

## ABSTRACT

Occlusion of the stem vasculature by microorganisms that proliferate in the vase water, or the plant vessels, leads to water stress symptoms that reduce postharvest quality of cut flowers. This study aimed to determine the effects of pulsing and wet-cold storage on the microbial profiles in cut *Gladiolus grandiflorus* L. cv. Fado. Pulsing treatments of 600-ppm 8-hydroxyquinoline sulfate plus 5% sucrose solution versus distilled water were administered before wet cold storage periods of 0-5 days in cut *Gladiolus*, previously grown from corms under open field. A two-by-six factorial experiment embedded in a completely randomized design with four replicates was accomplished. Proc GLM in two-way Anova was adopted, and the means were separated using Tukey's test at a 5% level of significance. The pulsing treatment of 600 ppm 8-HQS plus 5% sucrose, the wet cold storage duration and their interactive effects significantly ( $P < 0.0209$ ;  $< 0.0001$  and  $< 0.0001$  respectively) affected the means of the colony-forming units in the vase water of cut *Gladiolus* at senescence. The prolonged vase life of cut gladioli spikes was associated with decreased microbial proliferation as influenced by pulsing and wet storage duration of up to 4 days. Data generated from this study will improve existing technologies related to the quality and market value of this *Gladiolus* cultivar.

### Keywords

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