

Title Effects of CPPU on quality and postharvest life of kiwifruit
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Abstract

Since several years it's common practice to apply CPPU (synthetic cytokinin) in kiwifruit to obtain increased fruit size. However, conflicting results have been reported regarding fruit behaviour during postharvest life. Since softening represents a key limiting factor in quality and storage of kiwifruit, it is relevant to obtain information regarding behaviour of CPPU-treated kiwifruit both at harvest and during postharvest life under normal management conditions. Thus, trials were carried out during two seasons in Central Chile, with CPPU being applied in two different orchards in each season and with fruit being stored both under normal air (first season) and CA (second season) conditions. In the first year (2005/2006), CPPU was applied once at either 5 or 10 mg•L⁻¹ and at 2 and 4 weeks after full bloom, while in the second year (2006/2007) CPPU was used only at one date, 4 weeks after bloom, in both concentrations. In the first year, CPPU application resulted in markedly increased fruit growth, shifting the fruit to bigger size categories, while not adversely affecting fruit quality at harvest, with the exception of somewhat reduced dry matter content. Further on during postharvest life, CPPU not only did not result in increased softening, but in some cases it actually reduced it, while it did not cause differences in any of the other quality parameters, with the exception of somewhat reduced final soluble solids in some cases, in general accordance with reduced dry matter content. In the second year similar results were obtained following CPPU applications in terms of fruit growth and quality at harvest. Analogously, no deleterious effects derived from CPPU applications on softening and further quality parameters following postharvest CA conditions were determined, although at harvest time some reduction in fruit dry matter could be found.