**Research Article**

# Characterization of Popular Potato Varieties in West Bengal for Their Resistance to Early Blight

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**Abstract**

Effect of inoculum concentration, leaf wetness period and age of the plant on the development of early blight of potato was evaluated in relation to host susceptibility in three popular varieties of potato under field condition. Mean lesion number in leaf and per cent leaf area damage in inoculated plant increased with the increase in inoculum load. The highest lesion number 15.70 was observed in plant inoculated with spore concentration of $1x10^5$ conidia per ml while very few lesions was noticed at $1x10^2$ conidia per ml. Disease severity value increased from 10.20 to 41.20 per cent with the increase in inoculum concentrations in Kufri Chandramukhi. No disease symptoms were produced when plant was exposed to 4h of leaf wetness. Mean lesion number and disease severity value were increased with increase in leaf wetness period upto 36h. Potato plants became more susceptible as plant matured. Susceptible variety Kufri Chandramukhi produced more leaf area damage and more lesions as compared to resistant variety Kufri Pukhraj at 70 days old.

**Key words**: *Alternaria solani*, early blight, inoculum concentration, leaf wetness, plant age, potato, resistance

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