

**Title** Managing food safety risks in the fresh-cut industry  
**Author** L.R. Beuchat  
**Citation** ISHS Acta Horticulturae 746:103-114. 2007.  
**Keywords** fresh-cut produce; fruit; vegetable; sanitizer; foodborne disease; enteric pathogen

### **Abstract**

Outbreaks of human diseases associated with consumption of raw fruits and vegetables contaminated with pathogenic bacteria, parasites, and viruses have occurred with increased frequency in many countries in the past decade. The development of sophisticated epidemiologic and surveillance techniques, together with changes in agronomic, harvesting, processing, distribution, and consumption patterns and practices have undoubtedly contributed to this documented increase. The risk of human gastrointestinal infections associated with fresh-cut produce can be reduced by preventing contamination at all points from the field to the time of consumption. Handling produce in ways that will prevent the growth of pathogens, as well as removing or killing pathogens by washing or treating with sanitizers, are extremely important in any effort by the fresh-cut industry to manage safety risks. The effectiveness of sanitizers is often minimal, however, because pathogens on and in plant tissues may be protected against exposure to the lethal components during treatment, thereby posing unique challenges to management of factors affecting safety. The challenge is to develop and apply treatments that will reach pathogens on the surface and in subsurface areas of fresh and fresh-cut produce in an active form without compromising sensory quality throughout subsequent shelf life. Management of safety risks associated with fresh and fresh-cut fruits and vegetables requires good agricultural practices (GAPs) and application of hazard analysis critical control point (HACCP) programs throughout various stages of growing, harvesting, processing, packaging, distribution, and preparing fresh and fresh-cut produce for consumption.<sup>2</sup>