COMBATING LEAF FALL

In our March 1983 issue, we had carried a report on the leaf fall disease in the rubber tracts of Kanyakumari district. Thomson T. Edathil C. Kuruvilla Jacob, Sabu P Idicula and K. Jayarathinam of Rubber Research Institute of India recently conducted an inquiry into the matter. Their report:

Abnormal leaf fall disease of *Hevea* caused by *Phytophthora* spp. has gained much attention among the rubber planters of South India from the very inception of plantations, but, this disease was not found to occur every year in Kanyakumari district of Tamil Nadu (Ramakrishnan and Radhakrishna Pillai, 1961)[3]. However, its incidence in this district was reported in 1961, 1967 and 1974 and it was correlated to the unusually high monthly rainfall during the south west monsoon period (Radhakrishna Pillai, 1982)[2]. In 1982 also, this disease caused severe defoliation in the rubber plantations in this district creating much panic among the planters. Hence, the feasibility of prophylactic spraying against this disease was investigated by organising micron spraying of 56% oil dispersible copper oxychloride powder with ( )t spray oil, at various locations i.. ....s district, prior to 1983 disease season. Curative treatments are not effective for the control of this disease. Moreover, it would be difficult to apply any fungicide after the appearance of the disease in heavy monsoon rains, either aerially or from the ground.

Abnormal leaf fall caused by *Phytophothora* spp.

INQUIRY METHOD

Spraying was organised at thirteen locations covering all the taluks and regions where *Hevea* is grown in Kanyakumari district. The clones covered in the trial were PB 86, RRIM 600 and Tiir-1, which are highly susceptible to abnormal leaf fall disease. The plantations were of different ages ranging from 12 to 27

years. Spraying was done during April-May by using micron sprayers. Eight Kilogrammes of 56% copper oxychloride powder dispersed in 40 litres of diluent spray oil were applied per hectare. Ten twigs were labelled on five random trees selected in each one hectare plot for pre and post treatment counting of the leaves to assess the percentage leaf retention. Appropriate control plots were maintained without spraying at each location.

In similar trials in Kerala, the experimental plots were either sprayed aerially or from the ground using micron sprayers. No unsprayed control plots were maintained since in such plots, heavy disease incidence will occur leading to considerable economic losses. This will also act as potential source of primary inoculum resulting in heavy outbreak of the disease in nearby plantations and to some extent even in sprayed areas. Due to this reason, enlightened planters do not normally allow any area in their plantations to be left unsprayed.

THE RESULTS:

The results of the prophylactic spraying trials in Kanyakumari district and in Kerala are presented in Table No. 1.

TABLE No 1.

	Kanyakumari district			Kerala.		
Clone	No. of locations	Micron sprayed	Unsprayed control	No. of locations	Aerial sprayed	Micron sprayed
PB 86	8	92.00	92.75	4	50.50	—
RRIM 600	2	84.50	80.50	2	68.50	—
Tjir-1	3	88.33	93.33	1	—	83.00

The results clearly indicate that there was no difference in leaf retention in the sprayed plots over the control in Kanyakumari District in 1983. This was due to the lack of disease incidence. Hence, annual prophylactic spraying as recommend ed by Narayanaswamy[1], would not be necessary. Disease monitoring and weather forecast are not possible because with the techinques available at present, it is not possible to predict weather conditions in June by April/May.

Summary: The need for prophylactic spraying against abnormal leaf fall disease of *Hevea* caused by *Phytopthora* spp. in Kanyakumari district was investigated. Annual prophylactic spraying was found to be unnecessary.

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