

**EFFECT OF K ON COMPETITION BETWEEN  
WEEDY RICE AND CULTIVATED RICE  
(*Oryza sativa* L.)**

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## ABSTRACT

Weedy rice becomes a serious threat to quality and quantity of rice production in Sri Lanka. Despite, Weedy rice is currently considered as one of the most troublesome, difficult-to-manage weed problems in paddy cultivation, very little information is available in Asia on how these species responds to fertilizers. Previous literature has shown that soil k levels effect weedy rice competition for Mathara weedy rice. A pot experiment was conducted to investigate the impact of weedy rice competition on cultivated rice for K fertilizer in a net house at RRDI, *Batalagoda*. Two factor factorial experiments with eight treatments in three replicates were established in a CRD design. Cultivated rice variety (Bg 352) and weedy rice Kurunegala (KWR) bio type were assessed for growth and yield components with four different levels of K fertilizers. The treatments were T1 (Bg 352 + zero K), T2 (Bg 352 + recommended K), T3 (Bg 352 + double the recommended K level), T4 (Bg 352 + thrice the recommended K level), T5 (Bg 352 + KWR zero K level), T6 (Bg 352 + KWR + recommended K level), T7 (Bg 352+ KWR + double the recommended K level), T8 (Bg 352 + KWR + thrice the recommended K level)

The results showed that, a significant reduction of tiller number, leaf chlorophyll content, flag leaf area and total biomass of cultivated rice due to weedy rice competition, irrespective of K fertilizer application. According to soil analyzed results ,In mono-culture condition, K use efficiency of Bg 352 was higher and with the competition of weedy rice the K use efficiency was low .The number of panicles per plant, filled grain percentage and 1000 grain weight significantly decreased due to competition of weedy rice. This reduction was not significantly affected by different K levels. The Bg 352 cultivated rice variety competed with Kurunegala weedy rice but was not affected by K fertilizer.

**Key words:** Competition, Potassium, Weedy rice