

***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 μM 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 μM 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 ± 1.0 shoots per explant obtained on media treated with 2 μM 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 μM zeatin (ZEA) promote the highest growth with an average of 2.9 ± 1.0 cm shoot length and 7.7 ± 3.2 leaves per explant after 12 weeks. In addition, medium added with 2 μM BAP and supplemented with 3–4% (w/v) of sucrose promote the best growth i.e., 3.0 ± 0.6 shoots per explant, 2.27 ± 0.2 cm length and 4.3 ± 0.5 leaves per explant.