

Influence of phenyl-urea and adenine-type cytokinins on direct adventitious shoot regeneration of cabbage (*Brassica oleracea* subsp. *capitata*) “KY Cross”

ABSTRACT

In this study, the effects of phenyl-urea (Thidiazuron) and adenine (6-benzylaminopurine) and 6-*y,y*,dimethylally-amino purine type cytokinins alone or in combination with indole-3-butyric acid on shoot regeneration from hypocotyl and cotyledonary explants of *Brassica oleracea* ssp. *capitata* “KY Cross” were investigated. For hypocotyl explants, medium containing 2.27 M Thidiazuron showed the highest mean number (18.15) of separable shoots per explant with 80% shoot formation. In the case of cotyledonary explants, the highest mean number of shoots (3.03) was obtained on medium containing 12.30 M 6-*y,y*,dimethylally-amino purine with a percentage of 56.67% shoot formation. Plantlets were successfully acclimatized with 70% survival in potting medium consisting of coconut husk+vermicompost (7 : 1 v/v). The regeneration system developed herewith will be a valuable tool for genetic improvement of cabbage “KY Cross”.

Keyword: Adenine-type cytokinin; *Brassica oleracea* subsp. *capitata* “KY Cross”; Hypocotyl; Phenyl-urea cytokinin; Shoot organogenesis