

Title Analysis of sucrose metabolism during petal growth of cut roses
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Abstract

To clarify the mechanism of flower opening, we investigated sucrose metabolism in rose petals using attached and detached flowers. The petal fresh weight of sucrose-treated detached flowers was lower than for attached flowers, and hexose levels of these detached-flower petals were also lower. Invertase activities in attached flowers increased markedly during petal growth, but these activities in detached flowers decreased, even when detached flowers were treated with sucrose. These different invertase activities might be the cause of the different growth between attached flowers and sucrose-treated detached flowers. Our results suggest that inducing invertase activity in postharvest conditions might be important for the quality of some rose cultivars.