

Title Managing mango fruit quality through the supply chain: a Pakistan case study
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Abstract

This paper describes the introduction and application of a unique integral supply chain approach to mango industry development in Pakistan. Using this system based approach, the fruits of two promising mango cultivars ('Sindhri' and 'Chaunsa') were monitored from tree to retail outlets. Fruit quality was analyzed at all levels in the supply chain (on the tree, at harvest, at the packing shed, at wholesale markets and at retail outlets) to determine the extent of fruit quality losses at each stage. For every 100 fruits on the tree at harvest, only 32 and 25 fruits of 'Sindhri' and 'Chaunsa' respectively reached retail outlets at a quality level acceptable to the market. Sap burn, bruising, physical damage, diseases and some other disorders were identified as the major causes of quality loss with variable impact at different stages of the supply chain. Most losses were caused by poor methods of harvesting and poor transportation from the packing shed to wholesale markets. The integral supply chain approach has been adopted to address these and other factors currently limiting the competitiveness of mango businesses in Pakistan. Demonstration mango supply chains have been established, comprising commercial participants who are willing to explore how the current situation of the industry can be improved. Mango postharvest quality improvement, domestic and export market research and information and technology transfer through capacity building activities are being used as tools to increase the ratio of better quality mangoes reaching consumers. This study is important because determination of losses throughout the chain and managing them using an integral supply chain approach, in developing countries, has not been reported in the horticultural literature before.