



Circular 320 June 1998 Alabama Agricultural Experiment Station
James E. Marion, Director Auburn University Auburn, Alabama



1997
Summer
Trial
Garden

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ON THE COVER: From top to bottom: *Zinnia angustifolia* 'Star Orange', *Petunia × hybrida* 'Cascade Burgundy', and *Begonia × semperflorens* 'Encore White/Bronze'.

ACKNOWLEDGMENTS

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*Information contained herein is available to all persons without regard
to race, color, sex, or national origin.*

1997

SUMMER

TRIAL GARDEN

RESULTS

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INTRODUCTION

In the summer of 1997, 323 bedding plant cultivars were evaluated in the All-America Selections (AAS) Display Garden at the E.V. Smith Research Center (EVSRC). The objective of this study was to determine overall performance of summer-flowering annual plant cultivars (bedding plants). Results generated from this study will assist Alabama horticultural professionals and consumers in bedding plant selection. Landscape performance may vary from year to year as climatic conditions affect performance.

AAS is a non-profit organization founded in 1932 to encourage the development of superior flower and vegetable cultivars through controlled trials. Cultivar selection is based on seed company donations and varies from year to year. Selection of AAS "winners" is based on cultivar performance throughout the nationwide trial system. Winners are prominently displayed for professionals and consumers to see in the landscape through a network of display gardens and printed media. The EVSRC Trial Garden was established as an AAS Display Garden in 1993.

EVSRC, a unit of the Alabama Agricultural Experiment Station, is located in Shorter, 26 miles east of Montgomery, Alabama (latitude 32° 30' N, longitude 85° 40' W). Similar tests were conducted at more than 200 display gardens throughout the United States to assess the general performance of new bedding plant cultivars under local environmental conditions. Other display gardens in Alabama are Bellingrath Gardens in Theodore and the Birmingham Botanical Garden. This publication summarizes results from the E.V. Smith trials. Comparison of results from several display sites will increase the reliability of findings because weather, soil type, exposure, cultural practices, and other var-

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iables can greatly affect plant performance. Horticulturists are urged to visit several trial gardens to gain a better understanding of cultivar performance throughout a region or market area.

METHODS

Seeds for the trial entries were donated by several companies and grown by a nearby commercial transplant producer. Raised beds of Norfolk-Orangeburg loamy sand association soil (fine, loamy, siliceous, thermic Typic Kandiudults) were tilled and fumigated with methyl bromide two weeks before planting. No other fungicides or insecticides were applied during the trial period. A commercially available slow-release fertilizer (18-6-12) was pre-plant incorporated into the beds based on soil test recommendations. No additional fertilizer was applied during the season. Transplants were planted on May 27, 1997. Twelve plants per entry were grown in full sun, with the exception of impatiens, which were grown under aluminum hoop frames covered with 60% black shade fabric. Rainfall was supplemented using overhead sprinkler irrigation to provide an equivalent of one inch of water per week. No deadheading of spent flowers or other maintenance was performed on any of the plants with the exception of hand weeding.

Eight of 12 plants (two rows of six plants) per entry were evaluated every two weeks from July 3 through September 29, 1997. The four plants on each end of the two rows were not evaluated. Plants were rated by the same individual using a 0 to 5 scale. Flowering plants were rated primarily on their floral displays, while size, shape, and freedom from insect or disease blemishes were also considered. A rating of 0 indicated the plant had died; 1—a small display of foliage with no flowers present; 2—adequate amount of foliage with one or two flowers present; 3—sufficient foliage and floral display to be attractive in the landscape; 4—above average floral display and sufficient foliage display; and 5—superior floral display and sufficient foliage display. Ratings were made in whole number units. Any plant rated 2.5 or higher could be acceptable in the landscape and would be a worthwhile addition to a garden located in temperate zone eight.

CLIMATIC CONDITIONS

In 1997, average daily air temperatures were higher than average temperatures for the last 30 years (Table 1). Average monthly rainfall was higher in June, but lower in July, August, and September than average rainfall for the last 30 years. In general, it was drier than normal during the evaluation period in 1997. Figure 1 shows the minimum and maximum daily air temperatures for 1997.

TRIAL HIGHLIGHTS

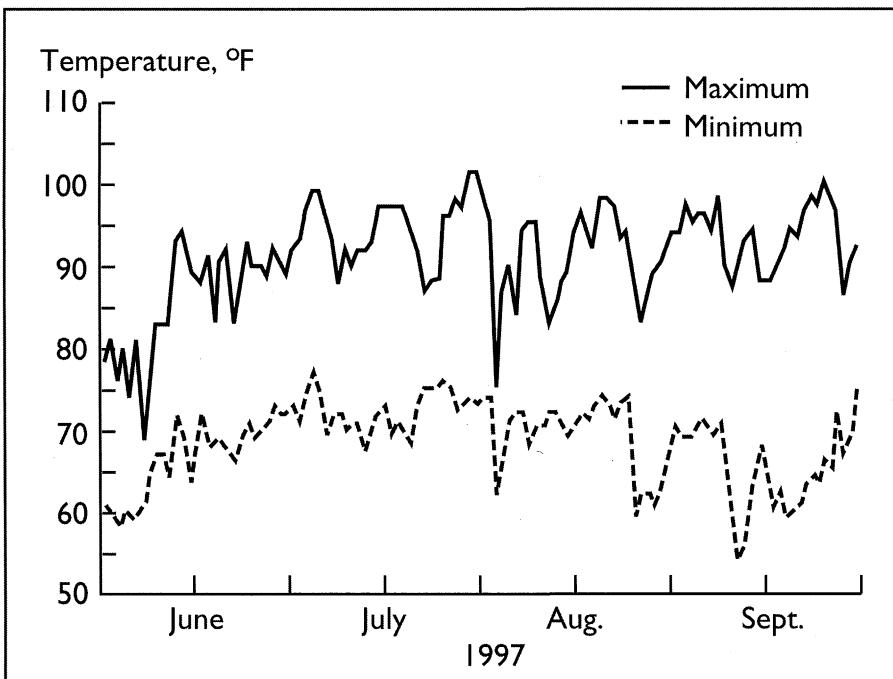
The highest overall rating for any plant this year was *Impatiens wallerana* 'Super Elfin Melon' with a rating of 4.1.

Begonia × semperflorens 'Eureka Scarlet' came in second with a rating of 4.0. 'Eureka Scarlet' is an upright, tall-growing type of begonia as opposed to the short, rounded form of the more popular varieties.

Begonia × semperflorens 'Prelude White' and '*Eureka Bronze Rose*' and *Impatiens wallerana* 'Showstopper Cherry' tied for third with a rating of 3.9.

TABLE 1. AVERAGE DAILY SUNLIGHT, DAILY AIR TEMPERATURE, AND MONTHLY RAINFALL¹

Month	Avg. sunlight		Avg. temperature		Total rainfall	
	1997	11-yr. avg.	1997	30-yr. avg.	1997	30-yr. avg.
June	5,259.8	5,919.8	76.3	75.8	7.0	4.1
July	6,322.4	5,737.8	83.7	78.7	1.4	4.7
August	5,642.6	5,280.5	80.1	78.4	1.1	4.2
September	5,851.0	4,631.4	78.9	74.1	0.9	3.6

¹ Data were provided by the National Weather Service at Auburn University.² Sunlight, or solar radiation, is measured in watts per square meter.

Ageratum houstonianum ‘Blue Hawaii’, *Begonia* × *semperflorens* ‘Stara Deep Rose’ and *Impatiens wallerana* ‘Super Elfin Rose’ were fourth with a rating of 3.8.

Fifth place belonged to *Begonia* × *semperflorens* ‘Stara Mixed’ and ‘Stara White’ and *Impatiens wallerana* ‘Dazzler Deep Orange’ and ‘Dazzler Pink’. These had a rating of 3.7.

Sixth place was shared by four begonias, ‘Encore Red/Bronze’, ‘Victory B Pink’, ‘Encore P/B’ and ‘Prelude Pink’, and one impatiens, ‘Pride Pink’, with ratings of 3.6.

Begonia × semperflorens ‘Encore Pink’, *Catharanthus roseus* ‘Pacifica Orchid’, *Impatiens wallerana* ‘Accent Salmon’ and ‘Pride Salmon Orange’, and *Zinnia elegans* ‘Oklahoma Formula Mix’ were ranked seventh at 3.5.

Eighth place performers were begonia ‘Encore White/Bronze’ and ‘Stara Pink’; impatiens ‘Dazzler Cranberry’, ‘Accent Pastel Mixture’, ‘Bruno Orange’, ‘Accent Mystic Mix’, ‘Accent Deep Pink’, ‘Mosaic Rose’, and ‘Super Elfin Lipstick’; and petunia ‘Carpet Pink’, ‘Carpet Salmon’, and ‘Carpet Rose’ with a rating of 3.4.

Ninth place winners rated 3.3. These included *Ageratum houstonianum* ‘Royal Hawaii’; *Begonia × semperflorens* ‘Super Olympia Red’, ‘Eureka Rose’, and ‘Prelude Rose’; *Catharanthus roseus* ‘Pacifica Punch’; *Celosia plumosa* ‘Castle Yellow’; *Celosia spicata* ‘Flamingo Purple’; *Gomphrena globosa* ‘Woodcreek Red’; and *Petunia* ‘Pink Wave’.

The best performers in tenth place were *Begonia × semperflorens* ‘Vodka’ and ‘Partyfun Mix’, *Impatiens wallerana* ‘Pink Swirl’ and ‘Accent Peppermint Mix’, *Petunia × hybrida* ‘Carpet Velvet’ and ‘Carpet Lilac’, and *Tagetes patula* ‘Bonanza Harmony’, all rated 3.2.

The *Salvia farinacea* varieties—‘Victoria White’, ‘Signum’, ‘Reference’, ‘Strata’, and ‘Rhea’, rated 3.1, 2.5, 2.5, 2.4, and 2.3, respectively—performed better than all but two of the *Salvia splendens* varieties—‘Salsa Scarlet’ (2.2) and ‘Salsa Light Purple’ (2.1). *Tagetes erecta* ‘Antigua Primrose’ was the best performing African marigold (2.9) while *Verbena × speciosa* ‘Imagination’ was the best performing verbena (2.5).

Table 2, on pages 5-13, presents the average rating for all flowers grown in the 1997 summer trial garden. Flowers are arranged by genus and species, color, source, and rating. Photographs on pages 14-17 illustrate many of the top-performing plants. Figures on pages 18-25 plot the ratings of selected cultivars throughout the growing season.

EVALUATOR'S NOTES

The tall begonia cultivars, which were added in large numbers to the trial gardens this year, were particularly notable with a tall, open growth habit and profuse blooms. They could be exceptionally attractive in the landscape in either bright shade or part sun, and are available in a wide selection of leaf and flower colors. If marketed properly, they could become very popular.

Among the preferred selections this year were *Petunia × hybrida* ‘Pink Wave’ and ‘Purple Wave’. They are the best large-flowered petunias for this area, lasting through hot humid summers like no other petunia. The multiflora petunias are a small-flowered form with many blooms covering short compact plants that also performed very well.

Verbena speciosa ‘Imagination’ is another excellent performing summer annual that can be treated as a perennial in this area. It has a low-growing habit with finely dissected leaves and dark purple blooms which lasted into the fall. Normally, the tall growing zinnias are unsatisfactory because they tend to get powdery mildew. However, *Zinnia elegans* ‘Oklahoma Formula Mix’ was particularly attractive as was *Zinnia elegans* ‘Big Red’ last year (not included in the trial this year). Thread-leaf zinnias, *Zinnia angustifolia* ‘Gold’, ‘Star White’, ‘Star Orange’, and ‘Crystal White’, continue to be favorites. They are hardy plants that will take full sun, some drought, and have excellent landscape potential for the front of a border where they will bloom the entire summer until the first frost. However, they require warm weather for best performance.

**TABLE 2. AVERAGE RATING FOR FLOWERS GROWN
IN THE 1997 SUMMER TRIAL GARDEN**

Genus species	Variety	Color	Source ¹	Avg. rating ²
Ageratum houstonianum	Blue Hawaii	Blue	Bodger	3.8
Ageratum houstonianum	Royal Hawaii	Blue	Bodger	3.3
Ageratum houstonianum	White Hawaii	White	Bodger	3.0
Begonia × semperflorens	Eureka Scarlet	Scarlet	S&G	4.0
Begonia × semperflorens	Prelude White	White	Ball	3.9
Begonia × semperflorens	Eureka Bronze Rose	Rose	S&G	3.9
Begonia × semperflorens	Stara Deep Rose	Rose, dark	Floranova	3.8
Begonia × semperflorens	Stara Mixed	Mix	Floranova	3.7
Begonia × semperflorens	Stara White	White	Floranova	3.7
Begonia × semperflorens	Encore Red/Bronze	Red	Ball	3.6
Begonia × semperflorens	Victory B Pink	Pink	Goldsmith	3.6
Begonia × semperflorens	Encore P/B	Pink	Ball	3.6
Begonia × semperflorens	Prelude Pink	Pink	Ball	3.6
Begonia × semperflorens	Encore Pink	Pink	Ball	3.5
Begonia × semperflorens	Encore White/Bronze	White	Ball	3.4
Begonia × semperflorens	Stara Pink	Pink	Floranova	3.4
Begonia × semperflorens	Super Olympia Red	Red	Benary	3.3
Begonia × semperflorens	Eureka Rose	Rose	S&G	3.3
Begonia × semperflorens	Prelude Rose	Rose	Ball	3.3
Begonia × semperflorens	Vodka	White	Benary	3.2
Begonia × semperflorens	Partyfun Mix	Mix	Benary	3.2
Begonia × semperflorens	Eureka Bronze Scarlet	Scarlet	S&G	3.1
Begonia × semperflorens	Victory Bronze Leaf White	White	Goldsmith	3.1
Begonia × semperflorens	Encore White	White	Ball	2.8
Begonia × semperflorens	Super Olympia Rose	Rose	Benary	2.7
Begonia × semperflorens	Eureka Bronze White	White	S&G	2.7
Begonia × semperflorens	Super Olympia Pink	Pink	Benary	2.5
Begonia × semperflorens	Victory Bicolor	Bicolor	Goldsmith	2.3
Begonia × semperflorens	Eureka White	White	S&G	2.1
Begonia × semperflorens	Encore Red	Red	Ball	2.0
Begonia × semperflorens	Super Olympia Mix	Mix	Benary	1.9
Begonia × semperflorens	Atlanta Mixed	Mix	Floranova	1.5
Begonia × semperflorens	Atlanta Rose	Rose	Floranova	1.4
Begonia × semperflorens	Prelude Scarlet	Scarlet	Ball	1.4
Begonia × semperflorens	Super Olympia White	White	Benary	1.2
Begonia × semperflorens	Atlanta Pink	Pink	Floranova	1.1
Begonia × semperflorens	Atlanta White	White	Floranova	1.0
Begonia × semperflorens	Stara Pink	Pink	Floranova	0.8

¹ Seed sources: All-American Selections (AAS); Benary; Ball Seed Company (Ball); Goldsmith; Pan American (Pan Am); Sakata; Waller; Bodger; Floranova; Park Seed Company (Park); and S&G.

² Ratings are based on an average of eight plants. Rating scale: 0 = plant died; 1 = small foliage display, no flowers; 2 = adequate foliage, one or two flowers; 3 = sufficient foliage and flowers to be attractive in the landscape; 4 = above average floral display, sufficient foliage; and 5 = superior floral display, sufficient foliage.

**TABLE 2, CONTINUED. AVERAGE RATING FOR FLOWERS GROWN
IN THE 1997 SUMMER TRIAL GARDEN**

Genus species	Variety	Color	Source ¹	Avg. rating ²
Brachycome iberidifolia	Bravo Blue	Blue	Benary	1.5
Brachycome iberidifolia	Bravo White	White	Benary	1.5
Brachycome iberidifolia	Bravo Violet	Violet	Benary	1.4
Catharanthus roseus	Pacifica Orchid	Magenta	Waller	3.5
Catharanthus roseus	Pacifica Punch	Red, fruit	Waller	3.3
Catharanthus roseus	Blue Pearl	Blue, light	Pan Am	3.1
Catharanthus roseus	Heat Wave Grape	Blue	Bodger	3.1
Catharanthus roseus	Pacifica Blush	Pink, light	Waller	3.1
Catharanthus roseus	Apricot Delight	Peach	Waller	3.1
Catharanthus roseus	Grape Cooler	Blue	Pan Am	3.1
Catharanthus roseus	Blush Cooler	Pink, light	Pan Am	3.0
Catharanthus roseus	Pacifica Pink	Pink	Waller	3.0
Catharanthus roseus	Rose Cooler	Rose	Pan Am	2.9
Catharanthus roseus	Pacifica Lilac	Lilac	Waller	2.9
Catharanthus roseus	Heat Wave Mixture	Mix	Bodger	2.9
Catharanthus roseus	Orchid Cooler	Blue	Pan Am	2.9
Catharanthus roseus	Peppermint	White, red	Pan Am	2.8
Catharanthus roseus	Prairie Pastels Mix	Mix	S&G	2.8
Catharanthus roseus	Heat Wave Orchid	Lavender	Bodger	2.8
Catharanthus roseus	Pacifica Mixed	Mix	Waller	2.8
Catharanthus roseus	Heat Wave Pink	Pink	Bodger	2.8
Catharanthus roseus	Icy Pink Cooler	Pink, light	Pan Am	2.8
Catharanthus roseus	Heat Wave	White, red	Bodger	2.8
	Peppermint			
Catharanthus roseus	Pacifica Polka Dot	White, red	Waller	2.7
Catharanthus roseus	Heat Wave White	White	Bodger	2.7
Catharanthus roseus	Raspberry Red	Red, berry	Pan Am	2.6
	Cooler			
Catharanthus roseus	Pacifica White	White	Waller	2.6
Catharanthus roseus	Pacifica Red	Red	Waller	2.6
Catharanthus roseus	Strawberry Cooler	Rose, berry	Pan Am	2.6
Catharanthus roseus	Passion	Red, berry	Park	2.6
Catharanthus roseus	Pink Cooler	Pink	Pan Am	2.5
Celosia cristata	Red Glow	Red	Pan Am	1.9
Celosia cristata	Prestige Scarlet	Red	Sakata	1.8
Celosia plumosa	Castle Yellow	Yellow	Ball	3.3
Celosia plumosa	Century Red	Red	Ball	3.0
Celosia plumosa	Forest Fire	Red	Ball	2.9
Celosia plumosa	Apricot Brandy	Yellow, peach	Ball	2.3
Celosia spicata	Flamingo Purple	Purple	Ball	3.3

¹ Seed sources: All-American Selections (AAS); Benary; Ball Seed Company (Ball); Goldsmith; Pan American (Pan Am); Sakata; Waller; Bodger; Floranova; Park Seed Company (Park); and S&G.

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**TABLE 2, CONTINUED. AVERAGE RATING FOR FLOWERS GROWN
IN THE 1997 SUMMER TRIAL GARDEN**

Genus species	Variety	Color	Source ¹	Avg. rating ²
Celosia spicata	Flamingo Feather	Pink	Ball	2.9
Gomphrena globosa	Woodcreek Red	Red	Ball	3.3
Gomphrena globosa	Woodcreek Lavender	Lavender	Ball	3.1
Gomphrena globosa	Rose	Rose	Ball	2.8
Gomphrena globosa	Pink	Pink	Ball	2.3
Gomphrena globosa	Gnome Purple	Purple	Ball	2.3
Helichrysum bracteatum	Chico White	White	Pan Am	1.4
Helichrysum bracteatum	Chico Red	Red	Pan Am	1.3
Helichrysum bracteatum	Chico Yellow	Yellow	Pan Am	1.1
Helichrysum bracteatum	Chico Pink	Pink	Pan Am	1.0
Helichrysum bracteatum	Chico Orange	Orange	Pan Am	0.7
Impatiens wallerana	Super Elfin Melon	Rose	Pan Am	4.1
Impatiens wallerana	Showstopper Cherry	Red	Ball	3.9
Impatiens wallerana	Super Elfin Rose	Rose	Pan Am	3.8
Impatiens wallerana	Dazzler Deep Orange	Orange	Ball	3.7
Impatiens wallerana	Dazzler Pink	Pink	Ball	3.7
Impatiens wallerana	Pride Pink	Pink	Sakata	3.6
Impatiens wallerana	Accent Salmon	Salmon	Goldsmith	3.5
Impatiens wallerana	Pride Salmon	Orange	Sakata	3.5
Impatiens wallerana	Orange salmon			
Impatiens wallerana	Dazzler Cranberry	Red, berry	Ball	3.4
Impatiens wallerana	Accent Pastel Mixture	Mix	Goldsmith	3.4
Impatiens wallerana	Bruno Orange	Orange	Floranova	3.4
Impatiens wallerana	Accent Mystic Mix	Mix	Goldsmith	3.4
Impatiens wallerana	Accent Deep Pink	Pink, dark	Goldsmith	3.4
Impatiens wallerana	Mosaic Rose	Rose	Goldsmith	3.4
Impatiens wallerana	Super Elfin Lipstick	Red	Pan Am	3.4
Impatiens wallerana	Pink Swirl	Pink, light	Pan Am	3.2
Impatiens wallerana	Accent Peppermint Mix	Mix	Goldsmith	3.2
Impatiens wallerana	Dazzler Merlot Mix	Mix	Ball	3.1
Impatiens wallerana	Pride Rose	Rose	Sakata	3.1
Impatiens wallerana	Tempo Rose	Rose	Bodger	3.1
Impatiens wallerana	Bruno Rose	Rose	Floranova	3.1
Impatiens wallerana	Impulse Cranberry	Red, berry	Sakata	3.1
Impatiens wallerana	Bruno Salmon	Salmon	Floranova	3.0
Impatiens wallerana	Deco Pink	Pink	Pan Am	2.9
Impatiens wallerana	Peach Swirl	Peach	Pan Am	2.9
Impatiens wallerana	Tempo Pink Frost	Pink, light	Bodger	2.9

¹ Seed sources: All-American Selections (AAS); Benary; Ball Seed Company (Ball); Goldsmith; Pan American (Pan Am); Sakata; Waller; Bodger; Floranova; Park Seed Company (Park); and S&G.

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IN THE 1997 SUMMER TRIAL GARDEN**

Genus species	Variety	Color	Source ¹	Avg. rating ²
Impatiens wallerana	Pride Red	Red	Sakata	2.9
Impatiens wallerana	Dazzler Deep Pink	Pink	Ball	2.8
Impatiens wallerana	Bruno Blush	Pink, pale	Floranova	2.8
Impatiens wallerana	Shady Lady Peach	Peach	Park	2.8
Impatiens wallerana	Dazzler Peacock Mix	Mix	Ball	2.8
Impatiens wallerana	Accent Blush Pink	Pink, light	Goldsmith	2.7
Impatiens wallerana	Bruno White	White	Floranova	2.6
Impatiens wallerana	Tempo Punch	Rose	Bodger	2.6
Impatiens wallerana	Tempo White	White	Bodger	2.5
Impatiens wallerana	Dazzler Salmon	Salmon	Ball	2.5
Impatiens wallerana	Carousel Mix	Mix	Pan Am	2.5
Impatiens wallerana	Super Elfin White	White	Pan Am	2.4
Impatiens wallerana	Accent Red	Red	Goldsmith	2.4
Impatiens wallerana	Accent White	White	Goldsmith	2.3
Impatiens wallerana	Accent Salmon	Salmon	Goldsmith	2.3
	Picotee	bicolor		
Impatiens wallerana	Super Elfin Red	Red	Pan Am	2.3
Impatiens wallerana	Super Elfin Deep	Pink, dark	Pan Am	2.3
	Pink			
Impatiens wallerana	Dazzler Bright Eye	White	Ball	2.0
Impatiens wallerana	Dazzler White	White	Ball	1.9
Impatiens wallerana	Accent Cranberry	Red, fruit	Goldsmith	1.5
	Punch Mix			
Impatiens wallerana	Dazzler Burgundy	Burgundy	Ball	1.4
Impatiens wallerana	Deco Red	Red	Pan Am	1.3
Impatiens wallerana	Dazzler Orange	Orange	Ball	1.3
	Improved			
Impatiens wallerana	Pride White	White	Sakata	1.2
Impatiens wallerana	Dazzler Blush	Rose, light	Ball	1.2
Impatiens wallerana	Dazzler Red Star	Red	Ball	1.2
Impatiens wallerana	Bruno Soft Rose	Rose, light	Floranova	1.1
Impatiens wallerana	Deco Crystal	Blue	Pan Am	1.0
Impatiens wallerana	Dazzler Red	Red	Ball	1.0
Impatiens wallerana	Victorian Rose	Rose	AAS	0.9
Impatiens wallerana	Bruno Red	Red	Floranova	0.6
Ipomopsis rubra	Presidio Yellow	Yellow	Bodger	1.0
	Shades			
Ipomopsis rubra	Presidio Red Shades	Red	Bodger	0.9
Ipomopsis rubra	Presidio Pink Shades	Pink	Bodger	0.8
Nicotiana alata	Prelude Rose	Rose	Pan Am	2.7
Nicotiana alata	Prelude Red	Red	Pan Am	2.6

¹ Seed sources: All-American Selections (AAS); Benary; Ball Seed Company (Ball); Goldsmith; Pan American (Pan Am); Sakata; Waller; Bodger; Floranova; Park Seed Company (Park); and S&G.

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**TABLE 2, CONTINUED. AVERAGE RATING FOR FLOWERS GROWN
IN THE 1997 SUMMER TRIAL GARDEN**

Genus species	Variety	Color	Source ¹	Avg. rating ²
Nicotiana alata	Prelude Lime	Green	Pan Am	2.4
Nicotiana alata	Starship Cherry Blossom	Red, berry	Ball	2.2
Nicotiana alata	Prelude White	White	Pan Am	2.2
Nicotiana alata	Merlin Peach	Coral	Floranova	1.6
Nicotiana alata	Prelude Violet	Violet	Pan Am	1.5
Petunia × hybrida	Pink Wave	Pink	Pan Am	3.3
Petunia × hybrida	Purple Wave	Magenta	AAS	3.0
Petunia × hybrida	Prism Sunshine	Yellow	Floranova	1.4
Petunia × hybrida	Double Madness Mix	Mix	Ball	1.8
Petunia × hybrida	Double Madness Burgundy	Burgundy	Ball	1.8
Petunia × hybrida	Double Madness Salmon	Salmon	Ball	1.8
Petunia × hybrida	Double Madness Red and White	Red bicolor	Ball	1.7
Petunia × hybrida	Double Madness Silver Shades	Mix	Ball	1.7
Petunia × hybrida	Double Madness Sheer	White	Ball	0.9
Petunia × hybrida	Double Madness Rose and White	Rose bicolor	Ball	0.9
Petunia × hybrida	Double Madness Rose	Rose	Ball	0.9
Petunia × hybrida	Rose Madness	Rose	Ball	2.3
Petunia × hybrida	Spring Madness	Rose	Ball	1.3
Petunia × hybrida	Plum Madness	Red, berry	Ball	1.3
Petunia × hybrida	Sheer Madness	Magenta	Ball	1.1
Petunia × hybrida	White Madness	White	Ball	1.1
Petunia × hybrida	Pink Madness	Pink	Ball	0.9
Petunia × hybrida	Simply Madness	Magenta	Ball	0.9
Petunia × hybrida	Burgundy Madness	Burgundy	Ball	0.9
Petunia × hybrida	Royal Madness	Violet	Ball	0.8
Petunia × hybrida	Midnight Madness	Violet	Ball	0.8
Petunia × hybrida	Carmine Madness	Red	Ball	0.6
Petunia × hybrida	Plum Crazy Madness	Red, berry	Ball	0.6
Petunia × hybrida	Summer Madness	Magenta	Ball	0.5
Petunia × hybrida	Double Cascade Plum Vein	Rose, berry	Pan Am	2.3
Petunia × hybrida	Double Cascade Burgundy	Red, burgundy	Pan Am	2.1

¹ Seed sources: All-American Selections (AAS); Benary; Ball Seed Company (Ball); Goldsmith; Pan American (Pan Am); Sakata; Waller; Bodger; Floranova; Park Seed Company (Park); and S&G.

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**TABLE 2, CONTINUED. AVERAGE RATING FOR FLOWERS GROWN
IN THE 1997 SUMMER TRIAL GARDEN**

Genus species	Variety	Color	Source ¹	Avg. rating ²
Petunia × hybrida	Salmon Dreams	Salmon	Pan Am	2.8
Petunia × hybrida	White Storm	White	Goldsmith	2.8
Petunia × hybrida	Dreams Rose	Rose	Pan Am	2.6
Petunia × hybrida	Eagle Blue	Blue	Sakata	2.5
Petunia × hybrida	Dreams Burgundy	Red burgundy	Pan Am	2.5
Petunia × hybrida	Bravo Red	Red	S&G	2.4
Petunia × hybrida	Bravo Pink	Pink	S&G	2.4
Petunia × hybrida	Midnight Dreams	Blue	Pan Am	2.4
Petunia × hybrida	Dreams Red	Red	Pan Am	2.3
Petunia × hybrida	Dreams	Rose, light Appleblossom	Pan Am	2.3
Petunia × hybrida	Eagle Red	Red	Sakata	2.1
Petunia × hybrida	Dreams Neon Rose	Rose	Pan Am	2.1
Petunia × hybrida	Eagle Pink	Pink	Sakata	2.0
Petunia × hybrida	Bravo Salmon	Salmon	S&G	1.9
Petunia × hybrida	Eagle Salmon	Salmon	Sakata	1.8
Petunia × hybrida	White Dreams	White	Pan Am	1.8
Petunia × hybrida	Ultra Lilac	Lilac	Goldsmith	1.6
Petunia × hybrida	Bravo Formula Mix	Mix	S&G	1.5
Petunia × hybrida	Pink Storm	Pink	Goldsmith	1.4
Petunia × hybrida	Bravo Blue	Blue	S&G	1.3
Petunia × hybrida	Lavender Storm	Lavender	Goldsmith	1.3
Petunia × hybrida	Bravo White	White	S&G	1.1
Petunia × hybrida	Salmon Storm	Salmon	Goldsmith	1.0
Petunia × hybrida	Eagle Pastel Pink	Pink	Sakata	0.9
Petunia × hybrida	Dreams Pink	Pink	Pan Am	0.3
Petunia × hybrida	Fantasy Pink Morn	Pink	Goldsmith	3.1
Petunia × hybrida	Fantasy Salmon	Salmon	Goldsmith	2.9
Petunia × hybrida	Fantasy Blue	Blue	Goldsmith	2.8
Petunia × hybrida	Fantasy Ivory	White	Goldsmith	2.8
Petunia × hybrida	Fantasy Carmine	Red	Goldsmith	2.8
Petunia × hybrida	Fantasy Red	Red	Goldsmith	2.8
Petunia × hybrida	Fantasy Crystal Red	Red	Goldsmith	2.5
Petunia × hybrida	Fantasy Pink	Pink	Goldsmith	2.3
Petunia × hybrida	Fantasy Crystal Light Salmon	Salmon light	Goldsmith	1.6
Petunia × hybrida	Heavenly Lavender	Lavender	AAS	2.6
Petunia × hybrida	Carpet Pink	Pink	Pan Am	3.4
Petunia × hybrida	Carpet Salmon	Salmon	Pan Am	3.4

¹ Seed sources: All-American Selections (AAS); Benary; Ball Seed Company (Ball); Goldsmith; Pan American (Pan Am); Sakata; Waller; Bodger; Floranova; Park Seed Company (Park); and S&G.

² Ratings are based on an average of eight plants. Rating scale: 0 = plant died; 1 = small foliage display, no flowers; 2 = adequate foliage, one or two flowers; 3 = sufficient foliage and flowers to be attractive in the landscape; 4 = above average floral display, sufficient foliage; and 5 = superior floral display, sufficient foliage.

**TABLE 2, CONTINUED. AVERAGE RATING FOR FLOWERS GROWN
IN THE 1997 SUMMER TRIAL GARDEN**

Genus species	Variety	Color	Source ¹	Avg. rating ²
Petunia × hybrida	Carpet Rose	Rose	Pan Am	3.4
Petunia × hybrida	Carpet Velvet	Violet	Pan Am	3.2
Petunia × hybrida	Carpet Lilac	Lilac	Pan Am	3.2
Petunia × hybrida	Carpet Sky Blue	Blue, light	Pan Am	3.0
Petunia × hybrida	Carpet Blue Star	Blue	Pan Am	2.8
Petunia × hybrida	Carpet Bright Red	Red	Pan Am	2.7
Petunia × hybrida	Carpet Plum	Rose magenta	Pan Am	2.6
Petunia × hybrida	Carpet True Blue	Blue	Pan Am	2.6
Petunia × hybrida	Celebrity Chiffon Morn	Pink, pale	Pan Am	2.6
Petunia × hybrida	Carpet Blue	Blue	Pan Am	2.6
Petunia × hybrida	Carpet White	White	Pan Am	2.5
Petunia × hybrida	Carpet Buttercream	Yellow, pale	Pan Am	2.1
Petunia × hybrida	Carpet Blue Lace	Blue, light	Pan Am	2.1
Portulaca grandiflora	Sundial Fuchsia	Fuchsia	Bodger	2.8
Portulaca grandiflora	Sundial Orange	Orange	Bodger	2.5
Portulaca grandiflora	Sundial Goldsmith	Goldsmith	Bodger	2.3
Portulaca grandiflora	Passion Fruit Mix	Mix	Park	2.3
Portulaca grandiflora	Sundial Pink	Pink	Bodger	2.3
Portulaca grandiflora	Tropical Fruit Sundial Mix	Mix	Park	2.0
Portulaca grandiflora	Sundial Mango	Peach	Bodger	1.9
Portulaca grandiflora	Sundial White	White	Bodger	1.9
Portulaca grandiflora	Sunnyside Cherry Red	Red	Floranova	1.8
Portulaca grandiflora	Sunnyside Coral	Coral	Floranova	1.7
Portulaca grandiflora	Sunnyside Goldsmith	Goldsmith	Floranova	1.6
Portulaca grandiflora	Sunnyside Orange	Orange	Floranova	1.6
Portulaca grandiflora	Sunnyside White	White	Floranova	1.6
Portulaca grandiflora	Sunnyside Light Yellow	Yellow, light	Floranova	1.6
Portulaca grandiflora	Sunnyside Pink	Pink	Floranova	1.6
Portulaca grandiflora	Sunnyside Flame	Red	Floranova	1.5
Rudbeckia hirta	Indian Summer	Goldsmith	AAS	1.1
Rudbeckia hirta	Sonora	Yellow	Benary	1.0
Salvia farinacea	Victoria White	White	Ball	3.1
Salvia farinacea	Signum	Blue	Bodger	2.5
Salvia farinacea	Reference	Blue	Benary	2.4

¹ Seed sources: All-American Selections (AAS); Benary; Ball Seed Company (Ball); Goldsmith; Pan American (Pan Am); Sakata; Waller; Bodger; Floranova; Park Seed Company (Park); and S&G.

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**TABLE 2, CONTINUED. AVERAGE RATING FOR FLOWERS GROWN
IN THE 1997 SUMMER TRIAL GARDEN**

Genus species	Variety	Color	Source ¹	Avg. rating ²
Salvia farinacea	Strata	White	AAS	2.4
Salvia farinacea	Rhea	Blue	Ball	2.3
Salvia farinacea	Victoria Blue	Blue	Ball	2.0
Salvia splendens	Salsa Purple	Purple	Goldsmith	1.8
Salvia splendens	Salsa Scarlet	Scarlet	Goldsmith	2.2
Salvia splendens	Salsa Light Purple	Purple, light	Goldsmith	2.1
Salvia splendens	Red Vista	Red	Pan Am	2.0
Salvia splendens	Hotline Mixed	Mix	Park	2.0
Salvia splendens	Hotline Blue Streak	Blue	Park	2.0
Salvia splendens	Salsa Purple	Purple	Goldsmith	1.8
Salvia splendens	Sizzler Salmon Bic	Salmon bicolor	Floranova	1.7
Salvia splendens	Hotline Violet	Violet	Park	1.6
Salvia splendens	Salsa Rose	Rose	Goldsmith	1.4
Salvia splendens	Fire-Star	Red	Benary	1.4
Salvia splendens	Salsa Scarlet Bicolor	Scarlet bicolor	Goldsmith	1.3
Salvia splendens	Salsa Rose Bicolor	Rose, bicolor	Goldsmith	1.2
Salvia splendens	Salsa Salmon	Salmon bicolor	Goldsmith	0.9
Salvia splendens	Salsa Salmon	Salmon	Goldsmith	0.9
Salvia splendens	Salsa White	White	Goldsmith	0.7
Salvia splendens	Hotline White	White	Park	0.6
Tagetes erecta	Antigua Primrose	Yellow	Goldsmith	2.9
Tagetes erecta	Antigua Goldsmith	Goldsmith	Goldsmith	2.8
Tagetes erecta	Discovery Yellow	Yellow	Bodger	2.8
Tagetes erecta	Inca Yellow	Yellow	Goldsmith	2.7
Tagetes erecta	Inca Orange	Orange	Goldsmith	2.6
Tagetes erecta	Antigua Yellow	Yellow	Goldsmith	2.6
Tagetes erecta	Marvel Yellow	Yellow	Pan Am	2.6
Tagetes erecta	Inca Mix	Mix	Goldsmith	2.5
Tagetes erecta	Marvel Deep Orange	Orange	Pan Am	2.4
Tagetes erecta	Antigua Mixture	Mix	Goldsmith	2.3
Tagetes erecta	Antigua Orange	Orange	Goldsmith	2.2
Tagetes erecta	Marvel Goldsmith	Goldsmith	Pan Am	2.1
Tagetes erecta	Discovery Orange	Orange	Bodger	1.9
Tagetes erecta	Inca Goldsmith	Goldsmith	Goldsmith	1.8
Tagetes patula	Bonanza Harmony	Red	Pan Am	3.2
Tagetes patula	Bonanza Flame	Red	Pan Am	3.0
Tagetes patula	Hero Orange	Orange	Bodger	2.9

¹ Seed sources: All-American Selections (AAS); Benary; Ball Seed Company (Ball); Goldsmith; Pan American (Pan Am); Sakata; Waller; Bodger; Floranova; Park Seed Company (Park); and S&G.

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**TABLE 2, CONTINUED. AVERAGE RATING FOR FLOWERS GROWN
IN THE 1997 SUMMER TRIAL GARDEN**

Genus species	Variety	Color	Source ¹	Avg. rating ²
Tagetes patula	Bounty Yellow	Yellow	Sakata	2.8
Tagetes patula	Hero Bee	Red, yellow	Bodger	2.8
Tagetes patula	Bonanza Bee	Red, yellow	Pan Am	2.8
Tagetes patula	Hero Flame	Red	Bodger	2.8
Tagetes patula	Bounty Goldsmith	Yellow	Sakata	2.8
Tagetes patula	Bounty Spry	Yellow, red	Sakata	2.8
Tagetes patula	Little Hero Flame	Red	Bodger	2.6
Tagetes patula	Safari Bolero	Bicolor	Bodger	2.6
Tagetes patula	Little Hero Yellow	Yellow	Bodger	2.6
Tagetes patula	Safari Yellow	Yellow	Bodger	2.5
Tagetes patula	Bonanza Orange	Orange	Pan Am	2.5
Tagetes patula	Bonanza Goldsmith	Goldsmith	Pan Am	2.5
Tagetes patula	Little Hero Fire	Red	Bodger	2.5
Tagetes patula	Disco Flame	Red	Bodger	2.5
Tagetes patula	Bonanza Yellow Imp	Yellow	Pan Am	2.4
Tagetes patula	Janie Mixed	Mix	Waller	2.3
Tagetes patula	Disco Orange	Orange	Bodger	2.3
Tagetes patula	Bonanza Spry	Red	Pan Am	2.3
Tagetes patula	Little Hero Orange	Orange	Bodger	2.3
Tagetes patula	Hero Yellow	Yellow	Bodger	2.2
Tagetes patula	Hero Spry	Bicolor	Bodger	2.1
Tagetes patula	Disco Yellow	Yellow	Bodger	1.9
Verbena × hybrida	Quartz Scarlet	Red, scarlet	Pan Am	1.5
Verbena × hybrida	Quartz Formula Mix	Mix	Pan Am	0.9
Verbena × hybrida	Novalis Mix	Mix	Benary	0.7
Verbena × speciosa	Imagination	Purple	AAS	2.5
Zinnia angustifolia	Goldsmith	Goldsmith	Pan Am	2.8
Zinnia angustifolia	Star White	White	Pan Am	2.7
Zinnia angustifolia	Star Orange	Orange	Pan Am	2.6
Zinnia angustifolia	Crystal White	White	AAS	2.4
Zinnia elegans	Oklahoma Formula	Mix	Benary	3.5
Zinnia elegans	Mix			
Zinnia elegans	Oklahoma Formula	Mix	Benary	3.0
Zinnia elegans	Mix			
Zinnia elegans	Short Stuff Mixture	Mix	Goldsmith	2.1
Zinnia elegans	Peter Pan Mixture	Mix	Goldsmith	2.1

¹ Seed sources: All-American Selections (AAS); Benary; Ball Seed Company (Ball); Goldsmith; Pan American (Pan Am); Sakata; Waller; Bodger; Floranova; Park Seed Company (Park); and S&G.

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Begonia × semperflorens 'Prelude White'



Begonia × semperflorens 'Encore White/Bronze'



Catharanthus roseus 'Blue Pearl'



Catharanthus roseus 'Grape Cooler'



Gomphrena globosa 'Woodcreek Red'



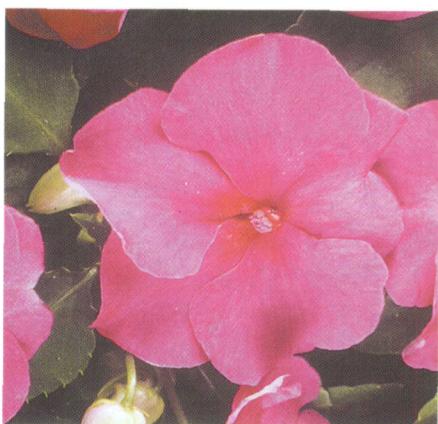
Impatiens wallerana 'Dazzler Deep Orange'



Impatiens wallerana 'Dazzler Pink'



Impatiens wallerana 'Super Elfin Melon'



Impatiens wallerana 'Dazzler Deep Pink'



Impatiens wallerana 'Super Elfin Rose'



Nicotiana alata 'Prelude Red'



Petunia × *hybrida* 'Pink Wave'



Petunia × hybrida 'Carpet Lilac'



Petunia × hybrida 'Carpet Pink'



Petunia × hybrida 'Carpet Rose'



Petunia × hybrida 'Carpet Salmon'



Petunia × hybrida 'Rose Madness'



Petunia × hybrida 'Cascade Burgundy'



Tagetes patula 'Bronze Flame'



Tagetes patula 'Bonanza Harmony'



Zinnia angustifolia 'Star Gold'



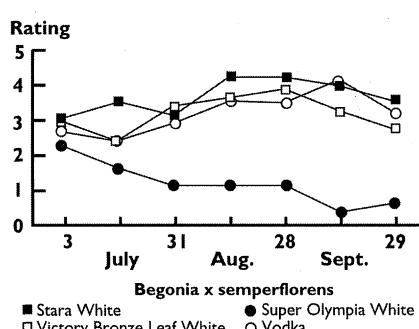
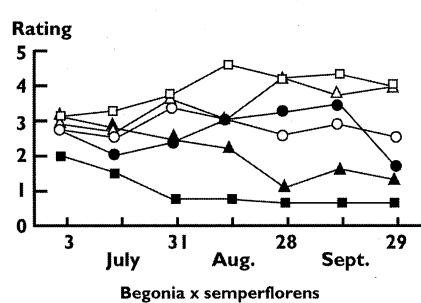
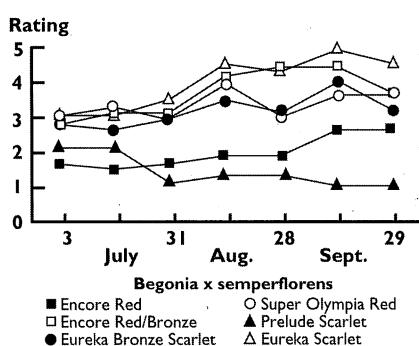
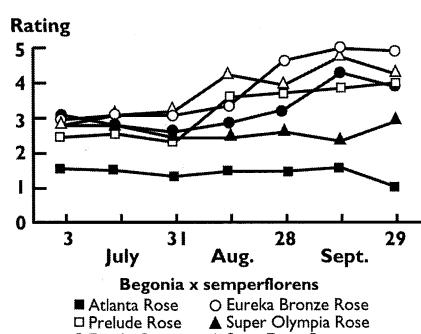
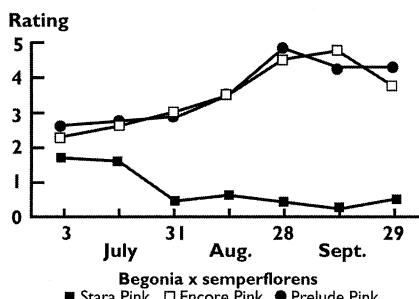
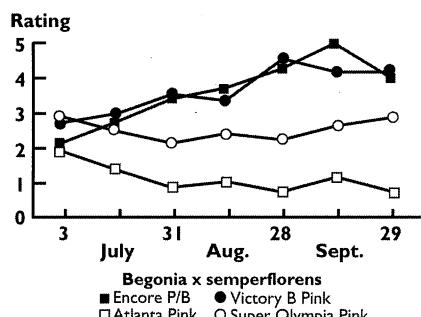
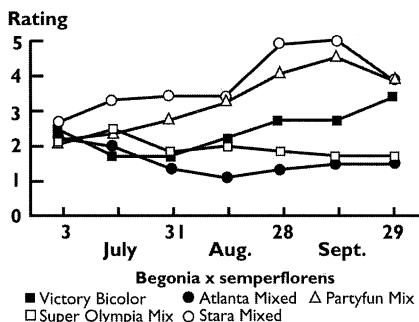
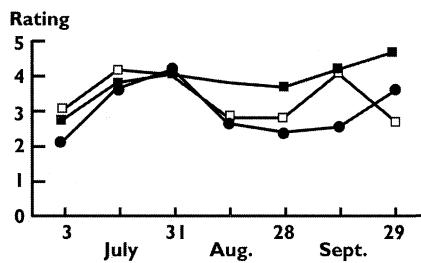
Zinnia angustifolia 'Star Orange'

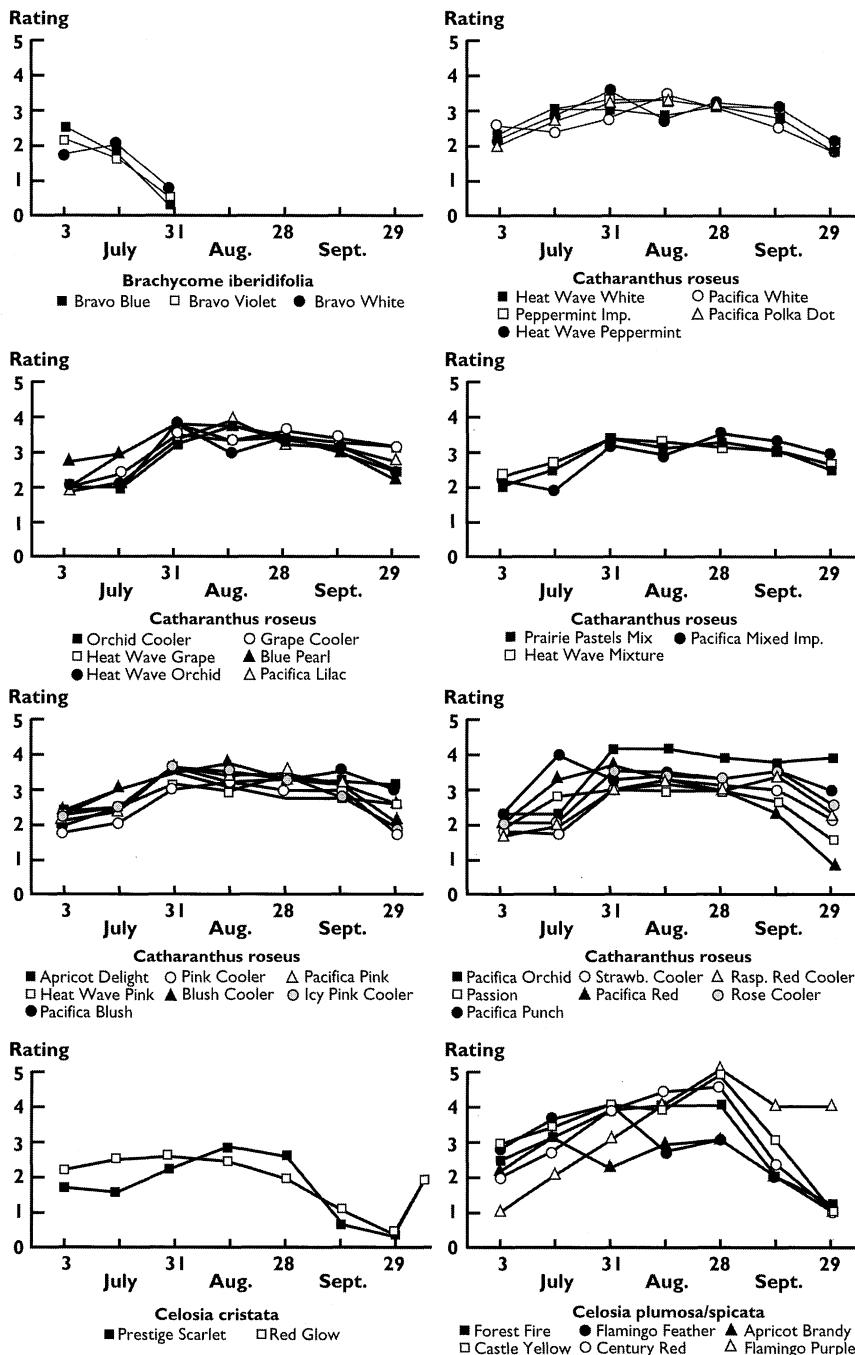


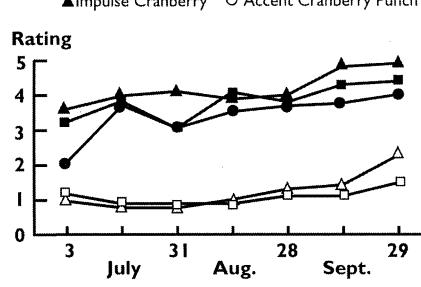
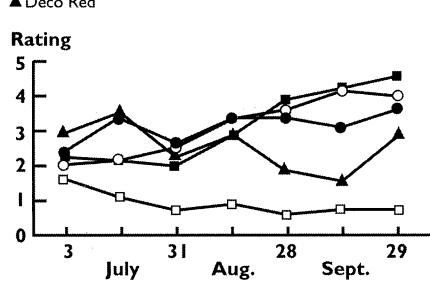
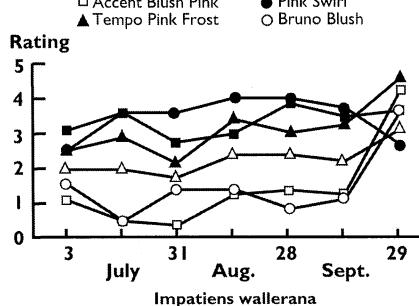
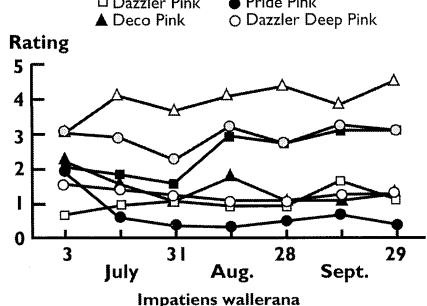
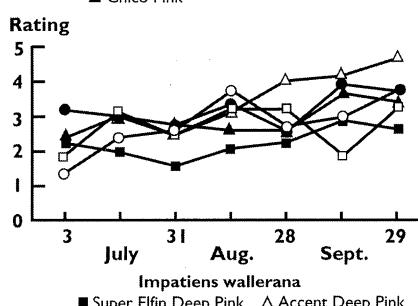
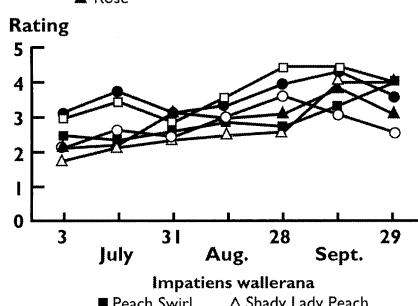
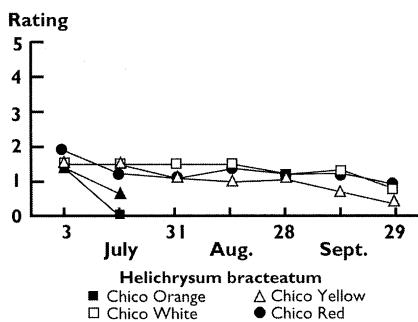
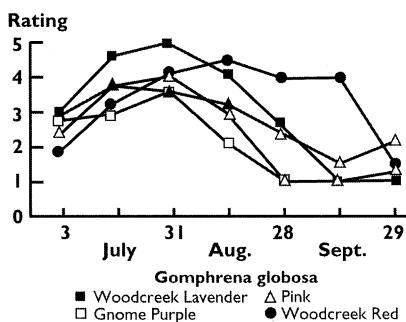
Zinnia angustifolia 'Star White'

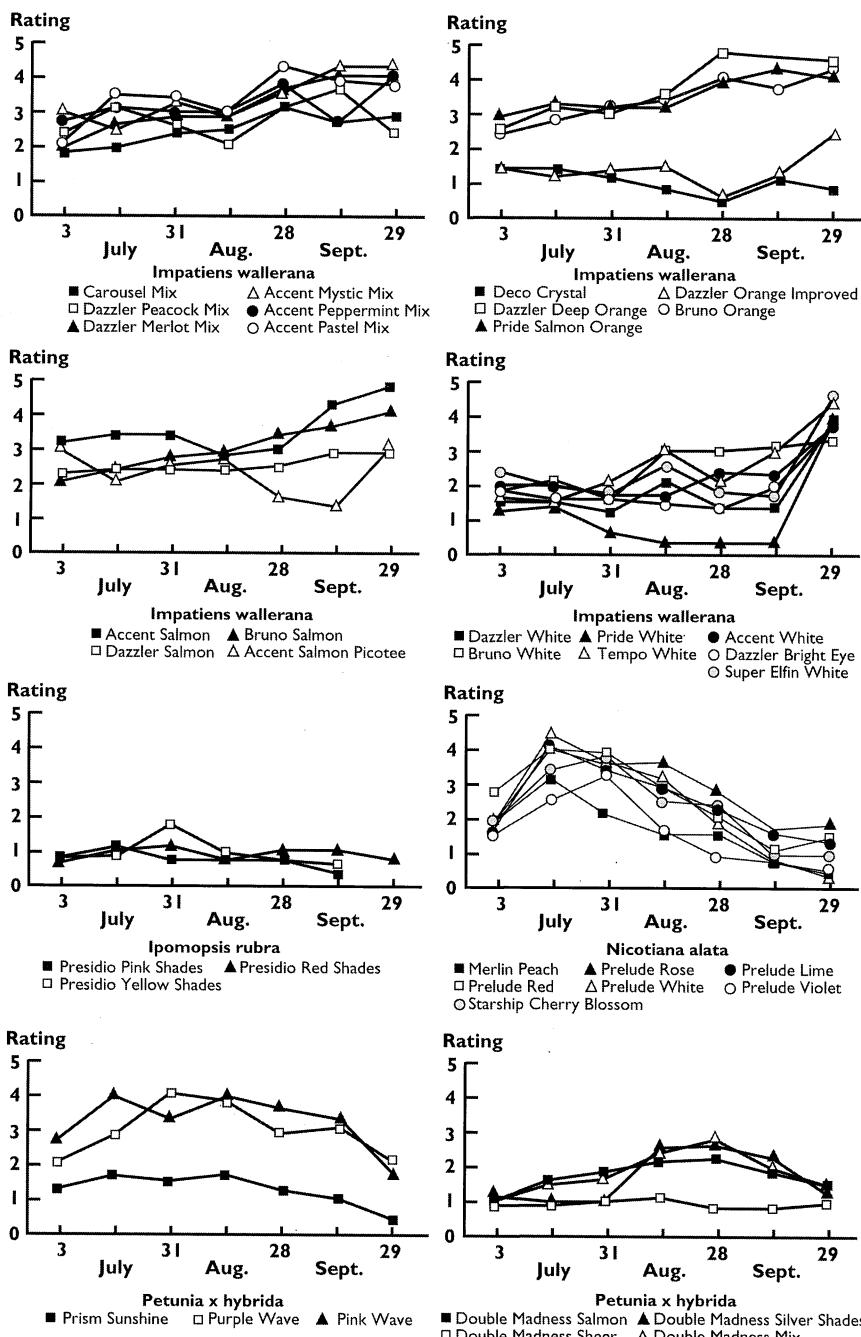


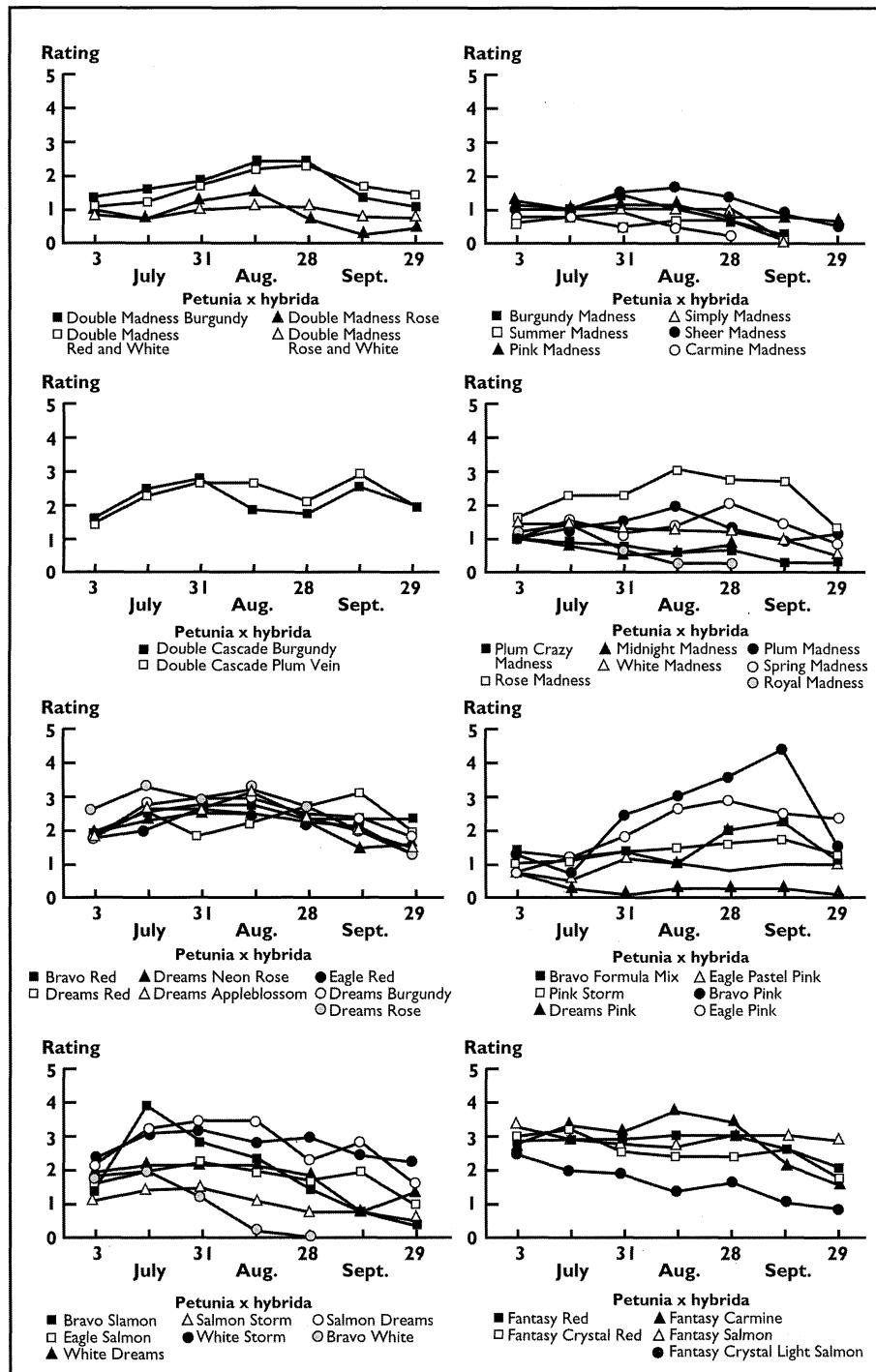
Zinnia angustifolia 'Starbright Mix'

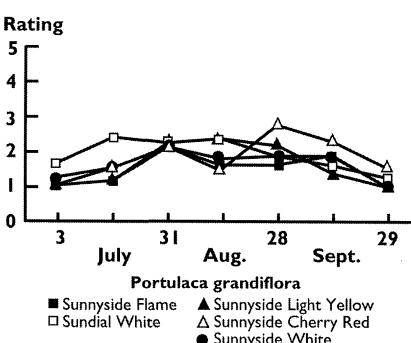
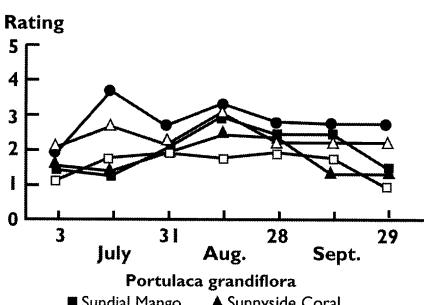
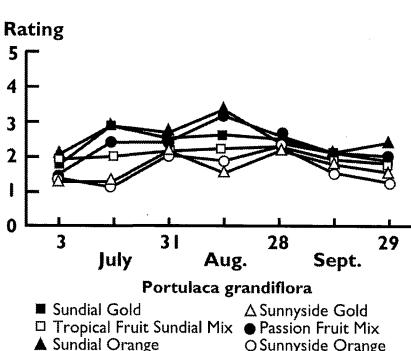
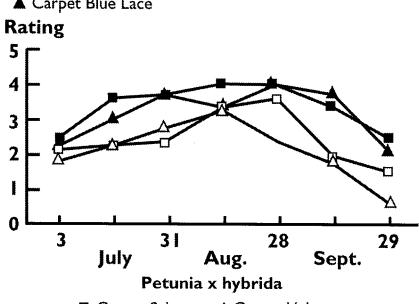
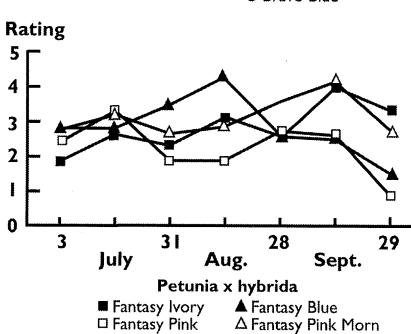
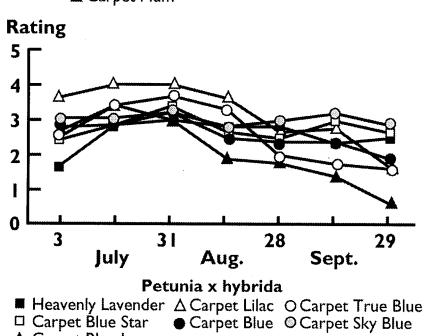
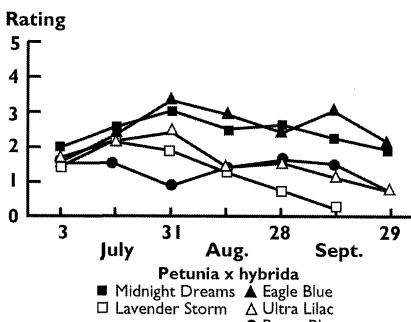
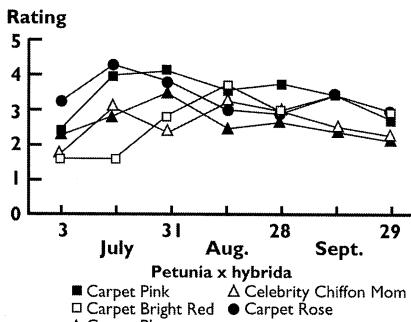


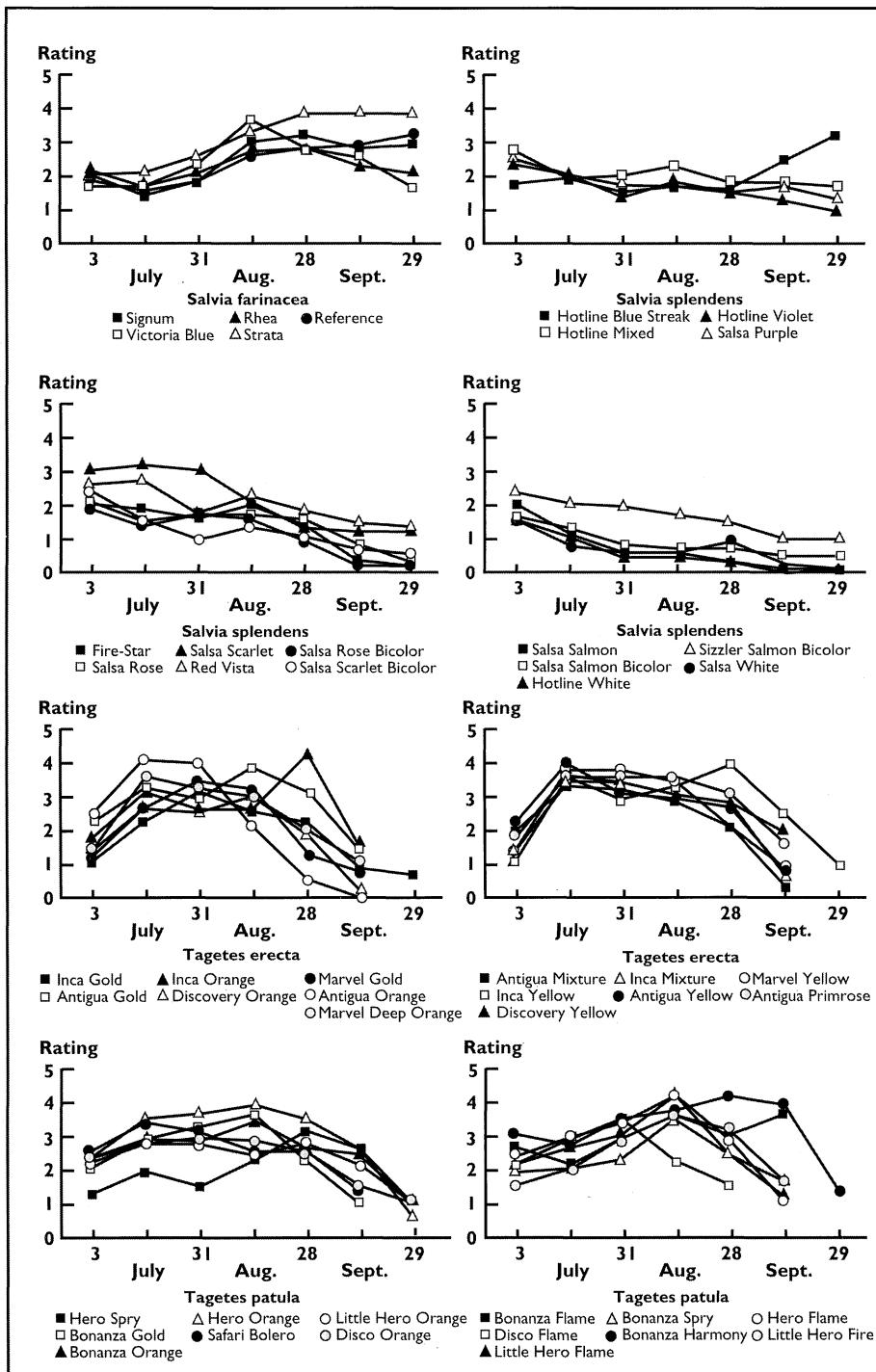


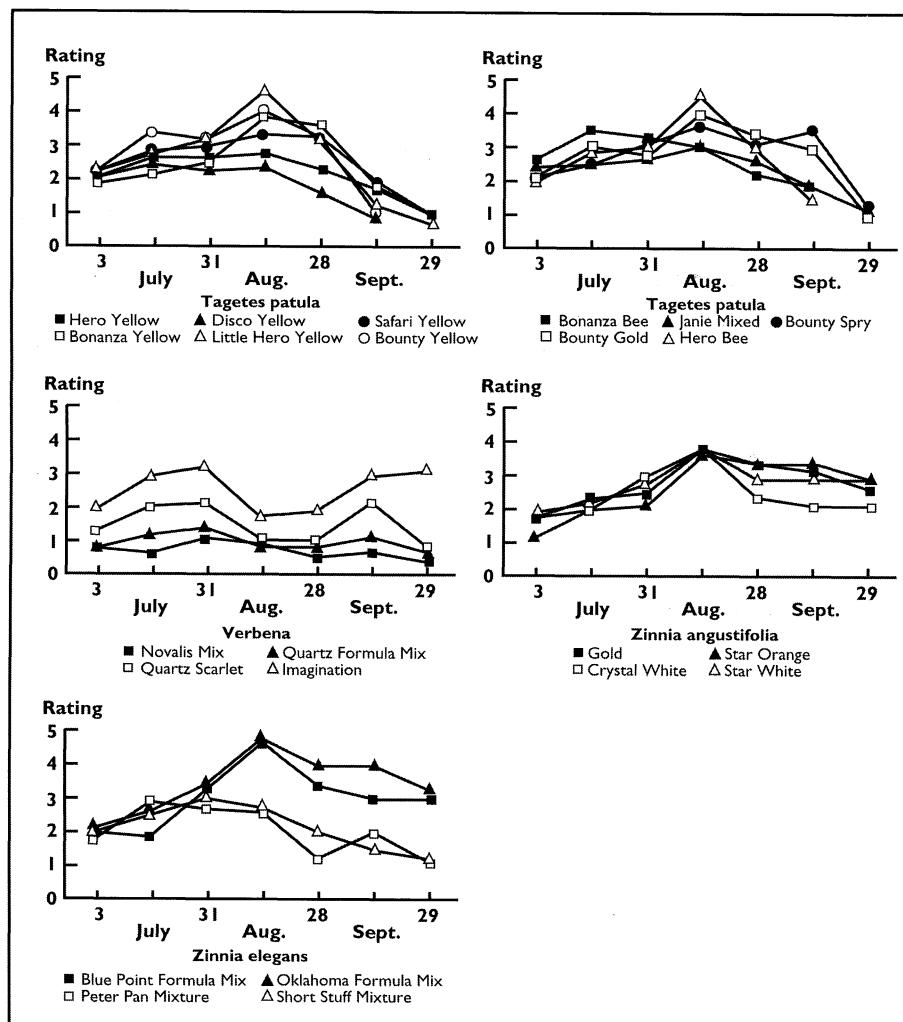








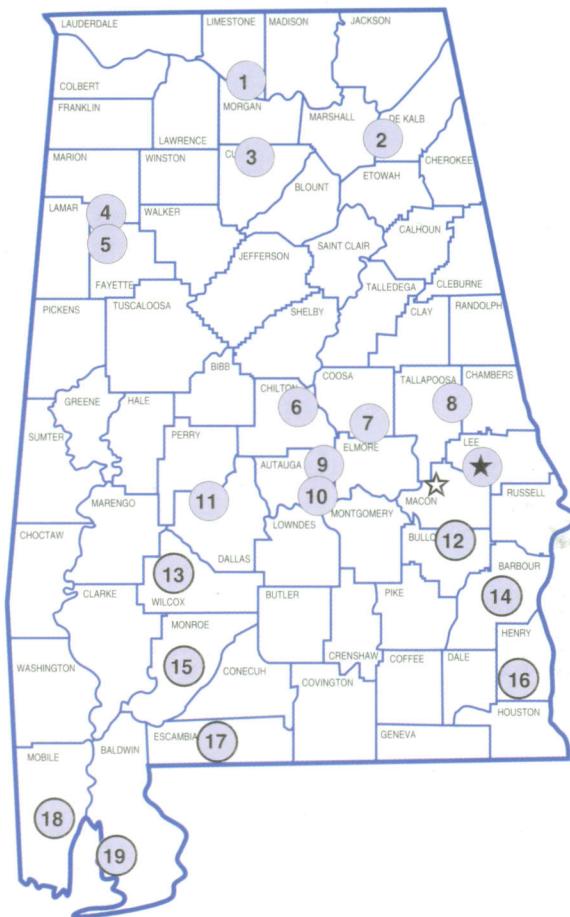




Alabama's Agricultural Experiment Station System

AUBURN UNIVERSITY

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.

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.
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.