

Secondary Leaf-Fall Disease of *Hevea* : A Report from Mizoram

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As the rubber plant (*Hevea brasiliensis* Muell. Arg.) has become an important crop in Northeastern India, investigation on the detrimental effects on health and vigour of rubber is very essential. It is already established that the rubber plants are highly susceptible to various diseases and pests by which growth and yield of rubber are much affected (Wima-lajeewa, 1965, Wimala-jeewa and Lloyd, 1965 and Pillay *et al.*, 1980.) During a survey of rubber diseases in Mizoram the Secondary Leaf Fall (SLF) disease caused by *Colletotrichum gloeosporioides* penz was found to attack the plants quite frequently during June to September, 1994 and is reported for the first

time from this part of India.

The study site was located at Tuichhuhen Research Farm about 16 KM away from Kolasib in Mizoram. The area is in an altitude of about 150M from Mean Sea Level (MSL). The survey was conducted in the Experimental Farm of the Rubber Research Institute of India, having an area of 44.3 ha. The occurrence of secondary leaf fall disease caused by *C.gloeosporioides* was noticed attacking the young tender leaves of rubber. However, the high intensity of infection was mostly recorded in bud wood and seedling nurseries in Mizoram. SLF disease with moderate to severe spotting on the immature leaves led to defoliation. Infection was abundant during the rainy season when the humidity

and temperature were quite conducive for the growth of the pathogen. The climatological data recorded at the Experimental Farm revealed that the average maximum and minimum temperature (32.37 and 24.46°C) and relative humidity (72.36 and 93.17%) were present during June to September 1994 which reflects a conducive weather for the incidence of SLF disease on immature leaves. The average rain fall (372 mm) and bright sun shine hours (4.77) were also recorded during the period from June to September 94. This disease appears to be quite widespread and serious especially in the nursery plants.

The conidia are produced abundantly and are very evident on infected

parts of the leaves as the pink, cheesy cushions. On the infected leaves, numerous minute circular brown spots with yellowish halo occur. As the infected leaves mature, these are raised on the leaf surface which can be easily felt with the fingers (Radziah and Ismail, 1990). It was also noticed that depending upon the severity of disease with the passage of time, the immature leaf tips and margins turn black and finally abscise. It was noticed that severe infection of this pathogen leads to shoot die-back in young nursery plants.

The climatic conditions seem to play a vital role in the proliferation of SLF disease. The disease becomes quiescent during the dry period but the spores remain viable and cause fresh infection during rainy season.

Although, Mizoram lies far outside the traditional

rubber growing zone, the agroclimatic conditions prevailing there are unique and comparable to any traditional rubber growing belt of the tropics and subtropics. The occurrence of this pathogenic fungus has been reported from all the rubber growing countries of the world (Wimalajeewa, 1965, Webster and Bulkwill, 1989).

In nursery plants, spraying of mancozeb (Indofil M-45 0.2%) and Carbendazim (Bavistin 0.05%) were carried out for the control of SLF disease during the first week of June, 1995. Spraying was continued for three rounds at an interval of 10 days and the SLF disease was controlled effectively by the application of Bavistin (0.05%).

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