

Cut Flower Keeping Studies

by Richard L. Knappenberger 1/

Perhaps the most important problem in the field of carnation research is to find the reasons for differences shown in the keeping life of the flowers after they reach the wholesaler, the retailer, and the consumer. No matter how excellent the culture or how careful the handling by the wholesaler, it is the keeping life in the consumer's home that determines the value of any flower.

First and Second Crops

The keeping life of flowers cut from plants producing their first crop was compared to that of flowers cut from the older, woodier stems of a second crop. Five sepa-

The literature gives many suggestions for extending the life of cut flowers. Cutting stems daily underwater, changing the water daily, placing stems in shallow water, cutting flowers in the afternoon, and hardening the flowers in warm water are a few of these. Some of these methods have been tested at Colorado A&M during the past year in an attempt to evaluate them.

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rate periods were tested and while there was a trend in favor of the younger stems, when analyzed statistically it was found that the differences were too small to be significant.

AVERAGE KEEPING LIFE - White Sim
(in days)

Trial	1	2	3	4	5
Old stems	8.8	8.2	12.3	12.8	14.6
Young stems	10.3	8.7	13.7	13.2	15.4

Morning vs. Afternoon Cutting

It is an accepted fact that plants contain more food in the late afternoon than early in the morning. Odom (Bul. 54) found this true in carnations. It is natural to assume that flowers cut in the afternoon when they are full of food would keep longer than those cut when the plant is partially deficient in food. This was investigated by comparing the keeping life of flowers cut in the morning and those cut in the afternoon. During the three periods that the test was conducted, very little or no differences were noted in the length of keeping.

AVERAGE KEEPING LIFE--Fanfare
(in days)

Period	1	2	3
AM cutting	10.1	10.1	10.4
PM cutting	10.2	9.3	10.2

Cutting vs. Breaking at a Node

Several trials were run to compare the effects of cutting the stems and breaking them at a node. The differences noted were very slight but were consistently in favor of breaking at a node; however when analyzed statistically, the differences were found to be too small to be significant.

AVERAGE KEEPING LIFE - White Sim
(in days)

Trial	1	2	3
Broken at node	10.33	9.33	9.22
Cut	10.00	9.06	8.94

Hardening Effects

Flowers were cut and divided into two lots: the first being hardened for 24 hrs. at 40°F. while the second was not refrigerated at all. Hardening fills the stems full of water while freshly cut flowers placed at room temperature are deficient in water relative to their potential water holding capacity. From the few tests conducted, no significant differences were found in the keeping life of flowers that were hardened and those that were not.

AVERAGE LENGTH OF KEEPING - White Sim
(in days)

Trial	1	2	3	4
Hardened	16.71	11.89	11.72	12.67
Not hardened	16.50	11.44	10.89	12.72