Dr. Larson

Florida Flower Grower

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INFLUENCE OF CHEMICAL PRESERVATIVES ON KEEPING QUALITY OF ASTERS, CARNATIONS, CHRYSANTHEMUMS, AND GERBERA DAISIES

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Demonstrations have shown that both pre- and post-harvest production techniques drastically affect keeping quality or vase-life of flowers. Proper handling techniques should increase the demand for Florida cut-flowers by extending flower vase-life and making distant potential markets a reality. Numerous commercial cut-flower preservatives have been used with limited success depending upon the plant species involved. These patented preservatives usually contain some form of sugar, pH depressant, metallic salt, and substances to suppress microbial growth.

The objective of this investigation was to evaluate the effectiveness of different floral-preservative treatments on keeping quality of several cut-flower species.

In all keeping quality studies solutions containing only tap water (Bradenton City water pH 7.9 and 200 ppm salts) were changed every 3 days to reduce microbial growth. In all continuous-preservative treatments water was added to the original solution if needed. In all treatments 1 to 2 inches were clipped from the base of stems every 3 days.

Asters

In experiments with asters using both mature and immature flowers, Everbloom, Roselife, Sucrose, Verdan and sodium hypochlorite were added to water to improve keeping quality. Verdan was detrimental to keeping quality and flower maturation and sodium hypochlorite had no effect, whereas all other water additives improved keeping quality from 2 to 5 days.

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*Mimeograph copies of this paper are available from Dr. Waters.

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS
(Acts of May 8 and June 30, 1914)
Agricultural Extension Service, University of Florida,
Florida State University and United States Department of Agriculture, Cooperating
M. O. Watkins, Director

Carnations

In keeping quality studies with miniature spray carnations vase-life was increased 3 days by use of Everbloom, Petalife or Roselife. Sucrose used alone was only slightly beneficial and Verdan caused injury.

Chrysanthemums

In keeping quality studies with chrysanthemums only Everbloom was utilized as a preservative. Vase-life of flowers was increased by 3 to 5 days, however, foliage was damaged slightly by all rates of Everbloom.

Gerbera Daisies

Two experiments with gerbera daisies utilizing Everbloom as a preservative extended flower keeping quality 3 to 5 days and greatly reduced or eliminated visible microbial growth in the solutions.

The affects of various floral-preservative treatments on the keeping quality of several cut-flower species were investigated. Continuous exposure of aster, carnation and gerbera daisy stems to solutions containing 7 to 15 g/l of a floral preservative was effective in extending the vase-life 35 to 50 per cent as well as increasing flower size. Continuous exposure of chrysanthemums to a specific preservative increased flower size but was detrimental to the foliage. When chrysanthemum stems were exposed for only 12 to 24 hours immediately after harvest, keeping quality was improved slightly with no adverse effects on foliage. Microbial growth and subsequent vascular stem clogging was eliminated on all species by use of 7 to 15 grams per liter of a floral preservative.

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GOOD NEWS ON GLADIOLUS BOTRYTIS

Robert O. Magie
Plant Pathologist

Warm dry weather has delayed initial Botrytis infections of gladiolus in southern areas of Florida. As of January 10, no infections have been seen. Since effective control of leaf and flower infection depends chiefly on regular spraying of all fields before initial infections take place, further delay of regular spraying would be unwise. Two applications each week of a maneb spray, such as Manzate, Dithane M-45, Dithane M-22 or Manzate D is recommended. Substitute zineb when sprayed plants would dry slowly. Coverage of plants should be checked visually after each spraying and nozzles should be adjusted according to plant size in order to obtain thorough coverage of leaves and flower spikes. The use of spreaders and stickers is no longer recommended for gladiolus where twice weekly spray applications are made.