Title Quality evaluations of cold stored Clementine as affected by gibberellic acid and wax coating

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Abstract

Clementine mandarins are particularly appreciated for their flavour, easy-peeling aptitude and seedless, but unfortunately they have a brief period of marketing (from the second decade of November until the first decade of January). Therefore, attempts to extend the marketing season beyond its usual bounds could increase grower income for Clementine mandarins in Italy. Cold storage represents a useful tool to extend marketing season, but its success depends, to a large extent, on minimizing shrinkage and softening. Objective of this experiment was to test the efficacy of gibberellic acid (GA_3) and wax coatings ot maintain fruit quality in cold stored Clementine. Clementine fruits were treated, at the end of October, just before color break with gibberellic acid (GA_3) at 10 ppm. After harvest, gibbed and ungibbed fruits were treated with Imazalil fungicide (1000 ppm), and dried. Fruit were then treated with shellac (5%) and shellac (5%) plus polyethylene (6%) coatings or were left uncoated. The coated and uncoated fruit were stored at 6°C and high relative humidity (85-90 U.R.%) for up 30 days. In order to evaluate the effect of treatments on the fruit quality, initially (at harvest) and at the end of cold storage plus one week shelf-life physicochemical and sensory analysis were carried out. At the end of storage plus a week of shelf-life, significant differences were found in weight loss, firmness and color. As regarding sensory analysis, no significant differences among descriptors, except for peel removal and freshness, were found.