FARM STRUCTURE SURVEY 2007

NATIONAL METHODOLOGICAL REPORT

11 November 2008

MEMBER STATE: UNITED KINGDOM

FARM STRUCTURE SURVEY 2007 NATIONAL METHODOLOGICAL REPORT

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Farm Structure Survey 2007 METHODOLOGICAL REPORT – UNITED KINGDOM

UK SUMMARY

In the United Kingdom, the collection of statistics is a devolved activity. The Department for Environment, Food & Rural Affairs (Defra) was responsible for collating Farm Structure Survey (FSS) 2007 data from each of the four countries of the United Kingdom, and for transmitting the final dataset to Eurostat.

Responsibility for the collection of data within each country was as follows:

England:	Department for Environment, Food & Rural Affairs (Defra)				
Northern	Department of Agriculture & Rural Development (DARD)				
Ireland:					
Scotland:	The Scottish Government (SG) Rural and Environment				
	Analytical Services (REAS)				
Wales:	Welsh Assembly Government				

As a results of the separate surveys and procedures within each country, four methodological reports have been prepared - one each for England, Wales, Scotland and Northern Ireland.

METHODOLOGICAL REPORT CONTENTS

The contents of the methodological report for each country is as follows:

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NATIONAL METHODOLOGICAL REPORT

MEMBER STATE: ENGLAND (UNITED KINGDOM)

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SUMMARY

The Department for Environment, Food & Rural Affairs (Defra) was responsible for collating Farm Structure Survey (FSS) 2007 data from each of the four countries of the United Kingdom, and for transmitting the final dataset to Eurostat. Defra was responsible for the collection of agricultural statistics in England.

The population for the FSS 2007 was drawn from The Statistical Register of Agricultural Holdings, which is used for all Defra-run statistical surveys of agriculture and horticulture and contains the details of all agricultural holdings that have contact with Defra.

The majority of the data was collected through two surveys which are detailed below. This report will cover both of these surveys in detail under each relevant section.

Survey of Agriculture and Horticulture – 1st June 2007

- Defra's flagship agricultural survey. Run every year.
- Collected data on land areas and livestock numbers for FSS.
- Recorded a 'snapshot' as at 1 June 2007, with survey forms being despatched to arrive on 1st June 2007.
- Operated as a postal survey with the option of completion online through Defra's Whole Farm Approach (WFA) system.
- Survey forms sent to 59,000 holdings. These generated 40,000 responses that had clean data for every section. In addition there were a significant number of responses that had only some usable data.
- Data has been provided for all 208,000 holdings believed to be active on 1 June 2007. Estimates are imputed for non-responding and nonsampled holdings using the most recent response updated by trends reported by respondents.
- Provisional results of the Survey of Agriculture and Horticulture 1st June 2007 for England were published on 20 September 2007 and final results were published on 26 November 2007. The statistical release for the final results can be seen here: https://statistics.defra.gov.uk/esg/statnot/june_eng.pdf

Survey of Labour and Diversification 2007

- Run specifically to provide data for the FSS. Only run in FSS years.
- Collected data on holding management, labour and diversification.
- The survey covered the 12 month period from the beginning of October 2006 to the end of September 2007, with survey forms being despatched to arrive on 3rd October 2007.
- Operated solely as a postal survey.
- Survey forms were sent to 60,000 holdings and generated 35,500 clean responses.

- Data has only been provided for the 35,500 clean responses. To obtain estimates for the full population, raising factors based on farm type and size can be applied to response data to account for both non-responding and non-surveyed holdings.
- No results from the Survey of Labour and Diversification 2007 have been published. A breakdown of results is expected to be published in late 2008.

Data on set-aside areas and organic holdings were derived from administrative sources. A very small amount of data was collected through the Survey of Mushroom Growers 2007 and the Survey of Vegetables and Flowers Grown in the Open 2006. These will not be covered in further detail in the remainder of the report.

1. INTRODUCTION

1.1 History

There has been an annual agricultural census in England since 1866, which became a sample survey in 1995. Initially the census covered land areas and livestock numbers but in 1921 it was expanded to cover counts of farm labour (however these are not used in the FSS dataset). The Survey, which has always been postal, takes place at the beginning of June each year.

1.2 National legislation

In England the legal basis for the collection of agricultural statistical data is the Agricultural Statistics Act 1979 (as amended by the Agriculture (Amendment) Act 1984) which imposes a statutory requirement on all occupiers to complete and return their questionnaires. This legislation does not need to be updated or amended to allow for new surveys or for additional questions. There is provision within the Act to prosecute those that do not respond to the survey, without reasonable excuse.

The annual June Survey of Agriculture and Horticulture is designated as statutory under the Agricultural Statistics Act. The additional Survey of Labour and Diversification, however, is a voluntary survey and is conducted under the terms of the Government Statistical Service Code of Practice. There is therefore no legal requirement for respondents to complete the Survey of Labour and Diversification.

2. CONTENT

2.1 Characteristics and reference period

The information in England was collected according to the Commission Regulation 204/2006 adapting Council Regulation 571/88 and amending Annex I to Council Regulation 571/88/EC.

Non-Existent Characteristics

The following characteristics were deemed to be non-existent (or close to zero) in the UK and therefore were not separately collected in England:

- CC03 agricultural area used for shared farming and other modes;
- D02 durum wheat;
- D06 grain maize;
- D07 rice;
- D09G other protein crops harvested;
- D14B fresh vegetables market gardening;
- D23 tobacco;
- D25 cotton;
- D27 sunflower;
- D28 soya;
- D30 other oilseed crops;
- D33 other textile crops;
- E kitchen gardens;
- G01B fruit and berry species of subtropical climate zones;
- G01C nuts;
- G02 citrus plantations;
- G03 olive plantations;
- G04A quality wine;
- G04C table grapes;
- G04D raisins;
- G06 other permanent crops;
- G07 permanent crops under glass;
- I01 successive secondary crops;
- I08C areas converted to permanent pasture and meadow.

Of these characteristics, D07, D23, D25, G01B, G02, G03, G04A, G04C, G04D and G07 are not thought to be grown at all in England.

Where identified, D27 and D30 were included in D20 (other crops) and G01C was included in G01A (Temperate fruit and berry plantations).

Non-Significant Characteristics

The following items were deemed to be non-significant in the UK and therefore were not collected in England:

- CC06B direct sales contribute >50% of total sales;
- D09F lentils, chick peas and vetches;
- D24 hops;
- D31 flax;
- D32 hemp;
- D35 industrial crops not mentioned elsewhere;
- J17 rabbits breeding females;
- J18 bees

Where identified, D31 and D32 were included in D20 (other crops).

Characteristics D24 (hops) and D31 (flax) were not collected although they are known to exist with very small areas. These characteristics were last collected in 2006 and measured 1,117ha (D24) and 579ha (D31) for the England. In 2007 it was necessary to remove these crops from the June Survey of Agriculture and Horticulture in order to reduce the administrative burden on the industry.

Characteristic F03 (Permanent grassland and meadows no longer used for production purposes and eligible for the payment of subsidies) was problematic to understand and collect. Defra Statisticians and agricultural experts interpreted the original F03 definition to include only land that had at one time, been in production as *pasture*. The experts' view was that any permanent pasture not in full production by the owner would be either rented out or subject to informal low-intensity grazing, if it was to remain in good condition. As a result, none of this land existed in England in 2007 and the original intention for England and the UK was to treat F03 as Non-Significant. A more detailed definition of F03 was circulated by Eurostat in September 2008. This made it clear that land that had turned into pasture due to several years of being uncropped could be included in F03. An estimate for this type of land was produced by a statistician following in-depth analysis of administrative data from the Rural Payments Agency (RPA). It is recognised that some of the land declared as F03 is probably also included in H01 as 'set-aside under incentive schemes'. This is an area that will be investigated in more detail in 2010, although it is believed that the area in question is <5.000ha. It is the opinion of the survey statisticians that the complicated definition of F03 would make it extremely difficult to collect an accurate estimate for F03 using a postal questionnaire.

Following the definitions laid down in Commission Regulation (EC) No 1444/2002 of 24th July 2002, Annex I, variable B/1b, the decision was taken to not collect separate information on group holdings. Instead, for holdings where two or more natural persons carry out the functions of the holder, one of them (the one who bears the greatest share of the work) was recorded as

the holder and all other persons working on the holding were recorded in the relevant L04**T characteristic as 'non-family labour force', regardless of their family relation to the holder.

Reference Period for Characteristics

The Survey of Agriculture and Horticulture -1^{st} June 2007 recorded the status of holdings on 1 June 2007. The survey results include responses that were completed between 1 June 2007 and early October 2007.

The Survey of Labour and Diversification 2007 recorded labour on holdings in the twelve months from the beginning of October 2006 to the end of September 2007. The survey results include responses that were completed between 3 October 2007 and March 2008.

Changes in definitions

The area of mushrooms (characteristic I02) was reported incorrectly in FSS 2005 and therefore is significantly different to the area reported in FSS 2007. A processing error resulted in FSS 2005 areas being reported as 'production area' (bed area multiplied by number of crops in the year). The FSS 2007 have been correctly reported as just the bed area, with no multiplication if more than one crop was taken over the year.

2.2 Questionnaire

Survey of Agriculture and Horticulture – 1st June 2007

Two different survey forms were used to collect data, a detailed form and a core form. Standard Labour Requirement (SLR, see Annex 1) of holdings was used to determine which form an individual holding was sent. A detailed form was sent to selected agricultural holdings with an SLR >=0.25 and 30% of selected agricultural holdings with an SLR >0 and <0.25. These detailed forms had four A4 pages of questions and were sent to 47,000 holdings. A cut down 'core' form was sent to the remaining 70% of the selected agricultural holdings with an SLR >0 and <0.25 and all selected agricultural holdings with an SLR >0 and <0.25 and all selected agricultural holdings with an SLR >0 and <0.25 and all selected agricultural holdings with an SLR >0. Core forms had two A4 pages of questions and were sent to 12,000 holdings. Form allocation (detailed or core) within the selected agricultural holdings with an SLR >0 and <0.25 was random.

Both questionnaires were despatched to arrive on holdings on 1 June 2007 and collected data on crops, land use and livestock. The questionnaires also collected data on the numbers of farmers and agricultural/horticultural workers employed by the holding on 1 June 2007, which did not contribute to the FSS dataset.

For the first time, all cattle related data for the Survey of Agriculture and Horticulture was provided by the Cattle Tracing System (CTS) so no cattle questions were required on the survey forms. There was an option for all holdings to complete the survey online through Defra's Whole Farm Approach (WFA) system, rather than on the paper form sent. This option was taken by 223 holdings.

The questions on both the detailed and core survey forms were very similar to those in previous June Surveys of Agriculture and Horticulture. The entire survey form was subject to close scrutiny from statisticians, survey support staff and industry experts to ensure that the design was appropriate.

Survey of Labour and Diversification 2007

The Survey of Labour and Diversification 2007 questionnaire was despatched to arrive on holdings on 3 October 2007. Respondents were asked to provide data for the twelve month period from the beginning of October 2006 to the end of September 2007. There was a single version which had five A4 pages of questions and collected all the information required for the FFS labour (section L) and diversification (section M) characteristics. There was no online completion facility.

The questions on the survey form were similar to those on previous Surveys of Labour and Diversification, however the design was intensely scrutinised in order to make improvements to the clarity of the form.

Copies of the two Survey of Agriculture and Horticulture – 1^{st} June 2007 forms and the Survey of Labour and Diversification 2007 form can be found in Annexes 2, 3 and 4.

3. SURVEY METHODOLOGY

3.1 Survey organisation

Survey of Agriculture and Horticulture – 1st June 2007

The lead statistician oversaw the whole process including form design, sample design and results processing. A team of three administrative staff were responsible for system maintenance. A further team of nine administrative staff were responsible for contacting farmers as part of data validation and issuing reminders to farmers who had not responded by a given date. Four statisticians were responsible for producing the Survey results. The lead statistician used the response data to produce an imputed dataset with values for all live holdings on the The Statistical Register of Agricultural Holdings.

Survey of Labour and Diversification 2007

The lead statistician oversaw the process including form design, data validation rules and results processing. A senior statistician was responsible for the sample design. A team of three administrative staff were responsible for system maintenance. A further team of nine administrative staff were responsible for contacting farmers as part of data validation and issuing reminders to farmers who had not responded by a given date.

3.2 Calendar (overview of work progress)

Survey of Agriculture and Horticulture – 1st June 2007

August 2006	Survey planning begins
March 2007	Form design completed
March 2007	Sampling design completed
29 May 2007	Survey forms despatched
27 June 2007	First reminder despatched to non-respondents
13 July 2007	Second reminder despatched to non-respondents
20 September 2007	Provisional England results published
8 October 2007	Survey closed
26 November 2007	Final England results published

June 2007	Sampling design completed
July 2007	Form design finalised
August 2007	Validation programmes prepared
1 October 2007	Survey forms despatched
19 October 2007	First reminder despatched to non-respondents
9 November 2008	Second reminder despatched to non-respondents
March 2008	Survey Closed
June 2008	Results processing completed

Survey of Labour and Diversification 2007

Between March and August 2008, there was considerable work performed by England to bring together datasets from England, Northern Ireland, Scotland and Wales into a single FSS 2007 dataset for the United Kingdom. England co-ordinated the validation of final datasets and populated characteristics farm type (A06) and SGM (A12) for all of the UK. England also populated the organic fields CC05A, CC05D and CC05E for Scotland and Wales.

3.3 Planning the survey

3.3.1 Population and frame

The population for the FSS 2007 was all holdings on The Statistical Register of Agricultural Holdings ('The Register') that were active on 1 June 2007. This is also used as the sampling frame. There were 208,166 such holding in 2007, compared to 195,908 in 2005.

Definition of a Holding

The basic unit of enumeration is the holding. The guideline definition is pragmatic and operational and subject to agreement with the individual farmer. The holding comprises land on which agricultural activities are carried out and which is by and large farmed as one unit having regard to such supplies as machinery, livestock, feeding stuffs and manpower, and to distance between any separate areas of land involved and their type of farming. The farm business is operated by a "farmer" who is a single individual, a partnership of individuals, a limited company, or an institution of some kind. Some farm businesses occupy more than one holding.

The Statistical Register of Agricultural Holdings ('The Register')

The Register contains a unique number for each holding (known as the CPH number), the contact details of the holder, the area of the holding, whether the holding is currently active, the legal status of the holding, and the CPH number of any associated holdings. The register does not hold statistical data about holdings. The Register is continuously updated by the Survey Support Section, who use comments on statistical survey forms, telephone conversations with holders and information from the Rural Payments Agency to maintain it.

Identification of the survey population from The Register

In mid April 2007, the population of active farms was downloaded from The Register in preparation for the sample to be drawn. Inactive holdings and holdings that have indicated that they will refuse to complete statistical surveys ('non-co-operators') were excluded.

A further download of new holdings was taken in mid June 2007. This identified any holdings that were registered during the period between the original download of the population in mid April and 1 June 2007. These holdings were added to the Survey population and sent a Survey of Agriculture and Horticulture – 1^{st} June 2007 questionnaire. The population was finalised in September 2007 to take account of all changes to the Register between mid April and 1 June, some of which may not have been changed on The Register at the time of the mid June download. This resulted in a final population of 208,166 for the Survey of Agriculture and Horticulture – 1^{st} June 2007. The population for the Survey of Labour and Diversification 2007 was identical to that of the Survey of Agriculture and Horticulture – 1^{st} June 2007 and subsequently the FSS 2007.

Organic Data

The data for organic characteristics (CC05A, CC05D & CC05E) was taken from the United Kingdom Register of Organic Food Standards (UKROFS). UKROFS consists of an independent board appointed by UK Ministers for Agriculture. Any producer wishing to sell their produce as organic must, by law, be registered with UKROFS, or a body approved by UKROFS, and be inspected by them at least once a year. Only if the holding passes the inspection will they be kept on UKROFS. UKROFS contains parcels of land that are not necessarily the same as holdings on The Statistical Register of Agricultural Holdings. Entries on UKROFS were matched, where possible to holdings on The Statistical Register of Agricultural Holdings. Where entries on UKROFS did not appear to be on The Statistical Register of Agricultural Holdings they were not added to the FSS 2007 population.

3.3.2 Survey design

In 2005 both the Survey of Agriculture and Horticulture – 1st June 2007 and the Survey of Labour and Diversification 2007 were carried out by sample enumeration. Different and independent samples were drawn for each survey and it was possible for a holding to be selected for both surveys.

Survey of Agriculture and Horticulture – 1st June 2007

There were no exclusions apart from those holdings that had indicated that they would refuse to complete any statistical surveys (non-co-operators). However where a large pig or poultry producer has many holdings, each holding was not individually sent a survey form. Instead the producer was requested to return data for each of their holdings, either using WFA or direct to the Survey Support Section via e-mail.

Sample Size

From a sampling population of 209,652 holdings identified in mid April 2007, a stratified sample of approximately 60,000 holdings was drawn. Eligible holdings within each stratum were randomly selected from The Register by a computer system.

Stratification

The basic principal of stratification was by Standard Labour Requirement (SLR). (See annex 1 for definition). There are six bandings: very small (spare time), very small (part time), small, medium, large and very large. The smallest holdings (less than 0.25 SLR) are sampled on average just once every ten years (in practice this led to a 20% sample size), whilst the largest holdings (more than 5 SLR) are sampled at 100% to ensure that the overall coverage of the survey is high.

The samples sizes for the strata between the smallest and largest are 30%, 40%, 50% and 70% respectively.

In order to improve coverage, Horticultural holdings were stratified separately (again by SLR) and were sampled at the rate of the next strata size up. Small holdings were therefore sampled at the small-medium rate (30%) rather than the small rate (20%).

Six further strata dealt with holdings that had no previous response to the June survey of Agriculture and Horticulture.

Stratum	Description	Sampling rate	Form type	Pop size	Actual sample size (after restrictions)
1	SLR =0	10%	100% core	23,326	2332
2	SLR >0 and <0.25	20%	70%:30% split core:detailed	61,598	12315
3	SLR >=0.25 and <1	30%	detailed	45,453	13639
4	SLR >=1 and <2	40%	detailed	22,865	9144
5	SLR >=2 and <3	50%	detailed	9,894	4947
6	SLR >=3 and <5	70%	detailed	8,083	5659
7	SLR >=5	100%	detailed	4,684	4514
8	Hort SLR <0.25	30%	detailed	2,479	744
9	Hort SLR >=0.25 and <1	40%	detailed	3,021	1208
10	Hort SLR >=1 and <2	50%	detailed	1,440	720
11	Hort SLR >=2 and <3	70%	detailed	620	434
12	Hort SLR >=3 and <5	100%	detailed	591	588
13	Hort SLR >=5	100%	detailed	1,030	1024
14	New holdings SLR<1	0%	-	3,666	0
15	New holdings SLR >=1 and <3	20%	detailed	177	35
16	New holdings >=3	100%	detailed	77	71
17	Sent new holdings form but not returned	0%	-	9,379	0
91	Holdings no base (non- respondents to past June surveys & 1,600 never surveyed holdings)	20%	70%:30% split core:detailed	8,143	1612
92	New holdings since April 07 (done as late news exercise)	0%	-	0	0
	Total	29%		209,652	58,986

The sampling population and sample sizes by strata for the Survey of Agriculture and Horticulture -1^{st} June 2007 are shown below:

Survey of Labour and Diversification 2007

Holdings selected for the Earnings & Hours Survey June 2007, holdings with SLR <0.25 that were selected for the Survey of Agriculture and Horticulture – 1^{st} June 2007 and non-co-operator were excluded from selection for this survey.

Sample Size

The target number of clean responses required for England was 36,000. Assumed response rates suggested that a sample of 60,000 holdings would be sufficient to meet the target whilst imposing the burden of the survey on as few holdings as possible.

Stratification

The stratification was based on that used for the Survey of Agriculture and Horticulture -1^{st} June 2007 (stratification by SLR), with the addition of robust

farm types. This meant that SLRs were used for stratification, rather than Standard Gross Margins (SGMs) which had been used for stratification in previous Surveys of Labour and Diversification. The strata are numbered sequentially from 1 to 67. All strata for holdings with an SLR of zero have been combined into one strata. The final six strata (from 62 onwards) are for new holdings. The holdings in strata 65 to 67 (about whom we had no information) were not sampled.

Allocation

Neyman Allocation was used to find the optimal sample size for each strata, based on the variability of the labour data from the 2006 June Survey of Agriculture and Horticulture. This method optimally allocates the sample between strata where the total sample size is fixed, by minimising the variance within strata.

The formula for Neyman Allocation is as follows:

$$n_h = n \left(\begin{array}{c} N_h S_h \\ \overline{\sum N_h S_h} \end{array} \right)$$

Where: n_h = strata sample size n = total sample size N_h = strata population S_h = strata standard deviation

Once the optimum sample size within each strata had been calculated, a random sample of this size was drawn from the strata population. There were a few exceptions. The non-responders' (strata 65 and 66) were not sampled, because a failure to previous survey forms indicated a lack of willingness on their part to complete any survey forms, so this avoided wasting further forms. Holdings new to The Register since the Survey of Agriculture and Horticulture -1^{st} June 2007 sampling population was downloaded in April 2007 (stratum 67) were not sampled, as they did not form part of the June Survey sampling population.

SLR band Stratum Robust type Population Reqd Sampling sample fraction size 1 SLR =0 Lowland 23,326 1,866 8% Grazing Livestock, Other 2 1369 28% SLR >0 and <0.25 Cereals 4.924 3 SLR >0 and <0.25 General 700 242 35% Cropping 4 SLR >0 and <0.25 Horticulture 2,469 1033 42% 5 SLR >0 and <0.25 Specialist 18% 721 126 Pigs Specialist 42% 6 SLR >0 and <0.25 4,099 1732 Poultry 7 48% SLR >0 and <0.25 Dairy 356 171 8 SLR >0 and <0.25 LFA Grazing 3,516 620 18% Livestock 9 SLR >0 and <0.25 Lowland 13,040 3409 26% Grazing Livestock 10 SLR >0 and <0.25 Mixed 2,330 478 21% 11 SLR >0 and <0.25 31,922 8480 27% Other 33% 12 SLR >=0.25 and <1 Cereals 8,452 2774 13 SLR >=0.25 and <1 General 2,274 1007 44% Cropping 54% 14 SLR >=0.25 and <1 Horticulture 3,007 1626 15 SLR >=0.25 and <1 Specialist 588 146 25% Pigs 16 SLR >=0.25 and <1 Specialist 595 237 40% Poultry 17 SLR >=0.25 and <1 1,095 217 20% Dairy LFA Grazing 18 SLR >=0.25 and <1 5.215 1084 21% Livestock SLR >=0.25 and <1 19 Lowland 13.685 3146 23% Grazing Livestock 20 SLR >=0.25 and <1 31% Mixed 3.410 1053 21 SLR >=0.25 and <1 10,153 20% Other 2055 22 SLR >=1 and <2 Cereals 4,841 1766 36% SLR >=1 and <2 General 64% 23 2,400 1544 Cropping 24 SLR >=1 and <2 Horticulture 1,434 1434 100% Specialist 25 SLR >=1 and <2 77 30% 259 Pigs Specialist 26 SLR >=1 and <2 611 611 100% Poultry 27 SLR >=1 and <2 4,543 980 22% Dairy 28 SLR >=1 and <2 LFA Grazing 1,976 438 22% Livestock 29 SLR >=1 and <2 3,374 964 29% Lowland Grazing Livestock 30 691 32% SLR >=1 and <2 Mixed 2,191 31 30% SLR >=1 and <2 Other 2,676 814 37% 32 SLR >=2 and <3 Cereals 1,964 735

The population and sample sizes by strata for the Survey of Labour and Diversification 2007 are shown below:

Stratum	SLR band	Robust type	Population	Reqd sample size	Sampling fraction
33	SLR >=2 and <3	General Cropping	1,133	989	87%
34	SLR >=2 and <3	Horticulture	616	504	82%
35	SLR >=2 and <3	Specialist Pigs	167	40	24%
36	SLR >=2 and <3	Specialist Poultry	235	203	86%
37	SLR >=2 and <3	Dairy	2,775	690	25%
38	SLR >=2 and <3	LFA Grazing Livestock	918	234	25%
39	SLR >=2 and <3	Lowland Grazing Livestock	991	291	29%
40	SLR >=2 and <3	Mixed	1,019	392	38%
41	SLR >=2 and <3	Other	696	285	41%
42	SLR >=3 and <5	Cereals	1,397	1,257	90%
43	SLR >=3 and <5	General Cropping	1,083	1,083	100%
44	SLR >=3 and <5	Horticulture	591	591	100%
45	SLR >=3 and <5	Specialist	125	113	90%
46	SLR >=3 and <5	Pigs Specialist	207	207	100%
47	SLR >=3 and <5	Poultry Dairy	2,632	2,369	90%
48	SLR >=3 and <5	LFA Grazing	638	2,309	90%
49	SLR >=3 and <5	Livestock Lowland	641	574	90%
		Grazing Livestock		577	90%
50	SLR >=3 and <5	Mixed	934	841	90%
51	SLR >=3 and <5	Other	426	383	90%
52	SLR >=5	Cereals	621	466	75%
53	SLR >=5	General Cropping	1,137	1137	100%
54	SLR >=5	Horticulture	1,030	1030	100%
55	SLR >=5	Specialist Pigs	233	157	67%
56	SLR >=5	Specialist Poultry	168	168	100%
57	SLR >=5	Dairy	1,137	716	63%
58	SLR >=5	LFA Grazing Livestock	212	85	40%
59	SLR >=5	Lowland Grazing Livestock	262	145	55%
60	SLR >=5	Mixed	768	768	100%
61	SLR >=5	Other	146	146	100%
62	New holdings SLR <1	Other	3,666	587	16%
63	New holdings SLR	Other	177	35	20%
64	New holdings SLR	Other	77	77	100%
65	Sent new holdings form but not responded	Other	9,379	0	0%
66	Other holdings with	Specialist	8,143	0	0%

Stratum	SLR band	Robust type	Population	Reqd sample size	Sampling fraction
	no previous June Survey response	Pigs, Specialist Poultry, Other			
67	New holdings between mid April and 1 June 2007	Other	3,126	0	0%
Total			209,652	60,062	29%

3.3.3 Pilot Survey

Survey of Agriculture and Horticulture – 1st June 2007

The questions on both the detailed and core survey forms were very similar to those in previous June Surveys of Agriculture and Horticulture so a pilot survey was not deemed necessary.

Survey of Labour and Diversification 2007

The form was sent to about fifty farmers who had volunteered to be part of a 'Farmers Panel' for comments, but this was not a formal pilot survey.

3.3.4 Informing and training the staff and respondents

Staff Training

The same team of administrative staff investigated queries arising from responses to both the Survey of Agriculture and Horticulture – 1^{st} June 2007 and the Survey of Labour and Diversification 2007 and where necessary contacted holders by telephone for clarification.

An oral presentation was given to the staff by the relevant lead statistician prior to the start of each survey to provide some background and highlight potential data issues that they may be able to help correct.

New staff are given individual training before beginning work on their first survey, and their work is checked for a length of time after they start. Most staff in the team had worked on the surveys in previous years.

Informing Respondents

A letter accompanied the questionnaires to both surveys, with the aim of informing holders of the importance of the survey and to encourage them to respond.

3.4 Sampling, data collection and data entry

3.4.1 Drawing the sample

The sampling methodology for both the Survey of Agriculture and Horticulture -1^{st} June 2007 and the Survey of Labour and Diversification 2007 is detailed in section 3.3.2 Holdings are randomly selected from the survey population by a computer system called Farm Survey System, tailor made for Defra.

3.4.2 Data collection and entry

Both the Survey of Agriculture and Horticulture – 1^{st} June 2007 and the Survey of Labour and Diversification 2007 were postal surveys. Respondents were provided with reply paid envelopes. Those sampled for the Survey of Agriculture and Horticulture – 1^{st} June 2007 were given the option of completing the survey online instead of by post, however electronic returns represented only a tiny proportion of responses.

- The mean self completion time declared by postal respondents to the Survey of Agriculture and Horticulture – 1st June 2007 was 21 minutes.
- The mean self completion time declared by postal respondents to the Survey of Labour and Diversification 2007 was 13 minutes.

Paper responses to both the Survey of Agriculture and Horticulture – 1st June 2007 and the Survey of Labour and Diversification 2007 were keyed into computerised format by an outside company (RR Donnelleys, formerly trading as Astron). Detailed data validation was not carried out at this stage. The keyed data were sent back to Defra via email and transferred to our processing system. Scanned images of every form were created and were available for use during the data checking process. Data from internet form completion was loaded directly onto Defra computer systems every 24 hours.

3.4.3 Utilisation of administrative data sources

There were two main sources of administrative data.

Organic Data

The data for organic characteristics (CC05A, CC05D & CC05E) was taken from the United Kingdom Register of Organic Food Standards (UKROFS), which is explained in more detail in section 3.3.1 of this report. The organic data was matched to the FSS population using the unique holding number identifier (CPH). A CPH field was present in the UKROFS data, but it was imperfect. Where a valid identification number was not available, a manual exercise was carried out, matching holdings on key variables such as name, address or post code. The data collected on organic methods for animal production (CC05E) only recorded the presence of organic methods for animal production. Because of this it was impossible to distinguish between 'full' and 'partial' production methods so as result any presence of organic methods of animal production were recorded as 'full' in characteristic CC05E.

Set-aside Data

Set aside data (used in sections I and H and to supplement crops grown on non set-aside land in sections D and G) was provided by the Rural Payments Agency (RPA). The RPA is responsible for the administration of the Single Payment Scheme in England. The Single Payment Scheme (SPS), introduced by EC Council Regulation 1782/2003, replaced most existing crop and livestock payments from 1 January 2005. The data provided by the RPA covers all holdings which have made a claim for subsidy payments in England and is therefore has perfect (100%) coverage of all crops grown on set-aside land in England. The RPA use the same definition of an agricultural holding and the same CPH identifier so linking the data to the FSS 2007 population did not present any problems.

Cattle Tracing System (CTS)

CTS data replaced survey data for the June Survey of Agriculture and Horticulture in 2007, having been available as an alternative source for several years. CTS data comes from cattle passport information which must be submitted every time an animal is born, moves or dies/is slaughtered. The data is thought to be more robust than the survey data it has replaced, with a coverage of 99%.

3.4.4 Control of the data

Control of the data is extremely similar for both the Survey of Agriculture and Horticulture -1^{st} June 2007 and the Survey of Labour and Diversification 2007.

Computer validation of keyed data is an integral part of processing. Both logic and consistency checks are applied and the validation for the Survey of Agriculture and Horticulture -1^{st} June 2007 makes extensive use of previous survey data as a comparison tool. The computer system corrects or completes some data automatically and then alerts Survey Support staff to further validation rules that have failed. These staff then resolve the queries by scrutiny of the response and any comments or by contacting the respondent by telephone. Once a query has been resolved, the data will be manually corrected. The computer system records details of any amendments to the data, when the amendment was made and the person that made the amendment.

A consistency query would be raised where component parts do not equal the total. The response would be analysed, and the holder may be contacted, to identify whether a component part had been omitted, or whether the total had been miscalculated.

A credibility query would also be raised where there is reason to doubt the response, for example, ewes but no lambs or livestock but no grassland. Queries are also raised where the response shows significant change from the previous year and is not consistent with market trends, and no explanation has been provided on the form by the farmer.

It is the intention of the Survey Support staff to resolve all queries by the end of the validation process. Where this is not possible, some outstanding validation rules will prevent data from being used in the survey results whereas some are seen as less severe and will not prevent data still under query from contributing to the survey results.

Statisticians begin working with the data once it has been validated by Survey Support staff. Statisticians may spot errors in the data whilst processing survey results and may be able to correct them or may have to prevent them from contributing to the final survey results.

3.4.5 Non-response

The response rate (forms with usable data/dispatch) for the Survey of Agriculture and Horticulture -1^{st} June 2007 was 68%. The response rate for the Survey of Labour and Diversification 2007 was 66%.

Non-response here is interpreted as questionnaires which were dispatched but either not returned or returned without any usable data. Questionnaires returned after the survey closedown date are not used (in practice there are very few of these). For the Survey of Agriculture and Horticulture – 1^{st} June 2007, where the data did not raise any credibility queries on a individual section of the form, partially completed forms were treated as acceptable for those respective sections. For example, a form with clean data in the pig section but credibility queries on the poultry section could be used for pig results, but would be treated as non-response for the poultry results.

Action Taken

Two postal reminders were issued for the Survey of Agriculture and Horticulture -1^{st} June 2007, and two were issued for the Survey of Labour and Diversification 2007.

Non-respondents to the June Survey were not prosecuted. This is a sensitive issue and it is a political decision not to prosecute non-respondents. The Survey of Labour and Diversification 2007 was treated as voluntary.

Reasons for Non-Response

Anecdotal evidence from Survey Support staff and comments given on survey forms returned with no data would suggest the following reasons for non-response:

- Survey forms being lost in the post, either on the way to, or from the holding.
- Resentment of paperwork, particularly because similar data is collected by the RPA and the misconception that therefore the surveys are collecting information already held by Defra.

- The incorrect belief that survey data is freely distributed to third parties or may be used to check compliance with regulations at an individual level.
- A lack of tangible benefits to be realised by completing survey forms.
- A general non-co-operative attitude towards the Government, often as a protest against Defra policies or delays in receiving the Single Payment.
- A recognition that Defra will not prosecute holders who do not complete compulsory survey forms.
- A complaint that the survey forms are too confusing.
- Holders being under the misconception that none of their activities qualify as agriculture or that they are too minor to be of importance to the survey.
- Holders believing that they did not need to complete the Survey of Labour and Diversification 2007 because they employ no labour and are not involved in any diversification activities.

3.5 Data processing, analysis and estimation

3.5.1 Methods for handling missing or incorrect data items

Corrections to the data are covered by section 3.4.4 of this report. Only the Survey Support Section at DEFRA and the statisticians were authorised to make data changes on either survey.

Survey of Agriculture and Horticulture – 1st June 2007

Where a non-response was registered, data were imputed for the holding. The 'ratio raising' method of imputation was used whereby a ratio is applied to the base data for the non-respondent holding. The ratio is calculated by observing how responding holdings in the same stratum have behaved since the base was measured.

The core survey form did not have the complete breakdown of sections collected by the detailed form, but instead recorded broader 'core' items. Core responses had their core responses apportioned between the detailed items. In most cases the breakdown was done in proportion to the medians of the results for new holdings that received the detailed form. This generally resulted in everything being allocated to the one or two most common categories found on smaller holdings. In some cases the medians of the items on the detailed form are all zeros and in these cases the means were used instead, resulting in a much more complex breakdown with some very small proportions.

Survey of Labour and Diversification 2007

Non-respondents to the Labour Survey were not imputed for. Instead, non-respondents were treated in the same manner as non-sampled holdings, and the raising factors calculated accordingly.

3.5.2 Estimation and sampling errors

Survey of Agriculture and Horticulture – 1st June 2007

Estimates were calculated using ratio raising estimation, by strata, with the base data taken from the final dataset from the Survey of Agriculture and Horticulture – 1st June 2006. The base data consisted of response data where available and imputed values otherwise. For the new holdings strata, the absence of base data meant that expansion raising (Population size/Achieved responses) was used instead.

Non-responding and non-sampled holdings were imputed for using the extrapolation factors generated by the ratio raising on their base imputed values. New holdings with non-response were imputed using the expansion raising factors.

Where the number of observations within strata is very low (typically in the strata for the smallest holdings), strata may be merged so that the ratio used for raising is based upon more observations.

Extreme observations believed to be genuine but unrepresentative of their stratum are excluded from the ratio calculation, but contribute to the published total.

Variance estimation on the ratio was produced by strata, using the following formula:

$$\sigma^{2} = \frac{\left(N(N-n)\left(\sum y^{2} + \sum x^{2}\left(\frac{\sum y}{\sum x}\right)^{2}\right) - \left(2\sum xy\left(\frac{\sum y}{\sum x}\right)\right)\right)}{n(n-1)}$$

Where:

N = Number of holdings in the population n = Number of holding in the sample y^2 = sum of squares of sample values y = sum of sample values x^2 = sum of squares of base values x = sum of sample values

xy = sum of product of sample and base values

These variances by strata are then weighted together to produce a total variance. Sampling errors, relative sampling errors (RSE – the key estimator) and confidence intervals were produced for each data item from the variance estimators. The RSE took into account sample design, as it was produced for each strata, but no account was taken of non-sampling errors (see below).

For each data item, a system of ticks and crosses, based upon the RSE was published alongside the results to show confidence within an estimate. Three ticks indicated the RSE was less than 2.5%, two ticks between 2.5% and 5%, one tick for 5% to 10%, no ticks for 10% to 20% and a cross for an RSE over 20%

Statistical principals and methodology are taken from Barnett, Sample Survey Processing & Methods (3rd edition) and Cochran, Sampling Techniques (3rd Edition).

A software package called Genstat was used for estimating totals, variances and other estimates.

Survey of Labour and Diversification 2007

At the time of writing of this methodological report, variance and sampling errors for the Labour Survey have not yet been calculated.

3.5.3 Non sampling errors

Non-Response Errors

The main source of non-sampling errors in England is from non-response. The imputation methodology for dealing with non-response is detailed in Section 3.5.1. Due to the method of carrying forward previous years data, non-response errors on crop and livestock questions should be minimal (although this cannot be calculated). Due to low sampling rates, base data for holdings with small SLRs can be up to a decade old and are likely to be inaccurate. However this is not believed to have a significant effect on item totals.

Coverage Errors

Coverage errors are not believed to be significant. Continuous register maintenance ensures that The Register is up to date and that newly identified holdings are added to the register. As explained in section 3.3.1 of this report it is suspected that there is under coverage of the horticultural sector.

Some over coverage is likely to exist when holdings cease to be active but remain listed as active on The Register. The problem exists because when a holding ceases to be active the occupier to whom Defra correspondence will be addressed may not be present or inclined to notify our office of the change of status.

Measurement Errors

The main cause of measurement error is thought to be relating to the weights of pigs. However, the weights recorded by farmers are unchecked, so it is not possible to estimate the significance of any measurement error.

Respondents also use varying degrees of accuracy, although the holder signs a declaration on the Survey form to the effect that the information given is "correct and complete to the best of my knowledge and belief".

Processing Errors

Scope for these to have a significant affect on the survey results is limited by the validation checks that are in place, however in each survey it is expected that there are some errors resulting from data being keyed incorrectly from form to computer.

3.5.4 Evaluation of results

Survey of Agriculture and Horticulture – 1st June 2007

No specific comparisons at holding level between the survey data and other sources have been carried out. Aggregate estimates were compared to outside data sources from organisations including the Meat Livestock Commission and Home Grown Cereals Authority, Survey of Agriculture and Horticulture results from the Devolved Administrations (Scotland, Wales, Northern Ireland) and previous June results.

Survey of Labour and Diversification 2007

There is no practical way of comparing the Labour Survey figures with other sources, as there are differences in definitions between the Labour Survey and existing sources of labour statistics, such as the Survey of Agriculture and Horticulture. Aggregate level comparisons with FSS 2005 did not identify any differences of concerning proportions.

4. PUBLICATION AND DISSEMINATION

Survey of Agriculture and Horticulture – 1st June 2007

20 September 2007	English provisional results published through a press release and the Defra website.
26 November 2007	English final results published through a press release and the Defra website.

Detailed data queries are available through the Defra website at http://www.Defra.gov.uk/esg/work_htm/publications/cs/farmstats_web/default. htm or by contacting the Farming Statistics team on 0044 (0) 1904 455313

Survey of Labour and Diversification 2007

No results have yet been published from the Survey of Labour and Diversification 2007. A publication with labour data and commonly requested breakdowns is planned for publication in late 2008.

REFERENCES

Most information on the statistics collected in the Survey of Agriculture and Horticulture -1^{st} June 2007 in England can be found on the DEFRA website at:

https://statistics.defra.gov.uk/esg/index/list.asp?i_id=032

Barnett, V. (2002) Sample Survey: Principles & Methods (3rd edition) Arnold Publishing, ISBN 0340763981 Cochran, W G. (1977) Sampling Techniques (3rd edition) Wiley Publications, ISBN 047116240X

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ANNEXES

Annex 1: Definition of Standard Labour Requirement (SLR)

Annex 2: Survey of Agriculture and Horticulture – 1st June 2007 Detailed survey form

Annex 3: Survey of Agriculture and Horticulture – 1st June 2007 Core survey form

Annex 4: Survey of Labour and Diversification 2007

Annex 1: Definition of Standard Labour Requirement (SLR)

The Standard Labour Requirement (SLR) for a farm business represents the labour requirement (in full-time equivalents) for all the agricultural activities on the farm, based on standard coefficients for each commodity on the farm. The SLR is representative of labour requirement under typical conditions for enterprises of average size and performance.

The SLR may be different from actual labour use on a farm depending on factors such as the extent to which the farmer chose to substitute machinery for labour. There are two advantages in using standard coefficients rather than actual labour used:

- SLR can be used as a physical measure of farm size, independent of labour efficiency and other non-size factors
- the labour requirement can be calculated for a group of farms or for a farm on which actual labour use is unknown

Annex 2 part 1 of 4: Survey of Agriculture and Horticulture – 1st June 2007 Detailed survey form

Restric	cted Commercial
	If there are any amendments or corrections to details opposite, please write them in this box.
	Name: Address:
	Postcode: Tel. no. (incl. nat. dialling code)

Please complete this form only in respect of the holding named above **as of 1st June**. For assistance in completing the form please contact us using the details given at the foot of this page. There is a legal obligation, under the Agricultural Statistics Act 1979, to complete and return this form.

1. Land Ar

Area you ow	'n		Hectares	If there are any other holdings under the same occupancy, please list the holding numbers here.
Area owned (Exclude land	let out for 365 days or more)	H2	•	Q111
Area you ren	it In			
	Full Agricultural Tenancy	нз		
For 365 days or more	Farm Business Tenancy	н4	•	
	Other Agreement	HS	•	
For 364 days (including sea	or less isonal grazing licences)	H11	•	
Area you let (Do not accou	out nt for this land on the re	st of the	form)	If the areas in H2 to H12 are zero, please indicate why here:
For 364 days (including sea	or less isonal grazing licences)	H12	•	H100
Area used by (Land owned	r you + area rented in - area le	t out)		
Area used (in land not in pr	cluding woodland & roduction)	H10	•	
Please accoun	t for this area in Sections	2-5		
Official Use O	nly			Department for Environment, Food and Rural Affairs
Name/Addre	ss			Surveys, Statistics & Food Economics, Foss House
Comments in	n box			Kings Pool, 1–2 Peasholme Green, York YO1 7PX Helpline: 01904 455284 Mon - Fri 8:30am - 4:30pm
Comments e	Isewhere			Email: surveys@defra.gsi.gov.uk Web: www.defra.gov.uk
CSS 947 (Rev. 3/0)	7) Please refer to	the note		dditional assistance on filling in the form

Page 1

Annex 2 part 2 of 4: Survey of Agriculture and Horticulture – 1st June 2007 Detailed survey form

Sections 2-5 should rela	te to H10 (total	l area used) in section	1
--------------------------	------------------	-------------------------	---

2. Crops grown on non set-aside land (Do not include crops grown on set-aside land here)

Combinal	ble crops			Other cro	ops (non-horticultural)		
			Hectares				Hectares
	Wheat	A1		Potatoes	Earlies, intended for harvest before 31 July	A10	۲
	Winter barley	A2	32.83	seed	Main, intended for harvest after 31 July	A11	
Cereals	Spring barley	A3	•	Sugar beet (not for stock feeding) Maize (fodder and grain maize) Root crops, brassicas and fodder beet for stockfeeding		A12	•
	Oats	A4	•			A23	•
	Mixed Grain	AS	1			A19	
	Rye	A6	•	All other crops for stock feeding		A18	•
	Triticale	A7	•	All other crops (not vegetables) e.g miscanthus		A31	
	Winter Oilseed rape	A24		Pleas	se list other crops here:		
Ollseed Crops	Spring Oilseed rape	A25	•	A310			
	Linseed	A27		ASTO			
Peas and	Field beans	A21	•				
Beans	Peas for harvesting dry	A22	- -	Bare fallow land)	v (including all GAEC 12	A32	
Total com	binable crops	A89		Total othe	er crops	A39	•

3. Compulsory set-aside land (Cropped and uncropped)

Total compulsory set-aside G7 •

As defined by Single Payment Scheme codes SA1 to SA6, NF1 and NF2. See notes for details.

4. Horticulture

Fruit and Vegetables (grown outdoors) for human consumption (include Spanish tunnels)				Hardy nursery stock (HNS), bulbs and flowers in the open			
			Hectares		- W	Hectares	
	Commercial	C1		Christmas trees	D6		
Orchards	Non-commercial	C2	•	Perennial herbaceous plants (not cut flowers)	D8	•	
Small fruit	Strawberries	C5	•	Other HNS and mixed area	D10		
	Raspberries	C6	•	Bulbs and flowers (Include aquatic plants)	D13	•	
	Blackcurrants	C7	•	Total HNS, bulbs and flowers	D99	•	
	Wine grapes	C10	•	Glasshouse and protected crop	s		
	Other small fruit	C11	•	(exclude Spanish tunnels) Record floor space not bench space	s	ouare metres	
Peas and	Vining peas for processing	85		Vegetables, salad and fruit	F1	1	
beans	Other peas and beans	B14	•	Flowers, foliage for cutting and other plants	F2		
All other vegetables and (including berbs for human of	egetables and salad erbs for human consumption)	B21	•	Glasshouse not in use on survey day	F7		
Total frui	t and vegetables	C299		Total glasshouse (used and unused)	F98		
				Include mushroom sheds in Section 5:	G17		

CSS 947 (Rev. 3/07)

Please refer to the notes sheet for additional assistance on filling in the form Page 2

Annex 2 part 3 of 4: Survey of Agriculture and Horticulture – 1st June 2007 Detailed survey form

Sections 2-5 should relate to H10 (total area used) in section 1

5. Grassland and other land

Г

Grasslan	d and other land		
			Hectares
Grassland	Grass sown in last 5 years	G1	
Grassiand	Other grassland (include permanent pasture)	G2	•
Sole right r mountain,	ough grazing (e.g. hill, moor)	G5	10 8 ()
Woodland		G14	•
	nd not entered elsewhere outdoor pigs land)	G17	•
Total gras	s and other land	G98	

What area of grassland do you expect to harvest for seed this year?	R3	
Potal outdoor area able to be	R4	

6. Livestock (continues overleaf)

				If YES please t	tick	Cattle an	d calves			
	ck kept now later this yea	but expect t ar	0	R12		We are now sourcing cattle data via the the Cattle Tracing Scheme (CTS)				
	ck kept now or silage this	but expect t year	0	R13		Pigs				
	any stock yo	ou are grazing	gonα	ommon		rigs.		lf Y	'ES plea	se tici
land • exclude	e any stock b	eing looked a	after fo	or you on		Temporarily	y reduced pig numbers		L90	
another out Poultry	holding, or d	on land that g		asonally le YES please		contract p	reared for someone el lease specify the comp lese pig numbers below	any na		nd
Temporarily	reduced po	ultry number	5	N1		L92				
				Numbe	Y.				Nun	nber
Hens and	Pullets, point of lay		N2				Sows in pig	L1		
pullets	Birds in laying flock (include	Intensive	N31			Breeding	Gilts in pig	L2		
laying eggs for		Barn	N32				Suckled or dry sows kept for further breeding	L3		
eating	birds in moult)	Free range	N33				Boars for service	L4		
Breeders	Layer breed	ers	N5				Gilts 50kg+ (intended to be kept/sold for further breeding)	15	1	
(include grandparents	Broiler breed	ders	N6			Barren sows for fattening		L7		
and growing pullets)	Cocks and c	ockerels	N7			All other pigs by liveweight	110kg+	L10		
Broilers (tal	ble chickens)		N10				80 - 110kg	L11		
	Ducks		N13			(not	50 - 80kg	L12		
Other	Geese		N14			already	20 - 50kg	L13		
poultry	Turkeys		N15			above)	Under 20kg, include suckling pigs	L14		
	All other bin	ds	N16			Total pigs		L98		

CSS 947 (Rev. 3/07)

Total poultry

Please refer to the notes sheet for additional assistance on filling in the form

What % of your breeding pigs are

housed outdoors?

L16

%

Page 3

N98

Annex 2 part 4 of 4: Survey of Agriculture and Horticulture – 1st June 2007 Detailed survey form

6. Livestock continued

Sheep and Lambs			Other livestock			
		Number		Number		
	Ewes intended for further breeding	M1	Horses used in agriculture e.g for meat or breeding	P3		
Breeding sheep 1 year and over	Intended for slaughter	M4	All other horses	P4		
	Ewes intended for breeding (first time)	M7	Goats	P91		
	Rams for service	M9	All farmed deer	P10		
-4	Females, 1 year and over	M13	Any other livestock e.g donkeys, llamas, mules, hinnies	P11		
Other sheep and lambs	Males, 1 year and over	M14	Total other livestock	P98		
lamos	Lambs, under 1 year	M17	а л Эті			
Total shee	p and lambs	M98				

7. People working on the holding (remember to include yourself)

Part-time is less than 39 hours a week Number of people		Are you a Ltd company or is the holding run by an institution (hospital, school, church, prison)?			
All principal farmers,	Full time	Q101			
spouses, and business partners	Part time	Q102	Q3 YES NO 2		
Calaried manager	Full time	Q103		If YES please tick	
Salaried managers	Part time	Q104	All staff are self-employed	Q100	
Regular workers:	Full time	Q105	Do you expect to employ casual or	appa labour	
Male	Part time	Q106	Do you expect to employ casual or gang labo during the following months?		
Regular workers :	Full time	Q107	Please tick a	I boxes that apply	
Female	Part time	Q108	August - October 2007	Q54	
Casual and Gang	Male	Q109	November - January 2008	Q55	
workers (include SAWS workers)	Female	Q110	February - April 2008	Q56	
Total labour (includin	a vourself)	098	May - July 2008	Q57	

8. Declaration

Signature	in mine	rte.		
V3	Time taken to complete the form V1			
Name (please print)	Any other comments			
	Т99			
Telephone number				
Date	Please now return the form in the enclosed pre-pa Wigston envelope.	id		

CSS 947 (Rev. 3/07)

Please refer to the notes sheet for additional assistance on filling in the form Page 4

Annex 3 part 1 of 2: Survey of Agriculture and Horticulture – 1st June 2007 Core survey form



Survey of Agriculture and Horticulture 1st June 2007

Please complete this form only in respect of the holding named above as of 1st June. For assistance in completing the form please contact us using the details given at the foot of this page. There is a legal obligation, under the Agricultural statistics Act 1979, to complete and return this form.

1. Land area

(do not include land let out for 365 days or	more)	Hectares
Area owned + area rented in for 365 days or more	H1	(
Land rented in for 364 days or less (including seasonal grazing licences)	H11	•
Land let out for 364 days or less (including seasonal grazing licences)	H12	(.)
Total area used by you H1 + H11 - H12 =	H10	•

If the areas In H1 to H12 are zero please indicate why here:

H100

Other holdings

If there are any other holdings under the same occupancy, please list the holding numbers here.

Q111

Official Use Only

Name/Address	
Comments in box	
Comments elsewhere	

2. Crops grown on non set-aside land Seasonally let land

Include crops on land rented in for 364 days or less
 exclude crops on land let out for 364 days or less

Include industrial / energy crops e.g. SRC and miscanthus in A399 Hectares

Wheat	A1	•
Other cereals (e.g. barley, oats)	A199	٠
Oilseed Rape	A245	•
Other arable crops (including potatoes, sugar beet, linseed)	A399	
Crops for stockfeeding	A180	•
Bare fallow- include all GAEC12 land	A32	•

Compulsory set-aside land (Cropped and uncropped)

As defined by Single Payment Scheme codes SA1 to SA6, NF1 and NF2.

Compulsory set-aside G7 •

Department for Environment, Food and Rural Affairs Surveys, Statistics and Food Economics, Foss House, Kings Pool, 1–2 Peasholme Green, York YO1 7PX Telephone: 01904 455284 Email: surveys@defra.gsi.gov.uk Web: www.defra.gov.uk

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37(126)

Square metres

Annex 3 part 2 of 2: Survey of Agriculture and Horticulture – 1st June 2007 Core survey form

4. Horticulture (outdoor crops, including fruit, vegetables and flowers)

include spanish tunneis		Hectares	
Orchards	C90	•	
Other fruit	C91		
Peas and beans (for human consumption)	B90	•	
Other vegetables	B21	•	
Total fruit and vegetables	C299	•	
Nursery stock, Christmas trees, bulbs and flowers	D99		

Glasshouse and protected crops (exclude Spanish tunnels)

Record floor space not bench space

Glasshouse	area	(used	and	unu	sed)	F98

6. Grassland and other land

	Hectares		
Grass sown in the last 5 years	G1	•	
Other grassland including permanent pasture	G2		
Sole right rough grazing (e.g. mountain, hill or moor)	G5		
Woodland	G14		
All other land (including outdoor pig land)	G17	•	

People working on the holding (remember to include yourself)

Part-time is less than 39 hours

- Include managerial, supervisory and office workers
 Include regular and family workers, seasonal and
- gang workers • exclude equestrian workers and those solely involved
- in diversification activities

		wumper
All full-time principal farmers, spouses and business partners	Q101	
All part-time principal farmers, spouses and business partners	Q102	
All other workers	Q112	

8. Livestock

Include any stock you are grazing on common land
 exclude any stock being looked after for you on another holding, or on land that you seasonally let out

Cattle and calves - We are now sourcing cattle data via the Cattle Tracing System (CTS).

		Number
FOWIS - egg layers, breeders and broilers	N97	
Other poultry - turkeys, geese, ducks etc	N90	
Breeding sheep	M80	
Other sheep and lambs	M81	
Breeding pigs	L80	
Other pigs	L81	
Horses / Ponies	P90	
Goats	P91	
Farmed deer	P10	
Any other livestock e.g donkeys, llamas, mules, hinnies	P11	

9. Other details	#YES please tick	
No livestock kept now but expect to have some later this year	R12	
No livestock kept now but expect to make hay or silage this year	R13	

10. Any other comments

Т99				
to be corr	he Informat	plete		given in this return he best of my
Signature	V3			
Name (BLOC	K LETTERS)			-
Telephone	number			
Date	[
Time taken to	o complete the	form	V1	minutes

Annex 4 part 1 of 6: Survey of Labour and Diversification 2007

defra Department for Environment Food and Rural Attain
 If there are any amendments or corrections to det opposite, please write them in this box
Name: Address:
Postcode: Tel. no. (ind. Nat. dialling code)

Survey of Labour and Diversification on Agricultural and Horticultural Holdings 2007

What we would like you to do.

A survey is taking place throughout the European Union in 2007 to provide up-to-date information about the structure of agriculture and horticulture in Member States. Most of the information for England can be provided from the June Survey, but to complete the requirements we need to ask a sample of holdings to provide us with some detailed information on the holders, managers and other workers employed on the holding and any diversification activities carried out on the holding.

The information you provide is primarily used for statistical purposes. Please read the Data Protection statement on pages 7 and 8 of this form for more details.

Please complete this form in respect of the 12 months ending September 2007 and return it to us in the pre-paid envelope within two weeks of receipt.

Thank you for your co-operation.

Marc Thomas, Statistician, Surveys, Statistics & Food Economics Foss House, Kings Pool, 1-2 Peasholme Green, York YO1 7PX

Official Use Boxes

Name / Address	
Comments in box	
Comments elsewhere	

Department for Environment, Food and Rural Affairs Surveys, Statistics & Food Economics, Foss House, Kings Pool, 1–2 Peasholme Green, York YO1 7PX Telephone: 01904 455284 Email: surveys@defra.gsi.gov.uk Web: www.defra.gov.uk

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Annex 4 part 2 of 6: Survey of Labour and Diversification 2007

Please read these important notes first

- Period covered. This form covers the 12 month period from beginning October 2006 to end September 2007.
- Completion. This form should be completed only in respect of the holding named on the front page.
 Total labour force. Include each person once only.
- Trustees. Where a holding is operated under the name of a trustee, please enter the trustee's details as the holder.
- Land agents. Land agent details should be entered as the manager and their employer's details as the holder. If the estate is a Limited Company, the Land Agent details should still be entered as the manager but there should be no holder.

1. Multiple groups of holdings

Prisons. Any farm workers employed specifically for working on the farm should be included but prison inmates excluded.

 Need more information or help? Notes are provided in this form to help you complete it, but if you have any difficulties in providing the information, please contact:

> 01904 455284 Monday – Friday 8.30am – 4.30pm Or email: surveys@defra.gsi.gov.uk

If possible, please complete this form only in respect of the holding number printed o	n the front of the form.
If you can only complete this form in respect of a multiple group of holdings, please tick here and list the other holding numbers below.	H1
н99	

2. Status of the farm business

Who takes financial and legal responsibility for the hold Limited companies: For the purpose of this form, do not de complete only the Manager column.		ler. Tick boxes	B4 and B8 below. In Section 3,
	Tick one b	ox only	
Holder only	B1		B2 includes spouse, brothers, sisters, parents, sons and daughters.
Holder and close family member(s) jointly	B2	⊡•−_	B3 may include other family members not included in B2 above. Please designate ONE person as the principal holder and answer
Holder and other business partner(s)	B3	•	questions in Section 3 accordingly.
A limited company or an institution (e.g. hospital, school, church etc)	B4	_ -	Do not declare a holder. Tick box 88 below. In Section 3, complete only the Manager column.
Who is mainly responsible for the day-to-day running o If there is an equal partnership, please choose one person on			
	Tick one b	ox only	
Holder only	B5		
Holder's spouse	B6		The holder's husband or wife, or other person in a similar un-married relationship.
Holder's close family member	B7	•	
Another person	BS	- F	These people are termed manager In Section 3.

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Annex 4 part 3 of 6: Survey of Labour and Diversification 2007

3. Details of Holder, Holder's Spouse and Manager Please read all the notes on the right hand side of this page Holder before completing all relevant columns in this section. Where there are joint holders, please designate one person as the principal holder and complete the Holder Please tick one box only column for that person. If a non-principal holder is the principal Does the Holder have a spouse? A10 Yes No holders spouse then enter their details (Limited companies please ignore.) In the Holder's Spouse column. If YES, please enter the details in the Holder's Spouse column below, even if the spouse The details of other non-principal does not work on the holding. holders who work on the holding should be entered later on the form in the appropriate section. If you have ticked box B4 in Section 2, complete only the Manager column. Otherwise the Manager column should only be completed if you have ticked box B7 or box B8 in Holder's spouse Section 2. Husband or wife or other person in a For all appropriate columns, tick one box in each of the four sections below. similar un-married relationship. Please enter their details in the Holder's Spouse column whether or not they Holder's Holder Manager work on the holding. Spouse Manager Only complete the Manager column if neither the Holder nor the Holder's Male A1 A22 A43 Sex Female A2 A23 A44 Spouse is responsible for the day to day running of the holding. Only one person should be regarded as the 16 - 24 A3 A24 A45 manager Where two or more people share the 25 - 34A4 A25 A46 management, please enter one as the manager and enter the details for Age If age is 35 - 44A5 A26 A47 the others later on the form in the appropriate section. not known please give an 45 - 54 A6 A27 A48 Age Age is needed to give more accurate statistics for workforce planning. If you do not know the exact age then estimate A28 A49 55 - 64A7 65 and over A8 A29 A50 please provide an estimate. A13 A34 A55 Farm work None This should include all farming activities on the holding and the preparation of its produce for market. * Time spent Less than 1/4 A14 A35 A56 on farm work it should include managerial and office work. Diversification activities qualify 1/4 to less than 1/2 A15 A36 A57 (on this holding as a as other paid work. 1/2 to less than 3/4 A16 A37 A58 proportion of the last 12 ¾ to less than Time spent on farm work months) A17 A38 A59 Full time is the equivalent of 39 full time hours a week over a full 12 months. The other categories are based on a Full time A18 A39 A60 proportion of this 12 month period. Other paid work Other paid work includes any activity A19 A40 A61 None Time spent Less than farm work or occupation for payment of money on other A20 A41 A62 on this holding or kind. It includes: paid work non farm work OFF the holding; non farm work ON the holding such More than farm work A21 A42 A63 on this holding as tourism, operating the farm shop or other diversification activities; farm work ON ANOTHER holding. * If this holding is part of a multiple group of holdings and you have not ticked box H1 If the other paid work occupies exactly in Section 1, please include only the proportion of the labour that relates to the holding number printed on the front of this form. A rough estimate is acceptable. the same amount of time as the farm work on the holding, answer on the basis that less time is spent on other paid work.

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4. Other family workers (Do not include Holder's spouse who should be entered in Section 3)

			ber of les	Num fem	per of ales	relatives of the holder and who have been engaged in farm work on this holding in the last 12 months.		
Total numbe	r of other family workers	C1		C10		 all workers related to the holder whether 		
in the section	e details of these workers below ed 0 for both C1 and C10, pro	oceed to	o Section	5		 an workers related to the holder whether permanent or casual; anyone working on land seasonally rented in Exclude: the holder, the holder's spouse and manager anyone working on land seasonally let out. 		
	n farm work aproportion of the last 12 months)		ber of iles	Numl	er of ales	Farm work This should include all farming activities on the holding and the preparation of its produce for		
All ages	Some but less than ¼	2		C11		market. It should include managerial and offic work. Diversification activities qualify as other		
	¾ to less than ½	а		C12		paid work.		
	½ to less than ¾	C4		C13				
	¾ to less than full time	C5		C14		Time spent on farm work Full time is the equivalent of 39 hours a week		
Full time		C6		C15		over a full 12 months. The other categories based on a proportion of this 12 month peri-		
Time spent o	on other paid work		ber of les	Numl	per of ales	Other paid work Other paid work includes any activity or occupation for payment of money or kind.		
	None	07		C16		It includes: non farm work OFF the holding;		
Less tha	n farm work on this holding	C8		C17		non farm work ON the holding such as tourism operating the farm shop or other diversification		
More tha	n farm work on this holding	C9		C18		activities. farm work ON ANOTHER holding. If the other paid work occupies exactly the		
						same amount of time as the farm work on the holding, answer on the basis that less time is spent on other paid work.		

5. Non family regular workers (Do not include casual workers who should be entered in Section 6)

		Number of males	Number of females	Please enter the number of non-family regular workers who have been engaged in farm work		
Total number of other regular workers		E20 E30		on this holding in the last 12 months. For no on farm work and time spent on farm work, s		
Please provide details of these workers in the section below				Section 4 above.		
If you answ	ered 0 for both E20 and E30, p	roceed to Sectio	n 6			
	on farm work as a proportion of the last 12 months)	Number of males	Number of females	Include: • anyone working on land seasonally rented in;		
	- 2128	E2	50	 family workers if limited liability company. Exclude: 		
All ages	Some but less than 1/4	EZ	E8	Exclude:		
All ages	Some but less than ¼ ¼ to less than ½	E2 E3	E9	· persons related to the holder;		
All ages						
All ages	¼ to less than ½	E3	E9	persons related to the holder; contract labour, seasonal/casual workers;		

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6. Non family casual workers

in Section 4.	
F1	Yes No
rson day= 8hrs)	
= 30 days, 12 workers for	r half a day = 6 days,
2006 F4	person days
2007 F5	person days
2007 F6	person days
2007 F7	person days
	F1 rson day= 8hrs) = 30 days, 12 workers for 2006 F4 2007 F5 2007 F6

7. Contract labour

Include self employed workers or people employed by a third party e.g. relief Exclude unpaid work under mutual aid arrangements, agricultural accountan	ragencies, g icy work, co	ang labour. Insultancy w	ork.
Has any contract labour been used on the holding in the last 12 months? Please tick one box.	G1	Yes	, No
If 'YES' please estimate the total number of PERSON DAYS (1 person day = 8hrs) worked by contract labour during the last 12 months.	G3		Number of person days

8. Diversification and contract work

Correction and the barriers of		and the second sec	
IT YES, please tick the box beside	e any or the commercial e	nterprises listed below which you run on this holding	
Contracting / Haulage		Direct Sales	
gricultural contracting	51	Farm shops	511
ther (e.g. haulage)	52	Other sales (e.g Pick Your Own)	512
ourism		Processing / Food Manufacture	
Camping / Caravanning	53	Animal products (e.g. dairy products)	513
elf catering	54	Arable products (e.g. crops/veg / fruit), wine	514
ervices (B & B)	55	Handicraft	516
port / Recreation		Wood processing	517
questrian	56	Environment	
ishing	57	Aquaculture	518
hooting	58	Renewable energy production e.g. wind energy	519
Solf	59	Other activities	
Other sport	510	Renting out buildings for non- agricultural activity e.g. offices	527
		Any other non-agricultural activity	S15

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9. Comments

mments you have on the	figures provided. T	his may remove the ne	ed for us to contact you.	
	mments you have on the	mments you have on the figures provided. T	mments you have on the figures provided. This may remove the ne	mments you have on the figures provided. This may remove the need for us to contact you.

10. Declaration

Signature	V3	Name (Please print)	
Telephone No. (Ind. National dialling code)		Date	
Time taken to con	plete this form V1	Minutes	

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FARM STRUCTURE SURVEY 2007

METHODOLOGICAL REPORT

MEMBER STATE: NORTHERN IRELAND (UNITED KINGDOM)

Farm Structure Survey 2007 METHODOLOGICAL REPORT - NORTHERN IRELAND (UNITED KINGDOM)

<u>SUMMARY</u>

The Department of Environment, Food & Rural Affairs (DEFRA) was responsible for collating FSS 2007 data from each of the four countries of the United Kingdom and submitting to Eurostat. The Department of Agriculture & Rural Development (DARD) in Northern Ireland is responsible for the collection of agricultural statistics for that country.

The register used in the conduct of DARD farm surveys contains all farm businesses who have contact with the Department, either in an administrative role (application for grants or subsidies) or in a statistical role (response to a statistical survey). The register is maintained by IACS administration and is updated on regular basis. The population for statistical purposes is established each year when a download of currently active businesses is obtained from the register.

All active farms in Northern Ireland (26,146) were eligible for surveying for the 2007 Structure Survey. The work was carried out in the following two postal surveys in addition to using administrative sources:

- Data on crop areas and livestock numbers were collected relating to the situation on 1st June 2007.
- Other data were collected in a special additional survey carried out in March 2007.

Since the June questions were the same as in previous years no pilot exercise was required. The labour questions were largely the same as in previous surveys though with more detail, and were developed and checked in conjunction with a team of data users and were further tested by a number of Department staff who have close farming connections.

The response rate for the June survey was 69.8% and for the March survey 70.0%. For businesses which had made a return to earlier June surveys but which failed to respond in June 2007, estimates were provided, based on the previous year's return updated by trends reported by farms which did respond. For new businesses which failed to respond, estimates were made from administrative sources, covering the most significant crops and livestock. A different approach was used to deal with non-response to the March survey. The data were handled in a similar way as in a sample survey, with raising factors, based on farm type, size and location, added to the responses.

For the June survey data entry was carried out by a commercial company, Fujitsu, with double entry keying. Data from the March survey were captured by DARD statistical staff using a scanner. All data validation was carried out by staff of Farm Surveys Branch of DARD. Preliminary results of the June survey were published on 28th August 2007 and final results on 20th November 2007. Work on validating the March data was spread over two periods, one before the June survey and the other after that had been completed,

The main strength of the Northern Ireland system was the link with administrative systems which provided an accurate and up to date register and which provided an important means of validating returns. Almost 95% of NI farms make IACS returns.

1 INTRODUCTION

1.1 History, scope

<u>History</u>

The series of crop and livestock surveys for the island of Ireland which extends over 150 years is one of the oldest in the world. The first survey was carried out in 1847. Annual surveys of crop areas and livestock numbers have been carried out in Northern Ireland in each year since its inception in 1921. These, along with data from special surveys to complete the requirements, have contributed data to Farm Structure Surveys since 1975.

<u>Scope</u>

The surveys were addressed to all businesses which, at the time of preparing the mailing list, were believed to be active. All businesses which received grants or subsidies in relation to crops or livestock were included along with any others which were active in the previous statistical survey or which had contact with DARD indicating active participation in an agricultural or horticultural enterprise. Returns from inactive businesses were subsequently excluded from the database. (Current average annual turnover in businesses is estimated as 7% closing and 5% new, with a net reduction of 2% per year, however the vast majority of these changes are generational shifts rather than completely new entrants).

1.2 Legislation

National farm survey legislation

The Agricultural Statistics (Northern Ireland) Order 2004 authorises DARD to demand response to a specific list of questions which encompasses those which were asked in the June survey. This legislation was used in the conduct of the June 2007 survey but, while DARD has the power to do so, it was not politically or practically appropriate to prosecute for non-response.

Relevance to FSS

The Order requires occupiers of agricultural land or the owners of livestock to furnish to DARD, at any time or times in any year, such returns as may be prescribed in relation to a list of topics such as crop areas and livestock numbers. It is not specific to any one survey.

Protection of respondents

The Order restricts the ways in which individual records may be used and/or disclosed. This guarantee is reinforced by the Northern Ireland Code of Practice on Confidentiality which is adhered to by all Government statisticians in Northern Ireland. Along with the Data Protection Act 1998, this Code extends the guarantee of confidentiality to respondents to voluntary surveys such as that undertaken in March 2007 for the FSS.

Legislation on survey costs

There is no specific legislation related to the cost of the FSS in Northern Ireland. The cost was met from the Department's annual budget. The

collection of agricultural statistics contributes to one of the Departmental objectives, namely:

"To promote sustainable development of the agri-food industry and the countryside and stimulate the economic and social revitalisation of disadvantaged rural areas."

Northern Ireland's obligations to the UK

Following the devolution of powers to the Northern Ireland Assembly, DARD's obligations to provide statistical data to enable DEFRA to meet UK obligations to the EU were embodied in a Concordat relating to the provision of statistical information.

1.3 Main changes in the 1990s

The main change in the 1990s involved (a) an improvement to the register and (b) the advent of IACS and the subsequent access to administrative data leading to improved data quality.

The register

Prior to 1997 the register used in the conduct of farm surveys was specific to that task and was based on land ownership. It was updated by means of returns from annual surveys. It was divided into "mains" holdings (above 6 ha) and "minor" holdings, the former being surveyed each year and the latter every third year. The occupiers of one third of all holdings took no active part in farming, all the land being let out on a short term basis. Holdings in this category were included in the FSS up to and including 1990, though in that year records from such farms were subsequently excluded from the FSS file.

Since 1997 the register has been shared with IACS and other administrative sections of DARD and updated on an on-going basis. IACS checks ensure that, for the majority of those covered by the surveys, there is no duplication which had been a problem under the old system.

A break in statistical series occurred when the new register was introduced in 1997. The 1990, 1993, 1995 and 1997 Surveys were on the old basis and the Surveys since then, on the new.

IACS and administrative data

Almost 95% of farms in Northern Ireland grow cereal crops or have cattle or sheep and are, therefore, included in the IACS system. This benefits the operation of the FSS first by facilitating the identification of all such businesses and second by providing basic data which can be used to verify returns. For example if a farm has received a subsidy in respect of ewes but omits sheep from his census return, a query will be made. Other administrative sources have also been used to improve data quality by flagging up which enterprises should be recorded in statistical returns for specific farms. These sources include animal health registers and also reports by farm hygiene inspectors and farm and horticulture advisors.

2 CONTENT

2.1 Characteristics

For the most part information was collected in Northern Ireland and provided to Eurostat according to the accepted exclusions listed in Commission Decision 98/377/EC amending Annex 1 to Council Regulation 571/88/EC.

There were a number of exceptions where items, though existing in the UK, were non existent in Northern Ireland. In such cases, most notably D11 (sugar beet) and G04 (vineyards), zero was recorded.

The UK was not authorised in 98/377/EC to collect information on Section M from a sample survey and all farms were asked to provide data on this. However non-response proved a problem and no acceptable method of imputing estimates for this could be found. To ensure good quality of data on this topic, raising factors were attached to data on this section (the same raising factors as for Section L).

From its register DARD identified¹ very few "group holdings" and information on this was not sought for Northern Ireland.

2.2 Questionnaires

Two separate questionnaires were used --- one for crops and livestock (June) and the other for all other FSS items (March).

Both included questions not required for the FSS. The June form included a section on the numbers of farmers and workers² working on farms on June 1st. The March form sought information on the tasks for which agricultural contractors were employed (relating to the period March 2006 – March 2007). It also collected information on the ages of family and non-family regular workers and the other gainful activities of farmers' spouses whether they worked on the farm or not.

Copies of the questionnaires and associated notes for guidance are attached.

¹ The DARD business register includes background information on the composition of the ownership of each IACS business.

² The FSS labour definition do not satisfy the needs of other users of statistics on the agricultural labour force in Northern Ireland.

3 SURVEY METHODOLOGY

3.1 Survey organisation

The FSS in Northern Ireland was under the management of a Principal Agricultural Economist with one Deputy Principal Statistician and 6 administrative staff who organised and carried out all the work with the exception of printing and mailing forms and data entry for the June questionnaire.

The work of the team was monitored by the Farm Census Development Group that considered and recommended any changes from earlier surveys. This group comprised a number of key users of the data.

3.2 Work process

Planning dates for the 2007 FSS can be seen in the table below:

March survey³

November 2006	First draft of the March questionnaire prepared
December 2006	Options discussed by the Farm Census Development
	Group
December 2006	Plans discussed at UK level to ensure co-ordination
January 2007	Farmers' associations informed of planned surveys in
	2002
January 2007	Contracts for printing and addressing forms agreed
February 2007	Staff instructions prepared
February 2007	Validation programmes prepared
February 2007	Press Release about the survey issued
February 2007	Forms posted
March 2007	Reminder posted to non-respondents
May 2007	Validation process halted ³
September 2007	Validation recommenced
October 2007	Clean file completed
April 2008	Results published

³ Work on validating and checking the data from the March survey began in May 2007, then interrupted by the June survey and a further survey carried out in December, before being restarted in September 2007.

June survey

The organisation of the June survey continues on an annual cycle but key dates in running the survey included the following.

Press Release issued
Forms posted
First reminder issued
Second reminder sent
Third reminder sent
Preliminary results published
Files closed
Final results published
Detailed analyses published

3.3 Preparing the survey operations

3.3.1 Population and frame

The population for the additional survey questions was based on the 2006 June Agricultural survey. There were 26,739 active farms recorded for that year according to EU definition 571/88.

Definition of a farm business

The definition of a farm business used in Northern Ireland⁴ is:

"a single unit, both technically and economically, which has a single management and which produces agricultural products"

Within that framework a threshold is applied so that the population surveyed includes:

"all active farm businesses having one hectare or more of farmed land, whether owned, leased or taken in conacre⁵, and those with under one hectare having any cattle, sheep or pigs or with significant poultry or horticultural activity".

The Register

The IACS administrative system maintains a register of all DARD "clients". Each person or company is allocated a client reference and each client is associated with a specific business, in accordance with the rules operated by the IACS controls. To this register have been added other clients and businesses, such as pig, poultry, horticulture or potato specialists, who have not made an IACS return but which are included on other DARD administrative registers, e.g. customers of the DARD Advisory Service. The register also includes other businesses which Farm Census Branch have identified from external sources.

⁴ This differs from that used in the other UK countries.

⁵ Conacre is the system of annual lets which involves 30% of agricultural land in Northern Ireland.

The register for each client includes

- name
- address
- telephone number
- a reference for the business with which he/she is associated. This business reference incorporates a grid reference of the main farm buildings.

Behind the register screen for each client the history of the associated business is held, including a report on its acceptance as a separate business and a note about which other clients are included in the business.

For each business a principal "client" is identified and a Survey Reference Number⁶ attached to that client name.

The register does not hold statistical data about each business. A separate data file is held for each survey in SPSS for Windows. Files can be merged as required.

Identification of the survey population from the Register

Around one month before each survey, the population of possibly active farms is downloaded from the register. This is defined as any which

- received a grant or subsidy for crops or livestock within the previous 15 months; or
- were flagged as "survey active" after the previous annual June survey; or
- were identified from other sources in the course of the previous year and which were flagged accordingly (see next section).

Steps to improve the Survey Register

Each year, lists of agricultural producers are received from other sources such as mushroom growers from crop advisors or poultry producers from quality assurance personnel, not normally covered by IACS. These lists are compared to the previous years register to identify any new producers so that they will be included in the next survey. A check is made to ensure that the activity which is flagged is recorded in the subsequent return. Checks are also made to ensure no holding is duplicated within the sampling population.

3.3.2 Survey design

The March and June surveys were conducted as sample surveys in which 21,911 farms were surveyed in June and 13,387 were surveyed in the March survey. For the June data, estimates were provided for non-respondents. However, because of lack of other information sources, no estimates were made for those who failed to respond to the March survey. In that case the

⁶ It was found necessary to maintain Survey Reference numbers in addition to Business References to facilitate managing the dynamics of change of business identifications.

data were treated as if they were derived from a sample survey, the sample consisting of those who responded.

Sampling/raising frame

Data from the Mar	ch survey were raised in accordance with a 3 dimensional
frame with 9 farm ty	ypes by 3 business sizes by 4 NUTS3 areas. These were:
Type of farm:	Cereals, General Cropping, Horticulture, Pigs & Poultry,
	Dairying, Cattle & Sheep: LFA, Cattle & Sheep: Lowland,
	Mixed, Other types.
Size of business:	Under 8 ESU, 8-<40 ESU, 40 ESU & over
NUTS3 area:	Belfast and Outer Belfast combined, East of NI, North of
	NI, West & South of NI.

Raising factors varied from 1.50 to 4.67 (excluding 1 record) with 87% of records having a raising factor of less than 4.00.

The sample frame for the questionnaires sent for the Labour information (March) included only those farms which were going to receive a June Survey form.

3.3.3 Pilot Survey

The questions in the June 2007 survey were the same as those in previous June surveys so they were not tested through a pilot.

As changes to the basic Structure Survey questions were minimal – from the previous survey - a full pilot was not conducted in 2007 but the Department's 5 FADN data collectors were consulted as were a similar number of DARD personnel with close farming connections.

3.3.4 Informing and training staff and respondents

Staff who investigated queries

For all surveys administrative staff whose job is to investigate and, if necessary, correct queried returns are provided with a detailed instruction manual which indicates the appropriate steps to be taken, i.e. where supporting evidence may be found in the IACS system and when a phone call to the farmer is necessary.

New staff are given individual training before beginning work on their first survey. DARD operates a comprehensive training programme. In addition to formal training delivered externally, manuals are provided for specific topics and staff units use these for more targeted training, e.g. good telephone techniques.

Respondents

Before the March survey a Press Release was issued, describing the role and coverage of the survey.

The June survey is regarded⁷ as a routine part of the farming year and farmers do not have to be specially informed about it. However special posters giving notice of the survey are placed in strategic locations (markets, rural banks, local DARD offices) in May each year. E-mail reminders were also sent to those farmers who had registered their e-mail account with the Rural-NI farming portal.

3.4 Sampling, data collection and data entry

3.4.1 Drawing the sample

All farms classified as small, medium and large / very large (using the SGM methodology) were included in the survey. An additional 50% of farms, classified as very small, were identified and surveyed. These farms are targeted on alternate years.

3.4.2 Data collection

Data collection methods

The data were collected by means of a postal survey.

Non-respondents who were believed to have pigs, poultry or potatoes were telephoned to obtain the maximum response.

DARD is committed to reducing the burden of form filling and all June surveys collect information on the time taken to complete the questionnaire time. The average in 2007 was 18 minutes. The time taken to collect the information of the specific Structure Survey was 14 minutes.

Data entry modes

The June data were captured using double entry keying system through a reputable professional company – using a heads down approach.

The March data were keyed in-house.

3.4.3 Utilisation of administrative data sources

Data was also obtained through administrative sources. Appendix 3 lists the variables associated with these. Each administrative unit used is based on the holding definitions used for any farm surveys. The coverage of data from administrative sources is complete, particularly those with financial links which are subject to stringent checks.

All of the data derived from administrative sources (with the exception of the ESA coverage) were matched using name and address as key identifiers. As the total numbers were small, each case was linked manually to eliminate errors.

3.4.4 Control of the data

⁷ As reported by one of the NI Farming Organisations.

June forms

An initial scrutiny of forms was made to ensure that they were legible before passing to the data entry process.

Data on the June forms were keyed twice into different files which were then compared to identify errors in data entry. The clean version was then returned to DARD for electronic validation. These were of 4 types:

Sub-totals: Sub-totals were included on the forms for land use and for each of the main livestock types.

Maximum values: For each item a maximum value was set, at a level below the absolute maximum expected.

- Credibility checks: These identified unlikely scenarios, e.g. ewes but no lambs, sows but no piglets, large cereal areas but no setaside.
- Flag checks: Before the survey a number of Yes/No flags were set against each Survey Reference number. Information to do this was derived from IACS and related information, from the previous survey return and from other sources during the preceding year. For example, if the business had received a sheep premium subsidy but no sheep were recorded on the form, this was rejected.

March forms

Forms which recorded a farm diversification activity (Section A) were scrutinised and checked to ensure that the particular type of activity was correctly identified (respondents were asked to give details of the activity as well as placing it in a category).

A series of validation programs were set up using the SPSS analytical package. These tested for logical errors and credibility checks. Second level checks applied when the information was converted from the format in which it was collected to that in which it was supplied to Eurostat. For example if the form indicated that the occupier was the manager, data for a separate manager were rejected. The third level checks were made when the Eurostat validation checks were run.

Missing data was investigated by administrative staff. Data credibility checks were scrutinised by administrative supervisors, under pre-set guidance instructions (e.g. maximum values).

3.4.5 Non response

Non-response was interpreted as questionnaires which are not returned at all. Partly completed ones were treated as queries and finalised by telephone contact with the farmer.

Actions taken

One reminder was issued for the March survey and three for the June. Further reminders were not issued for March to avoid compromising responses to the June survey. The first June reminder was a card, the second and third included duplicate forms with the third reminder form to very small farms (<3ESU) shortened to include only aggregated data. The third reminder also included a short note of common questions concerning the census, with answers which aimed to highlight its importance.

Non-respondents were not prosecuted because legal advice indicated that a successful prosecution would be unlikely and that the step would be likely to lower response to subsequent surveys rather than improve it.

The Department is continuing to make the census as easy for the data providers as possible. The following is a list of ongoing activities to assist with this aim.

- Query calls are kept to a minimum through reference to other data sources;
- In most years the coverage of the June survey has been reduced from a full census to a sample survey;
- A poster campaign was adopted to present a more friendly image;
- Survey results are made freely available to all on the DARD website;
- Help is freely available to farmers in competing the form.
- An on-line version is available to anyone wishing to complete the form through those means

Reasons for non-response

Non-co-operation with Government is a political reality in some areas. There was a strong regional variation in response rates, ranging, for the June survey, from 60% to 72% across the six counties.

3.5 Data processing, analysis and estimation

3.5.1 Methods for handling missing or incorrect data items

June survey

Queries on forms which were <u>returned</u> for the June survey were dealt with:

- by reference to the relevant administrative file, i.e. cereals, fodder areas from IACS, cattle from subsidy claims and milk quota records, sheep from sheep subsidy claims;
- for other items the farmer was contacted by telephone.

A significant number of forms were returned indicating that the business was no longer active and that the land had been let. In such cases the administrative files were checked to ensure that no subsidy claims had been made.

Data were imputed for forms which were <u>not returned</u> for the June survey:

- since the same questions had been asked in each previous year, the most recent return was used as the basis for imputation;
- for items where significant⁸ changes between 2005 and 2007 were recorded by those farms which did respond, the "brought forward" data for non-respondents were trended accordingly;
- for farms believed to have pigs, 1000 or more poultry or to grow potatoes, telephone enquiries were made;
- for new businesses for which no "brought forward" record was available, estimates were made on the basis of the information in the IACS and other administrative systems.

March survey

Most queries on forms which were <u>returned</u> for the March survey were dealt with through telephone enquiries. However, for a number of questions a "no" answer was assumed if there was no response given, e.g. Section A (farm diversification), use of contractors, irrigation, other employment (if aged 50+).

Both surveys

Only staff of Farm Census Branch of DARD are authorised to make changes. All changes are checked by a second, more senior, member of staff. All data are processed using SPSS analyses programs. These include a suite of credibility checks and maximum values tests.

⁸ For different items the level at which a change was significant varied. Also a subjective view was taken on whether changes were due to the number of farms including a particular crop or livestock type or whether due to an increase or decrease in enterprise size.

3.5.2 Estimation and sampling errors

A previous interview survey conducted among 10% of farm households in Northern Ireland indicated a good match with the FSS on the time spent on farm work and the incidence of other gainful employment. An analysis of the response rate across the nine main robust farm types shows a 0.998 correlation between sample responses and the population total.

3.5.3 Non-sampling errors

Coverage errors

Coverage errors are believed to be minimal for the cattle, sheep and cereal sectors. The other sectors are targeted in rotation when other sources of information are consulted.

The potato and horticultural sectors were targeted in 2007 and the registers updated where appropriate. A separate Horticultural survey provided additional information on the coverage of this type of enterprise

Coverage of the poultry sector is difficult because the questions refer to one specific date when a number of producers are likely to have no birds on their farm and to be disinfecting their premises. It is believed that a significant number of farms (1 or 2%) fatten turkeys specifically for the Christmas market and do not have any on their farms on the June census date. The number of farms with poultry at any time is believed to be around 10% short, but the number of birds recorded on the census date is believed to give a good measure of the position at that time.

Measurement errors

The main cause of measurement errors arises from the difficulty in estimating the ages of cattle and the weights of pigs and piglets. IACS requires farmers to have farm maps with the areas of each field marked on them and a percentage of areas are checked by IACS staff each year, so that errors in area estimation are thought to be small.

Processing errors

Scope for these is limited by the procedures and checks which are in place.

Non-response errors

The main source of error in the FSS 2007 for Northern Ireland resulted from non-response. The means of dealing with non-response is detailed in Section 3.5.1. For enterprises for which administrative data were available (cereals, beef cows, dairy cows, ewes) and for activities which were specially targeted (pigs, poultry, potatoes) the impact of non-response in the totals is believed to have been within +/- 3%. It is likely to have been higher for other items, particularly those found on only a few farms.

3.5.4 Evaluation of estimates

The annual June survey covers all farms greater than the very small classification and an alternating half of those classified as very small, giving 78% coverage. Validations on census returns are carried out using the IACS and APHIS system ensuring the coverage is as robust as possible The 2007 comparison of estimated survey total and APHIS total indicated a difference of <0.5% between the two systems. Comparisons between only those returns received for 2006 and 2007 and finalised totals (including estimates and new businesses) are favourable with only a few percent variation. Greater variations are seen in marginal or volatile enterprises such as pigs and poultry.

4 PUBLICATION AND DISSEMINATION

June survey

25th August 2007	Preliminary results (macro level) published through a Press Release and the DARD website
20 th November 2007	Final results (macro level) published through a Press Release and the DARD website
15 th January 2008	Final results (micro level analyses by enterprise size and by geographical area) published in a booklet which was freely available in full on the DARD website.

March survey

April 2008	Final results (micro level analyses by enterprise size
	and size) published in a booklet which was freely
	available in full on the DARD website.

Both the published booklets contain full descriptions of the methodology

Both publications are available free to download from the DARD website at <u>www.dardni.gov.uk</u>

Access to individual data is not possible.

5 SUGGESTIONS FOR FURTHER TASKS

Each year a review of the farm survey system is be undertaken..

The main issues in the reviews are include:

- revised use of IACS data in light of SFP processes
- wider use of the cattle tracing system
- access to other administrative systems
- improving response
- targeting the non-IACS sectors
- The demand for more focused information
- The demand for information for equality proofing

IACS data

With the introduction of the Single Farm Payment the change in the data collected via the IACS system will have to be taken into consideration when preparing the census forms.

Cattle tracing system (APHIS)

The data extracted from the APHIS database is considered to be of excellent quality and suitable for use for statistical purposes.

Other administrative systems

Wherever possible, all DARD administrative systems are being linked to the central DARD client register.

Improving response

Major improvements to response rates are unlikely to be achieved over the next few years but steps can be taken to safeguard against further deterioration. These include giving publicity to the role played by good statistics in developing Government policies and continuing to ensure that no lapse in confidentiality occurs.

Targeting the non-IACS sectors

Currently new means of sharing the information held and gathered by the horticultural advisory service are being explored. This has improved coverage of horticultural activities in 2007 and will be continued. Other sectors are targeted in rotation.

REFERENCES

Most information on the statistics collected in the FSS 2007 in Northern Ireland can be found on the DARD website at <u>http://www.dardni.gov.uk/econs/econ0033.htm</u>. This includes:

- Census 2007
- European Union Structure Survey 2007

Alternatively hard copies may be obtained from DARD of:

- The Agricultural Census in Northern Ireland: Results for June 2007
- EU Farm Structure Survey 2007, Northern Ireland:

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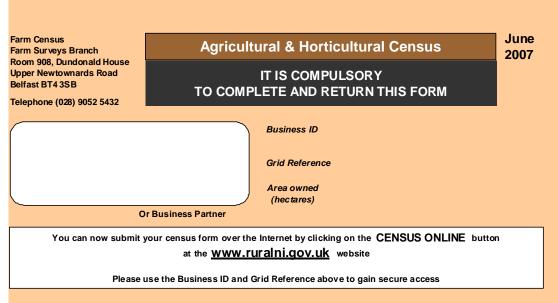
<u>Conor McCormack</u>, DARD, Dundonald House, Upper Newtownards Road, Belfast, BT4 3SB

conor.mccormack@dardni.gov.uk

Appendix 1 – Structure Survey

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Appendix 2 – June Census



Dear Farmer / Grower,

AGRICULTURAL AND HORTICULTURAL CENSUS, JUNE 2007

Under the Agricultural Statistics (Northern Ireland) Order 2004 you are required to complete **all** of this form in respect of the land you occupy. **This is a legal requirement.** Under Section 6.1 of the Order, anyone who without reasonable excuse fails to complete and return this form shall be guilty of an offence and may be liable, on summary conviction, to a fine not exceeding £1,000.

Information to be supplied

The information which you are asked to supply concerns the use, by you and other partners in your business, of agricultural and horticultural land, the numbers of livestock you own on **1 June 2007** and the numbers of persons working in your business on that date. Data collected under the Agricultural Statistics (Northern Ireland) Order 2004 may only be used for specified purposes, such as the preparation of statistics or to assist with the control of serious animal diseases.

Notes:

- Please return the form, in the pre-paid envelope provided, by 15th June 2007. A stamp is not required.
- Further notes for guidance are enclosed. Should you have any problems with the completion of this form, please telephone (028) 9052 5432.
- An occupiers copy of the form is enclosed for you to retain for your own records.

Mr Norman Fulton	OFFICIAL BOX								
Director of Policy & Economics	Query	Cleared	Checked	Notes					
				1st:	Scrutiny	2nd Sci	utiny		
				Inits.	Date	Inits.	Date		
					1	1	1		

			00000						007		
You	AREAS C		CROPS, GRAS								
	(or which you cro										
IF YOU	HAVE STOPPED FAR	MI	NG		(RU	JSES OF THE L	
					_	(i.e. a	rea at Iter	n 4)		Hectares	Official Use
Please indicate	the reason by ticking the r	elev	ant box:			Grass for grazing,	Grass und	er 5 yrs old	20	•	
Sold farm						hay or silage	Grass 5 yrs	old and over	21	•	
Transferred Other (Plea						Rough grazing (sole rights)		gh land on which s cannot be used	22	•	
							Oats		25	•	
All land is le	et or leased					Cereals and other	Wheat		26	٠	
Name and addr	ess of new owner:					crops for threshing	Barley	Winter	27	•	
						(not set-aside	Daney	Spring	28	•	
						crops)	Mixed corr	n	29	•	
	ease pass this form to the						Oilseed ra	ре	30	•	
Otherwise comp pre-paid envelop	lete the declaration on the boo provided.	ack	of this form and retu	rn in the		Potatoes	Ware	Ware		•	
P	PLEASE ENTER ARE	AS	IN HECTARES		ר 🗋	1 outoes	Seed (cert	Seed (certified)		•	
•	TO 1 DECIMAL F	۲LA	CE ONLY			Whole cro	Whole crop cereals		•		
	E.G. 10 (1 acre = 0.		-					wedes, fodder other forage	41	•	
				Official	Official	Fodder crops	Kale or ca		42	•	
<u> </u>			Hectares	Use	٦		Forage ma	aize	43	•	
Owned Land	Area owned by your business	1	•				Other crop	os for stockfeed	44	•	
Land Taken	Area which you take in	2					Apples		45	•	
	conacre or on lease	_				Fruit, vegetables	Strawberri	es	46	•	
Land Let	Area which you let out in conacre or lease to another	3	-			and flowers grown	Other fruit		47	•	
	business Area farmed by your					outdoors or under cloches	Vegetable		48	•	
AREA	business (including horticultural and wooded	4	•			for sale	Bulbs and flowers		49	•	
FARMED	areas) (Items 1 + 2 - 3)					Glasshouse	Hardy nurs	ate crops:	50	•	
	questions on this form ref tually farmed by you.	er t	o the area at Item	4,	٣	area (or plastic houses)				•	
	GNATED LAND TYPE			Official		Bio-mass Fuels	SRC Will		63	•	
			Hectares	Use	٦	Other crops		ate crops:		•	
Land officially designated as	Area of SDA, "old LFA" land	5	•			Set-aside		Single Farm	65	•	
Less Favoured	Area of DA, "new LFA" land	6	•	_		Woodlands	-	d plantations	70	•	

		/= 9		MREDS /	S ON 1 JI	INE 2007			
5 CATTLE Tick this box if r					7 GOA			Number	Official Use
For the June 2007 C taken from APHIS. I					Female goats	s which have kidded	125		
section 5a (and 5b i	f applicable).				All other goat	s and kids	126		
5a Total Cattle &	Calves		Number	Official Use	TOTAL GO	ATS(Items125-126)	130		
TOTAL CATTLE AND C	CALVES	100			8 FAR	MED DEER	<u> </u>		
5b Heifer Replace	ment Stock				\sim	s box if no Deer		Number	Official Use
Heifers intended for APHIS. If you have	replacements car				Farmed Dee	r	140		
Number of heifer	s in calf (with fir Dairy producti		alf) being ke	ept for		SES AND PONIES s box if no Horses/Po	nies	Number	Official Use
			Number	Official Use	Horses/Ponie	es owned by occupier	155		
2 years old and over		82			Horses/Ponie occupier	es NOT owned by	156		
Over 1 year and under 2 ye	ears old	83			TOTAL HORSES/PONIES (Items 155-156)				
Number of heifer	Beef producti		Number	Official Use		is box if no Pigs	rest	ock) Official Use
2 years old and over		86				Breeding Sows	170		
Over 1 year and under 2	years old	87			Pigs	Pigs Gilts in pig			
Number of I	neifers not in ca	lf b	eina kent fo	r	for Breeding	Boars	173		
	airy or Beef bre			1		Maiden Gilts	174		
			Number	Official Use	Sows waiting on cull		175		_
2 years old and over		92				110kg and above (Finishers)	176		
Over 1 year and under 2 y	/ears old	95			All other	80 to 110kg (Finishers)	177		
6 SHEEP					Pigs by Liveweight	50 to 80kg (Finishers) 20 to 50kg	178		
Tick this box if no	Sheep		Number	Official Use		(Second stage weaners) 8 to 20kg	179		
Ewes put to the ram in 2 and still on farm at 1 Jur		109				(First stage weaners) Under 8kg	180		
Rams for Service		112				(Suckling pigs)	181		
Other Sheep	For breeding	114				S (Items 170-181)	185		
1 year old and over	Other	116			🕕 POU	LTRY			
Lambs under 1 vear	1	119							

	IG ON THE FARM		N 1 JUNE 2	2007		
12 FARMERS & WORKERS						
INCLUDE All persons engaged in agricultural or horticultur. Those who are normally employed in the busine Persons working on your farm as self employed EXCLUDE School children. Individuals employed by others but working on your AGRICULTURAL / HORTICULTURAL WOR INCLUDES care of crops and livestock, managemaintenance (e.g. ditching, etc).	ess but who were absen agricultural or horticultu our farm on a contract b RK	t on ral w basis	the census date orkers on 1st J on 1st June.	une (recor	·	ŗ
EXCLUDES gardening, housework, work on cap	oital investments (i.e. on	new	buildings).			
	Time normally spent on farm work in this business		NUMBER OF MALES		NUMBER OF FEMALES	
FARMERS	30 hrs/week or more	220		250		
Farmer or principal partner (one only)	Less than 30hrs/week	221		251		
Spouse (i.e husband or wife)	30 hrs/week or more	225		255		
of farmer or principal partner (if working on the farm)	Less than 30hrs/week	226		256		
	30 hrs/week or more	227		257		
Other partners in this farm business	Less than 30hrs/week	228		258		
PAID WORKERS Regular paid workers (including waged family	30 hrs/week or more	229		259		
members) who work on the farm for 20 weeks or more per year.	Less than 30hrs/week	230		260		
Paid casual/seasonal workers who work for less than 20 weeks per year (exclude contractors).	All times	231		261		
UNPAID WORKERS Regular unpaid workers (include unwaged family	30 hrs/week or more	236		266		
members) aged 16 or over who work on the farm for 20 weeks or more per year.	Less than 30hrs/week	237		267		
Unpaid casual/seasonal workers who work for less than 20 weeks per year (exclude contractors).	All times	238		268		
TOTAL FARMERS AND WORKERS		240		270		
13 OTHER DETAILS						
Please indicate (\Box) any of the following circums	tances that apply.					
(1) I/we grow mushrooms for sale	Number of mushro	om h	ouses/tunnels			
(2) I/we have no livestock now but expect to have some later this year]			L]
(3) I/we have no livestock now but]			280		
(4) My/our land is not farmed]			290		
14 DECLARATION						
I declare that the information I have given on this form is	true and complete to the b	est of	my knowledge ar	nd belief.		
Signed			Date _			
Please print name Telephone/ mobile number						
Could you please indicate the length of time taken to co			(mins)			
searce you produce manadate and reingen or entre taken to col			·····-/			

Appendix 3 - Bird Register

Update of Northern Ireland Bird Register 2007



Dear Keeper

You have been sent this form because you have registered birds on the Northern Ireland Bird Register.

We now wish to update the information we hold to ensure it is accurate and also to ensure we have the information that will allow us to contact you quickly if the need arises, for example in the event of an avian influenza outbreak in the UK.

The information may also be shared with the Department of the Environment, Food and Rural Affairs (DEFRA) in GB for the purpose of UK disease surveillance. Some of the information will also be used by the Department for statistical purposes.

Please complete this form and return it in the postage paid envelope provided by Friday 6 July 2007.

Keepers of birds should remain vigilant for signs of disease and observe a high standard of biosecurity.

Further information on avian influenza, including biosecurity advice is available on the DARD website at <u>www.dardni.gov.uk</u>

If you have any queries, please contact the DARD Helpline on 028 905 24999.

Thank you for your co-operation.

Yours faithfully

Jackie Robinson

Animal Disease Control Branch

Return completed form to:

Sectio	on 1 General information	
(1a)	Your details (person in day to da	y charge)
	Address (if different from front)	
	E mail	<u>Post code</u> Fax no.
	<u>E-mail</u> <u>Phone no.</u>	Mobile no.
	Place where birds are kept	
	Address (if different from front)	
	E-mail	Post code
	Phone no.	<u>Fax no.</u> Mobile no.
	PBF, NIPHAS or Egg Market Number	
	Owner of the birds Owner's name Address (if different from front)	
	E-mail	<u>Post code</u> Fax no.
	Phone no.	Mobile no.
	-	ch you are affiliated (if applicable)
	(tick as appropriate) Organisation Club	Name of organisation/club
	Contract Name	
	Address	
		Post code
	<u>E-mail</u>	Fax no.
	Phone no.	<u>Mobile no.</u>

Herd/flock numbers for animals held by person in day-to-day charge of birds

which you hold

Section 2 Birds and Use

		t for commercial purposes* or commercial purposes please go	to 2d (*see notes	for guidance)	
(2a) Purpose c	of production				
<u> </u>	Egg	production/line Meat	production/line		Rear	ing
(2b) Stage in c Gran	hain dparents Parents	Comme	ercial	Hatch	ery
(2c) Informatic	on on the birds				
	Chickens		Actual Number of birds	Max number of birds on site	Number of houses	Numbers per house
	For producing	Laying birds from point of lay to end of first cycle				
	table eggs	Hens retained after first cycle				
	Mainly for	Growing pullets from day old				
	producing	to point of lay				
	hatching eggs	Hens, pullets, cockerels, etc (not turkeys, ducks, etc)				
		other table chickens				
	Other poultry	,				
	Turkeys					
	Geese					
	Ducks					
	Pheasants					
	Pigeons					
	Partridges					
	Guinea-fowl					
	Quail					
	Others					
	please specify	·····				

2d	Husbandry system - how you keep your birds – see Notes for Guidance (tick appropriate box)
	Free range
	Partially housed
	Housed at all times
(2e)	Birds kept other purposes (tick appropriate box)
	Hobby/Racing
	Rare Breed
	Information on the birds

	Actual Number of birds	Max number of birds on site	Number of houses	Numbers per house
Chickens				
Turkeys				
Geese				
Ducks				
Pheasants				
Pigeons				
Partridges				
Guinea-fowl				
Quail				
Others please specify				

Signature of bird keeper	<u>Da</u>	<u>ite</u>
Name in BLOCK CAPITALS		

Appendix 4 – Administrative Sources

1. Organic producers

A register of all organic producers is held by a specialist unit at Greenmount Campus (College of Agriculture Food and Rural Enterprise). This consists of the name and address – including postcode – of the participants, coupled with the area currently considered organic or under conversion plus the types of enterprises conducted there. A sub-list of poultry producers is also held were the actual area of production may be registered as zero. This list was merged with the sample drawn for the Structure Survey using both address and name as key variables.

2. Agricultural areas with environmental restrictions

A list of postcodes covering the ESA areas was obtained from the branch administering the scheme. This was merged with the census data to indicate the status of the each farm using name and address as key variables.

Appendix 5 – F03 variable

Northern Ireland has predominantly grass based agricultural systems consisting of relatively intensive dairy farming and relatively extensive beef and sheep production. Approximately one-third of the agricultural area is rented by farmers on an annually renewable basis - mostly for grazing and the production of winter forage. The existence of a large and flexible short-term rental market for land means that there is no incentive to hold land unused, when rent income (albeit modest) is readily available. Renting does not compromise eligibility for payment under the Single Payment System. As a consequence of these characteristics, the area of permanent grassland (eligible for subsidies) and not being used for grazing or silage / conserved fodder purposes is, at present, judged to be insignificant.

Additionally, for permanent pasture areas, to be entitled for a "Less Favoured Area" subsidy (covering 70% of NI) a minimum stocking density is needed. Farmers are careful to ensure this requirement is met, which when coupled with the requirement that all land receiving subsidy is in good agricultural condition (involving an inspection regime) results in all land being grazed – even if it is low intensity.

The total area of "set-aside" land in the country was less than 2,000 hectares, as the cereal sector is small – and is largely producing grain for fodder. It is again unlikely that any of this land would ever fall within this category.

To confirm that the F03 category did not exist in any measurable quantity in 2007, briefings were undertaken with Farm Account Officers who are involved in the Farm Business Survey (which collects data for FADN). These revealed that there was none of this type of land present on any of the farms included

in this survey. This mechanism will allow a rolling and robust assessment of the situation and if/when land of this type appears, either an assessment can be made directly from the farmers in 2010, through the questionnaire, or, interrogation of the single farm payment system may allow figures to be derived.

Appendix 6 - Cattle data extracted from the APHIS (Animal and Public Health Information System) database

An extraction of the APHIS system was undertaken on 1st July 2007 (allowing time for late updates to occur) and consisted of all cattle alive in Northern Ireland as at 1st June 2007. The variables extracted, for each animal, from the system included

Date of Birth Sex Breed Progeny Herd / Business number Animal Number

Using breed as a reliable measure of Dairy / Beef production status, it is possible to segregate the data into most of the categories needed. Aggregation by business number allows this data to be appended to that collected through survey or other administration sources

Information on heifers is obtained through the June survey. This survey covers approximately half of all NI farms. The numbers of heifers, determined from this survey, are then used to expand on the APHIS data.

FARM STRUCTURE SURVEY 2007

METHODOLOGICAL REPORT

MEMBER STATE: SCOTLAND (UNITED KINGDOM)

Farm Structure Survey 2007 METHODOLOGICAL REPORT - SCOTLAND (UNITED KINGDOM)

SUMMARY

The Department for Environment Food & Rural Affairs (DEFRA) was responsible for collating FSS 2007 data from each of the four countries of the United Kingdom and for passing them to Eurostat. The Scottish Government (SG) Rural and Environment Analytical Services (REAS) are responsible for the collection of agricultural statistics for Scotland where it conducted FSS 2007.

The Agricultural Census register, which is used for all REAS statistical surveys, contains the details of all agricultural holdings that have contact with the SG. The register is maintained by the Agricultural Census team and is updated on a day to day basis. All agricultural holdings require a unique holding number, which is allocated by the census team.

All the active main agricultural holdings in Scotland were surveyed for the 2007 survey. Minor agricultural holdings, which are classed as statistically insignificant, were not included in this survey. The work was carried out in two stages:

- Data on crop areas, livestock numbers, diversification and holding management were collected, by a postal census, relating to the situation on 1 June 2007. Generally, the same questions on crop areas and livestock are asked each year. Forms were sent to all active main agricultural holdings in 2007.
- All other data (apart from areas of non-cultivation, agri-environmental premium data and information on organic farming and some minor crops data not normally collected in June (all obtained from administrative data)) were collected in a special additional survey. There were 14500 from approximately 27000 active farms included and forms were posted out in March 2007.

Both surveys were carried out by post. In 2007, from a survey sample of 14 500, 155 customers submitted their March survey form online.

Since the June questions were broadly the same as in previous years no pilot exercise was required.

The response rate for the June 2007 survey was 75% and the response rate for the March survey was also 75%.

A major effort was made to make the potentially complex FSS as simple as possible. Ideas were shared across UK departments and within Scotland, both specialist and administrative staff were involved in drafting the FSS notes for

completion and other documentation going out with the survey to check that it was as clear as possible.

Despite these efforts, a number of farmers clearly had significant difficulty in completing the forms, although the effort did pay off in that the response rate held up to virtually the same level as 2005. There were a number of complaints from clearly angry farmers who phoned, wrote or e-mailed census branch with their grievances.

The main complaints related to views that the data was a waste of time, too personal or that the form was too complicated. Some complained that the survey overlapped with the June census (although it does not).

Many said they would refuse to complete the FSS and any further surveys or censuses. Apart from the threat to all other agriculture statistics the FSS causes, this was a very stressful time for census staff.

On complexity, the main area of difficulty related to distinguishing between owners, occupiers/farmers, business/institutions, managers, partners, spouses, agents etc, all who may receive the form, and which sections each should fill in.

Some of the information requested was apparently simply not known.

Estimated data were provided for non-respondents in June, based on the previous year's return updated by trends reported by respondents. Non-response to the labour survey was handled by adjusting the extrapolation factor to reflect achieved response rates within each stratum.

For both surveys data entry was carried out by a commercial company, Advanced Data Services Limited, with single entry keying. All data validation was carried out by staff in the Agricultural Census Branch of REAS.

Provisional results of the June survey were published on 19 September 2007 and final results on 24 October 2007. Work on validating the March data was spread over two periods, one before the June survey and the other after that had been completed. No results from the March survey in Scotland have been published.

1 INTRODUCTION

1.1 History, scope

<u>History</u>

The series of crop and livestock surveys for Scotland extends for more than 100 years. Annual surveys of crop areas and livestock numbers have been carried out in Scotland throughout this period. These, along with data from special surveys to complete the requirements, have contributed data to Farm Structure Surveys since 1975.

<u>Scope</u>

The surveys were addressed to all agricultural holdings that, at the time of preparing the mailing list, were believed to be active. All holdings with an up-to-date address and who were not survey suppressed due to unconfirmed land movement, received a survey form. Returns from holdings that had been sold off or were no longer used for agriculture were subsequently excluded from the database.

1.2 Legislation

National farm survey legislation

The Agricultural Act 1947 authorises REAS to demand response to certain types of questions which encompasses those which were asked in the June survey. This Act was used in the conduct of the June 2007 survey but, while REAS has the power to do so, it was not politically or practically appropriate to prosecute for non-response.

The Act does not empower REAS to collect information on training or farmers' other gainful activities so it was not used in the conduct of the March survey, the March survey was therefore treated as voluntary.

Relevance to FSS

The Act requires occupiers of agricultural land or the owners of livestock to furnish to REAS, at any time or times in any year, such returns as may be prescribed in relation to a list of topics such as crop areas, labour and livestock numbers. It is not specific to any one survey.

Protection of respondents

The Act restricts the ways in which individual records may be used and/or disclosed. This guarantee is reinforced by the National Statistics Code of Practice on 'Data Access and Confidentiality', which is adhered to by all Government statisticians. Along with the Data Protection Act 1998, this Code extends the guarantee of confidentiality to respondents to voluntary surveys such as that undertaken in March 2007 for the FSS. The Freedom of Information Act 2002 does not cut across this.

Legislation on survey costs

No specific legislation related to the cost of the FSS in Scotland. The cost was met from the Department's annual budget and using **existing** staff resources.

Scotland's obligations to the UK

Following the devolution of powers to the Scottish Government, REAS's obligations to provide statistical data to enable DEFRA to meet UK obligations to the EU were embodied in a Concordat relating to the provision of statistical information.

1.3 Reclassification

The register used in the conduct of farm surveys is specific to that task and is based on land occupancy (either by ownership or full tenancy). It is updated by means of returns from annual surveys. It is divided into "mains" holdings (the main conditions for this are that the holding is above 1 ha and has greater than or equal to 1 & 2/3 ESU) and "minor" holdings, the former being surveyed each year and the latter every third year.

A break in statistical series occurred in 2000 when there was a reclassification exercise of main and minor holdings. The previous reclassification exercise had been conducted in 1990 and by 2000, significant numbers of large holdings were classed as minor and visa versa. Classification of holdings as main and minor is now done on an annual basis to prevent any future large discontinuities, although this was not done in 2004. The 1990, 1993, 1995 and 1997 Farm Structure Surveys were run under the old reclassification system, with all subsequent Farm Structure Surveys since then using the new methodology.

2 CONTENT

2.1 Characteristics

For the most part information was collected in Scotland and provided to Eurostat according to the accepted exclusions listed in Commission Decision 98/377/EC amending Annex 1 to Council Regulation 571/88/EC.

There were a number of exceptions where items, though existing in the UK, were non existent in Scotland. In such cases, most notably D11 (sugar beet), D24 (hops) and G04 (vineyards), zero was recorded.

Information on F03 (Permanent grassland and meadow - not used for production, eligible for subsidies):

(i) We have no evidence or actual data to support any direct estimates for this item.

(ii) Because we have no evidence to use in the formulation of an estimate, we are not confident that any results produced would be anything other than speculative, given that they would not be empirically based.

(iii) After considering (i) and (ii), we have concluded that attempting to produce any <u>immediate</u> estimates for item F03 would incur 'disproportionate cost'.

Resources for the immediate future have already been allocated, and we do not consider that any estimates produced would be robust enough to justify the additional resource that would be needed. However, we will consider what can be done for item F03 for FSS2010.

(iv) As an additional quality assurance measure, discussions took place in the Scottish Government with senior colleagues responsible for Rural Payments and Inspections, Rural Business Development and Regional Delivery. Various scenarios were considered with regard to the potential magnitude of item F03 (in line with the examples provided by the Commission), but ultimately the conclusions were that:

(a) our agricultural data systems (covering inspections and monitoring, statistical requirements and payments and compliance) hold no data on this type of land.

(b) We will investigate item F03 and our options for data supply for FSS 2010.

(c) We will share our work and any findings on this with the other 3 UK countries.

Information on Group holdings was not sought for Scotland as it is insignificant.

2.2 Questionnaires

Two separate questionnaires were used - one for crops, livestock and management (June) and the other for all other FSS items (March).

The June form included questions not required for the FSS on the numbers of farmers and workers⁹ working on farms on 1st June.

3 SURVEY METHODOLOGY

3.1 Survey organisation

The FSS in Scotland was under the management of one Assistant Statistician, one survey manager and seven administrative staff who organised and carried out all the work with the exception of printing and mailing forms and data entry. The printing and mailing of forms was done by Adare Halcyon Ltd (external contractor). The data entry was done by Advanced Data Services Ltd (external contractor).

3.2 Work process

⁹ The FSS labour definitions do not satisfy the needs of other users of statistics on the agricultural labour force in Scotland.

Planning for the 2007 FSS was initiated in 2005. Key dates in the planning and operation included:

March survey¹⁰

September 2006	First draft of the March questionnaire prepared
October 2006	Plans discussed at UK level to ensure co-ordination
November 2006	Form circulated around Department for comments
December 2006	Form finalised
January 2007	Timetable for printing, addressing and issuing forms agreed with printers
February 2007	Staff instructions prepared
February 2007	Validation programmes prepared
February 2007	Sample chosen for labour survey
February 2007	Data entry instructions sent to punching company
March 2007	Forms posted
March–May 2007	Data punched and loaded into system
April 2007	Reminder posted to non-respondents
April–May 2007	Forms validated and errors repaired
End May 2007	Validation process halted
October 2007	Validation recommenced
June 2008	Clean file completed
June – July 2008	Data from other sources added in and converted into
	one file in the correct format
July 2008	Final data sent to DEFRA to merge with other UK data

June survey

The organisation of the June survey continues on an annual cycle but key dates in running the survey included the following.

May 2007	Forms posted
July 2007	Reminder issued
September 2007	Provisional results published
October 2007	Files closed and final results published
October 2007	Files closed and final results published

3.3 Preparing the survey operations

3.3.1 Population and frame

Definition of a holding

The definition of a holding used in Scotland is:

"a single unit, both technically and economically, which has a single management and which produces agricultural products."

¹⁰ Work on validating and checking the data from the March survey began in April–May 2007. Work recommenced in October 2007 after publication of the June survey results.

Please note however, that two parcels of land that are a significant distance away from each other may be classed as two different holdings even if they are run as one unit.

Within that framework a threshold is applied so that the population surveyed includes:

"all holdings having one hectare or more of farmed land and at least 1&2/3 European Size Units, and/or a full-time farmer, and all holdings where an occupier farms more than 1 holding and all holdings with significant poultry or horticultural activity".

<u>The Register</u>

The census branch maintains a statistical register of all agricultural holdings in Scotland. Each discrete area of agricultural land is allocated a holding number and then an occupier (Owner or person/company renting the land under a full tenancy) is allocated to the holding.

The register for each holding includes:-

- Name of occupier
- Address of occupier
- telephone number of occupier
- holding description
- area of land
- details of land movements and previous occupiers

Identification of the survey population from the Register

About one month before the survey was issued (shortly before the sample was selected) a list of ineligible holdings was obtained. These holdings can be ineligible for surveys for a number of reasons these include:

- No valid contact name/address
- Unconfirmed land movement

3.3.2 Survey design

Sampling design

The March survey was based on a sample of 14500 holdings. The holdings were stratified by farm size (European Size Units) and farm type. The FSS has in the past attracted many complaints from farmers. In order to manage the survey burden on individual farmers and minimise respondent fatigue, the bulk of the sample was made up of those holdings in scope which either were not selected for FSS 2005 or did not respond. These holdings accounted for 9 904 or 68% of the sample. These were then topped up with a further 4 596 holdings who had responded to FSS 2005 to reach the desired overall sample size of 14 500.

These top up holdings were selected at random within each stratum in such a way as to maximise the minimum overall sampling fraction among all strata. The response rate of 76% to FSS 2005 was used as a guide to determine the number of forms necessary to ensure the required 9 100 responses.

The June survey was sent to all agricultural holdings and estimates were provided for non-respondents.

Raising frame

Data from the March survey were raised in accordance with a 2-dimensional frame with 10 farm types by four sizes (the same frame as the sample was drawn from). These were:

Type of farm: Specialist Cereals, General cropping, Horticulture, Dairy, Rearing /fattening cattle, Specialist sheep, Other grazing livestock, Pigs and poultry, Mixed and Unclassified.

Size of business: Under 8 ESU, 8–<40 ESU, 40–<100, 100 ESU & over

Raising factors varied from 2.11 to 4.33 with 75% of records having a raising factor of less than 2.67.

3.3.3 Pilot Survey

The questions in the June 2007 survey were broadly the same as those in previous June surveys so they were not tested.

In the given timescales, it was not possible to pilot the FSS. As a compromise, the form was circulated around the Department and to the other UK Departments for comment.

3.3.4 Informing and training staff and respondents

Staff who investigated queries

All survey administrative staff whose job is to investigate and, if necessary, correct queried returns were provided with detailed instructions. In cases where the query could not be resolved using the available information the occupier was contacted by telephone for more details.

New staff are given individual training before beginning work on their first survey. Ongoing training in the form of job shadowing, computer based training, videos and external courses are also available for more targeted training, e.g. good telephone techniques.

Respondents

A letter was sent to long-term non-responders prior to issuing the June form, encouraging them to complete and return the form and stressing why it is important to do so.

3.4 Sampling, data collection and data entry

3.4.1 Drawing the sample

A simple random sample stratified by size and farm type was drawn from the population as described in 3.3.2. This method of stratification is our standard way of drawing samples and ensures accurate coverage of each of the main sectors. The simple random sample was picked using the 'Survey Select' procedure in SAS.

3.4.2 Data collection

Data collection methods

The data were collected by means of a postal survey. Data on areas of noncultivation, agri-environmental premium data and organic farming were collected from administrative sources.

Organic Data

The data for organic characteristics (CC05A, CC05D & CC05E) was taken from the United Kingdom Register of Organic Food Standards (UKROFS), which is explained in more detail in section 3.3.1 of this report. The organic data was matched to the FSS population using the unique holding number identifier (CPH). A CPH field was present in the UKROFS data, but it was imperfect. Where a valid identification number was not available, a manual exercise was carried out, matching holdings on key variables such as name, address or post code. The data collected on organic methods for animal production (CC05E) only recorded the presence of organic methods for animal production. Because of this it was impossible to distinguish between 'full' and 'partial' production methods so as result any presence of organic methods of animal production were recorded as 'full' in characteristic CC05E.

Data entry modes

The March and June data were captured using heads down, data entry.

3.4.3 Control of the data

March and June forms

An initial scrutiny of forms was made to ensure that they were signed and completed before passing to the data entry process.

Data was keyed by a contractor (Advanced Data Services Ltd) into a text file. The text file was then checked to make sure it contained the correct number of records and that the data was in the correct format. The file was then loaded into our system for electronic validation. These were of 5 types:

- Sub-totals:Sub-totals were included on the forms for land use, for
each of the main livestock types and for labour
questions.Maximum values:For each item a maximum value was set, at a level
- Absence checks: If certain questions were missing then forms were

queried (e.g. tick box about who managed holding).

Valid value: For questions on Livestock and labour, checks were applied to make sure all figures were entered as whole numbers. For tick box questions only specific values were allowed (e.g. 1 if box one was ticked, 2 if box two was ticked etc.).

Credibility checks: The credibility of certain figures was also checked (e.g. more than 100 poultry but no labour).

Second level checks were applied when the information was converted from the format in which it was collected to that in which it was supplied to Eurostat. For example if the form indicated that the occupier was the manager, data for a separate manager were rejected. The third level checks were made when the Eurostat validation checks were run.

3.4.4 Non response

Non-response was interpreted as questionnaires that are not returned at all. Partly completed ones were treated as queries and finalised by telephone contact with the farmer. However, forms that were returned blank or had errors that could not be fixed were not included in the data sent to Eurostat.

Actions taken

One reminder was issued for the March survey and one for the June. Further reminders were not issued for March for fear of compromising response to the June survey. The June reminder included a reminder letter and a duplicate form. Long-term non-responders were sent a letter prior to receiving the June form, encouraging them to complete and return the form and stressing why it is important to do so.

Non-respondents were not prosecuted because it is likely that this would lower response to subsequent surveys rather than improve it. Additionally, the SG would prefer to work together with farmers to improve survey response.

Much time has been spent in trying to improve the image of the "Farm Census":

- Query calls being kept to a minimum through reference to other data sources;
- Very small holdings only surveyed once every 3 years;
- Survey results made freely available to all on the REAS website.

Reasons for non-response

A significant number of farmers feel that they are receiving too many forms from the government, so they refuse to fill in forms unless there is a financial implication (i.e. IACS and Single Application Form). Other farmers have reported that they do not have the time to complete survey forms. The SG is investigating ways to streamline bureaucracy in order to reduce the data burden on famers. More details are available in section 5.

3.5 Data processing, analysis and estimation

3.5.1 Methods for handling missing or incorrect data items

<u>June survey</u>

Queries on forms that were <u>returned</u> for the June survey were dealt with:

- By checking that the data was entered correctly and fixing where it was not;
- Looking at returns from previous years;
- Sending a letter to the occupier and the other party involved to confirm land movements;
- Contacting the occupier by telephone.

Data were imputed for forms that were <u>not returned</u> for the June survey:

- Since the same questions had been asked in each previous year, the most recent return was used as the basis for imputation;
- Imputations for items with significant activity within each robust farm type were created by trending the 2006 figure using average proportional changes in similar holdings which returned in both 2006 and 2007.
- For new holdings for which no "brought forward" record was available, no estimates were made. This should not cause a large shortfall as there are very few new holdings every year and because some of the carried forward holdings will be farms that have been sold off but have not notified us yet.

March survey

Most queries on forms that were <u>returned</u> for the March survey were dealt with through telephone enquiries. However, for a number of questions a "no" answer was assumed if there was no response given, e.g. Section F (farm diversification), Section G (Environmental Issues).

Both surveys

Only staff of Agriculture Census Branch of REAS were authorized to make changes.

3.5.2 Estimation and sampling errors

The June survey is a complete census rather than a sample survey, with imputation for non-respondents. It covers all crop and livestock items, and has been augmented with administrative data for crop items not normally collected in the June census. Totals for these items can therefore be obtained directly by summation.

The March Survey sampled just over half of all holdings and covered questions on labour, farm diversification and environmental restrictions. Estimates of totals are obtained by expansion using the extrapolation factor A10.

3.5.3 Non-sampling errors

Coverage errors

Coverage errors are believed to be minimal for most crop and livestock sectors.

Coverage of the poultry sector is difficult because the questions refer to one specific date. It is possible that on the census day (1 June) a number of producers may have no birds on their farm and be disinfecting their premises. This caused problems in June 1999 when broiler figures appeared to be about 3 million lower than normal. However, the figures for June 2007 appear to be close to usual trends.

Measurement errors

There is no way of estimating measurement errors as we do not check that the figures the occupier supplies are correct. The occupier signs the census form to the effect that the information he has supplied is correct to the best of their knowledge. There is scope to improve this however – more details are available in section 5.

Processing errors

Scope for these is limited by the procedures and checks that are in place.

Non-response errors

The main source of error in the FSS 2007 for Scotland resulted from nonresponse. The means of dealing with non-response is detailed in Section 3.5.1. Due to the method of carrying forward previous years data and the high response rate (75% for the 2007 June Census) non-response errors on crop and livestock questions are minimised (although this has not been quantified). The non-response errors for the March Survey (labour questions) will be higher as data from previous years was not used to fill in the gaps.

3.5.4 Evaluation of estimates

The June Survey was a full census and figures for non-responses were carried forward from previous years as described earlier. The data on labour in the June survey is as at 1 June 2007 whereas the March Survey is for the whole year. There are also different classifications for labour and work time. June results are validated against previous years data and where any large variations are observed, these are investigated.

4 PUBLICATION AND DISSEMINATION

<u>June survey</u>

19 September	Provisional results (Scotland level) published through a				
2007	Press Release and the REAS website				
24 October 2007	Final results (Scotland level) published through a				
	Press Release and the REAS website				

March survey

No data has yet been published from the March Survey. However, it is our intention to publish figures from the March survey via the REAS website later this year.

5 SUGGESTIONS FOR FURTHER TASKS

Improving response

Major improvements to response rates are unlikely to be achieved over the next few years but steps can be taken to safeguard against further deterioration. These include giving publicity to the role played by good statistics in developing Government policies and continuing to ensure that no lapse in confidentiality occurs. In June 2007, further changes have been made in an attempt to improve response rates. Letters have been sent to a further sample of non-responders who were not sent the similar form last year.

Streamlining bureaucracy

The SG is currently assessing ways in which duplication can be eliminated. Specifically, a project is underway to assess the extent to which the June census and the Single Application Form (SAF) can be streamlined to provide data that has been historically collected through separate systems. In addition to this, data already collected from the two systems will be analysed to aid validation and improve overall data quality.

Other areas where there is the potential to reduce duplication are the use of cattle movement data and also the use of inventory data for sheep and goats.

These areas will be investigated further as soon as is realistically possible.

REFERENCES

Statistics collected in the June 2007 Survey in Scotland can be found on the REAS website at <u>http://www.scotland.gov.uk/Topics/Statistics/Browse/Agriculture-Fisheries/PubFinalResultsJuneCensus</u>

CONTACTS

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Annex 1: Simple Random sample stratified by size and farm type

EC Farm type	<u>.</u>	-	ESU		
	<8	8-<40	40-<100	≥100	Total
Cereals	306	482	316	220	1324
General cropping	146	57	185	303	691
Horticulture	121	75	22	19	237
Dairy	28	31	139	437	635
Other cattle	577	568	189	30	1364
Sheep	996	490	223	53	1762
Other livestock	1765	455	352	102	2674
Pigs & Poultry	115	24	19	26	184
Mixed	237	281	244	197	959
Unclassified	74	0	0	0	74
Total	4365	2463	1689	1387	9904

Holdings in 2007 sample which did not return a valid 2005 FSS form (including holdings not sampled in 2005)

The figures above are as close as is possible to those used in FSS2007. Exact replication is not possible because of changes to our farm register from when the sample was initially picked in February 2007.

Holdings in 2007 sample which returned a valid 2005 FSS form

EC Farm type			ESU		
	<8	8–<40	40–<100	≥100	Total
Cereals	139	302	199	128	768
General cropping	85	40	97	207	429
Horticulture	0	10	5	6	21
Dairy	0	12	30	148	190
Other cattle	175	244	80	14	513
Sheep	543	283	127	8	961
Other livestock	978	169	120	48	1315
Pigs & Poultry	0	3	7	19	29
Mixed	55	126	98	66	345
Unclassified	25	0	0	0	25
Total	2000	1189	763	644	4596

EC Farm type			ESU		
	<8	8–<40	40–<100	≥100	Total
Cereals	445	784	515	348	2092
General cropping	231	97	282	510	1120
Horticulture	121	85	27	25	258
Dairy	28	43	169	585	825
Other cattle	752	812	269	44	1877
Sheep	1539	773	350	61	2723
Other livestock	2743	624	472	150	3989
Pigs & Poultry	115	27	26	45	213
Mixed	292	407	342	263	1304
Unclassified	99	0	0	0	99
Total	6365	3652	2452	2031	14500
	F00 (;				

Annex 2 : Copy of FSS questionnaire

SCOTTISH EXECUTIVE Environment & Rural Affairs Department Science and Analysis Group						
European U	Union	Farm	Structure Surv	/ey 2007		
Name: Address:				e 'SEERAD O s form electron ase visit:		na
Postcode: Telephone No:			www.seerad	online.gov.uk		
Holding description:			The Scottish Exe Environment & F Division AS1 1A Pentland Hou 47 Robb's Loan Edinburgh EH14	Rural Affairs Depar Ise	rtment	
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Annex 2 : Copy of FSS questionnaire

SECTION B: THE OCCUPIER, OCCUPIER'S SPOUSE, MANAGER

You must complete the <u>occupier</u> details in <u>column 1</u> (unless there is no occupier - i.e. you ticked box 4 at question 1). Please complete all questions by ticking <u>one box</u> for<u>each</u> question 3 through to 7. The attached notes explain more about questions 5 to 7.

Then please complete the occupier's <u>spouse</u> details in <u>column 2</u>, if applicable. You should complete the spouse's details even if the spouse does no farm work. Enter a tick in <u>one box</u> for <u>each</u> question 3 to 7.

Then please complete the manager's details in column 3 (if the manager is not the occupier or the spouse - i.e. if box 3 or 4 was ticked at Question 2).

Please check: at least one of the columns 1 or 3 must be completed.

			1	2	3
(9		Occupier	Occupier's spouse	Manager (if not occupier or spouse)
	Sex	Male			
	267	Female			

0

	Under 25		
	25 - 34		
Age group	35 - 44		
	45 - 54		
	55 - 64		
	65 & over		

6

Time spent on agricultural work on <u>this</u> farm, as a	None		
	Less than ¼		
	¼ to less than ½		
proportion of the full working	1⁄2 to less than 3⁄4		
year	¾ to less than full		
	A full year		

0

	None		
Time spent on any other work	Same or less than on the farm		
	More than on the farm		

0

	No formal training		
Agricultural training	Formal course lasting less than 2 years		
	Formal course lasting at least 2 years		

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Annex 2 : Copy of FSS questionnaire

SECTION C: OTHER FAMILY MEMBERS (AGED 16+) WORKING ON THIS FARM

Please read the notes for Section C before completing questions 8 to 10. Tick (1) as appropriate.

		Member of Family									
(Ð		Example	1st	2nd	3rd	4th	5th	6th		
	Sex	Male	~								
	364	Female									

0

	Less than 1/4	1			
-	14 to less than 1⁄2				
Time spent on agricultural work on this farm, as a proportion of	1⁄2 to less than 3⁄4				
the full working year	¾ to less than full				
	A full year				

0

	None				
Time spent working elsewhere	Same or less than on the farm				
	More than on the farm	~			

* If there are more than 6 family workers doing farm work, please provide details on a separate sheet, covering questions 8 to 10 for each.

SECTION D: OTHER REGULAR WORKERS WORKING ON THIS FARM

Please read the notes for Section D before completing questions 11 and 12. Tick (✓) as appropriate.

	Regular (Non Family) Worker										
0	Example	1st	2nd	3rd	4th	5th	6th				
Sev	Male	1									
364	Female										
) Sex	Sex	Sex Male	Example 1st Sex Male ✓	Example 1st 2nd Sex Male ✓ ✓	Example 1st 2nd 3rd Sex Male ✓	Example 1st 2nd 3rd 4th Sex Male ✓ <	Example 1st 2nd 3rd 4th 5th Sex Male ✓			

Ð

	Less than 1/4	1			
Time another an this	14 to less than 1⁄2				
Time spent working on this farm as a proportion of the	1⁄2 to less than 3⁄4				
full working year	¾ to less than full				
	A full year				

* If there are more than 6 regular (non family) workers doing farm work, please provide details on a separate sheet, covering questions 11 and 12 for each.

Page 3

Annex 2 : Copy of FSS questionnaire

Г												
SECT	TION E: CASUA	L AND SEASO	NALWORK	ERS A	ND U	SE OF (ONTRACT	ORS				
⊕	Have you emp	bloyed any casu	al or seasor	nal labo	uron	the farm	in the past	12 months?	Yes		N	•
Ø		e estimate the nu asuals' for 20 da			ays' v	vork dor	ie by casual	workers		Days		
Ð	Did you emplo	oy contractors to	carry out a	any wor	ork relating to crops or livestock? Yes						N	•
0		e estimate the nu . Example: 3 wo			-days' work done by contractors = 6 days							iys
SECT	TION F: FARM [DIVERSIFICATIO	л									
Ø	Does any non	-agricultural acti	vity take pl	ace on y	/our h	olding?			Yes		N	•
0	If 'yes', please tick a box beside any of the commercial enterprises listed which you run on this farm. Exclude a farming, i.e. livestock breeding and rearing and crop production and exclude activities run by persons who of your farm business.											
		Tourism - acco	mmodation	ı	1		Aqua cultu	re			7	
		Tourism - othe	r		2		Contracting	g / haulage			8	
Ту	pes of	Handicraft			3		Livestock I	haulage			9	
div	versification	Processing of	farm produ	cts	4		Leisure - e	quine activities, s	shooting	etc.	10	
		Wood process	ing		5		Direct sale	5			11	
		Renewable en	ergy produ	ction	6		Other com	mercial activities			12	
9	Example: hors	etails of the dive te livery, <i>B&B, fa</i> ked 'Tourism - a	m shop, be	e keepi			the number	ofbeds			Ве	ods
3	and during wh	nich months of th	ie year are	they ava	ailable	e.g. Ju	ine - Dec)					
29 SECT		rsification activit	y occupy a	nyone fi	ull-tim	ie throug	phout the ye	ar	Yes		N	•
Does	Does this farm lie partly or wholly within either of the designated areas described below? Please tick (✓) one t										ne bo	x only
23			Yes	No			29			Ye	s	No
Co	tura Site/ Speci nservation 192 Habitats Dir							Protection Area ds Directive)				
/ dec	aration by ownerio lare that the inform of my knowledge	nation I have given	on this form	is correc	2 10 Ihe		ignature oppo e signing le.g.	site is not that of th 'manager', 'agent',	e address 'owner a	ee, plea broad',	ase sta etc.	te reason
Full	Name ASE PRINT						on for signing Telephone No					
Date	Date						Please return	this form in the en	closed pr	e-paid e	onvelo	pe
	Page 4											

Annex III : Copy of Agricultural and Horticultural Census 1 June 2007Questionnaire (Page 1 of 4)

SCOTTISH EXECUTIVE Environment & Rural Affairs Department Science and Analysis Group	Survey ID Holding Number
	Itural Census 1 June 2007 mation by 15 June 2007
Name: Address:	Area of holding recorded In SEERAD corporate register Hectares (to nearest 0.01 Area you own Area you rent from another person under a full tenancy
	3 TOTAL AREA 2 Details of owned and rented area of holding (see notes, Section 2) Hectares (to nearest 0.01)
	1 Owned croft
Telephone number:	2 Other owned area
	3 TOTAL OWNED AREA •
Holding description:	4 Rented croft
	Small Landowners Act 5 tenancy (only found outside crofting counties)
	91 Act tenancy: Any tenancy for more than 1 year with full security of tenure and succession rights lease
AGRICULTURE ACT 1947, SECTION 78 (As amended) As the occupier you must complete and return this form. The information you give should be as at 1 June 2007 except where otherwise stated. The completed form must be returned as soon as possible but no later than	91 Act, Ltd Partnership: 7 Any tenancy for more than 1 year where the tenant is a partnership SLDT: entered into on or
15 June 2007. The information you provide is confidential and cannot be disclosed without your written consent, except as specified in Section 80 of the above Act and Section 12 of the European Communities Act 1972.	after Martinmas 2003 for between 1 and 5 years duration LDT: entered into on or after
Section 61 of the Agriculture Act states that anyone who fails to complete and return the form shall be liable, on summary conviction, to a fine not exceeding £1,000. Penalties are also prescribed for knowingly or recklessly furnishing	9 Martinmas 2003 for 15 years or more and with a specific end date TOTAL AREA YOU RENT
false Information.	10 a full tenancy (should equal the total of items 4 to 9)
The Sootlish Executive Environment & Rural Affairs Department Division AS1, 1A Pentiand House 47 Robb's Loan	11 TOTAL AREA (should equal flem 3 plus flem 10) Sessonal rents (see notes, Section 3)
Edinburgh EH14 1TY Richard Wakeford, Secretary	Seasonal rents (see notes, Section 3) Area of land (to nearest 0.01 hectares)
	1 that you let seasonally to another person (should be included in Sections () and ())
If you need help or further information, please contact: Name: Telephone:	If any of the land entered at Item 1, 2 above, is let out under SLDT, please state the number of SLDT leases
	Please state the combined area of any SLDT leases entered at item 2, above (to nearest 0.01 hectares) Area of land rented seasonally
	4 from another person (should NOT be included elsewhere)
Pa	ge 1

0	Crops (see r	notes, Section 4)	Hectar	res (to nea	irest 0.01)	6	Gr	assiand (see notes, Section 5)	Hectares (to	nearest 0.01)		
1	Land set aside Single Farm Payme (Include non-food	ent Scheme			•	1	For	Under 5 years old (Including grass sown this year without a nurse crop)		•		
2	Wheat for combini	ing			•	2	season	5 year grass and older (I.e. sown in 2001/2002 or		•		
3	Triticale for combi	ning			•	\vdash		earlier) Under 5 years old				
4	Barley for	Winter			•	3	For	(including grass sown this year without a nurse crop)		•		
5	combining	Spring			•	\vdash	this	5 year grass and older				
6	Oats for	Winter			•	4		(I.e. sown in 2001/2002 or earlier)		•		
7	combining	Spring			•		TOTAL C	ROPS AND GRASS				
8	Mixed Grain for (only mixtures of wi and oats or any 2	heat, barley			•	5	(Total of S items 1 to	Section () item 29 and 9 4 above)		•		
9	Rape for	Winter			•		Moor, Dee	Frazings - Mountain, Hill, er Forest situated within the				
10	oliseed	Spring			•	6	Include: \	nit, enclosed or not. Do not woods, roads, etc., share in		•		
11	Linseed				•	L	common seasonall	grazings or land taken Y				
12	Potatoes Intended	mainly for seed			•		(other tha	d - total area of woodland in orchards) forming part of				
13		ntended for 1g on or by 31 July			•	7	for comm	g, including woodland used ercial or amenity purposes,		•		
14		p Intended for ng after 31 July			•	\vdash		nd - I.e. roads, yards,				
15	Beans for combini	ing			•	8		s (excluding glasshouses in ds, dereilct land, etc.		•		
16	Peas for combinin	g			•	Ē		FALL LAND to which this lates Total of Section 🚯				
17	Lupins				•	9	Items 5 +		•			
18	Turnips and swede (Not for human con				•		with Section 😧 Item 11 on page 1)					
19	Kale and cabbage (Not for human con				•	G	Vegetables for human consumption (see notes, Section Hectares (to nearest 0.					
20	Rape for stock feed (Not oliseed rape)	ling			•	1		canning, freezing or drying n peas for market or peas for		•		
21	Malze				•	ŀ	stock feed					
22	Fodder beet				•	2		beans for market or beans for		•		
23	Other crops for Including cereal c (Not grass)				•	3	Leeks					
24	Vegetables for hun grown in the open					4	Turnips a	nd swedes				
24	Section G Item 18	5)				5	Cabbages and savo			•		
25	Orchard fruit - app sale or manufactu planted with malden	re. Include land			•	6	and baro	All other		•		
	fruit stocks (see Se	ction 🗿 Item 4)				7	Brussels	sprouts		•		
26	Soft fruits (must a with Section 🕜 its				•	8	Calabres	9		•		
27	Other crops not inc (not grass). See no Do not include set-:	tes, Section 4.			•	9		er, broccoll-heading varieties		•		
28	Bare fallow land -	do not		1.1.1	•	10	Carrots			•		
29	Include set-aside la TOTAL CROPS, FA					11	11 Lettuce					
L	ASIDE LAND (Item					12 Rhubarb Other vegetables - grown in the open						
	n 27 above (Other c vers and nursery st					13		getables - grown in the open toes or other glasshouse crops)		•		
30	Unspecified crops Please name any u			luporto - F	•	14		getables - areas of Individual ich are too small to be shown /		•		
51	rease name any u	ropeoneu oropo in tr	19 190X, e.g. 1	avenne, o	nevares'	15		(EGETABLES (must agree Ion 0 Item 24)		•		
	1				Pa	ge 2						

Annex III : Copy of Agricultural and Horticultural Census 1 June 2007Questionnaire (Page 2 of 4)

Annex III : Copy of Agricultural and Horticultural Census 1 June 2007Questionnaire (Page 3 of 4)

0	age J		as Rection 7)		6	•	outry a	nee noten	Pootlon	(0)	Mur	mbar
Ľ	50	ft fruit grown in the open (see no He	ctares (to neare	st 0.01)		, ,	ounry (i	see notes,	ns in firs		NUN	nber
1	Strawber	ries		•		Fowls	Hens laying	in the lay	ing seaso			
2	Raspberi	198		•	2	eggs for eating	. aying		ulted her	15		
3	Blackcur	rants		•	3		Pullet	ts being rea	red for la	ying		
4		nd other kinds of soft fruit - those above which as individual		•	4	Fowis o			ch layer (chicks		
\mathbb{H}		too small to be shown separately OFT FRUIT (must agree with			5	all ages for	eggs		ch table (chicks		
5		Item 26)		•	6	breeding	Cock	(8				
0		lbs, flowers and nursery stock gi e notes, Section 8) He	own in the op stares (to neare		7	Broller	s and ot	her table f	owis			
1		wn for the production of dry buibs cut flowers in the open		•	8	Turkeys	8					+
2	Other flo	wers for cutting in the open not s, incl. land prepared for the crop		•	10	Ducks Geese						
3		Bedding + pot plants grown in the open •										
L		Fruit stocks - spawn beds,		- 11	Other p							
4	Hardy	runner beds, stool beds and young plants intended for sale		12	TOTAL	POULTR	RY (Items 1	to 11 abo	we)			
5	nursery stock			•	13			is and gees ave access			No	
6	In the open	Shrubs		•								
7		Ornamental trees (not forest trees)		•	٩) 0	attie				Nu	umber
8	Other nursery stock - herbaceous plants, alpines, etc. (not forest trees)		1	Cows helfers		Dairy						
9	TOTAL (should also be included in Section O item 27)				2	mlik		Beef				
		and protected crops	Square	Square metres	3	Cows li calf but		Dairy				
10	Glass-	"Walk-In" plastic structures			4	mlik		Beef				+
11	houses	Glass clad structures			5	Listers		2 years old and over		1		
12	Area of v	which is Tomatoes			6	Helfers calf for the firs			Beef			
13	Area of v	which is Other Fruit			7	time		Under 2	Dairy	1		
14	Area of v	which is Vegetables			8		years old Be					
15	Area of v	which is Bedding and Pot Plants			9	Bulls fo	и Г	2 years old and over				
16	Area of	which is Hardy Nursery Stock			10	service	'	1 year old	and und	ər 2		
0) PI	gs		Number	11		2	Male				
1	Sows In	pig			12		years old		For	Dairy		
2	Glits In	pig			13		and over	Female	breeding	Beef		
3	Other so	ws for breeding			14				Not for I	preeding		
4	Barren a	ows for fattening			15		1 yr	Male				
5		okg and over, not yet in pig, but d to be used for breeding			16	other	old and under		For	Dairy		
6	Boars b	eing used for service			17	cattle	2	Female	breeding	Beef		
7	110kg liveweight and over			18				Not for t	preeding			
8	All other	80kg and under 110kg liveweight			19			hs old and	Ma	ale		
9	pigs (not	50kg and under 80kg liveweight			20		under 1	l year	Fe	male		
10	entered above)	20kg and under 50kg liveweight			21		Under 6 m		Ma	ile		
11		Under 20kg liveweight			22	22 Under 6 months old			male			
12 TOTAL PIGS (Items 1 to 11 above) 23						TOTAL	CATTLE	: (items 1 t	o 22 albov	e)		
_				D.	age 3							

Annex III : Copy of Agricultural and Horticultural Census 1 June 2007Questionnaire (Page 4 of 4)

12			e cattle sold/bought, e aughter (see notes, Sec		se Number	16		ur - Occupie lotes, Sectio	r/spouse doing n 16)	farm work			
		Under	6 months old			-					ge (Ye		
H	Calves and		the old and under				cupler		-	under55	55 to (54 65 a	- T -
2	store cattle sold from	1 year				1		II-time on hol	-				16 00
з	2 June 2006 to	1 year	old and under 2			2	Working part-time	Haif-time or Less than ha					ick only cre box
4	1 June 2007	2 year	s old and over			Ľ	on nording	Less than no	an-ume]			78
5	Calves and	Under	6 months old			SD	ouse				ge (Ye		
6	store cattle bought from	6 mon 1 year	the old and under			4		-time on hold	ling	under 55	55101	94 00 a	1 -
7	2 June 2006 to	1 year	old and under 2			5	Working part-time	Half-time or	more				th only one box
8	1 June 2007	2 year	s old and over			6		Less than ha	alf-time				(hth o
13			es, Section 13) ng in 2006/07 season		Number	Ū		her labour w notes, Sectio	orking on the h	nolding on		e 2007 mber	7
	(Actual numb					1			Business Par	tners			
2	Rams to be be used for					2		Males	Hired				
3	Other shee		for breeding			3	Full-tim regular stat		Members of occupier's far	mily			
4	year old and o	over	other			4	employed o 1 June 200	n	Business Par	tners			
5	Lambs (estima	ate if not	yet counted)			5		Females	Hired				
6	TOTAL SHEEP	P (Items	1 to 5 above)			6			Members of occupier's far	mity			
C	Miscella	aneous	lvestock (see notes, Se	ection 14)	Number	7			Business Par	tners			
1			/pes (exclude wild nnot be gathered,			8		Males	Hired				
\mid	identified, rec			_	-	9	Part-tim regular sta		Members of occupier's far	mily			
2		-	iture/horticuiture	_	_	10	employed o 1 June 2007		Business Par	tners			
4	All other hore Female goat	s that h	ave kidded		_	11		Females	Hired				
Н	In 2007 or will Other female (t have been used		-	12			Members of occupier's fam	nily			
5	for breeding in	n previou	s years		_	13		d seasonal nployed on	Males				
6	All other goats	s and kid	5			14	1 June 200)7	Females				
6	Other fa (see not		stock not mentioned el tion 15)	sewhere	Number	15	(Items 1 - 14		CASUAL STAFF	:			
1	Other livesto	ick				~	Dect	antore	awad hur ware to	the last to	ment	ha	
2	Please spec	ify the ty	pe of livestock			13		actors empl notes, Sectio	oyed by you in en 18)	the last 12	mont		lumber
						1			ing days worked the last 12 mon				
10	eclaration by o declare that the le best of my k	ə inform	ation I have given on th	nis form is c	orrect to				not that of the , 'manager', 'a				
	Signature						eason for sig	ning			_		
F	ull Name						Telephon	e No					
	LEASE PRINT						Please re	turn this for	m in the encio	sed pre-pa	ld en	velop	9

FARM STRUCTURE SURVEY 2007

NATIONAL METHODOLOGICAL REPORT

MEMBER STATE: WALES (UNITED KINGDOM)

SUMMARY

UK results are compiled by the Department for Environment Food and Rural Affairs (DEFRA) from separate data collected in Wales, England, Scotland and Northern Ireland. Results for Wales for the 2007 Structure Survey have been collected by the Welsh Assembly Government.

The Welsh design, methodology and operation of the survey are closely based on that for England. Some functions – such as form despatch and data capture – are still performed jointly.

The Welsh Assembly Government maintains a register of farm holdings in Wales for statistical purposes. All known holdings on the register are allocated a unique identifier. The Agricultural Statistics team at the Assembly maintains this register. The workings of the Welsh register are based on the register in England maintained by DEFRA. Arrangements exist to ensure that a holding with land in both countries is registered only once.

Data for the 2007 Structure survey was collected from three sources in Wales.

- June 2007 Agricultural Survey. Regular postal sample survey to collect information about land and livestock on farms in Wales. The survey also collects information about farm labour but this is not used in the Structure Survey.
- Labour survey March 2007. An additional postal sample survey to cover the agricultural labour questions for the Structure Survey. The survey also carried the diversification questions.
- Administrative sources were used to supply results for numbers of cattle on a holding; organic farming and the environmental schemes.

Given the similarity in the questions for this and previous Structure Surveys no piloting was specifically undertaken.

Estimated data for land areas and livestock numbers have been provided for holdings that were not selected for the June survey or did not respond to it. For the Labour Survey a smaller number is required and so we have not attempted to impute values for all missing holdings. The data include raising factors to scale the survey results to overall population estimates.

The administrative sources provide definitive information for the holdings in the particular schemes. The administrative data are linked to the statistical results using unique holding identifiers.

Provisional and final results from the June 2007 Agricultural Survey have been published:

- Provisional June 2007 results published 2 October 2007 (SDR143/2007)
- Final June 2007 results published 29 November 2007 (SDR186/2007)

Results from the Labour survey have not yet been published. A table on the age distribution of principal farmers will be included in the next volume of "Welsh Agricultural Statistics" to be published in spring 2009.

A consideration of the data quality issues for the June Survey, and its implications on how the results can be used, was published in August 2007. This was entitled "Agricultural Small Area Statistics Bulletin" (SB39/2007).

1. INTRODUCTION

1.1 <u>History, scope</u>

<u>History</u>

There has been an annual agricultural survey in England and Wales since 1866. Initially run as a census it covered land areas and livestock numbers. In 1921 it was expanded to cover data on farm labour. The survey has always been postal and takes place at the beginning of June each year.

Since 1995 the survey has been based on a sample rather than being a full census. A full census is run periodically, the last being in June 2000 and the next will be 2010.

Scope

In June 2007 survey returns were sent to 13,500 holdings in Wales out of a total of 37,000 known holdings. The survey is stratified by the economic size of the holdings. The selection of the survey is described below.

To run the Agricultural Survey the Welsh Assembly Government maintains a register of farm holdings. While there is no compulsory register of farms in the UK the statistical register represents the best attempt at a register of all farms. The register carries general contact details for each holding.

The classification of known farms on the register into Robust Farm Type and economic size group is derived from data from the annual June Agricultural Survey. This information is used to obtain the optimal stratification for sample surveys. It is also used administratively for providing the names and addresses of holdings with particular types of livestock in the event of disease outbreak or for mail shots directed at certain holding types.

Communication between the Assembly and farmers can be in either English or Welsh. The register records the language that individual farmers would prefer to use. English and Welsh versions of the questionnaires are produced. In any telephone contact the farmer can conduct the call in Welsh if desired.

1.2 National legislation

National Farm Survey Legislation

In England and Wales the legal basis for the collection of agricultural statistical data is the Agricultural Statistics Act 1979 (as amended by the Agriculture (Amendment) Act 1984) which imposes a statutory requirement on all occupiers to complete and return their questionnaires. This legislation does not need to be updated or amended to allow for new surveys or for additional questions. There is provision within the Act to prosecute those that do not

respond to the survey, without reasonable excuse. The maximum financial penalty that can be imposed is currently £1,000.

There is also a requirement to minimise the burden on respondents wherever possible. This is in line with EU Council Regulation (REC) No. 322/97 on Community Statistics, and Office of National Statistics guidelines in "Statistical Surveys Guide to Best Practice". Administrative data, such as that from IACS, has therefore been incorporated where a close match has been identified between previous IACS and June Survey returns.

The Agricultural Statistics Act requires that farmers complete the June survey when they are selected in the sample. The additional labour survey, however, is a voluntary survey and is conducted under the terms of the Government Statistical Service Code of Practice. There is therefore no legal requirement for respondents to complete the labour questionnaire.

1.3 Main changes since 2000

The main changes apply to the June Agricultural Survey. For the 2000 Structure Survey the June results were derived from a full census of agricultural main holdings.

- The June survey is now a sample survey going to some 13,500 holdings in Wales (see section 3.4).
- The distinction between main and minor holdings has been dropped. All known holdings are now included in the scope of the June survey (see section 3.3).
- The 2007 survey did not ask for information about cattle. Cattle information came from the Cattle Tracing System. The link between the survey and administrative data was through the unique farm identifier.
- In 2007 the Labour survey for Wales was run in March rather than October as for previous Structure Surveys.

Minor changes are made from time to time to try and make the form easier for farmers to complete. The main changes to the survey are those detailed above.

2. CONTENT

2.1 Characteristics and reference period

The information for Wales was collected according to the Commission Decision 98/377/EC amending Annex 1 to Council Regulation 571/88/EC.

The reference periods for the sources used in Wales were as follows:

- June Survey areas and livestock numbers as at 1 June 2007
- Labour Survey number and ages of farm workers as at 1 March 2007

The climate, soil quality and topography of Wales mean that agriculture is largely based on raising livestock on permanent pasture and rough grazing. Growing arable or horticultural crops is largely restricted to the coastal zone and sheltered valleys. Taken together arable crops and horticulture account for less than 5% of the agricultural land in Wales. The pig and poultry sectors in Wales are also relatively small, with production concentrated in a small number of large holdings.

These factors make it impracticable to collect the full range detail from these small sectors in Wales. The following table summarises these approximations. These are in addition to variables that have been agreed as not significant or not available for the UK as a whole.

Sub total	Notes	Non-zero responses
Stockfeed	Includes turnips, swedes, fodder beet, mangolds, kale, cabbage, kohlrabi, rape and other crops grown for non-human consumption.	403
Total vegetables and salad grown in the open	Includes broad beans, runner beans, French beans, picked green peas, vining peas and other vegetables and salad grown in the open for human consumption.	73
Total orchards and small fruit	Includes commercial and non- commercial orchards, strawberries, grapes, raspberries, blackcurrants, blackberries, gooseberries and other small fruit.	114
Glasshouses	Includes glasshouse in use and not in use on survey day. Includes those used for vegetables, salad, fruit, flowers and foliage for cutting and all other plants.	85
Hardy nursery stock	Includes christmas trees, perennials not cut for flowers and other hardy nursery stock. Excludes bulbs and flowers grown in the open.	31
Other poultry	Poultry excluding chickens and turkeys	384

To estimate the full level of detail for the Structure Survey these sub-totals have been distributed using historical patterns.

No data have been collected for F03 – land not being used for agricultural production but kept in good agricultural and environmental condition. This is intended to include pasture no longer used to graze animals and land taken out of crop production for the long term.

Using evidence from available experts in the Welsh Assembly Government suggest that while some of this land will exist in Wales the amounts will be limited. The active market in Wales for rented agricultural land provides an incentive not to let land fall out of production. Some agri-environment agreements require the exclusion of livestock from an area but these are rare. More usually the priority is to reduce stocking levels to an acceptable level.

The original intention for the UK was that this item was to be recorded as "not significant". The surveys were conducted on this basis. This means that we have not been able to establish a plausible methodology to estimate this area for the 2007 survey. Work will be required to rectify this for 2010.

2.2 Questionnaire

Two separate postal questionnaires were used:

- June Survey. Regular annual survey collecting information about land usage, changes to land area, livestock numbers (excluding cattle) and farm labour head counts. The labour and land change results from this survey were not required for the Farm Structure Survey.
- Labour Survey. Collecting the information required by the Structure Survey on the characteristics of farmers and their workforce and diversification information.

Copies of the questionnaires are attached.

3. SURVEY METHODOLOGY

3.1 Survey organisation

The surveys used to collect information for the Structure Survey in Wales were managed by the Statistics Directorate of the Welsh Assembly Government.

The Agricultural Statistics team is led by a statistician with 5 support staff. This team maintains the statistical register of farms, runs the surveys and analyses and disseminates the results. The team has one member of staff who is fully bilingual in English and Welsh. The team was the same individuals who were involved in the 2005 Structure Survey.

DEFRA has the lead in co-ordinating the UK response to the Structure Survey. They also lead on agreeing the requirements of the survey. To take advantage of economies of scale the printing and despatch of forms is done for us by DEFRA. The contract for data capture is also managed by DEFRA.

3.2 Calendar (overview of work progress)

The June Survey is an annual survey. The Labour Survey is only run when required for Structure Survey. The timetable for the surveys was as follows:

Stage	June	Labour
Survey design completed	May 07	Feb 07
Sample chosen	25 May 07	23 Feb 07
Survey day	1 Jun 07	1 Mar 07
First reminder	25 Jun 07	4 Apr 07
Second reminder	14 Aug 07	4 May 07
Third reminder	14 Sep 07	N/A
Provisional results	2 Oct 07	N/A
Survey closed	9 Nov 07	May 07
Final results calculated	Nov 07	Jul 08
Final results published	29 Nov 07	N/A

The final Welsh Structure survey data set was sent to DEFRA in July 2008 to be incorporated into the UK results.

3.3 Planning the survey

3.3.1 Population and frame

Definition of a holding

The basic unit of enumeration is the holding. The guideline definition is pragmatic and operational and subject to agreement with the individual farmer. The holding comprises land on which agricultural activities are carried out and which is by and large farmed as one unit having regard to such supplies as machinery, livestock, feeding stuffs and manpower, and to distance between any separate areas of land involved and their type of farming. The farm business is operated by a "farmer" who is a single individual, a partnership of individuals, a limited company, or an institution of some kind. Some farm businesses occupy more than one holding.

From June 2002 the distinction between "main" and "minor" has been dropped. The sample for the agricultural surveys in Wales is now drawn from the full register of all holdings. Previous surveys had been drawn only from "main" holdings on the assumption that the contribution from the "minor" holdings was statistically insignificant.

Register of farm holdings

A statistical register of farm holdings in Wales is maintained by the Welsh Assembly Government. The register is continuously updated but there is no statutory requirement for holdings to register.

The four main sources of new register information are:

• Registration of new holdings is administered by the Divisional Offices of the Welsh Assembly Government.

- Administrative records such as the subsidy payment system will provide updated information mainly about names and addresses.
- Survey correspondence will identify name and address changes, business structure changes and closures.
- Maintaining the mailing lists for monthly farming magazine ("Gwlad") will give information about name and address changes and also identify addresses that the Royal Mail cannot deliver to.

The statistical register is accurate for the majority of holdings in Wales. Particularly where the holding is known through the subsidy payments system. Tracing holdings that do not receive subsidy can be difficult. This can include specialist pig, poultry or horticulture producers or very small holdings.

Links between administrative systems and the statistical register are through a unique holding identifier. The two systems are maintained independently. Thus there is scope for minor discrepancies when one system is updated before the other.

3.3.2 Survey design

The enumeration for the 2007 Structure Survey was by sample. Separate samples were taken for the June Survey and the Labour Survey. The Structure Survey questions were divided between these two surveys.

- June Survey. Land area and usage and livestock number questions. Data on cattle were collected separately using the Cattle Tracing System. The survey has a section of farm labour questions but these were not used for Structure Survey purposes.
- Labour Survey. Questions about the characteristics of farmers and farm workers and also diversification.

This avoids the possibility that a single farmer would have to answer the same question on different surveys. The larger farms are included in the sample for both surveys. Smaller farms are sampled and may included in none, one or both of the surveys.

Stratification of the samples

The samples for the two surveys are stratified separately.

For the June survey the stratification was based on the economic size of the holding. The Labour Survey stratifies according to economic size and the farm type. The standard ESU groups and farm types are used in the stratification. Calculation of the stratification was carried out by DEFRA in accordance with the methodology set out in the English paper.

Once the optimum sample size within each strata had been calculated, then a random sample of this size was drawn from the strata population.

3.3.3 Pilot Survey

Pilot surveys were not implemented since none of the surveys used to collect the data was significantly different from previous surveys.

3.3.4 Informing and training the staff and respondents

Staff training

The June Survey forms a regular part of the work of the Agricultural Statistics team. Training is given to new staff and desk instructions are maintained. The desk instructions for the Labour survey were developed from the European documentation with the help of DEFRA statisticians. In 2007 Wales was fortunate that all the members of the team had also been involved in the 2005 Structure Survey.

Informing respondents

Various trade and farming organisations were contacted to gain their support for the survey. These contacts were largely through DEFRA working on an England and Wales basis.

3.4 Sampling, data collection and data entry

3.4.1 Drawing the sample

Within the sample strata the sample is drawn as a simple random sample.

3.4.2 Data collection and entry

All the surveys were postal surveys. Farmers were provided with pre-paid reply envelopes. A helpline telephone number was given for farmers with queries about the surveys.

Average completion time for the questionnaires was:

- June survey 30 minutes
- Labour Survey 15 minutes

Data capture of the paper returns was through a contract managed by DEFRA for Wales and England. The captured data were sent on a CD by courier to the Assembly for final processing. The completed Welsh data set was sent as a database to DEFRA by secure e-mail. DEFRA then collated the full UK data set.

3.4.3 Control of the data

A thorough check of returned forms is an integral part of the processing system. Prior to data capture all forms are subject to manual scrutiny for completeness and legibility. Once the data have been captured they are run through computer validation. This involves logic and consistency checks (including comparison with previous survey data) and reconciliation of area information to the recorded area of the holding. Where appropriate, differences are resolved through telephone contact with the occupier of the holding. A record is kept of the original return, any amended data and the person who made the amendment. A validation procedure exists for returned forms, which checks the response for consistency and credibility. The validation rules used incorporate those required specifically by the Structure Survey.

3.4.4 Utilisation of administrative data sources

Administrative data were used in a small number of cases to flag when a holding was involved in a particular scheme. For the first time in 2007 all the cattle information was taken from the Cattle Tracing system.

Code	Description
CCO5a CCO5d CCO5e	UAA for organic farming UAA under conversion Organic animal production
AO3	Areas with environmental restrictions
J02 to J08	Cattle information

The data for organic characteristics (CC05A, CC05D & CC05E) was taken from the United Kingdom Register of Organic Food Standards (UKROFS), which is explained in more detail in section 3.3.1 of this report. The organic data was matched to the FSS population using the unique holding number identifier (CPH). A CPH field was present in the UKROFS data, but it was imperfect. Where a valid identification number was not available, a manual exercise was carried out, matching holdings on key variables such as name, address or post code. The data collected on organic methods for animal production (CC05E) only recorded the presence of organic methods for animal production. Because of this it was impossible to distinguish between 'full' and 'partial' production methods so as result any presence of organic methods of animal production were recorded as 'full' in characteristic CC05E. Areas with environmental restrictions are derived from the definitive records of the NATURA2000 areas and Nitrate Sensitive Zones. Where the Assembly holds individual field level data a direct comparison between the holdings and the restricted areas can be made. The field level data are available for all single farm payment recipients. These recipients form the great majority of holdings agricultural land in Wales. For non-recipients an estimate is made of whether the holding has land in the restricted area using the address of the farm holding.

The information about numbers of cattle was derived from the Cattle Tracing System rather than survey data. This system covers all holdings with cattle in Great Britain but excludes Northern Ireland. Since the Cattle Tracing System requires all holdings with cattle to register this means that the data do not have the sampling errors associated with survey data.

There are issues with linking the Cattle Tracing System and survey information to give a full farm record. There are also issues because the administrative data does not collect the information in exactly the same way as the June Agricultural Survey. Defra have led on developing the appropriate links between the sources for farms in Wales and England. The details of this work can be found in the methodology report for England.

3.4.5 Non-response

Non-response was interpreted as questionnaires that were not returned at all.

Most farms in Wales will only have results for a small sub-set of the Structure Survey questions. Farmers are asked to strike out questions that do not apply to them. However, where questions are left blank a nil response to the question is assumed.

The share of forms sent out that were completed for the three surveys were:

Survey	Forms sent	Responses	Response
	out	received	rate
June Survey	13,500	7,300	54%
Labour Survey	14,500	9,300	64%

Action Taken

In common with many government surveys, the response rates to agricultural surveys have fallen sharply in recent years. The Agricultural Statistics team in Wales has given a lot of thought to how this trend can be countered.

As a routine part of the survey reminders are sent to holdings which have not yet returned their data. There were three reminders for the June Survey and two for the Labour Survey. The issuing of reminders is shown in the survey timetables in section 3.2, above.

As part of the reminder process particular effort is put into getting responses from the largest holdings. This is particularly so for the large pig and poultry producers where a single holding can make a significant contribution to the Wales total. Another key area is to try and get responses from holding that have not completed the survey for a number of years.

Reasons for Non-Response

The main reasons for non-response are clear from management of the survey – written comments on the forms and telephone queries and comments from farmers. The key reasons are as follows:

- Farmers see no benefit to responding to the surveys either for themselves or the industry. They are seen as pure bureaucratic burden.
- The volume and complexity of the data are seen as excessive.
- Farmers already complete vast amounts of data for their subsidy payments. They resent the additional statistical data collection.
- Farmers believe that there is duplication between the administrative and statistical data.
- Farmers are concerned that survey data will be used against them statutory bodies such as Revenue and Customs.

It is noticeable that the Labour survey achieved a higher response rate than the June Survey. This may suggest that farmers find it easier to complete tick boxes rather than writing in values or free text. Compared to small business in other industries, farmers are still relatively good at completing surveys. When the farmers can see the benefit of the survey to their own farm, and the burden of the survey is proportionate to this benefit, then response rates can still be high.

3.5 Data processing, analysis and estimation

3.5.1 Methods for handling missing or incorrect data items

Queries raised against the survey data are firstly checked against other survey returns and previous data. If this cannot clear the query then the farmers are contacted by telephone to correct or explain the query.

Where a June Survey form had not been returned, or the holding had not been selected for the sample, data were imputed for the holding. Imputation was based on the most recent base data available for the holding. To this base data a trend calculated from the survey data was applied. When there were sufficient results from the survey different trends were calculated for the different strata in the sample.

For the Labour Survey there was no attempt to impute results for individual holdings. Non-responding holdings were treated as if they had not been sampled and the raising factors calculated accordingly.

3.5.2 Estimation and sampling errors

Estimation and sampling errors occur because we do not have actual observations for all farm holdings in Wales. Missing results can be due to a holding either not being selected for the sample or failing to respond.

The following table gives results for some key land area and livestock results from the June 2007 Welsh Agricultural Survey.

	Values ('000)		Non-zero holdings ('000)		Average per	Standard	Response
	Total	Responses	Total	Responses	holding (a)	deviation (a)	share (b)
All land	1,460	484	32.9	5.8	44	85	33%
Grass (c)	1,306	435	32.0	5.7	41	80	33%
Crops (d)	67	24	4.2	1.2	16	31	36%
Sheep	8,987	2,964	15.1	3.3	597	857	33%
Poultry (e)	7,510	7,033	5.4	1.1	1,378	12,701	94%
Pigs	24	20	1.0	0.3	25	145	85%
Horses	46	10	7.6	1.5	6	9	21%

(a) - average and standard deviation calculated using only those holdings with a non-zero value

(b) - total from survey responses as a share of total estimated value $% \left(b\right) =0$

(c) - includes permanent pasture over 5 years, sole rights rough grazing and new grass under 5 years

(d) - all arable crops and horticulture

(e) - includes chickens, turkeys, ducks, geese and other fowls

For most of the variables the share from actual responses is around a third of the final estimate. The figures for pigs and poultry are particularly high because these animals are largely concentrated on a few very large holdings. The small number of large units can be targeted individually.

Since the results are taken from an administrative source, rather than the survey, cattle data are excluded from this table.

3.5.3 Non sampling errors (¹¹)

Coverage errors

There is no compulsory register of farms in the UK therefore there is scope for coverage error. The statistical register has good coverage for most purposes. The coverage will be at its best for farms that are in receipt of subsidy payments. This will include the majority of holdings with sheep or cattle or arable crops. For these farms the main issue will be about how quickly the statistical register is notified of changes, new holdings and closures.

Specialist pig, poultry and horticulture producers may have more scope for coverage error. These holdings are often outside the subsidy payments system. Also for these types of holdings the production tends to be dominated by a few very large producers. Thus missing a single large producer may be more significant than in other sectors.

Very small holdings are also difficult to track. This is partly because they are often outside the subsidy payments system, the owners often do not consider themselves to be "farmers" and also because of the volume of change in this sector. The very small holdings are not generally statistically significant with less than 1% of the Wales total for most agricultural variables (although horses are an exception).

The four main ways to reduce the coverage error have been employed in Wales

- Improving links with the subsidy administration system and so speeding up the maintenance of the statistical register.
- Targeting large non-responders so that we have up to date information about the key holdings.
- The register has benefited greatly from the introduction of a monthly farming magazine issued by the Welsh Assembly Government. The magazine in known as "Gwlad" (which is the Welsh for "country"). This gives a regular source of up to date address information since farmers appear keen to continue to receive it. It also gives early warning when an address falls out of use because the magazine is returned undelivered.
- Register cleaning exercises. Prior to 2007 there was an exercise to look at holdings for which we had not had a response for a long time or which recorded no agricultural activity (dormant holdings). The exercise attempted to confirm the status of the holding as either live or dead.

Measurement errors

Most of the variables on the Structure Survey should be virtually free from measurement error. The crop and livestock categories have a long history and are understood by farmers. There may be some scope for mis-allocation between categories – for example on the weights of pigs. Any such mis-specification is not thought to be significant.

^{(&}lt;sup>11</sup>) *Non-sampling error* is the error attributable to all sources other than sampling error. Non-sampling errors arise during the planning, conducting, data processing and final estimation stages of all types of survey.

The main area for concern in the June Agricultural Survey is for the labour questions. These questions are not used for Structure Survey purposes.

Processing errors

The scope for processing error is limited by the validation checks. Spot checks on the data that we receive from the data capture contractor confirm the accuracy of the data capture.

Non-response errors

Results from respondents may be taken as an accurate statement for the individual holding. The major source of error for the Structure Survey results comes from those holdings that do not have a response. These could be either holdings in the survey that did not respond or holdings that were not selected for the survey.

In Wales the proportion of the estimated total that comes from responses usually falls in the range from 30% to 40%. Thus between 60% and 70% of the total is imputed and so subject to non-response and sampling error.

Response rates in Wales vary by the economic size of the holding and the robust farm type. In keeping with the rest of the UK, response rates are higher for arable farms than livestock farms. In Wales the response rates are higher for smaller farms. This is largely because the larger farms in Wales are mainly livestock farms but elsewhere there is bigger share of large arable farms.

3.5.4 Evaluation of results

The evaluation of the results from Welsh agricultural surveys has concentrated on an internal investigation of the impacts of the various data quality issues. This included some simple simulation work and some subsampling of the real data. The main conclusions of this work were:

- The results for an individual holding are accurate only for those holdings for which we have a response.
- The imputed values may not be good estimates of the true holding results particularly if the given holding has not responded for some time.
- The imputed values are, however, accurate *in aggregate*. The accuracy of the estimates depend primarily on being based on reasonably large numbers of holdings.
- The location of a holding can only be approximated. Flexible regions can be estimated by aggregating individual holdings but these estimates are, again, only accurate *in aggregate*.
- Maintenance of the register of farm holdings is crucial to the quality of the statistical estimates. The two major factors in keeping the register up to date appear to be regular contact with farmers and giving farmers an incentive to maintain contact.

The practical impact of this is that it is important to use results that are based on a sufficient number of responses. This is a balance between the desire for precision and the need for accuracy. The data quality issues are discussed further in the Agricultural Small Area Statistics Bulletin (SB39/2007).

4. PUBLICATION AND DISSEMINATION

The Welsh Assembly Government published agricultural statistics for Wales. The Assembly also contributes data to UK compendia volumes.

The following statistical releases contain results used in the 2007 Structure Survey.

- June Survey 2007 provisional results (SDR143/2007), 2 October 2007
- June Survey 2007 final results (SDR186/2007), 29 November 2007

The data quality and usage issues were considered in the Agricultural Small Area Statistics bulletin (SB39/2007).

These publications are all available on the statistical pages Assembly Internet site, along with many other general statistics publications, releases and bulletins.

A regular general volume of results ("Welsh Agricultural Statistics") is published annually. There is also a pocket sized summary of Welsh agriculture ("Farming Facts and Figures"). These publications are available on the Assembly Internet site and as paper publications.

Results from the 2007 Labour Survey have not yet been published. Defra will in due course publish UK level results. A table showing the age distribution for principal farmers from the 2007 survey will be included in the next edition of "Welsh Agricultural Statistics".

REFERENCES

Statistical releases, bulletins and publications may be found on the statistics pages of the Welsh Assembly Government Internet site.

www.wales.gov.uk/statistics

ANNEXES

- The Annual Agricultural and Horticultural Survey 1st June 2007 Survey Form
- Survey of Labour on Agricultural and Horticultural Holdings 1st March 2007 - Survey Form

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Restricted – Commercial The Survey Manager, FREEPOSTNAT 8910 SD6, Room 2-002, Cathays Park, Cardiff CF10 3BI Tel No. 029 2082 5082/029 2082 5047 (English/Cyn Fax: 029 2082 5350 e-mail:stats.agric@wales.gsi.	araceg) gov.uk dip s	vstadegau ir gyfer cymru tatistics or wales Uwodraeth Cynulliad Cym Welsh Assembly Governmen there are any amendments or corrections to yc me and/or address, please write them in this box.	nt our
Holding Number:	Recorded holding area:		ha
The Annual Agricultural & Ho 1st JUNE 2		Mae yna ffurflen Gymraeg ar gael hefyd. Os hoffech gopi, cysylltwch a'r adran ar y rhif uchod, neu ticwch blwch V2	
A. Ownership of land and area of	이 것 같아. 그는 것 같아		
	areas you farm to the nea		
Permanently is defined as land the		······	
Seasonally is defined as land that	is <u>RENTED IN</u> or <u>LET OU</u>	<u>IT</u> for 364 days or LESS	-
Has <u>all</u> the land been sold? If YES please tell us who is now farming the lan section on Page 8 then sign the Declaration on 1		Yes I No 2	
Do you own the land but no longer fa or the land is not being used ? If YES please complete THIS PAGE & sign the	NA52	Yes 1 No 2	
 If all your land has been LET OUT onl Please indicate if the land has been LET OUT is <u>P</u> <u>SEASONALLY</u> let and sign the Declaration on 	ERMANENTLY or NA50A Page 8.	Permanently 3 Seasonally 4	_
	Hectares		
Land OWNED at the 1st June 2007	H2 .	For 365 days or MORE (ha)	
(include all land that is let out but is OWNED)	+	HCIC .	
Land <u>RENTED</u> IN at the	HC1 . W	Thich is rented	
1st June 2007	HCI .	in: For 364 days or LESS (ha)	
		HCID .	
	_	For 365 days or MORE (ha)	
		HC6C .	
Land <u>LET</u> <u>OUT</u> at the	HC6 .	Which is let	
1st June 2007		oul: For 364 days or LESS (ha)	
		HC6D .	
	=	This will be the TOTAL AREA	
TOTAL area at the 1st June 2007	H10 .	that is FARMED by this holding NOT the total area OWNED	g
HC/JME PB12583 (2007)			

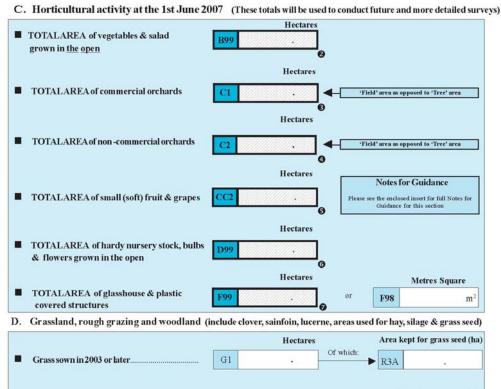
Annex 1: The Annual Agricultural and Horticultural Survey 1st June 2007 – Survey Form. Page 2 of 8.

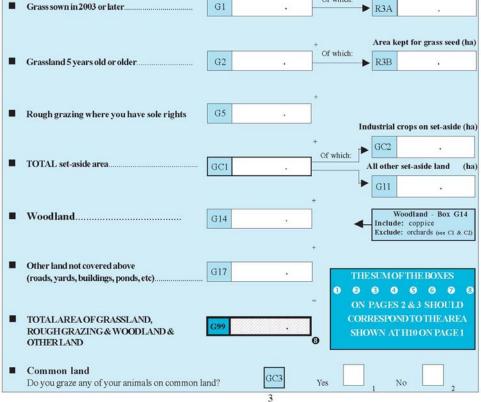
Conversion tables

The following tables provide approximate equivalents for use in completing your return

		Acr	es to F	lectare	s				Square feet to square metres					
Acres	1/4	1/2	3/4	1	10	100	1000		Square feet		10	50	100	1000
Hectares	0.1	0.2	0.3	0.4	4	40.5	404.7		Square metres		1	5	9	93
	r hold ease lis		the	same o	occupa	ncy/par	lings in tnership of the o		Q1	Yes		l N		2 one form):
Q92A						Q92B					Q92C			
B. A	rable	crops	and	bare f	fallow	(NO	T on se	t a						
■ Ce	ereals	for co	ombin	ing				_	Hectares	1				
W	heat						Al		•					
W	inter ba	rley					A2		,					
Sp	ring ba	rley					A3							
Oa	ıts						A4				Other	ereals for cor	nbining - Box	AC4
Ot	her cere	eals for	combi	ning			AC4			4	togethe	grain or per er & intende	of grain cro as, beans et d for combin	ing, rye
■ Po	otatoes	s (inclu	ading s	eed po	tatoes)					+	for thre	shing and mi	xed corn and	triticale.
	tatoes						A10							
Po	tatoes	intende	ed for				A11							
	rvestinį									+				
	ops fo	or hur	nan c	onsun	nptior	1				1				
Fie	eld beau	ns and	peas fo	or harve	esting	dry	AC3							
М	aize						AS1		4					
	lseed ra ot on se						AC5							
C Cr	ops f	or sto	ckfee	ding						+				
Ma	ize (gre	enmai	ze Indi	ian corr	1)		AS2							
200	oins (all						AC6				All oth	er crops for s	tockfeeding - l	Box AC7
	other c						AC7				These :	le grass to be should be ent on Page 3.	used for hay ered in Boxes	or silage. G1 and/
		-					CLUDI	NG	grass for hay/s	sila	-		l oive area i	n ha)
						(Lin			Bruss for hays]+	Pr (pieds	e name and	Bueared I	
	31A		suga				A		•	2				
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E. People employed on the holding (remember to include yourself)

Include

- Managerial, supervisory and office work, preparation . and marketing of produce and maintenance (ditching, etc);
- All persons normally engaged in agricultural or horticultural work;
- those who are not present/not working on the 1st June 2007;
- youth trainees on official schemes.

Exclude:

Gardeners, groundsmen, gamekeepers, grooms,

children and work on capital investments (i.e. on

Prison inmates & students working on college farms;

farm shop workers, sales assistants in garden centres, domestic staff in the farm house, school

new buildings, new equipment) etc

Casual or regular:

Casual labour refers to people employed for a fixed part or parts of the year which covers 1st June 2007.

Glossary of terms

Typically this period would not be in excess of 20 weeks. Such labour are deemed to be casual, irrespective of the number of hours worked. Employees working longer than a 20-week period should be viewed a regular labour and classed as either full-time or part-time (See below).

Full time or part time

This status is determined by the average number of hours worked per week. If this figure is 39 hours or more it is deemed to be full-time; if it is less than 39 hours then the worker is deemed to be part-time.

SECTION I - (QUESTION NUMBERS Q5A TO Q12A)

Principal farmer: the person(s) who own(s) the land and who tends it. This also covers people who rent in land for more than a year at a time who, for the purposes of this return, are classed as the principal farmer

(NB. if all the land is let out for a period of less than a year then you should indicate this at question HC6D on Page 1 and therefore the questions on labour need not be completed).

Spouse: any spouses or (non-business) partners of people included above. Note that they should only be included if they work on the holding or assist in the running of the holding.

Other business partners, directors and their spouses: any people not already included who have financial and/or legal responsibility for the running of the holding.

Also ensure to include any spouses or (non-business) partners if they work on the holding.

SECTION II - (QUESTION NUMBERS Q17 TO Q20)

Salaried managers: include anyone who is paid to undertake the day-to-day management of the holding (or part of the holding).

Do not include anyone already included in Section I.

SECTIONS III AND IV - (QUESTION NUMBERS Q21A TO Q28B)

All other workers (excluding contractors) who have not been included in either Section I or Section II above should be shown in these sections. Each worker should only be included once in one of questions Q21A to Q28B according to the following:

Paid or unpaid: paid workers should be shown in Section III and unpaid workers in Section IV. 'Paid' is defined as giving money in return of or, in exchange of services 'Unpaid' is defined as providing services without payment i.e. unsalaried.

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Please p	lace numbers in thes	se boxes NOT	ticks or crosse	es.	Number of people	
Section I			Full Time	Q5A		
Principal farmers	All principal	Male	Part Time	Q6A		
(holders), spouse and	farmers		Full Time	Q7A		
business partners	(holders)	Female	Part Time	Q8A		
	Spouses of all		Full Time	Q5B		
REMEMBER TO COUNT <u>YOURSELF</u> AND EACH PERSON	principal farmers	Male	Part Time	Q6B		
ONCEONLY	(who work on the		Full Time	Q7B		
	holding)	Female	Part Time	Q8B		
	Other business		Full Time	Q9A		
	partners, directors	Male	Part Time	Q10A		
	and their spouses		Full Time	Q11A		
	(who work on the holding)	Female	Part Time	Q12A		
		-		· · · · ·		
Section II		Male	Full Time	Q17		
Salaried Managers	Salaried	Male	Part Time	Q18		
	managers	Female	Full Time	Q19		
		remate	Part Time	Q20		
Section III						
	Free large draw	Male	Full Time	Q21A		
PAID Workers 'PAID' is defined as giving money in return of or in exchange of services. REMEMBER			Part Time	Q22A		
	Family workers PAID		Casual	QC9A		
	TAD		Full Time	Q23A		
		Female	Part Time	Q24A		
			Casual	QC10A		
REMEMBER			Full Time	Q21B		
Exclude yourself & each person if you		Male	Part Time	Q22B		
have already been entered in Section I or II.	Non-family		Casual	QC9B		
See notes opposite for definitions of	workers PAID		Full Time	Q23B		
PART TIME, FULL TIME & CASUAL.			Female	Part Time	Q24B	
			Casual	QC10B		
Section IV		Male	Full Time	Q25A		
UNPAID Workers	Family workers UNPAID	iviale	Part Time	Q26A		
'UNPAID' is defined as providing services without		Freed	Full Time	Q27A		
payment i.e. unsalaried.		Female	Part Time	Q28A		
REMEMBER		N (-1-	Full Time	Q25B		
Exclude yourself & each person if you	Non-family	Male	Part Time	Q26B		
have already been entered in Section I or II.	workers UNPAID	E1	Full Time	Q27B		
See notes opposite for definitions of PARTTIME & FULLTIME		Female	Part Time	Q28B		
TOTAL LABOUR	TOTALAREA	of Sections I + 1	П+Ш+IV	Q98		

E. People employed on the holding (REMEMBER TO COUNT YOURSELF AND EACH PERS	PERSON ONCE ONLY)
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F. Cattle at 1st June 2007

	being collected from other administrative sources ore there is no need for you to enter any beef or dairy cattle
G. Sheep, rams and lambs on the holdin	g at 1st June 2007
Breeding sheep and rams 1 year and	over
Ewes intended for further breeding	Number Further Breeding Box M1 M1 Ewes and shearlings present on 1st June 2007 that have produced lambs between 1st June 2006 & 1st June 2007.
Ewes intended for first time breeding	+
Rams for service	М9
 Other sheep and rams NOT already of 	entered above +
Other sheep (1 year and over) - female	M13
Other sheep (1 year and over) - male	M14
 All lambs <u>under</u> one year old 	+ M17
Please tick this box if the majority or all of your land have been sold or have gone to slaughter on or before the 1st June 2007.	mbs MC171
TOTAL OF SHEEP & RAMS & LAMBS	

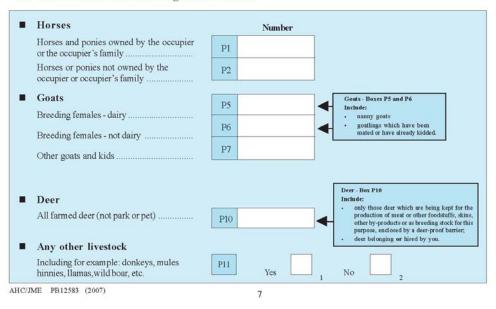
H. Pigs on the holding at 1st June 2007

Please tick this box if the pig numbers are reduced to zero, but you intend to restock	Tick or Cross	Please specify the name of the company for whom you are keeping pigs:
Please tick this box if you are rearing pigs for someone else under contract	L91	and include pig numbers in the boxes below.
Breeding pigs	Number	Box L60 - Breeding pigs - include: all sows in pig; gilts in pig;
All other pigs and piglets	Number	 gilts expected to be used for breeding; boars being used for service.
AHC/JME PB12583 (2007) 6		

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J. Poultry at 1st June 2007	Do not include any bird in more than ONE ca	itegory
Empty poultry sheds	Tick or Cross	
If you usually keep poultry but all y empty on 1 June 2007 due to your to please tick or cross here		
 Hens and pullets kept for producing eggs for eating 		
Growing pullets up to point of la	ay N2	
Birds in laying flock	N3	
 Fowls for breeding Layer breeders 	+ N5	
Broiler breeders	N6	
Cocks and cockerels	N7	
Broilers - (table chicken)	+ N10 +	
Turkeys - TOTAL number	N15	
All other poultry - TOTAL :	number NC6	All other poultry Box NC6 Include : ducks, geese, guinea fowl, ostriches, game birds, etc
TOTAL POULTRY	N98	

K. Other livestock on the holding at 1st June 2007



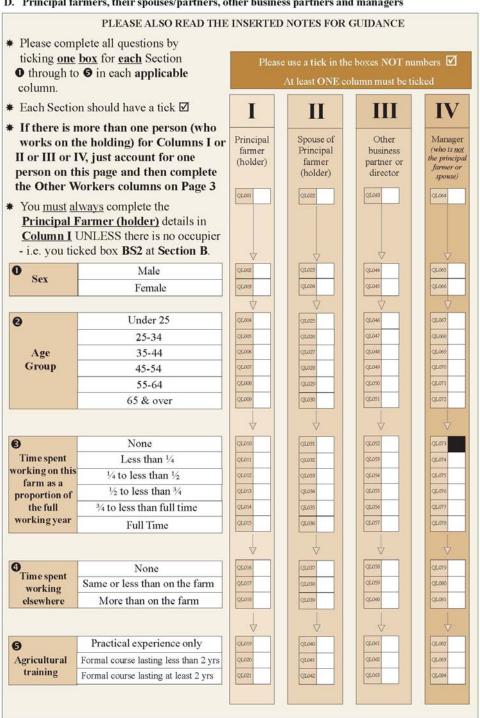
Annex 1: The Annual Agricultural and Horticultural Survey 1st June 2007 – Survey Form. Page 8 of 8.

L. Any other comments	X99
Please use this space to provide any information you feel may be of interest to us. Fo	
in farming activity since last year, a simple explanation here may avoid the need for u	is to trouble you further.
M. Casual labour employed in the <u>previous</u> 12 months	
Please tick or cross each relevant box if you employed casual labour in the previo	
Q50 July-September 2006 Q51 October-Decem	ber 2006
Q52 January-March 2007 Q53 April-June 2007	
N. Miscellaneous questions	
Mushrooms	
Have you grown mushrooms for commercial purposes in the past 12 months?	1 Yes No 2
Vegetables, flowers and bulbs Do you expect to have more than 2 ha of vegetables, flowers	
and/or bulbs in the 2007/2008 growing season?	2 Yes No 2
Seed and seedlings What area of your land do you expect to harvest for seed this year	
or use for growing seedlings?	3C . ha
(Exclude grass seed which should be entered in Boxes R3A & R3B on Page 3) Irrigation	
	R4 , ha
P. Declaration	
(Before signing this declaration, please check that you have con	
I declare that I have read the Notes for Guidance and I am authorised to sign this Decl agent, or as a member of this business partnership as per Section 3 of the Agricultur	
Signature (please print)	
e.g. owner,	
Status (Title) partner, etc	Date
Telephone No. (incl. national dialling code)	
e-mail address if applicable	
Е	
We know you will only continue returning forms if you are confident that we r you supply. Details of your return are not disclosed outside this division of the	
accordance with the provisions of Section 3(2) of the Agricultural Statistics Ac	
Could you please indicate the approximate length of time taken to complete this	form V1 minutes
IC/JME PB12583 (2007) 8	

Annex 2: Survey of Labour on Agricultural and Horticultural Holdings 1st March 2007 - Survey Form. Page 1 of 4.

Restricted – Commercial National Assembly for Wales	Cynulliad Cenedlaethol Cymru National Assembly for Wales
SD6, Room 2-002, Cathays Park, Cardiff, CF10 3NQ Tel No. 02920 825082/02920 825047 (English/Cymraeg) Fax: 02920 825350 e-mail:stats.agric@wales.gsi.gov.uk	PLEASE COMPLETE AND RETURN THE FORM IMMEDIATELY
	If there are any amendments or corrections to your name and/or address, please write them in this box.
Holding Number:	Recorded holding area: ha
SURVEY OF LABOUR ON AGRICULTURAL & HORTICULTURAL HOLDINGS 1 ST MARCH 2007	If all your land is permanently let/rented out on the 1st March 2007, you only need to tick here, sign, and return the form.Mae yna ffurflen Gymraeg ar gael hefyd. Os hoffech gopi, cysylltwch a'r adran ar y rhif uchod, neu tiewch ymaV2
A. Multiple groups of holdings	
ane sume secupaney/paranersmp.	Yes 1 No 2 m to relate to only ONE holding, but if it relates to more than
Н99А Н99В	Нээс
B. Status of the farm business Is the responsibility of the holding taken by:	
Tick	one box only
 One or more individuals? (e.g. the principle farmer, and/or spouse or partner) 	e BS1 Please complete Section C below + Column I on Page Two + any other relevant column(s)
An institution (e.g. hospital, school, church prison, etc.) or a limited liability company?	
C. Day to day running of the farm business Who is mainly responsible for the day to day runni	ng of the farm?
Tick	one box only
The Principal farmer (Holder)	BS3
Holder's spouse	or BS4
Other family member	or If either Boxes BS5 or BS6 are ticked, this person will have to be classified as the
Other non-family member	BS6 Or Manager at Column IV on Page Two INSERTED NOTES FOR GUIDANCE

Annex 2: Survey of Labour on Agricultural and Horticultural Holdings 1st March 2007 - Survey Form. Page 2 of 4.



Annex 2: Survey of Labour on Agricultural and Horticultural Holdings 1st March 2007 - Survey Form. Page 3 of 4.

E. Other work	ers doing farm work - Please co	mplete ONE col	lumn for EA	ACH worke	r				
	DO NOT COUNT ANYONE ALREADY ENTERED ON PAGE 2								
	IF YOU HAVE MORE	THAN FOUR W	VORKERS						
F	PLEASE CONTACT THE HELPL	INE FOR CON	TINUATION	SHEETS					
Please comp	lete by ticking one box for each Section	O through to O in	each column	for each work	er				
T lease comp	See the example on t			IOI Caen work	.01.				
	Number								
How many other	Flease accou		a tick in these	L. NOT					
(excluding people Page 2) are there		Prease use	a uck in mese	boxes NOT n	umbers 🗠				
work for this hole	ding?	1 st worker	2nd worker	3rd worker	4th worker				
O Is this	PAID?	QL085	QL106	QL127	QL148				
worker	UNPAID?	QL096	QL107	QL127	QL140				
CONTRACTOR OF THE OWNER OWNER OWNER OF THE OWNER OWNE	0.000			(mino)					
-		4		_ ♥					
• Is this	Family worker?	QL087	QL108	QL129	QL150				
worker a	Non family worker?	QL088	QL109	QL130	QL151				
8	Male	QL089	QL110	QL131	QL152				
Sex	Female	QL090	QL111	QL132	QL153				
	Tennie								
Ø	None	QL097	QL118	QL139	QE.160				
Time spent	Less than ¹ / ₄	QL098	QL119	QL140	QL161				
working on this	$\frac{1}{4}$ to less than $\frac{1}{2}$	QL099	QE120	QL141	QL162				
farm as a proportion of	¹ / ₂ to less than ³ / ₄	QL100	QL121	QL142	QL163				
the full	³ / ₄ to less than full time	QL101	QL122	QL143	QL164				
working year	Full Time	QL102	QL123	QL144	QL165				
2									
O	None		QL.124	\ ↓					
Time spent	Same or less than on the farm	QL103	QL124	QL145	QL166 QL167				
working elsewhere	More than on the farm	QL105	QL126	QL147	QL168				
eisewiiere	More than on the faith	- Contraction	- Cartao	Sarri	North Contraction				
F. Casual labou	ur - please see Notes for Guidan	ce on how to ca	lculate Pers	on-Days					
Exclude: Persons re	lated to the holder								
Have you directly en	nployed any casual labour on the holdin	g in the last 12 mor	nths? F1	Yes 1	No 2				
	te the total number of PERSON DAYS	(1 person day = 8h	rs) worked by	casual labou	r				
during each of the f	ollowing periods.								
Mar-May 2006 F4/	A Jun-Aug 2006 F5A	Sep-Nov 2006	F6A	Dec 06-Feb 07	F7A				
G. Contract lab	our								
	yed or people employed by a third party ork under mutual aid arrangements, agri			ltancy work.					
Has any contract lab	our been engaged on the holding in the	last 12 months?	G1 Yes	1 No	2				
	ate the total number of PERSON DAYS bour during the last 12 months	(1 person day =	8hrs) G3		Number of person–days				

Annex 2: Survey of Labour on Agricultural and Horticultural Holdings 1st March 2007 - Survey Form. Page 4 of 4.

H. Non-agricultural activity					
Does any non-agricultural activity take place on your holding?	SC20	Yes			
If YES then these activities should	be acc	ounted	for in the appropriate box(es) below.		
Please tick a box beside any of the commercial enterprises listed which you run on this holding:					
Contracting/Haulage	SC1		Livestock Haulage	SC7	
Renewable energy production	S19		Tourism (Accommodation)	SC8	
Sport/Recreation	SC3		Tourism (Other)	SC9	
Direct sales	SC4		Beekeeping (apiculture)	SC10	
Processing/Food manufacturing	SC5		Any other activity	SC6	
Wood processing	S17		Please list any other activities here:		
Aquaculture	S18		SC99		
Do you employ anyone full time to work on any non agricultural activities?	S20	Yes	1 No 2		

L. Any other comments

Please use this space to provide any information you feel may be of interest to us. For example, if there are any major changes in farming activity since last year, a simple explanation here may avoid the need for us to trouble you further.

X99

gnature	(please print)	
atus (Title)	e.g. owner, partner, etc	Date
lephone No. cl. national dialling code) nail address if applicable		Tick here if you have completed and enclosed continuation sheets
e know you will only continue returning forms if u supply. Details of your return are not disclosed cordance with the provisions of Section 3(2) of th	outside this division of the National	l Assembly for Wales except in