

**Title** Modified atmosphere / modified humidity packaging for preserving pomegranate fruit during prolonged storage and transport

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### **Abstract**

The limiting factors for prolonged storage of pomegranates are weight loss and shrinkage, decay, appearance of skin blemishes (especially scalds), and impaired quality and taste. Modified atmosphere packaging is a simple and low-cost method that has been proven to alleviate these problems and maintain fruit quality for 3-4 months after harvest. For periods of less than 4 weeks storage, fruit can be held naked in cold storage without any need for modified atmosphere. For moderate storage periods of up to 10 weeks after harvest, it is recommended to pack fruit either in Xtend<sup>®</sup> Easy-Tear or in regular Xtend<sup>®</sup> modified atmosphere/modified humidity (MA/MH) bags in 4-5 kg export cartons. The Xtend<sup>®</sup> Easy-Tear bags contain a notch, which allows the final user to easily tear and remove the top part of the bag for retail display in cartons. The main advantage of packing fruit in Xtend<sup>®</sup> bags within cartons is that the bag maintains fruit quality not only during the storage period, but also during subsequent shipment and marketing. For storage periods of up to 3-4 months after harvest, it is recommended to pack fruit in Xtend<sup>®</sup> 20 kg bulk bags in plastic crates or in Xtend<sup>®</sup> 80kg bulk bags. This strategy is optimal for storage of large volumes of fruit for long periods but necessitates resorting and removing damaged fruit after storage before repacking. It is recommended that fruit stored in bulk Xtend<sup>®</sup> bags in crates or bins be repacked in Xtend<sup>®</sup> 4-5 kg bags prior to shipment and marketing. In this way MA storage conditions are maintained throughout the entire storage and supply chain.