

PATTERNS OF ESTABLISHMENT OF TWO COMMON PADDY WEEDS *CYPERUS IRIA* AND *LINDERNIA CORDIFOLIA* IN SRI LANKA

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Out of the 54 species of weeds reported from the paddy fields of Sri Lanka (Senevirathna and Appadurai, 1966) *Cyperus iria* and *Lindernia cordifolia* are the commonest. Investigations were carried out at paddy fields in Kiribathgoda (10 Km N. E. of Colombo) to determine the patterns of their establishment.

The abundance of the two weeds were studied two months before harvest and one month after harvest using the method of random quadrats (IM X IM). The results indicated that *Cyperus iria* is the more abundant weed before harvest, whereas *Lindernia cordifolia* is more abundant after harvest. This pattern of abundance changed as the next harvest approached.

Furthermore, the output, the size, the weight, the specific gravity and the coat thickness were investigated (Jayasekara, 1980). The germination potential of the two seed varieties were studied according to the method described by Misra (1968). The removal of thick seed coat through scarification and acid treatment caused high percentage of germination in *C. iria* whereas in *L. Cordifolia* the effect was less evident. Scarification increased water uptake as well as oxygen uptake in both seeds. Photoblastic effect on germination was studied using a source of light of 950 Lux. Seeds were kept either in continuous darkness, continuous light or at alternative light intervals of variable duration. Both seeds were positively photoblastic. Their germination was also dependent on the availability of certain minerals. *L. Cordifolia* was found to exhibit imposed dormancy and *C. iria* innate dormancy. Positive photoblastism may be an indicator of hormonal control of germination. The germination and the eventual behavioural patterns of the two weeds showed considerable correlation with their morphological and physiological characters and also with changing environmental factors in the field.

References:

1. Misra, R., 1968. Ecology workbook Oxford & IBH Pub. Co.,
2. Jayasekera, L. R., 1979. (Dissertation presented to the University of Kelaniya, as a partial requirement for the B. Sc. (Special) Degree.