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**Abstract:** Banded leaf and sheath blight (BLSB) incited by *Rhizoctonia solani* f. sp. *sasakii* Exner, is gaining the economic importance in the state. To find out a concrete and an integrated management of the disease, a comprehensive investigation was carried out. The investigation started with survey and surveillance of five different locations namely Hisri Chauli, Itki, Bero, Jirabar and Kanke of Ranchi district during kharif season, 2004 and 2005. More than 25 isolates were collected from all the locations. Out of which five were selected after routine isolation, purification and pathogenicity test. The isolates were designated for convenience in handling the cultures as Hc, It, Be, Jr and Rf based on locality from where these isolates were isolated. When the isolates were grown on PDA the radial growth of Hc was maximum (87.76 mm). The sclerotial production per plate ranged between 39.66 (Rf) to 95.33 (Hc). The morphological characters such as abundance of mycelium, colour and location, distribution size and density of sclerotia etc., of the 5 isolates showed variation. Time taken for development of sclerotia also varied among isolates. In pot culture, host-pathogen interaction revealed that isolate Hc was most aggressive followed by Rf, whereas, isolate Jr was least aggressive. In estimation of total phenol ( $\mu\text{g/g}$ ) in different genotypes against different isolates, the differences were observed. Genotypes BVM 4 showed highest level of total phenol (160.33  $\mu\text{g}$ ) whereas BVM 5 contained lowest level (119.66  $\mu\text{g}$ ) of phenol against the Rf isolate. In bio-assay of different fungicides against Rf isolate, bavistin showed 100 per cent inhibition at the concentrations of 5, 10, 20 and 40 ppm, whereas indofil M-45 showed minimum inhibition at all the concentrations. Among fungicides bavistin proved most effective as seed treatment showing 25.60 per cent disease severity and 68 per cent reduction over control. Under field conditions, bavistin (0.1%) showed least disease severity (31.78%) and highest grain yield (31.50 q/ha) whereas indofil-M 45 (0.3%) showed highest disease severity (71.49%) with lowest grain yield (18.91q/ha) among fungicides tested. In-vitro study of bioagents against the pathogen, *T. harzianum* showed maximum growth inhibition (86.93%) after 72 hr. Whereas, minimum growth inhibition was shown by *P. fluorescens* (4.10% and 7.93%). Inhibition of sclerotial production ranged between 34.1% (Th) and 20.97%(Pf). Seed treatment with bioagents alone or in combination with bavistin revealed that highest per cent efficacy was observed with bavistin (68.00%) followed by bavistin + *T. harzianum* (56.33%). Seed treatment with bioagents alone revealed that *T. viride* reduced disease severity more than any other bioagents. The efficacy of bioagents as soil application revealed maximum reduction in disease severity in plot treated with *T. harzianum* (46.59%) followed by *T. viride* (39.72%).*T. harzianum* alone as well as in combination with bavistin when used as foliar spray showed best result showing 37.22 per cent disease severity and 62.11 per cent reduction over control. In screening trial under artificial epiphytotic conditions, out of 13 genotypes, three cultivars/varieties viz., BVM-8, BVM-4 and BVM-4-1 showed resistance to the disease and 3 genotypes (BVM 2, Suwan and BM 1) showed moderately resistant reaction.

**Description:** STUDIES ON BANDED LEAF AND SHEATH BLIGHT OF MAIZE WITH SPECIAL REFERENCE TO ITS MANAGEMENT

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