

## Defoliation of in vitro shootlets of *Azadirachta excelsa* (Jack) M. Jacobs: a possible solution

### ABSTRACT

Defoliation is a common phenomenon which usually hinders the productivity of plantlets of *Azadirachta excelsa* through micropropagation. Thus, a study to develop a procedure to overcome defoliation of in vitro shootlets of *A. excelsa* after undergoing rooting stage was conducted. Shoots exhibiting defoliation were transferred on to MS medium supplemented either with only 0.24% gelrite, mixture of 0.1 mg l<sup>-1</sup> BAP, 1.0 mg l<sup>-1</sup> NAA and 0.75% difco-bacto agar, mixture of 0.24% gelrite and 0.2% activated charcoal and mixture of 0.24% gelrite, 2.0 mg l<sup>-1</sup> BAP and 10.0 mg l<sup>-1</sup> AgNO<sub>3</sub>. The results indicated that the different treatment produced significant effects at  $P < 0.05$  on the number of leaves, shoot length, root length and number of axillary shoots after 30 days of culture incubation. The MS medium supplemented only with 0.24% gelrite was the most effective treatment producing the highest number of leaves (9.8) and the longest shoot and root lengths of 17.2 mm and 43.5 mm respectively. The addition of NAA, BAP and AgNO<sub>3</sub> stimulated callus formation and growth of axillary shoot.

**Keyword:** *Azadirachta excelsa*; Micropropagation; Defoliation; In vitro shootlets; Gelrite