Farm Structure Survey 2009/2010 Survey on Agricultural Production Methods (SAPM) 2009/2010

National Methodological Report (NMR)

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FARM STRUCTURE SURVEY 2009/2010 SURVEY ON AGRICULTURAL PRODUCTION METHODS 2009/2010
NATIONAL METHODOLOGICAL REPORT

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SUMMARY

The Farm Structure Survey (FSS) collects data on the structure of agricultural holdings and is carried out by the Agriculture Division of the Central Statistics Office (CSO) of Ireland. The FSS held in 2010 was a full Census of Agriculture and took place in June 2010. In Ireland, the first Census of Agriculture was conducted in 1847 and annually thereafter until 1953. Censuses of Agriculture were then conducted every five years between 1960 and 1980, and every ten years or so after that. A Farm Structure Survey (FSS) is carried out on a smaller sample approximately every three years to measure changes in farm structure between Censuses.

The agricultural register used for FSS2010 was compiled by amalgamating the CSO intercensal register with a client database provided by the Irish Ministry of Agriculture, known as the Department of Food, Agriculture and the Marine (DAFM). The register contained 153,901 agricultural holdings. An eight-page questionnaire was issued to each of these holdings in the week preceding the reference date of June 1st 2010 to be completed and returned to the CSO by Tuesday 8th June 2010. Five reminders were issued in order to maximise the response rate.

FSS 2010 was the first FSS to use a combination of administrative records and completed paper questionnaires to collect the required data. In an effort to reduce the response burden on farmers, all questions relating to cattle, cereals and potatoes were eliminated from the FSS 2010 questionnaire as the relevant data was available from administrative data files provided by DAFM. The administrative data files used were

    (i)   the Integrated Administration and Control System (IACS). This is provided according to Council Regulation (EC) No 1782/2003 of 29 September 2003 establishing common rules for direct support schemes under the common agricultural policy and establishing certain support schemes for farmers and amending Regulations (EEC) No 2019/93, (EC) No 1452/2001, (EC) No 1453/2001, (EC) No 1454/2001, (EC) 1868/94, (EC) No 1251/1999, (EC) No 1254/1999, (EC) No 1673/2000, (EEC) No 2358/71 and (EC) No 2529/2001[1].

    (ii)   the System for the Identification and Registration of Bovine Animals. This is provided according to Regulation (EC) No 1760/2000 of the European Parliament and of the Council of 17 July 2000 establishing a system for the identification and registration of bovine animals and regarding the labelling of beef and beef products and repealing Council Regulation (EC) No 820/97[2].

Data on cereals and potatoes were obtained from DAFM's Single Payment Scheme (Council Regulation No 1782/2003 above) while all data on cattle was obtained from DAFM's Animal

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[1] OJ No. L270, 21.10.2003,p.1.

[2] OJ No. L204, 11.08.2000,p.1.

Identification and Movement system (Council Regulation No 1760/2000 above). The use of these administrative data sources was provided for under Article 4.1 of the FSS regulation.

The data collection phase took place between June 2010 and September 2010. A response rate of just under 90% was achieved. The paper questionnaires returned to the CSO were batched, receipted and scrutinised. They were then electronically scanned, verified and edited.
The first administrative data file was received from DAFM in November 2010. Full imputation was carried out for non-respondents where the holding could be confirmed active in 2010 based on data held in administrative files.

In all, the microfile transmitted to Eurostat contained data for 139,887 holdings, 27 of which related to Commonage.

Preliminary results from the FSS2010 were published nationally on February 14th 2012 as *Census of Agriculture 2010- Preliminary Results[3]*. This provided county-level data for the main FSS characteristics such as Utilised Agricultural Area, Livestock and Cereals. The Final Results[4] for Census of Agriculture 2010 were published nationally on December 7th 2012.

No threshold was used in the Census and the full population of holdings on the agricultural register was taken into consideration for FSS 2010. There is no threshold for inclusion on the register. The Survey on Agricultural Production Methods (SAPM) was issued in September 2010 to a sample of 40,000 farms, the results of which were transmitted to ESTAT in October 2012.

1.   CONTACTS

Contact organisation	Central Statistics Office
Contact organisation unit	Agriculture Register Section
Contact name	Fiona O'Callaghan and Hilda McCarthy
Contact person function	Methodology Fiona O'Callaghan and Hilda McCarthy Database management Fiona O'Callaghan and Hilda McCarthy Dissemination Fiona O'Callaghan and Hilda McCarthy
Contact mail address	Skehard Road, Cork, Ireland

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[3]http://www.cso.ie/en/media/csoie/releasespublications/documents/agriculture/2010/coapre2010.pdf

[4] http://www.cso.ie/en/releasesandpublications/agricultureandfishing/censusofagriculture2010-finalresults/

Contact email address	Fiona.ocallaghan@cso.ie Hilda.mccarthy@cso.ie
Contact phone number	Fiona O'Callaghan 021 4535705 Hilda McCarthy 021 4535084

2. SURVEY METHODOLOGY

2.1 National legislation

The Census of Agriculture was carried out on a statutory basis under Statistics (Census of Agriculture) Order, 2010, Statutory Instrument No. 181[5] of 2010, made under the Statistics Act, 1993.

The Statistics Act, 1993, which governs all the statistical activities of the CSO, makes provision for prescribing by order a requirement on persons and undertakings of particular classes to provide requested information. In advance of the Census, the Statistics (Census of Agriculture) Order, 2010, Statutory Instrument No. 181 of 2010, was enacted. This order came into effect on 1 June, the reference date of the census. It itemised, in general terms, the type of data that had to be provided, and the specific reference dates for that data. Under the Statistics Act, 1993, it was an offence for any farmer issued with a census questionnaire to refuse to supply the requested information. The Act also guarantees the confidentiality of all data provided, expressly prohibiting the disclosure of information which can be related to any identifiable person or holding.

The Statistics Act, 1993 also grants the CSO right of access to records of public authorities for statistical purposes (with a number of exceptions). Specifically under the Act the CSO may request any public authority to consult and co-operate with (the CSO) for the purpose of assessing the potential of the records of the authority as a source of statistical information and, where appropriate and practicable, developing its recording methods and systems for statistical purposes. This underpinned co-operation with the Department on the subject of its farm registers.

2.2 Characteristics and reference period

2.2.1 Characteristics

The characteristics collected in FSS 2010 correspond to the list of characteristics provided in Annex III of Regulation (EC) No.1166/2008. A copy of the questionnaire is provided in Annex II to this document. A number of characteristics listed for collection in the regulation were not

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[5] http://www.attorneygeneral.ie/esi/2010/B27597.pdf

collected as these were determined to be either non-existent or non-significant based on empirical data from previous Farm Structure Surveys, examination of more recent Single Farm Payment (IACS) variables as well as extensive consultations with Ministry of Agriculture and Teagasc (Ireland's national body for Agricultural Research & Training). These are provided in Annex I to this document. The 8th version of the 'Handbook on implementing the FSS and SAPM definitions' was used to define the variables.

A small number of additional variables were collected for national purposes. The need for these variables was identified through a consultation process with the main stakeholders prior to the survey design stage. Specifically these variables related to:

- Sheep: A more detailed breakdown of sheep, consisting of rams, ewes (both under and over 2 years) and other sheep (both under and over 1 year)

- Poultry: The sub-division of both broilers and turkeys into breeding birds and table birds and also the sub-division of other poultry into turkeys, ducks, geese and ostriches.

- Equidae: The sub-division of equidae into thoroughbred, other horses and mules, jennets and asses.

- Pigs: An alternative weight breakdown of non-breeding pigs into Fatteners (32kg and over), Weaners (7kg-31kg) and Sucklers (less than 7kg).

- Deer: Number of farmed deer.

- Fragmentation of the holding: the number of parcels of land making up the holding.

- Administrative Burden: the number of minutes taken to complete the FSS2010 questionnaire

- Farm Accounts: an indication of whether or not farm accounts are maintained for the purpose of managing the holding

2.2.2 Reference Periods

The reference period for the livestock and crop characteristics was June 1st 2010.

The reference period for the all labour force characteristics was the twelve-month period prior to June 1st 2010.

The reference period for the rural development measures was the three-year period between January 1st 2008 and December 31st 2010.

2.3 Survey Organisation

2.3.1 Staffing & Duties

The FSS2010 was carried out by the Agriculture Division within the Central Statistics Office. The project team consisted of 9 core processing staff, 2 Statisticians (one of whom was Project Manager) and 1 Senior Statistician. A further 22 temporary staff were recruited on short-term contracts for data processing between May and December 2010. A third statistician joined the team on a part-time basis in mid-2011. Together these staff made up the project team.

This team was responsible for all aspects of FSS2010 from project planning and survey management through to dissemination of results. The team updated the farm register, designed and issued the census questionnaire and reminder notices, receipted and scrutinised questionnaires returned, scanned and verified data. The team then moved on to merging questionnaire data with administrative data and finally analysis of data and preparation of results for transmission to Eurostat and national publications.

It was also responsible for a specialist survey of large pig units, carried out as part of the COA. The CSO has its own internal Printing section which produced the questionnaires and accompanying information booklets. The CSO has an Office Services Unit which provided support in managing the large volumes of outgoing and incoming post.

2.3.2 Questionnaire & Other Materials

An 8-page A4 sized questionnaire (see Annex II) was issued to all farm holdings in the week prior to June 1st 2010. This was accompanied by an information booklet (see Annex III) with detailed notes on each section of the questionnaire.

A separate 2-page A4 sized questionnaire (see Annex IV) was also issued to all specialist pig-producers.

The SAPM survey was issued in late September 2010. This took the form of a 4-page A4 questionnaire (see Annex V). This was also accompanied by an information leaflet (see Annex VI).

2.3.3 Pilot Survey

A pilot survey was not carried out as the Census questionnaire was quite similar in content and design to questionnaires issued in previous agricultural surveys. The questionnaire was circulated to a small number of people with agricultural expertise for review prior to being launched and this process provided constructive feedback which was incorporated into the final version of the questionnaire. The accompanying information booklet was designed to add clarity to the data being collected.

2.3.4 Promotion of the Census

A comprehensive publicity campaign was carried out by the CSO to promote awareness of the Census and to increase response rates. The techniques employed were as follows:

1. **CSO Census of Agriculture webpage**[6]
   This webpage provided information on the Census in a 'Frequently Asked Questions' format. It could be accessed directly from the CSO homepage for the duration of the project.

2. **Design and Distribution of Promotional Materials**
   An A3 size poster and a leaflet (see Annexes VII & VIII) were designed and printed in-house for distribution to suitable outlets. The leaflet contained most of the

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[6] http://www.cso.ie/en/surveysandmethodology/agricultureandfishing/censusofagriculture2010/

questions and answers from the Census webpage. The posters and leaflets were distributed to any office, business or venue where a large flow of traffic from the farming community might be expected such as:

- Department of Agriculture (Ministry) regional and local offices nationwide
- Teagasc offices nationwide (Ireland's national body for Agricultural Research & Training)
- Farming Organisations
- Marts & Meat Factories
- Public Libraries and Post Offices in rural locations
- Agricultural Colleges, Secondary Schools and Third level Colleges teaching Agricultural Science
- Regional & National Newspapers
- Local & National Radio Stations

3. **Radio Interviews**
An information leaflet and covering letter was sent to both local and national radio stations containing the contact details for the Census Project Manager who was available for short interviews/sound bites. There was a very good uptake on this and many interviews were pre-recorded over the phone for airing on appropriate farming/rural news programmes in the days leading up to June 1st.

4. **Printed Media**
The main weekly farming publication, The Irish Farmers Journal and also many of the main newspapers with a farming section/supplement were willing to carry an article outlining the main points of the Census, how it was being conducted and the importance of cooperating with the Census.

5. **Endorsement of Census by Irish Farming Organisations**
The support of the main farming organisations in Ireland was formally requested in writing and we used this agreement in our printed publicity items to reassure respondents that the Census was viewed as a positive initiative by the main farming organisations.
The Irish Farmers Association (IFA) is the main lobby group for Irish farmers and has a nationwide branch infrastructure. The County executives meet in Dublin every month and the IFA invited CSO to address one of the executive meetings. This allowed CSO to deliver the main points of the Census and get the cooperation of the biggest farming associations in Ireland. Each County Executive relayed the details back to farmers at local meetings across the country.

2.4 Calendar (overview of work progress)

	Task	Dates
1.0	***FSS 2010 Project Initiation*** 1.1 Project Plan development 1.2 Consultation with Stakeholders	September 2009 October 2009
2.0	***Census Preparations*** 2.1 Design of questionnaire 2.2 Testing of questionnaire for electronic scanning 2.3 Printing of questionnaire 2.4 Selection & Training of temporary processing staff 2.5 Census Publicity Campaign	Jan-Feb 2010 Feb-Apr 2010 April 2010 April-May2010 April-May2010
3.0	***Survey Management*** 3.1 Build Farm Register 3.2 Issue COA2010 postal Questionnaire 3.3 Returns receipted 3.4 1st reminder notice issued 3.5 2nd reminder notice issued 3.6 3rd reminder notice issued 3.7 4th reminder notice issued 3.8 5th reminder/Statutory Notice issued 3.9 SAPM Questionnaire issued 3.10 SAPM reminder issued	Oct 2009 – May 2010 May 2010 June-Sept 2010 June 2010 June 2010 July 2010 Aug 2010 Aug 2010 September 2010 October 2010
4.0	***Data Capture*** 4.1 Returns electronically scanned and verified 4.2 Returns edited 4.3 Integrate administrative data with survey returns 4.4 Capture new births in 2010 administrative data and add to Farm Register 4.5 Imputation	June-Oct 2010 Aug 2010-Jun 2011 May '11- Jan 2012 Feb 2012 Sep '11 – March 2012

5.0	**_Dissemination_**	
	5.1 Provisional matched sample crops and livestock results published	Oct 2011
	5.2 Pig results published	Nov 2011
	5.3 Preliminary Census results published	May 2012
	5.4 Commonage file transmitted to ESTAT	Feb 2012
	5.5 Micro-data coded to Eurofarm format and validated	March 2012
	5.6 Eurofarm file (v.1) transmitted to Eurostat	March-April 2012
	5.7 SAPM data transmitted to Eurostat	April 2012
	5.8 Final results of COA2010 and SAPM published	October 2012
		December 2012

2.5   Population and frame

2.5.1 Population

The target population of COA 2010 was all agricultural holdings in Ireland, irrespective of size.

An agricultural holding was defined, in line with the definition in Article 2 of Council Regulation 1166/2008 as:

> '*a single unit, both technically and economically, which has a single management and which undertakes agricultural activities within the economic territory of the European Union, either as its primary or secondary activity*'

A minimum size threshold of 1 hectare, as per Article 3 of Regulation 1166/2008, was not applied in advance of the survey. Excluding such units could significantly reduce state-level results for some characteristics that are more frequent on smaller holdings (e.g. goats, pigs, or poultry). In addition, there is a sizeable amount of common land in the state, which can allow very small land holders to keep significant numbers of livestock (sheep in particular).

2.5.2 Frame

The Farm register was compiled using a combination of the pre-existing CSO Farm Register and two administrative databases held by the DAFM, namely the Corporate Client System (CCS) and the Animal Identification and Movement (AIM) system:

(i)   The **pre-existing CSO Farm Register** was created for the last COA which took place in 2000. This register was maintained by the CSO Agriculture Register Section and updated with births and deaths identified in the annual June and December surveys over the last 10 years. It was used as the sampling frame for every agriculture survey that was carried out by CSO since 2000. There were

139,968 records on this register which were considered still active in 2010. A considerable amount of cleansing was performed on this database, providing an updated CSO register containing 136,443 agricultural holdings. The availability of administrative files since 2010 ensures that now all entries on this register can be checked on an annual basis for activity and accurate contact details. The CSO register holds only contact information and location details. The register does not hold any structural variables.

(ii)   The **CCS database** was received from DAFM in March 2010. This contained 143,587 records consisting of the name, address, telephone number, email, date of birth, and herd number of every farmer considered to be active by DAFM. The CCS database is separate to the IACS database but contains all of the holdings that are on the IACS system. The CCS database was used solely for the purposes of building the register. No statistical data was extracted from the CCS.

(iii)   The **AIM database** was received from DAFM in September 2009. This contained 1,996 records which did not have a corresponding entry in CCS so these were added to the CCS file.

The CSO register file was merged with the administrative database that contained both the AIM data and the CCS data and this resulted in a file containing 163,326 records. A decision was made to delete any records from the CSO subset of the database that had not returned a form since 2003 but a further check was made against the original CSO register to ensure that any farmer who had returned a survey form to us in recent years was included in the database.
A further check was made to make sure that all of the specialist pig farmers were included, and a separate file containing a list of specialist mushroom growers (which was received from DAFM) was also cross checked to ensure full coverage for horticultural producers. A final check was carried out to eliminate any obvious duplicates using herd-number as an identifier. The resulting register, which was used as the frame for the 2010 Census of Agriculture contained 153,906 records.

2.6   Survey design

The Census was a complete enumeration. Every identifiable agricultural holding was included.

A supplementary pig questionnaire was sent to a sample of 329 pig farmers. These were farmers who returned 100 or more pigs in one or more of the preceding four pig surveys (June 2008, December 2008, June 2009 and December 2009). This questionnaire allowed the pig producer to provide additional breakdowns of the breeding sows and of the non-breeding categories, a format which they were already familiar with. A copy of the Pig Survey is provided in Annex IV.

2.7   Sampling, data collection and data entry

2.7.1   DRAWING THE SAMPLE –FOR SAPM AND/OR OGA, IF APPLICABLE

- Sample size: How was the sample size decided?

Most of the items on the SAPM questionnaire relate to Yes/No answers for characteristics which are expected to be relatively rare in Ireland. According to Cochran (Sampling Techniques, 1963), very large samples are needed for precise estimates of proportions of attributes that are rare in the population. For P = 0.01, we must have $\sqrt{n}$ = 99 in order to reduce the coefficient of variation of the estimate to 0.1 or 10%.
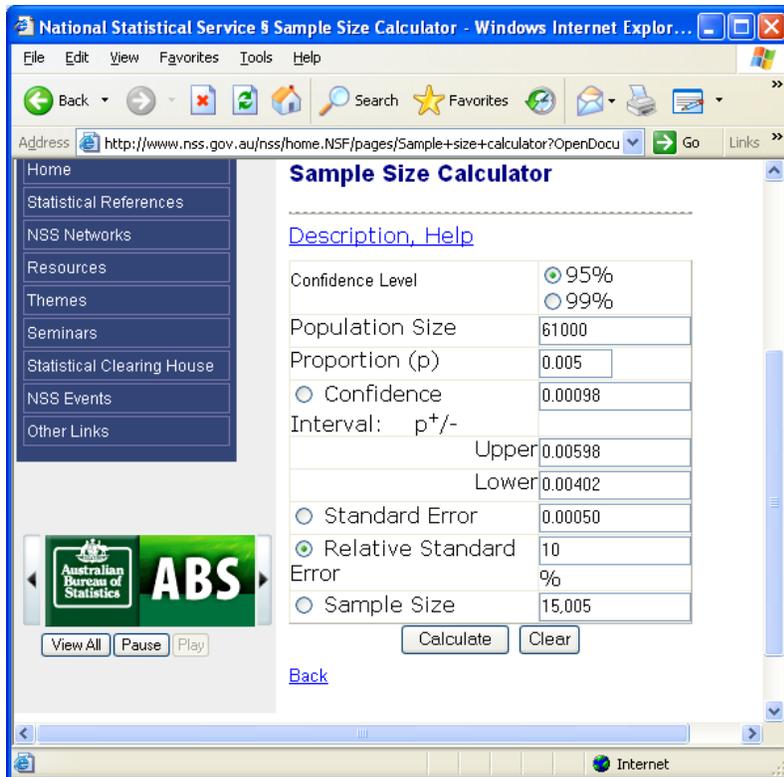
Annex IV of the Regulation on FSS and SAPM defines precision categories for NUTS 2 regions with at least 10,000 agricultural holdings and requires a relative standard error of <10%.

At the time that the SAPM sample was drawn there were an estimated 70,000 holdings in the NUTS 2 region IE01 and 61,000 in IE02. Using these two population estimates, a sample size calculator available on the Australian National Statistics Service website was used to estimate the required sample size, see the following two screenshots. A conservative estimate of the prevalence of the characteristic (p=0.005) was used.

This calculation yielded a sample size of 15,495 + 15,005 = 30,500

It was decided to augment this sample size even further to 40,000 units to take account of possible nonresponse.

- How are the sampling units chosen (expert's choice, enumerator's choice, etc)

Sample units were selected using stratified random sampling.

- Statistical/other programs used in the sample selection

SAS Enterprise Guide was used to perform the sample selection.

- Sampling design and estimation method: probability sampling (fully, partly, not at all)([i])

Stratified random sampling using Neymann allocation.

- Stratification: list of stratification variables. How are the stratification variables classified? Pre-/post-stratification?

16 strata were used – these comprised the two NUTS 2 regions crossed with 5 size of holding categories (<10 ha, 10-<20ha, 20-<30ha, 30-<50ha, 50-<100ha) and 3 separate strata (specialised pig units, specialised poultry units, and units > 100ha).

- List/description about strata where the sampling ratio is 100%.

100% sampling was not used in any of the strata, although a higher sampling rate was used in the 3 strata - pig units, specialised poultry units, and units > 100ha.

- Sampling across time:
    o drawing a new sample in each occasion
    o retaining the same sample throughout all occasions
    o other (please specify)

Not applicable as SAPM was a once off survey.

- Co-ordination with other surveys taking into account the number of surveys. Is there any co-ordination between surveys to avoid the situation that some farms have to answer multiple questionnaires with the same kind of questions?

This did not arise in the case of SAPM as a survey of this kind had not previously taken place in Ireland.

- Elements related to the precision requirements stipulated in Annex IV "Precision Requirements" of the Regulation 1166/2008:

Please provide information in the following tables:

NUTS2 regions with more than 10000 holdings
Crop characteristics:

Precision requirements	Field codes	NUTS2 regions	
		IE01	IE02
Number of holdings in the NUTS2 region		73881	65979
UAA, ha of the NUTS2 region	A_3_1	2,019,366	2,549,572
Area of cereals in ha in the NUTS2 region	B_1_1	56,077	217,821
% Cereals in the UAA of the NUTS2 region		2.78%	8.54%
Area of potatoes and sugar beet in ha in the NUTS2 region	B_1_3 + B_1_4	3,019	9,994
% potatoes and sugar beet in the UAA of the NUTS2 region		0.15%	0.39%
Area of oilseed crops in ha in the NUTS2 region	B_1_6_4 + B_1_6_5 + B_1_6_6 + B_1_6_7 + B_1_6_8	1,829	6,149
% oilseed crops in the UAA of the NUTS2 region		0.09%	0.24%
Area of permanent outdoor crops in ha in the NUTS2 region	B_4 - B_4_7	135	833
% permanent outdoor crops in the UAA of the NUTS2 region		0.01%	0.03%
Area of fresh vegetables, melons, strawberries, flowers in ha in the NUTS2 region	B_1_7 + B_1_8	738	4,750
% fresh vegetables, melons, strawberries, flowers in the UAA of the NUTS2 region		0.04%	0.19%
Area of temporary grass and permanent grassland in ha in the NUTS2 region	B_1_9_1 + B_3	1,947,737	2,267,274
% temporary grass and permanent grassland in the UAA of the NUTS2 region		96.45%	88.93%

Livestock characteristics:

Precision requirements		Field codes	NUTS2 regions	
			IE01	IE02
LSU in the NUTS2 region			2,302,353	3,400,230
Bovine animals (all ages)	Number of Bovine animals in the NUTS2 region, in LSU	C_2_1*0.4 + C_2_2*0.7 + C_2_3*0.7 + C_2_4 +C_2_5*0.8 + C_2_6 + C_2_99*0.8	1,784,962	2,958,318
	% of the LSU in the NUTS2 region		77.53%	87.0%
	% of national share of bovine animals in LSU		37.63%	62.37%
Sheep and goats (all ages)	Number of Sheep and goats in the NUTS2 region, in LSU	C_3_1*0.1 + C_3_2*0.1	260,619	214,975
	% of the LSU in the NUTS2 region		11.32%	6.32%
	% of national share of sheep and goats in LSU		54.80%	45.20%
Pigs	Number of Pigs in the NUTS2 region, in LSU	C_4_1*0.027 + C_4_2*0.5 + C_4_99*0.3	184,361	195,079
	% of the LSU in the NUTS2 region		8.01%	5.74%
	% of national share of pigs in LSU		48.59%	51.41%
Poultry	Number of Poultry in the NUTS2 region, in LSU	C_5_1*0.007 + C_5_2*0.014 + C_5_3*0.030	72,412	31,858
	% of the LSU in the NUTS2 region		3.15%	0.94%
	% of national share of poultry in LSU		69.45%	30.55%

NUTS2 regions with less than 10000 holdings
Crop characteristics:

Precision requirements	Field codes	NUTS2 regions	
Number of holdings in the NUTS2 region			
Associated NUTS1 region			
Number of holdings of the associated NUTS1 region			
UAA, ha of the associated NUTS1 region	A_3_1		
Area of cereals in ha in the associated NUTS1 region with at least 1000 holdings	B_1_1		
% Cereals in the UAA of the associated NUTS1 region with at least 1000 holdings			
Area of potatoes and sugar beet in ha in the associated NUTS1 region with at least 1000 holdings	B_1_3 + B_1_4		
% potatoes and sugar beet in the UAA of the associated NUTS1 region with at least 1000 holdings			
Area of oilseed crops in ha in the associated NUTS1 region with at least 1000 holdings	B_1_6_4 + B_1_6_5 + B_1_6_6 + B_1_6_7 + B_1_6_8		
% oilseed crops in the UAA of the associated NUTS1 region with at least 1000 holdings			
Area of permanent outdoor crops in ha in the associated NUTS1 region with at least 1000 holdings	B_4 - B_4_7		
% permanent outdoor crops in the UAA of the associated NUTS1 region with at least 1000 holdings			
Area of fresh vegetables, melons, strawberries, flowers in ha in the NUTS2 region	B_1_7 + B_1_8		
% fresh vegetables, melons, strawberries, flowers in the UAA of the NUTS2 region			
Area of temporary grass and permanent grassland in ha in the associated NUTS1 region with at least 1000 holdings	B_1_9_1 + B_3		
% temporary grass and permanent grassland in the UAA of the associated NUTS1 region with at least 1000 holdings			

Livestock characteristics:

			NUTS2 regions	
Precision requirements				
Precision requirements		Field codes		
LSU in the associated NUTS1 region				
Bovine animals (all ages)	Number of Bovine animals in the associated NUTS1 region with at least 1000 holdings, in LSU	C_2_1*0.4 + C_2_2*0.7 + C_2_3*0.7 + C_2_4 +C_2_5*0.8 + C_2_6 + C_2_99*0.8		
	% of the LSU in the associated NUTS1 region with at least 1000 holdings			
	% of national share of bovine animals in LSU			
Sheep and goats (all ages)	Number of Sheep and goats in the associated NUTS1 region with at least 1000 holdings, in LSU	C_3_1*0.1 + C_3_2*0.1		
	% of the LSU in the associated NUTS1 region with at least 1000 holdings			
	% of national share of sheep and goats in LSU			
Pigs	Number of Pigs in the associated NUTS1 region with at least 1000 holdings, in LSU	C_4_1*0.027 + C_4_2*0.5 + C_4_99*0.3		
	% of the LSU in the associated NUTS1 region with at least 1000 holdings			
	% of national share of pigs in LSU			
Poultry	Number of Poultry in the associated NUTS1 region with at least 1000 holdings, in LSU	C_5_1*0.007 + C_5_2*0.014 + C_5_3*0.030		
	% of the LSU in the associated NUTS1 region with at least 1000 holdings			
	% of national share of poultry in LSU			

2.7.2 DATA COLLECTION AND DATA ENTRY

2.7.2.1 Data collection methods

The Census was conducted entirely by post. Each COA 2010 questionnaire issued included a pre-addressed freepost reply envelope. The return address on the reply envelope was to one of three dedicated Post Office Boxes which were used exclusively for the Census of Agriculture. The advantage of this method was that COA 2010 post was segregated from other post when it was delivered to the CSO and the national Post Office was able to provide an exact count of how many envelopes were returned this way. The envelopes were mechanically cut open across the top and the questionnaire held within was removed manually.

Each questionnaire was coded as either active or inactive, according to the information supplied by the respondent. The Central Statistics Office's Data Management System (DMS) includes a receipting function which allows for the rapid receipting of returns. A hand-held electronic scanner read the unique reference number of each return, (which was pre-printed on the questionnaire in barcode format) and recorded the response code (active or inactive) and the date of return to the DMS. Inactive returns were batched separately by the reason for the inactive return, e.g. holder retired, farm holding let, farm holding sold etc. Active responses were scrutinised to check for legibility of the data returned and obvious omissions or errors. Active returns were scanned using an OCI scanner to capture the data on the questionnaire.

The rate of return of Census questionnaires was monitored daily. When the response rate began to decline below targets, a reminder notice was issued to those who had not yet responded. In total five reminder notices were issued between June 2010 and August 2010. The second and fourth reminder notices also included a copy of the questionnaire, in case the original had been mislaid. The final reminder notice also included a Statutory Notice that outlined the respondents' obligations to complete the form.

A limited number of non-respondents were phoned. These consisted almost entirely of specialised pig holdings.

2.7.2.2 Data entry modes

OCI scanning directly captured the respondents reply to every question on the form. Each question had an answer field with a specific box for each digit to be entered (or ticks in the case of tick-box questions). The OCI software created an image of each questionnaire. Where the OCI software could not clearly identify a numeric or character value entered on the questionnaire, the software 'held' the questionnaire for review by a member of staff. Once this verification process was completed the data on the questionnaire was written to a flat file for import into the CSO Data Management Systems' Data Entry module. A series of checks were run to ensure that the data returned was consistent (e.g. to ensure that totals equaled the sum of their parts, to ensure that livestock holdings returned sufficient grazing land etc.). Once these checks were completed,

a 'clean-unit' copy of the data was available to be merged with administrative data and this produced a complete, or almost complete, record for each holding.

2.7.3 USE OF ADMINISTRATIVE DATA SOURCES

The Census of Agriculture 2010 was the first census to use data from administrative sources held by DAFM to supplement other data collected directly from agricultural holdings with a postal questionnaire.

The administrative data files used were:

- o The Integrated Administration and Control System:

  Council Regulation (EC) No 1782/2003 of 29 September 2003 establishing common rules for direct support schemes under the common agricultural policy and establishing certain support schemes for farmers

- o The System for the Identification and Registration of Bovine Animals:

  Regulation (EC) No 1760/2000 of the European Parliament and of the Council of 17 July 2000 establishing a system for the identification and registration of bovine animals and regarding the labelling of beef and beef products

Data on cereals and potatoes were obtained from DAFM's Single Payment Scheme (SPS) (Council Regulation No 1782/2003 above) while all data on cattle was obtained from DAFM's Animal Identification and Movement (AIM) system (Council Regulation No 1760/2000 above). All databases held by the Ministry of agriculture are (including SPS and AIM) are linked to the CCS by herd-number (which is the unique identifier).

The reporting unit in the SPS and the AIM systems is the Herd Number. Each herd number represents a farm holding in Ireland. All holdings are identified by their herd number and all data is linked based on herd number as this is the unique identifier. It is important to point out that all holdings have a herd number, irrespective of whether they hold any livestock or not.

- o AIM system

  The AIM system contains information on the following variables:

  - ▪ Herd Number – Unique identifier
  - ▪ Tag number
  - ▪ Gender
  - ▪ Date of birth

- Herd of origin
- Breed
- Breed type (dairy or beef)
- Animal class (cow/heifer, bull etc)
- Details of whether the animal has ever calved.

This information makes it possible to compile estimates for the characteristics C_2 to C_2_99. These characteristics can all be directly computed based on the age and gender of the animal as recorded in the AIM database.

The fact that the AIM system is the definitive register of cattle owners in Ireland implies that the coverage provided by this data source is more complete than by sample survey, and the system of fines for non-compliance with the AIM scheme incentivises farmers to keep its information up to date. As farmers must supply the date of birth when registering an animal, the AIM data for age is likely to be much more accurate than for survey data.

A snapshot of the cattle population for a specific point in time can be extracted from the AIM system.

Data from the AIM system is used for both building the register and to replace the collection of cattle variables on the survey form, therefore reducing response burden.

o SPS system

The Single Payment System database is also known as the Integrated Administration and Control System (IACS) and contains the following variables:

- Herd Number – Unique identifier
- Parcel ID – ID number of each separate parcel of land
- Crop name – type of crop that is planted on the particular parcel
- Area claimed – area (in hectares) being claimed for the parcel
- X high, X low, Y high, Y low – co-ordinates based on the Irish National Grid reference system for each parcel

Data for each parcel of land in the SPS system is aggregated to the farm level.

There are 78 different crop types in the SPS system.

The X high, X low, Y high, Y low – co-ordinates from SPS were converted from the Irish National Grid system to ETRS89.

X, Y co-ordinates for any holdings that are missing this information can be easily imputed based on the Region and DED code.

The earliest application date for the SPS is March, and the closing date for applications was May, so while the reference date does not correspond exactly to our COA reference date of 01/06/2010, the information in the SPS dataset was still usable for COA 2010 as it represented what was in the ground for the harvest year.

Data from the SPS system is used for both building the register and to replace the collection of selected crop variables on the survey form, therefore reducing response burden.

The percentage of farmers who do not apply for payment under this scheme is thought to be very small. Certainly any farmer growing significant areas of crops would be registered to receive the single farm payment.

Thorough checks were performed on all of the administrative databases that were used for the COA. Records were joined across databases using the Herd Number identifier, and any mismatching records were scrutinised and name and address matching was performed in order to ensure that duplicate records did not result from mismatching records.

To reduce the possibility of under-coverage, all of the administrative databases were merged together with the existing CSO intercensal register and the union of all of these records was used to establish the 2010 Register of Farm holdings.

2.8 Specific topics

2.8.1 COMMON LAND

History
Utilised Agricultural Area (UAA) data for FSS reference years prior to 2010 has always excluded Common Land. To address this, an estimate of 421,041 hectares of common land was submitted to Eurostat in February 2011, pertaining to FSS 2007. Therefore the total UAA (including Common Land) for 2007 is now estimated at 4,558,941 hectares.

Current Methodology
Common Land data for FSS 2010 and the estimate for FSS 2007 are based on the same methodology. The estimate of 421,041 hectares for 2007 and 422,415 hectares for 2010 were obtained from the agriculture ministry, DAFM. This data is the most accurate data in the state for declared commonage and follows a year-long review undertaken by DAFM of all declared common land in Ireland. This comprehensive review consisted of physical inspections of the areas and/or a review of the ortho-imagery. It involved excluding all ineligible features such as scrub, rock, roadways, forests etc to construct accurate areas. The Census of Agriculture 2010

questionnaire asked agricultural holdings to specify whether or not commonage is used– see Appendix 1: Section1. Land Parcels & Use of Commonage.

Results

There were 13,578 holdings which indicated on the COA questionnaire that common land was used in 2010. The Commonage data collected by DAFM provides a total commonage area of 422,415 hectares in 2010.

In FSS 2007, there were an estimated 9,700 holdings using common land in 2007 accounting for 421,041 hectares.

The information on commonage land is the total eligible area of all commonages declared for the purposes of all area-based schemes (e.g. Single Payment Scheme, Disadvantaged Area Scheme, REPS, Agri-Environment Options Scheme etc.) operated in Ireland. The areas were established following a comprehensive review carried out by the Ministry of Agriculture during 2009 and 2010. The review was undertaken under the provisions of Council Regulation (EC) No 73/2009, Council Regulation (EC) No 1698/2005, Commission Regulation (EC) No 1122/2009, Commission Regulation (EC) No 1975/2006 (now replaced by Commission Regulation (EC) No 65/2011). The results provided a file of commonage areas which were grouped by NUTS 4 regions to create 27 artificial holdings which were transmitted as part of the final COA microfile.

2.8.2 GEOGRAPHICAL REFERENCE OF THE HOLDING

The Integrated Administration and Control System (IACS) database received from DAFM contained the geo-coordinates of every parcel of land on which a claim was being made under the Single Farm Payment scheme. These coordinates are Irish National Grid System coordinates, and these were transformed into ETRS89 system coordinates using GIS software. The largest parcel of land on each farm was used as the reference parcel to allocate a farm into the various NUTS regions. For a small number of holdings without land, the administrative headquarters of the holding were used to identify a location from which geo-coordinates were then constructed.

In order to send rounded coordinates, as stipulated by Eurostat (to maintain confidentiality), an analysis was performed on the NUTS5 regions in Ireland (this is the smallest reporting area used in the COA) to ascertain if a 5 minute arc covered an entire NUTS5 region. It was found that the largest NUTS5 region in Ireland was completely included within a 5 minute arc of its centroid so the coordinates assigned to each farm for Eurostat purposes are the centroid coordinates of the NUTS5 region to which it belongs.

Geo-coordinates for any holdings that did not appear on the IACS database had to be calculated manually. The address of the holding (which was available on the Register) was used to determine the appropriate NUTS 5 region, and this NUTS 5 region allowed us to allocate the relevant centroid coordinates to the holding.

The FSS 2010 dataset identifies holdings in 2944 different coordinates.

According to their location the coordinates were grouped into points representing the centroid of the respective NUTS 5 region.

The methodology used in FSS 2010 varied slightly from that used in FSS 2007 in terms of the allocation of a holding into a NUTS 5 region. In FSS 2007, the physical address of the farm headquarters (the farmhouse) was used to determine the NUTS 5 region. In FSS 2010, the geo-coordinates of the largest parcel belonging to the holding was used to determine the NUTS 5 regions. This may result in a difference between the number of regions containing farm holdings between 2007 and 2010.
There are 3441 NUTS 5 regions in Ireland. The FSS 2010 dataset identifies holdings in only 2944 regions. Regions in urban areas may not contain any agricultural holdings, hence the difference between the number of regions containing holdings and the number of regions in Ireland.

2.8.3   VOLUME OF WATER USED FOR IRRIGATION

The volume of water used to irrigation on the holding is not provided as irrigation is not necessary in Ireland due to high level of rainfall. This characteristic is sent to Eurostat as non-significant – see Annex1_IE_Nonexistent_Significant_FSS2010 (April2012).

2.8.4   OTHER ISSUES

There are no issues for consideration here.

2.9   Response-burden policy

The CSO is focused on continuously reducing the response burden on farmers. The Census of Agriculture held in 2010 was the first time that extensive use was made of administrative data files to collect data. This initiative allowed CSO to remove 20 questions pertaining to Cattle and 14 questions pertaining to Cereals from the Census questionnaire.

This ensured that the additional data required under Regulation 1166/2008 could be met while still limiting the questionnaire to just 8 pages. The questionnaire was issued to 153,906 holdings in the last week of May 20100. To increase the response rate five written reminders were posted out to non-respondents between June-August 2010. The final reminder took the form of a Statutory Notice (see Annex IX) and highlighted the penalties for non-participation. Just under 90% (138,339) of the issued questionnaires were returned. Of these, 120,613 were considered active farms. Non-respondents from larger holdings were included in the sample for the subsequent December 2010 survey as an extra check to establish whether the farm was still

active. The final section of the Census questionnaire, and indeed every agricultural survey, asks the respondent to indicate, in minutes, how long it took to complete the form. This allows CSO to measure the change in response burden from year to year.

3. ACCURACY AND RELIABILITY OF THE DATA COLLECTED

3.1 Data processing, analysis and estimation

3.1.1 ESTIMATION AND SAMPLING ERRORS – FOR SAPM AND/OR OGA, IF APPLICABLE

Not applicable for FSS2010 as this was a full census.

SAPM was carried out as a sample survey and a questionnaire was sent to 40,000 holdings (selected using stratified random sampling) from the sampling frame consisting of the Register of Agricultural holdings in Ireland. The register was updated for FSS2010 and so the coverage of the frame was thought to have been very accurate.
This was the first time that SAPM data was collected in Ireland so there was no previous data available for consistency checking.

The basic sample weights were the weights based on the inverse of the sampling probability within the various strata. Stratum weight h= N_h/n_h, where N_h= number of farms in stratum h and n_h= number of sample farms in stratum h.
To account for non-response, these basic weights were adjusted so that, Stratum weight h= $N_h/(n_h-m_h)$, where N_h= number of farms in stratum h, n_h= number of sample farms in stratum h, and m_h= number of non-respondent sample farms in stratum h.

Wrong classification was not an issue with SAPM as the strata were formed based on the FSS2010 returns.

The stratified random sampling was carried out using proc surveyselect in SAS, and RSEs were calculated using proc surveymeans.

- Please give the RSE for each relevant characteristic included in p. 2.7.1 - the tables related to the precision requirements stipulated in Annex IV "Precision Requirements" of the Regulation 1166/2008

NUTS2 regions with more than 10000 holdings
Crop characteristics: RSE

Precision requirements	Field codes	NUTS2 regions	
		IE01	IE02
Number of holdings in the NUTS2 region		73,881	65,979
RSE - UAA, ha of the NUTS2 region	A_3_1	0.4%	0.4%
RSE - Area of cereals in ha in the NUTS2 region	B_1_1	4.1%	2.4%
RSE - Area of potatoes and sugar beet in ha in the NUTS2 region	B_1_3 + B_1_4	15.0%	9.3%
RSE - Area of oilseed crops in ha in the NUTS2 region	B_1_6_4 + B_1_6_5 + B_1_6_6 + B_1_6_7 + B_1_6_8	17.1%	9.9%
RSE - Area of permanent outdoor crops in ha in the NUTS2 region	B_4 - B_4_7	43.2%	31.3%
RSE - Area of fresh vegetables, melons, strawberries, flowers in ha in the NUTS2 region	B_1_7 + B_1_8	28.1%	13.7%
RSE - Area of temporary grass and permanent grassland in ha in the NUTS2 region	B_1_9_1 + B_3	0.4%	0.4%

Livestock characteristics: RSE

Precision requirements		Field codes	NUTS2 regions	
			IE01	IE02
LSU in the NUTS2 region			2,302,353	3,400,230
Bovine animals	RSE - Number of Bovine animals in the NUTS2 region, in LSU	C_2_1*0.4 + C_2_2*0.7 + C_2_3*0.7 + C_2_4 +C_2_5*0.8 + C_2_6 + C_2_99*0.8	0.7%	0.6%
Sheep and goats	RSE - Number of Sheep and goats in the NUTS2 region, in LSU	C_3_1*0.1 + C_3_2*0.1	1.6%	2.3%
Pigs	RSE - Number of Pigs in the NUTS2 region, in LSU	C_4_1*0.027 + C_4_2*0.5 + C_4_99*0.3	29.6%	12.7%
Poultry	RSE - Number of Poultry in the NUTS2 region, in LSU	C_5_1*0.007 + C_5_2*0.014 + C_5_3*0.030	7.3%	14.3%

3.1.2   NON SAMPLING ERRORS ([ii])

Coverage Errors: All necessary steps were taken to ensure full coverage of the population. The amalgamation of registers from different sources (both administrative and statistical) in order to create a frame for the Census inevitably led to duplicates. While every effort was made to eliminate these prior to issuing questionnaires, it was not possible to identify and remove all duplicates and therefore, some farms were surveyed twice. Generally farmers themselves returned the second questionnaire with the completed one. To eliminate cases where a farmer completed two separate returns, a thorough examination of the data was carried out to identify records with identical data. This was done primarily using name and address matching, but also using several of the outcome variables. In all, approximately 4,000 duplicates were identified. A further 1,648 new holdings, not included in the initial register (as they did not appear on administrative records in 2009) were identified in the 2010 administrative files and these were then added to the register and included in the final population.

Non-Response Error: During FSS2010 and SAPM, there were instances of both full non-response (no return) and item non-response (incomplete return).

Unit non-response: The target population of FSS 2010 was 139,860 holdings. A Census questionnaire was completed and returned for 138, 370 of these, of which 120,613 indicated that the farm was active. Data was taken from administrative records for a further 19,247 farms, (made up of 1,648 new farm births not in existence when building the register and a further
17, 599 farms which on their survey form had indicated that the farm was inactive but according to administrative records the holding was in fact active).
 Non-response was minimised by issuing five postal reminders during the three month period following the reference date. An additional measure was also taken in December 2010 to include non-respondents with larger holdings in the December 2010 survey. When all efforts to get a response had been exhausted, the next step taken to address missing returns was to cross-reference the non-respondents against an administrative file of active farm holdings in 2010. A total of 19,247 non-respondents were identified as active using this approach and data for cattle, cereals and area farmed could be taken directly from these administrative files.
The sample size for SAPM was 40,000 holdings, and completed forms were received from 25,885 holdings (response rate of 65%).

Item non-response: As all data on cattle and cereals were collected from administrative records, only variables collected in the Census paper questionnaire and in SAPM questionnaire were affected by item non-response.

3.1.3   METHODS FOR HANDLING MISSING OR INCORRECT DATA ITEMS

Various methods and sources were employed to complete missing items. The sources relied upon included administrative files and previous survey returns. If these did not provide the missing data, imputation and regression were used to complete for missing items. Some of the areas affected are provided below:

Sheep: The annual Sheep & Goat Census carried out by the Ministry of Agriculture provided a register of all sheep producers with a reference point of December of each year. To ensure good quality data for sheep farms, the CSO choose to examine this file for December 2009 as some sheep farms may not have provided a Census return or may have simply not answered the section on sheep.

While the reference dates of the December 2009 Sheep & Goat Census were not comparable for FSS2010, we worked on the assumption that all farms with breeding sheep in December 2009, went on to produce lambs in Spring 2010 and thus were active on the reference date of June 1st 2010. Starting with the breeding flock from the December 2009 Sheep and Goat Census, the number of lambs for non-responding sheep farms was imputed based on the average number of lambs per ewe across those farms that did complete and return a questionnaire. This method was applied to all farms that were both confirmed active on June 1st 2010 and also confirmed as having sheep in December 2009.

Labour: This section of the questionnaire is often left blank or only partially completed. Where the age of the holder was not provided, administrative files were first checked for a date of birth. If this failed, the age at the last Census in 2000 was checked if available and adjusted accordingly. Finally, if the age could still not be confirmed, the distribution of holder ages across all returns was examined and this distribution was used to randomly assign ages to the missing cases. Where the labour force section was left completely blank (approximately 10% of returns), regression techniques were utilised to provide a model for labour component of farms based on all available explanatory variables including area farmed, number of livestock, age of holder, gender of holder amongst others. Time spent was regressed on explanatory

Imputed and regression estimates were compiled by the Statisticians responsible for FSS2010.

SAPM: SAPM was subject to both unit non-response and item non-response. No imputation was carried out for unit non-response. However, unit non-response was handled by re-weighting within strata to adjust for non-response. Item non-response was imputed using a variety of methods. Categorical variables were imputed using mean imputation, after controlling for other observed variables. Quantitative variables were imputed by deduction or by regression on FSS2010 variables.

3.1.4 CONTROL OF THE DATA

The data undergoes checks and controls throughout the processing stages. This takes place across three stages; scrutiny, verification and editing.

Scrutiny is a manual process undertaken by processing staff. The function of scrutiny is to detect and rectify errors in advance of data entry. It involves visually examining the questionnaire, page by-page. Where a 'yes/no' tick box was left unchecked or an inconsistency in the data was encountered, it was manually amended on the questionnaire where possible.

After data entry, the data enters verification stage. This is done electronically. Illegible digits and data are highlighted and corrected on screen by referring to previous returns or by deduction. The data then enters the edit phase where data is passed through a range of pre-programmed edit checks. Here, arithmetic checks, range checks and consistency checks (with previous returns) are carried out and data is examined where these checks fail and then edited if necessary.

Each of these three stages was carried out by the Census processing staff in the CSO made up of temporary staff and more experienced supervisory staff.

3.2   Evaluation of results

Wherever possible, census data were also compared with other sources including administrative sources. However, such comparisons were made difficult by differences in definitions and/or reference periods and as such were of limited use.

Table 1

	Survey		
	FSS (excl. OGA in case of sample survey)	OGA (if sample survey)	SAPM (if sample survey)
Initial list of units	153,906+1,648=155,554*		
Initial sample	NA		39,990
Number of holdings with completed questionnaires (incl. Eventual imputed questionnaires):	138,370		25,885
Number of units under the threshold applied	0		0
Holdings with ceased activities (or duplicates)	18,726		303
- (If information is available) of which definitely ceased, i.e. the land is abandoned			
- (If information is available) of which holdings with change of the manager			
Unit Non-response:			13,802
- Refusals – not corrected	0		13,802

- Refusals – corrected (imputed)	17,599			
Number of records transferred to Eurostat *	139,887			25,885
Common land units (A_2_1)	27	NA		NA

*153,906 records from original register and 1,648 records added later

Table 2: Trends from FSS 2007 to FSS 2010.

Comments must be given in case there is a change of more than 10% at national level between FSS 2007 and FSS 2010 for any of the groups below:

	From FSS 2007	From FSS 2010	Difference in %	Comments
Number of holdings;	128,224	139,887	+9%	See comment 1 below.
UAA (A_3_1), ha;	4,137,900	4,991,352	+21%	See comment 2 below.
Arable land (B_1), ha;	1,007,582	1,011,701	+0.4%	
Permanent grassland (B_3), ha;	3,130,279	3,978,532	+27%	See comment 2 below.
Permanent crops (B_4), ha;	1,244	968	-22%	See comment 5 below.
Wooded area (B_5_2), ha;	128,613	149,849	+16.5%	See comment 3 below
Unutilised Agricultural area (B_5_1), ha;	48,410	67,038	+38%	See comment 3 below
Fallow land (B_1_12_1 + B_1_12_2), ha;	6,244	4,605	-26%	See comment 5 below.
LSU in LSU;	5,918,339	5,787398	-2%	
Cattle (C_2), head;	6,572,870	6,606,585	+.005%	
Family Labour force - in persons;	227,610	255,637	+12%	See comment 4 below
Family Labour force - in AWU;	136,784	152,569	+12%	See comment 4 below
Non family labour force - in persons;	15,245	16,406	+7.6%	
Non family labour force - in AWU	7,877	9,779	+24%	See comment 4 below

1) Number of farms

The availability of administrative data has allowed us to verify activity on farms that might otherwise have been deemed inactive based on their Census questionnaire, thus leading to better results and a 9% increase on the number of farms estimated in FSS2007. The overall change, however, since the last Census in 2000 is a reduction in the number of farms of just over 1%.

2) UAA & Permanent grassland
The increase in UAA of 21% is largely as a result of including Commonage with UAA for the first time. Excluding this, the difference is an increase of 10% on FSS2007 or an increase of just under 3% on Census 2000.
3) Wooded Area and Unutilised Agricultural Area
The changes in each of these categories can be attributed to the increased coverage achieved through the use of administrative data.
4) Labour
While labour input has increased by 12% since FSS2007, this is in line with the increase in number of farms and UAA since FSS2007. Overall, the labour input per farm remains unchanged in the ten year period since Census 2000. It is also worth noting that as most farms are family owned, an increase in the AWU of family members does not always translate into an increase in output and SO. Family members may return to work on the family farm if they become unemployed from their off-farm employment.
5) Permanent Crops & Fallow Land
The availability of administrative data for the first time in 2010 has allowed us provide definitive values for these items which were previously estimated using samples.

3.3   Data Revision Policy

No further revisions are envisaged for FSS2010 data at this time.

4. ACCESSIBILITY AND PUNCTUALITY

4.1   Publications

Preliminary results from the FSS2010 were published nationally on February 14th 2012 as *Census of Agriculture 2010- Preliminary Results*[7]. This provided county-level data (NUTS4) for the main FSS characteristics such as Utilised Agricultural Area, Livestock and Cereals.
A special report on Agricultural Labour Input was published nationally in October 2012.
A final detailed publication of FSS results was published in December 2012.

4.2   Timeliness and Punctuality

Time lag first results - The number of months from the last day of the reference period to the day of publication of first results: (**June 2010- Feb 14th 2012**) **19.5 months**

Time lag final results - The number of months from the last day of the reference period to the day of publication of complete and final results: (**June 2010- Dec 7th 2012**) **29 months**

Punctuality for delivery and publication - The number of days between the delivery/ release date of data and the target date on which they were scheduled for delivery/ release: **Delivery of FSS2010 to Eurostat = +11days**

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[7]http://www.cso.ie/en/media/csoie/releasespublications/documents/agriculture/2010/coapre2010.pdf

5. CONFIDENTIALITY AND SECURITY

 All information returned on Census questionnaires is treated as strictly confidential and is used for statistical purposes only. This is guaranteed by both Irish and EU law.

Section 33 of the Statistics Act 1993 states:

> 33.-(1) *No information obtained in any way under this Act or the repealed enactments which can be related to an identifiable person or undertaking shall, except with the written consent of that person or undertaking or the personal representative or next-of-kin of a deceased person, be disseminated, shown or communicated to any person or body except as follows-*
>
> *(a) for the purposes of a prosecution for an offence under this Act;*
>
> *(b) to officers of statistics in the course of their duties under this Act;*
>
> *(c) for the purposes of recording such information solely for the use of the Office in such form and manner as is provided for by a contract in writing made by the Director General which protects its confidentiality to his satisfaction.*

In the national release, a category is primary confidential if any one of the following conditions applies:
- o   there are three or less units
- o   one unit accounts for more than 80% of the total (dominance rule 1)
- o   two units account for more than 90% of the total (dominance rule 2)

A category is secondary confidential if publishing that category indirectly reveals information about a confidential category.
County data is checked for confidentiality according to the rules outlined above. County data that is considered to be confidential is combined with data from another county or counties in order to be published.

REFERENCES

- Methodological notes available
- Main scientific references

ANNEXES

Annexes I-IX

ENDNOTES

(ⁱ)   Probability sampling assures for each element in the population a <u>known positive</u> probability of selection. In practice, it may be that, only for some stage of the sampling design, this condition is not fulfilled. In this case, the sample is here indicated as *not completely probabilistic sample*.

(ⁱⁱ)   *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.