



Beef, sheep and climate change: the facts

Addressing the environmental impact of beef and sheep meat production, and in particular reducing greenhouse gas emissions, is one of the biggest challenges facing the industry today. EBLEX works closely with other industry organisations and producers to look at ways of reducing that impact while increasing efficiency.

Here are some key facts regarding the industry's contribution to climate change.

- There were 2.1 million cattle and 14 million sheep slaughtered in the UK in 2010, supplying over 1.1 million tonnes of meat to the human food chain, with a farm gate value of over £3 billion¹
- A little under 65% of UK farmland is only suitable for growing grass² - without grazing ruminant animals (cattle and sheep) we could not use this land to feed our growing population
- Actively managed pastures are a good carbon sink, storing carbon which would otherwise be released into the atmosphere.

Current emissions position

- Agriculture is responsible for 7% of the UK's carbon emissions, with livestock production responsible for an estimated 5% of total emissions³
- This is significantly lower than the often-quoted global figure of 18%⁴, which is currently under review and is expected to be revised down
- A recent EU report concluded that the emissions from livestock were estimated to be responsible for around 9.1 per cent of all emissions in the Union⁵, higher than the UK figure due to our efficient production systems
- Calculations show an average 100-year Global Warming Potential (GWP₁₀₀)* for beef of 11.93kg CO₂ eq per kg liveweight and for sheep of 11.95kg CO₂ per kg liveweight

The emissions challenge

- The UK Low Carbon Transition Plan requires that by 2020 emissions from farming are at least 11% lower than the levels currently predicted

- To meet the 11% reduction target for beef, an efficiency gain equivalent to 320g per day extra growth and 5 extra calves per 100 cows per year is needed - and is technically achievable
- To meet the target for lamb, an efficiency gain equivalent to 20% per day extra growth and 7.5 extra lambs per 100 ewes per year is needed - and again is technically achievable.

Meeting the challenge

- The good news is that reducing GHG emissions and improving efficiency go hand in hand
- Steady improvements in production efficiency have taken place over the past decade, with 5% fewer prime cattle and lambs required to produce each tonne of meat in 2008 than in 1998
- Research indicates that the three main areas of breeding, feeding and management offer opportunities to make the required reductions
- The genetic potential for progress in beef and sheep breeds for improvements in feed efficiency is largely undeveloped, but modern breeding techniques will allow rapid progress.

Deforestation and imported soya

- UK beef and lamb production is not driving demand for imported soya and, therefore, not significantly contributing to deforestation in some parts of the world. The level of soya meal used in UK sheep and beef diets is very small.

For more information, the two EBLEX roadmaps, [Change In the Air](#) and [Testing the Water](#), provide a benchmark of where the industry is now and outline the steps we need to take going forward.

¹ EBLEX, *UK Yearbook - 2011*

² DEFRA, *Agriculture in the United Kingdom – 2010*

³ DECC, *The UK Low Carbon Transition Plan - 2009*

⁴ FAO, *Livestock's Long Shadow – 2006*

⁵ EC JRC, *Evaluation of the livestock sector's contribution to the EU greenhouse gas emissions (GGELS) – 2011*

* GWP₁₀₀ is a way of expressing the Global Warming Potential of a number of gases – notably CO₂, methane and nitrous oxide – in one currency, namely CO₂ equivalence over a fixed time period of 100 years