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THE 1996 POINSETTIA CULTIVAR TRIAL: A DIFFERENT APPROACH

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The 1996 poinsettia cultivar evaluation trial was quite different from the ones we have had in former years. Previously we would request poinsettia breeders to send all the cultivars they wanted to send, and the number of cultivars could be close to 70. Breeders paid no entry fees for any of their cultivars. In 1996 the policy changed when five companies said they would pay entry fees, on a sliding scale, with the newest cultivars having the highest fee, followed by those which had been in the trade for a couple of years, and the lowest fee for the cultivars they wished to use as comparisons with the new selections. Three universities had been selected for this program, and these universities were Purdue University (Allen Hammer), University of Florida in Gainesville (Jim Barrett) and NC State University.

Outside funding has become essential for floriculture research at Land Grant Universities and Experiment Stations as tax support has decreased, so the financial support by poinsettia

breeders was appreciated. Some of our independence was lost, however, as we had agreed to evaluate only those cultivars which had entry fees and some prominent cultivars in the industry weren't included if a company excluded them from their list. 'Supjibi' and 'Monet' would be two examples of cultivars which were excluded in 1996, and some growers at the open houses wondered where they were.

In previous years we also grew stock plants and propagated the cuttings ourselves with a few exceptions. In 1996 we didn't grow any stock plants and received rooted cuttings from the breeders instead. The breeders also decided they would send us the cuttings at different times, rather than all at once. Previously we had planted everything in early September and pinched September 15, but in 1996 the breeders sent us what they considered to be their less vigorous cultivars in early August, the medium ones in mid-August and the tall growing ones in late August. That meant our plant and pinch dates

varied, based on cultivar growth habits. The poinsettia breeders and the dates when we potted the rooted cuttings of the cultivars are shown in Table 1.

Plants that were potted on August 15 were pinched on August 29, those planted August 23 were pinched September 6, and those potted August 29 were pinched September 12. We thought that the plants that were pinched August 29 would have more long days than those pinched on September 6 or September 12 so should be taller, even though the breeders had labeled them as compact cultivars. The 15 cultivars that were pinched August 29 had an average height of 10"; those pinched September 6 were 11"; and those pinched August 12 were 10". Unfortunately we didn't have the same cultivar on all three dates to see the effects of pinch dates on final heights within cultivars but the data do indicate that the breeders had their cultivar growth habits labeled correctly. (Plant heights were measured from the pot rim to the top of the plant canopy).

Cultural Procedures

The plants were potted in 6.5" plastic azalea pots in Fafard 4P. They were grown under natural daylengths in a double-layered polyethylene house, at a night temperature of 65 °F. A tube watering system was used. Osmocote 14-14-14

Table 1. Suppliers, cultivars, and potting dates for poinsettias evaluated in the NC State 1996 trials.

Breeder	Potting Date		
	August 15	August 23	August 29
Ball Flora Plant	Jolly Red Red Splendor		
Dümmen		Spotlight Dark Red	
Fischer	Marblestar Picacho Silverstar	Bonita Cortez Cortez Pink Cortez White Dark Puebla Flirt Maren Nobelstar Puebla Sonora Sonora Marble Sonora Pink Sonora White	
Oglevee	Dynasty Red		Festival Red Nutcracker Red Nutcracker White
Paul Ecke Ranch	Freedom Freedom Jingle Bells Pepride Peterstar Jingle Bells Peterstar Pink Peterstar Red Peterstar White Success V-14 Glory		Angelika Marble Angelika White Celebrate 2 Darlyne Lilo Pearl Petoy

was applied one week after potting, at a rate of one teaspoon/pot. The primary fertilizer used was a combination of calcium nitrate (33 oz/100 gallons of water) and potassium nitrate (18 oz/100 gal), at weekly intervals, but 20-10-20 at 2 lbs/100 gallons was applied every third week. Sodium molybdate was applied as a drench at 2.5 oz/100 gallons on October 7, and Epsom salts at 2 lbs/100 gallons was applied on October 10. None of the cultivars showed any signs of nutrient

deficiency or excess. No growth regulators were used. Marathon was applied in late September for whitefly control but by late November some whiteflies were evident and we used Dithio twice. No diseases were encountered.

Once again our trials proved that growers have many options when it comes to choosing cultivars. Several of the cultivars are very similar. The PLA Poinsettia International ApS, (headquarters in Hillerod, Denmark) has Plant Variety Protection guidelines for the conduct of tests for distinctness, homogeneity and stability. There are 53 characteristics listed and described in these guidelines, and if a selection differs from others in only one characteristic, often very minor, it can be named. The senior author of this article was invited to attend a meeting of the PLA in Germany in November, 1996 and was appalled to learn that a characteristic such as color of the leaf petiole was considered to be as important as the color of the bracts. So if two plants with different names look exactly alike they might differ in some trivial characteristic a grower would be too busy to even notice.

New "breeding" techniques also have hastened the development of new "sports" of many cultivars. Previously it might take several years to get a white, pink or marble selection from a red cultivar, but innovative procedures have greatly decreased the time required. This proliferation of cultivars increases the value of trials which are readily accessible to growers. In 1996 we

Table 2. Final height, number of flowering shoots per plant, and flowering date data for poinsettias in the NC State 1996 trials.

Cultivar	Final height (")*	No. flowering shoots*	Average date for:		
			Bract color	Cyathia	Anthesis
Angelika Marble	13.0	5.5	10/29	10/30	11/19
Angelika White	11.5	6.0	10/28	10/28	11/18
Bonita	9.5	4.5	10/13	10/28	11/19
Celebrate 2	8.5	4.5	10/19	10/29	11/17
Cortez	10.0	7.0	10/23	10/28	11/22
Cortez Pink	9.5	6.0	11/1	10/28	11/21
Cortez White	9.0	6.5	10/26	10/28	11/20
Dark Puebla	12.0	**	11/14	11/4	**
Darlyne	10.0	4.5	10/25	10/27	11/18
Dynasty Red	12.5	7.0	10/14	10/25	11/17
Festival Red	9.5	5.0	10/18	10/23	11/13
Flirt	11.0	6.5	10/25	10/28	11/17
Freedom	10.0	5.0	10/12	10/19	11/9
Freedom Jingle Bells	10.5	5.0	10/20	10/22	11/12
Jolly Red	11.0	5.0	10/26	10/30	11/24
Lilo	11.5	4.0	10/29	10/16	11/9
Marblestar	10.0	6.0	10/22	10/28	11/20
Maren	12.0	6.5	10/20	10/27	11/16
Nobelstar	12.0	7.0	10/16	10/27	11/15
Nutcracker Red	10.0	4.5	10/17	10/27	11/17
Nutcracker White	10.5	6.0	10/27	10/28	11/19
Pearl	8.5	5.0	10/23	10/28	11/18
Pepride	6.0	3.5	10/10	10/14	11/4
Peterstar Jingle Bells	10.5	5.5	10/16	10/28	11/18
Peterstar Pink	11.0	6.0	10/21	10/27	11/16
Peterstar Red	10.5	5.0	10/16	10/27	11/18
Peterstar White	10.0	6.0	10/27	10/29	11/20
Petoy	10.0	4.5	10/22	10/28	11/19
Pichacho	9.5	6.0	10/14	10/21	11/16
Puebla	11.0	6.0	10/23	10/27	11/14
Red Splendor	12.5	**	11/7	10/24	**
Silverstar	10.0	5.5	10/15	10/27	11/19
Sonora	10.5	6.0	10/20	10/28	11/19
Sonora Marble	12.0	6.0	10/29	10/27	11/20
Sonora Pink	11.0	5.5	10/27	10/27	11/18
Sonora White	9.5	6.5	10/24	10/27	11/18
Spotlight Dark Red	15.0	6.5	10/17	10/28	11/21
Success	9.0	5.0	10/18	10/29	11/24
V-14 Glory	8.5	5.0	10/20	10/29	11/19

* Final height and number of flowering shoot data taken on 19 November 1996.

**Missing data.

had approximately 100 visitors at our Open House and several representatives from poinsettia breeding companies were in attendance throughout the day.

Important data about the cultivars we evaluated in 1996 are shown in Table 2, and some cultivars we have never shown in previous issues of the Bulletin when we gave our annual reports are pictured in this issue.

The authors wish to acknowledge the following companies for their contributions to our poinsettia trials: Poinsettia cultivars: Ball Flora Plant, Dümmen Young Plants, Fischer, USA, Inc., Oglevee, Ltd., Paul Ecke Ranch. Substrate: Fafard Fertilizer: Scotts Refreshments for the Open House: Financed by the N.C. Commercial Flower Growers' Association and made or purchased by Darlyne Larson and Ingram McCall.

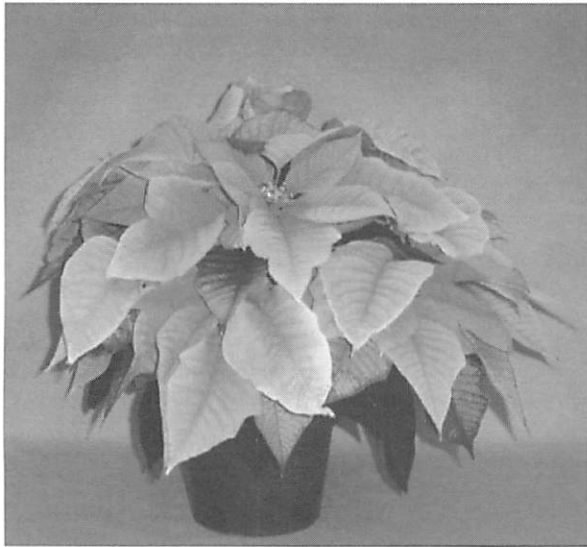


Figure 1. 'Cortez Pink' on 16 December 1996.



Figure 2. 'Sonora Pink' on 16 December 1996.

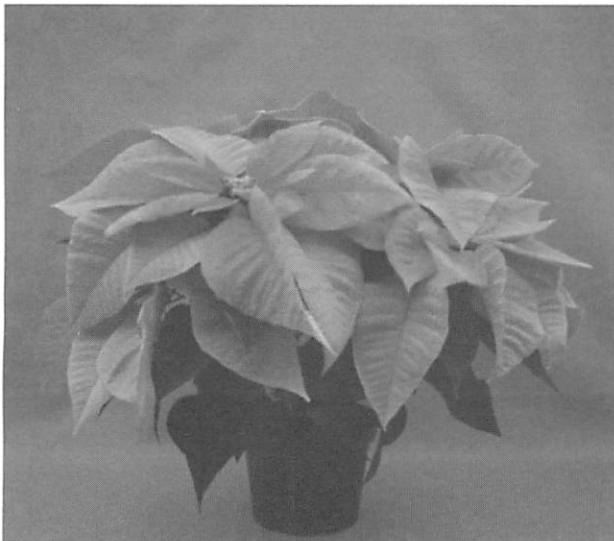


Figure 3. 'Peterstar Pink' on 16 December 1996.



Figure 4. 'Marblestar' on 16 December 1996.



Figure 5. 'Peterstar Red' on 16 December 1996.



Figure 6. 'Festival Red' on 16 December 1996.

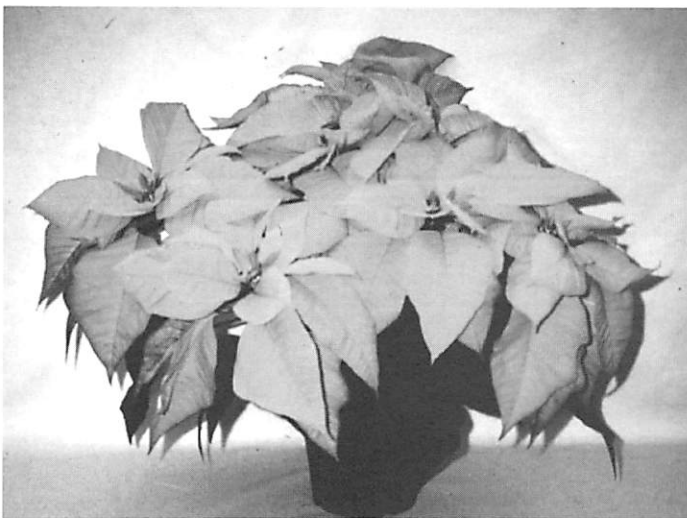


Figure 7. 'Spotlight' on 16 December 1996.

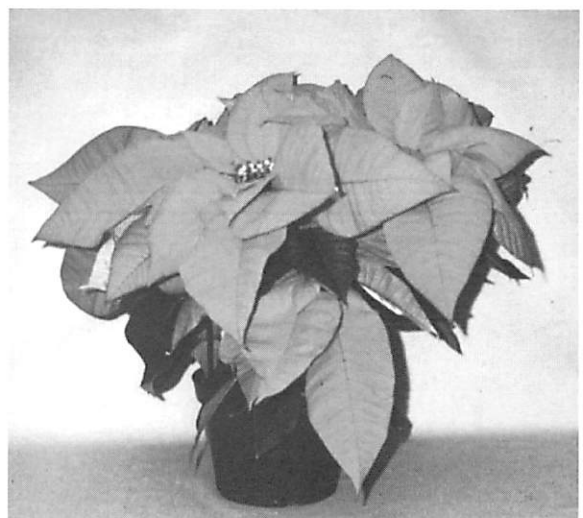


Figure 8. 'Nutcracker Red' on 16 December 1996.



Figure 9. 'Pepride' on 16 December 1996.

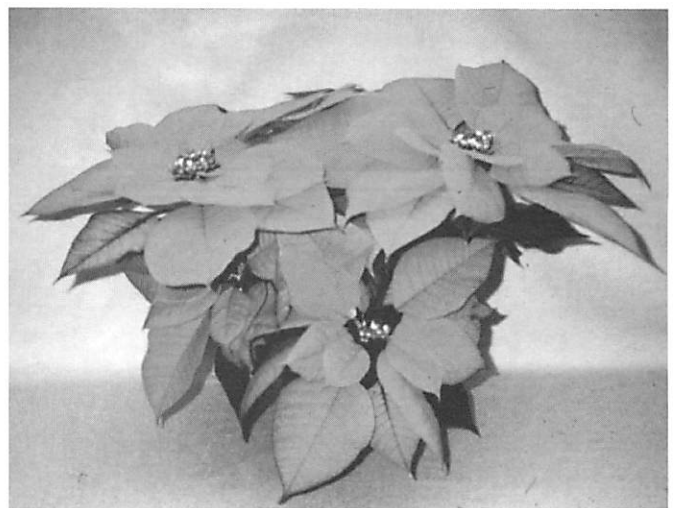


Figure 10. 'Petoy' on 16 December 1996.



Figure 11. 'Sonora Marble' on 16 December 1996.



Figure 12. 'Cortez White' on 16 December 1996.

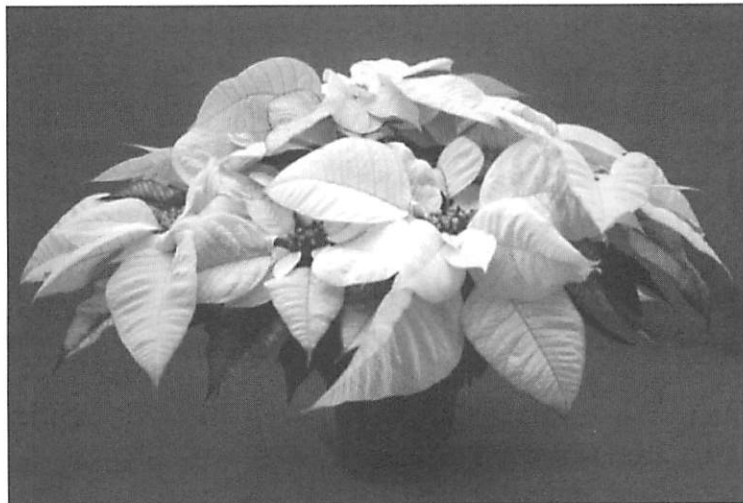


Figure 13. 'Nutcracker White' on 16 December 1996.

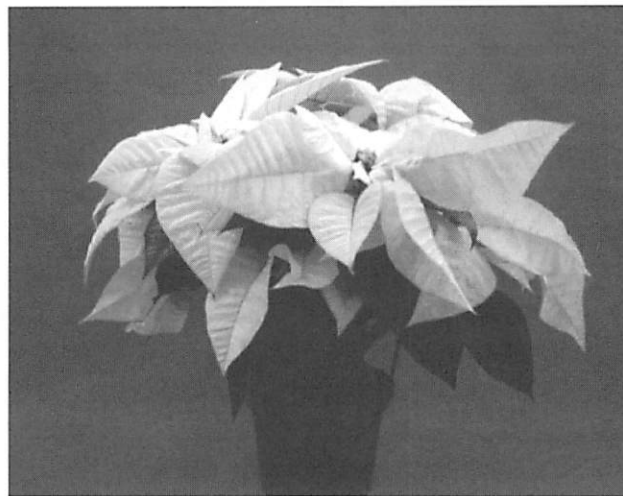


Figure 14. 'Peterstar White' on 16 December 1996.