

# Overpackaged?

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## Why do fruit & vegetables c

### Why have packaging?

Fruit & vegetables often have to travel many miles before their point of sale. Along the way they are susceptible to various ways in which they can be damaged or spoiled. These include pests, transport damage, temperature variation and moisture. Packaging helps protect against these types of threats and ensures the product reaches the public in a fit state. The life of a product can also be prolonged when stored in a consumer's home. For instance, fruit or vegetables that contain a high level of moisture can dry out quickly when stored loose in the home. However, when the product is packaged it can more easily retain its moisture, thereby extending its life.

### Food waste and packaging waste

While it is important to minimise the amount of packaging on fruit and vegetables as much as possible, we cannot lose sight of the many positive effects that packaging can contribute to food. A recent report by the Waste Resources Action Programme (WRAP) concluded that one third of all food purchased was thrown away. While there are many reasons for this, better packaging can contain, protect against bruising, prolong shelf life and avoid contamination, all of which prevent food waste. It is worth considering the best use of all resources before removing packaging as it can result in a greater amount of food waste.

### Packaging in Perspective

The Advisory Committee on Packaging in the UK produced an excellent report in 2008 called 'Packaging in Perspective'. The report provides facts about packaging recovery and recycling and provides the public with outline of what businesses are doing to:

- Design more efficient packaging
- Minimise environmental impact, and
- Increase the amount of used packaging that is recovered and recycled.

A full copy of the report can be downloaded from:

<http://www.incpn.org/publications/PackaginginPerspective.pdf>



The examples shown here are from the report and highlight the positive effects that packaging has on some shopping trolley contents

### Prepared salads

Prepared salads typically contain three or four varieties of washed, cut, ready-to-eat salad leaves in a bag specially designed to contain a modified atmosphere which keeps the leaves fresh and extends their shelf life. Without the bag and its modified atmosphere the edges and stalks would quickly go brown. If consumers bought individual lettuces to create the same mixture at home, eleven times the amount of salad would be produced at four times the cost and there would be five to ten times more waste. Modified atmosphere bags make a significant contribution to reducing food waste.

# come with packaging?

## Potatoes

If potatoes are sold loose, on average 3% are wasted in store because of deterioration on exposure to light – they go green, and put out shoots. New potatoes are particularly prone because they have thin skins. Green potatoes contain glycoalkaloids which may cause food poisoning and which are not destroyed by cooking. If they are packed in a modified atmosphere plastic bag, their shelf life in store is extended by 3 days. A survey carried out with a large grower and major supermarket showed that in-store waste reduced from 3% for potatoes sold loose to under 1% after modified atmosphere bags were introduced.

## Bananas

Bananas have their own natural packaging: their skins. However, large amounts of bananas over-ripen and are thrown away. WRAP (Waste and Resources Action Programme), reports that British consumers throw away 1.6 million bananas a day. Wrapping in a modified atmosphere bag greatly reduces waste because the bag:

1. Absorbs the ripening substance, ethylene, that bananas give off, extending shelf life by 2-3 days so fewer fruits become waste.



Wastage of potatoes at home is generally due to greening and sprouting, which is why they should be kept in the dark. WRAP estimates that 5.1 million potatoes are thrown away in the UK each day. As early new potatoes are typically expensive, and air freighted, there are cost and climate change benefits too (fewer replacement deliveries are needed if there is less waste).

## Grapes

Traditionally grapes were sold in loose bunches in an open tray from which the consumer selected and paid by weight at the checkout. Some of the grapes inevitably fell off and would be discarded by the shop. Any that fell on the floor were potentially hazardous if slipped on. Grapes are now sold either in bags or sealed trays so that the loose ones stay with the bunch and are sold and there's no danger of slipping. This has reduced waste in store typically by over 20%.

2. Prevents the ethylene affecting other nearby fruit and vegetables, stopping them ripening too quickly and going to waste.

3. Prevents shoppers breaking bunches up, which bruises the fruit and which leaves odd bananas that are unsold and get wasted.

## Cucumber

A cucumber is 96% water which it begins to lose as soon as it is picked. After 3 days, it has lost so much water that it becomes dull, limp and unsaleable. Wrapping it in just 1.5 grams of plastic film extends its shelf life to 14 days and it lasts longer at home.

## Conclusions

So, despite some public perceptions to the contrary, packaging on fruit and vegetables plays a vital role. Modified atmospheres, barrier layers, containment and moisture retention all help to reduce food waste and lead to a more sustainable use of resources overall.