Title Effect of electrolyzed acidic water in combination with sucrose on the vase life of cut rose flowers

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Abstract

Cut rose flowers ('Diana') were treated with 1) 100 g L^{-1} sucrose for 10 hr, 2) 300 ml L^{-1} electrolyzed acidic water (EAW) for 2 hr, 3) 300ml L^{-1}EAW for 2 hr followed by 100 g L^{-1} sucrose for 10 hr, and 4) water (control), and the effects of the treatments on vase life were evaluated. Compared to the control, all treatments promoted flower diameter, advanced opening, and extended longevity. Treatment with EAW followed by sucrose was the most effective in promoting floret opening as well as extending longevity. Petal color pigmentation was improved by treatments with sucrose alone or EAW followed by sucrose. Ethylene production seemed to inhibit by all treatments, particularly in the presence of sucrose. These results show that EAW followed by sucrose is more effective than EAW alone in improving the vase life of cut rose flowers.