Department for Environment Food & Rural Affairs

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Greenhouse gas mitigation practices - England
Farm Practices Survey 2015

This release contains the results from the February 2015 Farm Practices Survey which focused on practices relating to greenhouse gas mitigation. The key results from the survey are given below.

Nutrient management (section 1)

Nutrient Management Plans help farmers and growers to plan the use of fertilisers and manures, meet regulatory demands and protect the environment. The proportion of holdings with a nutrient management plan has increased steadily from 46% in 2006 to 60% in 2015. Those holdings with nutrient management plans in 2015 accounted for 76% of the farmed area.

In 2015, the largest proportion of nutrient management plans were created by farmers themselves either with the help of a professional (45%) or without advice (25%). Three quarters of plans are updated annually and almost all farmers (94%) refer to their plan at least once a year.

Anaerobic digestion (section 2)

Anaerobic digestion is a treatment that composts waste in the absence of oxygen, producing a biogas that can be used to generate electricity and heat. Approximately 5% of holdings currently process slurries, crops or other feedstocks by anaerobic digestion either on their farm or elsewhere. Although this is a small proportion of farms, this has increased from just 1.5% in 2014.

Emissions (section 3)

In 2015, just over half of farmers (52%) attached some importance to considering greenhouse gases (GHGs) when taking decisions about their land, crops and livestock. This is an increase from 45% of holdings in 2014. Of the holdings currently taking action to reduce GHG emissions from their farm, recycling waste materials (84%) was the most frequently selected action followed by improving energy efficiency (72%).

Fertiliser, manure and slurry spreaders (section 4)

In 2015, 77% of farmers spread manure or slurry on their grassland or arable crops either themselves or hiring a contractor to do so and 86% spread fertiliser. Of those farmers spreading some or all of the manure or slurry themselves, just over half (51%) never calibrate their spreader.

Note: The results in sections 5 to 8 relate only to holdings with livestock.

Manure and slurry storage (section 5)

In 2015, just over two thirds of holdings (68%) with livestock had storage facilities for solid manure in temporary heaps in fields. On the majority (86%) of these holdings, the type of manure being stored was cattle farmyard manure. Almost a quarter of farmers store their slurry in a tank, whilst 15% store slurry in lagoons.

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Farm health planning and biosecurity (section 6)

In 2015, 71% of livestock holdings had a farm health plan. Of those holdings with a plan, 72% completed it with the assistance of a vet or adviser and 86% use their plan either routinely or when possible during the year to inform decisions on disease management. Just over half (54%) of livestock farmers undertake training for animal health and welfare and disease management.

Grassland and grazing (section 7)

In some situations sowing grassland with a clover mix or high sugar grasses can be a cost-effective method of increasing production and improving environmental protection. In 2015, 74% of livestock holdings had sown some or all of their temporary grassland with a clover mix and 62% have sown their temporary grassland with high sugar grasses.

Three quarters of farmers always take action to reduce stocking rates when fields are excessively wet and almost two thirds routinely try to keep livestock out of water courses.

Livestock feeding regimes and breeding practices (section 8)

In 2015, 53% of livestock farmers indicated they use a ration formulation programme or expert nutritional advice when planning the feeding regime of their cattle and sheep at least some of the time. This has remained unchanged since 2013.

Just over a quarter of livestock holdings offered alternative forages (other than grazed or conserved grass) to their livestock. Whole-crop silage and maize were the most common forages offered by 15% and 13% of farmers respectively.

Estimated Breeding Values (EBV) provide an estimate of the genetic worth of animals using desirable traits such as meat production. The proportion of holdings using bulls or rams with a high EBV when breeding beef cattle or lambs in 2015 is 58% and 56% respectively. These holdings accounted for 66% of beef cattle and 64% of lambs at June 2014.

Farm Practices Survey – Greenhouse Gas Mitigation Practices

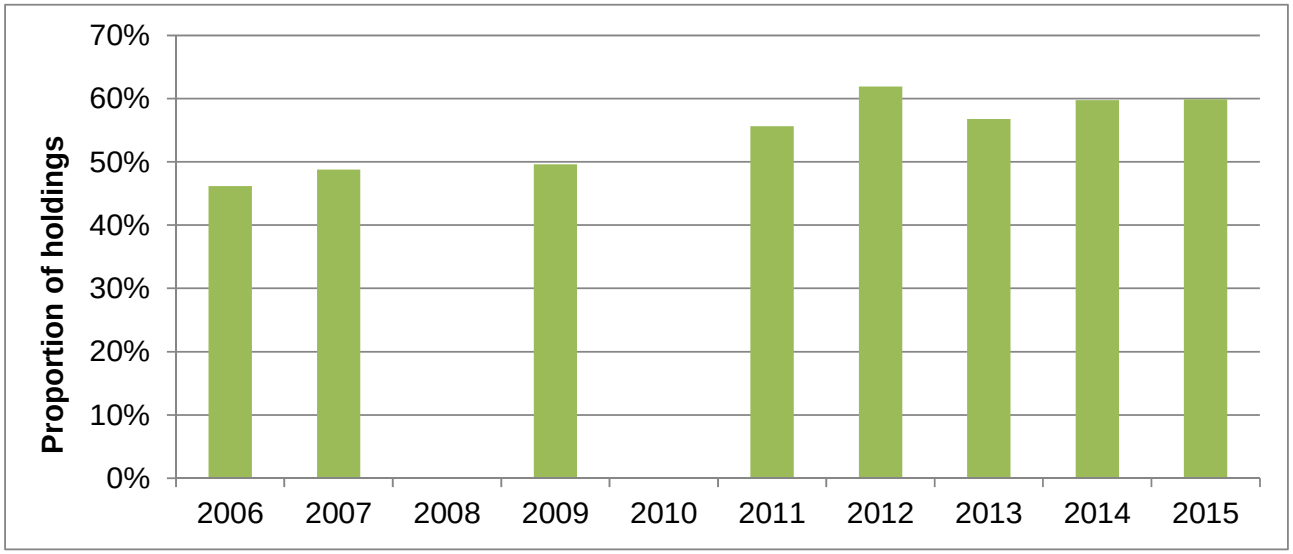
1 Nutrient management

Effective nutrient management provides sufficient nutrients to meet the growth requirements of crops and grassland whilst managing environmental impacts; it can help minimise GHG emissions, reduce the incidence of diffuse water pollution and increase productivity by reducing input costs. Here we consider how farmers manage the application of fertilisers and manures, the use of nutrient management plans and how nutrient requirements are calculated.

Key findings

- In 2015, 60% of holdings had a nutrient management plan which is unchanged from 2014. These holdings accounted for 76% of the farmed area covered by this survey.
- The largest proportion of nutrient management plans were created by farmers themselves either with the help of a professional (45%) or without advice (25%). The remaining 30% were created by an adviser or contractor.
- In 2015, 71% of farmers have a programme of soil testing for nutrient indices and 75% for pH. Of these holdings almost all were testing at least some of their fields every five years.
- Some 63% of holdings have a manure management plan for their farm. This is almost unchanged from 2014.

Figure 1.1: Proportion of holdings with a nutrient management plan: 2006 - 2015

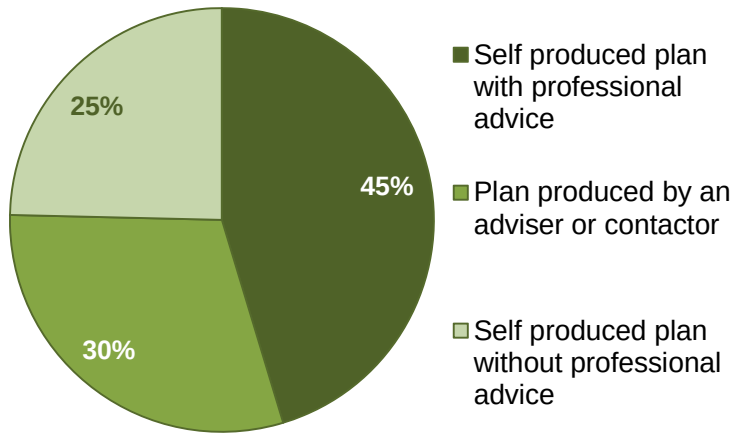


This question was not asked in 2008 and 2010, therefore results are not available for these years.

The proportion of farms with a nutrient management plan (NMP) has increased from 46% in 2006 to 60% in 2015 (Figure 1.1). This could be due to a mixture of regulation and increasing environmental awareness. In 2015, those holdings with nutrient management plans accounted for 76% of the farmed area.

Around 11% of holdings (accounting for 6% of the farmed area) indicated that a NMP is not applicable. This figure varied by farm type with 29% of pig/poultry farms, 22% of lowland grazing livestock farms and 15% of LFA grazing livestock farms indicating that a NMP was not applicable compared to 3% of cereal and other general cropping farms and 2% of dairy farms.

Figure 1.2: Preparation of nutrient management plans: 2015

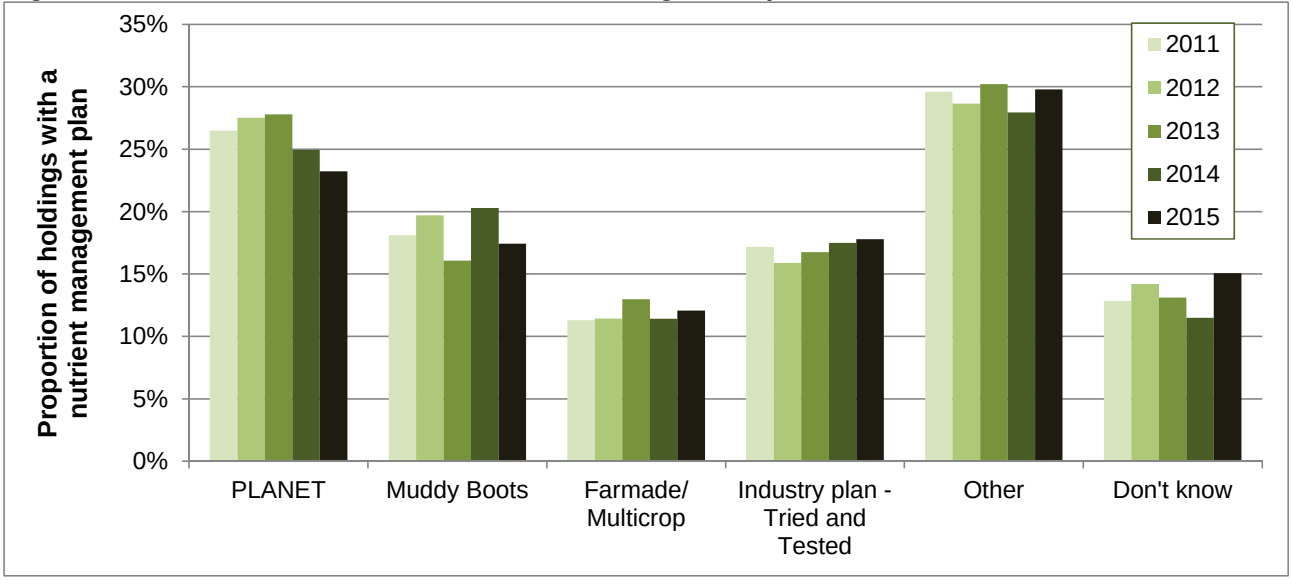


(Proportion of holdings with a nutrient management plan)

In 2015, 25% of those with a nutrient management plan completed the plan on their own without advice, whilst a further 45% created it themselves with the help of an adviser (Figure 1.2). The remaining 30% had the plan produced by a contractor or adviser.

Of those that sought professional advice, the majority (86%) did so from fertiliser advisers or agronomists (Table 1.3). Most of those with a nutrient management plan update it every year (75%) and almost all (94%) refer to it at least once each year (Tables 1.4 and 1.5).

Figure 1.3: Methods used to create nutrient management plans: 2011 - 2015



PLANET, Muddy Boots, Farmade/Multicrop and Tried & Tested are methods for creating nutrient management plans. PLANET has been the most popular of these four methods (Figure 1.3), although in each of the last five years the largest proportion of farmers (30% in 2015) have used other methods not listed on the survey form to create their plans (Table 1.6). 'Defra recommendations (RB209)' was the most commonly reported source of nutrient recommendations for plans (Table 1.7).

The percentage of farmers undertaking some form of nutrient testing on soil has remained similar between 2009 and 2014. Results for the past three years can be found in table 1.8. Approximately 63% of farms have a manure management plan in 2015, almost unchanged since 2014. The majority of farmers (89%) use nutrient recommendations for manure management plans from Defra recommendations (RB209, CoGAP).

Table 1.1: Uptake of nutrient management plans: 2011 – 2015 (proportion of holdings and farmed area)

	2011		2012		2013		2014		2015	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
% of holdings										
Yes	56	*±1*	62	*±3*	57	*±2*	60	*±2*	60	*±2*
No	34	*±2*	29	*±3*	33	*±2*	32	*±2*	29	*±2*
Not applicable	10	*±1*	9	*±2*	10	*±2*	8	*±1*	11	*±1*
% of farmed area										
Yes	71	*±2*	78	*±3*	73	*±2*	74	*±2*	76	*±2*
No	24	*±2*	18	*±2*	21	*±2*	22	*±2*	19	*±2*
Not applicable	5	*±1*	5	*±2*	6	*±1*	4	*±1*	6	*±1*
Number of responses	3 436		1 146		2 058		2 481		2 635	

Table 1.2: Use of advisers/professional advice to create nutrient management plans: 2012 – 2015 (proportion of farmers with nutrient management plans)

	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
Self produced plan without professional advice	19	*±3*	25	*±3*	22	*±2*	25	*±2*
Self produced plan with professional advice	50	*±4*	48	*±3*	43	*±3*	45	*±3*
Plan produced by an adviser or contractor	31	*±4*	27	*±3*	35	*±3*	30	*±2*

Based on 792 responses in 2012, 1 348 in 2013, 1 651 in 2014 and 1 782 in 2015 from holdings with a nutrient management plan.

Table 1.3: Use of advisers and contractors for completion of nutrient management plans: 2015

	Those who sought an adviser's help to create the plan themselves [(a)]		Those whose plan was created by an adviser or contractor [(b)]	
Type of adviser	% of holdings	95% CI	% of holdings	95% CI
Fertiliser adviser / agronomist	86	*±3*	85	*±3*
Animal nutritionist	5	*±1*	3	*±1*
FWAG [(c)]	3	*±1*	1	*±1*
Other	10	*±2*	13	*±3*

(a) Based on 832 responses from those who created the nutrient management plan themselves with advice.
(b) Based on 539 responses from those whose nutrient management plan was created by an adviser or contractor.
(c) FWAG: Farming and Wildlife Advisory Group.

Table 1.4: Frequency with which the nutrient management plan is updated: 2012 – 2015

Frequency of update	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
Every year	76	*±3*	79	*±3*	76	*±2*	75	*±2*
Every 2 years	11	*±2*	10	*±2*	10	*±2*	11	*±2*
Every 3 years or longer	13	*±3*	11	*±2*	13	*±2*	14	*±2*

Based on 792 responses in 2012, 1 346 in 2013, 1 647 in 2014 and 1 780 in 2015 from holdings with a nutrient management plan.

Table 1.5: Frequency with which the nutrient management plan is referred to in a year: 2012 – 2015

Frequency of use	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
More than 10 times	9	*±2*	8	*±1*	9	*±1*	9	*±1*
5 to 10 times	21	*±3*	18	*±2*	18	*±2*	16	*±2*
Less than 5 times	64	*±4*	67	*±3*	68	*±2*	68	*±2*
Never	5	*±2*	6	*±1*	6	*±1*	6	*±1*

Based on 792 responses in 2012, 1 345 in 2013, 1 649 in 2014 and 1 778 in 2015 from holdings with a nutrient management plan.

Table 1.6: Methods used to create nutrient management plans: 2012 – 2015

Method	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
PLANET	28	*±3*	28	*±3*	25	*±2*	23	*±2*
Muddy Boots	20	*±3*	16	*±2*	20	*±2*	17	*±2*
Farmade / Multicrop	11	*±2*	13	*±2*	11	*±2*	12	*±2*
Industry plan – 'Tried and Tested'	16	*±3*	17	*±2*	18	*±2*	18	*±2*
Other	29	*±3*	30	*±3*	28	*±2*	30	*±2*
Don't know	14	*±3*	13	*±2*	12	*±2*	15	*±2*

Based on 791 responses in 2012, 1 348 in 2013, 1 643 in 2014 and 1 775 in 2015 from holdings with a nutrient management plan.

Table 1.7: Sources of nutrient recommendations for nutrient management plans: 2012 – 2015

	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
Defra recommendations / manual (RB209)	68	*±4*	70	*±3*	68	*±3*	68	*±2*
An adviser's or industry note	39	*±4*	38	*±3*	36	*±3*	36	*±2*
Personal experience	41	*±4*	43	*±3*	41	*±3*	40	*±3*
Other	4	*±2*	4	*±1*	3	*±1*	4	*±1*
Don't know	4	*±2*	4	*±1*	2	*±1*	3	*±1*

Based on 792 responses in 2012, 1 348 in 2013, 1 651 in 2014 and 1 780 in 2015 from holdings with a nutrient management plan.

Table 1.8: Nutrient testing of soil: 2013 – 2015

		2013		2014		2015	
		Proportion	95% CI	Proportion	95% CI	Proportion	95% CI
Testing the nutrient content (indices) of soil[(a)]	% of holdings	73	*±2*	70	*±2*	71	*±2*
	% of farmed area	85	*±2*	83	*±2*	85	*±1*
Testing the pH of soil[(a)]	% of holdings	80	*±2*	74	*±2*	75	*±2*
	% of farmed area	89	*±2*	84	*±2*	87	*±1*

Based on responses from holdings considering the questions applicable. Minimum numbers of responses used: 1 985 in 2013, 2 375 in 2014 and 2 477 in 2015.
(a) The questions used to collect this data were worded differently from 2014 onwards, so the differences seen between 2014/2015 and previous years may be due to these changes. Prior to 2014 the question was worded to ask whether farmers regularly tested the nutrient content and pH of soil 'at least every 5 years'. In 2014 and 2015 the question was split to initially ask if farmers carried out soil testing and then whether they tested all fields, some fields or no fields at least every 5 years. The additional detail relating to the number of fields tested regularly in 2015 can be found in table 1.9.

Table 1.9: Nutrient testing of soil by proportion of fields: 2015

		All fields		Some fields		None of the fields	
		Proportion	95% CI	Proportion	95% CI	Proportion	95% CI
Testing the nutrient content (indices) of soil at least every 5 years	% of holdings	58	*±2*	41	*±2*	0.4	*±0.4*
	% of farmed area	65	*±2*	35	*±2*	0.1	*±0.1*
Testing the pH of soil at least every 5 years	% of holdings	57	*±2*	42	*±2*	0.3	*±0.3*
	% of farmed area	62	*±2*	38	*±2*	0.3	*±0.3*

Based on responses from holdings with a programme of soil testing for either nutrient indices or pH. Minimum numbers of responses used: 1 947 in 2015.

Table 1.10: Nutrient testing of manure: 2014 - 2015

Methods of testing/assessing/calculating nutrient content of manure	2014		2015	
	% of holdings	95% CI	% of holdings	95% CI
Sampling and lab analysis	12	*±1*	14	*±1*
Sampling and on-farm testing	2	*±1*	3	*±1*
Based on published tables	36	*±2*	37	*±2*
No testing done	47	*±2*	47	*±2*

Based on 2 017 responses in 2014 and 2 140 in 2015 from holdings without a manure management plan.

Table 1.11: Uptake of manure management plans: 2012 – 2015

	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
% of holdings	76	*±3*	71	*±3*	64	*±2*	63	*±2*
% of farmed area	86	*±3*	82	*±2*	77	*±2*	76	*±2*

Based on 847 responses in 2012, 1 570 in 2013, 2 134 in 2014 and 2 299 in 2015 from holdings for which the question was applicable.

Table 1.12: Source of nutrient recommendations for manure management plans: 2012 – 2015

	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
Defra recommendations / manual (RB209), CoGAP	90	*±3*	87	*±2*	90	*±2*	89	*±2*
Other	13	*±3*	16	*±2*	12	*±2*	14	*±2*

Based on 660 responses in 2012, 1 206 in 2013, 1 537 in 2014 and 1 622 in 2015 from holdings with a manure management plan.

2 Anaerobic digestion

Anaerobic digestion is a natural process in which plant and animal materials are broken down by micro-organisms in the absence of oxygen, producing a biogas that can be used to generate electricity and heat. The process allows more efficient capture and treatment of the nutrients and greenhouse gas emissions from animal slurries and manures than can be achieved by spreading directly onto land. The remaining digestate is rich in nutrients and can be used as fertiliser. This section looks at the proportion of farmers who are currently processing any waste or crop feedstocks in this way.

Key findings

- In 2015, 5.0% of farmers said they process waste by anaerobic digestion. This is an increase when compared to the past four years.
- Crops were the most common waste type being processed, with 3.2% of farmers choosing this option. Slurries were the next most popular option processed by 2.4% of farmers.

The majority of farms do not currently process slurries, crops or other feedstocks by anaerobic digestion, with just 5.0% of holdings doing so in 2015. However this is an increase when compared to the 1.5% of farmers using anaerobic digestion in 2014. Prior to 2015, the number of farmers processing by anaerobic digestion had previously remained stable since 2011 (Table 2.1).

Table 2.1: Proportion of holdings processing waste by anaerobic digestion: 2011 – 2015

					% of holdings	95% CI
Waste type	2011	2012	2013	2014	2015	2015
Slurries	0.6	0.4	0.6	0.9	2.4	± *0.7*
Crops	:	0.4	0.6	0.8	3.2	± *0.7*
Other feedstocks from the holding	0.8	0.5	0.5	0.2	0.8	± *0.4*
Other feedstocks from outside the holding	0.3	0.6	0.1	0.3	0.5	± *0.3*
Any of the above	1.4	1.4	1.3	1.5	5.0	± *0.9*

Based on no fewer than 2 547 responses in 2011, 1 144 in 2012 from holdings who had heard of anaerobic digestion and 2 049 responses in 2013, 2 470 in 2014 and 2 641 in 2015 from all holdings.
: data not collected.

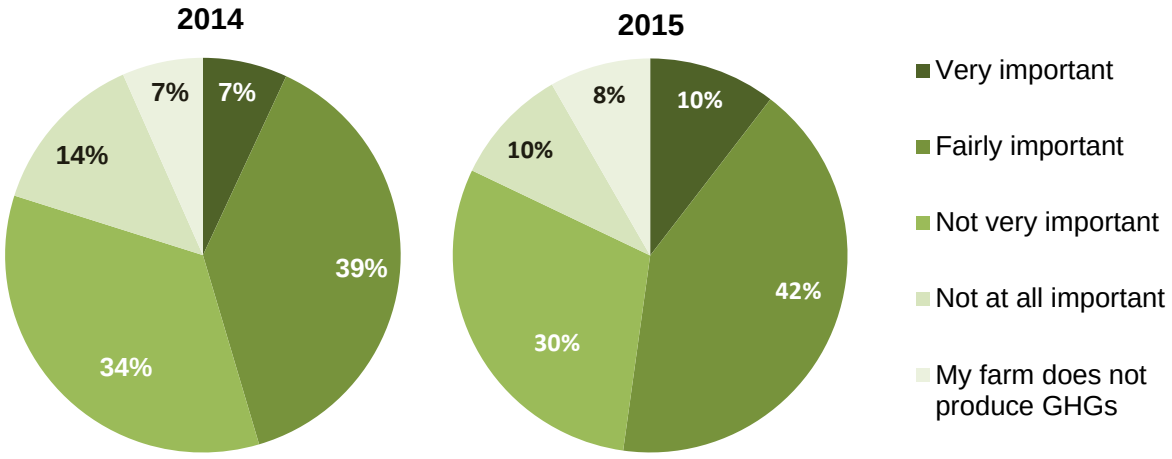
3 Emissions

This section looks at the importance farmers place on greenhouse gas (GHG) emissions when making decisions about their farms. It also focuses on the actions that farmers are currently taking to reduce emissions and their motivations for doing so. In contrast we also look at the reasons that prevent farmers from taking action.

Key findings

- Just over half of farms (52%) in 2015 considered it fairly or very important to consider greenhouse gases (GHG) when taking decisions about their land, crops and livestock. This is an increase from 45% in 2014.
- In 2015, 61% of farmers reported that they were currently taking action to reduce greenhouse gas emissions from their farm. The most common actions taken by this group were recycling of waste materials from the farm (84%) and improving energy efficiency (72%).
- The most common motivation for taking any action was that it was considered to be good business practice to do so. This has been the case for the past three years.
- For those not taking action to reduce GHG emissions, the most common reason preventing them was that it was not necessary because their farm did not produce many emissions.

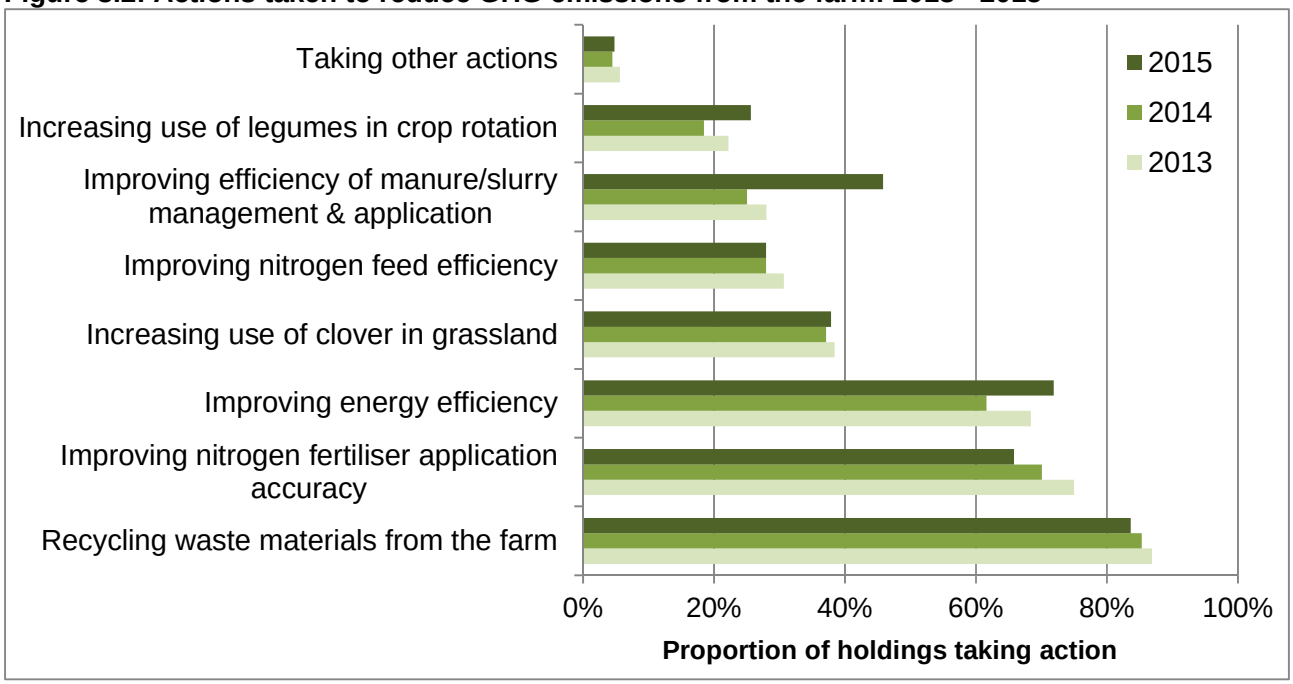
Figure 3.1: Importance placed on GHGs by farmers when taking decisions about their land, crops and livestock: 2014 – 2015



Just over half of farms (52%) considered it fairly or very important to consider greenhouse gases (GHG) when taking decisions about their land, crops and livestock in 2015. This has increased from 45% in 2014 (Figure 3.1). There were 8% of farms that believed that their farm did not produce any GHGs.

61% of farmers said that they were currently taking action to reduce GHG emissions from their farm. Of those taking action (Figure 3.2 and Table 3.3) the three most common actions are recycling waste materials from the farm (84%), improving energy efficiency (72%) and improving nitrogen fertiliser application accuracy (66%). The largest change in actions between 2014 and 2015 was an increase in the number of farmers improving efficiency of manure and slurry management & application. This rose from 25% of holdings in 2014 to 46% in 2015.

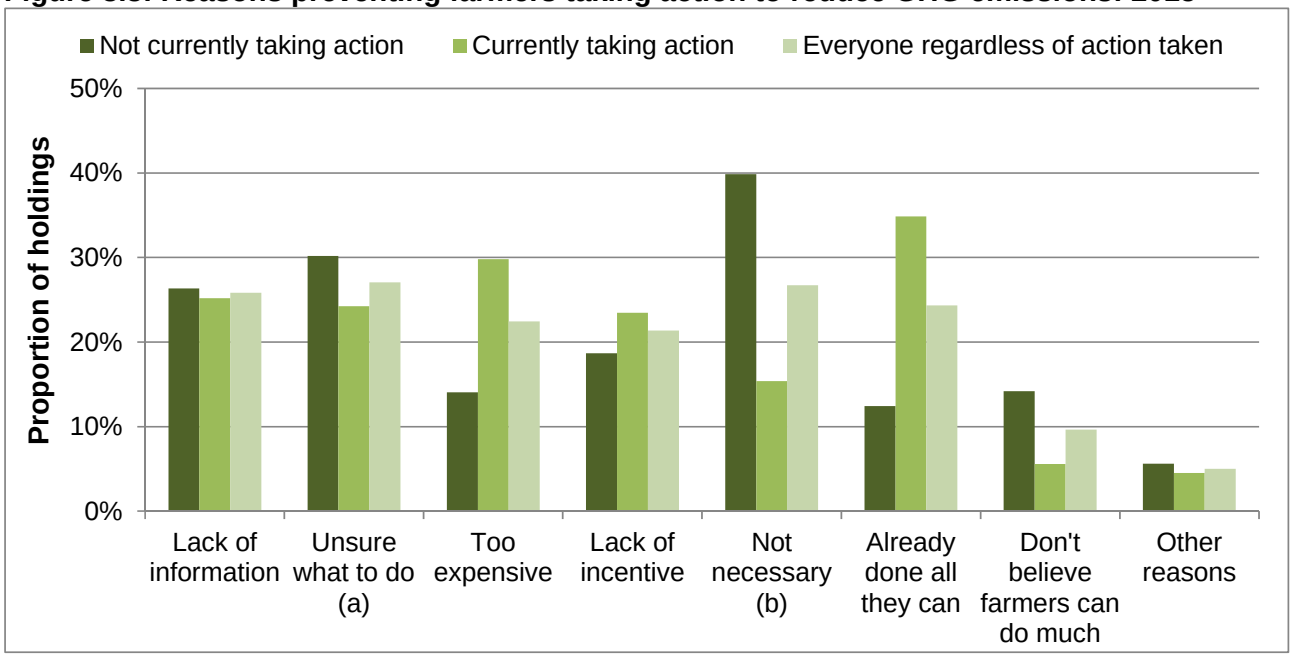
Figure 3.2: Actions taken to reduce GHG emissions from the farm: 2013 - 2015[(a)]



(a) Figures relate only to those holdings currently taking action to reduce GHG emissions from their farm.

For those farmers currently taking action to reduce their farm's GHG emissions the most common motivation for doing so was that it was considered to be good business practice (selected by 80% of holdings) followed by concern for the environment (selected by 62%) (Table 3.4).

Figure 3.3: Reasons preventing farmers taking action to reduce GHG emissions: 2015



(a) Unsure what to do - too many conflicting views on the issue
(b) Not necessary - don't believe farm produces many emissions

As might be expected, the reasons given that prevent people from taking action to reduce GHG emissions varied depending on whether farmers were currently taking action or not (Figure 3.3). For those not currently taking action, the most commonly quoted reason was that farmers did not think it was necessary to do so as the farm did not produce many emissions. For those who were already taking action the most commonly quoted reason was that farmers had already done all they can (35%), closely followed by expense (30%).

Table 3.1: Importance placed on GHGs by farmers when taking decisions about their land, crops and livestock: 2013 - 2015

	% of holdings			95% CI
	2013	2014	2015	2015
Very important	8	7	10	*±1*
Fairly important	39	39	42	*±2*
Not very important	36	34	30	*±2*
Not at all important	12	14	10	*±1*
Do not believe farm produces GHGs	5	7	8	*±1*

Based on responses from 2 048 holdings in 2013, 2 474 in 2014 and 2 616 in 2015.

Table 3.2: Belief that reducing GHG emissions from the farm will contribute to improving the overall profitability: 2013 - 2015

	% of holdings			95% CI
	2013	2014	2015	2015
Strongly agree	2	2	4	*±1*
Agree	36	37	41	*±2*
Disagree	53	52	48	*±2*
Strongly disagree	9	8	7	*±1*

Based on responses from 2 038 holdings in 2013, 2 458 in 2014 and 2 586 in 2015.

Table 3.3: Actions being taken to reduce GHG emissions from farms: 2013 - 2015

	% of holdings			95% CI
	2013	2014	2015	2015
Taking action[(a)]	62	59	61	*±2*
Of those taking action, the actions were[(b)]:				
Recycling of waste materials from the farm (e.g. tyres, plastics)	87	85	84	*±2*
Improving nitrogen fertiliser application accuracy	75	70	66	*±2*
Improving energy efficiency (e.g. reducing electricity use, using reduced tillage)	68	62	72	*±2*
Increasing use of clover in grassland	38	37	38	*±2*
Improving nitrogen feed efficiency, livestock diets	31	28	28	*±2*
Improving efficiency in manure and slurry management and application	28	25	46	*±3*
Increasing use of legumes in arable rotation	22	18	26	*±2*
Other actions	6	4	5	*±1*

(a) Based on responses from 2 035 holdings in 2013, 2 461 in 2014 and 2 613 in 2015.
(b) Based on responses from 1 361 holdings in 2013, 1 566 in 2014 and 1 731 in 2015 who are taking action to reduce GHG emissions.

Table 3.4: Main motivations for those taking action to reduce GHG emissions: 2013 - 2015

Motivations	% of holdings			95% CI
	2013	2014	2015	2015
Consider it good business practice	78	79	80	±2
Concern for the environment	67	59	62	±3
To improve profitability	58	53	55	±3
Regulation	50	47	46	±3
To meet market demands	20	19	19	±2
Other motivation	1	2	3	±1

Based on 1 353 responses in 2013, 1 564 in 2014 and 1 727 in 2015 from holdings who are taking action to reduce GHG emissions.

Table 3.5: Reasons preventing farmers from taking action to reduce GHG emissions from their farm: 2014 - 2015

	For those not taking action[(a)]			For those already taking action[(b)]			For all holdings[(c)]		
	% of holdings			% of holdings			% of holdings		
	2014	2015	95% CI	2014	2015	95% CI	2014	2015	95% CI
Lack of information	26	26	±3	22	25	±3	25	26	±2
Too expensive	11	14	±2	31	30	±3	20	22	±2
Lack of incentive	18	19	±3	19	23	±3	19	21	±2
Already done all they can	10	12	±2	35	35	±3	22	24	±2
Don't believe farmers can do much	23	14	±3	9	6	±1	16	10	±1
Not necessary – don't believe farm produces many emissions	41	40	±4	17	15	±2	29	27	±2
Unsure what to do - too many conflicting views on the issue	31	30	±3	25	24	±3	29	27	±2
Other reasons	3	6	±2	5	5	±1	4	5	±1

(a) Based on responses from 880 holdings in 2014 and 871 holdings in 2015 who are not taking action to reduce GHG emissions.
(b) Based on responses from 867 holdings in 2014 and 1 233 holdings in 2015 who are currently taking action to reduce GHG emissions.
(c) Based on responses from 1 754 holdings in 2014 and 2 108 holdings in 2015 regardless of whether or not they are taking action to reduce GHG emissions.

4 Fertiliser, manure and slurry spreaders

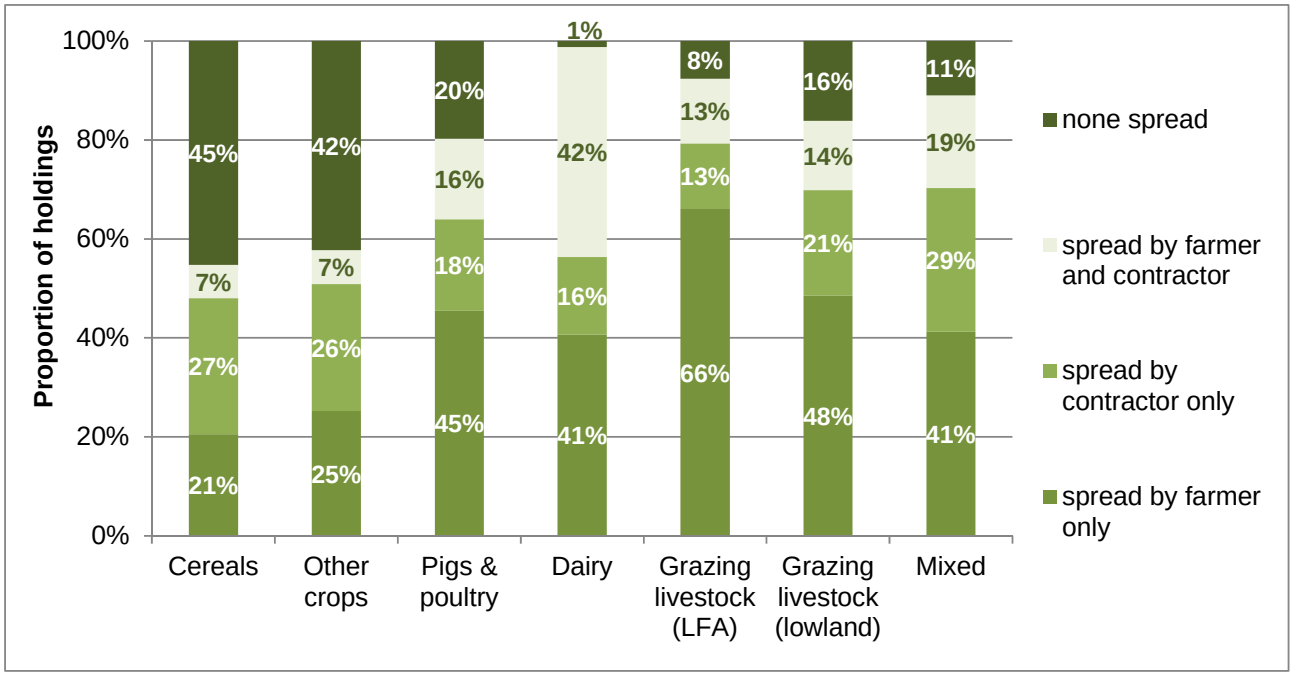
Calibrating fertiliser, manure and slurry spreaders can help to improve input efficiency and reduce GHG emissions. This section focuses specifically on farmers who spread manure, slurry and fertiliser.

More details on nitrogen fertiliser spreading practices are available in the British Survey of Fertiliser Practice at: https://www.gov.uk/government/collections/fertiliser-usage.

Key findings

- Just over three quarters of holdings (77%) spread manure or slurry on their grass or arable land in 2015 and 86% spread fertilisers.
- On approximately half of holdings (51%) where the farmer spreads at least some manure or slurry themselves, the manure or slurry spreader is never calibrated.

Figure 4.1: Proportion of holdings spreading manure and slurry on grassland and arable land by farm type: 2015



In 2015, 77% of holdings spread manure or slurry on their grass and arable land. As might be expected there was considerable variation between farm types. Almost all dairy farms spread manures or slurries and these farms are more likely to use contractors to spread at least some of the manure and slurry than other farm types. The majority (66%) of LFA grazing livestock farmers spread manure/slurry themselves only (Figure 4.1).

Fertiliser was spread either by the farmer or a contractor on 98% of cereal farms, 95% of other cropping farms and 93% of dairy farms. On all three of these farm types the largest proportion of holdings said the fertiliser was spread solely by the farmer, however cereal and other cropping farms were more likely to use a contractor than dairy farms (Figure 4.2).

Figure 4.2: Proportion of holdings spreading fertiliser on grassland and arable land by farm type: 2015

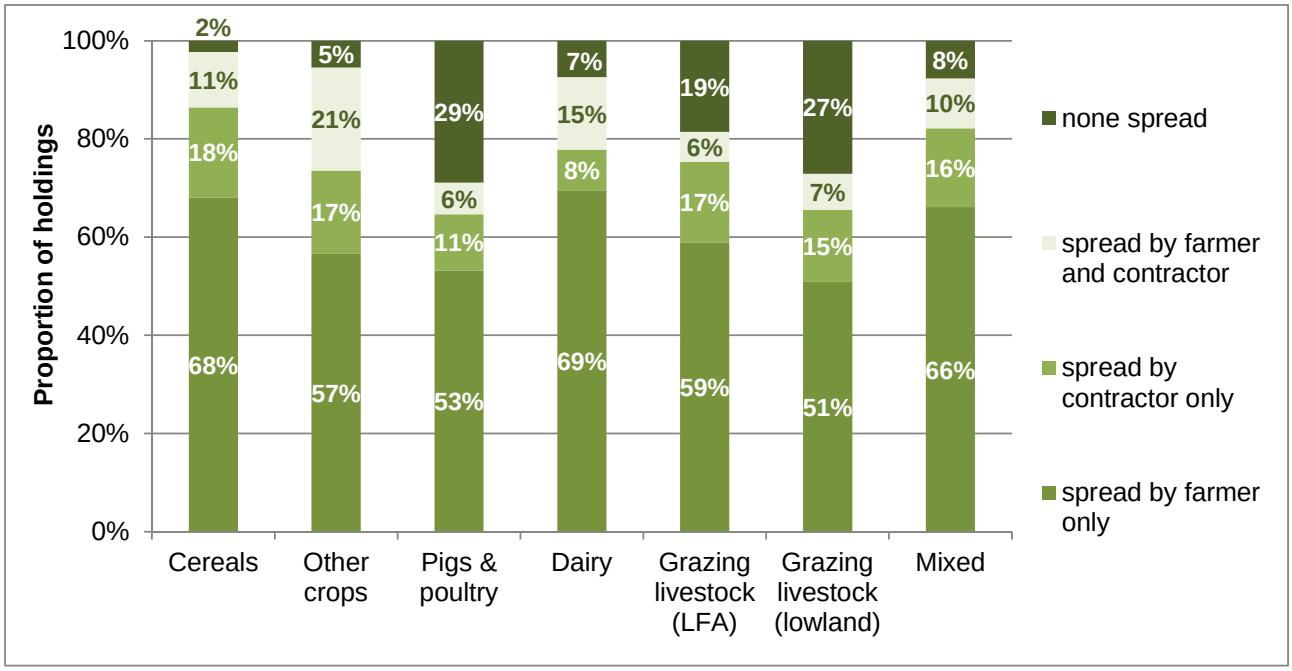


Table 4.1: Spreading of manure and slurry on grassland or arable land: 2013 - 2015

	2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
Spread by farmer only	39	*±2*	35	*±2*	40	*±2*
Spread by farmer and also contractor	17	*±2*	16	*±1*	15	*±2*
Spread by contractor only	20	*±2*	20	*±2*	22	*±2*
None spread	24	*±2*	29	*±2*	23	*±2*

Based on 2 056 responses in 2013, 2 467 in 2014 and 2 297 in 2015.

Table 4.2: Spreading of fertiliser on grassland or arable land: 2014 - 2015

	2014		2015	
	% of holdings	95% CI	% of holdings	95% CI
Spread by farmer only	55	*±2*	60	*±2*
Spread by farmer and also contractor	13	*±1*	11	*±1*
Spread by contractor only	16	*±2*	15	*±2*
None spread	16	*±2*	14	*±2*

Based on 2 461 responses in 2014 and 2 315 in 2015.

Table 4.3: Frequency with which farmers calibrate their manure or slurry spreader(s): 2013 - 2015

Frequency of check	2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
Never	58	*±3*	64	*±3*	51	*±3*
Whenever there is significant change in manure or slurry characteristics	29	*±3*	24	*±2*	18	*±2*
Whenever manure or slurry is tested	4	*±1*	4	*±1*	2	*±1*
Every year[(a)]	:	*:*	:	*:*	19	*±3*
Less often than every year[(a)]	:	*:*	:	*:*	7	*±2*
Other frequency	9	*±2*	8	*±2*	3	*±1*

Based on 1 167 responses in 2013, 1 343 in 2014 and 1 100 in 2015 on holdings where the farmer spreads some or all of the manure/slurry.
(a) These were new options added to the survey in 2015 so other categories are not be directly comparable with previous years.
: data not collected.

Note: **The results in sections 5 to 8 relate only to holdings with livestock.**

5 Manure and slurry storage

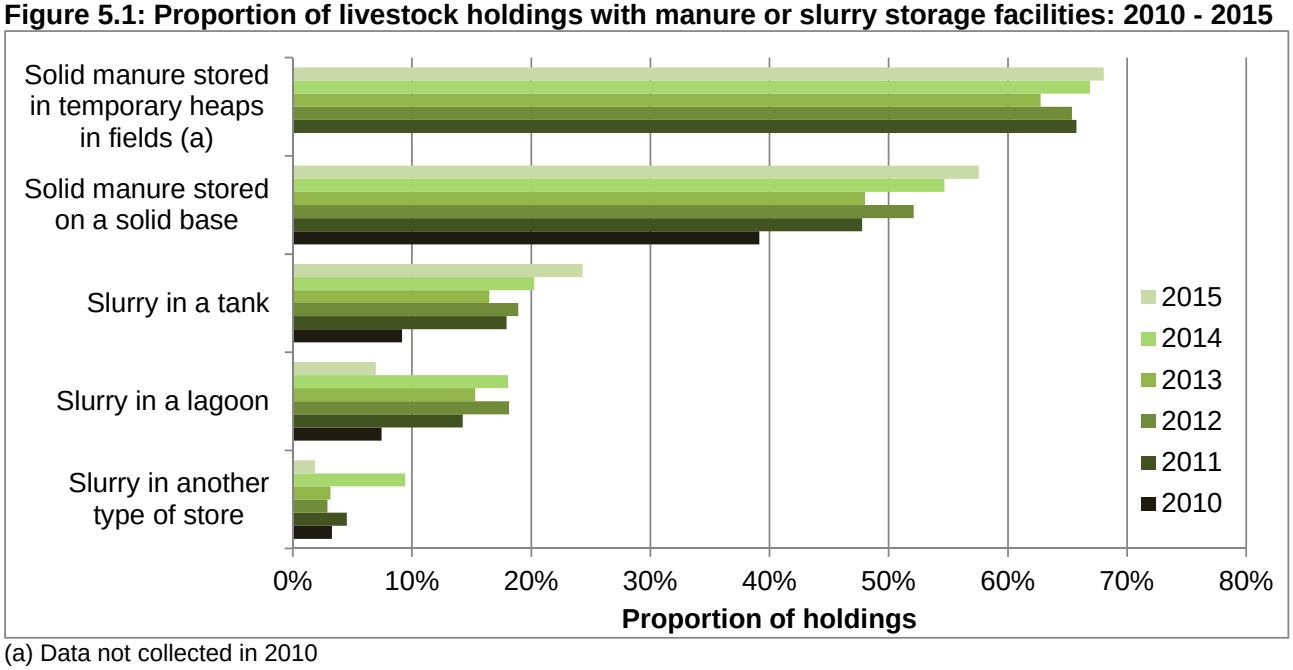
The system of manure and slurry management is relevant to the control of environmental risks to water and air. It prevents the loss of ammonia to the air, at the same time retaining the nitrogen for use as an organic fertiliser, reducing the need for manufactured nitrogen fertiliser inputs.

This section looks at the types of stores that livestock farmers have, whether or not they are covered, and whether the farmer has any plans to upgrade their current facilities. It also looks at whether the farmer has a slurry separator. Separating the suspended solids from slurry allows the two manure streams to be handled separately. The solid fraction can be stored on a concrete pad or in a field heap, while the liquid fraction can be stored and transported/pumped to fields for land application. Separation can reduce storage space and improve the efficiency with which nitrogen is applied to land which has the potential to reduce emissions.

Key findings

- Solid manure in temporary heaps remains the most common form of storage, with approximately two thirds of the farmers having this kind of store.
- The majority of holdings storing manure in temporary field heaps were storing cattle farmyard manure (86%), followed by horse farmyard manure (16%). Far fewer holdings were storing poultry litter, poultry manure or pig farmyard manure in this way.
- Almost a quarter of farmers store their slurry in a tank, whilst 15% store slurry in lagoons.
- In 2015, 8% of livestock farmers have a slurry separator compared with 4% in 2014.

Figure 5.1: Proportion of livestock holdings with manure or slurry storage facilities: 2010 - 2015



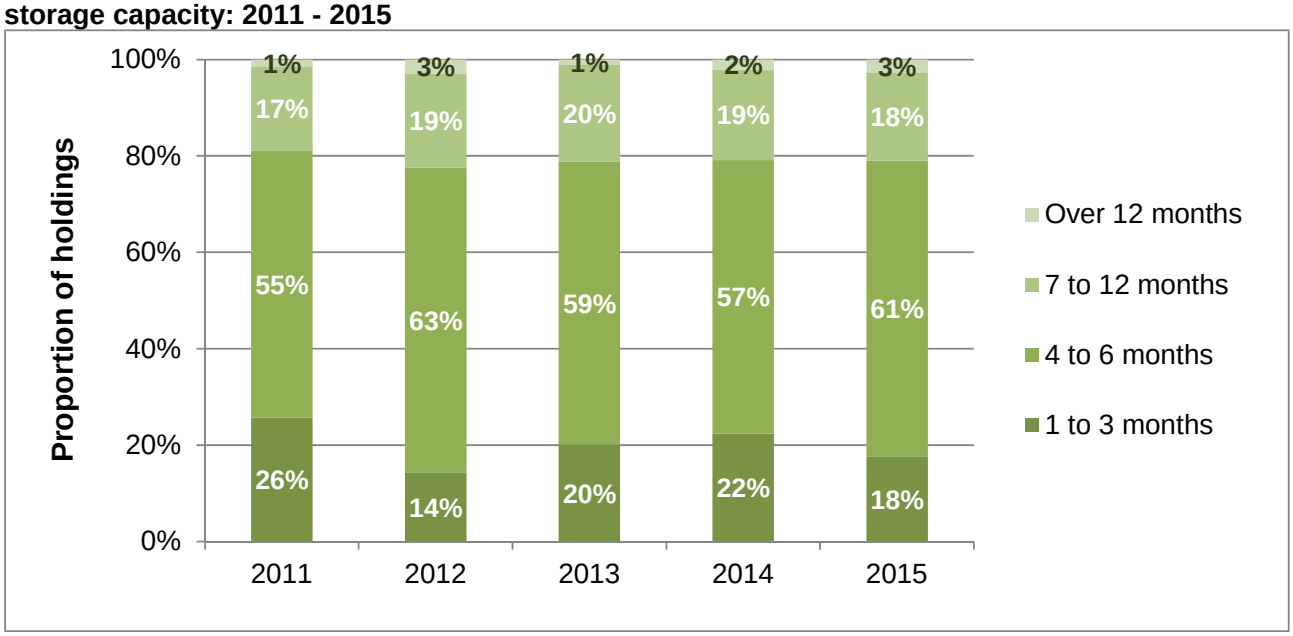
(a) Data not collected in 2010

The most common storage facility for solid manure continues to be temporary heaps in fields. The most common facilities for slurry storage are tanks (24% of farms) followed by lagoons (15%). Slurry in a tank is far more likely to have a cover than any other type of store (Table 5.2).

Of the holdings storing manure in temporary field heaps, the majority were storing cattle farmyard manure (86%). Far fewer holdings were storing horse farmyard manure, poultry litter, poultry manure or pig farmyard manure in this way (Table 5.3).

In 2015, 13% of livestock farmers planned to make changes to their manure or slurry storage facilities. Of these, 27% planned to make the changes within the next year and a further 49% in the next 1 to 3 years (Table 5.4).

Figure 5.2: Proportion of holdings with storage facilities for slurry by number of months of storage capacity: 2011 - 2015



The proportion of holdings that have 6 months storage capacity or less for slurry remains unchanged at 79%. Almost all of the remaining holdings had between 7 and 12 months capacity with only very few people having more than 12 months storage (Figure 5.2 and Table 5.5).

Table 5.1: Proportion of holdings with storage facilities for manure and/or slurry: 2012 - 2015

Storage facility	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
Solid manure stored in heaps on a solid base	52	*±4*	48	*±3*	55	*±3*	58	*±3*
Solid manure stored in temporary heaps in fields	65	*±4*	63	*±3*	67	*±3*	68	*±2*
Slurry in a tank	19	*±3*	16	*±2*	20	*±2*	24	*±2*
Slurry in a lagoon without strainer	18	*±3*	15	*±2*	18	*±2*	15	*±2*
Storage with strainer facility (a)	:	*:*	:	*:*	:	*:*	7	*±1*
Slurry in another type of store	3	*±1*	3	*±1*	9	*±2*	2	*±1*

Based on no fewer than 789 responses in 2012, 1 546 in 2013, 1 533 in 2014 and 1 679 in 2015 from livestock holdings.
(a) This was a new option added to the survey in 2015 so some other categories may not be directly comparable with previous years.
: data not collected.

Table 5.2: Proportion of holdings having storage facilities for manure and/or slurry where the store is covered: 2012 - 2015

Storage facility	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
Solid manure stored in heaps on a solid base	7	*±3*	7	*±2*	13	*±3*	15	*±3*
Solid manure stored in temporary heaps in fields	0	*±0*	0	*±0*	1	*±1*	1	*±1*
Slurry in a tank	12	*±6*	14	*±4*	26	*±5*	28	*±5*
Slurry in a lagoon without strainer	0	*±0*	1	*±1*	3	*±2*	2	*±2*
Storage with strainer facility (a)							3	*±3*
Slurry in another type of store	19	*±20*	9	*±6*	5	*±10*	1	*±1*

Based on no fewer than 24 responses in 2012, 54 in 2013, 165 in 2014 and 116 in 2015 from livestock holdings that have the storage facilities in question.
(a) This was a new option added to the survey in 2015 so other categories may not be directly comparable with previous years.
: data not collected.

Table 5.3: Proportion of holdings storing each type of manure in temporary field heaps: 2015

	% of holdings	95% CI
Cattle farmyard manure	86	*±2*
Pig farmyard manure	7	*±1*
Poultry litter	6	*±1*
Poultry layer manure	3	*±1*
Horse farmyard manure	16	*±2*

Based on 1 191 responses in 2015 from livestock holdings with solid manure in temporary field heaps.

Table 5.4: Proportion of holdings planning to enlarge, upgrade or reconstruct their manure and slurry storage facilities: 2012 - 2015

	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
Holdings planning to make changes to their current facilities [(a)]	13	*±3*	14	*±2*	17	*±2*	13	*±2*
Of those planning to make changes, the changes will be made: [(b)]								
In 0 to 6 months	15	*±7*	16	*±5*	11	*±4*	13	*±5*
In 7 to 11 months	12	*±7*	19	*±7*	17	*±5*	14	*±5*
In 1 to less than 3 years	52	*±11*	44	*±7*	46	*±6*	49	*±7*
In 3 to less than 5 years	13	*±7*	10	*±4*	17	*±5*	14	*±5*
In 5 years or more	9	*±7*	11	*±4*	9	*±4*	10	*±4*

(a) Based on 718 responses in 2012, 1 424 in 2013, 1 518 in 2014 and 1 678 in 2015 from livestock holdings that have manure or slurry storage facilities.
(b) Based on 98 responses in 2012, 219 in 2013, 284 in 2014 and 233 in 2015 from livestock holdings that are planning to make changes.

Table 5.5: Proportion of holdings with slurry stores by storage capacity: 2012 - 2015

Storage capacity	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
1 to 3 months	14	*±4*	20	*±4*	22	*±4*	18	*±3*
4 to 6 months	63	*±6*	59	*±5*	57	*±4*	61	*±4*
7 to 12 months	19	*±5*	20	*±4*	19	*±3*	18	*±3*
Over 12 months	3	*±2*	1	*±1*	2	*±2*	3	*±1*

Based on 894 responses in 2011, 279 in 2012, 518 in 2013, 592 in 2014 and 673 in 2015 from livestock holdings that have slurry storage facilities.

Table 5.6: Proportion of holdings that have a slurry separator: 2012 - 2015

	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
Holdings who have a slurry separator	4	*±2*	3	*±1*	4	*±1*	8	*±2*

Based on 631 responses in 2012, 1 219 in 2013, 701 in 2014 and 685 in 2015 from livestock holdings.

6 Farm health planning and biosecurity

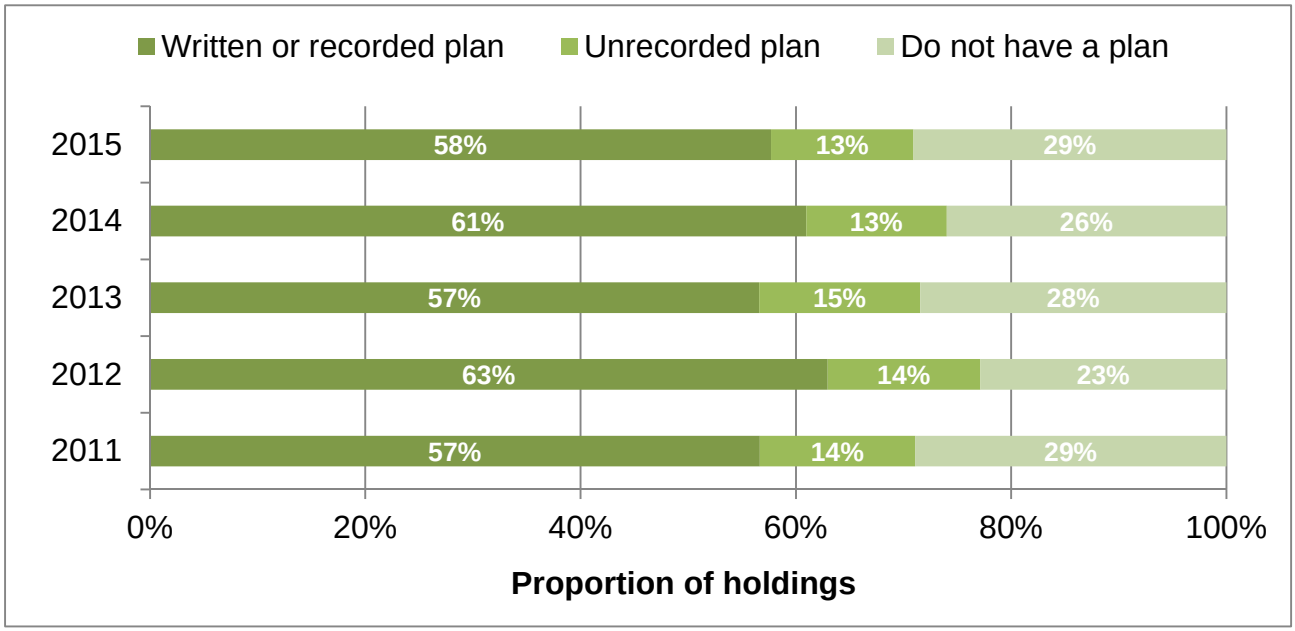
Farm health planning is a Defra initiative which benefits farmers by helping to prevent disease and improve the performance of their livestock. This can help to reduce GHG emissions over the course of an animal's lifetime by, for example, reaching finishing weights earlier and achieving higher feed conversion rates. Farm health planning is about farmers working closely with their vets or other advisers to set targets for their animals' health and welfare and take steps to measure, manage and monitor productivity.

Key findings

- Approximately 71% of farmers had a Farm Health Plan in 2015.
- In 2015, just over half (51%) of farmers with a FHP used it on a routine basis to inform disease management decisions. This is an increase from 44% in 2014.
- The number of FHPs completed with the help of a vet or adviser has continued to increase from 60% in 2009 to 72% in 2015.

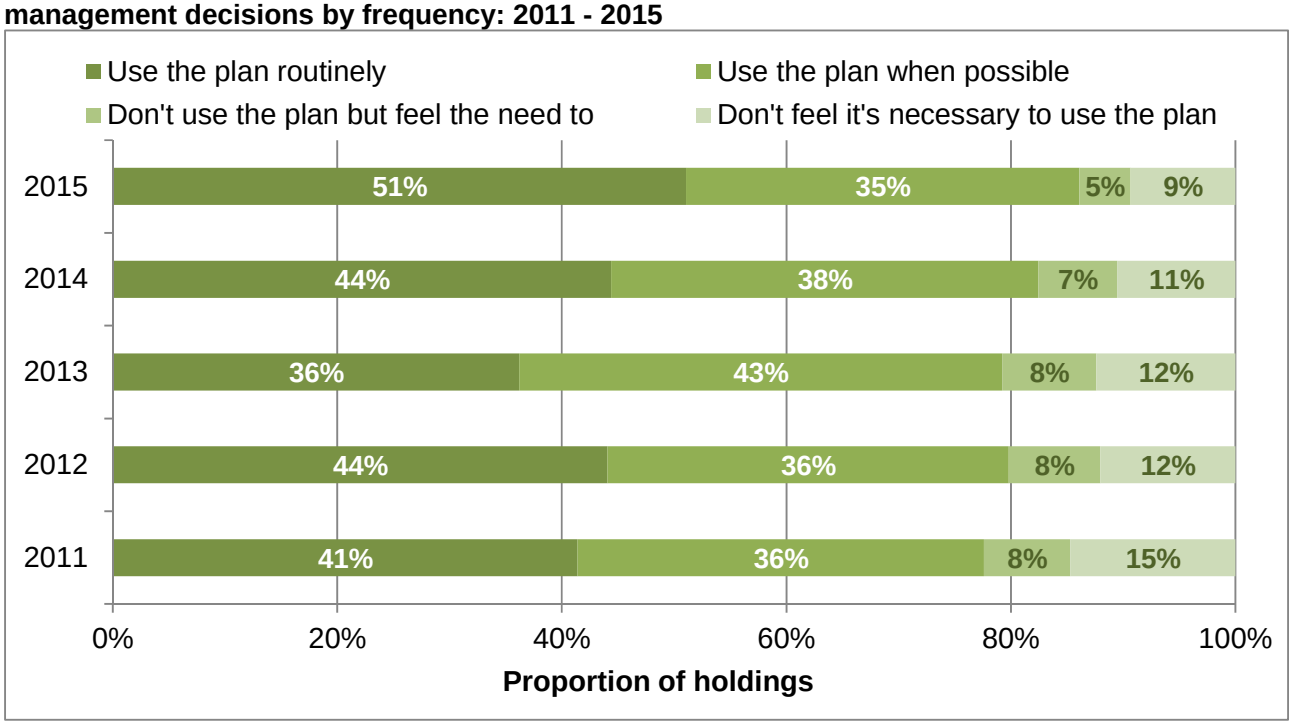
In 2015, 71% of livestock farms had a Farm Health Plan. The majority of livestock farmers have a written or recorded plan (58%) and 13% had a plan that was not recorded (Figure 6.1). Of those holdings with a FHP in 2015, 72% had created the plan with assistance from a vet or advisor (Table 6.2).

Figure 6.1: Proportion of livestock holdings with a farm health plan: 2011 – 2015



Of those with a Farm Health Plan in 2015, 86% were using it either routinely or when they could to inform disease management decisions and a further 5% felt that they should be doing so. The remaining 9% did not feel it was necessary to use the plan (Figure 6.2).

Figure 6.2: Proportion of livestock holdings using their farm health plan to inform disease management decisions by frequency: 2011 - 2015



Just over half (54%) of livestock farmers undertake training for animal health and welfare and disease management either routinely or when they can. A further 10% said that although they did not undertake training they felt that they should and the remaining 35% did not feel training was necessary (Table 6.4).

Table 6.1: Proportion of livestock holdings with a farm health plan: 2011 - 2015

	% of holdings					95% CI
	2011	2012	2013	2014	2015	2015
Written or recorded plan	57	63	57	61	58	±2
Unrecorded plan	14	14	15	13	13	±2
No plan	29	23	28	26	29	±2

Based on 2 607 responses in 2011, 812 in 2012, 1 588 in 2013, 1 942 in 2014 and 2 152 in 2015 from livestock holdings.

Table 6.2: Proportion of holdings who completed their farm health plan with the assistance of a vet or adviser: 2011 - 2015

	% of holdings					95% CI
	2011	2012	2013	2014	2015	2015
Assistance from vet / adviser	65	65	63	70	72	± 2

Based on 1 948 responses in 2011,634 in 2012, 1 230 in 2013, 1 548 in 2014 and 1 631 in 2015 from holdings with livestock.

Table 6.3: Proportion of holdings using their farm health plan to inform disease management decisions by frequency of use: 2012 - 2015

Frequency of use	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
Use plan routinely	44	*±4*	36	*±3*	44	*±3*	51	*±3*
Use plan when possible	36	*±4*	43	*±3*	38	*±3*	35	*±3*
Don't use plan but feel the need to	8	*±2*	8	*±2*	7	*±1*	5	*±1*
Don't feel it's necessary to use plan	12	*±3*	12	*±2*	11	*±2*	9	*±2*

Based on 634 responses in 2012, 1 228 in 2013, 1 553 in 2014 and 1 632 in 2015 from livestock holdings with a farm health plan.

Table 6.4: Proportion of holdings undertaking animal health and welfare and disease management training by frequency of training: 2012 - 2015

Frequency of training	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
Undertake training routinely	17	*±3*	14	*±2*	14	*±2*	18	*±2*
Undertake training when possible	36	*±4*	36	*±3*	37	*±2*	37	*±2*
Don't undertake training but feel the need to	14	*±3*	15	*±2*	14	*±2*	10	*±1*
Don't feel training is necessary	33	*±3*	35	*±3*	35	*±2*	35	*±2*

Based on 810 responses in 2012, 1 585 in 2013, 1 934 in 2014 and 2 142 in 2015 from livestock holdings.

7 Grassland and grazing

In some situations sowing temporary grassland with a clover mix or high sugar grasses can be a cost effective method of increasing production and improving environmental protection. For example, clover's nitrogen fixing properties (although not suitable for all soil types) can reduce the amount of nitrogen applied and improve grassland yields. High sugar grasses can help to improve the efficiency of animal production (for example, improved milk yields and faster live weight gain) which can in turn reduce GHG emissions.

Land and soil management mitigation methods can help to preserve good soil structure preventing erosion and compaction, both of which can lead to GHG emissions. Mitigation methods relating to this include keeping livestock away from water courses and reducing stocking rates when conditions are excessively wet.

Key findings

- In 2015, 74% of livestock holdings indicated that a proportion of their temporary grassland had been sown with a clover mix: 29% had sown all of their temporary grassland with a clover mix.
- High sugar grasses were sown on 62% of livestock holdings with temporary grassland.
- The most common frequency for reseeding clover or high sugar grass swards in 2015 was 3 to 5 years.
- Three quarters of livestock farmers always take action to reduce stocking rates when fields are excessively wet.
- Almost two thirds of livestock farmers routinely try to keep livestock out of water courses.

Table 7.1: Proportion of livestock holdings that have sown their temporary grassland with a clover mix by proportion of grassland: 2012 - 2015

Proportion of temporary grassland (%)	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
100	33	*±5*	32	*±4*	35	*±3*	29	*±3*
81-99	7	*±3*	7	*±2*	7	*±2*	5	*±1*
61-80	8	*±3*	7	*±2*	7	*±2*	7	*±2*
41-60	9	*±3*	11	*±2*	10	*±2*	8	*±2*
21-40	8	*±3*	10	*±3*	8	*±2*	8	*±2*
1-20	14	*±4*	12	*±3*	12	*±2*	16	*±2*
0	21	*±4*	21	*±3*	22	*±3*	26	*±3*

Based on 407 responses in 2012, 775 in 2013, 967 in 2014 and 1 106 in 2015 from livestock holdings with temporary grass.

Table 7.2: Proportion of livestock holdings that have sown their temporary grassland with high sugar grasses by proportion of grassland: 2012 - 2015

Proportion of temporary grassland (%)	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
100	20	±4	17	±3	20	±3	20	±3
81-99	7	±3	6	±2	6	±1	5	±1
61-80	7	±3	11	±2	9	±2	8	±2
41-60	10	±3	9	±2	9	±2	9	±2
21-40	8	±3	10	±2	6	±2	9	±2
1-20	9	±3	10	±3	8	±2	11	±2
0	38	±5	37	±4	42	±3	38	±3

Based on 407 responses in 2012, 775 in 2013, 967 in 2014 and 1 106 in 2015 from livestock holdings with temporary grass.

Table 7.3: Proportion of holdings by the frequency with which holders reseed their clover sward: 2012 – 2015 [(a)]

Frequency of reseeding	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
1 to 12 months	1	±1	1	±1	2	±2	1	±1
1 to 2 years	4	±3	5	±2	6	±2	4	±1
2 to 3 years	6	±3	10	±3	12	±2	8	±2
3 to 5 years	47	±6	50	±5	42	±4	32	±4
5 to 10 years	32	±6	32	±4	32	±4	24	±3
10 years and over	2	±2	1	±1	3	±2	1	±1
Never/Do not reseed	7	±3	1	±1	2	±2	29	±3

Based on 315 responses in 2012, 586 in 2013, 733 in 2014 and 801 in 2015 from livestock holdings with temporary grass.
(a) Results for 2015 are not directly comparable with previous years as the question was changed slightly to include an option for “do not reseed”. Those who did not reseed may have previously left the question blank.

Table 7.4: Proportion of holdings by the frequency with which holders reseed their high sugar grass sward: 2012 – 2015 [(a)]

Frequency of reseeding	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
1 to 12 months	1	±1	1	±1	2	±1	1	±1
1 to 2 years	7	±4	7	±2	8	±3	5	±2
2 to 3 years	16	±5	15	±3	18	±3	9	±2
3 to 5 years	42	±7	43	±5	41	±4	34	±4
5 to 10 years	29	±6	32	±4	26	±4	23	±3
10 years and over	1	±1	1	±1	3	±2	2	±1
Never/ Do not reseed	4	±3	1	±1	2	±1	26	±4

Based on 254 responses in 2012, 504 in 2013, 575 in 2014 and 694 in 2015 from livestock holdings with temporary grass.
(a) Results for 2015 are not directly comparable with previous years as the question was changed slightly to include an option for “do not reseed”. Those who did not reseed may have previously left the question blank.

Table 7.5: Frequency with which livestock holdings take action to reduce stocking rates when fields are excessively wet: 2015

Frequency	% of holdings	95% CI
Always	75	*±2*
Some of the time	24	*±2*
Never	1	*±1*

Based on 1 939 responses in 2015 from holdings with livestock.

Table 7.6: Frequency with which livestock holdings take action to keep livestock out of water courses: 2015

Frequency	% of holdings	95% CI
Routinely	65	*±2*
Some of the time	26	*±2*
Never	9	*±2*

Based on 1 780 responses in 2015 from holdings with livestock.

8 Livestock feeding regimes and breeding practices

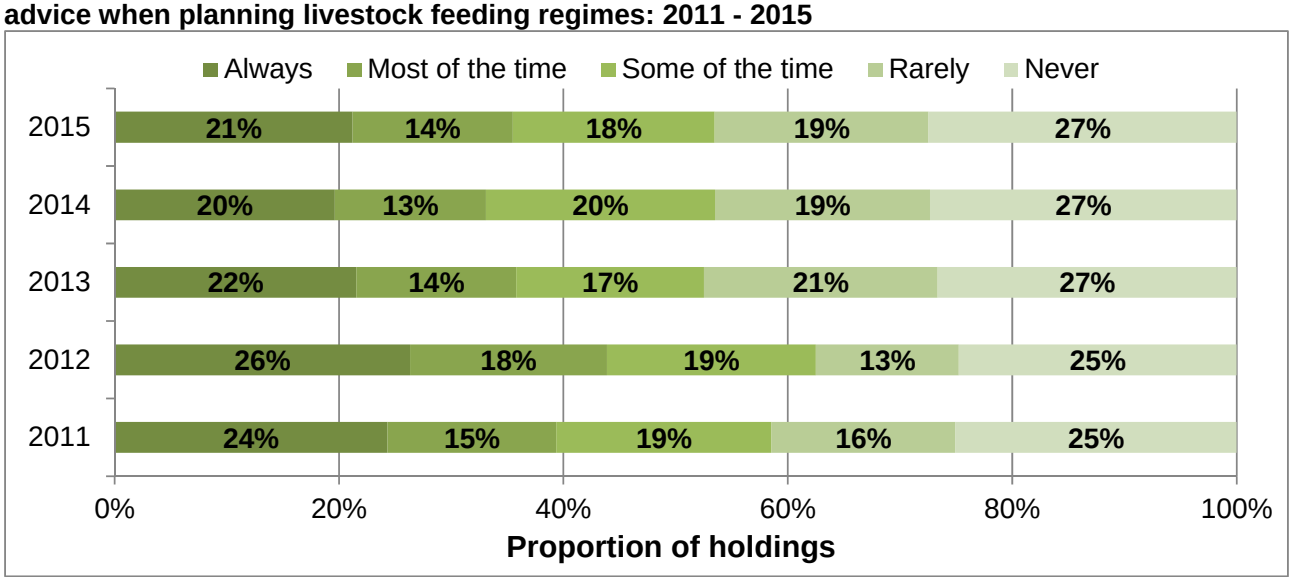
Cattle and sheep breeding practices are another area which can contribute to herd and flock productivity and efficiency which in turn can reduce GHG emissions. A Profitable Lifetime Index (PLI) is a scoring system to identify cattle with the best 'genetic merit' used when choosing bulls to breed with dairy cattle. The PLI uses a combination of attributes including life expectancy, health, fertility and milk production. Estimated Breeding Values (EBV) estimate the genetic worth of animals using desirable traits such as meat production. In addition to playing an important role in productivity and efficiency, livestock feeding practices such as intake and type of feed, can have an impact on GHG emissions.

Key findings

- Around three quarters (73%) of livestock holdings used a ration formulation programme or nutritional advice in 2015. This has remained almost unchanged since 2011.
- Whole-crop silage and maize were the most common alternative forages (other than grazed or conserved grass) offered to cattle and sheep by 15% and 13% of farmers respectively.
- In 2015, 21% of holdings breeding dairy cows always used bulls with a high Profitable Lifetime Index (PLI).
- Bulls and rams with high Estimated Breeding Values (EBV) were always used by 17% of holdings breeding beef cattle and 8% of those breeding lambs in 2015. These holdings accounted for 19% of beef cattle and 10% of lambs at June 2014.

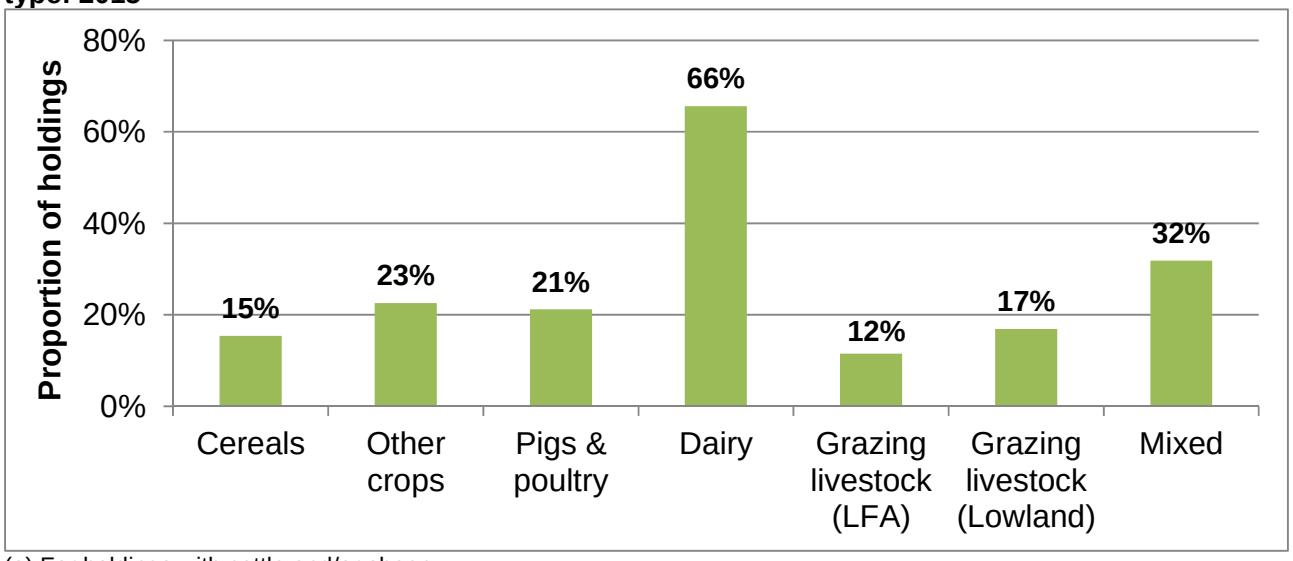
In 2015, just over half (53%) of livestock holdings used a ration formulation programme or expert nutritional advice when planning the feeding regime of their cattle and sheep at least some of the time (Figure 8.1).

Figure 8.1: Proportion of holdings using a ration formulation program or expert nutritional advice when planning livestock feeding regimes: 2011 - 2015



Just over a quarter (26%) of farmers offered alternative forages (other than grazed or conserved grass) to their cattle and sheep in 2015. As might be expected this figure varies depending on farm type and dairy farmers are most likely to offer their livestock alternative forages (Figure 8.2).

Figure 8.2: Proportion of holdings offering alternative forage crops to cattle and sheep by farm type: 2015 [(a)]

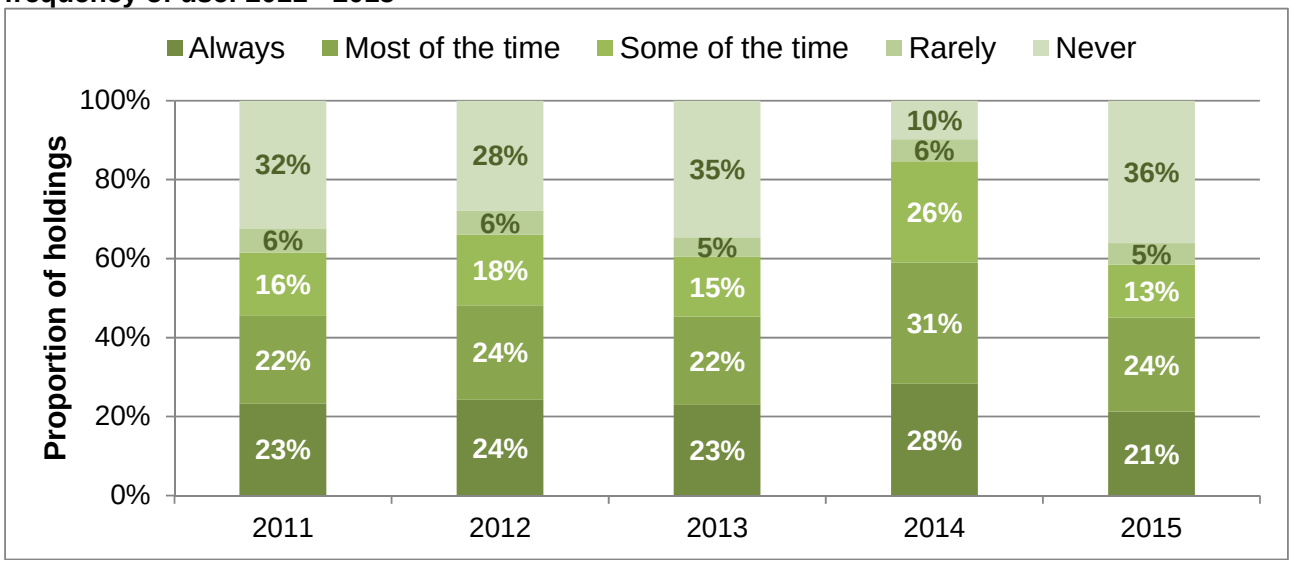


(a) For holdings with cattle and/or sheep

The most common of these forage crops were whole-crop silage and maize which were offered by 15% and 13% of farmers respectively. Once again this varied by farm type with 46% of dairy farmers offering their livestock maize and 39% offering them whole-crop silage.

Approximately 27% of holdings with poultry use whole wheat feed in addition to compound feed for broilers, whilst just 5% of holdings with pigs feed them liquid co-products from the food industry as part of their diet (Tables 8.4 and 8.5).

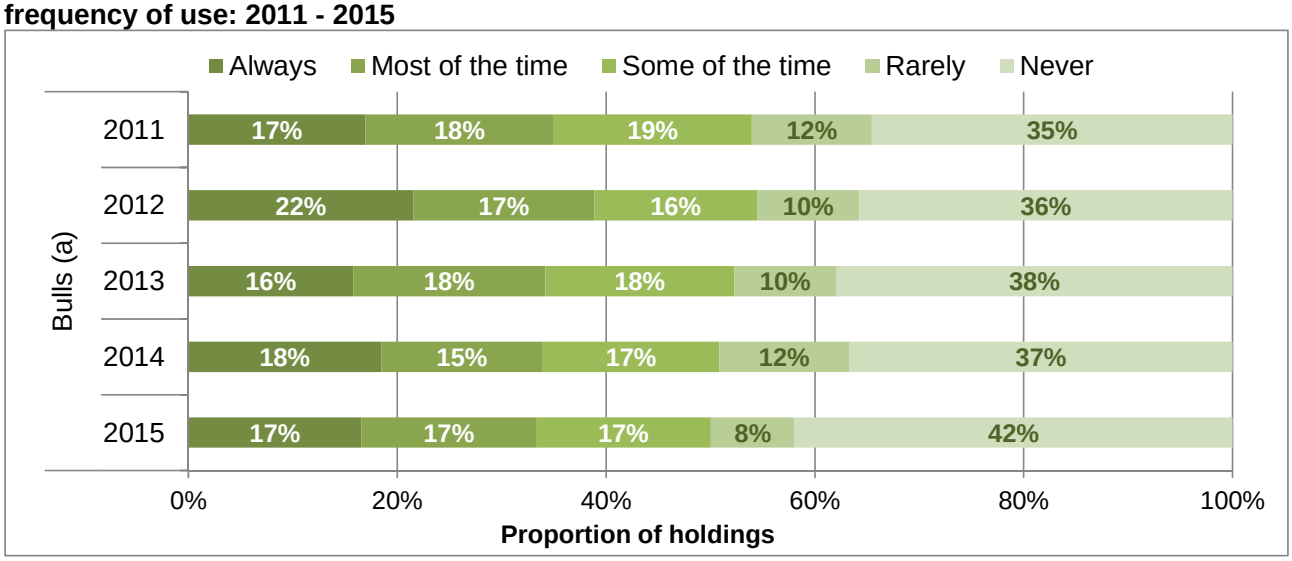
Figure 8.3: Proportion of holdings using bulls with a high PLI when breeding dairy cows by frequency of use: 2011 - 2015 [(a)]



(a) For holdings with dairy cattle

In 2015, 21% of livestock holdings always used bulls with a high Profitable Lifetime Index (PLI) when breeding dairy cows. This has remained almost unchanged since 2011 with the exception of 2014. However, changes for many of the categories are not statistically significant when considered alongside their confidence intervals (Table 8.6).

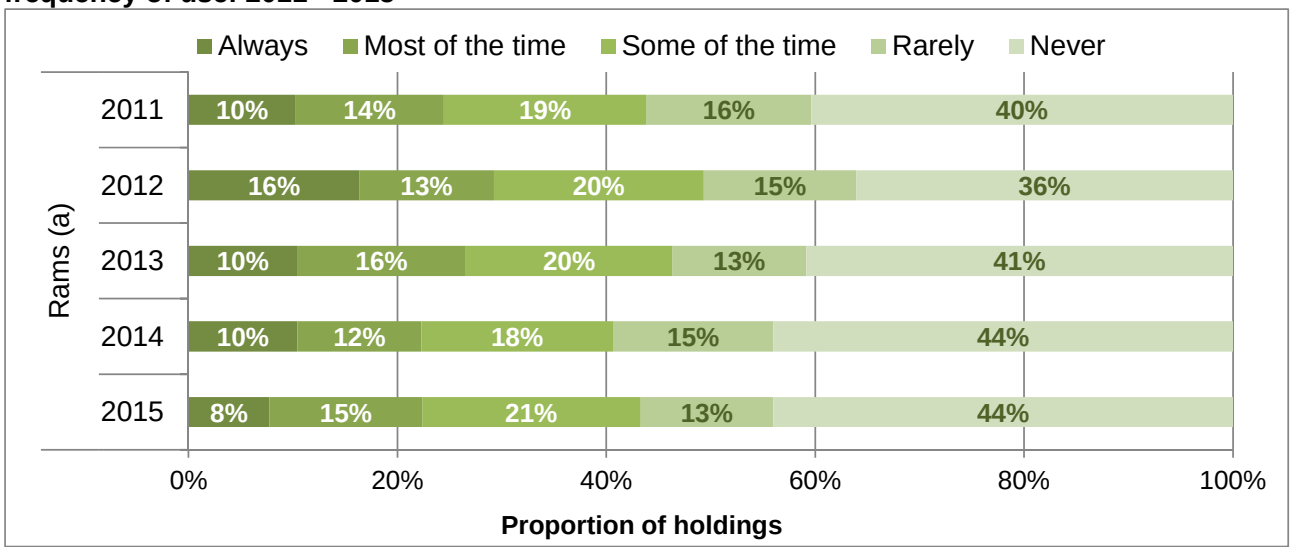
Figure 8.4: Proportion of holdings using bulls with high EBVs when breeding beef cattle by frequency of use: 2011 - 2015



(a) For holdings with beef cattle

Estimated Breeding Values (EBV) estimate the genetic worth of animals using desirable traits such as meat production. Approximately half of holdings used bulls with a high EBV at least some of the time when breeding beef cattle in 2015 (Figure 8.4). This is little changed since 2011. The equivalent proportion of holdings using rams with a high EBV at least some of the time when breeding lambs was 43% (Figure 8.5).

Figure 8.5: Proportion of holdings using rams with high EBVs when breeding lambs by frequency of use: 2011 - 2015



(a) For holdings with lambs

In addition to the proportion of holdings using bulls and rams with high EBVs (Table 8.7 and 8.8) the proportion of beef cattle and lambs that this figure relates to has also been calculated (Tables 8.9 and 8.10). By using responses from the 2014 June survey we are able to give an indication of the proportion of animals that are covered by this practice. In 2015, the holdings using bulls and rams with high EBVs at least some of the time accounted for 57% of beef cattle and 50% of lambs at June 2014.

Table 8.1: Proportion of holdings using a ration formulation programme when planning cattle and sheep feeding regimes by frequency of use: 2012 - 2015

Frequency of use	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
Always	26	±3	22	±2	20	±2	21	±2
Most of the time	18	±3	14	±2	13	±2	14	±2
Some of the time	19	±3	17	±2	20	±2	18	±2
Rarely	13	±3	21	±3	19	±2	19	±2
Never	25	±3	27	±3	27	±2	27	±2

Based on 704 responses in 2012, 1 333 in 2013, 1 679 in 2014 and 1 748 in 2015 from holdings with cattle or sheep.

Table 8.2: Proportion of holdings offering alternative forages to cattle and sheep: 2015

Alternative forage crop	% of holdings	95% CI
Whole-crop silage	15	±2
Maize	13	±1
Red clover	6	±1
Lucerne	2	±1
Triticale	1	±0
Any of the above	26	±2
None of these	74	±2

Based on 1 678 responses in 2015 from holdings with cattle and sheep.

Table 8.3: Proportion of annual diet that alternative forage crops account for: 2015

Alternative forage crop	% of annual diet	95% CI
Whole-crop silage	28	±3
Maize	35	±2
Red clover	18	±3
Lucerne	17	±5
Triticale	11	±4

Based on 308 (whole-crop silage), 333 (maize), 119 (red clover), 36 (lucerne) and 23 (triticale) responses in 2015 from holdings with cattle and sheep.

Table 8.4: Proportion of holdings using whole wheat feed in addition to compound feed for poultry broilers by farm size: 2015

Farm size	% of holdings	95% CI
Small	24	± 11
Medium	25	± 14
Large	34	± 11
All farms	27	± 8

Based on 187 responses in 2015 from holdings with poultry.

Table 8.5: Proportion of holdings using liquid co-products from the food industry as part of breeding and fattening pig diet by farm size: 2015

Farm size	% of holdings	95% CI
Small	1	± 2
Medium	6	± 8
Large	11	± 6
All farms	5	± 3

Based on 198 responses in 2015 from holdings with pigs.

Table 8.6: Proportion of holdings using bulls with a high Profitable Lifetime Index (PLI) when breeding dairy cows by frequency of use: 2012 - 2015

Frequency of use	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
Always	24	±5	23	±4	28	±4	21	±3
Most of the time	24	±5	22	±4	31	±4	24	±3
Some of the time	18	±5	15	±3	26	±4	13	±3
Rarely	6	±3	5	±2	6	±2	5	±2
Never	28	±6	35	±5	10	±3	36	±4

Based on 263 responses in 2012, 505 in 2013, 445 in 2014 and 614 in 2015 from holdings with cattle or sheep.

Table 8.7: Proportion of holdings using bulls with a high Estimated Breeding Value (EBV) when breeding beef cattle by frequency of use: 2012 - 2015

Frequency of use	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
Always	22	±4	16	±3	18	±3	17	±2
Most of the time	17	±4	18	±3	15	±2	17	±2
Some of the time	16	±4	18	±3	17	±2	17	±2
Rarely	10	±3	10	±2	12	±2	8	±2
Never	36	±5	38	±4	37	±3	42	±3

Based on 416 responses in 2012, 822 in 2013, 1 063 in 2014 and 1 123 in 2015 from holdings with beef cattle.

Table 8.8: Proportion of holdings using rams with a high Estimated Breeding Value (EBV) when breeding lambs by frequency of use: 2012 - 2015

Frequency of use	2012		2013		2014		2015	
	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI	% of holdings	95% CI
Always	16	±4	10	±3	10	±2	8	±2
Most of the time	13	±4	16	±3	12	±2	15	±3
Some of the time	20	±5	20	±4	18	±3	21	±3
Rarely	15	±4	13	±3	15	±3	13	±2
Never	36	±6	41	±5	44	±4	44	±4

Based on 313 responses in 2012, 612 in 2013, 811 in 2014 and 842 in 2015 from holdings with lambs.

Table 8.9: Proportion of beef cattle on holdings using bulls with a high Estimated Breeding Value (EBV) by frequency of use: 2013 - 2015

Frequency of use	2013		2014		2015	
	% of beef cattle	95% CI	% of beef cattle	95% CI	% of beef cattle	95% CI
Always	24	±6	23	±4	19	±3
Most of the time	19	±4	18	±3	18	±3
Some of the time	17	±4	17	±3	19	±3
Rarely	9	±2	11	±2	9	±2
Never	31	±5	31	±4	34	±4

Based on 822 responses in 2013, 1 063 in 2014 and 1 123 in 2015 from holdings with beef cattle.

Table 8.10: Proportion of lambs on holdings using rams with a high Estimated Breeding Value (EBV) by frequency of use: 2013 - 2015

Frequency of use	2013		2014		2015	
	% of lambs	95% CI	% of lambs	95% CI	% of lambs	95% CI
Always	11	±3	12	±3	10	±3
Most of the time	19	±4	12	±3	15	±3
Some of the time	25	±5	22	±4	24	±4
Rarely	14	±3	18	±3	14	±3
Never	31	±5	36	±4	36	±4

Based on 612 responses in 2013, 811 in 2014 and 842 in 2015 from holdings with lambs.

Survey details

Survey content
The Farm Practices Survey (FPS) – Greenhouse Gas Mitigation edition is usually run annually and collects information on a diverse range of topics usually related to the impact of farming practices on the environment. Each year, stakeholders are invited to request new questions to help inform policy decisions and provide evidence on progress towards agricultural and environmental sustainability.

This release includes the results from the FPS run in February 2015. The survey largely focused on practices relating to greenhouse gas mitigation, similar in content to FPS surveys run in February over the previous four years. Topics covered include nutrient and manure management plans, uptake of anaerobic digestion, manure and slurry storage, fertiliser, manure & slurry spreaders, farm health plans and cattle and sheep breeding and feeding practices. Where comparisons with earlier years are possible, the results are displayed alongside those from previous years.

The results provided in this release are based on questions sent to approximately 6,000 holdings in England. These holdings were targeted by farm type and size to ensure a representative sample. The survey was voluntary and the response rate was 44%. Thank you to all of the farmers who completed a survey form.

Thresholds were applied to ensure that very small holdings with little agricultural activity were not included in the survey. To be included in the main sample, holdings had to have at least 50 cattle, 100 sheep, 100 pigs, 1,000 poultry or 20 hectares of arable crops or orchards. Therefore, all results given in this statistical release reflect only the 60 thousand holdings that exceed these thresholds out of the total English population of 103 thousand commercial holdings.

A breakdown of the number of holdings within the population and the sample are shown below.

Farm type	Number of eligible holdings in England	Number of holdings sampled	Response rate %
Cereals	14 906	1 190	52
Other crops	6 006	848	46
Pigs & poultry	3 423	483	34
Dairy	6 607	993	42
Grazing livestock (less favoured areas)	8 407	689	44
Grazing livestock (lowland)	15 232	1 178	39
Mixed	5 949	619	47
All farms	**60 530**	**6 000**	**44**

Data analysis
Results have been analysed using a standard methodology for stratified random surveys to produce national estimates. With this method, all of the data are weighted according to the inverse sampling fraction.

Accuracy and reliability of the results
We show 95% confidence intervals against the results. These show the range of values that may apply to the figures. They mean that we are 95% confident that this range contains the true value. They are calculated as the standard errors (se) multiplied by 1.96 to give the 95% confidence interval (95% CI). The standard errors only give an indication of the sampling error. They do not reflect any other sources of survey errors, such as non-response bias.

Definitions
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. The farm size bands used within the detailed results tables which accompany this publication are shown in the table below. Standard Labour Requirement (SLR) is defined as the theoretical number of workers required each year to run a holding, based on its cropping and livestock activities.

Farm size	Definition
Small	Less than 2 SLR
Medium	2 to less than 3 SLR
Large	3 or more SLR

Availability of results
This release contains headline results for each section. The full breakdown of results, by region, farm type and farm size, will be available on 18 June 2015 at:
https://www.gov.uk/government/collections/farm-practices-survey .

Other Defra statistical notices can be viewed on the Defra website at:
https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/statistics.

Data uses
The Farm Practices survey is used to investigate the impact of farming on the environment and to provide up-to-date agri-environment information on current issues to help inform policy decisions. The survey has a wide customer base both internal and external to Defra including Natural England, English Heritage, ADAS, the Environment Agency and the NFU.

Data from the Farm Practices Survey are used in Defra's greenhouse gas (GHG) indicator framework. The framework, initially developed as part of the 2012 review of progress in reducing GHG emissions from English agriculture[1], consists of ten key indicators covering farmer attitudes and knowledge, the uptake of mitigation methods and the GHG emission intensity of production[2] in key agricultural sectors.

Defra and the Devolved Administration Governments are currently investing £12.6 million in the development of an improved GHG Inventory for agriculture which will be delivered in 2015. Information from the Farm Practices Survey fed into this research which should enable greater precision in reporting of greenhouse gas emissions from the agricultural sector.

Information from the survey also feeds into the Defra publication, Agricultural Statistics and Climate Change, which provides background context to the current understanding of agriculture and GHG emissions in the period before we have more accurate knowledge from the improved GHG Inventory.

Closing points and additional information

For more information on how the data was collected you can view the questions asked on our survey form in Annex I over the page.

Finally we are keen to hear your thoughts on this statistical release. If you found the data useful or if you have any other comments please let us know. You can contact us via the phone number on the front page or alternatively email us at farming-statistics@defra.gsi.gov.uk.

[1] https://www.gov.uk/government/publications/2012-review-of-progress-in-reducing-greenhouse-gas-emissions-from-english-agriculture
[2] GHG produced per tonne of crop or litre of milk or kilogramme of meat produced.

Annex I

Protect Commercial

Department for Environment Food & Rural Affairs

ONLY if there are any amendments or corrections to details opposite, please write them in this box

Name:

Address:

Postcode:

Farm Practices Survey - February 2015

Dear Sir/Madam

You are invited to participate in the February 2015 Farm Practices Survey. This survey aims to assess how farming practices are affected by current agricultural and environmental issues. We have tried to make the form as straightforward as possible and most of the questions can be answered using tick boxes.

Please note that this is a voluntary survey. Any information you supply on this form will not be used to assess cross-compliance on your holding and will not affect your Basic Payment Scheme payment. The aim of these questions is to ensure that those making decisions affecting farmers know what really happens on farms.

The results from the survey are important and will be used widely within Defra, its agencies and other external bodies. We can use some information from the June Survey of Agriculture and Horticulture or from other national surveys, but there are important gaps which this survey will help to fill. Results from this survey will be available from the end of Spring 2015 on the following website: **https://www.gov.uk/government/collections/farm-practices-survey**.

I would be very grateful if you would take the time to complete this form and return it in the enclosed pre-paid envelope. If you could complete and return it within 2 weeks of receipt, this will avoid the need for reminder letters. This survey form has been sent to a randomly selected sample of 6,000 holdings and a good response will improve the reliability of the results. For guidance on completing the form, please telephone or email using the details below.

Data Protection
Any information you provide to us is treated in confidence. Defra is the Data Controller in respect of the Data Protection Act 1998. The purposes for which it is used are set out in full in a data protection statement which can be found at **http://bit.ly/Data_Protection_Statement**. Alternatively we can send you a copy if you call 01904 455284 or email surveys@defra.gsi.gov.uk.

We greatly appreciate the time and effort you spend completing our survey forms. Thank you for your assistance.

Jennie Blackburn
Farming Statistics Team

Official Use Only

Name/Address	
Comments in box	
Comments elsewhere	

If you require a large print form please contact us on 01904 455284

For help with completion of the form contact us at:

Helpline: 01904 455284 Mon-Fri 9.00am to 4.30pm

Email: surveys@defra.gsi.gov.uk

Section 1. Soil Nutrient Management

(i) Nutrient management plans

1. Have you completed a nutrient management plan for your farm?

Yes ☐ 1 | No ☐ 2 | Not applicable ☐ 3 | C68

If No or Not applicable, please go to question 7

2. If yes, did you create the plan yourself or was it created by an adviser or contractor?

I created the plan myself without professional advice ☐ C4 → **If ticked, please go to question 3**

OR

	Fertiliser adviser or agronomist	Animal nutritionist	FWAG	Other	
I created the plan myself with professional advice from:	☐ 1	☐ 2	☐ 3	☐ 4	C125
OR					
The plan was created by the above type of adviser or contractor:	☐ 1	☐ 2	☐ 3	☐ 4	C6

3. How often do you update your nutrient management plan? Please tick **one** box

Every year ☐ 1 | Every 2 years ☐ 2 | Every 3 years or more ☐ 3 | C82

4. How often do you refer to your nutrient management plan in a year? Please tick **one** box

More than 10 times ☐ 1 | 6 to 10 times ☐ 2 | 1 to 5 times ☐ 3 | Never ☐ 4 | C7

5. How did you or your adviser/contractor create the nutrient management plan? Tick **all** that apply

PLANET	Muddy Boots	Farmade / Multicrop	Industry plan - Tried and Tested	Other	I don't know
☐ C69	☐ C70	☐ C71	☐ C72	☐ C74	☐ C8

6. What are the nutrient recommendations for your nutrient management plan based on? Tick **all** that apply

Defra Recommendations / Manual (RB209)	An adviser's or industry note	Personal experience	Other	I don't know
☐ C75	☐ C9	☐ C10	☐ C76	☐ C86

(ii) Nutrient testing

Tick **one** box in each row

7. Do you have a programme of soil testing for nutrient indices?

Yes ☐ 1 | No ☐ 2 | Not applicable ☐ 3 | C63

If No or Not applicable, please go to question 9

8. If yes, do you test each field at least every 5 years?

All of them ☐ 1 | Some of them ☐ 2 | None of them ☐ 3 | C140

9. Do you have a programme of soil testing for pH?

Yes ☐ 1 | No ☐ 2 | Not applicable ☐ 3 | C92

If No or Not applicable, please go to question 11

10. If yes, do you test each field at least every 5 years?

All of them ☐ 1 | Some of them ☐ 2 | None of them ☐ 3 | C141

Soil Nutrient Management (continued)

11. Do you test/assess/calculate the nutrient content of manure?

Yes, by sampling and lab analysis	Yes, by sampling and on-farm testing	Yes, based on published tables	No	Not applicable
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5 C142

(iii) Manure management plans

12. Have you completed a manure management plan for your farm?

Yes	No	Not applicable
☐ 1	☐ 2	☐ 3 C65

If No or not applicable, please go to Section 2

13. If yes, are the nutrient recommendations for this plan based on:

Defra Recommendations/Manual (RB209), CoGAP ☐ C66

Other (please specify) ☐ C67

Section 2. Fertiliser, manure and slurry spreaders

14. Are any of the manure, slurry or fertiliser spreaders on your farm computer controlled with variable rate application? Tick **all** that apply

Yes, fertiliser spreaders	Yes, manure or slurry spreaders	No, none of them	I do not have any spreaders
☐ 1	☐ 2	☐ 3	☐ 4 C104

If no spreaders, please go to section 3

15. Do you or contractors spread fertilisers, solid manure or slurry on your grass or arable land?

Tick **one** box in each column

	Fertiliser	Manure or slurry
Yes, I spread it myself	☐ C132	☐ C149
Yes, I spread some myself and also use a contractor	☐ C133	☐ C150
Yes, a contractor spreads it	☐ C134	☐ C151
No, not applied to grass or arable land	☐ C135	☐ C152

16. On average, which of the following options best describes how often your manure (solid manure or slurry) spreader is calibrated? Exclude fertiliser spreaders.

Tick **one** box only

I do not have a manure spreader	☐ C173
Never	☐ C136
Every year	☐ C160
Less often than every year	☐ C161
Whenever there is significant change in manure or slurry characteristics	☐ C137
Whenever manure or slurry is tested (e.g. sampled or analysed)	☐ C138
Other, please specify	☐ C139

Section 3. Emissions

17. How important do you feel it is to consider greenhouse gases (GHGs) when taking decisions about your land, crops and livestock? Please tick **one** box only

Very important	Fairly important	Not very important	Not at all important	My farm does not produce GHGs	
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	D51

18. To what extent do you agree that reducing your farm's greenhouse gas emissions will contribute to improving your overall profitability? Please tick **one** box only

Strongly agree	Agree	Disagree	Strongly disagree	
☐ 1	☐ 2	☐ 3	☐ 4	D52

19. Are you currently taking any action to reduce greenhouse gas emissions from your farm? Yes ☐ 1 No ☐ 2 D64 → **If No, please go to question 22**

20. What actions are you taking to reduce greenhouse gas emissions from your farm? Tick **all** that apply

Improving energy efficiency (e.g. reducing electricity use, using reduced tillage)	☐ D65
Recycling of waste materials from the farm (e.g. tyres, plastics)	☐ D66
Improving nitrogen feed efficiency, livestock diets (e.g. using a ration formulation program)	☐ D67
Improving efficiency in manure and slurry management and application (e.g. controlled application rate, improved timing)	☐ D68
Improving nitrogen fertiliser application accuracy (e.g. using a fertiliser recommendation system, regularly checking and calibrating fertiliser spreaders)	☐ D69
Increasing use of legumes in arable rotation	☐ D70
Increasing use of clover in grassland	☐ D71
Other, please specify	D72

21. What are your main motivations for taking these actions? Tick **all** that apply

I consider it good business practice	☐ D73
Regulation	☐ D74
To improve profitability	☐ D75
Concern for the environment	☐ D76
To meet market demands	☐ D77
Other, please specify	D78

22. What are the reasons stopping you taking action to reduce greenhouse gas emissions from your farm?

Tick **all** that apply

Lack of information	☐ D79
Too expensive	☐ D80
Lack of incentive	☐ D81
I've already done all I can	☐ D82
I don't believe there is much farmers can do	☐ D83
It's not necessary as I don't think my farm produces many emissions	☐ D84
I'm unsure what to do as there are too many conflicting views on the issue	☐ D85
Other, please specify	D86

Section 4. Anaerobic Digestion

23. Do you already process any of the following by anaerobic digestion either on your farm or elsewhere? Tick one box in **every** row

	Yes	No	
Slurries / manures	☐ 1	☐ 2	A19
Crops (including silage)	☐ 1	☐ 2	A52
Other feedstocks from your farm	☐ 1	☐ 2	A20
Other feedstocks from outside your farm	☐ 1	☐ 2	A21

Note **24. The following sections relate to holdings with livestock (cattle, sheep, pigs, poultry or horses). If you do not have livestock, please tick this box and go to section 10 on page 8.** ☐ T94

Section 5. Grassland and grazing

(i) Temporary grassland

25. Questions 26, 27 and 28 relate to temporary grassland. If you do not have any temporary grassland, please tick this box and go to question 29. ☐ K95

26. What percentage of your temporary grassland has been sown with a clover mix or high sugar grasses?

	0%	1-20%	21-40%	41-60%	61-80%	81-99%	100%	
Clover	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	K96
High sugar grasses	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	K97

27. Do you reseed your clover or high sugar grasses? Tick **all** that apply

Yes, reseed clover ☐ K88 Yes, reseed high sugar grasses ☐ K89 No, do not reseed ☐ K49 **If No, please go to question 29**

28. If yes, please state the frequency (in months) with which you reseed your sward.

Clover ☐☐ months K98 High sugar grasses ☐☐ months K99

(ii) Grazing

29. Do you take action to reduce stocking rates when fields are excessively wet? Please tick **one** box only

Yes, Always ☐ 1 Yes, some of the time ☐ 2 No ☐ 3 Not applicable ☐ 4 K47

30. Do you take action to keep livestock out of water courses? Please tick **one** box only

Yes, routinely ☐ 1 Yes, some of the time ☐ 2 No ☐ 3 Not applicable ☐ 4 K48

Section 6. Pigs and poultry

Tick **one** box in each row

	Yes	No	Not applicable	
31. Do you use whole wheat feed in addition to compound feed for broilers?	☐ 1	☐ 2	☐ 3	N285
32. Do you use liquid co-products from the food industry as part of the diet of breeding and fattening pigs?	☐ 1	☐ 2	☐ 3	N286

Section 7. Manure and slurry storage

33. Do you have storage facilities for solid manure on your farm? Please tick **one** box only

Yes	No - I spread directly from shed (no further storage)	No - my farm does not produce manure	
☐ 1	☐ 2	☐ 3	P207 → **If No, please go to question 36**

34. Please indicate your manure storage facilities by type of store and type of cover. Tick **all** that apply.

	No cover	Plastic sheet cover	Solid store cover
Solid manure in heaps on a solid base	☐ P208	☐ P209	☐ P210
Solid manure in temporary heaps in fields	☐ P211	☐ P212	

35. Please indicate the type of manure stored in temporary field heaps? Tick **all** that apply

Cattle farmyard manure	Pig farmyard manure	Poultry litter	Poultry layer manure	Horse farmyard manure
☐ P242	☐ P243	☐ P244	☐ P245	☐ P246

36. Do you have storage facilities for slurry on your farm? Please tick **one** box only

Yes	No - I have little or no storage & spread directly	No - my farm does not produce slurry	
☐ 1	☐ 2	☐ 3	P217 → **If no slurry produced, please go to question 40**

37. How many months storage capacity do you have for slurry? ☐ months P69

38. Please indicate your slurry storage facilities by type of store and type of cover. Tick **all** that apply.

	No cover	Natural crust	Floating plastic cover	Floating straw /woodchip	Rigid/fixed cover
In-house storage in channel below slats	☐ P218				
Below ground tank	☐ P219	☐ P223	☐ P227	☐ P231	☐ P235
Above ground tank	☐ P220	☐ P224	☐ P228	☐ P232	☐ P236
Lagoon without strainer	☐ P221	☐ P225	☐ P229	☐ P233	☐ P237
Storage with strainer facility (e.g. lagoon with strainer wall or weeping wall compound)	☐ P247	☐ P248	☐ P249	☐ P250	☐ P251
Other type	☐ P222	☐ P226	☐ P230	☐ P234	☐ P238

39. Do you have a slurry separator? Yes ☐ 1 No ☐ 2 P70

40. Are you planning to enlarge, upgrade or reconstruct any of your manure or slurry storage facilities? Yes ☐ 1 No ☐ 2 P67 → **If No, please go to section 8**

41. If yes, when are you planning to make the majority of these changes? Please tick **one** box

	In 0 to 6 months	In 7 to 11 months	In 1 to less than 3 years	In 3 to less than 5 years	In 5 to less than 10 years	In 10 years or more
Changes planned:	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6 P68

Section 8. Farm Health Planning and Biosecurity

42. Do you have a Farm Health Plan (FHP)? Please tick **one** box only

Yes, a written or recorded plan	Yes, but not written or recorded	No	
☐ T92	☐ T91	☐ T90	→ **If No, please go to question 45**

43. If yes, did you complete the FHP with the assistance of a vet or other adviser?

Yes	No	
☐ 1	☐ 2	T93

44. Do you review and use your FHP to inform disease management decisions? Please tick **one** box only

Yes, routinely	Yes, when I can	No, but I feel I should	No, I don't feel the need	
☐ 1	☐ 2	☐ 3	☐ 4	T130

45. Do you or your staff undertake training on animal health & welfare and disease management?
Please tick **one** box only

Yes, routinely	Yes, when I / my staff can	No, but I feel I should	No, I don't feel the need	
☐ 1	☐ 2	☐ 3	☐ 4	T135

Section 9. Ruminant livestock feeding regimes and breeding practices

46. How often do you or your adviser use a ration formulation program or nutritional advice from an expert when planning the feeding regime for your livestock? Please tick **one** box only

Always	Most of the time	Some of the time	Rarely	Never
☐ C105	☐ C106	☐ C107	☐ C108	☐ C109

47. Do you offer any alternative forages (other than grazed or conserved grass) to your livestock?
Tick **all** that apply.

Maize	Lucerne	Triticale	Red clover	Whole-crop silage	None of these	
☐ C162	☐ C163	☐ C164	☐ C165	☐ C171	☐ C166	**If None, please go to question 49**

48. Please indicate the proportion of the annual diet these crops account for.

Maize	Lucerne	Triticale	Red clover	Whole-crop silage
% C167	% C168	% C169	% C170	% C172

49. How often do you or your adviser use bulls with a high Profitable Lifetime Index (PLI) when breeding dairy cows? Please tick **one** box only

Always	Most of the time	Some of the time	Rarely	Never
☐ C110	☐ C111	☐ C112	☐ C113	☐ C114

50. How often do you or your adviser use bulls or rams with a high Estimated Breeding Value (EBV) when breeding beef cattle or lambs? Tick **one** box in each row, if relevant.

	Always	Most of the time	Some of the time	Rarely	Never
Bulls	☐ C115	☐ C116	☐ C117	☐ C118	☐ C119
Rams	☐ C120	☐ C121	☐ C122	☐ C123	☐ C124

Section 10. Declaration

Signature V3 Date

Name (please print) Telephone number V8

Time taken to complete this form minutes V1

E-mail address V5

Please enter any comments you may have on the figures provided. This may remove the need for us to contact you.

Thank you for taking the time to complete the form.

Please now return this form in the pre-paid envelope to ONS, Government Buildings, Cardiff Road, Newport, NP10 8XG.

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