B-65 Effect of auxins on adventitious root formation of cinnamon (*Cinnamomum verum*, syn. *zeylanicum*)

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Cinnamon (*Cinnamomum verum* syn. *zeylanicum* 2n=24) is the major spice crop of Sri Lanka, which is a "hard to root", perennial, evergreen tree species, propagated by seeds. Possibility of the induction of adventitious root formation, with the use of exogenously applied auxins was studied, with the view of development of cinnamon "clones". Two auxins: Indole butyric acid (IBA) and Naphthalene acetic acid (NAA) in 3 concentrations (100, 200 and 400 μM) were used.

The basal end of the 2 nodal stem cuttings, which were taken at semi-hard wood stage, was dipped in hormone solutions separately for 4 h before planting them in polyethylene bags. No. of root primodia / cutting, no. of roots / cutting, root length, % root formation and & bud break were observed at regular intervals. Formation of root primodia could be observed at 5 weeks after planting as

small, white protrusions in hormone treated cuttings with the highest number being observed in 400 ìM IBA treatment. Profuse callus formation was observed in the control. The number of roots / cuttings, % root formation and the average root length has been increased by the application of auxins. IBA 200 ìM treatment showed the highest response with 73.33% root formation, compared to the control, where only 11.11% root formation was observed. Adventitious root formation was early in IBA treated cuttings compared to the control and NAA treatments. Profuse callus formation was noted in the control without root initiation. Root length has also increased significantly with 200 ìM IBA. Early bud break was observed with all IBA treatments.