

Short Report

FIRST REPORT OF *Rhizoctonia oryzae* ON MAIZE IN IRAN

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Abstract

Rice sheath spot agent was first reported from California, Arkansas and Louisiana as *Trichoderma* sp. (Tullis, 1934). Then Ryker & Gooch introduced *R. oryzae* as the correct agent. *Waitea circinata* has WAG-O anastomosis group related to *R. oryzae*. The fungus was not reported from Iran. A *Rhizoctonia* isolate was isolated from corn sheath bearing sheath blight symptoms. After fourteen days the colony was changed white to salmon and sclerotia were waxy, soft and often sunken in agar. Sclerotia were irregular and salmon in colour. The species as pathogen has been reported from Japan, Cambodia, Thailand, Taiwan, Philippines, USA, West Africa and Brazil. Hoshioka and Mankino (1969) reported that this fungus was found in subtropical and tropical rice growing regions and regarding to this report, *R. oryzae* is confined to these climates due to its low cold tolerance threshold. Although sheath spot has observed in southeastern Australia which is outside the tropical and sub-tropical regions (Lanoiselet *et al.*, 2001). The pathogen has been isolated from wheat, barley and rice (Ryker and Gooch, 1938). Also *R. oryzae* has been found with extensive distribution and high virulence on wheat, barley and pea fields (Paulitz, 2002). In Iran, the fungus has been previously reported as pathogen of corn, rice and wheat. Pathogenicity tests had positive results on roots and sheaths of corn and wheat seedlings. After DNA extraction, *R. oryzae* was subjected to amplification with ITS4 & 5 primer pairs with an annealing temperature of 60°C. The PCR product on 1.5% agarose consisted of a 670 bp fragment. Comparison of the sequences with those present in NCBI led to identification of *R. oryzae*. There were no noticeable differences between characteristics of *R. oryzae* isolates in the present study with those described by Rayker and Gooch. Based on the morphological and molecular characteristics of the isolates WAG-O, It can be concluded that this and similar isolates described herein, are isolates of *R. oryzae* and the species is being reported for the first time on corn from the central region of Golestan province.