

Bio efficacy of fungicides against rice sheath blight caused by *Rhizoctonia solani* under *in vitro* condition

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ABSTRACT

Sheath blight caused by *Rhizoctonia solani* Kuhn [*Thanatephorus cucumeris* (Frank) Donk], occurs throughout the temperate and tropical rice growing regions. Rice sheath blight was considered as a minor disease in earlier days, but now it is regarded as an internationally important disease second only to rice blast. Use of fungicides with a broad spectrum of activity against more than one disease is common in rice. The foliar spray of fungicides is the single most effective method for the management of sheath blight disease. The bio efficacy of various fungicides like Carbendazim 50 per cent WP, Mancozeb 50 per cent WP, Benomyl 50 per cent WP, Copper oxychloride 50 per cent WP, Edifenphos 50 per cent EC, Iprobenphos 50 per cent EC and Hexaconazole 5 EC were used to test against the *R. solani* by Poisoned food technique and Mycelial dry weight is analyzed. All the tested fungicides registered appreciable inhibition in colony growth and mycelia dry weight. Among the eight fungicides, Hexaconazole 200 ppm and 400 ppm were completely inhibiting the mycelial growth of *R. solani*. Among the fungicides, Hexaconazole showed the highest level of inhibition and recorded 49.3 mg mean of mycelial dry weight. The result of the experiment revealed the superiority of Hexaconazole in the control of *R. solani*, hence the same was used for further studies.

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