

11th World Congress on

PLANT BIOTECHNOLOGY AND AGRICULTURE

March 05-07, 2018 | Paris, France

Consequences of divergent vase solutions on post-harvest durability and quality of *heliconia* inflorescences

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Heliconia the most flourishing cut flower in the tropics owing to its charismatic form and alluringly blended hues of its bracts. To label post-harvest complications and to protract vase life for a substantial span present experiment was designed employing antithetical vase solutions of various concentrations and fresh, mature, cut spikes of nine different *Heliconia* species and varieties. T₅ and T₆ treatment combinations contain AgNO₃ @1500ppm and CaCl₂ @ 750mg/l along with 8- HQC @500mg/l and Sucrose 2% outstandingly elevated solution uptake and flower opening inside bracts principally in all species and varieties respectively. Untreated spikes of *Heliconia psittacorum* var. 'Lady di', *Heliconia wagneriana*, *Heliconia stricta*, *Heliconia stricta* var. 'Dwarf Jamaican Red' and *Heliconia metallica* exhibited noteworthy fresh weight retention on 8th days exceptionally while in contrast T₄, T₅, T₇ and T₃ evinced themselves unrivalled for rest of the genotypes on same duration. To preserve bract and flower's carotene, anthocyanin and chlorophyll pigments all treatment's impact were truly species specific apparently. T₇ and T₉ hold GA₃ @ 80ppm and Citric acid @ 200mg/l along with germicide and sucrose respectively besides T₅ and T₆ also yield utmost vase life being impeded senescence in all inflorescences. These identical treatments amplified the levels of catalase, peroxidase enzymatic activities and collaterally declined the lipid peroxidation on 7th days in the bract. Therefore, present study concludes that AgNO₃, CaCl₂, GA₃ and Citric acid at mentioned concentration renders magnificent beneficial effects on vase life attributes being subsisted with oxidative stress of *Heliconia* inflorescences.

Biography

Moumita Malakar, INSPIRE Fellow (SRF) of University of Calcutta, India is presently pursuing 'Doctoral Program' on Horticulture, specializing in 'Floriculture & Landscaping'. The investigation on 'impact of various vase-solutions on post-harvest life of *Heliconia* inflorescences' is the worthy portion of my thesis work. She studied longevity of few ornamental foliage and flowers too but as *Heliconia* presently is highly priced in flower plaza especially in west-Bengal, there arises a need to extend its vase-life. The positive impact on entrepreneurs of this authentic endeavor is ascertained and will keenly influence the wealth since *Heliconia* is an emerging 'specialty cut flower' in West-Bengal, India.

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