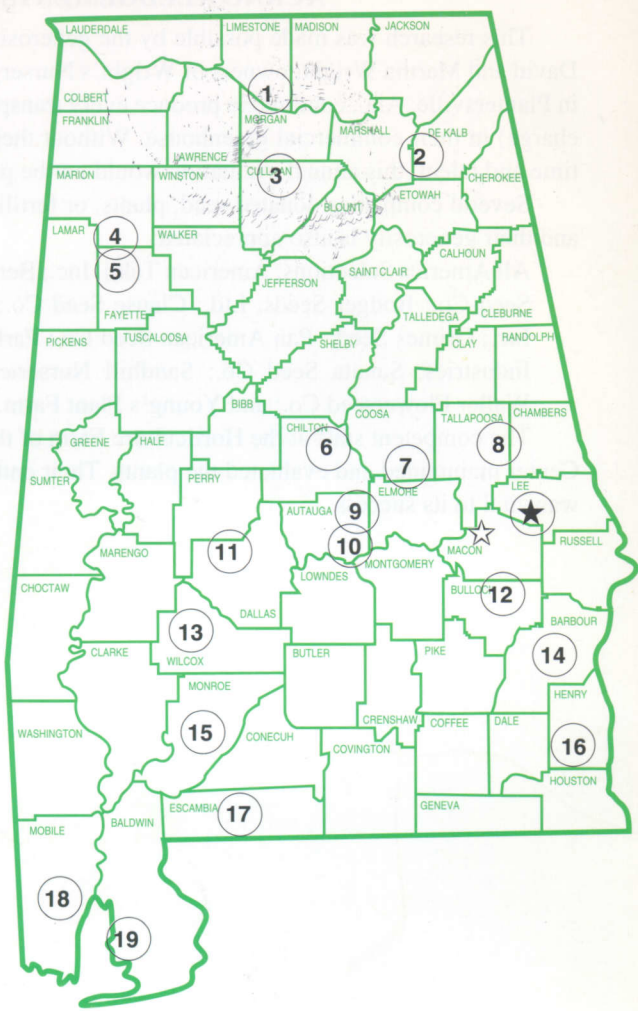
The competent staff at the Horticulture Farm of the E.V. Smith Research Center maintained and evaluated the plants. Their enthusiasm for this project was vital to its success.

Alabama's Agricultural Experiment Station System

AUBURN UNIVERSITY

DD

With an agricultural research unit in every major soil area, Auburn University serves the needs of field crop, livestock, forestry, and horticultural producers in each region in Alabama. Every citizen of the state has a stake in this research program, since any advantage from new and more economical ways of producing and handling farm products directly benefits the consuming public.



Research Unit Identification

- ★ Main Agricultural Experiment Station, Auburn.
- ☆ E. V. Smith Research Center, Shorter.

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|---|---|
| <ul style="list-style-type: none"> 1. Tennessee Valley Substation, Belle Mina. 2. Sand Mountain Substation, Crossville. 3. North Alabama Horticulture Substation, Cullman. 4. Upper Coastal Plain Substation, Winfield. 5. Forestry Unit, Fayette County. 6. Chilton Area Horticulture Substation, Clanton. 7. Forestry Unit, Coosa County. 8. Piedmont Substation, Camp Hill. 9. Forestry Unit, Autauga County. 10. Prattville Experiment Field, Prattville. | <ul style="list-style-type: none"> 11. Black Belt Substation, Marion Junction. 12. The Turnipseed-Ikenberry Place, Union Springs. 13. Lower Coastal Plain Substation, Camden. 14. Forestry Unit, Barbour County. 15. Monroeville Experiment Field, Monroeville. 16. Wiregrass Substation, Headland. 17. Brewton Experiment Field, Brewton. 18. Ornamental Horticulture Substation, Spring Hill. 19. Gulf Coast Substation, Fairhope. |
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