

Effect of different sucrose concentrations on the vase life of different protea cultivars (Protea leucadendron and leucospermum)

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Abstract

Many researchers have recommended carbohydrates supply as a remedy to improve vase life, however the actual application rates are seldom known. An experiment was laid out as a 4 x 4 factorial Structure in a randomized complete block design (RCBD); at Midlands State University Agricultural Laboratory to determine the most effective sucrose concentration in delaying leaf blackening in different protea varieties.

Procedures were developed for the pulsing of protea varieties using different sucrose concentrations. Four protea varieties (High Gold, Tango, Scarlett Ribbon, and Safari Sunset) were treated with four different sucrose concentrations (0ppm, 30ppm, 40ppm, 50ppm) with the aim of determining the most effective sucrose concentrations in extension of vase life and delaying leaf blackening. Number of days taken to onset of leaf desiccation and leaf blackening were recorded. The results showed that, there was a significant interaction ($p < 0.05$) on the effect of different sucrose concentrations and protea varieties on vase life. There were significant differences on the effectiveness of different sucrose concentration in extension of vase life of different protea varieties. It was concluded that 40ppm was the most effective sucrose concentration in almost all the varieties and Safari Sunset had the longest vase life of all the varieties.