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PhilippinesÂ researchers drives technology to preserve fruit freshness

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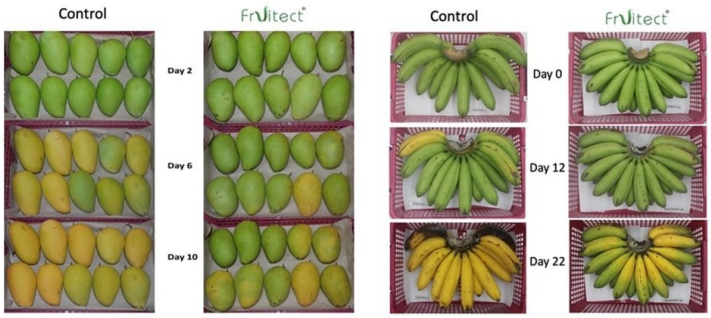
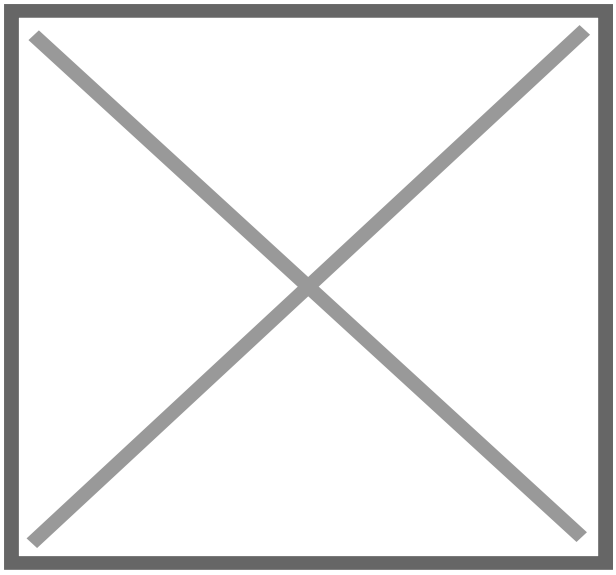


The novel technology FruitectÂ® consists of edible coating formulations that delay the ripening of mangoes and bananas

University of the Philippines Los BaÃ±os (UPLB)-based inventors founded HS InnoTech, Inc. (HSII) to manufacture products that make fresh fruit last longer. The technology named FruitectÂ® consists of edible coating formulations that delay the ripening of mangoes and bananas. Unlike petroleum wax coatings, FruitectÂ® is biodegradable because it is made from agricultural waste such as peels and leaves.

Carabao mangoes stored at room temperature (28Â°Câ??31Â°C) turn ripe and sweet five to six days after harvesting, but when mangoes are coated with FruitectÂ®, the fruits ripen after 10 or more days. At cooler storage temperatures, the FruitectÂ®-coated fruits ripen after 20 days.

On the other hand, *Lakatan* bananas stored at room temperature turn ripe and ready to eat six or more days after harvesting, while bananas coated with FruitectÂ® start to ripen after 20 days.

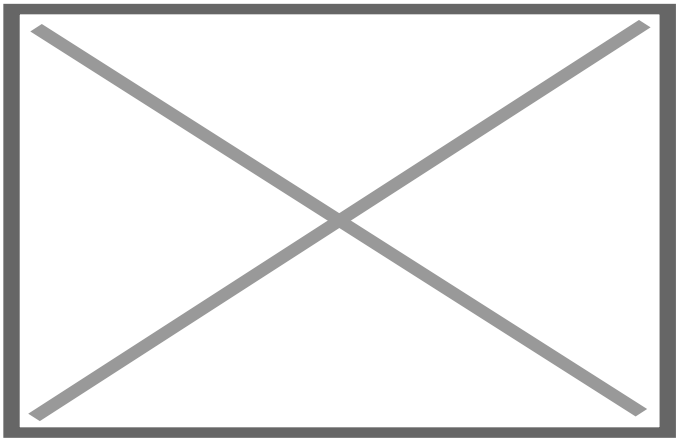


The Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) awarded HSII the Grants for Research towards Agricultural Innovative Solutions (GRAINS) in 2022 to start the operation of its pilot plant located in UPLB, Los BaÃ±os, Laguna. The grant enabled the fabrication of support structures and test runs to produce FruitectÂ® up to 300 liters.

Dr. Veronica Sabularse and Dr. Hidelisa Hernandez, inventors of FruitectÂ®, cite their technology as a solution to two common problems of agriculture: post-harvest life extension and agricultural waste utilization. â??By preserving the freshness of fruits sold to consumers, the technology promises better earnings and improved livelihood of our local farmers,â they explained.

The new pilot plant will be producing FruitectÂ® in liquid form, which is ready to apply to whole fresh fruits. Moreover, FruitectÂ® will also be available as a wettable powder for easier packaging, distribution, and longer shelf life. HSII is now exploring ways on how to cut production costs.

SEARCA Director Glenn Gregorio shared the impact of FruitectÂ®â??s technology. â??This nature-based coating technology significantly contributes to reducing food wastage and preserving fruit exports.â



The development of FruitectÂ® was initially funded by the Department of Science and Technology-Philippine Council for Industry, Energy and Emerging Technology Research and Development (DOST-PCIEERD) to apply nanotechnology in creating new materials for commercialization.

HSII reported that it is now ready to sell its FruitectÂ® formulation for *Carabao* mangoes. Groceries, fruit processors, retailers, and consumers will soon have a greener way of keeping produce fresh longer. FruitectÂ® for *Lakatan* banana will also be for sale soon