

**Title** Postharvest handling of passion fruit

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#### **Abstract**

‘Passion Dream’ is a new passion fruit variety that is a cross between the purple *Passiflora edulis* and the yellow *P. edulis* Sims f. *flavicarpa*. The fruit has characteristics common to both varieties. Export of fruit from Israel to Europe requires maintenance of quality for five weeks from harvest to consumer, to cover handling, transporting and marketing. Limiting factors in the ‘Passion Dream’ variety include decay and shriveling, resulting from water loss. In addition, fully ripe fruit may lack the distinctive purple colour, which makes them less appealing to the consumer. Experiments conducted during three years with fruit from both winter and the summer crops, indicate that the objective of marketing well-coloured fruit 5 weeks after harvest could be achieved under the following conditions: 1. Harvesting fruit at colour break, instead of gathering fallen fruit, reduced the incidence of decay and shriveling. The high acidity of harvested fruit declined during storage and fruit attained good flavour. 2. A hot water dip (55°C for 1 minute), followed by wrapping in high density polyethylene (HDPE) tied bags and storage at 12-16°C reduced water loss, shriveling and decay. For heavily infested fruit collected from the ground, this treatment was less effective for decay control than 0.1% Sportak. To prevent shriveling during shelf-life after removal from the HDPE bag, waxing after the hot water dip was beneficial. 3. A uniform purple fruit colour was obtained by holding wrapped fruit at 20°C prior to storage at 12-16°C. Duration of this pre-conditioning period depended on the level of coloration at harvest and could last, without detriment to fruit quality, for up to 8 days.