

Rapid Multiplication of Virus-Free Vegetatively Propagated Bunching Onion(*Allium fistulosum*)¹

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Abstract

Shallot latent virus (SLV) was detected by DTBIA, and evenly distributed in infected bunching onion (*Allium fistulosum* L.). An ELISA procedure was efficiently assigned for routine virus indexing in healthy seedling mass production system. For culture in MS medium, tissues from SLV infected bunching onion were excised, and the tested explants including stem-disc, apical meristem, meristem with one primordial leaf, and meristem with two primordial leaves. The results showed that only the plantlets derived from apical meristem are SLV virus-free. The rapid multiplication of healthy stock was also established. It was demonstrated that the number of regenerated shoots from stem-disc was reduced when TDZ and NAA combined together in MS media, but TDZ alone would regenerate more shoots. The stem-disc treated with 1-5 mg/L TDZ for 42 days, the optimal number of shoots (43-62) were regenerated. The TDZ had better effect on induction of shoot regeneration than BA or kinetin.

(Key words : Bunching onion, Micropropagation, ELISA, SLV, Thidiazuron)

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