Influence of floral preservatives on scape bending, biochemical changes and post harvest vase life of cut gerbera (Gerbera jamesonii bolus ex. Hook.)

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ABSTRACT
Vase life of cut gerbera is often terminated by bending of the flower stalk, called as scape bending, a premature senescence. However, the senescence of cut gerberas can be deferred by the use of floral preservatives in vase solution. The cut gerberas held in different holding solution combinations differed significantly on water relations, 8-HQS 200 ppm + AgNO$_3$ 20 ppm + sucrose 5% significantly increased the vase life (12.32 days) over control (4.56 days). The synergistic effect of 8-HQS and AgNO$_3$, which in turn kept the tissue water potential at higher levels (-5.683 bars) and reduced the scape bending curvature (0.000 degrees). Increase in total sugars and reducing sugars in the flower scapes of gerbera, increased the osmotic potential of the flower heads, thus improving their ability to absorb water and maintain turgidity. The positive water relations in 8-HQS 200 ppm + AgNO$_3$, 20 ppm + sucrose 5% made better utilization of sugars, proteins and lowered peroxidase activities in gerbera scapes thereby leading to longest vase life.

Key words: Gerbera, Floral preservatives, Scape bending, Postharvest, Vase life