

CYTOKININS STIMULATE BUD INITIATION ON CORDYLINE CUTTINGS

In experiments conducted at the University of Hawaii, two cytokinins, N⁶-benzyladenine (N⁶ BA), and 6-(benzylamino)-9-(z-tetrolydropranyl)-9-H-purine (PBA), were applied to cuttings of *Cordyline terminalis* 'Onomea' at concentrations of 50, 100 and 500 ppm. The results are presented in Table 1.

Table 1. Effects of two cytokinins on bud initiation and development in *Cordyline terminalis* 'Onomea'.

Chemical	Conc.	Ave. no. of buds initiated per cutting	Ave. no. of buds developed per cutting	Percent buds developed per cutting
	(ppm)			
N ⁶ BA	500	3.9	2.4	62.6
	100	3.7	2.0	54.0
	50	4.3	2.0	46.5
PBA	500	4.1	2.8	68.3
	100	6.0	2.8	58.6
	50	6.0	2.2	36.7
Control	—	4.0	1.5	37.5

Both N⁶ BA and PBA were effective in stimulating bud initiation and development in cordyline. The highest concentration of 500 ppm of each chemical was the most effective in stimulating development of buds without phytotoxicity. PBA was somewhat more effective than N⁶ BA. PBA did cause a reduction in the growth rate of

the shoots, which could possibly be accounted for by the fact that with large numbers of shoots developing on a single stem, there was a greater competition between shoots for nutrients.

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