



BARFOOTS
fresh thinking

Food Waste: How can industry help?

Keston Williams
Technical Director

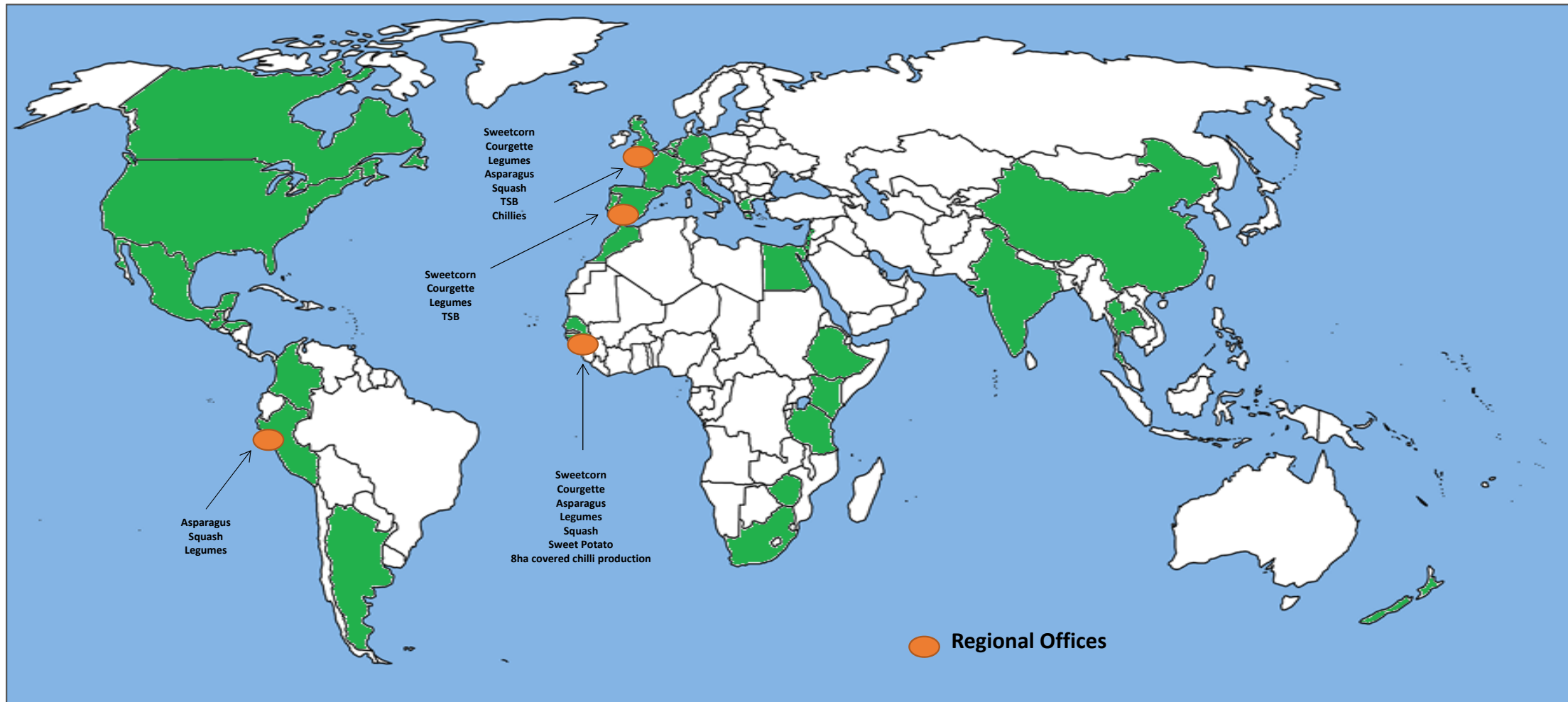
Barfoots

- 100% Owned by Peter
- Formed in 1976
- Vertically Integrated
 - Farming
 - Processing
 - Marketing
 - Green Energy
- Sustainable
- R&D Focused
- Supply UK / European Multiple Retailers plus Food Service
- Grow in 32 countries around the world



Barfoots UK & Global Supply-Chain

Sea freight focused strategy





Our Products



theguardian
website of the year

UK world politics sport football opinion culture business lifestyle fashion environment tech travel

home › business › retail markets eurozone economics banking

J Sainsbury
Food waste

Sainsbury's invests another £1m in battle against food waste

The Guardian 7/11/2016

11:26 **Kitchens should be 'more creative'**
Environment committee



Chair Neil Parish welcomes Hugh Fearnley-Whittingstall and Tristram Stuart to the committee.

Mr Parish asks what the catering industry can do to manage food waste within restaurants.

Mr Fearnley-Whittingstall says that restaurants need to "be more creative", for example by re-using waste such as lemon and orange peel.



BBC 15/11/2016

Food Waste In the News

FINANCIAL TIMES

WORLD UK COMPANIES MARKETS OPINION WORK & CAREERS LIFE & ARTS

Food safety + Add to myFT

How spectral analysis could make food waste a thing of the past
Camera could spell the end of sniffing dodgy food

FT 1/11/2016

EveningStandard News Football Going Out Lifestyle Showbiz Homes & Property ES Magazine

News › Food for London

Jeremy Corbyn: Food waste is painful to see when people are going hungry

ALEX DYMOKE | Tuesday 18 October 2016 | 13 comments

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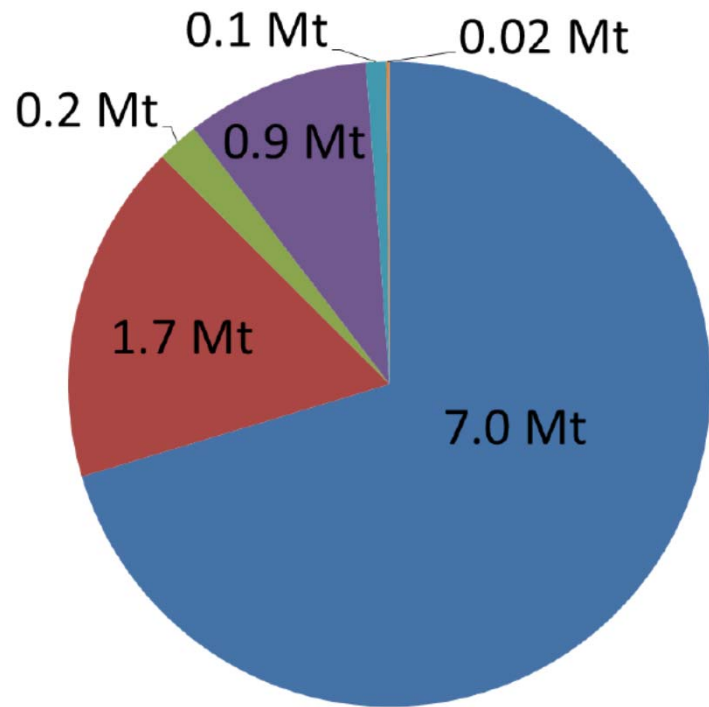
WHAT A WASTE OF GOOD FOOD!

Tesco admits two thirds of bagged salads end up in bin as it signals end to 'buy one, get one free' deals

Secrets of abducted Maria's gipsy life



Food Waste Facts



Amounts of food waste arising in the UK sector (total post farm gate = 10 Mt)

Source: WRAP 2016, Love Food Hate Waste

DID YOU KNOW...

Almost **50%** of the total amount of food thrown away in the UK comes from our homes. We throw away **7 million tonnes** of food and drink from our homes every year in the UK, and **more than half** of this is food and drink we could have eaten.



- Household
- Manufacturing
- Retail
- Hospitality and food service
- Food waste in litter
- Wholesale

WHY IS IT WASTED?

There are **two main reasons** why we throw away good food: we cook or prepare too much or we don't use it in time.

The foods we **waste the most** are fresh vegetables and salad, drink, fresh fruit, and bakery items such as bread and cakes.

DID YOU KNOW?

We throw away more food from our homes than packaging in the UK every year.



Where is waste being created?

Farm

- Weather
- Pest / Disease
- Poor Nutrition
- Lack of water
- Poor soil
- Seed
- Forecasting / planning (plant too much)
- Harvest Damage
- Poor storage conditions



Where is waste being created?

Factory

- Over ordering
- Poor forecasting
- Over production
- Reduction in orders
- Poor manufacturing process
- Over specified (high quality)
- Over processing
- Poor storage
- 'Normal processing'



Where is waste being created?

Post Factory

- Rejection at depot
- Poor packaging design
- Goes off before used
- Over stock (supermarket / restaurant / consumer)
- Poor planning
- Damage (store / transport / fridge)
- Poor storage
- Lack of imaginative cooking
- Shelf life (Use by / Best Before)



QC CHECK REPORT

Depot check

Check no: 487227 - P1080684



Technologist/Buyer Contacted N/A

Comments 4/36 (11.1%) of packs with 1 spear in each affected by dehydration

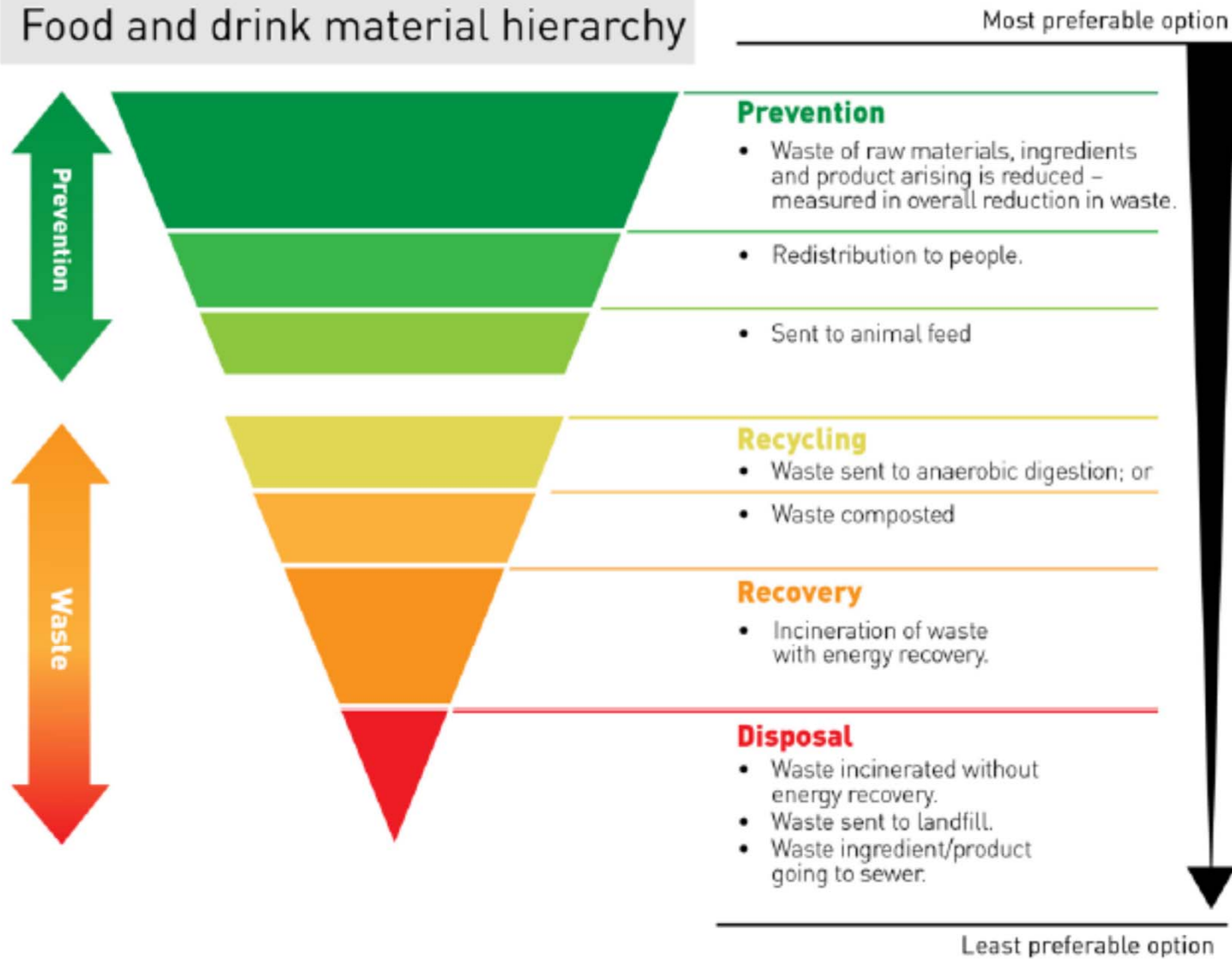
BEST BEFORE:

06 JUN
J127 N22 02:11

BEST STORED IN A COOL, DRY PLACE

What can the Food Industry do?

Food and drink material hierarchy



What can the Food Industry do?

Prevention

Crop Production

- Agronomy
- Reduce crop losses?
 - Weather: Protected crop protection
 - GM Crops
 - Higher pesticide input
- Investment in Storage

Attitude / Market Change

- Management of crop flushes
- Accept seasonality / variable supply
- Wider specifications and acceptance from consumers

Maximising Crop



Redistribution

Gleaning



What can the Food Science offer?

Improved Processes

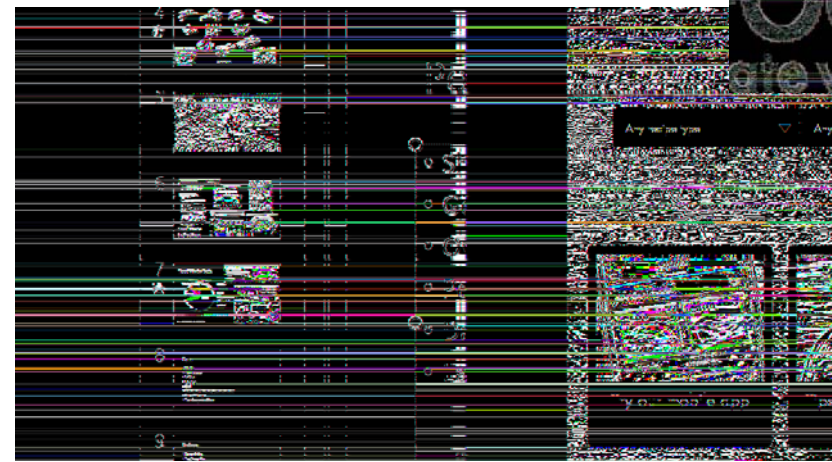
- Better storage (E.g. active controlled atmosphere and novel storage)
- Cooking... Pasteurising or something better?
- Other microbiological safe storage
- Novel product sanitation techniques
- Packaging

New Products from Waste

- Potato Starch recovered and used e.g. Starched based packaging
- Potato Peelings used for Brewing e.g. Chase Vodka
- Sweet Potato alternative products, e.g. dog chews.
- Pharmaceuticals and high value ingredients
- Other cost efficient product extraction
- Energy recovery



Consumer Awareness





Nutrition in Senegal

