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A NOTE ON THE COMPARATIVE EFFICIENCY OF CERTAIN HERBICIDES IN RICE FIELDS

The investigation was carried out at Rice Research Station, Mannuthy, Trichur to find out the comparative efficiency of certain herbicides in controlling the weeds in rice fields during 'Viruppu' (First crop) season of the year 1972—73. Experimental results on the performance of herbicides in controlling weeds of rice in some locations in South India were reported earlier by Nair *et al.* (1975) and Soundarapandian *et al.* (1972).

The soil of the experimental plot was sandy loam with organic carbon, phosphorus and potash 0.916, 0.017 and 0.062 per cent, respectively. The pH was 5.4. The variety used was IR 8. The experimental design used was RBD with four replications. The treatments were as shown in Table 1.

Important weeds in the experimental plot were *Cyperus rotundus*, *Cynodon dactylon*, *Phyllanthus niruri*, *Portulaca quadrifida*, *Lactuca ruccinata* and *Cyperus bulbosus*. The data are presented in table I. The crop in all the subplots except the hand weeded plots was affected by the weed growth. Application of butachlor and C. 288 was found to be effective in reducing the growth of weeds. The grain yield of rice has relatively increased in most of the plots treated with herbicides in comparison to the control plot. Among the herbicides used, the highest grain yield was obtained with C. 288 followed by preforan, propanil (two applications) butachlor and propanil (one application).

**Table 1 Effect of herbicide treatments on grain yield of rice,
dry matter of weeds and number of weeds**

Treatment	Grain yield of rice in kg/ha	Dry wt. of weeds/per sq. m	No. of weeds/ sq. m
Propanil two applications 3 kg a.i./ha	737.5	0.3225	292
Butachlor 2 „	725.0	0.3450	147
C. 288 2	1012.5	0.2834	158
Preforan 2 „	762.5	0.3025	235
Hand weeding (twice)	1200.0	0.1112	193
Hand weeding (once)	1412.5	0.1788	461
Control (Non-weeded)	102.0	6.3863	398
Propanil one application	224.5	0.4200	438
CD at 1%			183

The highest total number of weeds per sq. m in handweeding (once) may be due to the fact that immediately after hand weeding there was enough space for innumerable tiny weeds to grow. In plots where handweeding was done twice weed growth low. There was no significant difference in the grain yield and also in the dry weight of weeds. However it is seen that whenever there was an increase in dry matter of weed, there was corresponding decrease in yield and this decrease in yield was highest in control.

സംഗ്രഹം

നെല്ലിലെ കളകളെ നശിപ്പിച്ചു നെല്ലിന്റെ വളർച്ച, വിളവു എന്നിവയെ സഹായിക്കുന്ന ചില കളനാശിനികളുടെ കഴിവുനോക്കിയുള്ള താരതമ്യപഠനം മണ്ണുത്തി നെല്ലു ഗവേഷണ കേന്ദ്രത്തിൽ നടത്തുകയുണ്ടായി. കളനാശിനികൾ കളകളുടെ വളർച്ചയെ സാരമായി തടയുന്നുണ്ടെങ്കിലും നെല്ലിന്റെ വളർച്ചയിലും, വിളവിലും സാരമായ വ്യത്യാസം കണ്ടില്ല.

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