

### **Abstract:**

The vase life of sunflowers (*Helianthus annuus*) is limited by early wilting of leaves and ray flowers. Vase life was positively correlated with stem length (5 days in 50 cm stems, 9 days in 70 cm stems). We also studied the vase life after a 24 h pulse treatment with a number of chemicals. It was significantly increased by treatment with 150 mg L<sup>-1</sup> citric acid. Treatment with 10 µl L<sup>-1</sup> ethylene reduced vase life and induced both flower bending and abscission of ray flowers. In contrast, 2 mM amino-oxyacetic acid (AOA), an ethylene inhibitor, reduced ethylene production but did not increase vase life. 8-Hydroxyquinoline (8-HQS) at 150 mg L<sup>-1</sup> did not lengthen vase life. Vase life was reduced by treatment with 2% sucrose combined with either 150 mg L<sup>-1</sup> citric or with 150 mg L<sup>-1</sup> 8-HQS.