

**BIOASSAY OF CONIDIA AND BLASTOSPORES OF *VERTICILLIUM LECANII*  
ON WHITEFLY SCALES****P. Kanagaratnam***(Coconut Research Institute, Lunuwila)*

For both glasshouse and laboratory studies, it was necessary to develop a bioassay technique to measure the effect of concentration of the two spore types of *Verticillium lecanii* on *Trialetrodes vaporariorum*, the glasshouse whitefly. This was investigated initially by single assays, using only conidia, and later by paired assays for comparing conidia and blastospores in the laboratory. Tobacco leaf discs bearing whitefly scales of known age were treated with fresh spore suspensions and incubated at 20°C under wet, humid and dry conditions. Scale mortality was assessed after one week. Control mortality was low in most assays. Distinct profuse growth of *V. lecanii* was seen covering the treated scales, individually. The data from each assay were individually subjected to probit analysis. The slopes within the ten paired assays did not differ significantly. Therefore it was concluded that both the spore types responded similarly to the different experimental conditions in each assay. Thus the data were reanalysed using parallel probit lines within each pair. The Log L c<sub>50</sub> values varied between assays for both spore types, depending mainly on the humidity. Analysis of the differences between spore types indicated that blastospores were significantly more potent than conidia at the 0.01% level. The Log L c<sub>50</sub> values for conidia ranged from  $4.17 \pm 0.33$  to  $7.00 \pm 0.37$  and for blastospores from  $3.30 \pm 0.47$  to  $6.84 \pm 0.13$ . The slopes of the parallel probit lines for both spore types in the ten assays ranged from  $0.47 \pm 0.09$  to  $2.09 \pm 0.50$ .