Studies on the Callus Induction and Shoot Regeneration of Taro (*Colocasia esculenta*)

Ping-Lung Huang and Chi-Chu Tsai

**Abstract**

Axillary buds and shoots tip meristem obtained from healthy plantlets that cultured in half-strength modified MS medium supplemented with 2mg/l NAA and 3% sucrose were used to establish an *in vitro* development for the future materials of *Colocasia esculenta* var. *esculenta*. Among different organ explants, only petiole and corm cultured in MS medium containing 1mg/l 2,4-D, 0.1mg/l BA and 200mg/l glutamine for 2 months resulted in a maximum rate of callus formation. There are 30% and 55% respectively. For adventitious shoots regeneration, the most combination of NAA and BA or kinetin led to form root primordium easily. MS medium supplemented with 1mg/l NAA and kinetin (0, 0.5, 2.5mg/l) could induce shoot formation (6.7%, 16.7%, 3.3%). It produce lots of shoots per culture directly from the surface of calli, and the shoots could develop into intact plants with vigorous appearance after 3 months in culture.

Key words: Taro (*Colocasia esculenta*), Callus, Shoot regeneration

---

1 Assistant Researcher and Associate Researcher, Kaohsiung District Agricultural Research and Extension Station.