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A periodical insight publication from the renewable materials company

The future of fresh produce packaging

The battle for growth in mature markets

Beneath a calm surface, the fresh produce market is undergoing radical change

The volume of fresh fruit and vegetable produce in Europe ought to be booming. Consumers want to live healthy lives, choose sustainable products and improve their quality of life. Yet, total sales volumes have more or less flatlined since 2010 and are only expected to show modest growth until 2020. In fact, the industry is undergoing radical change. Consumer needs and behaviours are moving toward the desirable: more exotic, more added value, more taste and more freshness — but not necessarily more volume.

Food waste is a huge sustainability challenge, but innovation in packaging methods has a clear potential to reduce it. Retailers looking for growth should focus on value (rather than volume), which requires a deep understanding of how consumer desires can translate into great products and packaging.

The volume (weight) of fresh produce consumption has flatlined in the past five years and only limited growth (CAGR) is expected up to 2020.

	2010-2015 A	2015-2020 F
Estonia	2%	2%
Latvia	1%	2%
Lithuania	1%	2%
Poland	-1%	2%
Russia	0%	1%
Finland	0%	1%
Sweden	0%	0%

Fresh produce includes fruit, vegetables, pulses and starchy roots[1]

Consumer desires as a route to value growth

Desire # 1: Lead a healthy life

Most of us today have a desire to lead healthy lives and our awareness of the benefits of fruit and vegetables is high: countless "5-a-day" information campaigns have promoted fruit and vegetables as fresh, healthy, tasty, sustainable and attractive foods. We see them in increasingly attractive retail displays, in food blogs and on our social media feeds — but this does not necessarily mean that they are appearing more frequently on our plates. Overall, the health trend is not powerful enough to grow the entire fresh produce market in terms of volume. So where's the growth?

Health as a value driver

Growth is found in premiumised vegetables, fruits and berries that are loaded with nutrients and delivered fresh and tasty. As an example, kale has experienced a revival thanks to the vitamins, antioxidants and minerals that it contains, but also thanks to its popularity on food blogs and social media feeds filled with inspirational recipes.

Desire # 2: Better quality of life

Consumers want it all. Urbanisation makes people's lives more complex as they are faced with more opportunities and choices but with less time on their hands. This motivates consumers to choose solutions that simplify things and save time.
At the same time, consumers want tastier fruits and vegetables and even more exotic novelties to indulge in.
In the eastern parts of the European Union, consumers are shifting from basic, "staple" fruit and vegetables towards more diverse produce, including exotic foods.[2]

Quality of life as a value driver

Growth has been seen in the consumption of semi-prepared freshly-cut fruit or salads made for a modern time-constrained lifestyle. These products are consumed on-the-go, as a quick lunch or as part of a dinner.

Retailers are seeing that consumers are in fact willing to pay more for tastier and more exotic produce which are seen as being more premium.

Desire # 3: Save the planet

Levels of fruit and vegetable food waste are very high. Nearly 50% of all fruit and vegetables produced in Europe go to waste. Despite high levels of awareness, the biggest culprits in Europe are consumers — one in five fruit and vegetables are wasted after purchase.[3]

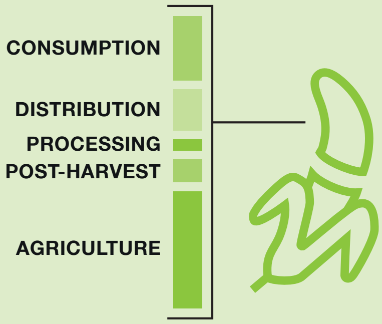
Fresh produce consumers are not only concerned about food waste, but they are also generally sceptical about packaging in this category.

Sustainability as a value driver

However, if packaging can enhance shelf life and therefore reduce waste, consumers have a positive attitude towards it.[4] Moreover, they want the packaging itself to be sustainable. Fibre-based packaging, such as corrugated cardboard or carton board, is considered by the majority of consumers to be the most sustainable choice.[5]

45%

fruit & vegetable food losses



Nearly 1 in 2 fruit and vegetables produced never reach our lips.[8]

Retailers expect more packaging, not less

Retailers are looking at markets like the UK to see where the fresh produce category is heading. The road seems to lead to more rather than less packaging.

Selling products like tomatoes in packages allows retailers to charge per package instead of per kilo which can create a completely different perception of price, with consumers being less able to compare.

Packaged fresh produce becomes less of a commodity as the quality and freshness can be increased. In addition, there is room for branding and differentiation.

Waste during transport or warehouse handling is generally very low. However in-store waste levels are significant. Five percent of the category's value is considered a good average waste level, but the percentage varies greatly between different fruits and vegetables. Packaging that prolongs shelf life can provide substantial cost savings.

How packaging innovation can make fresh produce more valuable

Both retailers and brand owners should consider how packaging could help them to build value in the fresh food category.

Field-to-fork packaging design

Tastier premium experience thanks to packaging

Consumers want healthier, fresher and tastier fruit and vegetables. Smart packaging can help to speed up the supply chain so that produce can be delivered in a better condition with more of the taste and nutrients intact.

Lechuvitas (below) shows how one tiny box can effectively optimise a supply chain from field to fork. Using retail-ready packaging from the start saves on labour costs, but the box also has a strong value proposition for consumers — smart freshness, long shelf life, convenient transport and storage and more fun when picking it.

Turn to the next page for another example of field-to-fork packaging and for an explanation on how Stora Enso helped deliver fresher strawberries in Finland.

From fresh to fresh-cut

Packaging for busy, convenience-seeking shoppers

Mini carrots, celery sticks, tossed salads, fruit salads and smoothies are all examples of the premiumisation of fresh produce. The downside of introducing more variants of prepared and packed products is the increase in complexity for consumers and store handling costs.

Shelf-ready packaging can help consumers to shop by organising crowded shelves and providing inspiration and information about the products and their value propositions. In addition, it can help shops by making shelf replenishment easier as well as keeping products in their place.

More shelf life and less waste

Corrugated cardboard adds three days of freshness

The idea of reducing food waste by using more packaging is a contradiction in terms as the packaging itself has an environmental impact.

Plastic packaging made from fossil-based materials not only adds to the carbon footprint, but it is also not renewable. Corrugated packaging from responsibly-sourced wood fibres is a renewable and sustainable packaging solution. However, returnable plastic crates (RPCs) are increasingly used to transport fresh produce.

A recent study by the well-respected University of Bologna shows evidence that this trend may in fact lead to more food waste. The study found that corrugated packaging reduces microbiological contamination compared to RPCs, thereby prolonging shelf life by up to three days![6]

Combatting food waste with smart, convenient packaging innovation

Lechuvitas from Primaflor is "living" lettuce. This innovative box design allows the lettuce to be packed, transported, sold and nurtured in a "micro-orchard" for the kitchen while keeping its roots in tip-top condition. The consumer waters the lettuce in the box and the lettuce stays fresh for longer without the need for refrigeration, while waste is also minimised.

Fresher strawberries from field to fork

Strawberries are big business in Finland, but the harvest season is short and they are highly perishable. Finland's largest strawberry farm Koivistoisen Mansikkapaikka approached Stora Enso and asked: Can the packaging process be optimised so that fresher strawberries can be delivered to stores?

Freshness:
Although the strawberries were packed directly in the field, the plastic packaging used slowed down the cooling process and caused extra work.

Seasonality:
Early season strawberries are sold at a premium in small volumes. When prices start to fall, consumers turn to bulk-buying behaviour.

Consumer experience:
Most strawberries are sold as commodities, with little attention paid to the potential of branded packaging design.

A total packaging concept

Stora Enso's DesignStudio co-operation with the customer resulted in a total packaging concept tailored for the category:

1. Field to fork design
Strawberry pickers fit the plastic boxes with a corrugated cardboard handle while still in the field. Larger shipping cartons designed for more efficient cooling save energy and provide fresher strawberries with a longer shelf life.

2. Modular pack sizes
A system of small, early-season boxes are combined with larger, bulk-sized boxes for late season.

3. Convenience
The top-opening corrugated cardboard sleeve on the small boxes turns into a convenient handle.

Result:
The farmer now enjoys a fast and simple packaging process. Strawberries travel faster from farm to fork, offering retailers a fresher product with a longer shelf life and more attractive and well-branded packaging which communicates the product's local origin. The retailer is rewarded by an increase in sales as a result of the elegant and convenient take-away boxes.

Improvements for the farmer
- Labour costs cut by 20%
- Stronger in-store branding

Improved retail performance
- Increased sales
- Fast cooling improves shelf life

Improved consumer experience
- Fresher strawberries
- Product's local origin is communicated

The renewable materials company

Stora Enso is a leading provider of renewable solutions in packaging, biomaterials, wooden constructions and paper on global markets. Our aim is to replace fossil-based materials by innovating and developing new products and services based on wood and other renewable materials.

Packaging Solutions division develops fibre-based packaging, and operates at every stage of the value chain from pulp production, material and packaging production to recycling. Our solutions serve leading converters, brand owners and retailer customers helping to optimise performance, reduce total costs and enhance sales.

About our Viewpoints
The Viewpoint on the future of fresh produce packaging is the seventh edition in a series of Viewpoints publications from Stora Enso. Through the Viewpoints we share our view on how our customers can become more successful in addressing future opportunities and challenges through packaging. Please see also our previous Viewpoints on packaging for Food, Consumer electronics, Dairy, Retail, Online retail and Millennials. You can find them and learn more about what packaging can do for your business at www.storaensopack.com

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Sources: *1. Euromonitor, 2016, 2. CBI Ministry of Foreign Affairs, 2015, 3. FAO, 2016, 4. WRAP, 2013 4. IFOAM EU, Organic in Europe – Prospects and Developments, 2016, 5. Data from the Millennials Viewpoint, 2015, 6. Fefco (University of Bologna).*