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Effect of Growth Regulators on Callus Induction and Plant Regeneration of *Sedum samentosum*

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Objectives

This study was conducted to develope plant regeneration system through *in vitro* culture of *Sedum samentosum* Bunge. We have investigated on the effect of growth regulator and genotype for plant regeneration from callus.

Materials and Methods

1. Materials: Two Korean local strains of *Sedum samentosum* - Keumsan and Bongdong Explants - 5 mm^2 leaf and 5 mm stem segments
2. Methods
   - Callus induction - MS media containing different concentrations of 2,4-D and BA
   - Plant regeneration - MS media containing different concentrations of NAA and BA

Results and Discussion

The leaf and stem segments of *Sedum samentosum* were cultured to investigate the influence of growth regulators on their callus induction and plant regeneration. The callus induction and growth showed a good response both leaf and stem on MS media supplemented with 3.0 mg/L 2,4-D and 0.5-2.0 mg/L BA. Callus induction was more effective in stem segment than leaf one. Frequency of plant regeneration in Bongdong local strain was very low compared to Keumsan local strain. The highest percentage of plant regeneration was obtained from 60-day-old callus on MS medium supplemented with 0.2 mg/L NAA and 2.0-3.0 mg/L BA. When subcultured to growth regulator free MS medium after 30 days, multiple shoots were developed from regenerating callus.

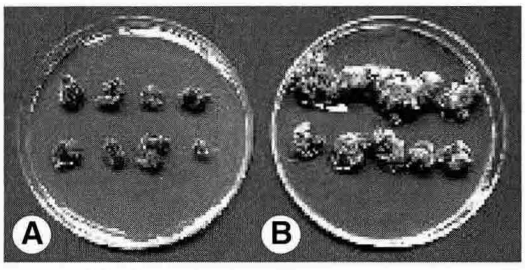

Figure 1. Multiple shoots developed from regenerating callus in 60 days after subculture. A, Bongdong; B, Keumsan.

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