

Cropland Management and Grazing Land Management – UK Reporting and Underpinning Research

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Contributors

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Overview

- Description of current UK reporting
- UK assessment on impact of grassland management practices on soil carbon stock
- Hierarchy of reporting for Cropland Management and Grazing Land Management under KP

Current UK Reporting

Current UK reporting

UK elected CM and GLM reporting in KP2

Category	First Reported	Method	Emission Factor	Notes
CM Soil	1990-2013	T1	CS & D	Residue, manure and fertiliser considered. Tillage found to have no effect in the UK.
CM Biomass	1990-2014	T1	CS	Classes are: annual crops, orchards, shrubby perennial, short rotation coppice and set-aside / fallow.
GM Biomass	1990-2014	T1	CS	Classes are: non-shrubby, shrubby, managed hedges, unmanaged hedges.

Moxley et al 2014a. Defra SP1113 Report: Capturing Cropland and Grassland Management Impacts on Soil Carbon in the UK LULUCF Inventory. <http://nora.nerc.ac.uk/id/eprint/508474/1/N508474CR.pdf>

Moxley et al 2014b. Variation to DECC contract TRN265/09/2011: Capturing the Effect of Cropland and Grassland Management on Biomass Carbon Stocks in the UK LULUCF Inventory. Unpublished report.

Grassland management and soil carbon stock

Grassland management and soil carbon stock

Background

- UK currently doesn't report soil CSC from grassland management practices
- SP1113 project in 2013/2014 concluded a need for further research
- New project commissioned and carried out by Ricardo Energy & Environment, SRUC & Alterra in 2017/2018

Grassland management and soil carbon stock

Project focus

- Development of new carbon stock change factors for mineral soils as a result of grassland management
- Modelling of grassland management scenarios over range of soil types, land uses and climate zones
- Scenarios included:
 - Grazing intensity
 - Mineral and organic fertiliser application
 - Tillage depth
- Changes in soil carbon stock in top 30cm assessed over a 150 year timeframe

Grassland management and soil carbon stock

Draft project conclusions

- Soil carbon stock of grassland increases by 9% over five years from reseeded
- Evidence for stock change between five and ten years is weaker
- Climate and grassland age more influential than management intensity
- IACS of limited use as it doesn't identify reseeded permanent grassland

Hierarchy of CM & GLM in KP

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- UK conforms to guidance on KP land representation, e.g. crop to settlement area reported under CM
- UK reports CM & GLM as equal on the KP hierarchy to ensure consistency with UNFCCC reporting and to avoid double counting
- Challenged by reviewers for the 1st time in 2017
- 2013 KP Supplementary Guidance states:
*“a Party **may** report all land subject to CM and GM under a single activity”*
- What approach do other countries use?

Thank You

Any Questions?