

REACTION OF *HEVEA BRASILIENSIS* CLONES AGAINST POWDERY MILDEW DISEASE IN NORTH EASTERN REGION OF INDIA

G. C. Mondal, H. K. Deka and D. Chaudhuri
Rubber Research Institute of India, Regional Research Station,
Household Complex, Guwahati-781 006, Assam, India

Submitted: 15 December 2005 Accepted: 12 September 2007

Mondal, G. C., Deka, H. K. and Chaudhuri, D. (2007). Reaction of *Hevea brasiliensis* clones against powdery mildew disease in north eastern region of India. *Natural Rubber Research*, 20 (1&2): 90-93.

The incidence and severity of powdery mildew disease caused by *Oidium heveae* were assessed in forty clones of *Hevea brasiliensis* in different experiments in Assam, Meghalaya, Tripura and northern West Bengal. At the mature stage of growth, the severity of powdery mildew disease was evaluated for three consecutive years during the peak time of the disease (March-April) after wintering. Sixteen clones were found to be moderately tolerant with infection grades ranging from 1.5 to 2.5. Due to repeated massive premature defoliation caused by the disease during March to May, die-back was noticed subsequently in clones PB 5/51, PB 235, RR11 300, RR11 51, RR11 105, RR11 5, RR11 430 and RR11 105. These clones are therefore rated as highly susceptible to powdery mildew disease.

Key words: Clones, *Hevea brasiliensis*, *Oidium heveae*, Powdery mildew disease, North East India, West Bengal.

Rubber (*Hevea brasiliensis* Muell. Arg.) is emerging as an important plantation crop in North East India and northern part of West Bengal. One of the limitations for rubber cultivation in these regions is occurrence of powdery mildew disease caused by *Oidium heveae*. Mondal *et al.* (1994) reported that owing to the extensive rubber cultivation, the outbreak of powdery mildew disease has become very common in all the rubber growing regions of North East India. The severity of the disease varies with the pattern of wintering, clones, leaf age, planting densities, age of plants, location, elevation and environmental factors (Liyanage, 1976; Mondal *et al.*, 1998). Severe incidence of powdery mildew disease in the absence of chemical control in the clone RRIM 600 has been reported leading to heavy crop loss (Yu

Zhuorong, 1989; Jacob *et al.*, 1992). In addition, repeated attacks result in poor canopy, with consequent adverse effects on girdling and bark renewal (Wastie and Mainstone, 1969; Lim, 1974; Mondal *et al.*, 1998; Mondal and Jacob, 2002). It is therefore essential to evaluate the severity of powdery mildew disease on rubber clones in north-eastern region including northern West Bengal. The severity of powdery mildew disease on forty *H. brasiliensis* clones were evaluated at different research farms in this zone and reported in this study.

The experimental material consisted of rubber plantations under tapping in different research farms of Regional Research Stations of Rubber Research Institute of India located at Sarutari in Assam, Ganolgre in Meghalaya, Taranagar in Tripura and