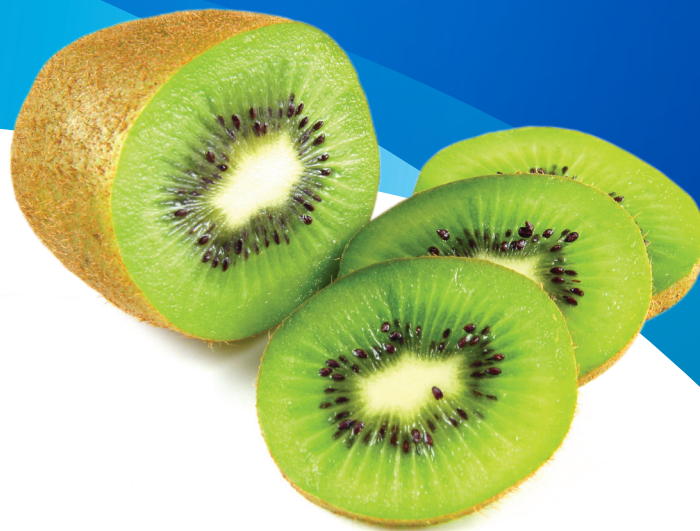


LifeSpan[®] for Kiwi



LifeSpan[®] Modified Atmosphere Packaging (MAP)

LifeSpan[®] box liners and pallet shrouds are an innovation in post-harvest packaging that extend the storage and marketing life of fresh produce. Used commercially for over 15 years, LifeSpan[®] is a global leader in MAP products and is now an important packaging component for many of the worlds leading fresh produce exporters.

LifeSpan[®] for Kiwifruit

Freshly Harvested

LifeSpan[®] can achieve 3-6 months storage for freshly harvested Hayward Kiwifruit. After any storage time, Kiwifruit packed in LifeSpan[®] will have a significantly longer marketing life than conventional air stored Kiwifruit. Freshly harvested Kiwifruit have relatively high respiration rate until LifeSpan[®] takes effect. As a result, the oxygen (O₂) level drops quite low in the first few days after packing in LifeSpan[®]. However, it will then rise back to the equilibrium value for long term storage.

Post CA Storage

Post CA Kiwifruit packed in LifeSpan[®] will also have a significantly longer marketing life. The marketing life that can be achieved depends on the pressure of the Kiwifruit when packed in LifeSpan[®]. Results of up to 3 months further storage after CA storage have been achieved when the average pressure after CA storage is 4-4.5 kg. Benefits have been observed with pressure as low as 2.5 kg after CA storage. It is important that all soft fruits are graded

out prior to packing in LifeSpan[®] post CA storage. Kiwifruit treated with MCP-1 can also be packed in LifeSpan[®].

To achieve the best results, there is a specific LifeSpan[®] product to use with Post CA Kiwifruit. For Kiwifruit held in CA storage for the longest periods, placing an ethylene scavenging sachet inside the LifeSpan[®] bag will deliver the best results.

How it works

LifeSpan[®] MAP Packaging allows the creation of a low oxygen (O₂), increased carbon dioxide (CO₂), and high humidity atmosphere inside a box liner. It is similar in concept to a CA Coolstore.

The oxygen and carbon dioxide permeability of the LifeSpan[®] liner is specifically designed for the respiration rate of Kiwifruit. The modified atmosphere created will significantly reduce the fruit respiration rate, with the following benefits.

LifeSpan[®]
Modified Atmosphere Packaging



Contacts

For more information, visit www.amcor.com/lifespan or email lifespan@amcor.com

T +61 9556 7666 F +61 9532 5385

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LifeSpan[®] for Kiwi

Benefits for Kiwifruit

- Maintenance of Kiwifruit firmness, reducing the incidence of soft fruits in storage & distribution
- Reduced dehydration and subsequent fruit weight loss, maintaining Kiwifruit in harvest fresh condition
- Prevention of the ripening effects of ethylene through elevation of CO₂
- Suppression of the onset and development of botrytis and some other rots or moulds

LifeSpan[®] Experience in Kiwifruit

LifeSpan[®] is used for commercial applications by many packers and receivers in South America, throughout Europe and the United Kingdom. The use of LifeSpan[®] has rapidly expanded over the past few years with much of the world's sea-freight kiwi exports now packed in MAP.



Many importers now request their foreign Kiwifruit suppliers to use LifeSpan[®] due to the delivery of superior quality fruit. This improvement in fruit quality has helped many exporters compete in a range

of new and distant markets.

Dehydration or fruit weight loss

LifeSpan[®] liners retain a high humidity around the Kiwifruit. Together with the reduced respiration rate created inside a LifeSpan[®] liner, this significantly reduces dehydration.

When Kiwifruit are stored in LifeSpan[®] MAP (low O₂ increased CO₂) the respiration rate is very low relative to air storage, thus dehydration is further reduced.

Ripening effects of ethylene

Ethylene is a ripening hormone produced by Kiwifruit and many other fruit types as they respire. The presence of ethylene further accelerates the ripening process, reducing storage and marketing life.

LifeSpan[®] lowers the Kiwifruit respiration rate reducing the production of ethylene. Elevated CO₂ from the modified atmosphere, blocks the fruit ethylene receptor sites. This prevents the ripening effects of ethylene and further extends the storage and shelf life of the produce. However, if the Kiwifruit to be packed in LifeSpan[®] has already been in storage for a long time, it may already have ethylene attached to the receptor sites (best identified through fruit firmness, with fruit below 3kg pressure already affected by ethylene). In these situations, LifeSpan[®] can still slow the ripening of the Kiwifruit, but best results will be obtained if an ethylene scavenger sachet is placed in each LifeSpan[®] bag.

Importance of pre-cooling & cool-chain management

Good temperature management commences the moment produce is harvested. LifeSpan[®] is designed to work at a pre-determined temperature range (0-2°C / 32-36°F for Kiwifruit), so it is important produce is pre-cooled before packing.

Maintaining the cool-chain at the designated temperature range throughout storage and distribution is essential for maximising LifeSpan[®]'s benefits. It is important that the LifeSpan[®] liners are opened when the produce is removed from the cool-chain for any significant period of time.

Importance of MAP and Sealing airtight

Establishing a consistent significantly modified atmosphere is essential to maximise the benefits of LifeSpan[®] MAP. Only by significantly modifying the atmosphere will the produce respiration rate be reduced. To achieve this it is necessary to seal the liner airtight.

The LifeSpan[®] clip seal system is fast and simple for packers whilst giving a consistent airtight seal and should be used for best results.

How LifeSpan[®] can add value to your Kiwifruit

- Reduced weight loss and subsequent price corrections
- Extension of marketing season to avoid gluts
- Reduction of storage and transport costs relative to CA
- Firmer, fresher fruit delivered to your markets

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