

**COMPARISON STUDY ON GROWTH AND YIELD
PARAMETERS AMONG SEEDLINGS AND STEM
CUTTINGS OF THAI KANGKONG (*Ipomoea aquatica*)**

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ABSTRACT

Thai Kangkong (*Ipomoea aquatica* Forssk), belongs to family Convolvulaceae, is one of the most important leafy vegetables in the tropics of Southeast Asia. Lack of sufficient quantities of quality seeds at affordable prices is one of the major constraints in Kangkong cultivation in Sri Lanka. Eventhough stem cuttings are used as an alternative planting material there is no research data available on seedlings and suitable age of stem cuttings. This study was initiated with the aim of comparing yield and growth parameters of seedlings and different age stem cuttings in order to select the best age of stem cuttings as planting material. Five different ages such as 08, 09, 10, 11 and 12 weeks old cuttings were evaluated along with seedlings in a Randomized Complete Block Design (RCBD) with four replicates at the research field of Horticultural Crop Research and Development Institute (HORDI), Gannoruwa during March to July 2010. Growth parameters such as plant height, number of leaves, length of leaf, width of leaf, leaf weight, number of stems, length of stem, width of stem, stem weight, internodes length, leaf to stem ratio and yield parameters such as fresh weight per plant, dry weight per plant and total weight per plot were measured at the time of harvest. The data were analyzed statistically with ANOVA using SAS statistical package.

Results revealed that the seedlings were best in terms of growth performances such as plant height, leaf length, leaf width, leaf weight, stem width and leaf: stem ratio than the stem cuttings only at the initial stage. However, yields of seedlings were not higher than stem cuttings of different ages throughout the experimental period though they had shown quick establishment and good growth performance initially. Among the stem cuttings, 8, 9 and 10 weeks old cuttings showed fluctuation in growth performances while 12 and 11 weeks old cuttings exhibited better growth performances and higher plant yields in terms of both fresh and dry weight throughout the harvesting periods. It can be concluded that stem cuttings at the age of 12 and 11weeks can be used successfully in the commercial cultivation of Thai Kangkong.