Case studies

18 days with PrimePro®
Sweet peppers (California green) Peppers in PrimePro® lost 45% less weight than without

18 days without PrimePro®

45 days with PrimePro®
Belgian endive Dramatic reduction in waste

45 days without PrimePro®

72 days with PrimePro®
Apples (Golden Delicious) Apples stored in PrimePro® were 35% firmer

51 days without PrimePro®

Cost savings through shelf life extension

PrimePro®
Shelf Life Extension Packaging

www.primepromap.com

Food safety registrations

Food Contact:
- Food and Drug Administration (USA)
- Canadian Food Inspection Agency (Canada)
- European Union (and member countries)

Food Safety (HACCP):
- ISO 22000, PAS 223 (Global Food Safety Initiative compliant)

Organic:
- Organic Materials Review Institute (OMRI®) Listed

Quality:
- ISO 9001: 2008

CHANTLER PACKAGING INC.
info@chantlerpackaging.com • www.chantlerpackaging.com
TEL: 905 274-2533 • TOLL FREE: 1-800-565-2245 • FAX: 905 274-9522

*Adapted from Microanalytics final report presented to Chantler Packaging Inc., August 14, 2012.
A fresh approach to shelf life extension

Consumers know fresh produce is the key to a healthy lifestyle and demand the best-quality produce for their tables. Grocery stores want to attract customers by having top-quality fresh produce, year-round. Growers, packers and shippers are trying to increase profits and cut costs while keeping up with the constantly changing demands of a competitive marketplace. As the produce industry tries to satisfy these demands, shelf-life extension technologies become more and more important.

PrimePro® is a packaging technology designed to extend the shelf life of fresh fruits and vegetables. It extends shelf life by removing ethylene gas, a powerful plant hormone that triggers the process of ripening and decay.

Growers, packers and shippers who use PrimePro® say:
- Produce arrives at its destination in top quality - appearance, texture, flavour, nutritional value and food safety are maintained at their peak.
- Weight loss is minimized.
- Sea or truck freight can be substituted for expensive air freight.
- Higher prices can be obtained by holding produce until market conditions are in the seller’s favour.
- Weaker or shoulder-season product can be exported.
- Mixed truckloads become safer.

What is ethylene?

Ethylene (C2H4) is a plant hormone. Some plants require ethylene to initiate the ripening process. Other plants do not require ethylene to ripen. Some types of produce generate large amounts of ethylene on their own. But most fruits and vegetables are sensitive to ethylene and so ethylene is a factor in how long produce can be stored and sold after harvest.

Even at extremely low concentrations in the air, ethylene causes accelerated ripening and ageing. In fact, ethylene can cause these effects at concentrations of 1 part of ethylene in 10 million parts of air.

Ethylene has been scientifically proven to cause:
- Increased respiration.
- Water loss.
- Yellowing or spotting.
- Production of more ethylene.
- Accelerated ripening, ageing and decay.
- Reduction in nutrient content (e.g., loss of vitamin C).
- Taste and aroma changes, off-flavours such as bitterness.
- Loss of leaves and flowers, sprouting, toughening.

The result: Exposure to ethylene shortens the shelf life of fresh produce by speeding up the process of ripening and decay.

Reducing waste benefits the value chain

Sustainability

- Reduced greenhouse gas emissions.
- Reduced disposal costs.

Local food

- Improved local food quality.
- Make local food more cost-competitive.

Growers

- Reduce wasted inputs: Fuel, fertilizer, water, electricity, pesticides.
- Fewer rejected loads.
- Improved brand image.

Chain stores

- Less waste at distribution centre and store level.
- Increased customer loyalty.
- Leadership position.

Consumers

- Less waste at consumer level.
- Increased fresh produce consumption.
- Save money.

How is PrimePro® Used?

Chandler Packaging custom-tailors the right PrimePro® package to suit the needs of individual growers. We take into account the harvesting process, cooling conditions, packing system, storage conditions and transport method and environment to create the right shelf life extension package. PrimePro® allows you to use the most cost-effective application.

Form-fill-and-seal rollstock

- Runs on horizontal and vertical equipment capable of sealing polyethylene.
- Protects all the way from the packing house, through the distribution & retail chain, right to consumers’ fridges.
- High-speed packaging, minimal labour.
- Capable of being printed for maximum marketing effectiveness.

Pallet covers

- Protect an entire pallet of produce.
- Quick to apply, just cool pallet and apply cover.
- Cost-effective alternative to gas-flushed pallet covers.

Carton Liners

- Place in carton, pack produce inside, fold top loosely to close.
- Highest level of ethylene protection.

Ideal for:
- Peaches
- Nectarines
- Strawberries
- Pomegranates
- Plums
- Zucchini and summer squash
- Lychee
- Green beans
- Sweetcorn
- Lettuce
- Leek greens
- Chinese
- Eggplant
- Peppers
- Clementines

Sheets

- Convenient format that other technologies can’t offer.
- Fast to pack, just place in carton, pack produce on top and fold sheet over produce.
- Use where pre-cooling is difficult or breaks in cold chain likely.
- Print with grower logo, branding.

They are ideal for:
- Tomatoes on the vine.
- Eggplant.
- Zucchini and summer squash.
- Peppers.

Bags for retail

- Protects for the maximum length of time, all the way from packinghouse to consumers’ fridges.
- Use on specialty produce to give customers confidence to try something out of the ordinary.
- Fully printable with custom branding.

PrimePro® bags are ideal for:
- Asian greens (kail choi, gai lan, etc.)
- Herbs.
- Bananas, etc.
- Baby bananas.
- Exotic / tropical fruit.
- Belgian endive.
- Salad greens.