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Fungi diversity in the rhizosphere of selected rice varieties under drained and water logging conditions in the low country wet zone of Sri Lanka

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Rhizosphere is the soil adjecent to plant root system. It is a region of intense microbial activity where root exudates allow the development of microorganisms around the roots.

The objective of this study was to investigate the diversity of fungi in the rice rhizosphere of the low country wet zone of Sri Lanka under drained and water logging conditions. Water logging creates anaerobic condition in soil while the soils of drained paddy fields create aerobic condition. In this study, fungi were isolated from the rhizospheres of Bw 367, Bw 372 and Bw 272-6B rice varieties grown under drained and water logging conditions of paddy fields in the low country wet zone. The spread plate technique was used to isolate and purify all the isolates on Potato Dextrose Agar medium. A total of 41 fungal isolates were observed in the rice rhizosphere under drained condition**.** Out of these 41 isolates, 18, 12 and 11 fungal isolates were associated with the rhizospheres of Bw 367, Bw 372 and Bw 272-6B rice varieties respectively. Out of 32 fungal isolates recorded in the rice rhizozphere under water logging condition, 13, 08 and11 fungal isolates were isolated from Bw 367**,** Bw 372 and Bw 272-6B rice varieties respectively. Accroding to the results, fungal diversity of the rice rhizosphere depends on the rice variety and the aerobic or anaerobic nature of the paddy soil.

Keywords: Rhizosphere, Rice, Water logging

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