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Authors: Rani, Nidhika (/browse?type=author&value=Rani%2C+Nidhika)

Advisor: Lal, H.C. (/browse?type=author&value=Lal%2C+H.C.)

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**Abstract:** Pigeonpea was earlier badly affected by wilt in Jharkhand and Alternaria leaf blight was considered minor one but in course of time the disease is assuming proportions in some pockets of Jharkhand. The present investigation was carried out with the study included survey, symptomatology, isolation and purification of fungus, pathogenicity test, morphological studies, evaluation of fungicides, bioagents, plant extract, integrated management and varietal screening against Alternaria leaf blight of pigeonpea. The systematic investigation revealed that Alternaria leaf blight was found to be infected with Alternaria spp. at all eleven locations surveyed and maximum disease incidence was recorded in research farm of R.A.C Kanke. It ranged from (0-30%). The pathogen was isolated from infected samples and identified as Alternaria alternata showing grey-brown appressed to velvety sometimes with a cottony centre, size of conidia was 38.02 x 7.12  $\mu$  with 2-4 transverse septa and 0-2 longitudinal septa and Alternaria tenuissima showed olivaceous to dark green, cottony to velvety, size of conidia was 76.5 x 6.12  $\mu$  with 2-6 transverse septa and 0-3 longitudinal septa. Out of six different fungicides tested in vitro, Tilt (Propiconazole) at all concentrations completely inhibited (100%) the mycelial growth against Alternaria spp. In biocontrol studies, rate of mycoparasitism was faster in Trichoderma viride (Pusa isolates) against Alternaria spp. followed by Trichoderma harzianum 1 (Delhi isolates). Among all the botanicals evaluated against Alternaria spp. in vitro, Garlic clove extract at 10% was found most effective in reducing the mycelial growth followed by onion and Neem. Seed treatment and two foliar sprays of Propiconazole @ (0.1%) effectively controlled the disease incidence which recorded 13.33 per cent disease severity followed by SAAF @ (0.2%) which recorded 14.33 per cent disease severity. Field evaluation of bio-agents, seed treatment and two foliar sprays of Trichoderma harzianum 1 showed minimum disease intensity of 14.33 per cent followed by Trichoderma viride. In case of field evaluation of botanicals application of Garlic (clove) extract at 10% showed minimum disease intensity of 11.66 per cent followed by onion bulb extracts. The effort has also been made to integrate the plant products and bio-agents as ecofriendly component along with fungicides for the effective management of the disease. Seed treatment with SAAF @ 2g/kg of seed plus two foliar sprays with Tilt @ 0.1 per cent was found to be most efficacious treatment showing minimum disease intensity (10.66%) of Alternaria leaf blight disease and increasing grain yield of 1535.33 kg/ha. The yield attributing traits like Plant population (91.00), Plant height (182.8 cm), No. of primary branches/ plant (18.26), No. of secondary branches/ plant (27.76), No. of Pods/ Plant (184.66), No. of Seed/ pod (4.30), 100 seed weight (11.27 gm) and grain yield (1432.56) were significantly superior in case of propiconazole (0.1%) treatment plot followed by SAAF.

**Description:** STUDIES ON LEAF BLIGHT OF PIGEONPEA CAUSED BY Alternaria spp. AND ITS MANAGEMENT

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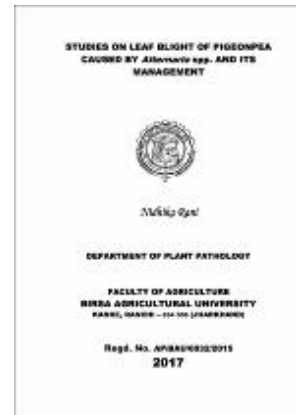
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