

**Title** Spraying of sucrose on the greenhouse-grown rose and its effects on the vase life of the cut flowers cv. Alexander

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### **Abstract**

Rose, being among the most important cut-flowers to the market, suffers from a limited vase life due to withering. According to the literature, storage carbohydrates in the plant are important to longevity of its cut-flowers. A factorial experiment was designed based on completely randomized blocks; having sucrose concentration (0, 4 and 8%) as the main factor and the number of spraying actions (1, 2, and 3 times after emergence of buds) as the sub-factors, with 5 replicates. After harvesting, flowers were placed in distilled water in the laboratory. Quantitative as well as qualitative factors such as weight loss process, vase life, chlorophyll content of the leaves, and other appearance factors were evaluated. The results showed that spraying with 8% sucrose solution, twice at 10 and 15 days after bud emergence maximizes the longevity of the cut-flowers; in a way that on the 8<sup>th</sup> day postharvest, it had preserved its quality well; while the control treatment showed a largely reduced quality on the 4<sup>th</sup> day after being harvested.