B-53 Vegetative compatibility groups of *Fusarium oxysporum* f.sp.*niveum*, the causal organism of vascular wilt disease in watermelon

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Plant disease complexity of a crop plant within a particular geographic area is a manifestation of the interplay between the genetic diversities of the host plant and co-evolving pathogen systems. *Fusarium oxysporum* f. sp. *niveum* (FON), the causal organism of fusarium wilt of watermedon (*Citrullus lanatus*), is widespread throughout the watermelon-growing regions of the world. This preliminary study reports on the genetic variation encountered in the fungal pathogen.

Vegetative compatibility is a powerful tool in examining genetic diversity in several fungi. Nitrate-utilisation complementation tests of induced *nit*-mutants have been used widely in vegetative compatibility studies.

Twenty one strains of FON isolated from heavily infected watermelon fields in Malaysia were used to generate *nit*-mutants on minimal agar medium (MM) amended with 1.5% $KClO_3$. Studies of vegetative compatibility groups (VCGs) were determined by nitrate-utilisation complementation tests of induced *nit*-mutants on MM. Nine VCGs were identified among 21 strains with no specific pattern being observed between geographical origin and VCG. Vegetative compatibility groupings may allow more precise, accurate and objective distinctions and constitute more appropriate divisions for subdividing FON than those based solely on virulence reactions.