

Indicator 1: Attitudes & awareness

Rationale: behaviour change can be a long process. Measuring awareness of the sources of emissions and intentions to change practice can provide a leading indicator of uptake of mitigation measures and help to highlight motivations and barriers. However, farmer attitude is not the only driver for the adoption of mitigation practices; research suggests that understanding business sustainability and financial implications are also important drivers for change.

Indicator: farmer understanding of the sources of greenhouse gas (GHG) emissions on farms, engagement and intention to change.

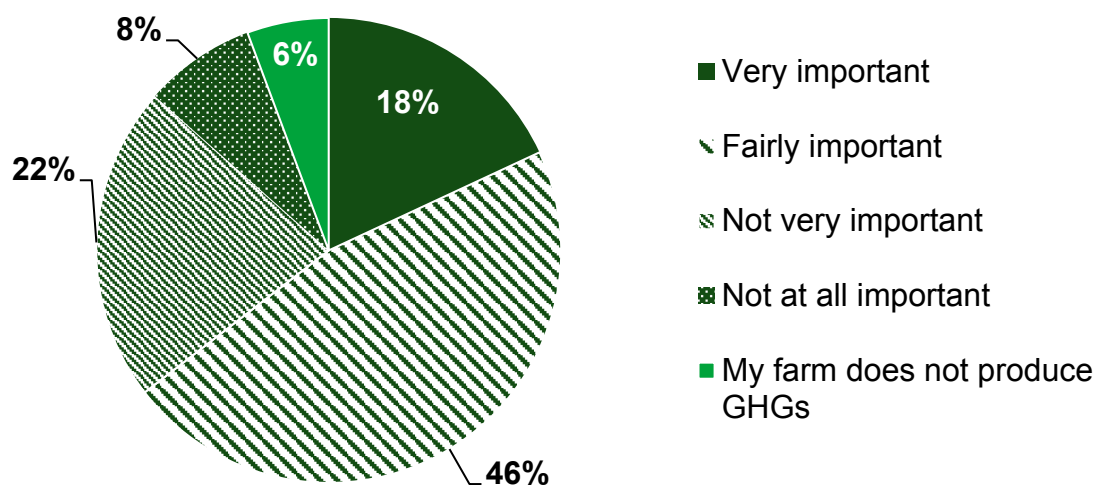
Desired outcome: increasing engagement and awareness of the sources of GHGs from agriculture.

Current status	Long term: (last 10 years) ...	Short term: (last 2 years) ✓
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Whilst awareness of the potential of GHG emissions has some bearing on the uptake of mitigation measures, other factors (particularly economic benefit or regulatory requirement) will also be important drivers.

The 2020 Farm Practice Survey (FPS) found that 18% of farms believed that it was “very important” to consider GHGs when making decisions relating to their land, crops and livestock and a further 46% thought it “fairly important” (see below chart). These results are a small increase compared to the 2019 FPS results.

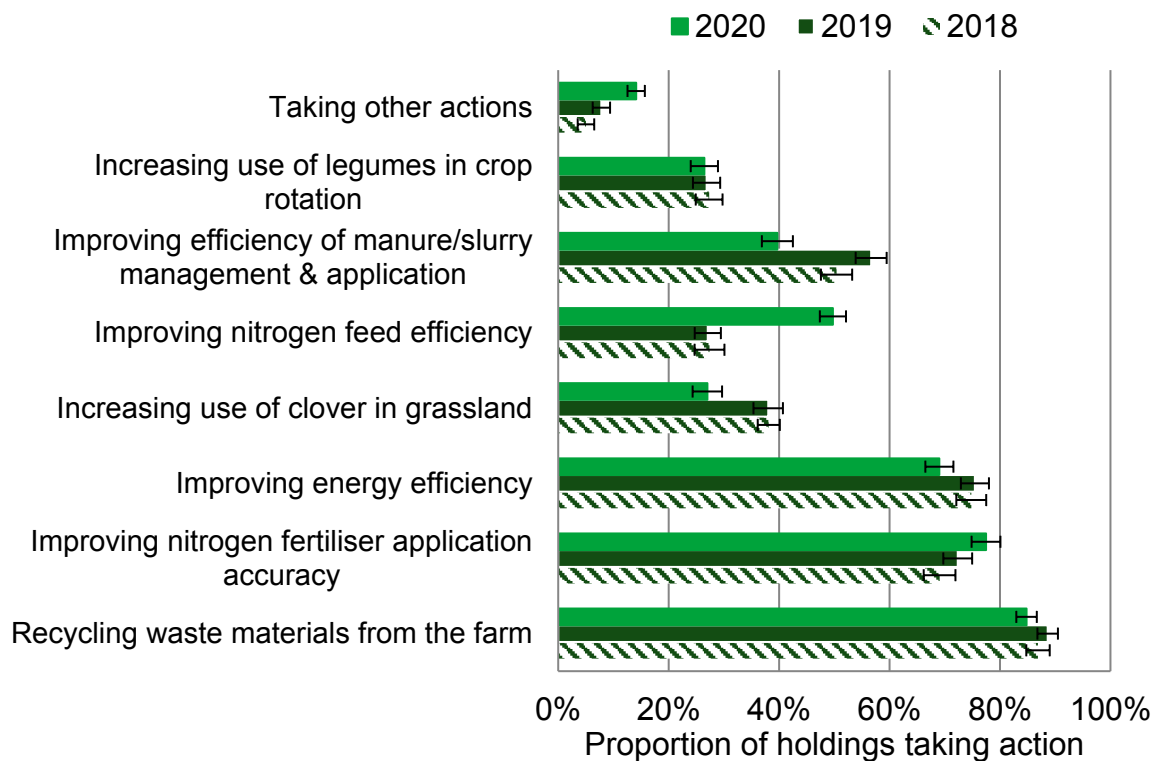
How important is it to consider greenhouse gases when taking decisions about crops, land and livestock?



Source: Farm practices survey 2020

Overall, 66% of farmers were taking actions to reduce emissions in 2020, which was a slight increase on 2019 results. Of these, larger farms continue to be more likely to take action (79%) than smaller farms (62%). LFA and lowland grazing livestock were least likely to be taking action compared to other farm types (51% in LFA farms and 57% in lowland farms).

Actions being taken by farmers to reduce greenhouse gas emissions



Source: Farm Practices Survey

The most common action to reduce GHG emissions in 2020 remained recycling waste materials from the farm (see above chart). Improving energy efficiency and improving nitrogen fertiliser application were the next most popular options. These are actions that most farmers can take irrespective of their enterprises. In terms of increase in uptake, the number of farmers improving efficiency of their manure/ slurry management and application has risen steadily from 28% in 2013 (when the questions were first asked) to 50% in 2020.

The FPS showed that most farmers (85%) taking action considered it good practice to reduce GHG emissions. The environment was also a strong positive motivator (73%). Just under half undertake the actions to improve profitability, while 35% cited regulatory reasons. Meeting market demands was a motivator for 24% of farmers. Larger farms placed more importance on profitability and meeting market demands than smaller ones, this was similar to the 2019 and 2018 results.

For those farmers not undertaking any actions to reduce GHG emissions, 42% did not believe any action was necessary, a slight decrease from 2019. Informational barriers were important, with both lack of information (35%) and lack of clarity about what to do (39%) cited as barriers by this group. 16% thought there was not much they could do and 13% that they had done enough. Financial barriers were also cited, with 24% saying not enough incentive and 12% too expensive.

Data sources

This indicator originally drew on data from the 2010 Defra-funded ADAS study into the feasibility of greenhouse gas mitigation methods (AC0222¹) and annual surveys undertaken by Farming Futures. However, from 2013 data have been collected via Defra's Farm Practices Survey (FPS).

Indicator methodology

The indicator uses responses to the following questions from Defra's Farm Practices Survey:

- How important do you feel it is to consider greenhouse gases (GHGs) then taking decisions about your land, crops and livestock? The five possible responses were: very important, fairly important, not very important, not at all important or my farm does not produce GHGs.
- What actions are you currently taking to reduce greenhouse gas emissions from your farm? The possible actions were:
 - Improving energy efficiency (e.g. reducing fuel use, producing own energy)
 - Recycling of waste materials from the farm (e.g. tyres, plastics)
 - Improving nitrogen feed efficiency, livestock diets (e.g. using ration formulation programme)
 - Improving efficiency in manure and slurry management and application (e.g. covering stores)
 - Improving nitrogen fertiliser application accuracy (e.g. using a fertiliser recommendation system, regularly checking and calibrating fertiliser spreaders)
 - Increasing use of legumes in arable rotation
 - Increasing use of clover in grassland
 - Other, please specify
- What are your main motivations for taking these actions? The possible motivations were:
 - I consider it good business practice
 - Regulation
 - To improve profitability
 - Concern for the environment
 - To meet market demands

- Other, please specify
- What are the reasons stopping you taking action to reduce greenhouse gas emissions from your farm? The possible barriers were:
 - Lack of information
 - Too expensive
 - Lack of incentive
 - I've already done all I can
 - I don't believe there is much farmers can do
 - It's not necessary as I don't think my farm produces many emissions
 - I'm unsure what to do as there as too many conflicting views on the issue
 - Other, please specify

Statistical background

The Farm Practices Survey (FPS) is an annual, voluntary, postal survey conducted by Defra which collects information on a diverse range of topics relating to the impact of farming practices on the environment. Since 2011 the survey has focused on practices relating to greenhouse gas (GHG) mitigation.

In 2020 the survey was sent to approximately 7,000 holdings in England. These holdings were targeted by farm type and size to ensure a representative sample. Thresholds are applied to ensure that very small holdings with little agricultural activity are not included in the survey. To be included in the sample, holdings had to have at least 50 cattle, 100 sheep, 100 pigs, 1,000 poultry or 20 hectares of arable crops or orchards. All results reflect only those holdings that exceed these thresholds. The response rate in 2020 was 35%.

Results are calculated using a standard methodology for stratified random surveys to produce national estimates. With this method, all of the data is weighted according to the inverse sampling fraction. Where reference is made to the type of farm in this document, this refers to the 'robust type', which is a standardised farm classification system. Farm sizes are based on the estimated labour requirements for the holding, rather than its land area.

Results from the FPS are designated National Statistics. These are official statistics which have been assessed and comply with the National Statistics code of practice.

¹<http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=17110&FromSearch=Y&Publisher=1&SearchText=AC0222&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description>