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In recent years, consumers have become more health-conscious in their food choices but have had less time to prepare healthful meals. As a result, the market demand for "minimally processed" or "lightly processed" fruits and vegetables has rapidly increased. Minimally or lightly processed operations have been defined as those procedures, such as washing, sorting, trimming, peeling, slicing, or chopping, that do not affect the "fresh-like" quality of the fruit or vegetable. The result of such procedures are convenient, fresh products that can be prepared and consumed in less time. However, because the produce is essentially wounded, shelf life is often greatly diminished.

The production of a high-quality, convenient, lightly processed produce pack presents unique challenges for horticulturists and food processors. Undesirable physiological changes are one of the most crucial problems in minimal processing. Loss of cellular integrity at the cut surface of the fruit or vegetable destroys compartmentation of enzymes and substrates. Browning reactions and formation of unwanted secondary metabolites are often the consequence. Senescence may accelerate and off-flavors may develop as respiration and ethylene production increase near the cut surface. Also, the exudate from

the cut surface is a favorable medium for fungal and bacterial growth. As the produce is handled further, opportunities for contamination and growth of microflora increase, and health risks can occur.

Various approaches have been used to control the undesirable physiological changes that adversely affect the quality of lightly processed products. Importantly, selecting the most appropriate cultivar for light processing can significantly aid efforts to maintain product quality. Refrigeration, humidity control, and addition of chemicals, such as ascorbic acid and Ca, have been used successfully to preserve product quality and enhance shelf life. Desirable modified atmospheres can be predicted and created within and around commodities by selecting appropriate packaging. Edible coatings and films have been used successfully with some commodities to provide useful barriers to moisture, O₂, and CO₂, while improving package recyclability.

The following six discussions describe in detail various topics related to the production and handling of lightly processed fruits and vegetables. Participants in this colloquium presented their views on the challenges associated with delivering a high-quality, lightly processed fruit or vegetable pack to the consumer.