

Statistical Publication

Agriculture Series

AN OFFICIAL STATISTICS PUBLICATION FOR SCOTLAND

RESULTS FROM THE
EU FARM STRUCTURE AND METHODS SURVEY, 2013

21st November 2013

Main Findings

Farm structure

- Ninety per cent of holdings were **managed** by the occupier or member of their family, with the remaining run by a manager. (Table 1)
- The **legal and financial** responsibility for holdings lay in an institution (e.g. limited company, church, estate) for four per cent of holdings. (Table 2)
- Eighty-five per cent of those managing farms (occupiers or managers) were **male**. Thirty-one per cent were **aged** over 65, with a further 27 per cent 55 or over. Three per cent were aged under 35. (Table 3)
- One in six of those managing farms had completed a full **agricultural training course** of two years or more. (Table 5)
- A third of occupiers reported they worked **full-time** on the holding, with over a half reporting they worked less than 50 per cent of the time. (Table 4)

Diversification and renewables

- The most common forms of **other gainful activities** on holdings were tourism (nine per cent of holdings) and agricultural contract work (five per cent of holdings). Three per cent of holdings reported the production of renewable energy for the market (not own use). (Table 6)
- One in eight holdings reported that more than ten per cent of their **turnover** came from other gainful activities at the location. (Table 7)

- The most common forms of **renewable energy** production (for own use or for the market) were solar (five per cent of holdings) and wind (four per cent of holdings). (Table 8)

Livestock breeding

- Of the holdings reporting the breeding of sheep or cattle, six per cent reported using **genetic information** such as EBVs for sheep, 15 per cent for beef cattle, and 11 per cent for dairy cattle. (Table 11)
- 53 per cent of ewes were mated using a home-bred ram, with one per cent **artificially inseminated**. About half of the cows were mated using a brought-in bull, but with 18 per cent mated using artificial insemination. (Table 12)

Land Use

- Conventional inversion **tillage** was used on 81 per cent of cultivated land, with reduced, conservation tillage on 11 per cent, and zero tillage on eight per cent. (Table 13)
- The most common method of **soil cover** was plant residues or stubble, which was on 41 per cent of land, with 19 per cent of cultivated land reported as being left bare. (Table 14)
- About a third of holdings kept all their land in general **crop rotation**. (Table 15)

Manure and Slurry

- 47 per cent of holdings with cultivable land **applied manure** on their holdings, compared to the 34 per cent of holdings that applied slurry. Six per cent of manure application was ploughed in within the recommended four hours, while the equivalent figure for slurry was nine per cent. (Table 17)
- Five per cent of holdings that had applied manure or slurry had tested the **nutrient value** of the manure or slurry. (section 4.6)
- 23 per cent of holdings had **storage facilities for solid manure**, with twelve per cent of holdings having storage facilities for slurry. Eighty-six per cent of manure storage facilities and 39 per cent of slurry storage were not covered. (Table 18)

Contents

| | |
|--|-----------|
| 1. Main Findings..... | 1 |
| 2. Introduction..... | 4 |
| 3. Farm structure..... | 5 |
| 3.1 Labour and qualifications..... | 5 |
| 3.2 Diversification and renewable energy..... | 6 |
| 3.3 Use of produce..... | 7 |
| 3.4 Agricultural equipment..... | 7 |
| 4. Production Methods..... | 8 |
| 4.1 Breeding Livestock | 8 |
| 4.2 Tillage Methods | 9 |
| 4.3 Soil Conservation..... | 10 |
| 4.4 Crop rotation..... | 10 |
| 4.5 Nutrient management..... | 11 |
| 4.6 Manure and Slurry | 11 |
| 4.7 Irrigation..... | 11 |
| 5. Notes..... | 13 |
| 5.1 Background..... | 13 |
| 5.2 Uses of the information..... | 13 |
| 5.3 Methodology – data collection..... | 13 |
| 5.4 Data quality..... | 14 |
| 5.4 Other publications..... | 15 |
| 6. Tables..... | 16 |
| 6.1 Farm management structure – day-to-day running | 16 |
| 6.2 Farm management structure – legal and financial responsibility | 16 |
| 6.3 Age profile of occupiers and those running holdings..... | 16 |
| 6.4 Proportion of time spent by occupier working on the holding..... | 16 |
| 6.5 Qualifications of person responsible for running the farm..... | 16 |
| 6.6 Other gainful activities..... | 17 |
| 6.7 Proportion of turnover coming from gainful activities..... | 17 |
| 6.8 Proportion of holdings generating renewable energy | 17 |
| 6.9 Use of farm produce..... | 17 |
| 6.10 Equipment belonging exclusively to the holding or shared/owned by others | 17 |
| 6.11 Number of holdings using various methods for selecting rams/bulls/semen | 18 |
| 6.12 Methods used for mating livestock..... | 18 |
| 6.13 Area of land cultivated using various tillage methods..... | 18 |
| 6.14 Area of cultivated land by soil cover method..... | 18 |
| 6.15 Distribution of holdings by percentage of arable land not in crop rotation..... | 19 |
| 6.16 Nutrient management..... | 19 |
| 6.17 Use of manure and slurry, by area..... | 19 |
| 6.18 Manure and slurry storage..... | 19 |
| 6.19 Irrigation..... | 19 |
| 7. Annex..... | 20 |
| 6.1 Thresholds for inclusion in the EU Farm Structure Survey | 20 |

2 Introduction

The 2013 EU Farm Structure and Methods Survey recorded details of farming practices and labour across Scotland. A number of the questions asked in this year's survey were asked as part of a similar EU survey in 2010. Comparisons of results for both years are made where available, though in some cases questions have changed slightly and so will not be directly comparable.

The data will be used to inform the development of EU and national policies on agriculture and the environment.

The 2013 survey was undertaken on a sample of around 13,600 holdings, drawn from the 33,000 holdings within the remit of the Farm Structure Survey. Returns were received from 9,400 holdings.

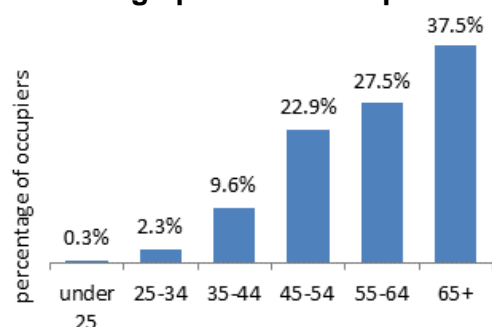
Since the Farm Structure Survey covered mainly larger holdings, the results published here refer to these larger holdings only, and not of the entire population of agricultural holdings included in the June Agricultural Census. These holdings however accounted for 98 per cent of agricultural land in 2013, so are largely representative of agricultural land use and livestock management in Scotland. More information on how the figures were produced can be found in the methodology section 5.3.

We welcome comments on the content or format of this publication to:
e-mail: Graeme.Kerr@scotland.gsi.gov.uk
Tel: 0300 244 9709

3 Farm structure

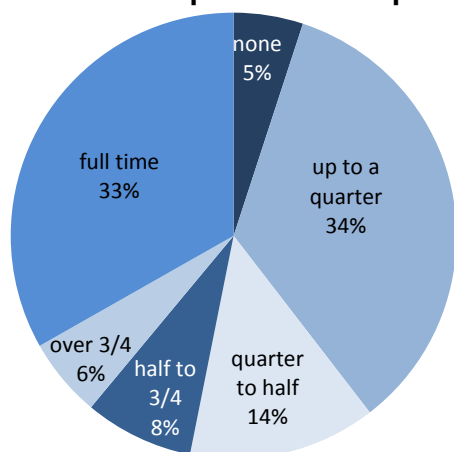
3.1 Labour and qualifications (Tables 1-5)

Chart 1: Age profile of occupiers



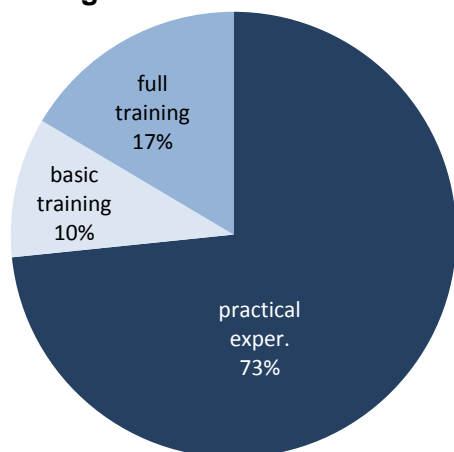
Source: Table 3

Chart 2: Work-profile of occupiers



Source: Table 4

Chart 3: Qualification of those running farms



Source: Table 5

Figures on occupiers, spouses and employees as at 1 June are collected as part of the June agricultural census. The EU Farm Structure Survey, meanwhile, collects information on labour over the 12 months to the March survey date.

The day-to-day running of the holding was the responsibility of the occupier or member of their family for ninety per cent of holdings, with the remaining run by a manager.

The legal and financial responsibility for holdings lay in an institution (e.g. limited company, church, estate) for four per cent of holdings.

Eighty-three per cent of occupiers were male (if managers are included where there is no occupier the proportion is 86 per cent).

The age profile of occupiers shows increasingly large proportions as age increases, as one might expect in family-run businesses, but with 38 per cent of occupiers aged 65 or older (up from 33 per cent in 2010). Three per cent of occupiers were under 35.

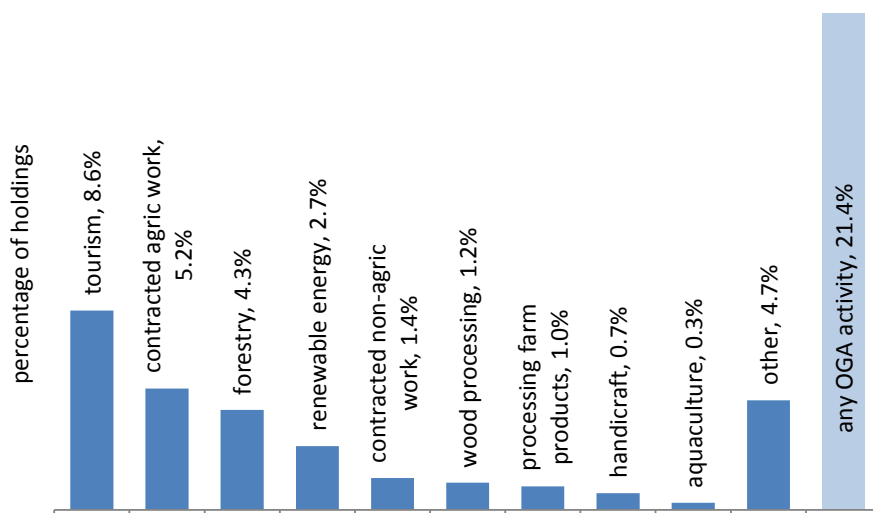
A third of occupiers reported they worked full-time on the holding, with over a half reporting they worked less than 50 per cent of the time. These are very similar figures to 2010.

The survey also asked about the level of qualifications of the manager or occupier. 16 per cent had completed a full agricultural training course of two years or more, ten per cent had completed a basic course of less than two years, with the remaining 73 per cent having practical agricultural experience only. In 2010 ten per cent had completed full training, with 85 per cent having practical experience only.

3.2 Diversification and Renewable Energy (Tables 6-8)

Of the various “other gainful activities” taking place on the holding that were asked about, the most common was tourism, which was reported on nine per cent of holdings. Contract work (agricultural work) was reported on five per cent of holdings, forestry on four per cent, and renewable energy for sale to the market on three per cent of holdings. Overall, 21 per cent of holdings reported other gainful activities on the holding, compared to 13 per cent in 2010.

Chart 4: Proportion of holdings reporting other gainful activities

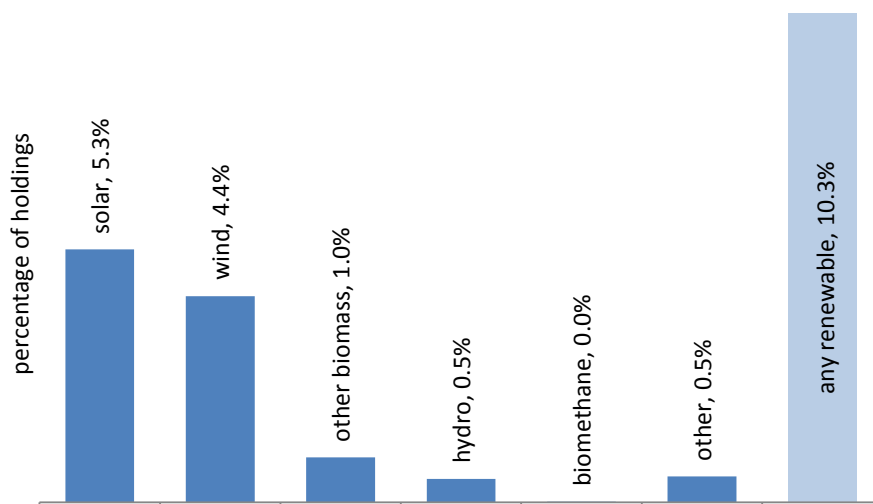


Source: Table 6

Splitting the 21 per cent further, nine per cent of all holdings reported that some, but less than ten per cent, of their overall turnover came from these other gainful activities, with six per cent reporting more than ten per cent up to half of turnover, and seven per cent reporting more than half of their turnover coming from other gainful activities.

Holdings were also asked about what forms of renewable energy was generated on the holding (this time including for home use). Five per cent of holdings reported solar energy, four per cent wind, and one per cent biomass. In total ten per cent of holding reported generating some renewable energy.

Chart 5: Proportion of holdings generating renewable energy



Source: Table 8

3.3 Use of produce (Table 9)

Three per cent of holdings reported the household consumed more than half of the location's production, with four per cent reporting they sold more than half of their produce direct to individuals (rather than wholesalers, shops or restaurants).

3.4 Agricultural Equipment (Table 10)

More complete information on farm machinery is collected as part of the Scottish Government December Agricultural Survey. However, for the 2013 EU Farm Structure Survey, information was collected on equipment, split by whether it belonged exclusively to the holding or whether ownership or usage was shared across more than one holding. This information was not requested in 2010.

Tractors, and cultivators, hoes and mowers were the most likely to belong exclusively to one holding, with 75 per cent in this category. 58 per cent of combine harvesters, and 51 per cent of other fully mechanised harvesters belonged exclusively to the holding.

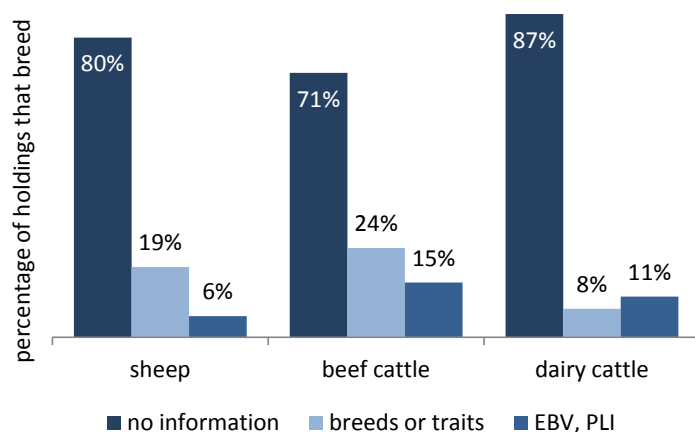
Twenty-seven per cent of holdings reported using tractors that were shared across locations or owned by others, 29 per cent for cultivators, hoes and mowers, 42 per cent for combine harvesters and 52 per cent for other fully mechanised harvesters.

4. Production methods

4.1 Livestock Breeding (Tables 11-12)

Respondents were asked about on the type of information used when breeding cattle and sheep, and the methods of insemination used. These data have been collected for the first time in 2013. In each of the following the percentage will not add to 100 as some farmers used more than one method.

Chart 6: Breeding – what information is used when selecting ram/bull/semen



Source: Table 11

Of the holdings reporting the breeding of sheep, 80 per cent reported not using information on genetics, 19 per cent reported using specific breeds or traits, and six per cent reported using genetic information such as EBVs.

Of the holdings reporting the breeding of beef cattle, 71 per cent reported not using information on genetics, 24 per cent reported using specific breeds or traits, and 15 per cent reported using genetic information such as EBVs.

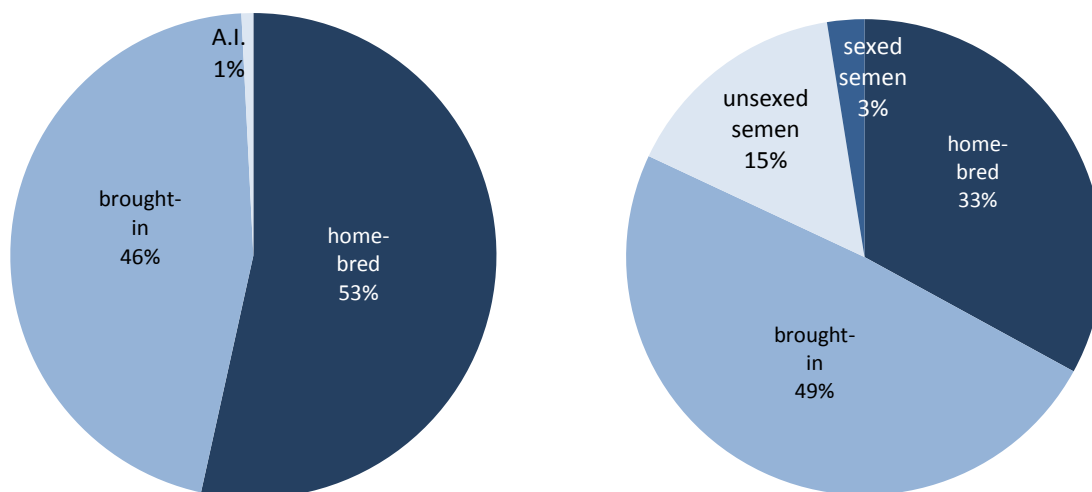
Of the holdings reporting the breeding of dairy cattle, 87 per cent reported not using information on genetics, seven per cent reported using specific breeds or traits, and 11 per cent reported using genetic information such as PLIs.

Respondents were also asked how many ewes or cows had been mated in the previous year using various methods. Again, this question was not asked in 2010. Please note that the total numbers of ewes reported (3.3 million) may seem high in relation to the number of “ewes used for breeding in the previous season” reported in the June 2013 census (2.6 million). It is not clear if this is related to respondents reporting matings rather than animals, or to what extent cull and fallen stock would account for a reduction by June.

Most ewes were mated naturally using home-bred (53 per cent) or brought-in (46 per cent) rams. 0.8 per cent were mated using unsexed semen, with a negligible number mated using sexed semen. Cows were more likely to be mated with a brought-in bull (49 per cent), with 33 per cent using a home-bred bull. Artificial insemination was more common with cattle, with 15 per cent mated using unsexed semen, and three per cent using sexed semen.

Fifty per cent of cattle breeders used some form of artificial insemination for some of their cattle, with 32 per cent using sexed semen. Seven per cent of sheep breeders used artificial insemination for some of their sheep.

Chart 8: Proportion of animals mated using various methods

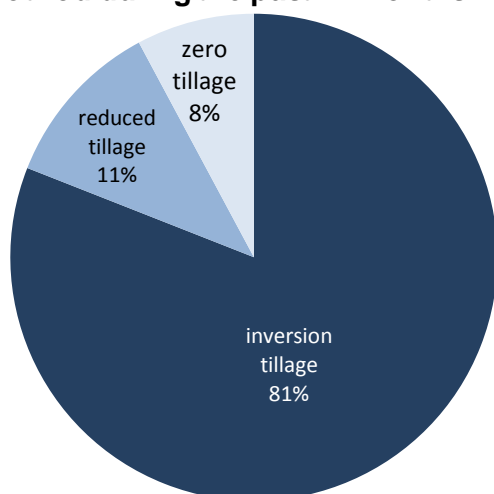


Source: Table 12

4.2 Tillage Methods (Table 13)

More intensive tillage systems, such as conventional ploughing, leave low levels of crop residue cover, whereas reduced tillage methods leave about 30 per cent or more residue cover. These residues reduce the amount of soil erosion, soil compaction and fuel consumption. Reduced tillage or no-till systems will also increase levels of soil organic carbon, and may result in lower direct carbon emissions from the soil.

Chart 9: Area of arable land by tillage method during the past 12 months



Source: Table 13

Note: Arable land excludes glasshouse crops, permanent crops and permanent grass. More than one form of tillage may be undertaken on a given holding.

In 2012/13 about 1.02 million hectares of land was cultivated, excluding permanent crops, grassland and crops under cover. The survey asked whether respondents had used inversion tillage, reduced tillage or whether the land was not cultivated (zero tillage) on the area of land sown/cultivated in the twelve months up to March 2013. Responses were received for the equivalent of 620,000 hectares of land.

Survey results show that conventional inversion tillage was used on 81 per cent of land, with reduced, conservation tillage on 11 per cent, and zero tillage on eight per cent.

In 2010 the option of zero tillage was not included in the survey, so we are not able to make a full comparison. However considering just the land that was tilled, the split between inversion tillage and reduced tillage was unchanged in 2013 from 2010, at about eight to one.

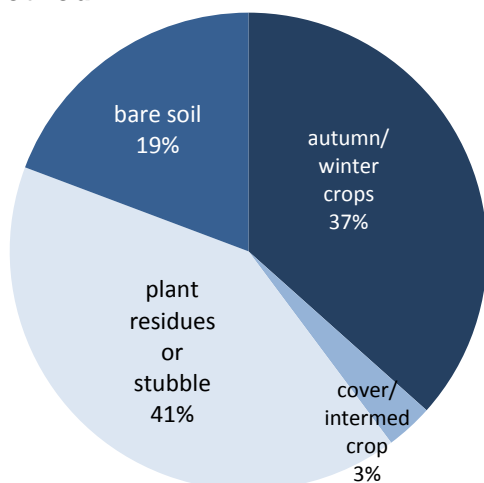
In 2013, inversion tillage again appeared to be used more on larger holdings (or on larger areas within holdings), being employed at an average of 49 hectares per holding compared to 11 hectares for reduced tillage and seven hectares for zero tillage.

4.3 Soil Conservation (Table 14)

Maintaining soil cover over the winter is a practice aimed at reducing soil erosion and the loss of particulate pollutants (e.g. plant protection products and faecal microbes), in addition to contributing to the amount of organic matter in the soil.

The survey asked about coverage of land sown/cultivated over the preceding winter (i.e. winter 2012/13), including if the soil had been left bare. Responses in 2013 accounted for just under half of the potential area of land.

Chart 10: Area of land sown or cultivated over winter 2012/13 by soil cover method



Source: Table 14

Note: Excludes glasshouse crops and permanent crops and permanent grass, though due to a printing error on the form many may have also excluded temporary grass. More than one form of cover may be undertaken on a given holding.

Chart 10 provides a breakdown of the reported soil-cover methods used.

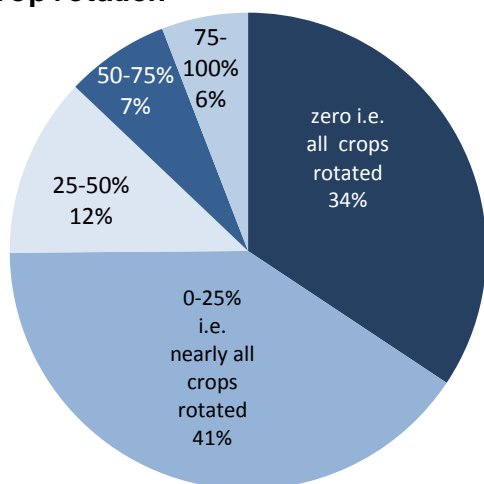
The most widespread cover on cultivable land was plant residues or stubble, which was on 41 per cent of land, and autumn/winter crops, which were used on 37 per cent of the area of cultivated land. Cover crops, intermediate crop or unharvested crops to be ploughed in before spring accounted for three per cent of land reported, with 19 per cent of land being left bare.

In 2009/10 there were slightly more winter crops than plant residues (44 per cent to 39 per cent), possibly due to the weather conditions in 2012, with bare soil accounting for 15 per cent.

The two more frequently used methods were also used most on larger holdings or areas within holdings, averaging at 12 hectares per holding, compared with 7 hectares per holding of bare soil.

4.4 Crop rotation (Table 15)

Chart 11: Distribution of holdings by percentage of arable land not in general crop rotation



Source: Table 15

Crop rotation is the practice of alternating crops grown on a specific field each year in a planned pattern or sequence. The proportion of arable land not included in a holding's crop rotation is intended to give an indication of the degree to which monoculture is undertaken. The use of monoculture is also linked to environmental disadvantages and can have adverse effects on the productive capacity of the land.

Chart 11 details the proportions of holdings which did not include a share of their agricultural land in crop rotation. About a third of holdings included all their land in general crop rotation, and of those that didn't, most (or 41 per cent of all holdings) left out only 0-25 per cent of their arable land.

The proportion of holdings reporting rotation of all their crops has fallen markedly from 79 per cent in 2010. However, the question was worded more clearly in 2013, and it is possible that the complicated wording of the 2010 question might have affected the validity of that result.

4.5 Nutrient Management (Table 16)

In the last year, 25 per cent of holdings with grassland had carried out a nutrient management plan on their grassland, and 52 per cent of holdings had carried out a nutrient management plan on their other land.

Of those with temporary grassland, 41 per cent of holdings reported that some of it was sown with a low n variety mix, such as red clover. The area sown accounted for 20 per cent of grassland on surveyed holdings.

4.6 Manure and Slurry (Tables 17-18)

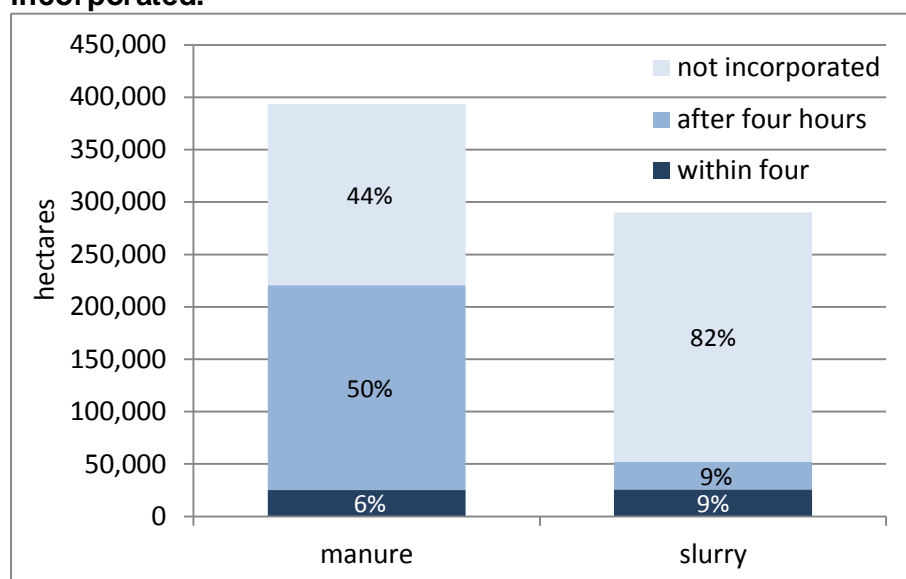
Immediate incorporation of manure and slurry, following application onto fields, can reduce environmentally harmful ammonia emissions and odours and preserves nitrogen in the soil. A threshold of four hours from the time of application to manure and slurry being ploughed in, along with immediate injection of slurry, is used to define immediate incorporation.

In 2013 the question was adapted from that asked in 2010, to now include delayed incorporation of manure as separate from not ploughed in at all.

In 2013, 47 per cent of holdings reported applying manure and 34 per cent reported applying slurry. The vast majority of those who applied manure or slurry did so to less than 25 per cent of their land.

For manure application, six per cent was ploughed in within four hours, 50 per cent was ploughed in after four hours, and 44 per cent was not ploughed in. For slurry, nine per cent was injected or ploughed in within four hours, another nine per cent was ploughed in after four hours, with the vast majority not ploughed in.

Chart 12: Percentage of holdings applying manure and slurry, and when it was incorporated.

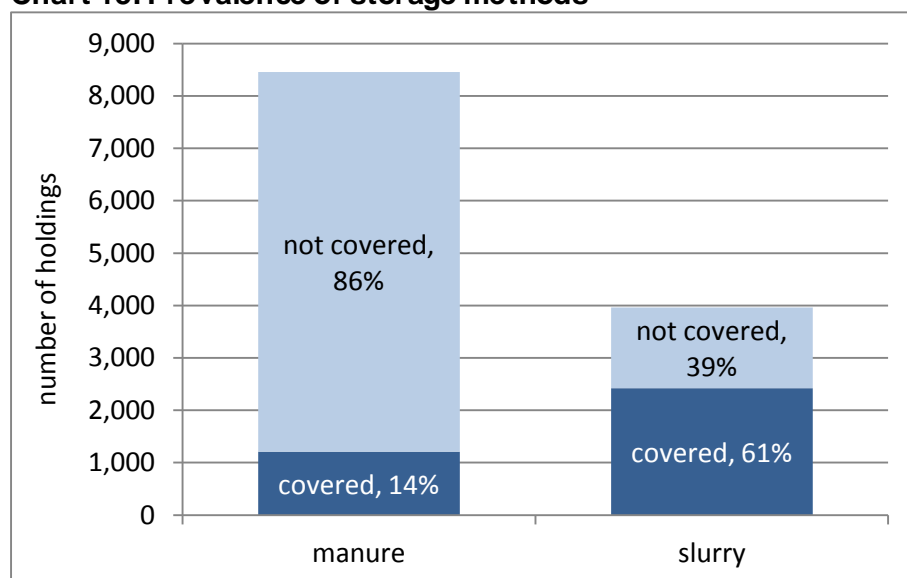


Source: Table 17

Five per cent of holdings that had applied manure or slurry had tested the nutrient value of the manure or slurry.

Covered storage facilities also reduce ammonia emissions, as well as protecting manure from rainfall. A quarter of all holdings had storage facilities for solid manure, and about 14 per cent of these had covered storage (an increase from ten per cent in 2010). Twelve per cent of all holdings had storage facilities for slurry, with 61 per cent of these having covered storage (up from 54 per cent in 2010).

Chart 13: Prevalence of storage methods



Source: Table 18

4.7 Irrigation (Table 19)

Finding suitable sources of water for irrigation is a major problem in many countries in the EU, and is becoming more of an issue in Scotland in some eastern areas. Additionally, inefficient and unplanned use of irrigation can lead to over-wet soils which can affect yields and lead to leaching of nutrients.

It was reported that a total of 348,705 hectares of land (19 per cent of the crops and grass in the survey) could be irrigated using the equipment and the quantity of water normally available at the location.

Over 5,700 holdings with crops (half of all holdings with crops) had undertaken irrigation in the twelve months up to March 2013, over an area of 98,633 hectares (17 per cent of crop area).

5. Notes

5.1 Background

The survey formed part of the 2013 EU Farm Structure Survey, which gathered information on the main activities of farm holdings alongside information on labour and diversification activities. The bulk of this was collected through the June Census alongside other administrative sources. The survey, and the questions asked therein, were determined by a European Commission requirement and was carried out across the whole of the EU.

Information not included in the Census or available from administrative sources was collected via a postal survey form, requesting information as at 15 March 2013. Some additional questions, not required this time by the EU, were added, most of which had previously been part of the 2010 EU Farm Structure Survey (Survey of Agricultural Production Methods) and which are likely to be asked again in future EU surveys. Repeating the collection in 2013 gives a fuller time series, enabling Scottish stakeholders to monitor any changes in practice more closely.

5.2 Uses of the information

Primarily, the March survey was conducted in order to satisfy information requirements of the EU, providing a source of information on farm management structure, labour, machinery, diversification and production methods. Each member state collects the data, anonymises the records and sends them to Eurostat where they are entered into the Eurofarm database. The survey results will then be used to assess the current status of farming in Scotland and the UK, and to monitor and develop agricultural strategy.

The survey also gives the Scottish Government important baseline and time-series information in considering the environmental impact of agricultural production. In particular, many farm activities have both a positive and negative impact on greenhouse gas (GHG) emissions. In order to properly quantify these, and to promote effective ways of mitigating emissions and enhancing sequestrations, it is important to have robust data that can accurately assess farm practices. Repeating questions in this survey allows the Scottish Government to monitor changes over time and progress towards the GHG mitigation targets in the Climate Change (Scotland) Act.

5.3 Methodology – data collection

The date for the survey was 15th March 2013. A date in March was chosen in order to ensure that correspondence and queries could be cleared in time for the June Census.

A holding's eligibility for inclusion in the survey was based on it meeting the threshold of any of the 14 characteristics outlined in the Annex section 7.1. In 2013 there were 33,121 holdings eligible on this basis, accounting for 98 per cent of agricultural land.

A sample of just under 13,600 holdings, stratified by size and type, was taken from this population and sent a form. Around 9,400 holdings returned a form, giving a response rate of 69 per cent. Non-response was imputed to provide a dataset of 13,600 holdings. These were then weighted by stratum to provide final figures based on the 33,121 holdings eligible for the survey. This method weighted responses based on the ratio of holdings in each stratum in the full dataset to the number of holdings per stratum in the sample. Where numbers of holdings are provided in this publication, these are calculated using weighting factors and then rounded. Please note that, the sum of holdings may therefore not always equal 33,121.

5.4 Data Quality

Relevance

The survey provides important information about farm structure and agricultural production methods which have consequences for both efficiency and the environmental impact of farming. Both the EU and the Scottish Government are committed to reducing the environmental impact of the agricultural industry, and monitoring of practices is a vital part of this process.

Accuracy

Data undergo several validation processes, as follows; (i) checking for any obvious errors on the paper forms upon receipt, (ii) auto-checking and identifying any internal inconsistencies once loaded onto the initial database, (iii) auto-checking for any inconsistencies in relation to land items in the June Census. A series of validation checks are also set out by the EU. If necessary, farmers are contacted to ensure data are correct. Additional quality assurance is provided at the later stages by utilising expert knowledge within the Scottish Government and the agriculture industry. See also section 5.3 above for details of the sampling and weighting strategies.

Timeliness and Punctuality

Results have been published at the earliest possible occasion, given available resources. Although the EU Farm Structure and Methods Survey took place before the June Agricultural Survey, the former survey relies on June land and livestock information for validation. Consequently, this publication follows that of the June census.

Accessibility and Clarity

These statistics are made available online at the Scottish Government's statistics website in accessible formats (html and pdf versions are available). All data tables are made available in excel format to allow users to carry out further analysis. No data will be published in a form that would allow individual responses to be identified.

Comparability: The questions on labour and other gainful activities were collected in both 2010 and 2013. In addition, questions on crop rotation, soil conservation and cultivation, tillage, manure and slurry storage and application were asked as part of the 2010 Survey of Agricultural Production Methods. Comparisons with the 2010 data are made where available. Results from Farm Structure Surveys prior to 2010 are not included in this publication.

Farm Structure Survey datasets are not due to be sent to the EU until late in 2014, with publication not until 2015. No comparable data for other countries are therefore yet available.

5.5 Other Publications

Results from all Scottish Government agricultural surveys can be accessed here:

www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/Publications

Results from the 2010 Survey of Agricultural Production Methods (against which comparisons are made in this publication) can be accessed here:

<http://www.scotland.gov.uk/Publications/2012/10/7669>

Results from previous June Censuses can be accessed here:

www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/PubFinalResultsJuneCensus

Results from previous December Censuses can be accessed here:

www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/PubFinalResultsDecCensus

Publications relating to cereal and oilseed rape production can be accessed here:

www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/PubCerealHarvest

Agricultural Facts and Figures pocketbook. This provides a useful summary of the key statistics in the Scottish agriculture and food sector in a convenient pocketbook format.

www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/PubFactsFigures

The Economic Report on Scottish Agriculture. This provides an overarching look at Scottish agriculture using data from various sources.

www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/PubEconomicReport

6. Tables

Table 1: Farm management structure – day-to-day running

| | number of holdings | percentage of holdings |
|-----------------------------------|--------------------|------------------------|
| The occupier | 26,797 | 80.9 |
| The occupier's spouse | 899 | 2.7 |
| A member of the occupier's family | 2,173 | 6.6 |
| Another person (a "manager") | 3,252 | 9.8 |

Table 2: Farm management structure – legal and financial responsibility

| | number of holdings | percentage of holdings |
|---|--------------------|------------------------|
| The occupier | 25,890 | 78.2 |
| The occupier's spouse or member of the family | 812 | 2.5 |
| The occupier and other partners | 4,929 | 14.9 |
| An institution | 1,490 | 4.5 |

Table 3: Age profile of occupiers and those running holdings

| | occupier | person responsible for running the farm (occupier or manager) |
|-------------|----------|---|
| Under 25 | 87 | 123 |
| 25-34 | 738 | 889 |
| 35-44 | 3,022 | 3,828 |
| 45-54 | 7,230 | 9,080 |
| 55-64 | 8,687 | 9,017 |
| 65 and over | 11,866 | 10,184 |
| % male | 82.5 | 85.5 |

Table 4: Proportion of time spent by occupier working on the holding

| | number of occupiers | percentage |
|-----------|---------------------|------------|
| None | 1,099 | 3.5 |
| >0-<25% | 11,703 | 37.3 |
| >25-<50% | 3,884 | 12.4 |
| >50-<75% | 2,393 | 7.6 |
| >75-<100% | 1,680 | 5.4 |
| Full time | 10,579 | 33.8 |
| Total | 31,338 | |

Table 5: Qualifications of person responsible for running the farm

| | number | percentage |
|--|--------|------------|
| Practical experience only | 24,310 | 73.4 |
| Basic agricultural training course – less than two years | 3,367 | 10.2 |
| Full agricultural training course – two years or more | 5,456 | 16.5 |

Table 6: Other gainful activities

| | number | percentage | | number | percentage |
|---------------------------------|--------|------------|---------------------------------------|--------|------------|
| Tourism | 2,847 | 8.6 | Aquaculture | 100 | 0.3 |
| Handicraft | 240 | 0.7 | Contract work – agricultural work | 1,734 | 5.2 |
| Processing of farm products | 337 | 1.0 | Contract work – non-agricultural work | 454 | 1.4 |
| Renewable energy for the market | 910 | 2.7 | Forestry | 1,426 | 4.3 |
| Wood processing | 389 | 1.2 | Other | 1,564 | 4.7 |

Table 7: Proportion of turnover coming from other gainful activities

| | number | percentage |
|-------------------------------------|--------|------------|
| Some, but less than ten per cent | 2,871 | 8.7 |
| More than ten per cent up to a half | 1,964 | 5.9 |
| More than a half | 2,249 | 6.8 |

Table 8: Proportion of holdings generating renewable energy

| | number | percentage | | number | percentage |
|---------------|--------|------------|--------------|--------|------------|
| Wind | 1441 | 4.4 | Solar | 1767 | 5.3 |
| Bio-methane | 4 | - | Hydro-energy | 164 | 0.5 |
| Other biomass | 316 | 1.0 | Other | 182 | 0.5 |

Note: includes for home use

Table 9: Use of farm produce

| | number | percentage |
|--|--------|------------|
| Household consumes more than half of holdings production | 970 | 2.9 |
| Direct sales to consumers >50 per cent of production | 1,452 | 4.4 |

Table 10: Equipment belonging exclusively to the holding or shared/owned by others

| | machines | | holdings | | |
|--|-----------|--------|----------------|-------------|-------|
| | belonging | shared | only belonging | only shared | both |
| Four-wheeled tractor, track-laying tractors, tool carriers | 41,396 | 13,846 | 16,599 | 4,081 | 2,113 |
| Cultivators, hoeing machines, rotary hoes and motor mowers | 21,128 | 6,771 | 9,581 | 3,165 | 807 |
| Combine harvesters | 4,356 | 3,180 | 3,905 | 2,732 | 111 |
| Other fully mechanised harvesters | 2,192 | 2,133 | 1,639 | 1,677 | 87 |

Note: definition of shared is "Ownership shared across locations or owned by others"

Table 11: Number of holdings using various methods for selecting rams/bulls/semen

| | sheep | | beef cattle | | dairy cattle | |
|---|--------|------|-------------|------|--------------|------|
| | number | % | number | % | number | % |
| No information on genetics | 9,531 | 80.4 | 6,919 | 71.0 | 3,712 | 86.8 |
| Information on specific breeds or traits | 2,235 | 18.9 | 2,331 | 23.9 | 327 | 7.6 |
| Best available genetic info (e.g. EBV, PLI) | 676 | 5.7 | 1,431 | 14.7 | 466 | 10.9 |
| Total breeding | 11,849 | | 9,747 | | 4,278 | |

Table 12: Method used for mating livestock

| | ewes | | cows | |
|--|-----------|----------|---------|----------|
| | number | holdings | number | holdings |
| Naturally mated to home-bred male | 1,751,715 | 8,359 | 244,115 | 6,395 |
| Naturally mated to brought-in male | 1,499,256 | 7,758 | 362,737 | 7,213 |
| Artificial insemination with unsexed semen | 25,744 | 862 | 114,738 | 4,977 |
| Artificial insemination with sexed semen | 131 | - | 18,700 | 3,275 |

Table 13: Area of arable land cultivated in the past twelve months using various tillage methods

| | hectares | percentage of tillage | number of holdings | hectares per holding |
|----------------------|----------|-----------------------|--------------------|----------------------|
| Inversion tillage | 504,837 | 81.1 | 10,295 | 49.0 |
| Conservation tillage | 68,434 | 11.0 | 6,263 | 10.9 |
| Zero tillage | 48,853 | 7.9 | 6,071 | 8.0 |
| Total | 622,124 | | 22,629 | 27.5 |

Note: Sum of sub-categories do not equal total holdings figure as holdings may employ more than one method of tillage. Excludes glasshouse crops and permanent crops and permanent grass.

Table 14: Area of sown or cultivable land by soil cover method over winter 2012/13

| | hectares | percentage of cultivable land | number of holdings | hectares per holding |
|---------------------------|----------|-------------------------------|--------------------|----------------------|
| Autumn/ winter crops | 96,179 | 36.6 | 8,211 | 11.7 |
| Cover/ intermediate crop | 8,424 | 3.2 | 6,086 | 1.4 |
| Plant residues or stubble | 107,542 | 40.9 | 9,318 | 11.5 |
| Bare soil | 50,658 | 19.3 | 7,152 | 7.1 |
| Total | 262,804 | | 30,767 | |

Note: Sum of sub-categories do not equal base figure as holdings may employ more than one method of soil cover. Sum of percentages may not equal 100 due to rounding. Excludes glasshouse crops and permanent crops and permanent grass

Table 15: Distribution of holdings by percentage of arable land not in crop rotation

| | number of holdings | percentage of holdings |
|------------------------|--------------------|------------------------|
| Zero i.e. all rotated | 5,678 | 34.3 |
| 0-25% of arable area | 6,706 | 40.5 |
| 25-50% of arable area | 2,020 | 12.2 |
| 50-75% of arable area | 1,163 | 7.0 |
| 75-100% of arable area | 971 | 5.9 |
| Total | 16,538 | |

Note: Excludes glasshouse crops and permanent crops and permanent grass

Table 16: Nutrient management

| | number | percentage |
|--|---------|------------|
| Carried out nutrient management plan on grassland | 5,852 | 25.3 |
| Carried out nutrient management plan on other land | 4,068 | 52.4 |
| Holdings with grassland that use low n variety | 11,423 | 40.6 |
| Area sown with low n variety | 253,200 | 19.5 |

Table 17: Use of manure and slurry, by area

| | manure | | slurry | |
|---|----------|---------|----------|---------|
| | holdings | area | holdings | area |
| Ploughed in or injected within four hours | 11,639 | 25,054 | 11,343 | 25,754 |
| Ploughed in after four hours | 14,962 | 195,438 | 11,496 | 26,140 |
| Not ploughed in or injected | 14,553 | 173,164 | 13,335 | 238,247 |
| Total | 18,087 | 393,656 | 13,660 | 290,141 |

Table 18: Manure and slurry storage (including covered storage)

| | all holdings with storage | | ...of which are covered as a | | |
|----------------------------------|---------------------------|----------------------------|------------------------------|-------------------------------------|------|
| | number of holdings | percentage of all holdings | number of holdings | percentage of holdings with storage | |
| Storage for solid dung | 8,454 | 25.5 | 1,211 | 14.3 | |
| Storage facilities for slurry... | in a tank | 3,610 | 10.9 | 2,421 | 61.0 |
| | in a lagoon | 647 | 2.0 | | |
| Total | 9,843 | 29.7 | 3,367 | 34.2 | |

Note: Sum of sub-categories do not equal base figure as holdings may employ more than one form of storage

Table 19: Irrigation

| | holdings | | area | |
|---|----------|------|----------|------|
| | number | % | hectares | % |
| Crops irrigated in last twelve months | 5,740 | 50.6 | 98,633 | 16.9 |
| Irrigable land with available equipment and water | 10,783 | 36.9 | 348,705 | 18.5 |

Note: Irrigable land includes grassland, crops irrigated does not

7. Annex

7.1 EU Thresholds for inclusion in the Farm Structure Survey

The table below details the thresholds required for holdings to be included in the Farm Structure Survey. A sample of these holdings were sent a survey form.

| Characteristics | | Threshold |
|--|--|------------|
| Utilised agricultural area | Arable land, kitchen gardens, permanent grassland, permanent crops | 5 ha |
| Permanent outdoor crops | Fruit, berry, citrus and olive plantations, vineyards and nurseries | 1 ha |
| Other intensive production | Vegetables, melons and strawberries, which are outdoors or under low (not accessible) protective cover | 0.5 ha |
| | Tobacco | 0.5 ha |
| | Hops | 0.5 ha |
| | Cotton | 0.5 ha |
| Crops under glass or other (accessible) protective cover | Vegetables, melons and strawberries | 0.1 ha |
| | Flowers and ornamental plants (excluding nurseries) | 0.1 ha |
| Bovine animals | All | 10 head |
| Pigs | All | 50 head |
| | Breeding sows | 10 head |
| Sheep | All | 20 head |
| Goats | All | 20 head |
| Poultry | All | 1,000 head |

AN OFFICIAL STATISTICS PUBLICATION FOR SCOTLAND

Official and National Statistics are produced to high professional standards set out in the Code of Practice for Official Statistics at <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/code-of-practice-for-official-statistics.pdf>. Both undergo regular quality assurance reviews to ensure that they meet customer needs and are produced free from any political interference.

Statistics assessed, or subject to assessment, by the UK Statistics Authority carry the National Statistics label, a stamp of assurance that the statistics have been produced and explained to high standards and that they serve the public good.

Further information about Official and National Statistics can be found on the UK Statistics Authority website at www.statisticsauthority.gov.uk

SCOTTISH GOVERNMENT STATISTICIAN GROUP

Our Aim

To provide relevant and reliable information, analysis and advice that meet the needs of government, business and the people of Scotland.

For more information on the Statistician Group, please see the Scottish Government website at www.scotland.gov.uk/statistics

Correspondence and enquiries

Enquiries on this publication should be addressed to:

Graeme Kerr
Senior Assistant Statistician
Rural and Environment Analytical Services
Q Spur, Saughton House,
Broomhouse Drive
Edinburgh, EH11 3XD
Telephone: 0300 244 9709
e-mail: agric.stats@scotland.gsi.gov.uk

General enquiries on Scottish Government statistics can be addressed to:

Office of the Chief Statistician and Performance
Scottish Government
1N.04, St Andrews House
EDINBURGH EH1 3DG
Telephone: (0131) 244 0442
e-mail: statistics.enquiries@scotland.gsi.gov.uk

Further contact details, e-mail addresses and details of previous and forthcoming publications can be found on the Scottish Government Website at www.scotland.gov.uk/statistics

Complaints and suggestions

If you are not satisfied with our service, please write to the Chief Statistician, Mr Roger Halliday, 1N.04, St Andrews House, Edinburgh, EH1 3DG, Telephone: (0131) 244 0302, e-mail roger.halliday@scotland.gsi.gov.uk. We also welcome any comments or suggestions that would help us to improve our standards of service.

ScotStat

If you would like to be consulted about new or existing statistical collections or receive notification of forthcoming statistical publications, please register your interest on the Scottish Government ScotStat website at www.scotland.gov.uk/scotstat

ISSN < ISSN number > ISBN < ISBN number >

Price < Price >

Crown Copyright

Brief extracts from the Crown Copyright material in this publication may be reproduced provided the source is fully acknowledged.