

# Carbon management and reporting in the agri-food supply chain



*ADAS offers a breadth of technical expertise and provides bespoke consultancy services aimed at identifying optimised and practical solutions to reduce GHG emissions. ADAS works with companies across their direct operations and supply chains to measure and identify where action is needed to reduce GHG 'carbon' emissions and offers to develop and implement a full carbon management solution.*

## Key drivers for reducing carbon and GHG emissions:

- ✓ Rising costs and finite supplies
- ✓ Cost savings and/or renewable energy options
- ✓ Reduction of GHG emission
- ✓ Environmental reporting guidelines
- ✓ National and international climate change targets
- ✓ Environmental pollution (air quality, biodiversity etc.)



In today's environment of climatic uncertainty, there is increasing pressure to reduce greenhouse gas (GHG) emissions (climate change mitigation) from all aspects of food production. This is leading to an increased need for food and drink companies to take action to identify sources of GHG emissions in their supply chains and to set binding emission reduction targets in order to help meet national and international climate targets under the Paris Agreement.

## Business benefits of using ADAS to understand and reduce carbon emissions include:

**Baseline measurements** | ADAS can model baseline carbon emissions in your supply chain using existing or bespoke carbon calculators and tools for emissions footprinting.

**Target setting** | Using your baseline carbon emissions ADAS can support target setting (e.g. Science Based Targets) and methods for achieving these targets.

**Reduction** | ADAS can help you put in place programmes to reduce carbon emissions in the supply chain, or develop a more efficient production system.

**Monitoring** | ADAS can help set up and run monitoring programmes with suppliers to determine if progress is being made at sufficient pace for targets to be achieved.

**Educate** | ADAS can provide training and workshops to raise awareness amongst suppliers to help them engage with the process and take action to reduce their carbon and GHG emissions.

**Financial** | Reducing carbon emissions should also reduce costs within the supply chain.

## Emission Assessment and Carbon Management Plans

ADAS utilises a range of carbon tools, including both bespoke tools built in house and off the shelf tools e.g. the Cool farm Tool (CFT), with clients (including PepsiCo, M&S and Nestle) to measure carbon emissions from their business (scope 1 and 2 emissions) and supply chains (scope 3 emissions).

ADAS are able to help farmers complete emission assessments, check the accuracy of the returns, ensure consistency of approach, provide analysis of hotspots and why they are there, and then work with farmer suppliers to identify actions they can take to reduce their carbon emissions, through implementation of carbon management plans.

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*“ADAS have helped corporate clients and their supply chains to assess and implement GHG reductions”*



### Achieving carbon reduction in potato supply chain



- ✓ Used the Cool Farm Tool (CFT) to measure GHG emissions
- ✓ Worked with PepsiCo alongside Walkers Crisps' UK potato growers
- ✓ Cut carbon emissions from potato production by over 50%

ADAS and PepsiCo worked alongside UK potato growers between 2010 and 2015 to reduce greenhouse gas (GHG) emissions from potato production by 50% in 5 years (the 50 in 5 initiative) in the potato supply chain. A baseline for carbon emissions was established using the CFT and changes were captured to provide evidence of carbon reduction, carbon management plans were used to help farmers identify specific actions to take to reduce future emissions.



### Designing bespoke tools and calculators for carbon footprinting

- ✓ Develop online benchmarking tool for farm enterprises
- ✓ Build tools to meet specific needs
- ✓ Add brand value through technical efficiency measures

ADAS developed a bespoke carbon and economic footprinting tool for the Welsh Government to add brand value through technical efficiency measures that deliver sustainable intensification in the context of climate change. ADAS produced an easy to use, online benchmarking tool for farm enterprises to calculate and compare on-farm emissions.

### Developing and implementing carbon reduction strategies

- ✓ Develop a carbon reduction strategy for your supply chain
- ✓ Using baseline data ADAS can run 'what if' scenarios
- ✓ Farm assurance auditing for collection of farm enterprise data

ADAS can develop a carbon reduction strategy for your supply chain using 'what if' scenarios (e.g. using organic manures, switching from ammonium nitrate to urea fertilisers, changing varieties to increase yield, increasing the lambing rate of a flock), test, and provide information given about the impact of a widespread switch in practice on 'carbon' emissions calculated.



### Application of technical expertise for GHG reductions

- ✓ Robust information provided on fertiliser practices and emissions
- ✓ Helped company meet initiative to cut emissions from agri- production
- ✓ Reduction in GHG emissions achieved throughout the supply chain

ADAS was commissioned to summarise the current knowledge of GHG emissions associated with nitrogen fertiliser application for a food and drink company. ADAS recommended actions to decrease the associated GHG emissions, through effective use of nitrogen products and management for the crop, to reduce the carbon footprint from agricultural production.

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