

8 ISOENZYME AND DNA POLYMORPHISM IN A *FUSARIUM OXYSPORUM* f. sp. *ELAEIDIS* POPULATION

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First investigations on eighteen isolates of *F. oxysporum* f. sp. *elaeidis* from different countries were made using the vegetative compatibility (VC) technic; it enabled to classify them into 5 VCG (vegetative compatibility groups). The diversity obtained by this way was further checked on the basis of isoenzyme and DNA polymorphism. Results were compared with the former method.

Ten enzymes were tested for isoenzyme polymorphism, the activity of six of which could be revealed after starch gel electrophoresis : malate dehydrogenase (MDH), esterase (EST), leucine aminopeptidase (LAP), acid phosphatase (ACP), isocitrate dehydrogenase (IDH) and 6-phosphogluconate dehydrogenase (PGD).

Esterase patterns of the isolates led to the same grouping as by vegetative compatibility while MDH, IDH, LAP and PGD seemed less discriminant and ACP zymogramm revealed no difference. Those last profiles however remained usefull in the context of our population structure analysis.

Ribosomal DNA polymorphism studies were carried out by RFLP and implied restriction enzymes : EcoRI, Bgl I, Xba I, and Xho I. Ribosomal unit length was found to be 8.0 kb. Except for one isolate (G13) from Ghana, no polymorphism could be evidenced, but preliminary experiments on mitochondrial DNA yet show more polymorphism between the isolates and further investigations are therefore undertaken on this material.

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