

SHELF-LIFE EXTENSION OF CHERRY TOMATOES USING NOVEL SUSTAINABLE PACKAGING

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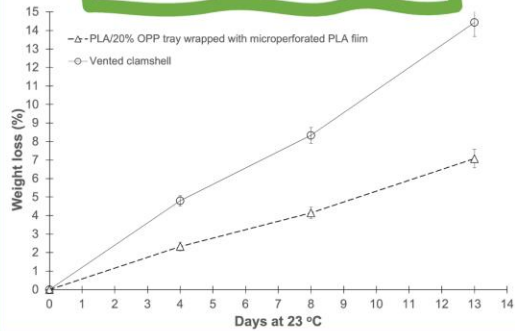
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The aim of this study was to use orange juice processing waste to develop a sustainable package that can extend the shelf life of cherry tomatoes while contributing to agricultural waste management. The novel package consisted of an orange peel powder Incorporated poly(lactic acid) (PLA) tray wrapped with a microperforated PLA film. The commercial vented clamshell container was used as control treatment. Cherry tomatoes were stored in the novel packaging and the clamshells for 13 days at ambient conditions simulating retail and household conditions. The results show that waste from orange juicing can be used to create sustainable packaging that can extend the shelf life of cherry tomatoes. The novel package will also work for other commodities that benefit from a modified atmosphere.

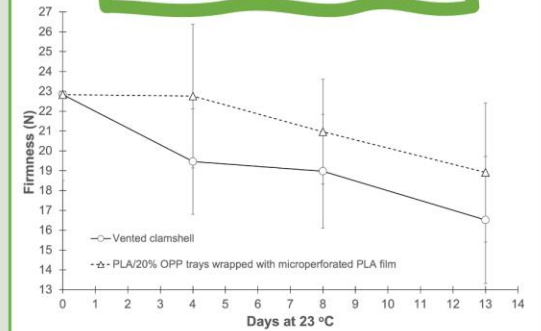
TOMATO WEIGHT LOSS REDUCED BY HALF IN THE NEW PACKAGE



VS



TOMATO FIRMNESS BETTER MAINTAINED OVER STORAGE

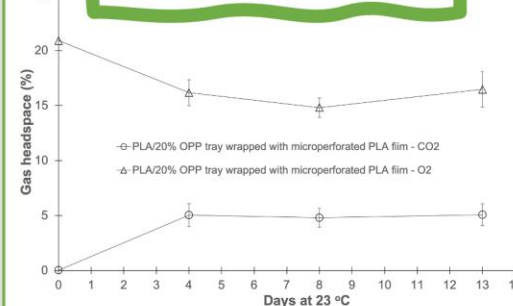


Day	Clamshell	PLA/20% OP tray
4	88 %	36 %
8	100%	48 %
13	100%	90 %

WRINKLED TOMATOES



OPTIMAL GAS COMPOSITION



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