Food waste: collaborative initiatives driving reduction

Food waste is a global sustainability issue with negative environmental, economic and social impacts. Producing food that is wasted puts pressure on water and other inputs potentially limiting availability of resources and increasing costs of production. Food waste has social impacts as food that is wasted cannot reach those who need it to ensure a healthy diet.

Food waste has risen to the top of the list of sustainability risks and is being tackled in national and international collaborative initiatives. Here governments, commercial businesses, industry organisations and NGO's are joining together to agree targets and methods for improvement. The output from these collaborative initiatives can help guide decision making by food sector businesses, and in some cases may offer opportunities for businesses to get involved directly.

In this article Leslie Berger, an ADAS Agri-food consultant gives background on where food waste is generated and describes some collaborative initiatives in place to drive reductions.

Where is food waste generated?

Waste occurs at every level of the agri-food supply chain with estimates of up to a third of all food produced on farm being lost or wasted each year. In developing countries the majority of food is lost during production and storage, while in developed countries most is wasted by consumers.

When food is wasted it reducing the availability of food for those who need it as well as incurring a disposal cost which is both financial and environmental. Food waste also has an indirect cost due to the wasted resources used to produce the food.

The FAO estimates 1.4 billion ha of land (28% of the total global agricultural area) and 250km^3 of blue water is used to produce food that is never eaten. That is enough water to fill Lake Geneva three times! This water takes a long time to replenish and in light of water scarcity in some areas due to the location of production society can ill afford this waste of resource.

In the UK, reports by the Waste Resource Action Programme WRAP Jan 2017 show that 60 million tonnes of food waste valued at £17 billion is generated annually in the UK. This food waste contributes

to 20 million tonnes of GHG emissions. According to WRAP's analysis, 60% of this could have been avoided. Proactive businesses are looking for ways to avoid generating food waste to reduce costs, to improve resource efficiency in production and to reduce GHG emissions.

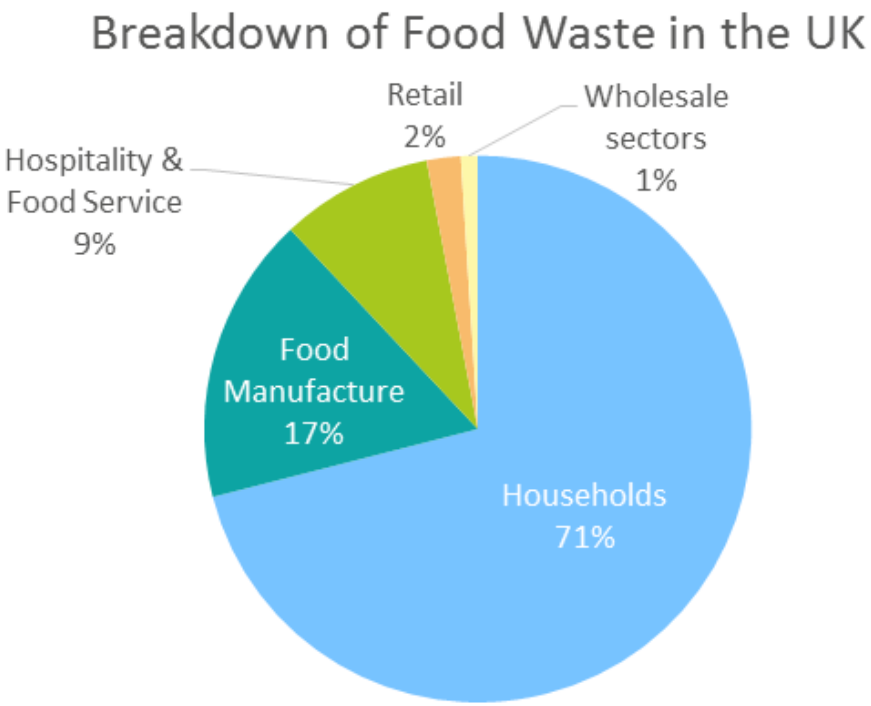

Figure 1: UK post farm gate waste breakdown (WRAP)

In the UK the greatest percentage of food waste, as captured by WRAP reports, arises in the home. Work has been done in some fresh product sectors to prolong shelf life and improve packaging to help consumers to waste less at home. In the past year, food manufacturers and retailers have scaled up their efforts to cut consumer waste by standardising food date labels. WRAP has worked with The Consumer Goods Forum's Call to Action to set targets to standardise date labelling worldwide by 2020.

While this breakdown of where food waste arises is informative, it does not include on-farm food waste which, for some crops and livestock species, is significant. For example, up to 50% of leeks may be left in the field due to stringent specifications on size and quality. On-farm waste has typically not been quantified and is rarely seen by food sector businesses as their responsibility. New initiatives to quantify food waste throughout the supply chain has put more onus on food businesses to look more closely at how their behaviour might have an impact on waste generated on farm. It is in the interests of food businesses to consider how their actions could help to improve marketable yield on farm as boosting on farm yields will improve resource efficiency of inputs applied to crop and livestock production and improve farm incomes. Boosting farm returns will support business resilience and in turn will help ensure the reliability of raw material supplies for food businesses.

Collaborative Initiatives to reduce food waste

Some high profile collaborative initiatives have been formed to raise awareness of food waste as a key sustainability concern. Public private partnerships have been formed in an effort to set food waste reduction targets as well as identify methodologies and tools to measure and monitor this waste, and to find innovative ways to reduce food waste throughout food supply chains. At the international

level, the Sustainable Development Goals are providing inspiration and direction in tackling food waste issues.

Sustainable Development Goals: Responsible Consumption and Production

The Sustainable Development Goals were agreed by global leaders as part of the United Nations Summit in 2015. Seventeen goals were put in place to tackle poverty, fight inequalities and address climate change. Commercial businesses have been encouraged to get involved by aligning their sustainability goals with SDG targets.

Goal 12 includes a target to halve global food waste and to reduce food losses by 2030, from farm to fork. All nations agreed to work toward this goal, and a multi stakeholder group called Champions 12.3 was formed to drive progress. Some private sector businesses are supporting this group and are setting targets and implementing food waste measurement techniques. In the past year, a number of prominent food companies including Ahold Delhaize, ConAgra Brands, Danone, Kellogg's, Nestle, Sainsbury's and Tesco have started measuring and also publicly reporting their food loss and waste inventories, leading the way on best practice in the private sector. This group recently released their second progress report indicating how far they have come since Sept 2016, and mapping out what needs to be done by 2030 to achieve food waste reduction targets. Countries and companies have reported on individual progress toward setting of reduction strategies and some case studies have now been published. The WRI's Food Loss and Waste Accounting Standard is one of the tools being used by participating companies to quantify and report on food waste. 2017 Progress Report | Champions 12.3.

The work of the Champions 12.3 group has led to new sources of research funding becoming available to tackle food waste issues identified at all stages of supply chain. One example is a joint funding initiative by the World Wildlife Fund and the Rockefeller Foundation who together with the American Catering and Hotel Association have been working to reduce food waste in hotels. Their work has established training programmes, defined methods to measure kitchen and plate waste, and have supported the redesign of menus. A toolkit of resources will be produced for wider hotel industry use. The Champions 12.3 group is seeking more input from the private sector businesses, especially agribusinesses, food service and hospitality businesses. Involvement in this pre-competitive group gives access to valuable resources and case studies, and can help businesses to show their commitment to reducing waste.

WRAP Courtauld 2025 voluntary agreement

In the UK, WRAP has worked with food businesses since 2005 through a series of voluntary agreements to encourage the measurement, monitoring and reporting of food waste in a drive to make significant reductions. The current iteration, Courtauld 2025, has provided a forum for retailers, manufacturers, food service businesses, food redistribution organisations and local authorities to collaborate on best practice ways of reducing food waste. Courtauld 2025, put in place in 2015, has set goals to reduce food waste and GHG emissions by 20% by 2025, and to reduce water use associated with food production. WRAP established a series of pre-competitive sector and topic specific working groups looking at data, communications and practical tools to support businesses' efforts to reduce food waste at all stages in production. Industry action to reduce food waste has stepped up as a result of

these collaborative initiatives where whole supply chain solutions are being sought to minimise the negative environmental and social impacts of food waste.

Business benefits

Food businesses who are working to reduce food waste are reporting on the benefits of these activities. This includes being able to capitalise on improved operational and supply chain efficiencies as well as reputational gains and strengthened relationships with consumers. Reducing food waste has an environment benefit helping to reduce greenhouse gas emissions coming from the production of the food, as well as arising from the food that may end up in landfill sites. Businesses are coming under increased pressure from investors to monitor and report on sustainability measures including progress made on food waste reduction so efforts here may be rewarded by favourable treatment by investors.

ADAS is supporting WRAP's fresh produce and meat working groups to help develop solutions to improve resource efficiency and to reduce food waste in these sectors. ADAS has participated in a series of multi partner whole chain supply chain waste reduction projects which have identified practical ways to reduce waste throughout supply chains. Case studies of these projects may be seen here WRAP Whole Chain*. To discuss how ADAS can support your business in assessing your food waste concerns to help you achieve your sustainability goals, please contact Leslie, leslie.berger@adas.co.uk*

About the Author

Leslie is an Agri-Food Sustainability Consultant with over 25 years' experience working with food businesses to improve the efficiency and sustainability of their supply chains. Leslie leads on ADAS's engagement with Courtauld signatories and manages ADAS's technical input to WRAP's fresh produce and meat working groups. This work has focused on finding more resource efficient ways to produce fruit, vegetables and meat to save on costs and to reduce waste, water use and GHG emissions. Leslie has close links with food redistribution charities and supports food sector businesses in finding creative ways to reduce food waste at all stages in their supply chains.