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**Abstract:** Alternaria leaf spot incited by *Alternaria brassicicola* is a major devastating disease of cabbage (*Brassica oleracea* var. *capitata* L.), causing significant reduction in yield. The crop grown in Jharkhand usually suffers seriously from this disease. Considering the economic importance of the disease present investigation has been carried out. The study included survey and surveillance, symptomatology, isolation and purification of fungus, pathogenicity test, morphological studies, screening and evaluation of bioagents, plant extract, fungicides, integrated management against Alternaria leaf spot caused by *Alternaria brassicicola*. The systematic investigation revealed that cabbage was found to be infected with *Alternaria brassicicola* at all six locations surveyed and maximum disease intensity was recorded in RAC farm (43.2 per cent). Morphological studies of the *A. brassicicola* revealed that Mycelium was short, compact, septate, inter and intracellular. Conidiophore was simple, erect, septate, straight or curved. Conidia was cylindrical to oblong, poorly developed beak, muriform, septate, light to dark olivaceous in colour and had long chains of 6 to 8 spores. The length of conidia varied from 78.0 µm to 96.0 µm. The width varied from 11.0 to 17.0 µm. The beak length varied from 8.0 to 28.0 µm with longitudinal septation varying from 2.0 to 3.0 and transverse septation from 3.0 to 6.0. Among systemic fungicides, Hexaconazole, Propiconazole and Vitavax power at 0.025, 0.05 and 0.1% concentration completely inhibited the growth of the pathogen. Among non-systemic fungicides, Mancozeb and Zineb at 0.1, 0.2 and 0.3% concentration completely inhibited the growth of the pathogen. Among all the botanicals evaluated against Alternaria leaf spot pathogen in-vitro, *Azadirachta indica* at 10 per cent concentration was found most effective in reducing the mycelial growth followed by *Allium sativum*. In monoculture, *Trichoderma viride* (D) and *Trichoderma harzianum* (R2) produced 88.4 mm and 83.6 mm colony diameter on PDA medium after 72 hours of inoculation. Rate of mycoparasitism was faster in *Trichoderma viride* (D) against Alternaria leaf spot pathogen followed by *T. harzianum* (R2). In dual culture maximum inhibition of mycelial growth (77.9%) was recorded by *T. viride* (D) after 72 hrs of inoculation. Three foliar sprays of Hexaconazole @ 0.1 per cent recorded minimum disease intensity (18.5 per cent) and highest yield of 184.4 q/ha and also recorded maximum disease reduction over control (54.32 per cent). Highest C:B ratio (1:19.29) was recorded by three foliar sprays of Hexaconazole (0.1%) and net return/ha of Rs. 40310/- Three Sprays of neem leaf extract @ 10% recorded minimum disease intensity (32.2 per cent) and highest yield of 165.0 q/ha and maximum disease reduction over control (29.38 per cent). Application of neem leaf extract at 10% was highly economical which recorded cost-benefit ratio of 1:17.32 and net return/ha of Rs. 26850/- The combination of seed treatment with Vitavax @ 2 g/kg seed plus two foliar sprays of Hexaconazole @ 0.1% showed minimum disease intensity (12.0 per cent) and gave highest yield of 196.8 q/ha. Considering cost – benefit ratio, seed treatment with Vitavax power @ 2 g/kg seed plus two sprays of Hexaconazole (0.1%) was found to be favourable and economical with returns Rs 34.22 per rupee. The only one variety, Pusa Mukta showed moderately resistant reaction against Alternaria leaf spot disease of cabbage.

**Description:** OCCURRENCE, INTENSITY AND MANAGEMENT OF ALTERNARIA LEAF SPOT DISEASE OF CABBAGE (*Brassica oleracea* var. *capitata* L.)

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