

## **In vitro germination and plantlet establishment of *Labisia pumila* (Bl.) F. Vill.**

### **Abstract**

In vitro seeds germination and plantlet establishment of *Labisia pumila* were studied in this report. The seeds obtained from the mature fruits of *L. pumila* were sterilized and cultured on Murashige and Skoog (MS) solid media supplemented with 1-3  $\mu\text{M}$  of 6-benzylaminopurine (BAP) and 3% (w/v) sucrose. The presence of BAP in the medium significantly affects seeds germination. High percentage of seeds germination (up to 90%) was successfully achieved after 2 weeks of culture on medium supplemented with 2  $\mu\text{M}$  BAP. Up to 70% of explants produced shoots through direct regeneration from newly emerged epicotyls after 5 weeks of culture. The average of  $8.1 \pm 1.0$  shoots per explant obtained on media treated with 2  $\mu\text{M}$  BAP. Seedlings were further transferred to growth media fortified with different types of cytokinin. Result observed after 12 weeks showed that medium supplemented with 1  $\mu\text{M}$  zeatin (ZEA) promote the highest growth with an average of  $2.9 \pm 1.0$  cm shoot length and  $7.7 \pm 3.2$  leaves per explant after 12 weeks. In addition, medium added with 2  $\mu\text{M}$  BAP and supplemented with 3-4% (w/v) of sucrose promote the best growth i.e.,  $3.0 \pm 0.6$  shoots per explant,  $2.27 \pm 0.2$  cm length and  $4.3 \pm 0.5$  leaves per explant. © 2007 Elsevier B.V. All rights reserved.