

Abstract

In this work, the fungal pathogens *M. acerina* and *Ramularia* sp. were investigated and their symptoms described. In the case of *M. acerina*, experiments were also done to investigate virulence.

Investigations of the symptom development showed very large similarities in the symptoms caused by each genus in that necrosis caused by *M. acerina* could be differentiated from that caused by *Ramularia* spp.

Isolates could be sub-divided by analysis of RAPD-banding patterns. A dendrogram generated using the RAPD-product marker bands indicated that the *M. acerina* isolates could be divided into two groups. The two groups correspond with the virulence classification of that isolate.

A bioassay with PG indicated that leaf lesions similar to those produced by the pathogen could be produced by the enzyme in the absence of the plant pathogen. The presence of PG and PME from material infected with both highly virulent and weakly virulent isolates could be demonstrated.

Differences could be observed during culture on PDB-medium. This activity was only observed for highly virulent isolates.

Taxonomically *M. acerina* was considered to belong to the closely related genus *Cercospora*. Members of the genus *Cercospora* produce the toxins cercosporin and beticolins. Cercosporin caused similar symptoms on pansy leaves in a bioassay. In the analytical chemistry part of the study, neither cercosporin nor beticolins could be detected using GC-MS. However, two red pigments compounds were isolated. One substance was identified as cynodontin the other as emodin.