

IMPACT OF POWDERY MILDEW DISEASE ON THE YIELD OF RUBBER IN TRIPURA

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Powdery mildew is the major fungal leaf disease of rubber in Tripura. A field trial was conducted to assess the economic impact of sulphur dusting against powdery mildew in 23 year old rubber plantations of clones RRRI 105 and RRIM 600. Higher incidence and severity of powdery mildew disease was observed in RRRI 105. The average severity of powdery mildew disease in sulphur dusted blocks of the two clones was 28.6 per cent as compared to 55.8 per cent in the undusted blocks. The growth of the trees was adversely affected in the undusted blocks of both the clones. The mean annual crop loss was estimated to be 19.5 and 14.2 per cent in the undusted blocks of RRRI 105 and RRIM 600, respectively. The economic advantage of sulphur dusting as control measure against powdery mildew disease was evident as cost of dusting compensated by 1.22 per cent increment in the yield based on the then prevailing costs and price of rubber.

Key words: Crop loss, Disease control, *Hevea brasiliensis*, Powdery mildew, Sulphur dusting, Tripura

INTRODUCTION

Powdery mildew disease of rubber caused by the fungus *Oidium heveae* Steinm. is prevalent in all the rubber growing parts of North East India (Mondal *et al.*, 1994). Leaf fall due to powdery mildew adversely affect the growth and yield of rubber. It can result in serious retardation in the rate of growth and bark renewal (Liyanage and Jacob, 1992). The disease adversely affect photosynthesis and respiration in infected leaves compared to healthy ones (Annamalainathan and Jacob, 2002). However, information on crop loss due to *Oidium* attack in popular clones of rubber in Tripura region is not available. Therefore, an investigation was carried out to assess the economic impact of powdery

mildew disease on the yield of two popular clones cultivated in Tripura.

MATERIALS AND METHODS

The experiment was conducted in research farm of Rubber Research Institute of India, at Taranagar in Tripura in a 23 year old plantation of two popular clones *viz.* RRIM 600 and RRRI 105 for six consecutive years during 2008-2013. Paired plot design was adopted where one block was dusted with sulphur and the other one was kept as control. The plant stand of RRIM 600 and RRRI 105 was 336 and 236 per hectare and the experimental trees were 150 and 220, respectively. Trees were tapped under alternate daily tapping (S/2 d2 6d/7) in the

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