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SOURCES OF RESISTANCE TO PYRICULARIA ORYZAE IN ORYZA SATIVA L.

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ABSTRACT.

A collection of 791 lines of rice germplasm of wide geographic origin from 25 countries were tested for blast resistance at seedling stage using IRBN methodology for 2 consecutive years. Difference in response to blast resistance were identified with 45 accessions of 8 countries. Most of the resistant material was of local origin. The 162 lines were intermediate and 584 were susceptible to blast fungus. The data for 4 major yield components were secured for the resistant material. Norin-17 from Japan produced maximum tillers per plant. Indigenous cultivars were either early or late in ear emergence and were low yielder. Santhi group of local origin which was low in yield component characters exhibited resistance to blast and could prove a good source of resistance for use in a breeding programme.

INTRODUCTION.

Rice blast (Pyricularia oryzae) is a common disease and occurs in most rice growing areas of the world (Ou 1985). Rice plants are vulnerable to this disease which is widespread in various environmental conditions and can cause complete death of rice seedlings or plant damage at tillering stage. Differences in disease incidence were observed among susceptible and resistant varieties and the disease symptom varied from slight to severe (Nomura and Ishii 1982). The damage caused by this disease is reduced if sowing of resistant varieties is practiced in the field in particular area (Ahn and Ou 1982). With the growing trend of obtaining high yield the use of fertilizers have also been increased manifold. Use of high dose of fertilizer is likely to increase the severity of blast which will be a major constraint to stable rice