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In Vitro Regeneration of Peanut (*Arachis hypogaea* L.) through Organogenesis

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Objectives

To establish the regeneration system via organogenesis and the dependable transformation system for varietal improvement in peanut.

Materials and Methods

Materials-Plant: *Arachis hypogaea* L.
Explant: Cotyledon
Culture: 16-h light/8-h dark photoperiod at 28℃

Results and Discussions

We have developed an efficient regeneration system by culturing mature cotyledons of *Arachis hypogaea* L. cv. Chokwang, Hokwang, Dakwang, Namkwang, Daekwang on Murashige and Skoog basal medium supplemented with various combinations of growth regulators (2,4-D, IAA, BAP, ABA). High morphogenic callus was produced from 100% of explants when cultured in 1.0 mg/L IAA, 5.0 mg/L, BAP, 1.0 mg/L ABA. and the percentage of callus developing shoots was 90% in cv. Chokwang. A distinct feature of this investigation is the induction of multishoots, more than 28 shoots. An average of 95% of shoots formed roots on MS medium supplemented with 1.0 mg/L NAA. This system can be used in genetic engineering approach as an adjunct to conventional breeding for improvement of nutritional quality and agronomc attributes of peanuts.

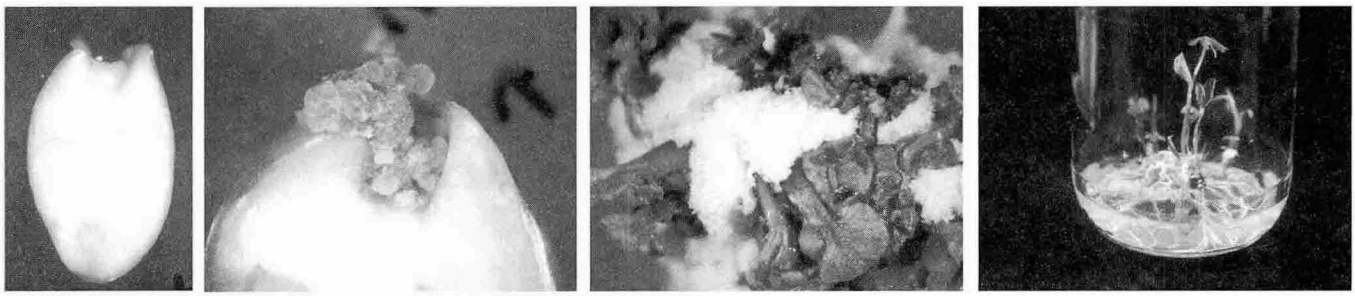

Figure 1. Regeneration via oragnogenesis in *Arachis hypogaea* L.

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