CHITOSAN AS AN ALTERNATIVE TO CONTROL PHYTOPATHOGENIC FUNGI ON FRUITS AND VEGETABLES IN MEXICO.

ABSTRACT

The control of phytopathogenic fungi has been carried out by synthetic chemical fungicides for many years. However, some studies showed the potential risk they present to the environment and human health. The use of chitosan as an alternative to control phytopathogenic fungi during postharvest is important particularly in Mexico because this polymer exhibits antifungal activity against several important pathogens that affect horticultural commodities. In this review, we present the most relevant scientific studies done in Mexico on the potential use of chitosan as an alternative for the control of phytopathogenic fungi. In addition to its antifungal activity, chitosan forms a semipermeable coating which generates a mechanical barrier against the diffusion of gases that affect the metabolism of agricultural products. The results obtained in different studies are variable and depend on several factors such as the concentration, molecular weight and degree of acetylation of chitosan, as well as on the application method and the storage temperature of the commodities, among others. The studies included in this review may assist to highlight the antifungal potential of chitosan and may spread its use within a sustainable agriculture.

http://www.academicjournals.org/AJMR/abstracts/abstracts/abstracts2012/27Sept/Valle%20et%20al.htm

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