

9 VEGETATIVE COMPATIBILITY IN TWO *FORMAE SPECIALES*
OF *FUSARIUM OXYSPORUM*.

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Twenty nine isolates of *F. oxysporum* f. sp. *elaeidis* and 25 isolates of *F. oxysporum* f. sp. *vasinfectum* from different countries were collected and characterized by their ability to form heterocaryons between each other. The vegetative compatibility was tested using spontaneous nitrate non-utilizing (nit) mutants of each isolate. Isolates that were able to form mutual heterocaryons were classified into the same vegetative compatibility group (V.C.G.). The following results were obtained :

- No compatibility was evidenced between isolates of *F. oxysporum* f. sp. *elaeidis* and *F. oxysporum* f. sp. *vasinfectum*.

- Five V.C.G. were characterized among the *F. oxysporum* f. sp. *elaeidis* isolates according to the following geographic origins: 1) Benin, Brazil, Ivory Coast, Equator ; 2) Ghana (isolates G12, G20 & G31); 3) Ghana (isolate G13); 4) Zaïre; 5) Cameroon.

- Six V.C.G. were characterized within the isolates of *F. oxysporum* f. sp. *vasinfectum* : 1) Benin ; 2) Centrafrica, Ivory Coast (isolate CIG), Peru ; 3) Argentina, Paraguay ; 4) Ivory Coast (isolate CIAN) ; 5) India; 6) China. Three of these V.C.G. (n° 2; 3 and 6) were able to form heterocaryons respectively with 3 races of F.O.V [races 2, 6 and 4; the strains corresponding to the six races (provided by A.T.C.C.) are not compatible with each other].

These results clearly show the possibility of discriminating different *formae speciales* on the basis of vegetative compatibility characteristics. Moreover, a relationship seems to exist between V.C.G. and races in the case of *F. oxysporum* f. sp. *vasinfectum*; this point however needs to be further investigated. More generally they demonstrate the interest and usefulness of vegetative compatibility studies as for the characterization of pathogenic *Fusarium* populations.

PROCEEDINGS

8th Congress of the Mediterranean Phytopathological Union

October 28th- November 3rd 1990
Agadir (Morocco)



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ORSTOM Fonds Documentaire

03 AOUT 1992

N° 36.481 ex 1

Cote : B

133 H