

1970 POINSETTIA FERTILITY TRIALS

A comparison was made of liquid feed, slow release fertilizer, and a combination of these at Manoa, Kula and Waiakea. Eckespoint C-1 was grown with a pinch at Manoa, and C-1 and Annette Hegg were grown as single-stem crops at Kula and Waiakea.

All the poinsettias were grown in well-drained mixes consisting of 1:1:1 (soil:peat:perlite) Osmocote slow-release fertilizer with either 14-14-14 or 18-6-12 analyses was incorporated into the soil at rates of 4, 6, or 8 ounces per cubic foot. The 4-ounce treatment was irrigated with either water or liquid feed. The Manoa liquid feed program was 8 ounces 21-21-21 per 100 gallons, injecting 125 ppm N with each watering. At Kula and Waiakea, 600 ppm N were supplied weekly.

Temperatures were: Manoa 85-90 F day to 70 night; Kula, maximum 80 F day to 60 night; and Waiakea maximum 85 F day to 60 night. Records were taken of plant size, flower diameter, fresh weight, and date of flowering.

In general, the combination of slow-release fertilizer plus liquid feed was superior to Osmocote or liquid feed alone. Either formulation of Osmocote at the rate of 4 ounces per cubic foot plus liquid feed produced the best plant size and flower diameter at both Kula and Waiakea. It should be noted that the Kula liquid feed control provided 1200 ppm N per week during the last month of growth and is not strictly comparable to the other treatments. The extra leaching capa-

POINSETTIA FERTILITY
MAXIMUM FLOWER DIAMETER (INCHES)

	Eckespoint C-1			Annette Hegg	
	Manoa (pinched)	Kula	Waiakea	Kula	Waiakea
Liquid Feed	11.1	15.0	12.4	12	10.6
Osmocote 14-14-14 oz/cu ft					
4	8.4	9.4	15.6	7.2	11.8
6	9.7				
8	10.5	10.4	17.8	9.8	15.6
4 + LF	13.3	13.2	15.2	14.8	12.8
6 + LF	12.9				
8 + LF	11.8				
Osmocote 18-6-12 oz/cu ft					
4		8.0	16.0	7.2	14.4
8		8.4	15.0	8.4	15.6
4 + LF		13.2	15.8	14.8	13.4

city of the Manoa automatic watering system was responsible for the better results obtained with 6 ounces Osmocote 14-14-14 per cubic foot plus liquid feed. Results support those of other research stations which recommend approximately 6-7 ounces 14-14-14 per cubic foot or 5-7 ounces 18-6-12 per cubic foot of soil mix. It should be pointed out that less Osmocote is needed if the crop is manually irrigated with fertilizer-injected water. However, automatic irrigation systems

cause extra leaching of the slow-release fertilizers, and slightly higher levels may be needed.

Finally, Osmocote does not provide a source of minor elements or calcium or magnesium. These should be provided through preplant incorporation or supplemental liquid feed.

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**POINSETTIA FERTILITY
 HEIGHT (INCHES)**

	Eckespoint C-1			Annette Hegg	
	Manoa (pinched)	Kula	Waiakea	Kula	Waiakea
Liquid Feed	18.0	20.0	13.2	18.7	9.6
Osmocote 14-14-14 oz/cu ft					
4	17.4	12.6	12.8	11	19.4
6	22.6				
8	21.6	14.0	13.8	13	13.6
4 + LF	30.6	16.0	18.4	16.4	14.2
6 + LF	31.8				
8 + LF	27.0				
Osmocote 18-6-12 oz/cu ft					
4		10.0	16.6	8.6	12.6
8		9.0	14.4	10.8	15.0
4 + LF		14.8	18.0	16.2	13.8