

## Abstract

Silver scurf, caused by the fungus *Helminthosporium solani*, is an important disease affecting potato tubers. Control of the disease has been hampered by the development of *H. solani* strains resistant to thiabendazole, the only fungicide used in postharvest treatment. As a result, alternative control strategies are needed. In this study, 100 selected soil samples from the province of Québec were tested for their effect on silver scurf development on potato tubers. The results showed that 10 soils were able to decrease silver scurf development on tubers incubated at 10, 15, or 24°C. Many microorganisms were isolated from these soils and tested for their individual ability to reduce *H. solani* development using a whole-tuber assay. Several of them, including *Alcaligenes piechaudii*, *Aquaspirillum autotrophicum*, *Arcanobacterium haemolyticum*, *Arthrobacter oxydans*, *Bacillus mycoides*, *Kocuria rosea*, *Streptomyces griseus*, and a fungus of the class Zygomycetes displayed an ability to reduce the development of silver scurf on potato tubers at 10, 15, or 24°C. These results can find useful applications toward a biocontrol program of potato silver scurf as postharvest or seed tuber treatment.