

Future Climate: Future Environment

Policy alternatives to reduce greenhouse gas (GHG) emissions in the agricultural sector

Greenhouse gas (GHG) emissions from the land use sector include Nitrous Oxide (N2O) from nitrogen fertilisers, methane (CH₄) from livestock and peat bogs and carbon dioxide (CO₂) from fuel burning and cultivation. The land use sector is responsible for approximately 20% of CO₂ emissions in Scotland, although a 60% reduction has been seen since 1990.

What effects would different policies have to reduce GHG in the agricultural sector?

Incentive scheme

An incentive scheme would rewards land managers who use the land in a way that emits less GHGs. However, this would require money from an external source.

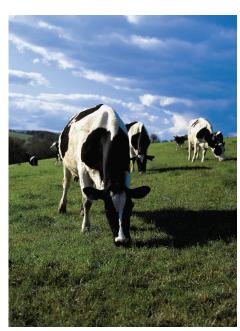
Taxation

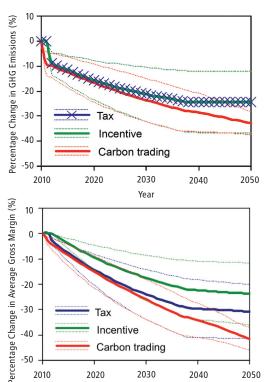
A combination of taxation and incentives could be used, with revenue generated from taxing land managers who emit GHG emissions above a threshold. The money would then be distributed to land managers who adopt land use practices that emit greenhouse gases below the threshold. This is a 'cost-neutral' solution to reducing overall GHG emissions.

Emission trading

Market mechanisms such as carbon credits may allow farmers to progressively adapt to the scheme constraints. At an individual level, the rate of on-farm compliance and the actual GHG emission reduction target will determine which strategy is the most efficient to cope with a trading scheme.







Incentive

2020

Carbon trading

2030

Year

2040

2050

-10 -20 -30

-40

2010