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

Regional Offices

- Sweetcorn
- Courgette
- Legumes
- Asparagus
- Squash
- TSB
- Chillies

Asparagus
- Squash
- Legumes

8 ha covered chilli production

- Sweet Potato
Our Products
Food Waste
In the News

The Guardian 7/11/2016

FT 1/11/2016

BBC 15/11/2016
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
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?
Where is waste being created?

**Factory**

- Over ordering
- Poor forecasting
- Over production
- Reduction in orders
- Poor manufacturing practices
- Over specified (high quality requirement)
- 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)
What can the Food Industry do?

**Food and drink material hierarchy**

**Prevention**
- Waste of raw materials, ingredients and product arising is reduced — measured in overall reduction in waste.
- Redistribution to people.
- Sent to animal feed.

**Recycling**
- Waste sent to anaerobic digestion; or
- Waste composted.

**Recovery**
- Incineration of waste with energy recovery.

**Disposal**
- Waste incinerated without energy recovery.
- Waste sent to landfill.
- Waste ingredient/product going to sewer.

Most preferable option

Least preferable option
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

[Image of a person holding a large squash with the FareShare logo]
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