A-185

CUSTOMIZED MODIFIED ATMOSPHERE (MA)/MODIFIED HUMIDITY (MH) PACKAGING FOR STORAGE AND RIPENING OF HASS AVOCADOS

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MA Packaging extends storage life of produce by suppressing respiration and metabolism. The high levels of CO2, which naturally accumulate in the package, suppress the ripening process. When triggering these fruit by heat elevation or exogenic ethylene, irregular ripening occurs which may cause pulp discoloration and decay, appearance of Stem and Rot *Anthracnose*, and short shelf life.

StePac L.A. Ltd. developed a customized, permeable polymer for long term storage and ripening of Hass avocados. When Hass avocados were packed in MA/MH bags, formulated from this polymer, they could be stored for up to 40 days at +5ºC and remain in green, stone hard condition. Subsequently, the avocados while still in the bag, were moved to +20ºC for a period of 48 hours, to induce ripening. The ripening process occurred in the bag enabling peel colour to change to brown/black and allowing pulp to have a uniformly, soft texture (2-4 lbs.) with fully developed taste. The shelf life, at +20ºC, of the bagged, ripe avocados (2-4 lbs.) was further extended to 7 days followed by an additional 7 days at home fridge temperatures (+4-7ºC). The commercial application of this innovation allows for one time packing at source in bulk or consumer bags without additional handling. This one bag functions to extend the storage life of fruit throughout the long shipment, to trigger for ripening at destination, and to preserve avocados on the shelf and at home.