

Abstract

Surveys and data collection of the cultivation and postharvest handling of chrysanthemums, roses, and hydrangeas showed that cultivation and postharvest handling, of each individual flowering plant were different.

A survey of postharvest losses of chrysanthemums, roses, and hydrangeas started from the fields and followed them through their arrival at the Royal Project shop in Chiang Mai. The study compared the postharvest loss of each flowering plant before and after improving the postharvest handling process. The study also compared the vase life of the three flowering plants by surveying three varieties of each flowering plants. For chrysanthemums, the postharvest survey of the three varieties comprising Celebrate, Orange Day, and Campus was conducted. In case of roses, the three varieties of Persia, Twilight, and Cantaloupe were compared. The study of hydrangeas explored the three varieties including Blue 031, White 027, and the Old Blue Color. The comparative survey found that the improved postharvest handling process reduced the overall postharvest loss. Even though the damage to the plants did not affect sales, the improved postharvest handling process contributed to the longer vase life of each individual flower. The vase life of the chrysanthemum varieties, including Celebrate, Orange Day, and Campus before improving the process was 10.08, 10.48 and 9.36 days respectively. The improved postharvest handling process prolonged the vase life to 14.16, 14.64 and 18.72 days, respectively. The Persia rose had a vase life of 4.32 days before the postharvest handling was improved. With the improved postharvest handling process, the vase life was extended to 7.72 days for roses in dry transportation and 8.52 days in wet transportation. For Twilight roses, the vase life was prolonged to 10.88 days and 11.16 days for flowers in dry transportation and wet transportation, respectively, from the normal vase life of only 3.80 days before the improved postharvest handling.

Similarly, the Cantaloupe rose vase life in dry and wet transportation was extended to 8.04 and 8.44 days, respectively, as opposed to the normal life of 3.72 days before the postharvest handling was changed. The improved postharvest handling for Blue 031 hydrangea lengthened the vase life to 6.87 days and 7.33 days for those in a vase containing distilled water and in a vase with a solution of citric acid pH_4 , respectively, as compared to 3.07 days with traditional postharvest handling. The vase life of the hydrangea White Color No. 027 in a vase with distilled water and a vase with a solution of citric acid pH_3 was extended to 2.87 days and 5.13 days, respectively, while the traditional handling process could only maintain 1.80 days of vase life. In case of hydrangea of Old Blue Color, the vase life with customary postharvest handling was 3.47 days. The improved process extended the vase life for Old Blue hydrangea in a vase containing distilled water and the one filled with a solution of citric acid pH_4 to 6.47 and 5.73 days, respectively.