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Investigation of *Lecanicillium muscarium* as biocontrol agent *Oxalis* rust

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The effect of *Lecanicillium muscarium* on *Puccinia oxalidis* was investigated. *Oxalis* is a common edible weed characterized by high concentrations of oxalic acid. *Oxalis* plants were grown in a greenhouse. The plants were inoculated with urediniospores of *P. oxalidis* by dusting *Oxalis* plants with leaves of rust-infected plants. Symptoms appeared after roughly 4-5 days. The biocontrol agent (*L. muscarium*) occurs routinely in nature where the crops are infected by rust. The biocontrol fungus was isolated at the later stage of *P. oxalidis* development on the abaxial surface of an *Oxalis* leaf. Samples of white mycelium of *L. muscarium* were taken from an infected pustule of *P. oxalidis* and streaked onto PDA plates, then incubated at 28 oC. From these plates, pure colonies were established. 36 *Oxalis* plants, each having 3 leaves were inoculated with *P. oxalidis*. 20 plates containing *L. muscarium* were placed under UV light to encourage sporulation. The three different concentrations 106, 104 and 102 conidia per ml1- were prepared and each concentration was applied to 36 *Oxalis* leaves. The growth of *L. muscarium* over the rust pustules was rated. The concentration of 106 conidia per ml-1 of *L. muscarium* was more effective at colonizing the rust pustules than the other two concentrations. *Lecanicillium muscarium* successfully colonized pustules of *P. oxalidis* and control the pathogen.

Biography

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