ABSTRACT

Serological Identification of Mango Anthracnose and Black Rot of Cabbage

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Colletotrichum gloeosporioides Penz. the anthracnose pathogen and Xanthomonas campestris pv campestris (X.c.pv campestris) the agent of black rot disease of crucifers severely limit worldwide, mango and cabbage production respectively. The objective of this five-month study was to produce antisera to both pathogens for use in detection and identification of these organisms. A protein extract from mycelia and conidia of C.gloeosporioides - mango isolate - served as the fungal antigen. For X.c. pv campestris the antigen was glutaraldehyde-fixed cells. Serodiagnostic methods employed were Ouchterlony double diffusion (ODD), direct immunofluorescence (IF) and the double sandwich enzyme-linked immunosorbent assay (ELISA). In ODD tests, X.c. pv campestris-specific antiserum demonstrated a high specificity, showing no cross-reactions with X.campestris

pathovars. ODD assays of cabbage seeds and seedlings showed that they were disease-free. Antiserum produced to C.gloeosporioides exhibited no cross-reactions with C.gloeosporioides isolated from non-mango hosts. Attempts to produce conjugates with both antisera for use in direct immunofluorescence and ELISA studies were unsuccessful because of the unavailability of certain essential compounds. Recommendations for further research are given.