

EFFECT OF CARBOHYDRATE STRESS AND OTHER ENVIRONMENT
FACTORS ON MACROPHOMINA PHASEOLINA INFECTION
IN CAPSICUM ANNUUM L. (CHILLI).

By

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Thesis

submitted in partial fulfilment of the requirements

for the degree of

MASTER OF PHILOSOPHY

in

Agriculture

in the

POSTGRADUATE INSTITUTE OF AGRICULTURE

of the

UNIVERSITY OF PERADENIYA, SRI LANKA.

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Examination Committee

October 1984.

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ABSTRACT

Foot rot in chilli, Capsicum annum L. causes serious yield loss in dry zone chilli farms. The primary causal agent of foot rot infection is fungus Macrophomina phaseolina. The damage caused by the pathogen is really conspicuous during fruiting and also after irrigation followed by dry spell. Commonly used chilli CV MI 2 was found to be very susceptible. 3 SEP 1988

Effect of carbohydrate stress on disease development was studied under field and green house conditions. The susceptibility of chilli CV MI 2 was evaluated in the inoculated field in a Randomized split plot design with 4 block replication at 2 defoliation (0 and 50%) levels and two deflowering (100% and 0%) levels independently. Similar treatments were used under controlled green house conditions in potted plants. It was found that chilli plants were more susceptible to foot rot caused by M. phaseolina after defoliation or pod formation. Soluble carbohydrate content and calorific values were low in the defoliated or plants with pods. There was a significant increase in the infection after the defoliation or pod formation over controls. High soil moisture, soil temperature and root exudates of onions (Allium cepa L.) and Cyperus rotundus L. caused significant loss in viability of the sclerotia of M. phaseolina in soil. Also it was found that the addition of cowdung as an organic manure reduced the infection significantly.