

Progress Report

Enhancing Protea Flowering in Hawaii

Dr. Richard A. Criley
University of Hawaii
Department of Tropical Plant & Soil Sciences
Honolulu, HI, USA 96822

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ICFG-HILL, P.O. Box 99, Haslett, MI 48840
ICFG.HILL@yahoo.com

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Richard A. Criley, Dept. Tropical Plant and Soil Sciences, University of Hawaii

The objective of this study is to utilize a combination of pruning times and application of cytokinin to manipulate flowering times for *Protea* cultivars popularly grown in Hawaii.

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On December 12, 2011, records were taken on shoot flushing of ten species/cultivars of the genus *Protea* that were pruned back 9/20/2010, 11/15/2010, and 1/18/2011. As would be expected, extent and vigor of flushing differed among these proteas. Table 1 shows the progress made.

Applications of N-6-benzyladenine were made to shoots that had attained 3 flushes at inspection times: July 18, 2011, October 11, 2011, and December 12, 2011. Many of the shoots that received N-6-BA in July and October produced copious amounts of by-passing shoots with no floral bud production. Only two cultivars, Niobe and Sylvia, produced flower buds following the July treatment. These are both strong, vigorous growers with desirable flower heads, so the result is promising. Buds were not observed in December following the October treatment.

Treatments applied in October and December 2011 will continue to be monitored in 2012 for responses to N-6-BA treatment.



Left: Multiple by-passing shoots result from N-6-BA foliar sprays applied in October. Photo: 12/12/2011

Above: Flower heads on shoots of Protea 'Niobe' treated in July 2011.

Photo: 12/12/2011

Table 1. Shoot and flush production as of December 12, 2011 on ten Protea species/cultivars pruned in fall 2010 and winter 2011. To be treated with BA, shoots had to have produced 3 flushes on either 7/18/11 or 10/11/11.

Variety	# shoots from pruning	# BA-treated	Results			
			# Budded	# w multiple bypass	# w continuing axis	Notes
Rose Mink	47	10		10		
<i>P. obtusifolia</i>	36	1			1	
Red Mink	47	17		16	1	
<i>P. lorifolia</i> R-1	44	8		7	1	
Niobe	40	6	3		3	
Sylvia	21	9	9			6 budded not treated
White Owl	51	0				
Late Mink	10	4			4	
<i>P. lorifolia</i> R-4	19	4		1	3	
<i>P. neriifolia</i> Green Ice	40	16		12	4	