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# Commercial Flower Food vs. Homemade Recipes

## Research Background

Maintaining biological functions of both flowers and leaves at the proper level is important to obtaining a good vase life for fresh cut flowers. To enable fresh cut flowers to open and stay alive they need a continuous supply of energy and water, along with free-flowing vessels inside the stems that transport these materials. Properly formulated fresh flower foods provide these necessary conditions and improve the postharvest life of cut flowers. There are various “home-made” recipes you will hear about from your aunt or neighbor, or see in your local newspaper, which are supposed to extend vase life of fresh cut flowers. The effectiveness of these recipes, however, has generally not been proven with proper scientific testing.

## Experiment

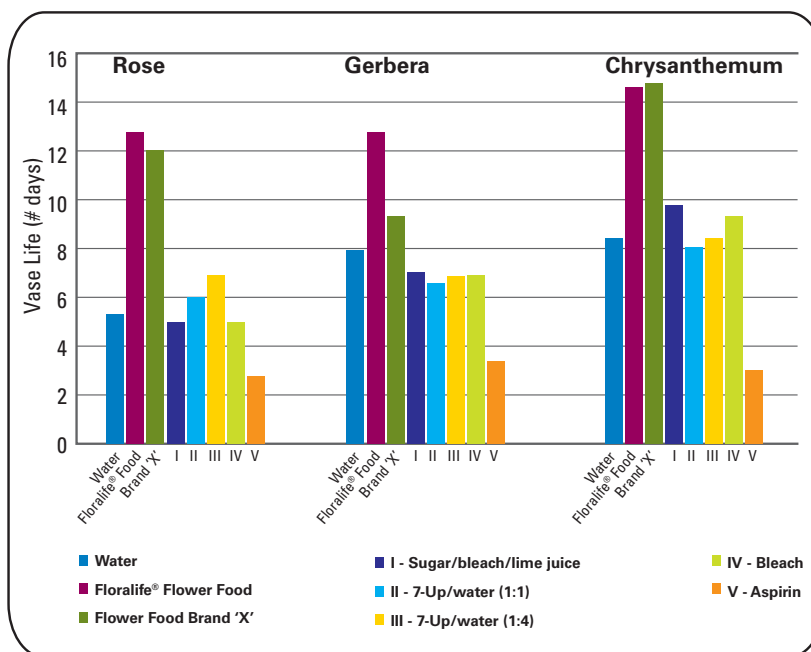
An experiment was conducted at the Floralife Laboratory in Walterboro, SC to compare the effectiveness of commercial flower food formulations and several homemade recipes. The following formulations were tested in the study.

1. Water (control)
2. Floralife Flower Food
3. Commercial Flower Food Brand “X”
4. Homemade Recipe I - (Sugar – 10g/ L, Bleach – one tsp/L and Lime Juice one tsp/L)
5. Homemade Recipe II - 7-Up® and Water (1:1 volume)
6. Homemade Recipe III - 7-Up® and Water (1:4 volume)
7. Homemade Recipe IV - (Bleach – one teaspoon/L)
8. Homemade Recipe V - (One Aspirin tablet/L)

Roses (variety ‘Charlotte’), yellow gerberas and chrysanthemum (variety ‘Cushion True’) were tested in the study. The ends of the flower stems were recut, any leaves that would be below the water level were removed and stems were placed in one liter glass vases containing the different test solutions. The flowers were held in an interior evaluation room (68 - 70° F, 12 hrs. of light) to monitor vase life performance. There were three replicate vases for each treatment.

## Results

The following graph shows the vase life of flowers (number of days) with different treatments.



Photos of Flowers on day 9 Vase Life



Water

Floralife<sup>®</sup>

Brand "X"

Recipe I



Recipe II

Recipe III

Recipe IV

Recipe V

### Conclusions

Commercial flower food formulations (Floralife<sup>®</sup> and another brand) outperformed (in terms of vase life and quality) all the homemade recipes for all the flower types tested. Some homemade recipes performed even more poorly than water. The data shows the risk of using homemade recipes with cut flowers instead of commercially formulated and tested flower food.