Calcium and silicon applications in gerbera daisies and their effect against Botrytis cinerea infection
Melissa Muñoz, Paul Millar, James E. Faust
Department of Plant and Environmental Sciences, Clemson University

Background

Botrytis is the causal agent of Botrytis blight in gerbera daisies. The infection results in tissue necrosis, making the plants and especially the flowers not suitable for marketing. Previous research in our lab has demonstrated the benefits of calcium applications as sprays and dips against Botrytis cinerea infections in petunia and cut rose flowers, respectively. Silicon has been used in several crops to enhance host tolerance against different plant pathogens. The goal of this study is to test Ca and Si as alternative methods for Botrytis blight management in gerbera daisies.

Objectives

1. To determine the effectiveness of Ca and Si foliar spray and drench applications in potted gerbera daisies against Botrytis blight
2. To determine the effectiveness of Ca and Si post harvest dips in cut gerbera daisies

Results

Visual rating scale

Foliar sprays

Drench

Postharvest dips

Take home

- Gray mold severity and response to Ca and Si treatments in gerbera daisies varied between cultivars and flower structures
- No treatment worked effectively in reducing gray mold severity across all floral structures for any cvr.
- Disk floret age appears to have an effect in the susceptibility to Botrytis cinerea infection in gerberas.