

D-07: The sensitivity of three chilli (*Capsicum annuum* L.) varieties to two major nursery killers

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Damping-off is a nuisance disease in chilli nurseries in tropical countries including Sri Lanka. In this investigation we focused on isolation of causative agents and investigation of their performance against three chilli cultivars

commonly grown in Sri Lanka namely *Capsicum annum* var. *acuminatum* cv. MI-1, MI-2 and var. *grossum* cv. CA-8. Samples were collected from diseased spots in farmers' nursery beds from all over the country.

Surface sterilized stem pieces of diseased seedlings were used to isolate pathogens and the pathogenicity of the isolates was confirmed by Koch's postulates. The inoculations were done either by prick inoculation or by soil drench. The performance of each pathogen was assessed by mixing propagules of pathogens with soil at different concentrations, sowing seeds and scoring ungerminated seeds and seedling death. Uninoculated soil served as control.

Rhizoctonia solani and *Fusarium solani* were the commonly isolated pathogens and a species of *Pythium* was also isolated intermittently but could not be maintained in culture. *R. solani* caused pre-and post-emergence damping-off of MI-2 and CA-8 and only post-emergence damping-off of MI-1. *F. solnai* caused only post-emergence damping -off of all three varieties. CA-8 has shown the highest sensitivity to both pathogens and MI-1 was most tolerant, MI-2 ranking in between.

Since the high occurrence was recorded from field samples and caused both pre-and post-emergence damping-off, *R. solani* should be given special attention in control measures.