War on **waste**

muddy boots
driven by TELUS

Introduction

The world of fresh produce is a rapidly developing landscape. Dictated by a growing customer appetite, the demand for goods is becoming more varied and more adventurous with no regard for seasonal limitations. This, combined with increasing pressure on the supermarkets and brand holders to reduce costs makes satisfying the hunger for product without compromising quality an increasingly challenging task.

Just like the rest of the food industry, brand holders in particular are not only competing in today's global market with commodity prices, but are also having to maintain their good brand reputation, because for brand holders, few things matter more than maintaining a high level of credibility amongst customers and stakeholders.

The Food and Agriculture Organisation of the United Nations (FAO) estimates that each year approximately one-third of all food produced for human consumption in the world is lost or wasted. This wastage represents not only a missed opportunity to improve food security and sustainability, but also to mitigate the environmental impact of our global supply chains.

The Global waste problem

This level of wastage is excessive in an age where almost a billion people go hungry, and represents a waste of the labour, water, energy, land and other inputs that went into producing that food. There is increasing concern around how the planet is going to feed a rapidly growing population. That said, many argue that we currently produce enough food to feed the estimated 9 billion strong population predicted by 2050; however with food waste at the level it is, there will always be a growing shortfall.

A £500m problem for the UK

The UK finds itself in a difficult position, home to a population who, like many other developed nations, demand a diverse variety of produce 365 days of the year, it is also a significant global exporter. However due to seasonal and geographical limitations, it finds itself managing one of the most complex supply chains in the world, and as such food waste is a significant problem.

A study undertaken by IGD and Cranfield University on behalf of WRAP, focused on supply chain waste of some of the core fresh produce household items.

The study found that over 2m tonnes of fruit and vegetables are either ploughed back into the field or do not make their intended grade, suffer loss in storage or are disposed to anaerobic digestion. It is estimated that the economic loss is in the region of £500m for the industry overall.

In many cases the waste identified through this research was caused by natural events and therefore cannot always be controlled by changes in supply chain management processes. However, there is a significant opportunity to reduce the level of waste arising through supply chain practices, which in turn will cut costs and benefit the environment.

In recent years, food waste really caught the attention of the British media who, armed with a pointed figure of blame, more often than not settle on the retailers as the primary culprits of waste. An example of this was in BBC2's Hugh's War on Waste. A large proportion of the programme highlighted the extreme levels of waste occurring when produce is rejected due to sub-standard size and/or shape – standards set by the retailers.

But this isn't the whole picture...

WRAP's research identified three main challenges:

1. Managing product specifications
2. Better supply chain communications
3. Increasing transparency

Food waste is now high on the agenda

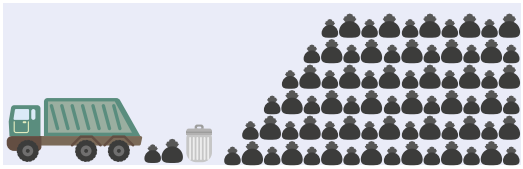
Thankfully, the reduction of food waste is gathering increasing global interest and action. Governments, research institutions, producers, distributors, retailers and consumers all have different ideas about the problem, the solutions, and the ability to change.

As an intergovernmental organisation, the FAO is in a position to play the role of a neutral and independent facilitator.

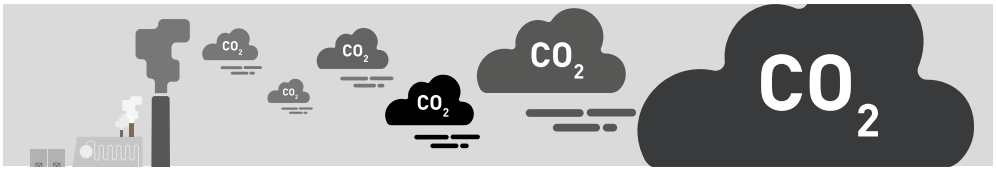
The FAO is already partnering with UN agencies and other international organisations to coordinate a global initiative founded on four pillars:

- Awareness raising on the impact of, and solutions for food loss and waste.
- Collaboration and coordination of world-wide initiatives on food loss and waste reduction.
- Policy, strategy and programme development for food loss and waste reduction.
- Support to investment programmes and projects, implemented by private and public sectors.

Global waste facts



The global volume of food wastage is estimated at **1.6 billion tonnes**



The carbon footprint of this is estimated at **3.3 billion tonnes** of C02 equivalent of GHG released into the atmosphere per year

1.4 billion hectares of land (28% of the world's agricultural area) is used annually to produce food that is lost or wasted

Harnessing technology to reduce supply chain waste

There is a strong appetite for reducing waste, and more specifically improving supply chain collaboration and it tends to be the retailers acting as the architects of change.

A key challenge is ensuring all supply partners are clear and aligned on the quality attributes expected by the customer; this includes product quality, packaging, value and service, and establishing if they can constantly deliver on these.

While pre-consumer food waste is a complex issue in the fresh industry, there are specific, tried and tested tools that can be implemented to eradicate this problem.

At Muddy Boots, our mission is to connect food and farming supply chains for a safer sustainable future. Our supply chain solutions give customers insight into the performance of their suppliers on the quality, compliance and provenance of their products from grower to retailer.

Managing product specifications and making real-time decisions

The loss associated with not meeting a customers' specification is one of the greatest causes of waste and is traditionally the most difficult to deal with.

Setting out clear specifications that involve all supply partners from the outset is essential. Being agile in managing change and variation to that specification in real-time, across a supply chain, to allow product to continue to flow and avoid unnecessary delay or rejection at the final destination will contribute to massive savings.

This real-time information means that businesses always know the status of their sites, suppliers and products.

Greenlight Quality Management's cloud-based computing offer enables central management and maintenance of specifications with detailed quality attributes. Alignment on the inspection process from manufacturer to shelf generates invaluable real-time data and metrics and retail shelf performance. This improves the consistency in the product offer to the customer and drives rejection waste out of the supply chain, whilst identifying key areas for improvement.

If a specification changes or if a supplier is no longer approved, the system will automatically send a notification to all relevant stakeholders, so action can be taken.

Better supply chain communication

The industry is calling for better collaboration in the supply chain. Harnessing new technologies that deliver the ability to measure, control and feedback on performance on quality at all points across a supply chain will be pivotal to success on the waste agenda.

Businesses must overcome the fear of being exposed and penalised by sharing data with supply chain partners if they are to address the root causes of waste and drive improvement. With instant access to data, businesses can start to identify where the problems are occurring and what actions are required to improve areas of under-performance.

Significantly reducing waste through collaboration

The implementation of tools that connect all members of a supply chain and provide immediate access to the product specification can significantly reduce waste.

Some of our customers have identified a 50% reduction in waste, just by connecting and communicating with their suppliers and growers on a cloud platform.

Increasing transparency with cloud technology

Collaboration across the supply chain is critical in order to achieve total transparency from grower to retailer.

Now more than ever, supply chain transparency is gaining currency, largely thanks to increasing consumer demand and recent high profile food scares. But what role does greater transparency play in waste reduction?

By connecting all members of a supply chain together from grower to retailer, and having the ability to easily access, update and share important information relating to the product, food businesses are able to align their offer to the specific requirements of the customer.

Any issues can be identified early on, before the produce has been shipped and costs have been incurred. This early warning system allows the end customer to find an alternative source of supply, and enables the supplier to try and identify a new customer with a lower specification.

So, what's the solution?

Muddy Boots understands that in order to combat the problem of food waste, it needs to be monitored at every point in the production process.

Careful management of the growth and production of produce is at the heart of the process to ensure it meets the end user specification. By collecting and sharing up-to-date information on sites, suppliers and produce, including forecast yields, quality and compliance, it provides essential information for procurement teams to make informed decisions.

Having this insight and being able to pinpoint and remove areas of risk, spot trends, identify inefficiencies and validate that the people, processes and products are operating as they should underpins the future of sustainable food and farming.

This kind of collaborative supply chain is very much a requirement of modern times.

Our Greenlight Quality Management software focuses on the entire food journey. Control is added to the system by managing the harvest and aligning the forecast output to projected demand and current sales orders. This reduces unnecessary harvest and transport costs, easing the pressure on factory intake and processing resources.

Integrating information on these often disjointed processes provides improved visibility of the data and key performance elements that are likely to impact the production and delivery processes for all users at all stages.

It gives the team total confidence that dispatched product is 'fit for purpose' and all assurances that incidences of product rejection or recall, which can result in significant cost and wastage, have been mitigated.

Effective management of raw material and processed stock flows can have a direct result on shelf-life performance by improving freshness. Stock rotation and qualitative information on the status of stock can have a direct impact on stock waste. Often quality control processes begin at factory intake, but in order to further drive out wastage, those processes should start at farm point, where harvest and early post-harvest activities can reduce waste and cost, ensuring that more product is transported that will meet intake requirements.

Greenlight Quality Management is being used by food businesses all over the globe, including world-leading food retailers, global brands and their supply chain members.

+44 (0)1989 780540

sales@muddyboots.com

@MuddyBootsLtd

www.muddyboots.com