D-45: Comparative study of growth of two paddy weeds *Ludwigia hyssopifolia* and *Ludwigia decurrens* under flooded and terrestrial soils

R K C Dilrukshi. S M Solangaarachchi
(Dept of Botany, University of Kelaniya)

A comparative study of the growth of 2 paddy weeds *Ludwigia hyssopifolia* and *Ludwigia decurrens* under flooded and terrestrial soils was made. The growth patterns of the 2 species were compared by measuring plant height (cm), number of nodes on main stem, number of leaves on main stem, number of branches, total leaf area (mm^2), number of flowers/pod and the dry weight of stems, roots, leaves and flower pods from seedling stage to senescence stage.

Eventhough the number of flowers/pod in *L. hyssopifolia* was not affected by the 2 treatments, *L decurrens* had a significantly greater number of flowers/pod in flooded soil than in terrestrial soil. *L. decurrens* reached the stage of flower initiation under both treatments earlier than *L. hyssopifolia*. Both species had a

significantly greater total leaf area (mm^2) under flooded soil. This indicated that the vegetative growth of both species is better under flooded soil. This growth enhancement was more conspicuous in *L. decurrens*. It was estimated that *L. hyssopifolia* produce 146250 and 131250 and *L. decurrens* 329000 and 266000 seeds per capsule per plant under flooded and terrestrial soils respectively.

Results of this study show that *L. decurrens* and *L. hyssopifolia* can grow within the rice field as well as in the terrestrial habitats around the field. Therefore the present study suggests the importance of giving equal attention to both habitats in the control of these paddy weeds.