Isolation of Microfungi from Malay traditional vegetables and secondary metabolites produced by Fusarium species.

ABSTRACT

Microfungi isolated from Malay traditional vegetables such as Centella asiatica, Cosmos caudatus, Oenanthe javanica, Persicaria odorata and Psophocarpus tetragonolobus are well diverse. A total of 40 isolates of the fungi were identified and classified into four genera such as Aspergillus, Fusarium, Penicillium and Trichoderma. Five species of Fusarium were morphologically identified as F. oxysporum, F. semitectum, F. proliferatum, F. solani and F. konzum. Three species of Aspergillus were identified as A. niger, A. fumigatus and A. flavus. The highest number of microfungi was isolated from Cosmos caudatus (12 isolates), followed by Persicaria odorata (9 isolates), Oenanthe javanica (8 isolates), Centella asiatica (6 isolates) and Psophocarpus tetragonolobus (5 isolates). Four isolates of Fusarium species were able to produce moniliformin (MON) and five isolates were able to produce fumonisin B1 (FB1). This is the first report on diversity of microfungi associated with some Malay traditional vegetables.

Keyword: Fusarium; Aspergillus; Malay traditional vegetable; Secondary metabolite.