

# FACT SHEET: FOOD

Snacking on emissions

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Eating and drinking are absolutely central part of live performances - whether that be in keeping artists and crew going through intensive work schedules, or for audiences as part of the live event experience. Large quantities of food and drink are consumed, for which considerable resources are required in the production stages; and when we don't finish our food and drink, these resources effectively go in the bin, so there is also the issue of waste. Both food production and disposal leads to the emission of GHGs, alongside other environmental impacts.

There are plenty of good reasons to engage with reducing food's GHG impact including economic, environmental and marketing drivers. Through awareness and targeted action by those responsible for food provision in the live performance sector, GHG emissions can be reduced. This sheet is aimed at those who procure food, lease catering tenders and cook/ prepare food in the live performance sector. A brief introduction to the GHG emissions of food is provided here, alongside the policy context and some guidance.

### Food: a climate change contributor

Food is thought to be responsible for 20-30% of our national GHG emissions (1) (Audsley, Brander et al. 2009). Similarly, at the EU level food has also been calculated to contribute 30% of total emissions. Climate changing gases arise at all stages of food production, preparation and disposal. See Figure 19 for a diagram of two supply chains for foods commonly sold at live performance venues - beer and beef burgers. These also happen to be relatively GHG intensive food stuffs.

Farming in particular, through the production and use of fertilisers, the creation of feed for livestock, the emission of methane (CH<sub>4</sub>) burps from ruminant (cows, sheep) digestion and nitrous oxide (N<sub>2</sub>O) from soil (2), emits comparatively more GHGs than other stages of the food chain. That is not to say however that other stages of production - whether that be transporting food, processing, manufacturing, packaging or cooling it - do not also warrant looking into. In fact, in many cases it can be easier to reduce emissions from the non-farming stages as methane and nitrous oxides in particular are harder to measure and manage.

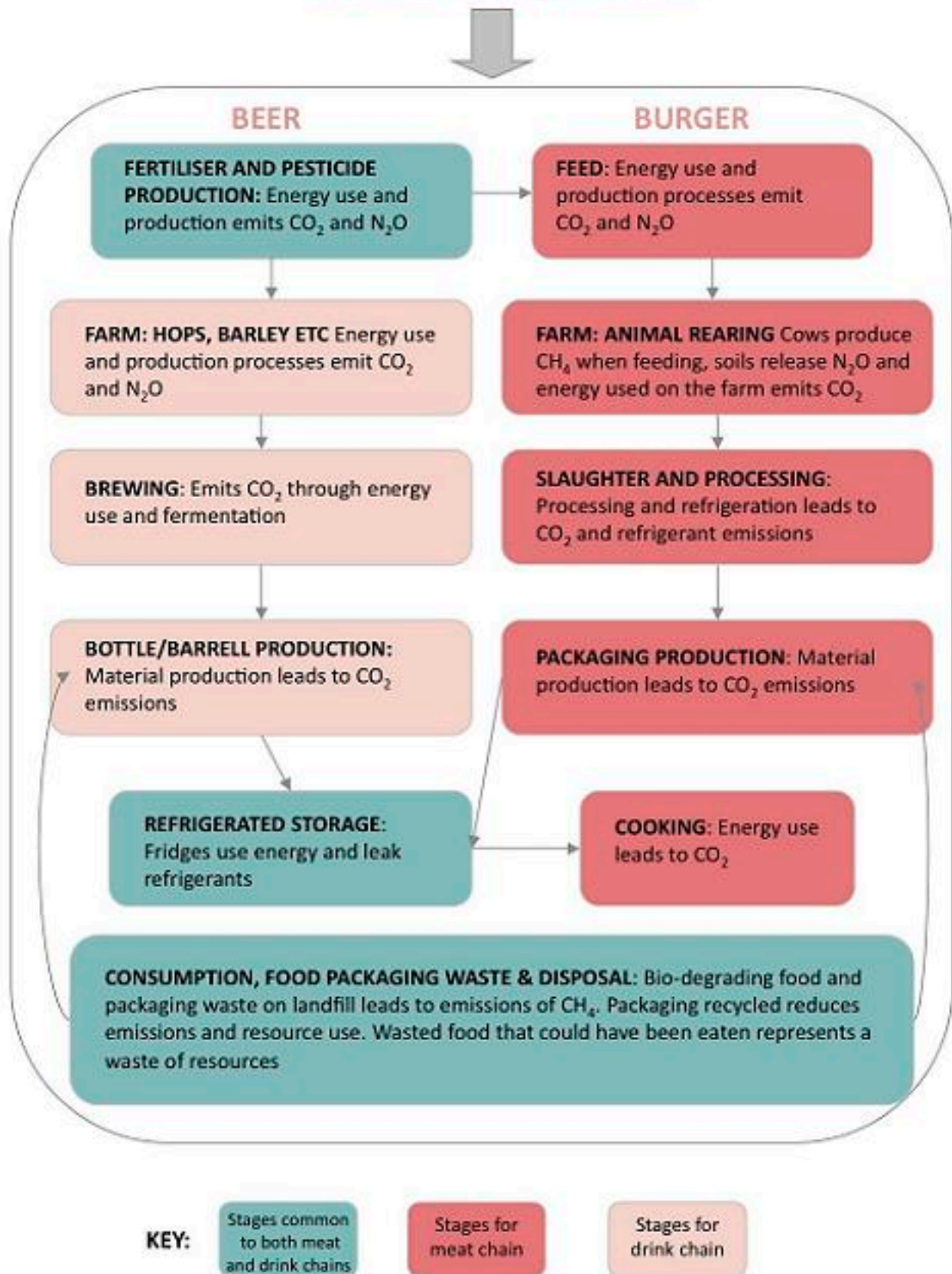
**Figure 1:** Sources of emissions from food consumed in the UK

(see overleaf)

### The impact of climate change on food

Climate change will also impact food in the longer run. As the climate changes the conditions for growing food will alter. While it is anticipated that this might be beneficial for northern latitudes in the shorter term to 2050, it is likely to have a negative impact for less developed countries in mid to low latitudes. Assuming we continue to emit greenhouse gases globally at the current rate, towards the end of this century climate change is expected to have an increasingly negative effect on agriculture across all countries (Parry et al 2007). Extreme weather events will also affect distribution and other production infrastructure.

## Electricity, transport fuel, gas and other energy sources



## Government policy on food and climate change

The government has signed up to 80% reductions in GHG emissions by 2050 - a large target that will affect each stage of the food chain. To date the food industry has not been specifically targeted by regulations to reduce emissions although a number of policies, such as the climate levy (a tax on energy) and the EU Emissions Trading Scheme do affect some parts of the supply chain. The most specific development for encouraging the food and drink industry to assess and improve environmental performance has been the Food Industry Sustainability Strategy, an industry lead initiative, and PAS 2050, a product carbon footprinting and labelling scheme developed by the Carbon Trust.

## Voluntary initiatives underway

### Adnams

A brewery that has developed an environmental and social policy that shapes their business development. They have taken a number of environmental initiatives such as producing a carbon neutral beer and a distribution centre with grass roof, rainwater collection, renewable energy sources, and environmentally benign materials and design. To learn more go to:

[http://www.youtube.com/watch?v=\\_YjIAqc8opY](http://www.youtube.com/watch?v=_YjIAqc8opY)

### E-CO2

The E-CO2 Project seeks to carbon footprint farmers and growers, and gives advice on renewable energy generation on farms. They have been working with McDonalds.

### Large Retailers

Retailers are taking increasing interest in the greenhouse gas emissions in their supply chains, including carbon labelling. For example Tesco is working with dairy farmers to examine emissions in the supply chain and opportunities for improvements.

## Guidance to the live performance sector

There are a number of strategies that will reduce the emissions created by food and drink consumption.

**Table 1** outlines 5 broad approaches and gives examples of the types of actions that can be taken under each approach.

(see overleaf)

<i>Table 1 Approaches to reducing food and drink GHG emissions</i>	
<b>Approach</b>	<b>Example Action</b>
Increase efficiency of production	Consider the energy use of your premises, appliances and transport modes. When it comes to replacing equipment (if not before) use energy ratings, labels and advice to buy the most efficient.
Reduce waste	Monitor how much food you buy-in and have to dispose of. Minimise packaging. Recycle and assess the viability of installing compost facilities or an anaerobic digester to recover energy from food waste.
Change production and disposal to eliminate GHG intensive stages	Consider having freely available water fountains/drinking water taps. Consider using the Incredible Cup company at your event to reduce plastic waste by using their re-usable cup system, which has successfully been implemented at large venues, arenas and stadium events.
Reduce consumption of GHG intensive foods	As a general rule minimise animal products as these are more energy and resource intensive. Offer customers, artists and crew good quality and imaginative vegetarian options. Procure local and seasonal food.
Change to no/low carbon energy sources	Source your energy from a renewable energy provider or generate your own renewable energy, e.g. using solar PV for electricity, heat pumps or solar thermal to heat space and water, and anaerobic digestion to turn your waste into electricity.

### Suggestions for venues

- › Develop a sustainable procurement policy for food and drinks.
- › Learn about the environmental impacts of food and drink sold at the venue.
- › Assess the energy used for food and drink provision and identify opportunities for energy savings.
- › Work with contracted food and drink concessions to offer consumables with low environmental impacts.
- › Communicate efforts to reduce the environmental impact of food and drinks to audiences.

### Suggestions for incoming productions

- › Hire caterers with environmental policy and credentials.
- › Ask venues about their food and drinks procurement policy and about the actions they are taking to reduce their environmental impacts. This could be part of a green rider.

### Further reading and resources

The Food Climate Research Network – general information, research and reports:  
[fcrn.org.uk](http://fcrn.org.uk)

Low Carbon High Potential video about SMEs and the environment:  
[www.youtube.com/watch?v=\\_YjIAqc8opY](http://www.youtube.com/watch?v=_YjIAqc8opY)

Sustain – information on food, environment and society, especially initiatives:  
[www.sustainweb.org](http://www.sustainweb.org)

WRAP - All things resource efficiency, recycling and waste: [www.wrap.org.uk](http://www.wrap.org.uk)

Business in the community: [www.bitc.org.uk](http://www.bitc.org.uk)

## References

1: This figure includes all the emissions from food that we consume in the UK, whether that food has been made in the UK or abroad. The higher figure of 30% also includes emissions from changes in land-use (e.g. cutting forest to grow animal feed) that can arise in the process of making some foods.

2: CH<sub>4</sub> is a greenhouse gas 25 times more powerful than carbon dioxide. N<sub>2</sub>O is a greenhouse gas 298 times more powerful than carbon dioxide.