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A STUDY OF GREEN MOULD DISEASE IN OYSTER MUSHROOM COMPOST

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Green mould disease in Oyster mushroom (*Pleurotus ostreatus*) caused by *Trichoderma harzianum* was first recorded in Sri Lanka in 1998.This disease results in considerable inhibition of growth of fruit bodies and lowers the yield substantially. The objectives of the present study were to establish the most dominant strain/s of *T.harzianum* in Sri Lanka and to examine how the disease inhibits mushroom growth while *T.harzianum* growth is accelerated in the compost medium.

Contaminated mushroom bags were collected from mushroom houses in the Kandy district and the most dominant strain was identified as *T.harzianum* biotype 2 (Th-2) using colony and conidial morphology. Certain interactions between *T.harzianum* and Oyster mushroom were studied *in vitro*. Diffusible metabolites of *T. harzianum* (Th-2) inhibited the growth of *P.ostreatus* by over 90%, but not vice versa. Growth of the two organisms on the same agar plate opposite to each other revealed that *T.harzianum* could grow rapidly inhibiting the growth of *P.ostreatus* colonies.

The volatile metabolites of *T.harzianum* or *P.ostreatus* showed no significant inhibitory effect on the mycelial growth of each other. The results showed that the diffusible metabolites of *T.harzianum* can cause a significant reduction of *P.ostreatus* growth. But the growth of *T. harzianum* was not significantly accelerated by *P.ostreatus* metabolites. Therefore, introducing a method to prevent the diffusible activity of metabolites produced by *T.harzianum* could minimize compost contaminations of Oyster mushroom cultivations.