

THE RELATIONSHIP BETWEEN *COLLETOTRICHUM* LEAF DISEASE
AND SOUTH AMERICAN LEAF BLIGHT OF RUBBER
(*HEVEA BRASILIENSIS*)

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South American leaf blight (SALB) is the most serious disease in *Hevea*. Breeding for SALB resistance is important as an insurance against the accidental introductions of *Mycrocyclus ulei*. It has been demonstrated that some of the SALB resistant clones are also resistant to *Colletotrichum* leaf disease (CLD); the peroxidase activity (PA) and glycoside content exhibited a negative relationship with SALB resistance. The purpose of this study was (1) to examine whether these factors react similarly to CLD resistance and (2) possibility of using these factors to indirectly assess SALB resistance in countries where SALB is absent.

Chromatographical analysis revealed that there are no qualitative differences among the leaf phenols, amino-acids and sugars. However, quantitative differences were evident in leaf phenols when bio-assayed with a standard spore suspension. Total phenol contents were not correlated with SALB resistance.

SECTION B

PA increased 24 h after inoculation and was more in leaves of infected tolerant clones than in diseased susceptible leaves. Later, PA declined after 72 h in both diseased susceptible and tolerant leaves. Total phenols and flavanol content also showed a similar pattern during infection, whereas polyphenol oxidase activity did not show a marked variation during infection.

Glycoside content and PA exhibited an inverse relationship with SALB resistance. These factors could therefore be used to evaluate SALB resistance in countries where the disease does not exist.