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Screening of wild rice species against blast disease incidence

Sagarika Parida

School of Applied Sciences, Centurion University of Technology and Management, Odisha, India

Email-Id: sagarika.parida@cutm.ac.in

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ABSTRACT

Wild rice varieties are great store house of genetic diverseness and have survived in the nature for thousands of years and so they definitely therefore must carry substantial amount of genes that are responsible for resistance to different diseases and pests. This chapter reveals the screening of blast disease incidence of 27 accessions representing 19 wild rice species. The disease incidence was evaluated in wet season of 1994 against blast disease. Out of the wild rice species tested only six (Oryza eichingeri, O. grandiglumis 1085, O. latifolia 1007, O. longistaminata 1026, O. meridionalis and O. rufipogon 1011) showed resistance to blast isolated IC-1. The diseases intensity in the above cultivars ranged between 2.66 and 3.66 Mean Disease Index (MDI). Out of the wild rice species tested only six (O. eichingeri, O. grandiglumis 1085, O. latifolia 1007, O. longistaminata 1026, O. meridionalis and O. rufipogon 1011) showed resistance to blast isolate IC-1. The diseases intensity in the above cultivars ranged between 2.66 and 3.66 MDI. These resistant wild rice cultivars can also be used to develop blast resistant cultivated rice cultivars by incorporating the resistant genome from the resistant wild rice accessions.

INTRODUCTION

Rice (*Oryza sativa* L.) is the most important staple food crops of the world especially for the people of Asia and provides both value and more than 50% global food energy. Wild rice varieties are great store house of genetic diverseness and can be used to enhance the quantity as well as quality of rice (Brar 2003; Sun et al. 2001). They have survived in the nature for thousands of years and so they definitely