Documenting Cut Flowers Production and Postharvest Issues and Improving Postharvest Performance of Cut Flowers

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Abstract: In the United States and Canada there has been an increase in the demand for local specialty cut flowers and an increase in their production. Furthermore, exports of cut flowers to the United States have doubled in the last 20 years and come mainly from Colombia and Ecuador. We surveyed the cut flower industry of North America and separately of Central and South America to determine their production and postharvest problems. In North America insect management (17% of respondents) was the main ranked production problem across all species and disease management (20%) was the response selected second most important by the same respondents. The main ranked postharvest problems were hydration and flower food management (35%) and second was temperature management (31%). Timing and stem length were the two most mentioned species-specific production issues. Common problems during postharvest at the farm were vase life and hydration. Damage was the most commonly listed issue for postharvest during storage and transport, and major customer complaints were vase life and shattering. For Central and South America the main ranked production problem was disease management (63%) across all species and tied for second were insect management, insufficient demand and crop timing (25%). The main ranked postharvest problem was temperature management (36%) and second was availability of qualified labor (22%). The most important species-specific issues during production were phytosanitary problems, disease, leaf miner and thrips. Damage was the most common postharvest issue on the farm. Major postharvest problems during storage and transport were temperature management, air transport, damage and botrytis and major customer complaints were damage, botrytis and phytosanitary problems.

It is widely known that cut flowers should be recut to increase hydration success However, recutting shortens stem length and flower value. We assessed the effectiveness of Floralife Express 200 flower food formulation to hydrate flowers without the need to recut stems. Across four bouquet types, Floralife Express 200 was more effective at increasing postharvest life without recutting when compared to the Chrysal flower food. Chrysal solution performed generally better when the stems were recut. Floralife solution performance appears to be as effective as providing the initial recut. Chrysal solution was more effective at preventing cloudiness of the vase water.

Every year vase life studies are conducted on promising cut flower species and cultivars to determine the optimal postharvest treatment for extending the postharvest life. On 2017 we tested the vase life of 25 cultivars of 10 different species and the vase life of seven cultivars was longest with the use of a holding preservative. The vase life of two cultivars was longest with the use of hydrator. The vase life of seven cultivars was longest with both hydrator and holding preservative. The vase life of one cultivar was longest with the use of water. The vase life of eight cultivars was unaffected by postharvest treatments.