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Investigations into anthracnose of 'Julie' mango (*Mangifera indica* L.) in Dominica

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Field investigations were conducted in the 1990 and 1991 mango cropping seasons to monitor anthracnose development in naturally infected 'Julie' mango orchards at Roger and Salisbury, Dominica. Three techniques were developed to assess disease - isolation of the pathogen, conidial trapping and visual estimations of the percentage leaf area infected. Weather variables - rainfall, air temperature, relative humidity and leaf wetness were monitored. Disease progress curves were developed and correlation analyses between disease assessment and weather variables were made. Conidial traps used in the field studies were evaluated for effectiveness. Variations in the pathogen reaction to different fungicides - prochloraz, benomyl, chlorothalonil and copper hydroxide and oxychloride were investigated.

The pathogen, *Colletotrichum gloeosporioides* Penz, was always present in the orchards. The fungal pathogen was isolated from leaves, flowers and fruits but rarely isolated from stem samples. At Salisbury, higher levels of conidia were trapped during the fruiting and flowering phases of the crop, while, at Roger, the majority of the conidia were trapped in the leaf flushing stage. The incidence of disease was correlated to rainfall, length of rainfall period, average relative humidity and temperature at Salisbury and temperature and leaf wetness at Roger. Site selection was therefore found to be important in the disease management strategy.

The efficiency of the conidial traps was highest if the volume of rainfall collected was between 100-200 ml. The various isolates of *C. gloeosporioides* collected from naturally infected organs at Roger and Salisbury were insensitive to the copper fungicides, perhaps suggesting a similarity among the isolates. The isolates responded differently to benomyl and chlorothalonil, indicating possibly the presence of several strains peculiar to the geographic region and maybe illustrating a degree of organ specificity.