

COMPARISON OF NEWLY RECOMMENDED TEA CULTIVARS ON ROOTING MEDIA AND GROWTH STIMULANTS

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Under normal conditions, without applying any growth stimulants to the nursery soil, some tea cultivars perform satisfactorily, whereas others perform moderately and poorly at their early stage of growth. Therefore, a study was conducted to evaluate the growth performances of ten cultivars using different nursery media and growth stimulants, at the Mid-Country Regional Center, Tea Research Institute, Hantana. Tea cultivars used were TRI 2023, 2025, 3019, 3025, 3072, 4006, 4046, 4053, 4071 and DG7. Two different rooting media, typical nursery soil and a mixture consisting of soil and paddy husk in 1:1 ratio, were used. The effect of two growth stimulants on rooting performance was also evaluated. Commercially available Indole Butyric Acid (IBA) and traditionally used cattle slurry were used as growth stimulants. The duration of the experiment was three months. A three factor factorial experiment in a complete randomized design was used and data were analyzed using the SAS computer software package. The Duncan's Multiple Range Test was used to compare means. The growth was assessed based on number of leaves, shoot length, root length, number of roots and level of callusing. Number of leaves and shoot length were measured once in two weeks, whereas other parameters were collected once a month using destructive samples. Results revealed that the callus formation of cultivars had been significantly improved by soil/paddy husk media over the control. In addition, TRI 2023, 3019, 4046 and 4053 cultivars showed a significantly higher rooting performance in soil/paddy husk media, whereas other cultivars had same performance in both media. A significant increase in number of roots was reported in all the cultivars treated with IBA. It was further revealed that TRI 2025, 3019, 4046 and 4053 had comparatively higher shooting performance when treated with IBA. This study revealed that paddy husk could effectively be used as an alternative nursery medium. Moreover, IBA was found to be an effective growth promoting treatment to induce roots and for growth performance of TRI 2025, 3019 and 4053, which usually show a slower growth.