

Title Seedborne fungi detected on stored solanaceous berry seeds and their biological activities
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Abstract

We isolated 629 fungi from 1296 berry seeds of solanaceous plants, including tomato (*Lycopersicon esculentum*), eggplant (*Solanum melongena*), bell pepper (*Capsicum annuum*), and red pepper (*Capsicum annuum* var. *annuum*) preserved for long and short terms. The isolates were classified into 22 genera excluding unidentified fungi, and the fungal floras were divided into two types: the tomato–eggplant and pepper groups. The results of cluster analysis with unweighted pair-group method with arithmetic average also supported these groups. Most tomato seeds infested with *Geotrichum candidum* germinated and grew the same as uninfested seeds. *Cladosporium sphaerospermum* and *Arthrinium* sp. isolated from eggplant seeds strongly suppressed germination, and *Penicillium variable* suppressed seminal root elongation on eggplant. *Alternaria alternata*, *Botrytis cinerea*, and *Myrothecium verrucaria* detected from red pepper or bell pepper seeds were pathogenic to the fruits and the seedlings after artificial inoculation.