

Title Extending harvest season, improving fruit quality and shelf life of 'Barhee' date palm by preharvest sprays

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Abstract

The present study was conducted in order to extend the harvest season and to maintain fruit quality for better marketability of 'Barhee' date palms growing in Riyadh in Saudi Arabia. Palms were treated by preharvest foliar sprays at the hababouk stage and at the beginning of fruit color break with 10 ppm from a new cytokinin related substance (CPPU or N-(2-chloro-4-pyridinyl)-N'-phenyl urea), known as cytofex, 8 mM putrescine (Put) and 50 ppm each of GA₃, NAA, benzyl adenine "BA" and salicylic acid "SA". The harvest date was delayed by one month with NAA and GA₃, three weeks with Put and SA, and by two weeks with CPPU and BA from the commercial harvest date. All treatments decreased skin color intensity and carotenoids content and increased acidity as compared with the control. The fruits turning to the postharvest rutab stage during storage at 0°C and 85-90% RH were reduced by all treatments. The GA₃, NAA and Put treatments had a significantly higher effect in extending the shelf life and decreasing the fruit weight loss percent than the other treatments. It is concluded that the sprayed growth regulators had a positive influence on extending the harvest season and the shelf life of 'Barhee' dates without any deterioration in fruit characteristics before and during cold storage.