

BIOLOGICAL CONTROL OF POST HARVEST DISEASES OF BRINJAL

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ABSTRACT

The fungi associated with the spoilage of brinjal fruits were studied. Fungi like *Alternaria solani*, *Fusarium solani*, *Colletotrichum gloeosporioides*, *Botrytis cinerea*, *Penicillium* sp., *Rhizopus niger*, *Curvularia lunata* and *Botryodiplodia theobromae* caused damage through the year. 26 phylloplane fungi were isolated from the leaf surface of brinjal plants. The type of mycoparasitism between the pathogen and the phylloplane fungi was studied. The pathogens viz., *F. solani*, *A. solani* were overgrown by the phylloplane fungi viz., *T. viride*, *A. niger*, and *A. flavus*. Penetration and coiling of hyphae was noticed with *F. solani*, while penetration and disintegration was common with *A. solani*. In *Trichoderma* treated fruits even though symptoms were visible by fourth day, it caused only 48 percent damage by 12th day, while in control samples of *F. solani* infected fruits symptoms were observed by 2nd day and complete rotting by 12th day. The study thus highlighted the possibility of utilizing *Trichoderma* as a biocontrol agent against the major post harvest diseases of brinjal.

Key words: Brinjal; biological control; Post harvest diseases.

INTRODUCTION

Biological control of plant disease is suggested as an alternative to chemical control (Cook, 1977) and is considered as a cost effective and an environmentally friendly technique. Even though a number of mycoparasites have been recognized (Janisiewicz, 1988), their role in combating the post harvest diseases of common vegetables like brinjal is very little. Hence, the present study was undertaken with the following objectives:

1. Isolation and identification of the fungal pathogens associated with brinjal fruits
2. Qualitative study of the naturally occurring phylloplane mycoflora of brinjal
3. In vitro studies of common phylloplane fungi with the major pathogens of brinjal for evaluation of suitable antagonistic fungi
4. Mechanism of action of antagonism
5. Effect of selected mycoparasite against important fruit rot pathogens.

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