

INCREASES PROLIFERATING EMBRYOS AND REGENERATING BUDS NGOC LINH GINSENG (*panax vietnamensis* Ha et Grushv.)

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Summary

Ginseng is a precious medicinal herbs, which widely used in the natural health protection industry. Ngoc Linh ginseng (*Panax vietnamensis* Ha et Grushv.), originated from Vietnam, has the highest saponin content compared to other ginseng species which are in the same panax genus. However, the difficult propagation and the un-controlled harvest in the wild for a long time affected the seed production of Ngoc Linh ginseng. Contribute to the conservation and rapid propagation of Ngoc Linh ginseng, the research about the embryo proliferation and bud regeneration under the effect of LED lightning system was conducted. Results showed that SH medium supplemented coconut water 20% combined with kinetin (0.3 mg/l) is the most appropriate medium for the in vitro *Panax vietnamensis* Ha et Grushv. embryo clusters proliferation with the fresh weight was 0.464. SH medium supplemented NAA (0.2 mg/l) combined with TDZ (0.5 mg/l and activated charcoal (0.1 mg/l) had the high rate of bud cluster formation. SH medium supplemented NAA (0.2 mg/l) combined with kinetin (1.0 mg/l) is the most appropriate medium for the in vitro *Panax vietnamensis* Ha et Grushv. bud multiplication.

Keywords: *Embryos, shoots, Vietnamese ginseng (Panax vietnamensis Ha et Grushv.).*