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**Abstract:** Brinjal (*Solanum melongena* L.) is an important vegetable crop which gives very high economic return to the growers. Fruit rot caused by *Phomopsis vexans* (Sacc. & Syd.) is one of the major constraints in its successful cultivation. During survey, the disease was prevalent in all area surveyed. The incidence of disease ranged from 18.33 to 62.00 per cent in different locations. Maximum incidence (62.0 %) was recorded in the cultivar Pusa Purple Long at Technology Park of Birsa Agricultural University, Kanke, Ranchi whereas least disease incidence (18.33 %) was recorded in cultivar Pratima at Nagri village of Kanke block. The pathogen affect all the aerial parts of plant and causing damping off seedling at nursery bed and leaf blight, stem blight and fruit rot symptoms at the main field. Fruit rot is the most destructive phase of disease resulted in formation of large rotten area on fruit and made it inedible and unmarketable. The pathogen was isolated and purified by following tissue isolation technique. Pathogenicity of the pathogen was proved by seed, soil, leaves and fruit inoculations. On the basis of cultural and morphological characteristic the pathogen was identified as *Phomopsis vexans* (Sacc. and Syd.). Correlation coefficient between disease (dependent variables) and weather variables (independent variables) showed that maximum temperature and maximum relative humidity were highly significant and positively correlated with disease intensity whereas minimum relative humidity was highly significant but negatively correlated with PDI. The rain fall was significant but negatively correlated. Multiple regression analysis between PDI and weather variables altogether accounted 97 per cent variation which was highly significant. Among the varieties/cultivars of brinjal screened against the disease, none of them was found to be resistant. Only two varieties, Ramnagar Giant and Round Green Katedar showed moderately resistant reaction. Out of six fungicides evaluated, Saaf (Carbendazim 12% + Mancozeb 63% WP) and Nativo (Tebuconazole 50% + Trifloxystorbin 25%) completely inhibited the mycelial growth of pathogen in -vitro. Among plant extract/botanicals crude leaf extract of *Allamanda cathartica* (pilikaner) completely inhibited the mycelial growth of pathogen. Under field condition, seed treatment with Saaf (Carbendazim 12% + Mancozeb 63% WP) @ 2g/kg seed + 2 foliar spray with Contaf (Hexaconazole) @ 0.1% managed the disease efficiently with minimum disease intensity (16.67 %) and highest fruit yield (264.53 q/ha) as compared to (44.33 %) disease intensity and (217.06) q/ha fruit yield in control. Seed treatment with Saaf @ 2g/kg seed + 2 foliar spray with Saaf was next effective treatment with highest per rupees return.

**Description:** EPIDEMIOLOGY AND MANAGEMENT OF FRUIT ROT DISEASE OF BRINJAL INCITED BY *Phomopsis vexans*

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