

# In vitro efficacy of hot water treatment on fungal pathogens of garden egg (*Solanum melongena* L.) fruits

C.A. Amienyo, F.M. GuGu

Acta Horticulturae 1053: 151-156. 2104.

---

## Abstract

A study on the effect of hot water treatment on fungi isolated from diseased garden egg (*Solanum melongena* L.) fruits was carried out. The isolated fungi were: *Alternaria alternata*, *Aspergillus flavus*, *A. niger*, *Botrytis cinerea*, *Cladosporium* sp., *Mucor hiemalis*, *Penicillium expansum*, *Phytophthora infestans*, *Rhizopus stolonifer* and *Stemphylium* sp. The fungus, *M. hiemalis* had the highest percentage of occurrence (19%), followed by *A. niger* (14%). *Stemphylium* sp. was the least occurring fungus (2%). Pathogenicity test of fungi isolated from the fruits showed that all the isolated fungi induced various degrees of deterioration on the fruits. Agar discs (3.0 mm diameter) of these fungi were subjected to hot water treatments at varying periods of time (40°C for 30 min, 50°C for 20 min and 60°C for 10 min) to determine the effect of the treatments on the pathogens. The hot water treatments could not eliminate the pathogens, but inhibited their radial growth on the malt extract agar (MEA) medium, when compared with the control. *Aspergillus niger* showed the greatest retardation of growth, followed by *A. alternata*. *Rhizopus stolonifer* showed the least growth retardation. The results obtained showed that postharvest decay of garden egg can be greatly reduced by immersing the fruit in hot water for 10 min at 60°C, which will help to extend the storage life of the fruit.