

## Control of Precocious Gladiolus Corm and Cormel Formation in Tissue Culture\*

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### Summary

Gladiolus propagates vegetatively by virtue of corm formation at the base of the shoot and by cormel differentiation on tips of stolons. The precocious generation of both organs was accomplished *in vitro* on plantlets incubated for one month in a liquid shake culture supplemented with 1.0-10.0 mg/l paclobutrazol. Paclobutrazol-dependent corm and cormel development could be prevented by addition of GA<sub>3</sub> to a paclobutrazol-containing medium, thereby indicating that paclobutrazol mediates its influence by reducing the endogenous GA level. BA was also found to inhibit corm formation. The dose-response relations for the influence of paclobutrazol, BA and GA<sub>3</sub> on corm development are presented. Paclobutrazol-induced cormels, when excised from the culture-derived plant, germinated and started to regenerate adventitious shoots upon transfer to an agar-solidified medium with 0.3 μM BA and 0.1 μM NAA.

*Key words: Gladiolus, benzylaminopurine, corm differentiation, dose-response, gibberellin, paclobutrazol, tissue culture*