

## **Effect of *Aeschynomene indica*, *Fimbristylis miliacea* and *Cyperus iria* on Growth and Yield of Rice (*Oryza sativa*) Variety LD 365**

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### **Abstract**

*Aeschynomene indica* (Fabaceae) (Singhala: *Diyasiyambala*) is a nitrogen-fixing weed commonly found in rice fields. This study was undertaken to determine the effect of *A. indica* on growth and yield of rice variety LD 365 in comparison with two non-nitrogen fixing weeds *Fimbristylis miliacea* (Singhala: *Kudamatta*) and *Cyperus iria* (Singhala: *Thunassa*).

Observations were made on the growth and yield of the potted rice variety LD 365 grown with no weeds and with *A. indica*, *F. miliacea* and *C. iria* separately. Shoot length, number of panicles per plant, number of seeds per panicle, weight hundred seeds were measured. The experiment was conducted in a Complete Randomized design (CRD) with 3 replicates. Statistical analysis was carried out using the Student Newman-Kuells Means Separation Test of SAS program (9.1.3).

LD 365 plants grown with *A. indica* (1:1) had 25.8% higher shoot length, 29% more number of tillers per plant/ number of panicles per plant, 61% more number of seeds per panicle and 13% higher seed weight than those grown with no weeds. Furthermore, LD 365 grown with other weed plants showed negative effect of weeds on rice plant growth and yield. Rice is a N demanding crop for better growth and higher yield, therefore N-fixing weeds could be integrated into rice ecosystem for better productivity with less fertilizer inputs.

**Keywords:** *Aeschynomene indica*, *Fimbristylis miliacea* and *Cyperus iria*, *Oryza sativa*, N fixation

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