

## **Salient characters of Weedy rice (*Oryza sativa* f. *spontanea*) populations in highly infested areas in Sri Lanka**

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Weedy rice (WR) was first reported in 1990 and it is reported in varying population densities from all agro-ecological zones in Sri Lanka. The main problem faced by the farmers and the agronomist is the identification of WR bio-types using agro-morphological characters varying with time. The WR population possibly possesses a number of derived characters and primitive characters. This study focuses on identification of primitive and derived characters observed in WR. The identification of salient trends of characters specialization in WR populations facilitates the understanding of the rate diversification of WR populations. Seeds of presumed WR bio-types were collected from five different locations in Kurunegala and Matara districts. Five replicates of each bio-type were planted in plastic pots with representative paddy soils from each location. Replicates were arranged in Complete Randomized Design (CRD). Agro-morphological characterization (using thirty six characters) of WR bio-types, Wild rice and cultivated rice varieties was made using a Standard Characterization Catalogue. The collected data were separated into nominal and scalar variables and the nominal data were used to construct Classification and Regression Trees using CART algorithm. The long-fully awned and absence of awn are apomorphic and short-fully awned and long-partly awned characters are plesiomorphic in WR biotype populations in Sri Lanka. These characters are hypothesized as derived from mixing of germplasm either of cultivated or wild rice varieties indicating possibilities of cross-pollination among wild, cultivated and weedy rice bio-types.

Key words: Agro-morphological, *Oryza sativa* f. *spontanea*, salient trends, Sri Lanka, Weedy rice

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