

Bloom preservation: Keep your gerberas blooming with urea and acid

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If you want your cut gerberas to last longer in the vase, you could try a flower food made from acids and urea. That's the conclusion of research published in the *International Journal of Postharvest Technology and Innovation*.

Gerbera jamesonii also known as the Transvaal daisy or African daisy, is a species native to South Africa and one of the most important commercially grown flower crops. Its large, vividly and varied [blooms](#) make it an attractive species for floral displays and a favorite in many households. Unfortunately, as with all [cut flowers](#), "vase life" is limited to just a few days if the blooms are simply dunked in a water-filled vessel.

Now, Maryam Jamshidi and Ebrahim Hadavi of the Department of Horticultural Sciences, at Islamic Azad University Karaj, and Roohangiz Naderi of the University of Tehran, Iran, have tested various treatments to see if they can extend the [vase-life](#) of cut gerbera blooms. Their tests with various combinations of salicylic acid (the active derivative of the painkiller drug aspirin), malic acid (which causes the tart taste of many ripened fruits) and urea (the main nitrogen-containing chemical in mammalian urine), have shown that they can extend bloom time in the vase for gerberas from about a week to more than two weeks compared with untreated flowers.

The combination of salicylic acid, malic acid and urea, prevents contamination of the submerged stems with bacteria that would

otherwise quickly kill the blooms. However, [salicylic acid](#) can also help sustain enzyme activity in the stems, specifically peroxidase enzyme activity. Likewise, the malic [acid](#). The presence of urea acts as a source of nitrogen that can be absorbed by the stems and act as a sustaining nutrient. These compounds are all readily available to the industry and could be provided as a packaged formulation to be added to vase water to keep one's gerbera flying.

More information: Jamshidi, M., Hadavi, E. and Naderi, R. (2014) 'Combination of salicylic acid, malic acid and urea enhances the vase life of cut gerbera flowers on par with selected treatments', *Int. J. Postharvest Technology and Innovation*, Vol. 4, Nos. 2/3/4, pp.235-250.

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