

COLÓQUIO DE MICOLOGIA

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S. Patologia de Sementes, Inst. Biologia, C. Postal 7119
01000 S. Paulo, SP.EPIDEMIOLOGY AND CONTROL OF *PHYTOPHTHORA BOTRYOSA* ON
RUBBER IN MALAYSIA

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In the major rubber-growing countries of both the New and Old Worlds, *Phytophthora* spp. infect the leaf, pod and terminal shoot to cause respectively, leaf wilt of fall, pod rot and shoot dieback. The same pathogens also attack the intact bark or the newly-exposed cambium following tapping to give rise to cankerous rot on the bark and within the underlying wood.

In Malaysia, *P. botryosa* causes leaf fall and pod rot in the rainy monsoon areas to the north western and north eastern corners of the country. Several modern high yielding clones like RRIM 600, RRIM 605 and PR 107 are particularly susceptible, with defoliation ranging from 70-85% of the canopy in a severe attack. However, the severity of the leaf fall varies from year to year, this being largely determined by the local weather conditions.

The main meteorological factors affecting field outbreaks of the disease on RRIM 600 were observed over several seasons. Intimate relationships were established between rainfall, maximum air temperature and humidity and disease severity. Basing on this, a method for short-range forecasting of an outbreak of the leaf fall was developed. An infection period is denoted by a continuous 4-day period during which the daily rainfall is 2.5mm or more, with R.H. > 90% persisting for at least 14 hours per day and the air maximum temperature falling to 32.2°C or below.

Traditionally, and as is widely practised in South India today, effective control of the leaf fall is achieved by applying a copper fungicide as a pre-monsoon protective spray some 4-8 weeks before the disease outbreak. Copper-in-oil is applied either by a helicopter at 4.0 kg/ha or from a ground LV motorised mist-blower at 4.6 kg/ha. In ground HV spraying, up to 12.5 kg/ha copper-in-water is used. In South Bahia, copper-in-water is aerially sprayed at 1.5 kg/ha thrice a year against the disease.

In Malaysia, the use of the newly-evolved disease forecasting system permitted accurate timing of the single application of copper-in-oil or captafol-in-oil to within a few days of an outbreak of the leaf fall. Particularly when applied in conjunction with thermal fogging, good control of the disease was achieved, followed by an increase in rubber yield, with a minimum dosage of the copper-in-oil fungicide (1.2 kg/ha). Fogging has since been introduced to control the leaf wilt and fall problem on plantations in South Bahia and the results seem promising.

A FERRUGEM DA SOJA NO BRASIL

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No Brasil o fungo *Phakopsora pachyrhizi* H. & P. Syd. foi identificado pela primeira vez infectando soja [*Glycine max* (L.) Merrill] na área experimental da Empresa de Pesquisa Agropecuária de Minas Gerais, em Lavras, em fevereiro de 1979. As cultivares infectadas foram: IAC-2, Paraná, Santa Rosa e UFV-1 (Deslandes, 1979, Fitopatol. Brasil 4: 337-9). Desde então, a