

Prevalence and evaluation of fungitoxicants against noxious *Marssonina juglandis* causing Anthracnose disease of Walnut (*Juglans regia* L.) in Kashmir

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ABSTRACT : Walnut anthracnose is one of the most important disease of walnut (*Juglans regia* L.) world-wide. The disease is prevalent in all the walnut growing areas of Kashmir valley surveyed, during the year 2013. The overall mean disease incidence and intensity ranged from 71.78 to 97.34 per cent and 19.56 to 51.66 per cent on leaves and twigs, respectively. The maximum disease incidence of 97.94 and 74.66 per cent and intensity of 55.76 and 22.77 per cent on leaves and twigs, respectively was observed in district Anantnag and minimum disease incidence of 96.22 and 68.41 per cent and intensity of 49.03 and 15.32 per cent, respectively was observed on leaves and twigs in district Kupwara, respectively. Twelve fungitoxicants both systemic viz, Carbendazim 50WP, Thiophanate methyl 70WP, Flusilazole 40EC, Difenconazole 25EC, Tebuconazole 25EC, Metiram + Pyraclostrobin 60WG @ 0.005%, 0.01%, 0.015%, 0.02% and non-systemic viz., Copper oxychloride 50WP, Mancozeb 75WP, Propineb 70 WP, Chlorothalonil 75WP, Captan 50WP, Ziram 80WP @ 0.025%, 0.05%, 0.1%, 0.15% were evaluated *in vitro* for their comparative efficacy against spore germination and mycelial growth inhibition against the *Marssonina juglandis* causing walnut anthracnose. All fungitoxicants at all the test concentrations inhibited the spore germination and mycelial growth of the pathogen and their effect differed significantly. Among the twelve fungitoxicants tested *in vitro*, metiram + pyraclostrobin 60WG, tebuconazole 25EC, flusilazole 40EC, mancozeb 75WP, captan 50WP, copper oxychloride 50WP proved significantly superior in inhibiting the spore germination as well as mycelial growth of test fungus.

Key Words: Walnut (*Juglans regia*), anthracnose, *Marssonina juglandis*, prevalence, evaluation, efficacy, fungitoxicants, systemic and non-systemic, mycelial growth, spore germination.