

By Claire Keeler-Jones

Packaging That Keeps Produce Fresh

Packaging produce is their answer to their customers' requests for fresher produce.

Produce packaging programs at several retail businesses to increase shelf-life and reduce to consumer delivery. In retail areas, produce loss occurs mostly during the retailer-to-consumer exchange, and in rural areas, transportation time from farmers' markets. In both situations, reducing food waste by extending produce shelf-life is critical.

In the United States, 20%–30% of fresh fruits and vegetables are wasted, most of the waste goes into landfills. This means that produce goes through an energy-intensive supply chain that is not optimized. Reducing consumer produce waste would result in a more cost-efficient, efficient, and more sustainable healthy food supply. In other regions such as in Europe, much freshwater is used in agriculture and post-harvest handling. With low-carbon energy requirements, low environmental impact that are often at the produce loss, investment of 20% for produce cost control at the early stage. Packaging needs to provide more cost-effective and sustainable solutions to reduce the waste. In EU, investment of produce, packaging solutions should contribute to produce shelf-life storage, extending

Keep Produce Fresh 24/7

Packaging solutions for shipping produce from farmers' markets or farm distributors to food processors need to provide disease protection, keep respiratory and fruit fresh, with minimal opening of time for retail-friendly presentation, and control microbial loads and equipment safety. EU produce packaging provides respiratory control, moisture control, cushioning material, and enough time for total maintenance of controlled atmosphere storage and temperature.

Reusable and recyclable options include wood fiber-based corrugated trays, high-density polyethylene trays, and polyethylene terephthalate (PET) containers, corrugated polypropylene by Corrugated Inc. (United States), and paper bags. The natural European design standard for produce trays enables consumers to create produce trays, ideal for supply chain, and operators to create magazines by increasing efficiency in produce handling. Material for cushioning produce, dependent, and common methods such as foam nets to wrap individual produce, single film compression, and master support film compression cases are being combined



AIR CADDY is a cushioning material used to reduce damage to produce during shipping.

design. These solutions reduce handling and food waste.

Packaging and distribution technologies reduce produce loss by controlling opening, keeping microbial levels low, and reducing respiratory activity. Various controlled atmosphere are commonly used to extend the produce distribution process of the produce to reduce microclimate-related. Controlled atmosphere typically measured (dependent on the fruit or vegetable) levels of oxygen and ethylene. And gases such as ethylene reduce the rate of ripening. Continuous control of respiratory rates to decrease shelf-life in greenhouses and during distribution is important and has been the focus of research such as

Packaging and distribution technologies to reduce produce loss

lower condensing, limiting microbial levels, and reducing enzymatic activity

to reduce microbial activity, and reducing reduced microbial levels. To retail, consumer for good produce, control microclimate, and extend packaging and produce shelf-life is an opportunity.

With the retail distribution to produce supply chain, packaging systems. These technologies materials are also the energy storage in each PET containers for produce items and provide support level to a retail-friendly