

# Postharvest research for quality horticultural products

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## Abstract

More than 1.3 billion tonnes of food is lost or wasted annually. Of this 44% is wasted in developed countries (most in the production, distribution and consumption phases) while 40% is lost in developing countries (most in the production, postharvest and processing phases). Postharvest science and technology has been dramatically underfunded internationally compared production science, and funding for high value horticultural crops has received <5 of that used for traditional grain and legume crops. Recognition of the health and nutritional benefits of horticultural crops is well recognised. However fruit and vegetables are very perishable with a relatively short life. This means that great attention has to be given to growing the right crop in the right place, harvesting, handling, packaging, storing and transporting it right such that consumers needs are satisfied, they are confident that they are buying safe and nutritious products so that they will return for repeat purchases. A successful supply chain from the grower to the customer will ensure profits are made and consumer satisfaction is assured. A combination of key pre- and postharvest factors affects product quality including: appropriate cultivars for consumer acceptance and for performance in specific soil conditions; balanced nutrition and water management; creation of suitable architectural structures; harvesting at the correct maturity; handling to avoid physical damage; removing field heat and storing at an optimised temperature; grading and segregating product for sending to into different markets; packing for preservation, protection and promotion; preventing postharvest pathogens by relevant hygiene and sanitation processes; education and training of staff. Growers and other supply chain participants have to make a profit to survive so it essential to satisfy the customer at all times by providing high quality, nutritious and safe fruit and vegetables. Some key aspects of these factors will be discussed.