

Mediated Minds Conference, University of Cincinnati, Blue Ash April 19, 2019

The Scientific Investigations and Solutions to Increase Produce Shelf-life and Decrease Waste

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Abstract — In this presentation, I will show the problem of produce waste due to hormonal fruit ripening and report three possible scientific solutions through analysis of scientific data.

I. INTRODUCTION

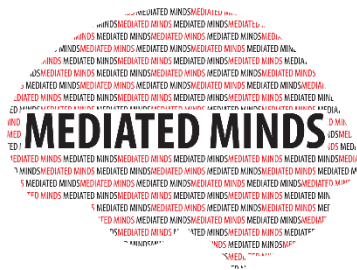
Two of the three methods of inquiry aim to enhance post-harvest shelf life and quality of fruit by modification of enzyme activity to delay the ethylene mediated pathways. The pre and post-harvest hexanal solutions are effective at retaining fruit qualities and delaying fruit ripening and senescence. The third method is genetic modification of the MADS box genes which are fruit expansion and ripening genes and are upstream of ethylene production and was also effective at delaying fruit ripening and senescence.

II. FINDINGS

Pre-Harvest hexanal (0.015%) sprays, the Post-Harvest 0.02% hexanal dip, and the genetic modification of the MADS-box genes were all effective solutions to delay fruit ripening and senescence.

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