

Effect of environmental factors on chilli fruit rot infection caused by *Colletotrichum capsici*

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Environmental factors like temperature, relative humidity and light must be favourable for the infection to take place. The optimal requirements of these factors vary with different species of plant pathogens. To find out the effect of environmental factors on chilli fruit rot infection, the surface sterilized, healthy chilli fruits artificially inoculated with conidial suspension (concentration of 10⁶ conidia/ml) of *Colletotrichum capsici* and incubated at different temperatures (includes 15, 20, 25, 30, 35 and 40°C), relative humidity levels (includes 75, 80, 85, 90, 95 and 100%) and light regimes (includes continuous light, continuous darkness, 18 h darkness followed by 6 h light period and 18 h light followed by 6 h darkness period), respectively. Ten days after inoculation recorded the data on lesion size and per cent disease index (PDI). The highest lesion size (15.10 mm) and PDI (38.50) were recorded when the inoculated chilli fruits were incubated at temperature of 25°C. Temperature beyond and below 25°C caused significant reduction in both lesion size and per cent disease index (PDI). Among the four light regimes, 18 h light followed by 6 h dark period was optimum (recorded the highest lesion size (8.96 mm) and PDI (61.05)) for chilli fruit rot development. The inoculated chilli fruits incubated at relative humidity of 95 per cent reported the highest infection (lesion size (21.00 mm) and PDI (59.90)). When the relative humidity was decreased to 75%, the lesion size and per cent disease index showed a sharp decrease.

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