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Application of coatings for post-harvest fruit conservation

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Nutrients present in fruits such as fiber, vitamins, minerals and other compounds are associated with health benefits, which is why fruit consumption has increased globally. However, global statistics show that fruit and vegetables, make up the majority of post-harvest food losses. In climacteric fruits, at a certain point in their life cycle, there is a sharp increase in their respiratory activity, followed by the rapid ripening of the fruit, making them perishable. Fruits may be prone to post-harvest weight loss, softening of their texture, conversion of starch to sugar, chlorophyll degradation and spoilage, limiting their post-harvest life. The fruits must be available not only in quantity, but also in quality. Post-harvest studies aim to maintain the nutritional quality of the fruit. The coatings are characterized as a thin layer of a material formed on the fruit and are a technological option to maintain the conservation of the fruit after harvest. Several types of raw materials can be used to form the coating, such as: polysaccharides, lipids and proteins, waxes, resins or mixtures. They are biodegradable, have an advantageous cost and convenience, can reduce the incidence of diseases, increase the surface gloss of the fruits and improve the appearance of the fruits. Coatings can block fruit gas exchange, reduce the rate of ethylene release and delay fruit ripening. Quality attributes like taste, look, texture, appearance can also be preserved for a longer period of time. Recent studies carried out in this area have shown that this technology is an option to maintain the quality and extend the shelf life of products, preserving the characteristics that are indispensable for consumers at the time of purchase. Availability, easy access and biodegradability, increase its application in the industrial sector. The future prospects for coating technology are the improvement of coating materials, optimizing their cohesion

before application and encompassing the incorporation of nanomaterials into the coating.

Referências bibliográficas:

CHITARRA, M. I. F.; CHITARRA, A. B. Pós-colheita de frutos e hortaliças: fisiologia e manuseio. 2. ed. Lavras: UFLA, 2005. 785 p.

KUMAR, P.; SETHI, S.; SHARMA, R. R.; SRIVASTAV, M.; VARGHESE, E. Effect of chitosan coating on postharvest life and quality of plum during storage at low temperature. **Scientia Horticulturae**, vol. 226, 104–109, 2017.

HENZ, G. P. Postharvest losses of perishables in Brazil: what do we know so far? **Horticultura Brasileira**, vol. 35, p.6-13, 2017.

NOR, S. M.; DING, P. Trends and advances in edible biopolymer coating for tropical fruit: A Review. **Food Research International**, vol. 134, 109208, 2020.

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