

Isolation and identification of fusarium species associated with fusarium ear rot disease of corn

ABSTRACT

Fusarium species associated with corn (*Zea mays*) are very diverse and widely distributed throughout Malaysia. Out of 657 samples cultured, a total of 220 Fusarium isolates were obtained from corn plants showing the typical symptoms of Fusarium ear rot in 12 locations throughout Malaysia. All the isolates were identified into 10 species based on the morphological characteristics that emphasized on growth rates, colony features and microscopic characteristics. A total of 117 Fusarium isolates were classified into four species in the section *Liseola* and their allied, tentatively identified as *F. proliferatum* (58), *F. subglutinans* (34), *F. verticillioides* (24), and *F. nygamai* (1). Meanwhile, *F. proliferatum* was the most prevalent species in all the sampling areas. 103 isolates, which were classified into six other Fusarium species belonging to different sections, were also isolated and identified, and these included *F. semitectum* (47), *F. oxysporum* (20), *F. pseudograminearum* (19), *F. solani* (15), *F. equiseti* (1), and *F. longipes* (1). *F. semitectum* was the highest among other common saprophytic fungi in corn. *F. pseudograminearum* was only isolated from the samples obtained from Cameron Highlands, Pahang. In term of species diversity, Fusarium species was the highest obtained in Semenyih, Selangor, with $H' = 1.72$.

Keyword: Fusarium species; Fusarium ear rot; Corn