

Weeds, Herbicide Use and Resistance in Rice Fields of Sri Lanka

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Abstract

Weeds are a significant problem in rice culture, and increasing use of herbicides in the developing countries do face problems of herbicide resistance. A study was undertaken to determine herbicide use patterns, weeds and the possible existence of resistance in the prominent weeds to the most popular herbicides used in two agroclimatic zones of Sri Lanka. The rice farmers could be categorized into non, suboptimal, optimal and excessive users of herbicides based on rates. The weed populations were greater in the dry season and grasses were predominant. The most common species were *Echinochloa* spp., *Ischaemum rugosum*, *Leptochloa chinensis*, *Cyperus* spp (sedges) and few broadleaved species. Selected populations of *E. crus-galli* and *I. rugosum* showed some degree of resistance to Propanil and Nominee (Bispyribac Sodium) respectively, on the basis of assays determining seedling death, while there was no evidence of resistance in *E. colonum*. Further research is called for to examine the potential of herbicide resistance development in major rice fields, due to the increasing use of herbicides in rice culture.

Media summary

Grass weeds are more common in rice than broadleaved species, and there are indications of herbicide resistance in the prominent grass weeds.

Key Words

Rice, Weeds, Herbicides, Grasses, Resistance