

Abstract

Studies were conducted on the *in vitro* effects of 27 salt compounds and seven commercially available fungicides on mycelial growth of *Alternaria alternata*, *Botrytis cinerea*, *Fusarium avenaceum*, *Phytophthora erythroseptica*, *Phytophthora infestans*, *Verticillium albo-atrum* and *V. dahliae* at Agriculture and Agri-Food Canada in Charlottetown, Prince Edward Island. Growth media were amended with each compound at three concentrations--0.002 M, 0.02 M, 0.2 M plus an appropriate control.

Several salt compounds were tested *in vitro* as growth inhibitors of *Erwinia carotovora* spp. *atroseptica* strains 3, 6, 31, 196, 198 and *Erwinia carotovora* spp. *carotovora* (Ecc) strains 23, 24, 59, 61, 71. Studies examining the preventative and curative effects of the most effective compounds were conducted using *Ecc* 71 as the test pathogen.

The preventative and curative effects, as well as seed piece phytotoxicity of various salt compounds were tested for their ability to inhibit infection by late blight and pink rot pathogens of potato. Compounds were applied as dips at the concentrations 0.002 M, 0.02 M, 0.2 M respectively. Tubers were inoculated with sporangia of *P. infestans* or active zoospores of *P. erythroseptica*.