

Abstract

A considerable number of blue mold rot reports of various commercially grown bulbs and vegetables in the literature have been based on outdated taxonomy attributing crop losses to *Penicillium corymbiferum* Westling (a synonym of *P. hirsutum* Dierkx). The species *P. corymbiferum* has recently been subdivided into seven taxa which comprise the *Penicillium* series *Corymbifera*: *P. albocoremium*, *P. allii*, *P. hirsutum*, *P. hordei*, *P. radiculicola*, *P. tulipae* and *P. venetum*. Results from pathogenicity trials indicated that *P. allii* was the predominant pathogen of *Allium cepa* (red onion) and *Allium sativum*; however it did not infect either tulip or gladiolus. *P. hirsutum*, *P. radiculicola*, *P. tulipae* and *P. venetum* were predominant pathogens of *Tulipa gesneriana* and *P. hirsutum*, *P. tulipae* and *P. venetum* were predominant pathogens of a *Gladiolus* sp. Six of the *Corymbifera* taxa (excluding *P. hordei*) caused a rot in the basal root plate of *A. cepa* (yellow onion); however as *P. tulipae* produces the mycotoxin penitrem A, which has been previously implicated in tremorgenic toxicosis, spoilage of yellow onion during storage due to this fungus is of particular concern.