

Abstract

# How Can Protected Cropping Ensure an Export Supply of High Quality Melons in the Tropics? †

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Queensland production of melons (*Cucumis melo* L.), typically rockmelon and honeydew fruits, is seasonal and practiced entirely outdoors. The horticulture industry has limited knowledge about using protected cropping as a technology to mitigate the effects of climate variability in melon crops. Some new specialty melon types now available in Australia require favourable environmental conditions and specific growing practices in order to obtain fruits with good visual and eating quality. Adoption of protected cropping could be a forthcoming technology to add diversity in fruit appearance, flavour and aroma, and guarantee consistent high quality of melons grown for export markets and niche domestic markets. The Queensland Department of Agriculture and Fisheries has been conducting agronomic research to develop guidelines that will assist growers produce specialty melons with protective cropping systems in the tropics. In a series of evaluations, crop performance and visual and eating quality were assessed. A range of desired fruit attributes were identified for rind colour and net patterns, flesh colour, texture and shelf life. There were examples of cultivars with remarkable sweet flesh (total soluble solids up to 16 °Bx) in large fruits. A group of promising cultivars had total marketable yields that ranged from 5.5 to 10 kg/m<sup>2</sup> with fruit weights that ranged from 0.9 to 2.0 kg/fruit, and where total soluble solids ranged from 12 to 16 °Bx. A market-driven approach is providing information about the range of melon commodities that are desired in targeted markets. This approach is guiding the development of agronomic recommendations to assist with the delivery of consistent superior fruit quality in melon export programs.



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