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A COMPARATIVE STUDY OF FORMS OF PORIA HYPOLATERITIA ISOLATED FROM DIFFERENT REGIONS OF SRI LANKA

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Poria hypolateritia is the causative fungs of the red root disease of tea. This disease is common and destructive in tea plantations of Sri Lanka situated at elavations above 600 M. In this study the characters of forms of P. hypolateritia isolated from different tea growing localities in Sri Lanka were investigated, with a view to establish whether significant variations exist among the isolates.

The morphology of the isolates were similar. The isolates showed significant variations in their growth rates when grown in solid and liquid media. All the isolates had the ability to grow in the temparature range of 15 - 30 C, and tolerated temparatures between 5 - 35 C. Temparatures above 35 C were lethel.

The study of utilization of the carbon sources revealed that pectin was the best source for the growth of all the isolates. This probably may be an adaptation for pathogenesis. Inorganic nitrogen compounds when incorporated into the media, inhibited the growth of the fungus. Among the inorganic nitrogen compounds used was urea and T 200 which are widely used as fertilizers in tea plantations.

Day light seems to enhance the growth of the pathogen since the isolates exhibited faster growth when exposed to diffused day light as compared to growth in total darkness. The Poria isolates secreted the cell wall degrading enzyme polygalacturonase. But, the time of secretion and the amount varied among the isolates.

Though variations among the isolates were observed in this study, the results obtained do not justify in categorizing the isolates into distinct groups.