

# Postharvest Physiology and Quality of Coated Fruits and Vegetables

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This review was part of a research project on “Gas exchange, ripening behaviour and postharvest quality of coated pears,” with financial assistance from the Brazilian Scientific and Technological Council (CNPq, Brasília, Brazil) and the New Zealand Apple and Pear Marketing Board.

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## I. INTRODUCTION

The magnitude of postharvest losses in fresh fruits and vegetables is estimated to be 25–80%, depending upon the commodity and the technological level of postharvest operations (Wills et al. 1981). This reflects a lack of knowledge by postharvest handlers of the biological and environmental factors involved in deterioration or the absence of adequate postharvest technologies required to preserve fresh quality (Kader 1992). These losses represent a large proportion of total costs of the hort-business, greatly reducing the profitability of the marketing chain.

In recent years, much attention has been paid to exploring the potential of surface coatings to maintain quality of harvested fresh produce and to reduce the volume of disposable non-biodegradable packaging materials (Rose 1992). The close attachment of the coating to the product surface results in a different set of benefits and risks to those encountered with plastic film wraps. Cosmetic enhancement is directly linked to the product rather than being a removable part of its packing. The risk of condensation on the inner surface, and the associated exacerbation of rots, is eliminated. On the other hand, the absence of opportunity for exchange of gases between the product surface and applied film can result in much more dramatic changes in the commodity internal atmos-