



1996-1997
WINTER
TRIAL GARDEN RESULTS



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ON THE COVER: Pansies like Universal plus violet blotch are the traditional cool-season annual for fall plantings in the southeastern United States.

ACKNOWLEDGMENTS

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

1996-1997 WINTER TRIAL GARDEN RESULTS

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INTRODUCTION

In the winter of 1996-97, 312 bedding plant varieties 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 the overall winter performance of cool-season flowering annual plant varieties. Results generated from this study will assist Alabama horticultural professionals and consumers in bedding plant selections for winter landscapes. 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

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Bellingrath Gardens in Theodore and the Birmingham Botanical Garden. This publication reports results from the E.V. Smith trials. Comparison of results from several display sites will increase the reliability of the findings because weather, soil type, exposure, cultural practices, and other variables can greatly affect plant performance. Horticulturists are urged to visit several trial gardens to gain a better understanding of variety 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 Kandiodults) were tilled and fumigated with methyl bromide in the spring of 1996. 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 recommendation. No additional fertilizer was applied during the season. The trials were planted on October 16, 1996. Twelve plants per entry were grown in full sun. 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 October 31, 1996 through April 24, 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 floral displays, while size, shape, and freedom from insect or disease blemishes and overall foliar health 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 2.0 or higher could be considered acceptable in the landscape and would be a worthwhile addition to a winter garden located in temperate zone eight.

CLIMATIC CONDITIONS

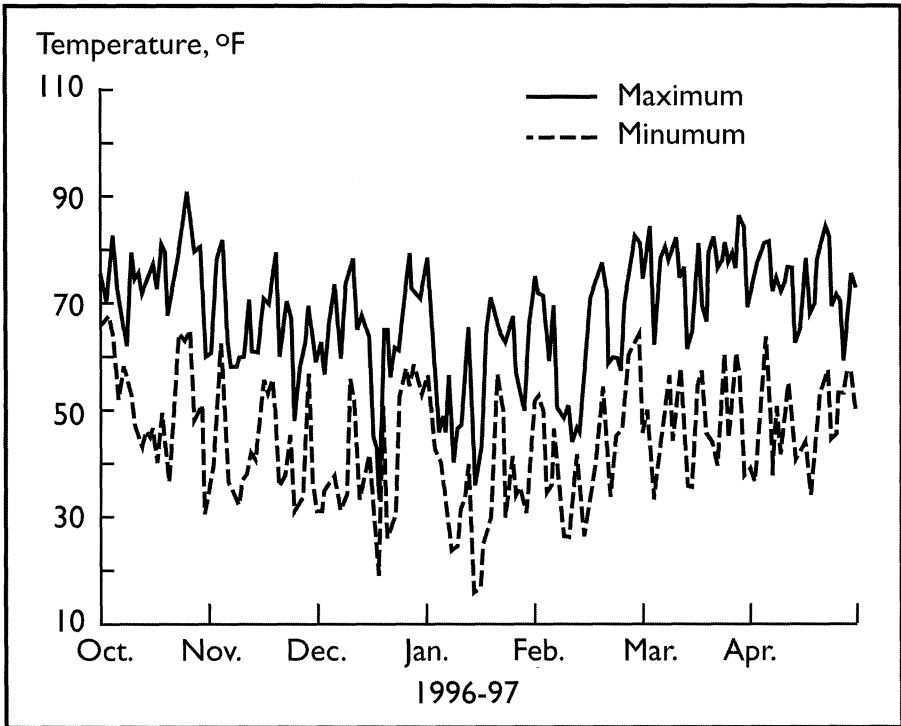
During the winter of 1996 to 1997, average daily air temperatures were warmer than average temperatures for the last 100 years (see table). Average monthly rainfall was lower in November, December, and March but higher in January and February than average rainfall for the last 30 years. In general, it was milder than normal during the winter evaluation period of 1996 to 1997. The figure on page 3 shows the maximum and minimum daily air temperatures for the evaluation period.

TRIAL HIGHLIGHTS

The top four winter performers were violas from the Penny series. All varieties in the top four were compact, low to the ground, and full of small, attractive, pansy-like flowers during most of the winter months.

AVERAGE DAILY SUNLIGHT, DAILY AIR TEMPERATURE, AND MONTHLY RAINFALL ¹						
Month	Avg. sunlight		Avg. temperature		Total rainfall	
	1996-97	1996-97	100-yr. avg.	1996-97	30-yr. avg.	
	w/m ²	°F	°F	in.	in.	
November	2935.4	55.0	54.8	2.5	4.1	
December	2083.2	51.5	46.8	4.6	5.2	
January	2211.0	48.2	43.2	5.4	5.0	
February	2641.0	52.0	46.5	7.9	5.6	
March	4484.6	63.5	54.3	2.1	6.6	

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



Viola ‘Penny Azure Wing’ received the highest overall rating for any plant this year: 3.8. *Viola* ‘Penny Violet Beacon’ and ‘Penny Violet Flare’ came in second with a rating of 3.7. Third and fourth were *Viola* ‘Penny Primrose’ and ‘Blackjack’ with a rating of 3.5 and 3.4, respectively.

Violas and pansies vied for fifth and sixth places. *Viola* ‘Felix’ tied with pansy ‘Purple and White Wink’ for fifth place with a rating of 3.1, and *Viola* ‘Springtime Violet’ and pansy ‘Rally Light Blue w/blotch’ placed sixth with a 3.0 rating.

The following varieties were seventh, and all rated a 2.9: *Viola* 'Alpine Summer' and pansy 'Universal Plus Rose Blotch', 'Accord Banner Blue Blotch', 'Universal Plus Yellow', 'Baby Bingo Beaconsfield', 'Presto Mixture', and 'Universal Plus Violet Blotch'.

The best performing *Dianthus* were 'Floral Lace Picotee', 'Award Mix', and 'Duchess Mix' with ratings of 2.3. *Dianthus* 'Floral Lace Violet Picotee', 'Floral Lace Rose Bicolor', 'Princess Purple', and three experimental lace types were all rated a 2.1.

The best performing snapdragons were 'Silks White' with a 1.9 rating, while 'Tahiti Red', 'Tahiti Rose', and 'Silks Yellow' tied for second place with a rating of 1.7. Scores for snapdragons reflect the fact that they do not bloom during winter months, but contribute pleasant green foliage to the border until they resume flowering in early spring. Unfortunately, re-blooming in the spring occurred after the winter annual study was concluded.

Cyclamen, *Linaria*, and primrose varieties in the trial did not perform well under our conditions and received ratings less than 1. For complete results, see Table 2 where the varieties are listed by plant, color, source, and rating.

EVALUATOR'S NOTES

Many of the *Viola* varieties performed well, especially those in the Penny series. They were a delight to observe during the normally dreary winter months when a small flower can make such a big impact.

The *Dianthus* varieties did not perform as well as usual in our garden, but provided very attractive mid-winter green or blue-green foliage when there is little else. In the spring as the weather began to warm up a little, *Dianthus* produced a bonanza of blooms that were sparse during winter. Snapdragons also produce blooms in the spring; however, re-bloom of snapdragons occurs later than in *Dianthus*.

Cyclamen, *Linaria*, and primrose did not perform well in our study this year.

**TABLE 2. AVERAGE RATING FOR FLOWERS GROWN
IN THE 1996-97 WINTER TRIAL GARDEN**

Plant	Variety	Color	Source ¹	Avg. rating ²
Cyclamen	Concerto White w/eye	white	S&G	0.0
Cyclamen	Little Dresden Formula Mix	mix	S&G	0.0
Dianthus	Floral Lace Picotee	pink	Ball	2.3
Dianthus	Award Mix	mix	Grimes	2.3
Dianthus	Duchess Mix	mix	Vaughan	2.3
Dianthus	Duke Mix	mix	Vaughan	2.2
Dianthus	2185 Purple Bicolor floral lace type	purple	Pan Am	2.2
Dianthus	Floral Lace violet Picotee	purple	Ball	2.2
Dianthus	2018 Crimson floral lace type	red	Pan Am	2.2
Dianthus	Floral Lace Rose Bicolor	pink	Ball	2.2
Dianthus	Princess Purple	purple	Gold	2.2
Dianthus	2184 Red Bicolor floral lace type	red	Pan Am	2.2
Dianthus	Award Rose	pink	Grimes	2.1
Dianthus	Floral Lace Violet	purple	Ball	2.1
Dianthus	Floral Lace Purple	purple	Ball	2.1
Dianthus	2249 Bicolor Mix floral lace type	mix	Pan Am	2.1
Dianthus	Floral Lace Mix	mix	Ball	2.1
Dianthus	2161 Lavender fringe type	purple	Pan Am	2.1
Dianthus	Princess Mix	mix	Gold	2.1
Dianthus	Ideal Violet	purple	AAS	2.1
Dianthus	Princess Crimson Eye	red	Gold	2.0
Dianthus	Princess Pink	pink	Gold	2.0
Dianthus	2196 Lavender Bicolor fringe type	purple	Pan Am	2.0
Dianthus	Floral Lace Crimson	red	Ball	1.9
Dianthus	2190 Bicolor Mix parfait type	mix	Pan Am	1.6
Dianthus	Princess Salmon	salmon	Gold	1.5
Dianthus	Stawberry Parfait	red	Gold	1.4
Dianthus	Magic Charms	pink	Gold	1.3
Dianthus	Raspberry Parfait	red	Gold	1.3
Dianthus	Monarch White	white	Gold	0.9
Dianthus	Monarch Scarlett	red	Gold	0.9
Dianthus	Monarch Orange	orange	Gold	0.3
Linaria	Fantasia Speckled Pink	pink	Takii	0.9

¹ Seed sources: All-American Selections (AAS); Ball Seed Company (Ball); Benary; Bodger; Floranova; Goldsmith Seeds, Inc. (Gold); G.S. Grimes (Grimes); Pan American (Pan Am); Park Seed Company (Park); Sakata; Sluis & Groot (S&G); Takii; and Vaughan's Seed Company.

² Rating scale: 0 = plant died; 1 = small foliage display, no flowers; 2 = adequate foliage, no flowers or few buds; 3 = adequate to large foliage, relatively small floral display; 4 = sufficient foliage and flowers to be attractive in the landscape; and 5 = superior floral display, sufficient foliage.

**TABLE 2, CONTINUED. AVERAGE RATING FOR FLOWERS GROWN
IN THE 1996-97 WINTER TRIAL GARDEN**

Plant	Variety	Color	Source ¹	Avg. rating ²
Linaria	Fantasia Yellow	yellow	Takii	0.8
Linaria	Fantasia White	white	Takii	0.8
Linaria	Fantasia Blue	blue	Takii	0.7
Linaria	Fantasia Magenta Rose	pink	Takii	0.6
Pansy	Purple and White Wink	bicolor	Takii	3.1
Pansy	Rally Light Blue w/blotch	blue	Pan Am	3.0
Pansy	Universal Plus Rose Blotch	pink	Gold	2.9
Pansy	Accord Banner Blue Blotch	blue	Gold	2.9
Pansy	Universal Plus Yellow	yellow	Gold	2.9
Pansy	Baby Bingo Beaconsfield	blue	Pan Am	2.9
Pansy	Presto Mixture	mix	Bodger	2.9
Pansy	Universal Plus Violet Blotch	purple	Gold	2.9
Pansy	Frosty Cherry Imperial	pink	Takii	2.8
Pansy	Skyline Yellow/Red Wing	yellow	S&G	2.8
Pansy	Universal Plus Clear Mixture	mix	Gold	2.8
Pansy	Accord Primrose	pink	Gold	2.8
Pansy	Universal Plus True Blue	blue	Gold	2.8
Pansy	Ultima Lavender Shades	purple	Sakata	2.8
Pansy	Rally Pure White	white	Pan Am	2.8
Pansy	Delta Pure Violet	purple	S&G	2.8
Pansy	Baby Bingo Midnight	purple	Pan Am	2.8
Pansy	Rally Lilac Cap	purple	Pan Am	2.8
Pansy	Universal Plus Blue Blotch	blue	Gold	2.8
Pansy	Accord Banner Clear Primrose	pink	Gold	2.7
Pansy	Glory Beaconsfield	bicolor	Bodger	2.7
Pansy	Bingo Blue w/blotch	blue	Pan Am	2.7
Pansy	Universal Plus Mixture	mix	Gold	2.7
Pansy	Delta Blue w/blotch	blue	S&G	2.7
Pansy	Clear Sky Rose	pink	S&G	2.6
Pansy	Baby Bingo Yellow	yellow	Pan Am	2.6
Pansy	Accord Banner Violet w/face	purple	Gold	2.6
Pansy	Universal Plus Lavender	purple	Gold	2.6
Pansy	Baby Bingo Denim	blue	Pan Am	2.6
Pansy	Skyline Pink Shades	pink	S&G	2.6
Pansy	Accord Banner Red Blotch	red	Gold	2.6
Pansy	Skyline Yellow	yellow	S&G	2.5

¹ Seed sources: All-American Selections (AAS); Ball Seed Company (Ball); Benary; Bodger; Floranova; Goldsmith Seeds, Inc. (Gold); G.S. Grimes (Grimes); Pan American (Pan Am); Park Seed Company (Park); Sakata; Sluis & Groot (S&G); Takii; and Vaughan's Seed Company.

² Rating scale: 0 = plant died; 1 = small foliage display, no flowers; 2 = adequate foliage, no flowers or few buds; 3 = adequate to large foliage, relatively small floral display; 4 = sufficient foliage and flowers to be attractive in the landscape; and 5 = superior floral display, sufficient foliage.

**TABLE 2, CONTINUED. AVERAGE RATING FOR FLOWERS GROWN
IN THE 1996-97 WINTER TRIAL GARDEN**

Plant	Variety	Color	Source ¹	Avg. rating ²
Pansy	Accord Banner Red Wing	red	Gold	2.5
Pansy	Delta Light Blue w/blotch	blue	S&G	2.5
Pansy	Regal Yellow w/red blotch	yellow	Sakata	2.5
Pansy	Universal Plus Blotch Mixture	mix	Gold	2.5
Pansy	Accord Clear Red	red	Gold	2.5
Pansy	Accord Banner Clear Mixture	mix	Gold	2.5
Pansy	Universal Plus Yellow Blotch	yellow	Gold	2.5
Pansy	Accord Banner Blotch Mixture	mix	Gold	2.5
Pansy	Accord Banner Clear Red	red	Gold	2.5
Pansy	Delta Pure Primrose	pink	S&G	2.5
Pansy	Fama See Me	purple	Benary	2.5
Pansy	Universal Plus Yellow/Red Blotch	yellow	Gold	2.5
Pansy	Red and Yellow Wink	bicolor	Takii	2.5
Pansy	Rally Yellow	yellow	Pan Am	2.5
Pansy	Bedder Light Blue	blue	Takii	2.5
Pansy	Fama Pure White	white	Benary	2.5
Pansy	Fama Primrose	pink	Benary	2.5
Pansy	Universal Plus Rose	pink	Gold	2.5
Pansy	Universal Plus Red Blotch	red	Gold	2.5
Pansy	Crown Purple	purple	Park	2.4
Pansy	Delta Pure Rose	pink	S&G	2.4
Pansy	Bingo Deep Purple	purple	Pan Am	2.4
Pansy	Delta Pure Red	red	S&G	2.4
Pansy	Fama Purple	purple	Benary	2.4
Pansy	Rally True Blue	blue	Pan Am	2.4
Pansy	Delta Rose w/blotch	pink	S&G	2.4
Pansy	Bingo Light Rose w/blotch	rose	Pan Am	2.4
Pansy	Accord Banner Clear Rose	pink	Gold	2.4
Pansy	Universal Plus Beaconsfield	bicolor	Gold	2.4
Pansy	Accord Violet w/face	purple	Gold	2.4
Pansy	Fama Silverblue	blue	Benary	2.4
Pansy	Clear Sky True Blue	blue	S&G	2.4
Pansy	Clear Sky formula mix	blue	S&G	2.4

¹ Seed sources: All-American Selections (AAS): Ball Seed Company (Ball); Benary; Bodger; Floranova; Goldsmith Seeds, Inc. (Gold); G.S. Grimes (Grimes); Pan American (Pan Am); Park Seed Company (Park); Sakata; Sluis & Groot (S&G); Takii; and Vaughan's Seed Company.

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**TABLE 2, CONTINUED. AVERAGE RATING FOR FLOWERS GROWN
IN THE 1996-97 WINTER TRIAL GARDEN**

Plant	Variety	Color	Source ¹	Avg. rating ²
Pansy	Fama Mix	mix	Benary	2.4
Pansy	Bingo Red and Yellow	red	Pan Am	2.4
Pansy	Rally Yellow w/blotch	yellow	Pan Am	2.4
Pansy	Delta Pure Orange	orange	S&G	2.4
Pansy	Universal Plus White Blotch	white	Gold	2.4
Pansy	Universal Plus Orange	orange	Gold	2.4
Pansy	Fama Lilac Shades	purple	Benary	2.4
Pansy	Bingo Yellow w/blotch	yellow	Pan Am	2.4
Pansy	Delta True Blue	blue	S&G	2.3
Pansy	Gold Imperial	yellow	Takii	2.3
Pansy	Happy Face Purple	purple	Bodger	2.3
Pansy	Accord Banner Mixture	mix	Gold	2.3
Pansy	Clear Sky Purple	purple	S&G	2.3
Pansy	Medallion White Blotch	white	Floranova	2.3
Pansy	Universal Plus Light Blue	blue	Gold	2.3
Pansy	Atlas White	white	Bodger	2.3
Pansy	Atlas Primrose	pink	Bodger	2.3
Pansy	Happy Face Rose	pink	Bodger	2.3
Pansy	Regal Deep Blue w/blotch	blue	Sakata	2.3
Pansy	Fama Orange	orange	Benary	2.3
Pansy	Universal Plus white	white	Gold	2.3
Pansy	Character clear White	white	Grimes	2.3
Pansy	Atlas Blue Spash	blue	Bodger	2.3
Pansy	Universal Plus Red Wing	red	Gold	2.3
Pansy	Bingo White w/blotch	white	Pan Am	2.3
Pansy	Fama Red	red	Benary	2.3
Pansy	Accord Banner Violet Blotch	purple	Gold	2.2
Pansy	Clear Sky Primrose	pink	S&G	2.2
Pansy	Rally Deep Blue w/blotch	blue	Pan Am	2.2
Pansy	Delta Yellow w/blotch	yellow	S&G	2.2
Pansy	Delta White w/blotch	white	S&G	2.2
Pansy	Clear Sky Orange	orange	S&G	2.2
Pansy	Accord Banner Clear Blue	blue	Gold	2.2
Pansy	Atlas Purple	purple	Bodger	2.2
Pansy	Delta Violet w/face	purple	S&G	2.2
Pansy	Purple Imperial	purple	Takii	2.2
Pansy	Delta White/Rose Wing	white	S&G	2.2

¹ Seed sources: All-American Selections (AAS): Ball Seed Company (Ball); Benary; Bodger; Floranova; Goldsmith Seeds, Inc. (Gold); G.S. Grimes (Grimes); Pan American (Pan Am); Park Seed Company (Park); Sakata; Sluis & Groot (S&G); Takii; and Vaughan's Seed Company.

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**TABLE 2, CONTINUED. AVERAGE RATING FOR FLOWERS GROWN
IN THE 1996-97 WINTER TRIAL GARDEN**

Plant	Variety	Color	Source ¹	Avg. rating ²
Pansy	Delta Formula Mix	mix	S&G	2.2
Pansy	Happy Face Red	red	Bodger	2.2
Pansy	Delta Carmine w/blotch	red	S&G	2.2
Pansy	Regal Blue w/blotch	blue	Sakata	2.2
Pansy	Clear Sky White	white	S&G	2.2
Pansy	Jema Red & Yellow	bicolor	Floranova	2.2
Pansy	Regal Red & Yellow w/blotch	bicolor	Sakata	2.2
Pansy	Delta Red w/blotch	red	S&G	2.2
Pansy	Happy Face Mix	mix	Bodger	2.2
Pansy	Accord Violet Blotch	purple	Gold	2.2
Pansy	Happy Face Yellow	yellow	Bodger	2.2
Pansy	Fama Yellow w/blotch	yellow	Benary	2.2
Pansy	Delta Pure White	white	S&G	2.2
Pansy	Fama Blue Angel	blue	Benary	2.1
Pansy	Accord Banner Clear Yellow	yellow	Gold	2.1
Pansy	Delta Pure Colors Formula Mix	mix	S&G	2.1
Pansy	Glory Rose w/blotch	pink	Bodger	2.1
Pansy	Jema Violet Blue	blue	Floranova	2.1
Pansy	Accord Clear Orange	orange	Gold	2.1
Pansy	Universal Plus Red	red	Gold	2.1
Pansy	Medallion Rose Blotch	rose	Floranova	2.1
Pansy	Bingo Yellow	yellow	Pan Am	2.1
Pansy	Rally White Blotch Improved	white	Pan Am	2.1
Pansy	Medallion Purple Blotch	purple	Floranova	2.1
Pansy	Delta Primrose w/blotch	pink	S&G	2.1
Pansy	Clear Sky Red	red	S&G	2.1
Pansy	Regal Yellow w/blotch	yellow	Sakata	2.1
Pansy	Glory Blue w/blotch	blue	Bodger	2.1
Pansy	Fama Love Me	yellow	Benary	2.1
Pansy	Delta Pure Yellow	yellow	S&G	2.1
Pansy	Crown Yellow	yellow	Park	2.1
Pansy	Glory Yellow w/blotch	yellow	Bodger	2.1
Pansy	Fama Golden Yellow	yellow	Benary	2.1
Pansy	Fama Dark-Eyed Lemon	yellow	Benary	2.1
Pansy	Accord Banner Rose Blotch	pink	Gold	2.1
Pansy	Clear Sky Yellow	yellow	S&G	2.1

¹ Seed sources: All-American Selections (AAS): Ball Seed Company (Ball); Benary; Bodger; Floranova; Goldsmith Seeds, Inc. (Gold); G.S. Grimes (Grimes); Pan American (Pan Am); Park Seed Company (Park); Sakata; Sluis & Groot (S&G); Takii; and Vaughan's Seed Company.

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**TABLE 2, CONTINUED. AVERAGE RATING FOR FLOWERS GROWN
IN THE 1996-97 WINTER TRIAL GARDEN**

Plant	Variety	Color	Source ¹	Avg. rating ²
Pansy	Majestic Giants Purple	purple	Sakata	2.1
Pansy	Medallion Yellow Blotch	yellow	Floranova	2.0
Pansy	Majestic Giants Yellow w/blotch	yellow	Sakata	2.0
Pansy	Delta Pink Shades	pink	S&G	2.0
Pansy	Skyline White	white	S&G	2.0
Pansy	Majestic Giants Canary	yellow	Sakata	2.0
Pansy	Majestic Giants	purple	Sakata	2.0
Pansy	Atlas Mixture	mix	Bodger	2.0
Pansy	All Sky formula mix	mix	S&G	2.0
Pansy	Majestic Giants Red & Yellow Bicolor	bicolor	Sakata	2.0
Pansy	Atlas Orange	orange	Bodger	2.0
Pansy	Rally Orange w/blotch	orange	Pan Am	2.0
Pansy	Blue Crown	blue	Park	2.0
Pansy	Regal white w/blotch	white	Sakata	2.0
Pansy	Glory White w/blotch	white	Bodger	2.0
Pansy	Skyline Blue/White Wing	blue	S&G	2.0
Pansy	Fama White w/blotch	white	Benary	2.0
Pansy	Roc Carmine red	red	S&G	2.0
Pansy	Happy Face White	white	Bodger	2.0
Pansy	Regal scarlett w/blotch	red	Sakata	2.0
Pansy	Jema White Blotch	white	Floranova	2.0
Pansy	Atlas Yellow	yellow	Bodger	2.0
Pansy	Majestic Giants White w/ blotch	white	Sakata	2.0
Pansy	Rally Orange	orange	Pan Am	2.0
Pansy	Skyline White w/purple wing	white	S&G	1.9
Pansy	Fama True Blue	blue	Benary	1.9
Pansy	Jema Blue Shades	blue	Floranova	1.9
Pansy	Medallion Blue Blotch	blue	Floranova	1.9
Pansy	Accord Banner Clear White	white	Gold	1.9
Pansy	Majestic Giants Scarlet Shades	red	Sakata	1.9
Pansy	Fama Blue w/blotch	blue	Benary	1.9
Pansy	Jema Rose Shades	rose	Floranova	1.8
Pansy	Regal Orange w/blotch	orange	Sakata	1.8

¹ Seed sources: All-American Selections (AAS): Ball Seed Company (Ball); Benary; Bodger; Floranova; Goldsmith Seeds, Inc. (Gold); G.S. Grimes (Grimes); Pan American (Pan Am); Park Seed Company (Park); Sakata; Sluis & Groot (S&G); Takii; and Vaughan's Seed Company.

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**TABLE 2, CONTINUED. AVERAGE RATING FOR FLOWERS GROWN
IN THE 1996-97 WINTER TRIAL GARDEN**

Plant	Variety	Color	Source ¹	Avg. rating ²
Pansy	Skyline Red	red	S&G	1.8
Pansy	Universal Plus Ivory/Rose Blotch	white	Gold	1.8
Pansy	Jema Mixture	mix	Floranova	1.8
Pansy	Jema Red Shades	red	Floranova	1.8
Pansy	Jema Yellow Blotch	yellow	Floranova	1.8
Pansy	Bingo Red w/blotch (primed)	red	Floranova	1.8
Pansy	Happy Face Blue	blue	Bodger	1.7
Pansy	Medallion Red Blotch	red	Floranova	1.7
Pansy	Skyline Blue	blue	S&G	1.5
Pansy	Majestic Giants Lavender Shades	purple	Sakata	0.1
Pansy	Majestic Giants Scarlett Shades	red	Sakata	0.0
Pansy	Skyline Pink Shades	pink	S&G	0.0
Pansy	Skyline Yellow w/red wing	yellow	S&G	0.0
Pansy	Delta Rose w/blotch	pink	S&G	0.0
Pansy	Medallion Mixture	mix	Floranova	0.0
Pansy	Skyline White/Purple Wing	white	S&G	0.0
Pansy	Skyline White	white	S&G	0.0
Pansy	Clear Sky White	white	S&G	0.0
Pansy	Majestic Giants White w/blotch	white	Sakata	0.0
Pansy	Majestic Giants Red/Yellow Bicolor	bicolor	Sakata	0.0
Pansy	Clear Sky Purple	purple	S&G	0.0
Pansy	Delta Blue w/blotch	blue	S&G	0.0
Pansy	Delta White w/blotch	white	S&G	0.0
Pansy	Delta Primrose w/blotch	pink	S&G	0.0
Pansy	Clear Sky True Blue	blue	S&G	0.0
Pansy	Clear Sky Rose	pink	S&G	0.0
Pansy	Majestic Giants Formula Mixed	mix	Sakata	0.0
Pansy	Accord Yellow w/red blotch	yellow	Gold	2.8
Pansy	Accord Banner Yellow Blotch	yellow	Gold	2.3
Pansy	Accord Banner White Blotch	white	Gold	1.9

¹ Seed sources: All-American Selections (AAS): Ball Seed Company (Ball); Benary; Bodger; Floranova; Goldsmith Seeds, Inc. (Gold); G.S. Grimes (Grimes); Pan American (Pan Am); Park Seed Company (Park); Sakata; Sluis & Groot (S&G); Takii; and Vaughan's Seed Company.

² Rating scale: 0 = plant died; 1 = small foliage display, no flowers; 2 = adequate foliage, no flowers or few buds; 3 = adequate to large foliage, relatively small floral display; 4 = sufficient foliage and flowers to be attractive in the landscape; and 5 = superior floral display, sufficient foliage.

**TABLE 2, CONTINUED. AVERAGE RATING FOR FLOWERS GROWN
IN THE 1996-97 WINTER TRIAL GARDEN**

Plant	Variety	Color	Source ¹	Avg. rating ²
Primrose	Crown Formula Mix	mix	S&G	0.8
Primrose	Ducat Pink	pink	S&G	0.1
Primrose	Crown Pink	pink	S&G	0.1
Primrose	Ducat Orange	orange	S&G	0.0
Primrose	Ducat White	white	S&G	0.0
Primrose	Ducat Blue	blue	S&G	0.0
Primrose	Ducat Carmine	red	S&G	0.0
Primrose	Ducat Bronze	yellow	S&G	0.0
Primrose	Sterling White	white	S&G	0.0
Primrose	Crown Yellow	yellow	S&G	0.0
Snapdragon	Silks White	white	Grimes	1.9
Snapdragon	Tahiti Red	red	S&G	1.7
Snapdragon	Tahiti Rose	pink	S&G	1.7
Snapdragon	Silks Red and White	bicolor	Grimes	1.7
Snapdragon	Liberty Light Pink	pink	Gold	1.5
Snapdragon	Bells Mix (dwarf)	mix	Gold	1.4
Snapdragon	Tahiti Lilac	purple	S&G	1.4
Snapdragon	Tahiti Appleblossom	pink	S&G	1.4
Snapdragon	Silks Yellow	yellow	Grimes	1.3
Snapdragon	Liberty Mix	mix	Gold	1.3
Snapdragon	Liberty Yellow	yellow	Gold	1.3
Snapdragon	Liberty Lavender	purple	Gold	1.2
Snapdragon	Liberty White	white	S&G	1.2
Snapdragon	Tahiti Yellow	yellow	S&G	1.2
Snapdragon	Red Bells (dwarf)	red	Gold	1.2
Snapdragon	Floral Carpet Pink	pink	Sakata	1.1
Snapdragon	Tahiti White	white	S&G	1.1
Snapdragon	Liberty Crimson	red	Gold	1.1
Snapdragon	Liberty Cherry	red	Gold	1.0
Snapdragon	Tahiti Orange	orange	S&G	1.0
Snapdragon	Red Chimes (dwarf)	red	Gold	1.0
Snapdragon	Tahiti Pink	pink	S&G	0.9
Snapdragon	Tahiti Scarlet	red	S&G	0.9
Snapdragon	Royal Carpet Formula Mix	mix	Takii	0.0
Snapdragon	Semi Dwarf Sonnet White	white	Sakata	0.0
Snapdragon	Royal Carpet Mix	mix	Takii	0.0
Snapdragon	Chimes Mix (dwarf)	mix	Gold	1.5

¹ Seed sources: All-American Selections (AAS): Ball Seed Company (Ball); Benary; Bodger; Floranova; Goldsmith Seeds, Inc. (Gold); G.S. Grimes (Grimes); Pan American (Pan Am); Park Seed Company (Park); Sakata; Sluis & Groot (S&G); Takii; and Vaughan's Seed Company.

² Rating scale: 0 = plant died; 1 = small foliage display, no flowers; 2 = adequate foliage, no flowers or few buds; 3 = adequate to large foliage, relatively small floral display; 4 = sufficient foliage and flowers to be attractive in the landscape; and 5 = superior floral display, sufficient foliage.

**TABLE 2, CONTINUED. AVERAGE RATING FOR FLOWERS GROWN
IN THE 1996-97 WINTER TRIAL GARDEN**

Plant	Variety	Color	Source ¹	Avg. rating ²
Viola	Penny Azure Wing	blue	Gold	3.8
Viola	Penny Violet Beacon	purple	Gold	3.7
Viola	Penny Violet Flare	purple	Gold	3.7
Viola	Penny Primrose	pink	Gold	3.5
Viola	Blackjack	black	Floranova	3.4
Viola	Felix	yellow	Floranova	3.1
Viola	Springtime Violet	purple	Floranova	3.0
Viola	Alpine Summer	yellow	S&G	2.9
Viola	Fanfare White Blotch	white	Floranova	2.8
Viola	Springtime Pure White	white	Floranova	2.7
Viola	Alpine Wing	bicolor	Floranova	2.7
Viola	Springtime Rose Blotch	rose	Floranova	2.6
Viola	Springtime Deep Blue	blue	Floranova	2.6
Viola	Fanfare Mixture	mix	Floranova	2.6
Viola	Springtime Clear Blue	blue	Floranova	2.6
Viola	Springtime Yellow Marble	yellow	Floranova	2.5
Viola	Springtime Azure Blue	blue	Floranova	2.5
Viola	Springtime Red	red	Floranova	2.5
Viola	Springtime Mixture	mix	Floranova	2.5
Viola	Alpine Sun	yellow	S&G	2.4
Viola	Artic Sky	blue	Vaughan	2.4
Viola	Fanfare Red Blotch	red	Floranova	2.4
Viola	Springtime Porcelain Blue	blue	Floranova	2.3
Viola	Fanfare Blue Centre	blue	Floranova	2.3
Viola	Springtime Blue Blotch	blue	Floranova	2.3
Viola	Springtime Mid Blue	blue	Floranova	2.3
Viola	Springtime Pure Yellow	yellow	Floranova	2.2
Viola	Fanfare Yellow Blotch	yellow	Floranova	2.1
Viola	Sunbeam	yellow	Floranova	2.1
Viola	Springtime Yellow Blotch	yellow	Floranova	2.0
Viola	Chalon Mix	mix	Floranova	2.0
Viola	Springtime White Blotch	white	Floranova	1.9
Viola	Springtime Lemon Splash	yellow	Floranova	1.9
Viola	Fanfare Blue Beacon	blue	Floranova	1.9
Viola	Fanfare Primrose Shades	yellow	Floranova	1.8

¹ Seed sources: All-American Selections (AAS); Ball Seed Company (Ball); Benary; Bodger; Floranova; Goldsmith Seeds, Inc. (Gold); G.S. Grimes (Grimes); Pan American (Pan Am); Park Seed Company (Park); Sakata; Sluis & Groot (S&G); Takii; and Vaughan's Seed Company.

² Rating scale: 0 = plant died; 1 = small foliage display, no flowers; 2 = adequate foliage, no flowers or few buds; 3 = adequate to large foliage, relatively small floral display; 4 = sufficient foliage and flowers to be attractive in the landscape; and 5 = superior floral display, sufficient foliage.



Crystal bowl orange



Rally pure white



Universal plus white blotch



Universal plus violet blotch



Rally lilac cap



Clear sky primrose



Rally yellow



Baby bingo yellow



Universal plus yellow



Atlas primrose



Universal plus clear mixture



Universal plus blotch mix



Universal plus yellow blotch



Universal plus white blotch



Clear sky white



Universal plus true blue

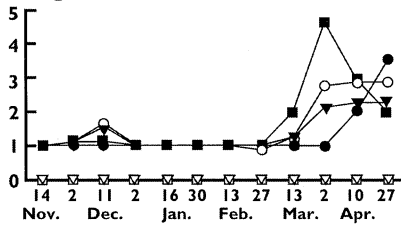


Rally light blue with blotch

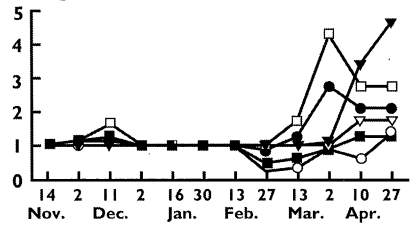


Universal plus blue blotch

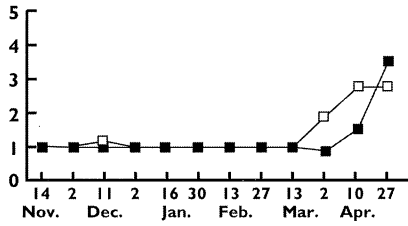
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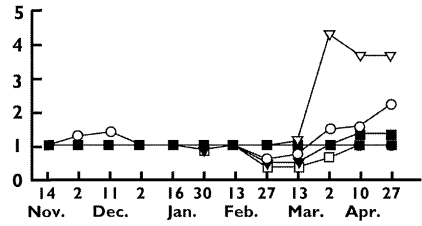
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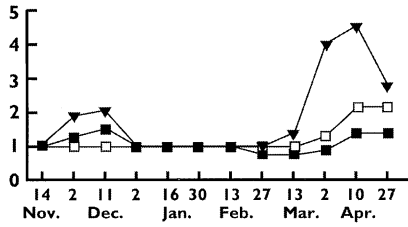
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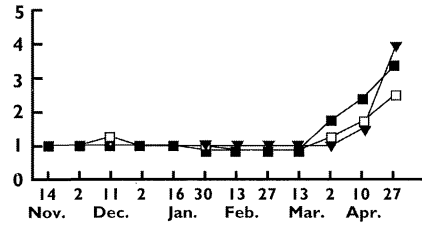
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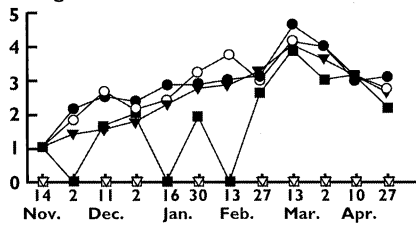
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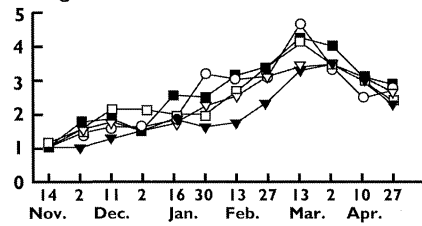
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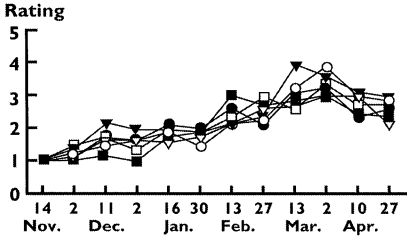


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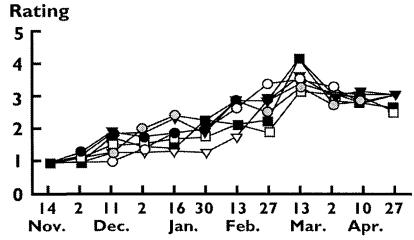


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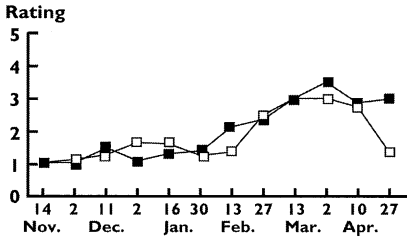




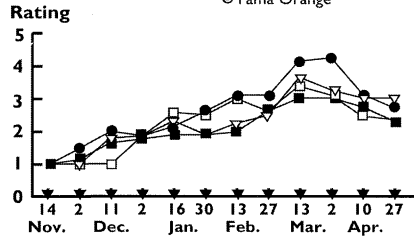
- Pansy**
- All Sky Formula Mix
 - Delta Formula Mix
 - ▼ Fama Mix
 - ▽ Atlas Mixture
 - Delta Pure Colors Formula Mix
 - Happy Face Mix



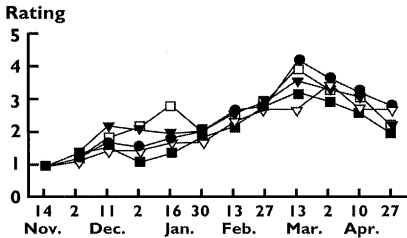
- Pansy**
- Accord Clear Orange
 - Atlas Orange
 - ▼ Delta Pure Orange
 - ▽ Rally Orange
 - Universal Plus Orange
 - Clear Sky Orange
 - Fama Orange



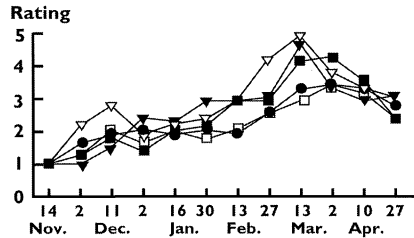
- Pansy**
- Rally Orange w/ Blotch
 - Regal Orange w/ Blotch



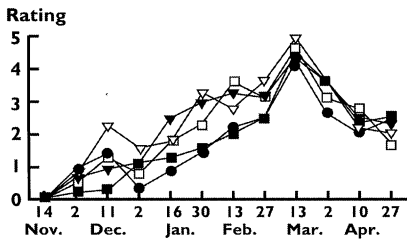
- Pansy**
- Accord Banner Rose Blotch
 - Clear Sky Primrose
 - ▼ Clear Sky Rose 2
 - ▽ Atlas Primrose
 - Clear Sky Rose



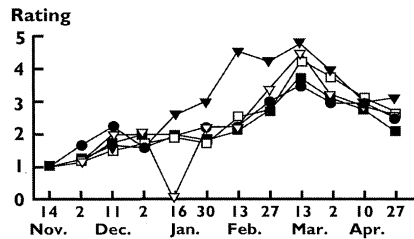
- Pansy**
- Delta Pink Shades
 - Delta Pure Primrose
 - ▼ Delta Rose w/ Blotch
 - ▽ Delta Primrose w/ Blotch
 - Delta Pure Rose



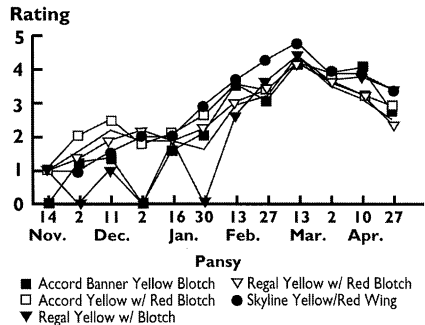
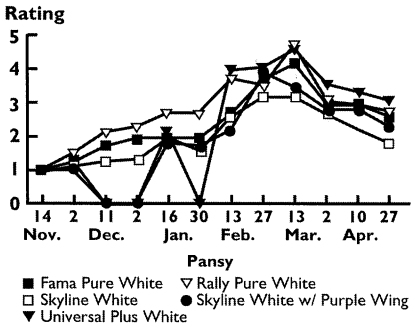
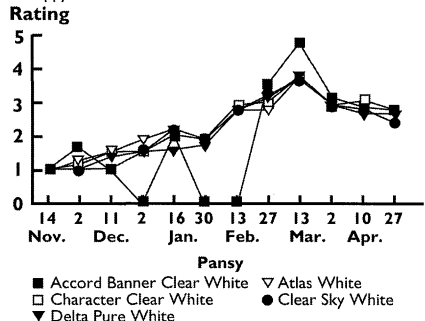
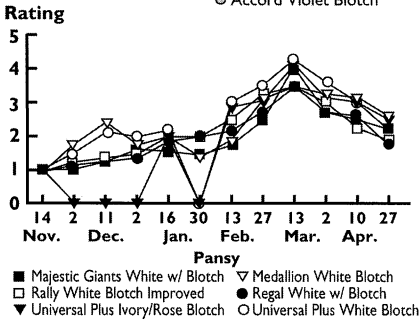
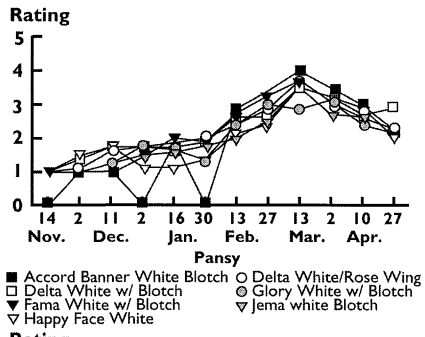
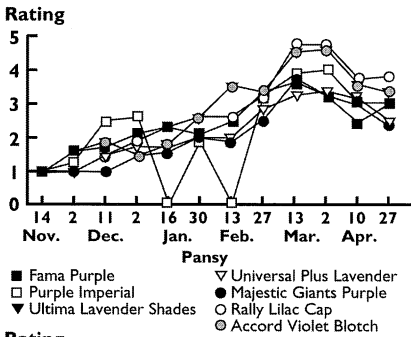
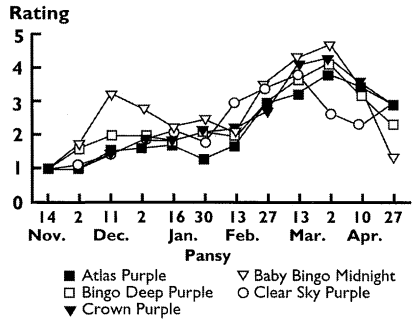
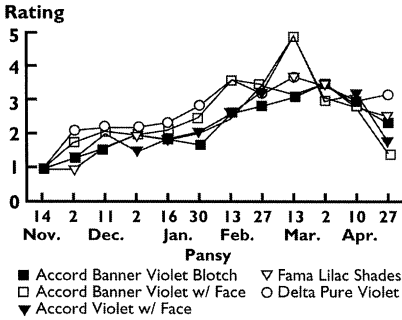
- Pansy**
- Fama Primrose
 - Glory Rose w/ Blotch
 - ▼ Skyline Pink Shades
 - ▽ Frosty Cherry Imperial
 - Happy Face Rose

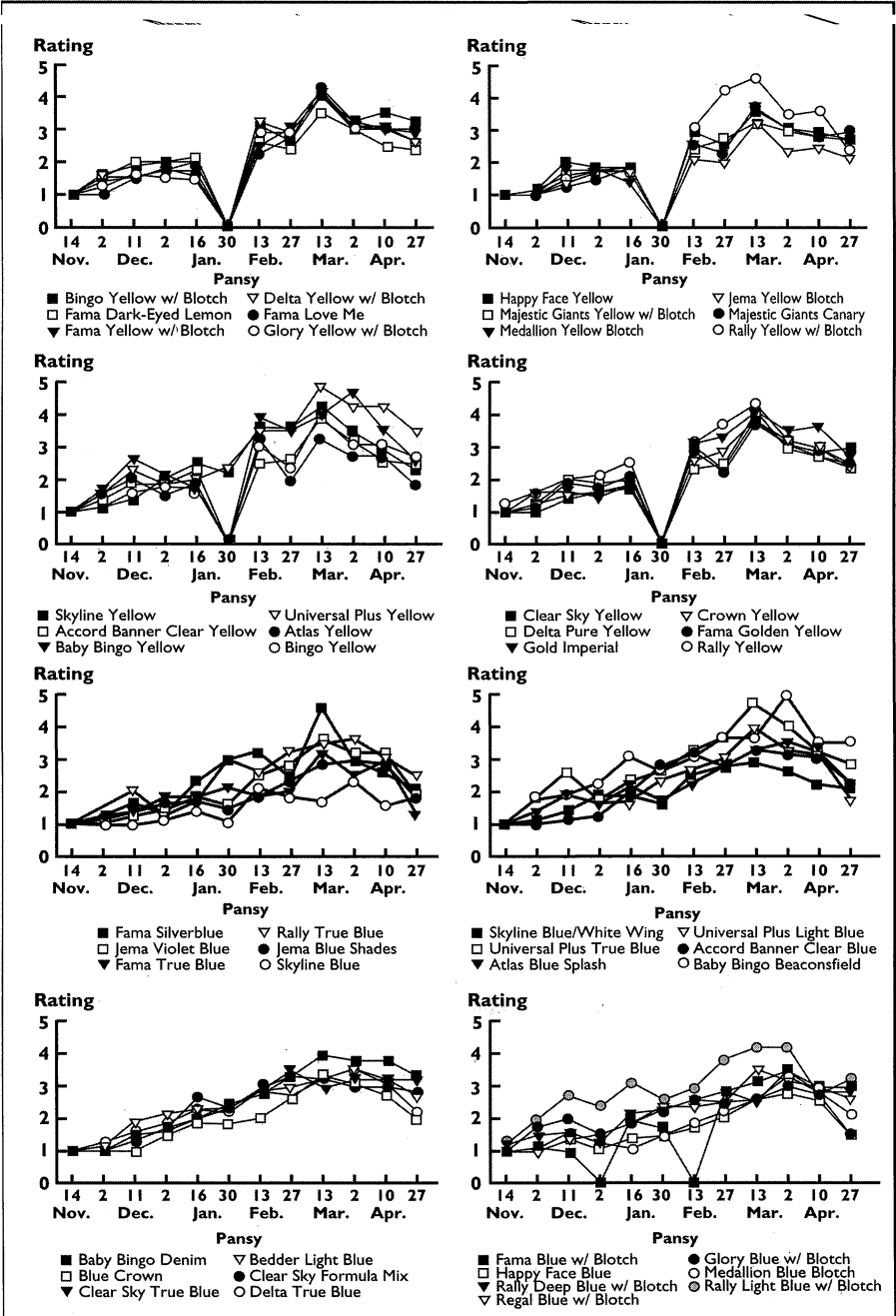


- Pansy**
- Universal Plus Rose
 - Accord Banner Clear Primrose
 - Accord Banner Clear Rose
 - ▽ Accord Primrose
 - Universal Plus Rose Blotch

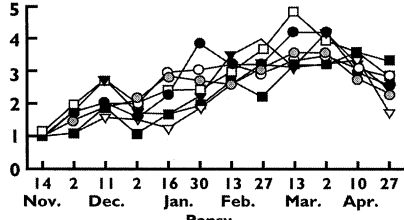


- Pansy**
- Delta Violet w/ Face
 - Happy Face Purple
 - ▼ Universal Plus Violet Blotch
 - ▽ Fama See Me
 - Medallion Purple Blotch



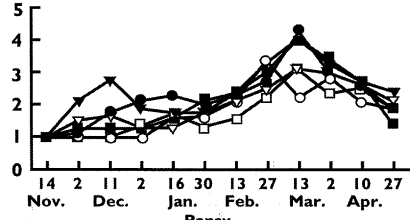


Rating



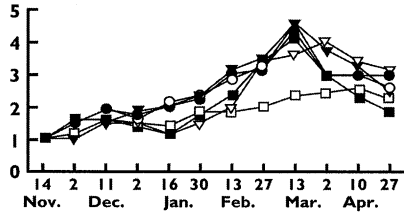
- Regal Deep Blue w/ Blotch ● Universal Plus Blue Blotch
- Accord Banner Blue Blotch ○ Bingo Blue w/ Blotch
- ▼ Delta Blue w/ Blotch ○ Delta Light Blue w/ Blotch
- ▽ Fama Blue Angel

Rating



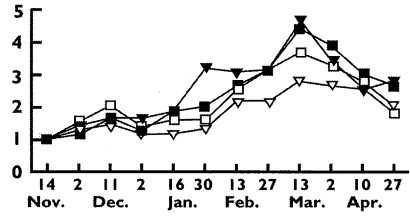
- Clear Sky Red ▼ Roc Carmine Red
- Jema Red Shades ● Fama Red
- ▼ Delta Pure Red ○ Skyline Red

Rating



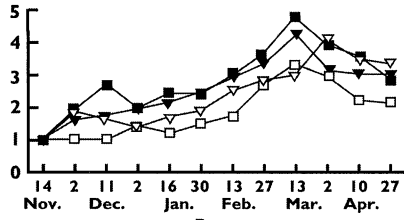
- Universal Plus Red ▼ Universal Plus Red Wing
- Jema Rose Shades ● Accord Banner Clear Red
- ▼ Accord Banner Red Wing ○ Accord Clear Red

Rating



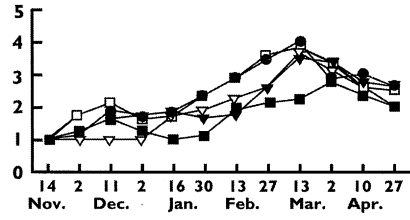
- Bingo Red and Yellow ▼ Happy Face Red
- Delta Carmine w/ Blotch ● Majestic Giants Scarlet Shades

Rating



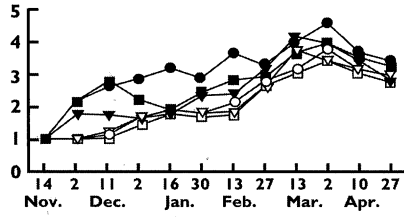
- Bingo Red w/ Blotch ▼ Accord Banner Red Blotch
- Delta Red w/ Blotch ▼ Universal Plus Beaconsfield

Rating



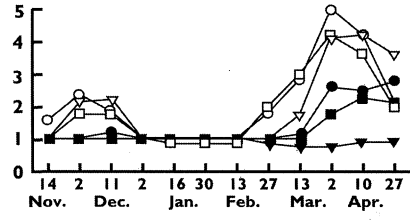
- Medallion Red Blotch ▼ Regal Scarlett w/ Blotch
- Universal Plus Red Blotch ● Bingo Light Rose w/ Blotch
- ▼ Medallion Rose Blotch

Rating

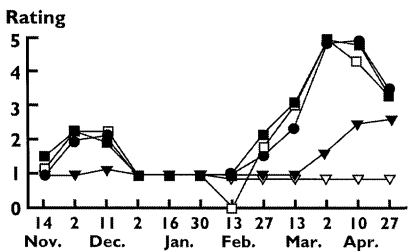


- Glory Beaconsfield ▼ Jema Red & Yellow
- Majestic Giants Red & Yellow ● Purple and White Wind
- ▼ Red and Yellow Wink ○ Regal Red & Yellow w/ Blotch

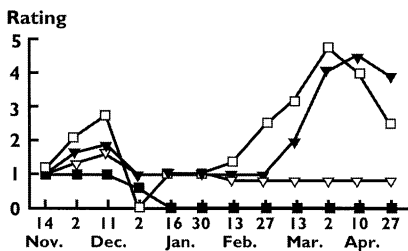
Rating



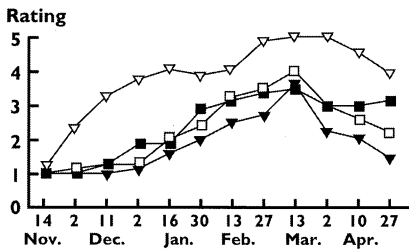
- Raspberry Parfait ▼ Princess Crimson Eye
- Floral Lace Crimson ● Strawberry Parfait
- ▼ Monarch Scarlett ○ 2184 Red Bicolor



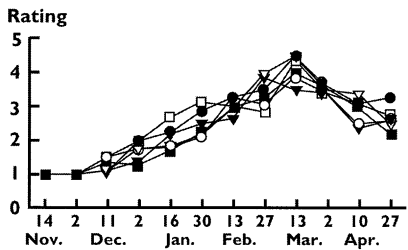
Dianthus
 ■ Floral Lace Picotee ▼ Monarch white
 □ Award Rose ● 2018 Crimson Floral Lace
 ▼ Magic Charms



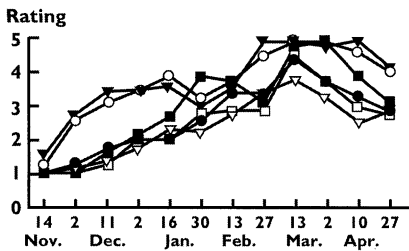
Dianthus
 ■ Monarch Orange ▼ Princess Pink
 □ Floral Lace Rose Bicolor ▼ Princess Salmon



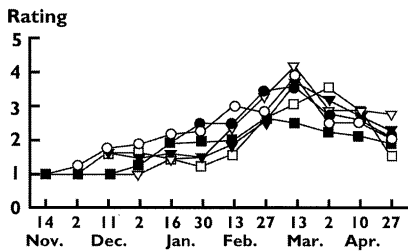
Viola
 ■ Arctic Sky ▼ Fanfare Blue Beacon
 □ Fanfare Blue Centre ▼ Penny Azure Wing



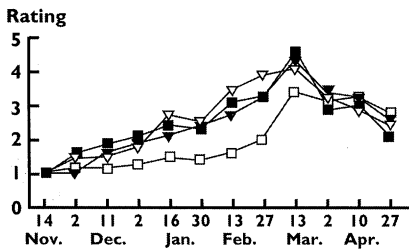
Viola
 ■ Springtime Blue Blotch ▼ Springtime Azure Blue
 □ Springtime Clear Blue ● Springtime Deep Blue
 ▼ Springtime Mid Blue ○ Springtime Porcelain Blue



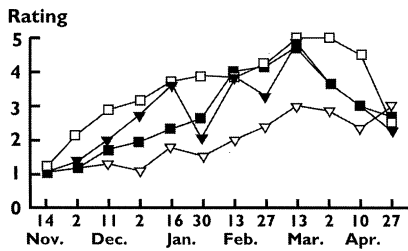
Viola
 ■ Springtime Violet ▼ Fanfare Red Blotch
 □ Springtime Red ● Springtime Rose Blotch
 ▼ Penny Violet Beacon ○ Penny Violet Flare



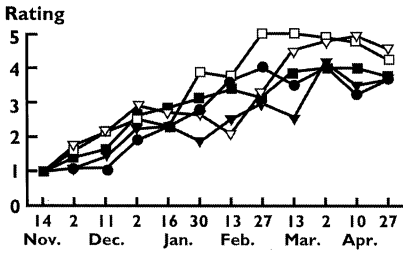
Viola
 ■ Fanfare Primrose Shades ▼ Sunbeam
 □ Springtime Lemon Splash ● Fanfare Yellow Blotch
 ▼ Springtime Yellow Blotch ○ Springtime Pure Yellow



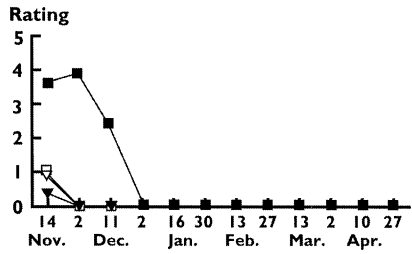
Viola
 ■ Springtime Yellow Marble ▼ Springtime Mixture
 □ Chalon Mix ▼ Fanfare Mixture



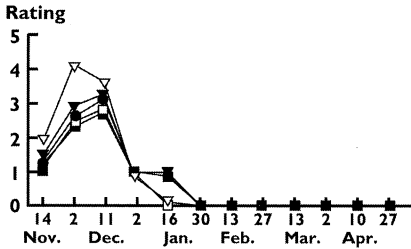
Viola
 ■ Springtime Pure White ▼ Fanfare White Blotch
 □ Penny Primrose ▼ Springtime White Blotch



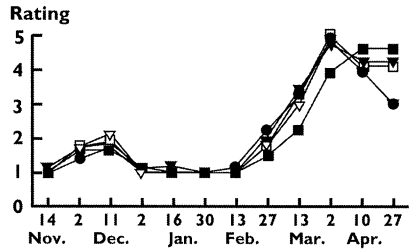
Viola
 ■ Alpine Summer ▼ Felix
 □ Blackjack ● Alpine Wing
 ▼ Alpine Sun



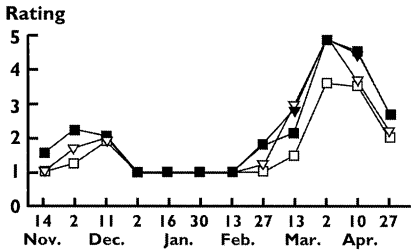
Alyssum/Cinoraria
 ■ Alyssum Cheers White ▼ Cinoraria Miranda White
 □ Cinoraria Miranda Salmon Rose ▼ Cinoraria Miranda Rose



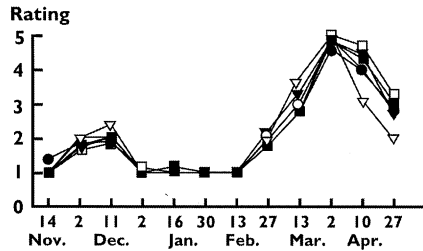
Alyssum/Cinoraria
 ■ Fantasia Blue ▼ Fantasia Speckled Pink
 □ Fantasia Magenta Rose ● Fantasia White
 ▼ Fantasia Yellow



Dianthus
 ■ Princess Mix ▼ Floral Lace Mix
 □ Duke Mix ● Award Mix
 ▼ Duchess Mix



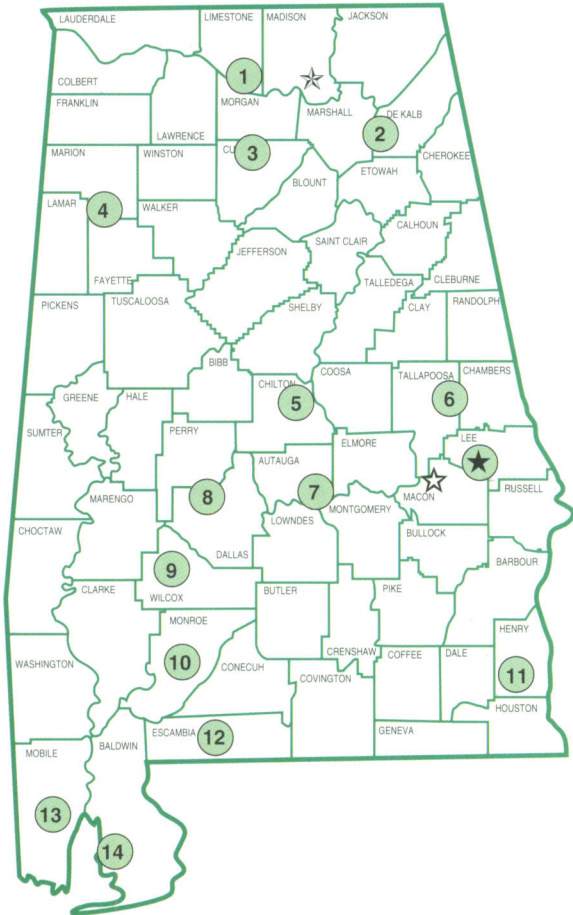
Dianthus
 ■ 2249 Bicolor Mix ▼ 2185 Purple Bicolor
 □ 2190 Bicolor Mix ▼ 2196 Lavender Bicolor



Dianthus
 ■ Floral Lace Violet ▼ 2161 Lavender Fringe
 □ Princess Purple ● Ideal Violet
 ▼ Floral Lace Violet Picotee ○ Floral Lace Purple

Alabama's Agricultural Experiment Station 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.
- ☆ Alabama A&M University
- ☆ E. V. Smith Research Center, Shorter.

1. Tennessee Valley Research and Extension Center, Belle Mina.
2. Sand Mountain Research and Extension Center, Crossville.
3. North Alabama Horticulture Station, Cullman.
4. Upper Coastal Plain Research Station, Winfield.
5. Chilton Area Horticulture Station, Clanton.
6. Piedmont Research Station, Camp Hill.
7. Prattville Experiment Field, Prattville.
8. Black Belt Research and Extension Center, Marion Junction.
9. Lower Coastal Plain Research Station, Camden.
10. Monroeville Experiment Field, Monroeville.
11. Wiregrass Research and Extension Center, Headland.
12. Brewton Experiment Field, Brewton.
13. Ornamental Horticulture Station, Spring Hill.
14. Gulf Coast Research and Extension Center, Fairhope.