

# Appendix 1

## Background Notes & Definitions

### Background Notes

#### Introduction

This report presents the results from the Census of Agriculture 2010 conducted by the Central Statistics Office (CSO) in June 2010. This work was undertaken within the framework of the statistical programme of the European Union, and in particular, Regulation (EC) No 1166/2008<sup>1</sup>. Similar Censuses were conducted in all EU member states during 2009/2010 in order to collect comparable statistics across the European Union.

#### Acknowledgement

The CSO would like to acknowledge and thank the many farmers who completed their Census of Agriculture questionnaire. The CSO also wishes to acknowledge the contribution of the various stakeholders in formulating the questionnaire for Census of Agriculture 2010 and the assistance given by the Department of Agriculture, Food and the Marine (DAFM) in providing the CSO with access to administrative data for statistical purposes.

A copy of the questionnaire is provided in Appendix 4.

#### Legal basis

The Census of Agriculture 2010 was conducted in accordance with:

- Statistics Order (Census of Agriculture) 2010 (S.I. No. 181 of 2010), made under the Statistics Act, 1993.
- Regulation (EC) No 1166/2008 of the European Parliament and of the Council of 19 November 2008 on farm structure surveys and the survey on agricultural production methods and repealing Council Regulation (EEC) No 571/88.
- Commission Regulation (EC) No 1200/2009 of 30 November 2009 implementing Regulation (EC) No 1166/2008 of the European Parliament and of the Council on farm structure surveys and the survey on agricultural production methods, as regards livestock unit coefficients and definitions of the characteristics<sup>2</sup>.

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<sup>1</sup>OJ No. L321, 1.12.2008, p.14.

<sup>2</sup>OJ No. L329, 15.12.2009,p.1.

## Data collection

For Census of Agriculture 2010, the register of agricultural holdings used to contact farmers was constructed by amalgamating the CSO intercensal Agriculture Register and DAFM's 2009 Corporate Client System.

Census of Agriculture questionnaires were sent to 153,906 farmers in the week preceding the reference date of 1st June 2010 and up to five reminders were issued in order to maximise the overall response rate.

In an effort to reduce the response burden on farmers, all questions relating to cattle, cereals and potatoes were eliminated from the June 2010 Census of Agriculture questionnaire as sufficient data was found to be available from existing administrative data sources from DAFM. Data on cereals and potatoes were obtained from DAFM's Single Payment Scheme (Council Regulation No 1782/2003) while all data on cattle was obtained from DAFM's Animal Identification and Movement system (Council Regulation No 1760/2000). The 2010 Census of Agriculture was therefore the first census to use a combination of administrative records and completed paper questionnaires to collect the required data in order to reduce the overall burden on respondents.

## Estimation of the total number of farm holdings

The total number of active farms in June 2010 was estimated to be 139,860. *See Table A.*

Of the 153,906 potential farms on the register which were issued with a Census of Agriculture questionnaire, 138,370 responded. Of these, 120,644 indicated that they were actively engaged in farming and/or maintaining the land in good agricultural and environmental condition in order to receive Single Farm Payment. The remaining 17,726 respondents stated they were not engaged in farming although 3,803 of these were later identified as active farm holdings from DAFM administrative records.

Of the 15,567 who didn't respond to the 2010 Census of Agriculture, 13,765 of these were also identified as active farm holdings from DAFM administrative records.

A further 1,648 new holdings were also identified from DAFM administrative records. These had not been on the original register used for issuing COA questionnaires. This arose as the register was partly built using DAFM's 2009 databases.

Thus, a total of 19,216 farms were identified as active from administrative records, of which 17,568 were listed on the original farm register and a further 1,648 which were not on the register.

As outlined previously, the data collection methodology used for the Census of Agriculture 2010 differed fundamentally from that used in the previous Censuses and therefore the results may not be directly comparable.

Table A Estimation of active farms in 2010	Number
(a) Census questionnaires issued	153,906
(b) Census questionnaires returned	138,370
(c) Responded as active	120,644
(d) Determined as active from administrative sources <sup>1</sup>	17,568
(e) New holdings identified as active from administrative sources <sup>2</sup>	1,648
<b>Total number of active farms ((c)+(d)+(e))</b>	<b>139,860</b>

<sup>1</sup> Where no response or an incomplete response was received

<sup>2</sup> Not on original CSO register

## Comparability issues with previous Censuses

### (i) Census sheep data

A delayed response by some farmers to the Census of Agriculture was considered to affect, in particular the number of animals returned for the category '*Other sheep under one year*'. On investigation, it was clear that many of the late returns gave the number of sheep on the holding on the date the questionnaire was completed, instead of on June 1<sup>st</sup> 2010, as required. Therefore, this considerably underestimated the number of lambs on farms on 1<sup>st</sup> June 2010.

To overcome this, the questionnaires completed on June 1<sup>st</sup> 2010 and in the fortnight immediately afterwards were used to determine the expected lamb/ewe ratio on a holding on the reference date of June 1<sup>st</sup> 2010. Over 45% of sheep returns had been made within that two week period. A lamb/ewe ratio was calculated for both upland and lowland breeds for this two week period and applied to all returns received from mid-June onwards depending on the breed of the sheep flock.

This adjustment had the effect of increasing the total number of sheep returned in the Census of Agriculture questionnaires by approximately 12%. Therefore, the national sheep flock is provisionally estimated at 4,745,424 on June 1<sup>st</sup> 2010.

This same issue also arose in the Census of Agriculture 2000. At that time, the matched sample estimate for lambs was considered to be a more reliable estimate for the category '*Other sheep under one year*'. A revised national sheep flock estimate of 7,555,000 sheep was derived at State level only.

### (ii) Location of the agricultural holding

The methodology for assignment of a farm to a particular county in 2010 is based on the location of the largest proportion of land of the holding. The method of assigning a farm to a county in 2000 was different in that the farm was assigned to the county where the farm headquarters was located. Caution is advised therefore, when comparing county data over the ten year period.

### (iii) Economic Size

The methodology for determining farm type has changed with the introduction of the concept of Standard Output (previously Standard Gross margin). Therefore, direct comparisons cannot be made with the economic size of farms published for earlier years.

## Regional classifications

The regional classifications used in this release are based on the EU Nomenclature of Territorial Units (NUTS) classification. The NUTS3 regions correspond to the eight Regional Authorities established under the Local Government Act 1991, Regional Authorities Establishment Order 1993, which came into operation in 1 January 1994. The NUTS2 regions, which were proposed by Government and agreed by Eurostat<sup>3</sup> in 1999, are groupings of the NUTS3 regions.

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<sup>3</sup>Eurostat is the Statistical Office of the European Union

## Definitions

### Farm/holding

An “agricultural holding” or “holding” means a single unit, both technically and economically, which has a single management and which undertakes agricultural activities listed below within the economic territory of the European Union, either as its primary or secondary activity:

- growing of non-perennial crops
- growing of perennial crops
- plant propagation
- animal production
- mixed farming
- support activities to agriculture and post-harvest crop activities

### Agricultural Area Utilised

The Agricultural Area Utilised (AAU) is the combined area under crops, silage, hay, pasture and rough grazing land in use (including fallow land). Areas under roads, tracks, water, bog, marsh, rocks, unused rough grazing land, buildings etc. are excluded.

### Farm Type

For analytical purposes, farms are classified in this report as one of eight farm types. These types represent the primary areas of specialisation in Irish Farming. They are derived from groupings applied to a detailed EU farm typology classification system<sup>4</sup> and are based on the relative economic importance of the various lines of agricultural activity carried out on each farm. These types are classified as Specialist Tillage, Specialist Dairying, Specialist Beef Production, Specialist Sheep, Mixed Grazing Livestock, Mixed Crops & Livestock, Mixed Field Crops<sup>5</sup> and Other<sup>6</sup>.

### Standard Output (SO)

The Standard Output (SO) of an agricultural product is defined as the average monetary value of the agricultural output at farm-gate prices. SO is not a measure of farm income. It does not take into account costs, direct payments (such as the Single Farm Payment), value added tax or taxes on products. This has replaced the concept of Standard Gross Margin (SGM) which was previously used to measure the economic size of a farm. Therefore, direct comparisons cannot be made between the economic size of farms in this report and the economic size of farms published for earlier years.

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<sup>4</sup>Commission Regulation (EC) No 1242/2008 of 08 December 2008 establishing a Community typology for agricultural holdings (Official Journal of the European Communities No L 335/3 of 13 December 2008)

<sup>5</sup>This group includes farms growing various crops (including silage, hay, pasture or rough grazing) but with no dominant crop type.

<sup>6</sup>This group includes farms specializing in horticulture, fruit, pig or poultry production, mixed crops, mixed livestock and a small number of unclassified farms.

## Economic Size

The economic size of the holding is measured as the total standard output of the holding expressed in euro. Holdings are classified by fourteen size classes which are set out in Annex II to Commission Regulation (EC) no 1242/2008. Some of these size classes have been grouped together here and therefore, only eight size classes are presented in this report.

## Family Farms

These are farms which are operated as family based enterprises.

## Commercial Farms

These are farms registered as companies which paid all their workers as employees (including management) or farms connected with institutions (e.g. schools, colleges, religious communities, prisons etc.). All persons working on commercial farms are classified as regular non-family workers.

## Farm Holder

The legal owner of a family farm.

## Farm Manager

The person responsible for the day to day running of the farm. On 97% of Irish farms, the farm manager was also found to be the holder.

## Non-Regular Labour Input

This refers to the labour supplied by those not employed on a regular basis such as casual workers, agricultural contractors and farm relief services.

## Annual Work Unit (AWU)

The labour input of each person who worked on the farm was measured in terms of AWUs with one AWU being defined as 1800 hours or more of labour per person per annum.

## Significance of Farmwork

This categorises the relative importance of farmwork as an occupation to the farm holder.

**Sole occupation:** If an individual engaged in farmwork had no other occupation from which an income was earned, then farmwork was the sole occupation.

**Major occupation:** If farmwork took up the greater part of a worker's time, it was regarded as a major occupation.

**Subsidiary occupation:** If the time spent on gainful non-farming activity exceeded that spent on farmwork then farmwork was regarded as a subsidiary occupation. Gainful non-farming activity includes paid farmwork on other farms and all other non-farming activities from which an income was obtained, whether undertaken on or off the farm.



## Appendix 2

# Description of EU Farm Typology Classification System

### Introduction

The EU Farm Typology Classification System was developed in order to identify and classify relatively homogeneous groups of farms by reference to two economic characteristics of the farm, its *type of activity* and its *economic size*. Both of these characteristics are determined by the application of Standard Output (SO) coefficients, estimated regionally per hectare of crop or per animal, to the individual farm's crop and livestock activities. In this way, all the farm's activities can be measured and compared on a standardised basis (i.e. SO). The classification system is used for the periodic Censuses and Farm Structure Surveys, the current series of which are conducted under Council Regulation (EU) No 1166/2008<sup>1</sup>, as well as the ongoing Farm Accountancy Data Network (FADN) surveys. A complete description of the Farm Typology system is given in Commission Regulation (EC) No 1242/2008<sup>2</sup>.

### Standard Output (SO)

The Standard Output (SO) of an agricultural product is defined as the average monetary value of the agricultural output at farm-gate prices. The SO does not take into account costs, direct payments, value added tax or taxes on products. The SO coefficient for each product is determined on the basis of a standard 12-month production period and is calculated as a regional average within each member state. The two regions in Ireland are Southern-Eastern (SE) and Border, Midland, Western (BMW). The SOs used in the case of Census of Agriculture 2010, were referenced to '2007' (i.e., calculated as the 5-year average of 2005-2009 SOs) and the Irish coefficients are given in Table 1. These values will be updated to take account of economic trends and the frequency of the update is linked to the years in which farm structure surveys are carried out. The next Farm Structure Survey will take place in June 2013.

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<sup>1</sup> Council Regulation (EC) No 1166/2008 of 19 November 2008 on farm structure surveys and the survey on agricultural production methods (and repealing Council Regulation (EEC) No 571/88) as implemented by Commission Regulation (EC) No 1200/2009 (Official Journal of the European Communities No L 321/14 of 01 December 2008 and No L 329/1 of 15 December 2009 respectively)

<sup>2</sup> Commission Regulation (EC) No 1242/2008 of 08 December 2008 establishing a Community typology for agricultural holdings (Official Journal of the European Communities No L 335/3 of 13 December 2008)

Table I "2007" Standard Outputs(SO) - IRELAND

Agricultural Product <sup>1</sup>	Region	
	Border, Midland & Western	Southern & Eastern
	€	€
Common wheat and spelt	1,255	1,205
Barley	871	877
Oats	966	982
Other cereals	918	929
Beans and peas	733	733
Potatoes	5,333	6,784
Sugar beet	1,693	1,693
Oilseed Rape	410	410
Fodder Roots & Brassicas	410	410
Fresh vegetables, melons, strawberries:		
Open air and Outdoor-market gardening	15,651	15,651
Under glass	138,190	138,190
Flowers and ornamental plants (excluding nurseries):		
Outdoor	45,000	45,000
Under Glass	310,524	310,524
Temporary grass for forage:	73	73
Other fodder crops:	302	302
Other arable land crops	260	260
Permanent pasture and meadow:		
Excluding rough grazing	73	73
Rough grazing	1	1
Apples	6,491	6,491
Berries	14,893	14,893
Nurseries	77,650	77,650
Mushrooms – aggregate for 5.8 harvests/annum/are	26,013	26,013
Equidae	314	314
Bovine animals, under one year old	331	390
Male bovine animals, over one but under two years old	191	176
Female bovine animals, over one but under two years old	166	151
Male bovine animals, two years old and over	298	299
Heifers, two years old and over	231	281
Dairy cows	1,600	1,523
Other cows	425	482

<sup>1</sup> Units are 'per hectare' for crops and 'per head of animal' for livestock

Table I (contd) "2007" Standard Outputs(SO) - IRELAND

Agricultural Product <sup>1</sup>	Region	
	Border, Midland & Western	Southern & Eastern
	€	€
Sheep:		
Ewes	95	94
Other sheep	10	8
Goats (breeding females)	460	460
Piglets less than 20 kg liveweight	60	60
Breeding sows of 50 kg and over liveweight	605	605
Other pigs	166	166
Broilers (per 100 birds)	704	704
Laying hens (per 100 birds)	1,467	1,467
Other poultry (per 100 birds)	1,377	1,377

<sup>1</sup> Units are 'per hectare' for crops and 'per head of animal' for livestock

### Farm Type Classification

The *farm type* classification of a farm is determined by the relative contribution of the standard output of the different activities on the holding to the total standard output of the holding. The farm type classification is a three-level hierarchical nomenclature which divides types of farming into the following structure:

- Level 1: General Farm Types (9 headings)
- Level 2: Principal Farm types (21 headings)
- Level 3: Particular Farm types (62 headings)

The complete classification including the definition of farm types is described in Commission Regulation (EC) No 1242/2008.

For EU purposes, all farms included in the Census of Agriculture were classified down to the most detailed farm type (i.e. Level 3). However, details at Level 1 and 2 are found to be adequate for most analytical purposes. A description of the headings comprising two levels of the basic typology classification as well as the definitions of the headings are given in Table II.

Table II Farm Typology Classification (Levels 1 and 2)

Code	Description	Definition (in terms of contribution to total SO)
<b>1</b>	<b>Specialist Field Crops</b>	<b>Field crops &gt; 2/3</b>
	15 Specialist Cereals, Oilseeds and Protein Crops	Cereals, Oilseeds and Protein Crops > 2/3
	16 General Field Cropping	Field crops > 2/3 <b>and</b> Cereals, Oilseeds and Protein Crops <= 2/3
<b>2</b>	<b>Specialist Horticulture</b>	<b>Horticulture &gt; 2/3</b>
<b>3</b>	<b>Specialist Permanent Crops</b>	<b>Permanent crops &gt; 2/3</b>
	35 Specialist vineyards	Not relevant
	36 Specialist fruit and citrus fruit	Fruit and berries > 2/3
	37 Specialist olives	Not relevant
	38 Various permanent crops	All other farms in class 3
<b>4</b>	<b>Specialist Grazing Livestock</b>	<b>Grazing livestock &gt; 2/3</b>
	45 Specialist dairying	Dairy cows > 3/4 and grazing livestock > 1/3;
	46 Specialist cattle – rearing and fattening	All cattle > 2/3 <b>and</b> Dairy cows <= 1/10 and grazing livestock > 1/3;
	47 Cattle – dairying, rearing and fattening combined	All cattle > 2/3 <b>and</b> Dairy cows > 1/10 and grazing livestock > 1/3 but excluding farms in class 45
	48 Sheep, goats and other grazing livestock	Cattle <= 2/3
<b>5</b>	<b>Specialist Granivores</b>	<b>Pigs and poultry &gt; 2/3</b>
<b>6</b>	<b>Mixed Cropping</b>	<b>[Field crops+Horticulture + Perm.Crops &gt;2/3 combined with [ Field Crops &lt;= 2/3 and Horticulture &lt;= 2/3 and Permanent crops &lt;= 2/3]</b>
<b>7</b>	<b>Mixed Livestock</b>	<b>Grazing Livestock + Granivores &gt;2/3</b> and Grazing Livestock <= 2/3 and Granivores <= 2/3
	73 Mixed livestock – mainly grazing animals	Grazing livestock > Granivores
	74 Mixed livestock – mainly granivores	Grazing livestock <= Granivores
<b>8</b>	<b>Mixed Crops and Livestock</b>	<b>Farms excluded from headings 1 to 7 but having a non-zero total SO</b>
	83 Field crops and grazing livestock combined	Field crops > 1/3 and Grazing livestock > 1/3
	84 Various crops and livestock combined	Farms in class 8 excluding those in 83; Field crops > 1/3 and Granivores > 1/3
<b>9</b>	<b>Non-classifiable farms</b>	<b>Farms excluded from headings 1 to 8 i.e. with a total SO=0</b>

To facilitate the presentation of the Census of Agriculture 2010 results according to type of farming, eight summary farm type classes relevant to Irish agriculture were selected from particular groupings of the farm typology classification headings described above. These derived farm type classes are identified in Table III below.

**Table III Irish Farm Type Classes**

Heading	Typology Code	Description
<b>A: Specialist Tillage</b>	15	Specialist field crops but excluding mixed field crops
	and	
	16	
	excl. 166	
<b>B: Specialist Dairying</b>	45	
<b>C: Specialist Beef Production</b>	46	
<b>D: Specialist Sheep</b>	481	
<b>E: Mixed Grazing Livestock</b>	47	No dominant enterprise; dairying and cattle rearing and fattening combined, mixed cattle and sheep systems as well as farms having silage, hay, pasture or rough grazing
	and	
	48	
	excl. 481	
<b>F: Mixed Crops and Livestock</b>	8	No dominant enterprise; various crops combined with grazing or other livestock enterprises
<b>G: Mixed Field Crops</b>	166	Farms growing various crops (including silage, hay, pasture or rough grazing) but with no dominant crop type
<b>H: Other</b>	2	Specialist horticulture or fruit, specialist pig or poultry, mixed crops or mixed livestock as well as "unclassified" farms
	3	
	5	
	6	
	7	
	9	

### Economic Size (SO) Classification

The economic size of the holding is measured as the total standard output (SO) of the holding expressed in euro. Holdings are classified by fourteen economic size classes which are set out in Annex II to Commission Regulation (EC) no 1242/2008<sup>3</sup>. Some of these size classes have been grouped together and therefore only eight size classes are presented in this report.

<sup>3</sup>Commission Regulation (EC) No 1242/2008 of 08 December 2008 establishing a Community typology for agricultural holdings (Official Journal of the European Communities No L 335/3 of 13 December 2008)



# Appendix 3

## Livestock Units

### Introduction

A Livestock Unit is a standard measurement unit that allows the aggregation of numbers of livestock across different categories of livestock for comparison purposes.

Each livestock category is assigned a coefficient which reflects the relative importance of livestock in that category. The number of livestock in each such category is multiplied by the coefficient for that category and the results summed across categories to give a standardised total number of livestock for a particular farm size class or for a particular farm type.

### Coefficients

Coefficients used for each livestock category differ throughout the world. The coefficients used in this publication are taken from EU Regulation No.1166/2008 covering the 2010 Census of Agriculture. Table I below gives the coefficient for each livestock category.

Table 1 Livestock Unit Coefficients		
Bovine animals	Under 1 year old	0.400
	1 but less than 2 years old	0.700
	Male, 2 years old and over	1.000
	Heifers, 2 year old and over	0.800
	Dairy cows	1.000
	Other cows, 2 years old and over	0.800
Sheep and goats		0.100
Equidae		0.800
Pigs	Piglets having a live weight of under 20 kg	0.027
	Breeding sows weighing 50 kg and over	0.500
	Other pigs	0.300
Poultry	Broilers	0.01
	Laying hens	0.01
	Ostriches	0.35
	Other poultry	0.03