

B-24 The influence of indole-3-acetic acid, a root promoter of potato, on the hatching behavior of *Globodera rostochiensis* free eggs under axenic culture conditions

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Eggs of the potato cyst nematode (*Globodera rostochiensis*) hatch freely under axenic culture conditions permitting an estimation of the relative stimulatory effect of the host plant rhizosphere. In our previous study, based on the percentage cumulative hatch (%CH) of free eggs, it was not clear whether %CH was in fact, dependent on the level of indole-3-acetic acid (IAA) incorporated in the medium. The present study is aimed at determining whether added IAA, while acting as an *in vitro* root promoter, could influence CH. Modified Murashige & Skoog basal medium supplemented with 4 levels of IAA (0, 0.4, 0.8, 1.2 mg l⁻¹) was used to promote *in vitro* root formation from internode stem segments (~1cm) of cv. *Sebago* (the genotype which showed the highest CH in the previous study). The selected locations of the *in vitro* rhizosphere in the culture were inoculated with axenic egg suspensions on the 7th day after root initiation. Petri dishes without host roots were inoculated with eggs to serve as the controls. No significant direct effect could be attributed to the incorporated IAA on CH. However, the number of roots per explant (NR) and the total root length (NRxRL) of an explant did significantly influence CH. Although, incorporated IAA promotes the average length of single roots (RL), length *per se* has no significant effect on the hatching of nematode eggs.