

North Carolina Flower Growers' Bulletin

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FIFTY POINSETTIA CULTIVARS IN 1994. WE CAN'T WAIT FOR '95

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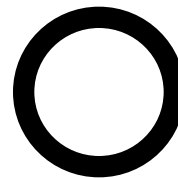
In 1994 we obtained 50 cultivars and selections from poinsettia breeders in the United States, though not all of the cultivars got their start on this side of the Atlantic Ocean. France, Germany, and Norway also were represented. This year we hope to have even greater participation and selection. On November 30, 1994 we had 82 attendees at our Poinsettia Open House. Our open house in 1995 will be on November 29, and we hope we get even more visitors then.

It surely would be nice if one could predict with certainty just what a poinsettia season will be like weather-wise but one only gets that knowledge after the crop is done. We wish every poinsettia season would be as easy for us as we had it in 1994. We could tell by the weather

(Continued on Page 2)

DO YOU SEE RED?

A red "X" in the circle below indicates that our records show you have not as yet paid your Association dues for 1995. By the same token, if no red "X" is shown, you are a bona fide NCCFGA member in good standing.



Our apologies if you have already forwarded your check for dues, but it did not reach us in time to bring our records up to date prior to publishing this issue of the Bulletin. **IF YOU ARE DELINQUENT IN PAYING YOUR DUES, THIS IS THE LAST ISSUE OF THE BULLETIN YOU WILL RECEIVE UNTIL MEMBERSHIP RENEWAL.** Furthermore, your name will be removed in the very near future from our active membership list. . . . and all of the benefits and advantages of membership will be lost to you.

Won't you please fill out the enclosed membership form and mail it in along with your dues check? Mail to:

NCCFGA
P.O. Box 52276
Raleigh, NC 27612

conditions in September and October that we should be off to a good start but that still left us with November and half of December as possible barriers to a successful crop. Mild night temperatures in late September and early October gave us a strong reason to believe that flower initiation would occur quite quickly and excessive height should not be a problem. Therefore we decided early in the season that we would not use growth regulators on the plants we pinched September 15, and we would be able to compare the natural growth habits of the many cultivars.

As state employees we decline to endorse a particular chemical or company but Marathon™ brought us welcome relief from whiteflies. We really don't know how much injury we inflict upon poinsettias when we or other growers have to spray pesticides a couple of times each week, and yet not always get the control we desire. Some growers have expressed disappointment in the whitefly control they didn't achieve with Marathon in 1994 but our results were positive. We applied Marathon on September 26, at 1.3 grams per 6 1/2" pot and we had excellent control until mid-November, when we used PlantFume 103™ to clean up a slight infestation. (The

greenhouse is screened to exclude insects, we only had clean plants in the house, so their arrival in mid-November is hard for us to explain. Perhaps Jim Baker can respond to the mystery, or we might begin to believe in the much abused theory of spontaneous generation).

We try very hard to make our cultural practices very simple. Our fertilization program does not require a sophisticated knowledge of soil or plant chemistry (Table 1). We never sprayed with a calcium fertilizer to prevent bract edge burn, and we did not detect any bract edge burn on any of the cultivars. We probably were more luck than skilled but our potting substrate never dries out completely, and we do have good air movement in the double-layered film plastic greenhouse. We also use quite generous amounts of calcium in our fertilization program, both on the stock and finishing plants. In no way are we smug about our lack of bract edge burn in 1994. We realize that a different set of circumstances in 1995 could affect us badly but things we can control, such as water, calcium, other fertilizers and media, we do control. We don't have the day temperature control to the precision we would like to have it, particularly on a very bright day, but we seem to do satisfactorily.

We already mentioned that we did not use any growth regulators in 1994 because we anticipated early flower initiation. Heights listed in Table 2 reveal that some of the plants could have been a little taller, making them a bit more acceptable, but almost all of our plants were in balance with the pot size, and they would have been commercially acceptable. One other reason for the plant height we obtained is that we put the plants at a 14" × 14"

Table 1. Poinsettia fertilization program followed in 1994.

Date	Fertilizer	Rate/100 gals
September 12	Calcium nitrate, potassium nitrate	33 and 18 oz.
September 13	Osmocote 14-14-14 topdressing	1 tsp./pot
September 16	Calcium nitrate, potassium nitrate	
September 23	20-10-20	32 oz.
September 30	Calcium nitrate, potassium nitrate	
October 7	Calcium nitrate, potassium nitrate	
October 11	Magnesium sulfate (Epsom salts)	32 oz.
October 14	20-10-20	
October 21	Calcium nitrate, potassium nitrate Ammonium molybdate	2.5 oz.
October 28	Calcium nitrate, potassium nitrate	
November 4	20-10-20	
November 11	Calcium nitrate, potassium nitrate	
November 18	Calcium nitrate, potassium nitrate	

Table 2. Growth and flowering characteristics of 45 cultivars in 1994 NCSU trials.

Cultivar	11/22 no. of shoots	11/7 shoot length	11/21 shoot length	11/21 bract height	Date of visible color	Date of visible cyathia	Date of anthesis
Amelita	6.5	5.5 ^a	7.0 ^a	10.0 ^b	10/24	10/30	11/23 ^c
Angelika	7.5	7.5	9.0	12.0	10/25	10/30	11/22
Angelika Marble	8.0	6.0	8.0	12.0	10/31	10/31	11/23
Angelika Pink	8.0	8.0	8.5	12.0	10/29	10/28	11/20
Angelika White	8.0	6.0	7.0	10.5	10/30	10/27	11/20
Annette Hegg Dark Red	6.0	7.5	8.5	10.5	10/22	10/23	11/14
Annette Hegg Hot Pink	6.5	6.5	6.5	10.5	10/31	10/22	11/13
Annette Hegg Top White	7.0	6.5	7.0	10.0	10/31	10/23	11/20
Bonita	8.5	5.5	6.5	9.5	10/11	10/27	11/22
Celebrate	3.0	5.5	6.5	10.0	10/18	10/23	11/14
Celebrate Pink	4.5	5.5	6.5	9.0	10/26	10/26	11/16
Celebrate 2	6.5	5.0	5.5	9.0	10/22	10/27	11/22
Celebrate 2 Pink	7.0	5.0	5.5	8.5	10/24	10/27	11/17
Celebrate 2 White	8.0	5.5	6.5	10.0	10/31	10/30	11/19
Cortez	9.0	4.5	5.0	8.0	10/24	11/5	11/30
Dark Puebla	8.5	5.5	6.0	10.5	10/16	10/24	11/18
Flirt	9.0	5.5	7.0	10.0	10/30	10/30	11/21
Freedom	6.0	4.5	5.5	9.5	10/19	10/24	11/18
Freedom Jingle Bells	7.0	5.0	6.0	9.5	10/21	10/23	11/11
Freedom Marble	6.5	4.5	5.5	8.0	10/28	10/27	11/17
Freedom Pink	8.0	5.5	6.5	10.0	10/24	10/23	11/12
Freedom White	6.0	5.0	6.0	9.0	10/28	10/24	11/19
Jingle Bells 3	6.0	5.0	6.0	9.0	10/14	11/1	11/22
Jolly Red	6.5	5.5	7.0	10.0	10/27	11/6	12/5
Lemon Drop	4.5	4.0	5.0	8.0	10/21	10/28	11/29
Lilo	8.0	8.0	10.0	13.5	10/30	10/23	11/19
Lilo Marble	7.0	6.5	7.5	11.5	11/5	10/23	11/16
Lilo Pink	7.5	6.5	8.0	11.5	11/5	10/22	11/15
Lilo White	8.0	8.0	8.5	12.0	11/6	10/23	11/16
Maren	8.5	5.0	5.5	9.5	10/27	10/31	11/23
Monet	5.5	5.0	5.5	8.5	10/28	10/31	11/22
Nobelstar	9.0	5.0	5.5	9.0	10/26	11/2	11/26
Picacho	8.5	4.0	4.5	7.5	10/20	10/24	11/19

^aShoot length measured from main axis of stem to tip of shoots.

^bHeight measured from pot rim to uppermost portion of canopy.

^cAnthesis was the date when pollen was evident.

Table 2, Continued.

Cultivar	11/22 no. of shoots	11/7 shoot length	11/21 shoot length	11/21 bract height	Date of visible color	Date of visible cyathia	Date of anthesis
Pink Peppermint	6.0	5.5 ^a	6.0 ^a	9.0 ^b	10/27	10/27	11/20 ^c
Puebla	9.0	6.0	7.5	11.0	11/10	11/7	12/5
Red Delight	6.5	5.0	6.0	10.0	10/7	10/18	11/13
Red Elegance	6.5	8.5	12.5	15.5	10/30	10/24	11/25
Red Sails	8.5	6.5	7.0	11.0	10/23	10/26	11/22
Sonora	8.5	5.0	6.0	9.0	10/20	10/27	11/22
Success	7.0	5.5	7.0	10.5	10/21	10/30	11/25
Supjibi	6.0	5.5	6.5	9.0	10/26	10/27	11/22
Supjibi Pink	7.0	7.0	7.0	10.0	10/26	10/28	11/19
V-14 Glory	5.0	5.5	7.5	10.0	10/27	11/7	11/27
V-14 Hot Pink	6.0	5.0	6.0	9.5	10/26	10/31	11/23
V-14 White	6.0	6.0	7.0	10.0	10/30	11/3	11/22

^aShoot length measured from main axis of stem to tip of shoots.

^bHeight measured from pot rim to uppermost portion of canopy.

^cAnthesis was the date when pollen was evident.

spacing the day the rooted cuttings are transplanted. They never get crowded because our intention to space them next week never gets sidetracked, as 14" x 14" is our first and final spacing. (At the second International Poinsettia

Conference, sponsored by the Poinsettia Growers' Association and held in San Diego January 11–15, some growers advocated the crowding of 'Freedom' plants right after pinching, to get the lateral shoots to extend upward so they wouldn't break so readily later. A disadvantage with such a practice is that too often the crowding continues too long, as some more pressing items occur, and plants don't get moved when they should).

We used Fafard 4P™ in our 1994 evaluation. The substrate was donated by Carroll's Greenhouses in Raleigh. We never encountered any nutrient disorders, root rot or any other difficulties.

Plant heights were measured and recorded periodically. Flowering data, such as the average dates of visible flower buds (cyathia), bract color and appearance of pollen (anthesis) also were calculated. Those data and other information are shown in Table 2.



Figure 1. An overview of the 1994 NCSU poinsettia trials.

Earlier we mentioned that we wish every poinsettia season was as easy for us as we had it in 1994. We do keep careful watch over our crop, we try to provide good environmental and pest control in the greenhouse, but somethings such as outside temperatures and sunshine are beyond our control. We felt weather was our ally in 1994 and we obtained weather records to see if we were right. We also obtained weather records for Asheville, Charlotte, Greensboro and Winston Salem, and Wilmington. Average minimum and maximum temperatures and percent possible sunshine for those locations are given in Table 3.

Space does not permit all data to be presented but a closer look at the Raleigh data indicates that from September 15 to October 15, the average minimum temperature was 65 or higher only on September 17 (66 °F), September 25 (65 °F) and 26th (66 °F). Other locations had similar weather.

Our plants in 1994 were compact without the use of growth regulators, most of the cultivars had an abundance of lateral shoots, and only 'Puebla' would not have been salable on November 30 when we had our open house. Representative plants of many cultivars were photographed on December 15, and a few are shown on the next page.

We did not conduct any post-greenhouse evaluations as we do not have ideal sites for such

Table 3. Average temperatures and percent possible sunshine from September 1 to December 31 at five weather stations in North Carolina, in 1994.

Location	Month	Temperatures (°F)		Percent of possible sunshine
		min.	max.	
Asheville	September	54	75	66
	October	45	66	a
	November	39	62	a
	December	35	52	a
Charlotte	September	62	80	51
	October	52	71	a
	November	46	66	51
	December	40	56	33
Greensboro/ Winston-Salem	September	57	78	66
	October	47	69	50
	November	40	63	45
	December	36	54	41
Raleigh	September	59	79	61
	October	48	71	52
	November	42	66	55
	December	38	58	40
Wilmington	September	63	81	67
	October	54	75	53
	November	49	71	a
	December	45	62	a

a = data not provided. Weather stations are at airports at all five sites.

studies, but we are aware of the extreme importance of that phase. Often the greenhouse “ages” plants more than the home interior would, because of the high day temperatures in a greenhouse. Most of the plants that remained in the greenhouse until late December still were acceptable when they were discarded.



Figure 2. 'Maren' is a promising salmon / pink from Fischer.



Figure 3. 'White Freedom' is a new member of Ecke's Freedom family.

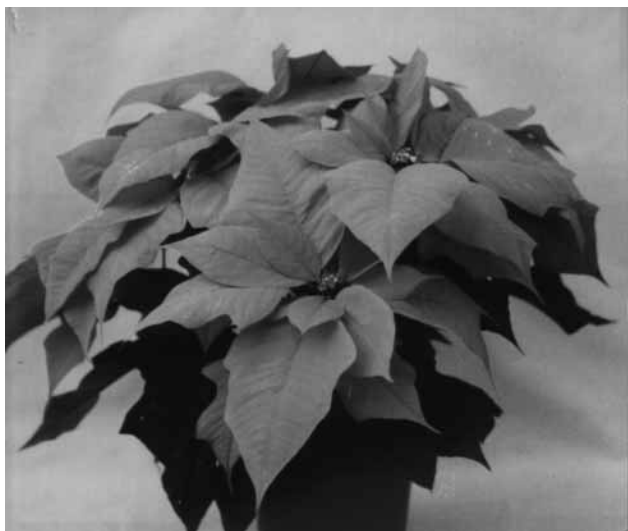


Figure 4. 'Success' is a new vigorous red from Ecke.



Figure 5. 'Picacho' is an early pure red from Fischer.



Figure 6. 'Puebla' is a vibrant marble from Fischer.



Figure 7. 'Nobelstar' is a coral / pink from Fischer.

1994 SUMMER BEDDING PLANT TRIAL SUMMARY

Douglas A. Bailey, Dept. of Horticultural Science, NCSU

(The following is a summary of the 1994 summer bedding plant trials. Interested readers can receive a copy of the full report, complete with species summaries, series comparison tables, weekly cultivar ratings, and final plant size and diameter. To receive a copy of the 1994 report, call me at [919] 515-1195 or FAX me at [919] 515-7747 and request "Horticultural Research Series Number 114.")

Over 450 entries of annual and perennial plants were evaluated during the 1994 bedding plant season at test gardens in Raleigh, North Carolina. The trial gardens were used to evaluate bedding plants for landscaper and home owner use.

The trial gardens are located at the Horticulture Field Lab, 4301 Beryl Road, in Raleigh. The site is located on latitude 35°47'N, longitude 78°42'W with an elevation of 400 feet. Transplants were grown in 2.5 inch x 2.2 inch containers, and most were planted in the trial garden on 11 May 1994. A few slower selections were planted when ready. Plant spacing in the trials was 18 inches x 24 inches (in-row x between-row

spacing). Seven plants of each entry were used to evaluate the performance of the cultivars with the exception of All America Selections judged entries, which had 14 plants each.

All plants were grown in full sun except for begonias, browallia, hypoestes, and impatiens;

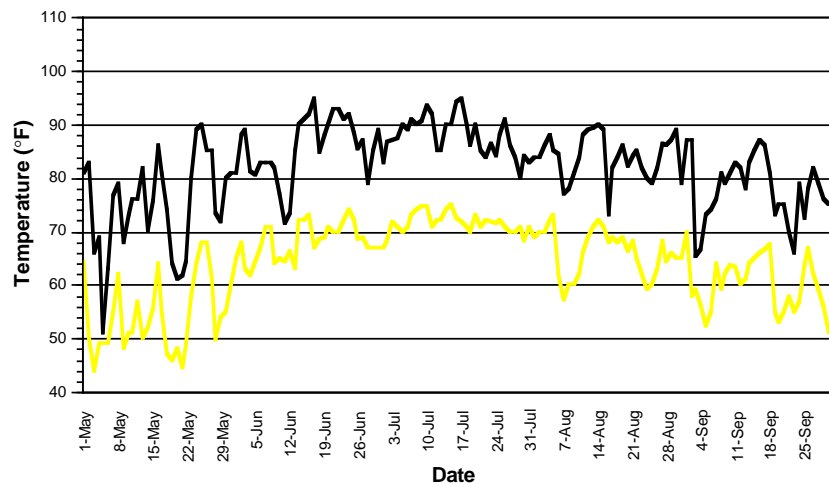


Figure 1. Daily minimum and maximum temperatures for Raleigh, North Carolina from May 1 through September 30, 1994.

Table 1. Temperature and rainfall from May to September 1994 and 30-year temperature and rainfall averages for Raleigh, N.C.

Month	1994 average daily temp. (°F) and % change from 30-year avg	30-year average daily temp. (°F)	1994 monthly rainfall (inches) and % change from 30-year avg	30-year average monthly rainfall (inches)
May	64.4 (-5%)	68.1	3.52 (-17%)	4.22
June	76.9 (+3%)	74.9	5.13 (+38%)	3.73
July	79.7 (+1%)	78.8	4.39 (-9%)	4.84
August	75.1 (-4%)	78.0	5.13 (+13%)	4.52
September	69.0 (-4%)	72.1	2.33 (-39%)	3.85

these were grown under 55% shade. When needed, water was applied using overhead irrigation.

Temperatures in May were below average; were above average in June; slightly above average in July; and below average in August and September (Table 1, Figure 1). Looking at the entire 5-month season, temperatures were moderate and averaged about 2% below normal (73 °F average daily temperature). Rainfall received during the 5-month period (20.5 inches) was only 3% below normal;

much closer to average for our area than last year's dry summer.

Plants were given a visual rating by the same individual once a week beginning 1 June 1994, three weeks after planting through 18 weeks after planting; the final evaluation date was 28 September 1994. The rating was based on plant performance and appearance, including floriferousness, plant size and shape, and freedom from insect and disease problems.

Weekly ratings were averaged to provide an overall rating for the entire season. We used the seasonal average ratings to select the N.C. State Leaders of the Pack and the NCSU Exceptional Performance Winners.

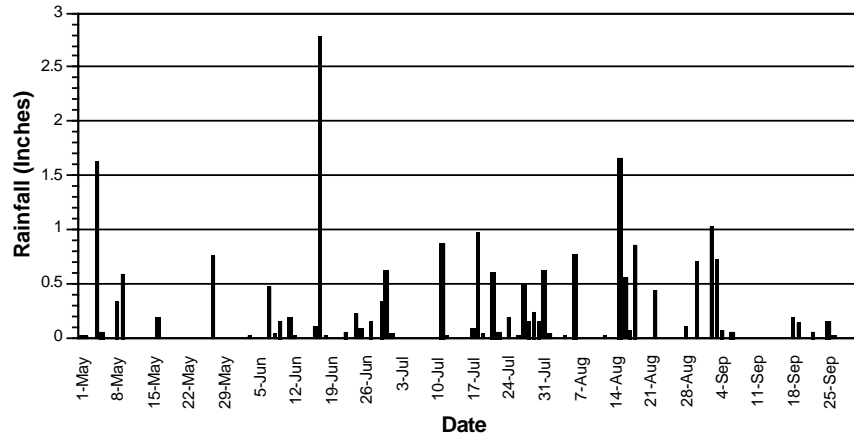


Figure 2. Rainfall received from May 1 through September 30, 1994.

The following were selected in 1994 on their ability to display attractive landscape color throughout the majority of the season. At any one time, other entries may have made a better short-term showing, but the "Leaders of the Pack" were selected for dependable full-season performance as a source of color in the landscape.

NCSU Leaders of the Pack

Alyssum

'Wonderland White' (BG)

Begonia

Bicolor: 'Ambassador Bicolor' (DHN)

Mix: 'Partyfun' (BEN), 'Espresso Mix' (DHN)

Pink: 'All Round Greenleaved Pink' (DHN), 'Ambassador Pink' (DHN)

Red: 'Red Vision' (BEN), 'All Round Greenleaved Red' (DHN)

Rose: 'All Round Darkleaved Rose' (DHN), 'All Round Greenleaved Dark Rose' (DHN), 'Bright Rose Vision' (BEN)

Salmon: 'Salmon Vision' (BEN)

Scarlet: 'Partyboy' (BEN)

White: 'Partydress' (BEN), 'Partylove' (BEN), 'All Round Greenleaved White' (DHN), 'White Vision' (BEN)

Brazilian Coleus

Plectranthus argentea (NCSF)

Dianthus

'Color Magician' (FLS), 'Princess Crimson' (GOLD)

Evolvulus

'Blue Daze' (HN)

Gaillardia

'Red Plume' (AAS)

Gazania

'Talent Mix' (BEN)

Geraniums

Bicolor: 'Signal Bicolor Red' (CSP)

Pink: 'Hot Pink Orbit' (GOLD)

Red/Scarlet: 'Scarlet Orbit' (GOLD)

Rose: 'Pinto Rose' (S&G), 'Pinto Deep Rose' (S&G)

Salmon: 'Glamour Light Salmon' (BALL), 'Cameo' (BALL), 'Pinto Salmon Orange' (S&G)

White: 'Pinto White' (S&G), 'Ringo 2000 White' (S&G)

Globe Amaranth

Lavender: 'Woodcreek Lilac' (ESC)

Purple: 'Woodcreek Purple' (ESC)

Red: 'Rainbow Red' (VN), 'Strawberry Fields' (PK)

White: 'Woodcreek White' (ESC)

Hypoestes

White: 'White Splash' (PK)

Pink: 'Pink Splash' (PK)

Rose: 'Confetti Carmine Rose' (DHN)

Impatiens

Bicolor: 'Dazzler Bright Eye' (BALL)

Blue/Violet: 'Accent Lavender Blue' (GOLD), 'Blitz 2000 Violet' (S&G)

Mix: 'Impact Mix' (SAK)

Orange: 'Accent Orange' (GOLD)

Pink: 'Blitz 2000 Pink' (S&G)

Impatiens, continued

Red: 'Tempo Red' (BG), 'Impulse Red' (S&G), 'Tempo Burgundy' (BG), 'Accent Scarlet' (GOLD), 'Accent Red' (GOLD)

Salmon: 'Blitz 2000 Salmon' (S&G)

White: 'Impulse White' (S&G)

Marigold

Gold/Red: 'Striped Marvel' (AAS)

Orange: 'Hero Orange' (BG)

Yellow: 'Aurora Light Yellow' (GOLD)

Melampodium

'Medaillon' (VA), 'Showstar' (ESC)

Mexican Heather

Mexican Heather (HN)

Narrow-Leaf Zinnia

'White' (PK), 'Classic' (PK), '92BP14' (AAS)

Petunia

Blue: 'Falcon Lilac' (AAS), '94BP11' (AAS), 'Plum Crazy Madness' (BALL)

Pink: 'PrimeTime Pink' (GOLD), 'Pink Pearls' (AAS)

Red: 'Horizon Ruby' (CSP)

Rose: 'PrimeTime Rose' (GOLD), 'Rose Improved Madness' (BALL), 'Merlin Rose' (SAK)

Petunia, continued

Salmon: 'Merlin Salmon' (SAK)

Portulaca

Sunnyside Pink' (CSP)

Salvia

Blue: 'Sizzler Lavender' (CSP), 'Rhea' (CSP)

Mix: 'Sizzler Mix' (CSP)

Pink: 'Top Pink' (AAS)

Purple: 'Sizzler Burgundy' (CSP), 'Sizzler Purple' (CSP)

Red: 'Cover Girl' (BEN), 'Lady in Red' (FLS), 'Sizzler Red' (CSP)

White: 'Argent' (CSP)

Spur Flower

Plectranthus coleoides (NCSF)

Verbena

'Imagination' (FLS), 'Peaches and Cream' (FLS), 'Novalis White' (BEN)

Vinca

'Pretty In Rose' (AAS), 'Orchid Cooler' (AAS), 'Tropicana Rose' (AAS), 'Cooler Pink' (VN), '94BP17' (AAS)

Each year, the best of the best, those cultivars that exemplify outstanding performance during the trials, will be recognized as Exceptional Performance award winners. The winners are judged on full-season performance and are recommended as outstanding selections for our region. Growers, retailers and landscapers are encouraged to consider these cultivars first for their color needs. Only six cultivars were selected from over 450 entries in the 1994 trial garden:

1994 Exceptional Performance Winners

- | | |
|--|---|
| 1. <i>Salvia</i> , 'Cover Girl' (BEN) | 4. <i>Hypoestes</i> , 'Pink Splash' (PK) |
| 2. <i>Vinca</i> , 'Pretty In Rose' (AAS) | 5. <i>Salvia</i> , 'Sizzler Lavender' (CSP) |
| 3. <i>Salvia</i> , 'Lady In Red' (FLS) | 6. <i>Salvia</i> , 'Rhea' (CSP) |

Sources of Seeds and Plants

The following companies graciously sponsored the 1994 trial gardens. The companies are acknowledged in the ratings table by the abbreviation that appears to the left of the company name:

- **AAS** All America Selections, 1311 Butterfield Road, Suite 310, Downers Grove, IL 60515
- **BALL** Ball Seed Co., P.O. Box 335, West Chicago, IL 60185
- **BEN** Ernst Benary Seed Growers Ltd., Postfach 1127, D-3510 Hann, Münden, West Germany
- **BG** Bodger Seeds Ltd., 1800 North Tyler Avenue, Lompoc, CA 91733-3618
- **BUR** W. Atlee Burpee Co., 300 Park Avenue, Warminster, PA 18974
- **CSP** Clause Semences Professionnelles, 100 Breen Road, San Juan Bautista, CA 95045
- **DHN** Dæhnfeldt Inc., P.O. Box 947, Albany, OR 97321
- **ESC** Express Seed Company, 300 Artino Drive, Oberlin, Ohio 44074
- **FLS** Fleuroselect, Parallel Boulevard 214D, 2202 HT Noordwijk, The Netherlands
- **GLC** Fred C. Gloeckner & Co., 600 Mamaroneck Avenue, Harrison, NY 10528
- **GOLD** Goldsmith Seeds, Inc., P.O. Box 1349, Gilroy, CA 95020
- **GRS** G.S. Grimes Seeds, P.O. Box 640, Concord, OH 44077-0640
- **HN** Homewood Nursery, 10809 Honeycutt Rd., Raleigh, NC 27614
- **NCSF** North Carolina State Fairgrounds, 1025 Blue Ridge Road, Raleigh, NC 27607
- **PK** Park Seed Wholesale, Cokesbury Road, Greenwood, SC 29647
- **SAK** Sakata Seed America Inc., 2048 Cherry Run Ct. N.W., Grand Rapids, MI 49504
- **S&G** S&G Seeds, 3010 Woodcreek Drive, Suite B, Downers Grove, IL 60515
- **VN** Vaughan's Seed Co., 5300 Katrine Avenue, Downers Grove, IL 60515

COMPUTER PROGRAM FOR SIZING INSECT EXCLUSION SCREENS FOR GREENHOUSES

Edwin A. Shearin and James R. Baker
Department of Entomology, NCSU

A computer program for calculating the optimal area for screening a greenhouse has been developed by Mr. Shearin for use in IBM™ and compatible personal computers. Besides a computer and a diskette with the screening program, a manometer is required to measure the static pressure drop in the greenhouse with the fans running and the doors closed. The Dwyer™ Mark II, Model 25 manometer is modestly priced and is reasonably accurate for this application (Dwyer Instruments, Inc., P. O. Box 373, Michigan City, IN 46360). If a manometer is used for determining static pressure drop, the flexible tubes must be free of any drops of liquid, the tubes cannot be kinked, the tube-to-manometer connections must be tight, and the manometer must be level for accurate readings. Our program uses static pressure values measured in inches of water.

To use the program, turn on the computer, put in the screening diskette, make sure you select the diskette drive as the current drive (a: for example), and type in the word <screen> and then <enter> or <return>. This turns on the Screening program. You will be asked to enter the static pressure drop of the greenhouse measured with all the doors closed and the fans running. Then you will be asked to enter information on the fans in that greenhouse. Next,

you will be asked to enter the size of the ventilation window or evaporative cooling pads. Then you will be asked to enter the size of the greenhouse floor. The program then presents you with a list of 21 screening fabrics and the multiplication factor for each material that will provide adequate ventilation (you multiply the factor times the area of the ventilation window).

This program gives warning messages if the static pressure drop without screening exceeds 0.08 inches and it gives warning messages if the predicted total volume of air exchange is below 11 cubic feet per minute per square foot of greenhouse area. These warnings alert the grower to the possibility of the greenhouse overheating in hot weather.

The resistance curves are based on data generated in the Ornamental Plant Insect Pest greenhouse wind tunnel that were reported on in the Bulletin in 1994. The program is written in QBasic™ and compiled using Microsoft™ QuickBasic™ version 4.5. The program will normally be supplied on a 3.5 inch 2HD (1.44 M) diskette. A 2DD(720K) diskette can be supplied on request. To obtain a copy of this program, please send a check for \$10.00 made out to the "North Carolina Agriculture Foundation" to James Baker, Entomology Extension, Box 7613, NCSU, Raleigh, NC 27695.

DATE CORRECTION IS NEEDED!

In the NCCFGA News article found in October 1994 issue of the N.C. Flower Growers' Bulletin, Roy Larson's retirement date was erroneously listed as August 1995. It is, in fact, August 1996. My apologies

to Roy for this mistake. Actually, Roy's comment to me was "do you know something I don't?" Sorry for the error.



POWDERY MILDEW ON CHRYSANTHEMUM

Ronald K. Jones, Extension Plant Pathologist, N.C. State University

In mid January 1995, outbreaks of powdery mildew on pot chrysanthemum were found in two North Carolina greenhouses. I have been an ornamental Plant Pathologist for 30 years, and this is the first time I have seen powdery mildew cause damage to chrysanthemums in commercial production.

Symptoms vary from 1/4 to 1/2 inch diameter white spots on leaves to leaves that are completely white on both the upper and lower surfaces. Growers report that the disease spreads and develops rapidly. Leaves of all ages and position on the plants can be infected. There does appear to be some difference in cultivar reaction to the fungus. Powdery mildew on chrysanthemum is caused by the fungus *Erysiphe cichoracearum*. Based on the literature, this same fungus causes powdery mildew on gerbera daisy. Many growers have been experiencing serious problems with powdery mildew on gerberas and report poor

control with several commonly used fungicides with activity against powdery mildew. Powdery mildew on greenhouse roses has also become more difficult to control, and many growers have gone back to the old practice of subliming sulfur in sulfur pots.

Control. A control program should begin with a regular monitoring program. If you are not sure whether the white leaf spots are powdery mildew or spray residue, check the spots with a hand lens or submit a plant to the Plant Disease and Insect Clinic at NCSU. The following fungicides are labeled for use on chrysanthemum in greenhouses and may have some activity on powdery mildew: triadimefon (Strike), thiophanate methyl (Cleary's 3336 or Domain) and sulfur. It is strongly suggested that you test sulfur on a few plants before treating your entire crop. Preventative sprays will be more effective than curative sprays.

COMING EVENTS

Event	Date	Time	Location and Contacts
Bedding Plant Production Update	Wednesday 8 February 1995	12:30-4:30	Human Resources Center, Morganton, N.C. Contact Reagan Ammons, Burke County Cooperative Extension Center at 704-439-4460 for more information.
Greenhouse and Nursery Update	23 February 1995		Randolph Cooperative Extension Center, Asheboro, N.C. Contact Garry Bradley at 1-800-666-3625 for more information.
Turf and Ornamentals Field Day	17 May 1995	9:00-5:00	Horticulture Field Laboratory, Raleigh, N.C. Contact Doug Bailey at 919-515-1195 for more information.
Southeast Greenhouse Conference and Trade Show	Thursday-Saturday 15-17 June		Haywood Holiday Inn and Palmetto Exposition Center, Greenville, S.C. Call Doug Bailey at 919-515-1195 for more information.

NCCFGA NEWS

Rob Lassiter, President

It's 1995. The year has started and Spring is already here. As your new president, I want to thank 1994's retiring board members and welcome our new ones. As a member of the NCCFGA for many years, it is with particular pride that I am to represent flower growers across the state. What a time to be in the greenhouse business! But its always been a good time, has it not?

Horticulture is changing very rapidly. New worker safety laws loom menacingly at our door. Some with merit, but many, typical of an ever increasing bureaucracy. The new laws lack practical problems. A new proposal, Plants for America, concerning mandated tax-generated revenue for advertising of our industry is making its way through the legislative process. With almost no debate it is gathering a life of its own. University level agricultural curriculum and research is being reinvented from top to bottom.

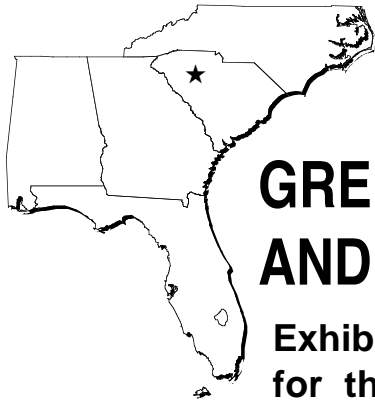
Change can be good. A vision of how that change will affect our industry seems judicial.

We will change in spite of ourselves. The most we can hope for is to be allowed to help chart our new course. We cannot direct the wind, but we can and must be allowed to set the sail.

We are part of an industry that brings people in touch with nature. We touch the human experience. That we are allowed to earn a living in so doing seems more than worthwhile.

The 1995 membership dues for NCCFGA are now due. Let this be the year you make a difference in our industry. Please feel free to call (919-746-2786) or FAX (919-746-8811) with your thoughts and concerns on how we can make our industry work better.

Robert E. Lassiter



SOUTHEAST

GREENHOUSE CONFERENCE AND TRADE SHOW

Exhibit booths are currently available for the 1995 Southeast Greenhouse Conference to be held June 15-17 in Greenville, S.C. Last year, there were over 700 growers, garden center operators, landscapers, and exhibitors at the show. This year promises to be bigger and better with Florida joining us! Contact Doug Bailey at (919) 515-1195 (FAX [919] 515-7747) for exhibitor registration information.

"Five States Strong and Growing!"



DO YOU WANT ANOTHER TAX?

Douglas A. Bailey

Dept. of Horticultural Science, NCSU

Hopefully everyone reading this article is already aware and well-informed about the proposed "promotion order," Plants for America. If not, I suggest you read up on it immediately. You can receive information on the program by calling Tax Free Growers for America at 904-735-0250, or by calling the Garden Council at 301-577-4073.

Certainly, there is nothing wrong with promoting the green industries in our country, but there are some serious problems with this particular plan, especially for floriculture. The proposed legislation would attempt to raise \$25 million to be used for advertising the green industries, including trees, shrubs, pot plants, bedding plants, foliage, and sod, to the end consumer. This money will come from a 5 to 9% tax on all production containers--pots, tray inserts, plug trays, hanging baskets--anything that plants are grown in.

There are many concerns with this program ranging from dislike of government intervention to disorganized advertising proposals. Probably the gravest concern I have with the proposed legislation is the inequity of taxation that floriculture will feel. The percent of the container cost vs. product selling price varies with products in the green industries, and some growers have no container costs at all. For example, sod isn't even sold in a container, the sod producers get all the promotion benefits without any taxation; the same holds true for nurseries selling bare root products. We on the other hand, usually use two or three containers within the production cycle of one product, such as annual hanging baskets and could receive triple taxation on such products! It is not my intent to point fingers at other segments of our industry and claim that we would pay more than they would have to pay. The blame does not lie with other producers, it lies with the Garden

Council and those that conceived this very unfair collection procedure.

The Professional Plant Growers' Association has examined the Plants for America proposal quite extensively. They oppose the proposal. I agree with them. The good news for growers is that you can have a voice. An industry survey will be taken by the auditing firm of Ernst and Young in March, 1995. If the survey indicates support by less than a majority of growers, the effort to pass a promotion order will stop. If the survey indicates support by more than a majority, then the legislation will be presented to Congress. Your vote is needed. At last count there were only 20,000 growers on the list to receive this ballot that will decide the tax fate of ALL growers. Make sure you receive a ballot and that you vote your convictions!

To make sure you receive a ballot, contact Vicky Bendure at the Garden Council by calling 301-577-4073 or by filling out and returning the form below. The concept of promoting floriculture is great. This marketing order is not.

.....

I am a grower. Please add my name to your survey list.

Please send me more information.

Name _____ Company _____

Address _____ State _____ Zip _____

Fax to the Garden Council: (301) 459-6533, or mail to: 10210 Bald Hill Road, Mitchellville, MD 20721

.....

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Ph. (919) 515-1195 / FAX (919) 515-7747*



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DUES NOTICE

NORTH CAROLINA COMMERCIAL FLOWER GROWERS' ASSOCIATION

FOR MEMBERSHIP FROM:

January 1, December 31,
1995 – 1995

Company: _____

Contact Name: _____ Telephone: _____

Additional Employees: _____ Fax: _____
(\$20.00 each)

Address: _____

City: _____ State: _____ Zip: _____

1995 Dues Categories (please check appropriate categories):

- Company Memberships
- ___ 0 to 10,000 ft² of greenhouses \$ 40.00
- ___ >10,000 ft² to 1 acre of greenhouses \$ 60.00
- ___ >1 acre to 5 acres of greenhouses. \$100.00
- ___ >5 acres of greenhouses. \$125.00
- ___ Allied Trades. \$ 60.00
- ___ Additional Employees (each). \$ 20.00
- ___ Educators \$ 20.00
- ___ Students \$ 1.00

Contributions to NCCFGA are not deductible as a charitable contribution for federal income tax purposes. Dues may be deductible to members for federal income tax purposes as ordinary and necessary business expenses.

**For Our Next Directory,
Please Indicate Your Categories:**

- Wholesale Grower
- Retail Grower
- Retail Associate
- Allied Trades
- Research
- Extension
- Municipal
- Landscaping
- Garden Center
- Educator
- Student
- Other _____

**If a Grower,
Please Indicate:**

- Total Heated ft²** _____
- Bedding Plants
 - Cut Flowers
 - Potted Flowering Plants
 - Hanging Baskets
 - Foliage
 - Hardy Chrysanthemums
 - Perennials
 - Herbs
 - Other _____

Please Mail This Form and Your Check To: **NCCFGA
P.O. Box 52276
Raleigh, NC 27612**

Total Dues Enclosed:
\$ _____

You will receive a membership confirmation and dues receipt in the next issue of the Bulletin

**NORTH CAROLINA
COMMERCIAL FLOWER GROWERS' ASSOC.**

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