

Effect of herbicides for the control of *Fimbristylis miliacea* (L.) Vahl. in rice.

ABSTRACT

The experiment was conducted in the glasshouse at Universiti Putra Malaysia to determine the efficacy of herbicides with different modes of action against a *Fimbristylis miliacea* population and increased rice yield potentiality. Nine early post emergence herbicide treatments such as bensulfuron, cinosulfuron, pyrazosulfuron, cinosulfuron+pretilachlor+safener, 2, 4-D (amine), pretilachlor+safener, bentazone, fentrazamide+propanil and bispyribac-sodium were applied singly or in mixtures. A weed-free (hand-weeded) treatment and an unweeded treatment served as controls. The treatments were arranged in a randomized complete block design with four replications. A weed-free (hand-weeded) treatment and an unweeded treatment served as controls. The treatments were arranged in a randomized complete block design with four replications. Data on crop phytotoxicity, weed control, chlorophyll content, plant height, productive tillers, total tillers, panicle length, grains per panicle, 1000 grain weight, % filled grains per panicle, grain yield and straw biomass were recorded to evaluate efficacy of the different treatments. All tested herbicides were effective in controlling *F. miliacea*, but the herbicides bensulfuron and fentrazamide+propanil increased grain yield by more than 80% compared to the unweeded treatment and were comparable to the weed-free treatment.

Keyword: Efficacy; *Fimbristylis miliacea*; Control; Herbicides; Rice