

# Bio Wax

## Invention summary:

Wax formulation developed using bio-ingredients to extend the storage life of fruits and vegetables.

## Technology overview:

Wax coatings are applied to many horticultural commodities to delay senescence and ripening by controlling the loss of moisture. Wax coatings modify gas exchange and thereby reduce the rate of respiration and extend shelf life of fruits. Wax formulations derived from biological compounds or GRAS (Generally regarded as safe) compounds are known as bio - waxes or edible coatings. This postharvest shelf life extension technology is achieved by encapsulating natural anti-senescence and anti-microbial agents in a water based wax emulsion. The emulsion then releases the encapsulated chemical agents, which acts on microbes to delay ripening during storage / shelf life of the fruit. The wax formulation also provides protection by enhancing the mechanical strength of the outer dermal layer of the fruit while facilitating the limited exchange of respiratory gases and minimizing there release of moisture.

## Potential Application:

To extend the storage life of following fruits and vegetables; mango, papaya, king coconut, lime etc

## Advantages of the wax:

- Extends the shelf life /storage life of fruits and vegetables to be exported and those in supermarket shelves
- Reduces postharvest losses
- Improves the cosmetic appearance of commodities
- Reduces the incidence of diseases and their severity
- Increases foreign exchange

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