

Cut Flower Preservatives Compared

by W. D. Holley

A comprehensive comparison of the leading cut flower foods has not been made at Colorado State University since Knappenberger's work in 1955 (CFGA Bulletin No. 63). During these intervening years Petalife has been used as a standard cut flower preservative by many Colorado growers and retailers. Recently one new proprietary material has come on the market and several of the available preservatives have been improved. To check the currently available "cut flower foods" a test was set up on February 6, 1963.

Twelve freshly cut carnations of the variety Red Gayety were placed in the following preservative solutions made up according to the packager's directions: Floralife, Petalife, Bloomlife, Everbloom and Blomvigor. Twelve flowers in water served as a check. The flowers were placed in a laboratory room at temperatures from 72 to 78°F and relative humidities between 35 and 45%. They were observed daily and the life of an individual flower was considered expired when that flower began losing turgor and petals showed a slight inward curl. Daily observations included the amount of solution used, size and condition of the flowers, turgor of flowers and stems, and color intensity.

Table 1. Effects of several cut flower preservatives on the life of Red Gayety carnations.

Solution used	Relative amount of solution used first 8 days	Mean life in flowers in days
Water	100	5.2
Floralife	135	9.5
Petalife	97	9.5
Bloomlife	138	8.4
Everbloom	163	11.6
Blomvigor	135	8.9

None of the flowers developed petal burn until near the point of life expiration. At this temperature flowers are expected to last in water about 5 days, the time required for microorganisms to plug the stems. The flowers in water all began losing turgor on the fifth and sixth days. Flowers in Floralife showed some loss of color by the fifth day. Otherwise, performance of Floralife, Petalife and Blomvigor was similar.

The outstanding result of the test was the performance of Everbloom. While this was used according to the packager's directions, it is suspected that the concentration was too strong as evidenced by considerable damage to lower stems. In spite of this, the flowers retained their turgor and crispness, the color was intensified and growth of the flowers in diameter was phenomenal. Flowers near the end of the treatment were 4 3/4 inches in diameter. When the experiment was stopped on February 18, 8 of 12 blooms in the Everbloom solution were still showy with good color and turgor, although most of the lower parts of their stems had collapsed and most of the flowers had considerable petal burn.

Further tests are being conducted with Everbloom to determine the optimum concentration for its use and possible preshipping uses.

Acknowledgement

Blomvigor supplied by Ab. Fortuna Producenter, Kvarnby, Sweden.
Bloomlife supplied by Bloomlife, Evansville 4, Indiana.
Everbloom supplied by W. Atlee Burpee Co., Philadelphia 32, Pa.
Floralife supplied by Floralife, Inc., Chicago 5, Ill.
Petalife supplied by Associated Marketing Products Co., Broomfield, Colo.

Poinsettias, Culture and Use as Potted Plants

This is a comprehensive manual covering the culture and use of poinsettias. Written by the staff of the Ohio Agricultural Experiment Station, the Ohio Agricultural Extension Service, and members of the firm of Paul Ecke, Inc., the manual covers such topics as statistics of the industry, varieties, stock plant production and handling, propagation, soils, fertilizers, watering, growth regulators, timing, diseases, insects, marketing, and care and use by retail florists and consumers.

A feature of the publication is full page color photographs of the development of color in poinsettia plants grown under natural conditions compared with plants which were lighted.

The manual was authored by Fred K. Buscher, James L. Caldwell, Paul Ecke, Sr., Paul Ecke, Jr., L.J. Herr, D.C. Kiplinger, Robert O. Miller, R. B. Neiswander, Robert Partyka, Kenneth W. Reisch, and Ralph W. Sherman and edited by Robert O. Miller and D. C. Kiplinger of the Ohio Station staff.

The manual is available from the Office of Extension Information, The Ohio State University, 2120 Fyffe Road, Columbus 10, Ohio. The cost is \$2.00 per copy. Checks or money orders may be made payable to The Ohio State University.

Optical Scanning Used in Grading Potatoes

The Materiadyne Corporation of Avon, New York, has developed a new machine, called an Optronic D. E. (Defect Eliminator), for locating defective potatoes on the grading belt by means of optical scanning. The defective potatoes are removed through electronic instructions from the scanner to precision devices. This new equipment came about when this company was asked to solve the problem of high cost in waste of trimming defective potatoes by hand.

This machine is expected to have application for removing bruises and other defects from other vegetables and fruits.

Contributed--

*Your editor,
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