

Assessment of compliance with the Code of Practice for Official Statistics

Statistics on Agriculture in England and the UK

*(produced by the Department for
Environment, Food and Rural Affairs)*

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About the UK Statistics Authority

The UK Statistics Authority is an independent body operating at arm's length from government as a non-ministerial department, directly accountable to Parliament. It was established on 1 April 2008 by the *Statistics and Registration Service Act 2007*.

The Authority's overall objective is to promote and safeguard the production and publication of official statistics that serve the public good. It is also required to promote and safeguard the quality and comprehensiveness of official statistics, and good practice in relation to official statistics.

The Statistics Authority has two main functions:

1. oversight of the Office for National Statistics (ONS) – the executive office of the Authority;
2. independent scrutiny (monitoring and assessment) of all official statistics produced in the UK.

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ASSESSMENT AND DESIGNATION

The *Statistics and Registration Service Act 2007* gives the UK Statistics Authority a statutory power to assess sets of statistics against the *Code of Practice for Official Statistics*. Assessment will determine whether it is appropriate for the statistics to be designated as National Statistics.

Designation as National Statistics means that the statistics comply with the *Code of Practice*. The *Code* is wide-ranging. Designation can be interpreted to mean that the statistics: meet identified user needs; are produced, managed and disseminated to high standards; and are explained well.

Designation as National Statistics should not be interpreted to mean that the statistics are always correct. For example, whilst the *Code* requires statistics to be produced to a level of accuracy that meets users' needs, it also recognises that errors can occur – in which case it requires them to be corrected and publicised.

Assessment reports will not normally comment further on a set of statistics, for example on their validity as social or economic measures. However, reports may point to such questions if the Authority believes that further research would be desirable.

Assessment reports typically provide an overview of any noteworthy features of the methods used to produce the statistics, and will highlight substantial concerns about quality. Assessment reports also describe aspects of the ways in which the producer addresses the 'sound methods and assured quality' principle of the *Code*, but do not themselves constitute a review of the methods used to produce the statistics. However the *Code* requires producers to "seek to achieve continuous improvement in statistical processes by, for example, undertaking regular reviews".

The Authority may grant designation on condition that the producer body takes steps, within a stated timeframe, to fully meet the *Code's* requirements. This is to avoid public confusion and does not reduce the obligation to comply with the *Code*.

The Authority grants designation on the basis of three main sources of information:

- i. factual evidence and assurances by senior statisticians in the producer body;
- ii. the views of users who we contact, or who contact us, and;
- iii. our own review activity.

Should further information come to light subsequently which changes the Authority's analysis, it may withdraw the Assessment report and revise it as necessary.

It is a statutory requirement on the producer body to ensure that it continues to produce the set of statistics designated as National Statistics in compliance with the *Code of Practice*.

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1 Summary of findings

1.1 Introduction

1.1.1 This is one of a series of reports¹ prepared under the provisions of the *Statistics and Registration Service Act 2007*². The Act requires all statistics currently designated as National Statistics to be assessed against the *Code of Practice for Official Statistics*³. The report covers the set of agriculture statistics produced by the Department for Environment, Food and Rural Affairs (Defra):

- *Land Use and Livestock on Agricultural Holdings England*⁴ - Crop Areas and Livestock Numbers (Provisional and Final);
- *Land Use and Livestock on Agricultural Holdings UK*⁵ (Provisional and Final Results);
- *Labour on Agricultural Holdings in England*⁶ (Provisional and Final Results);
- *Land Use and Livestock Populations England Results*
- *Land Use and Livestock Populations UK Results*⁷;
- *Cereals and Oilseed Rape Production Estimates Harvest UK*⁸ (Provisional and Final Results);
- *Cereal Stocks UK / England & Wales*⁹;
- *Farm Practices Survey - England*¹⁰;
- *Organic Statistics UK*¹¹;
- *Survey of Orchard Fruit - England & Wales*¹²;
- *Mushroom Production Area England*¹³; and
- *Basic Horticultural Statistics*¹⁴.

1.1.2 This report is one of four assessing agriculture statistics across the UK: the assessment of Statistics on Agriculture in Scotland, produced by the Scottish Government has been published in report number 149; the assessment of Statistics on Agriculture in Wales, produced by the Welsh Government has been published in report number 151; and the assessment of Statistics on Agriculture in Northern Ireland, produced by the Department of Agriculture and Rural Development, Northern Ireland (DARD) has been published in report number 148. Selected agriculture statistics produced by Defra have already been assessed: Assessment report 22¹⁵ discussed *Agriculture in the UK* and

¹ <http://www.statisticsauthority.gov.uk/assessment/assessment-reports/index.html>

² http://www.opsi.gov.uk/Acts/acts2007/pdf/ukpga_20070018_en.pdf

³ <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>

⁴ <http://www.defra.gov.uk/statistics/foodfarm/landuselivestock/junesurvey/>

⁵ See footnote 4

⁶ See footnote 4

⁷ <http://www.defra.gov.uk/statistics/foodfarm/landuselivestock/decembersurvey/>

⁸ <http://www.defra.gov.uk/statistics/foodfarm/food/cereals/cerealsoilseed/>

⁹ <http://www.defra.gov.uk/statistics/foodfarm/food/cereals/cerealstock/>

¹⁰ <http://www.defra.gov.uk/statistics/foodfarm/enviro/farmpractice/>

¹¹ <http://www.defra.gov.uk/statistics/foodfarm/enviro/organics/>

¹² <http://www.defra.gov.uk/statistics/foodfarm/landuselivestock/orchardfruit/>

¹³ <http://www.defra.gov.uk/statistics/foodfarm/landuselivestock/mushrooms/>

¹⁴ <http://www.defra.gov.uk/statistics/foodfarm/landuselivestock/bhs/>

¹⁵ See footnote 1

selected crop and livestock statistics; and Assessment report 72¹⁶ discussed statistics on agricultural accounts and agricultural prices, as well as farm business statistics.

- 1.1.3 This report was prepared by the Authority's Assessment team, and approved by the Board of the Statistics Authority on the advice of the Head of Assessment.

1.2 Decision concerning designation as National Statistics

- 1.2.1 The Statistics Authority judges that the statistics covered by this report are readily accessible, produced according to sound methods and managed impartially and objectively in the public interest, subject to any points for action in this report. The Statistics Authority confirms that the statistics published in the products listed at 1.1.1 are designated as National Statistics, subject to Defra implementing the enhancements listed in section 1.5 and reporting them to the Authority by April 2012.

1.3 Summary of strengths and weaknesses

- 1.3.1 Defra engages well with known users. Its statisticians hold an open, annual user seminar on agricultural statistics, consult users on plans, in particular about the Farm Practices Survey, and in 2010 held a user consultation gathering users' views on their outputs. Defra also actively engage with the Devolved Administrations, which supply data for publication in the UK releases.
- 1.3.2 Defra publishes some information about the methods it uses to compile the statistics and the quality of the statistics, but there is scope to provide more detail. The commentary could also be improved to help users' interpretation and use of the statistics.
- 1.3.3 Defra has sought to maximise the use of administrative systems to improve data quality and to minimise the burden on farmers of responding to surveys.

1.4 Detailed recommendations

- 1.4.1 The Assessment team identified some areas where it felt that Defra could strengthen its compliance with the *Code*. Those which the Assessment team considers essential to enable designation as National Statistics are listed in section 1.5. Other suggestions, which would improve the statistics and the service provided to users but which are not formally required for their designation, are listed at annex 1.

1.5 Requirements for designation as National Statistics

Requirement 1	Engage more widely with users of the statistics; publish the relevant information and assumptions and use them to better support the use of the statistics (para 3.3).
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¹⁶ See footnote 1

Requirement 2	Provide a statement of the nature and extent of revisions at the same time that the revised statistics are released (para 3.6).
Requirement 3	Alert key stakeholders promptly to the correction of errors (para 3.7).
Requirement 4	Publish full details about the methods used to compile statistics on crops, cereals stocks, orchard fruit, organic produce, horticulture, and mushroom area, including explanations of why particular choices were made (para 3.10).
Requirement 5	Publish more comprehensive details about the quality and reliability of its agriculture statistics and ensure that users are informed of all main sources of error and bias (para 3.11).
Requirement 6	Seek authorisation from the National Statistician for an exemption to the principle of confidentiality for the circumstances described in the <i>Agricultural Statistics Act 1979</i> , and publish the details of this authorisation (para 3.13).
Requirement 7	Improve the commentary in the releases so that it aids user interpretation of the statistics (para 3.19).
Requirement 8	Publish information on the strengths and limitations of the agriculture statistics in relation to particular uses (para 3.20).
Requirement 9	Disseminate orchard fruit and mushroom area statistics in forms that enable and encourage re-use (para 3.21).
Requirement 10	Ensure that all agriculture statistical releases are available through the National Statistics Publication Hub (para 3.24).
Requirement 11	Include the name of the responsible statistician in all releases (para 3.25).
Requirement 12	Ensure that all administrative data sources used to produce the agriculture statistics are included in its Statement of Administrative Sources (para 3.27).

2 Subject of the assessment

2.1 Defra produces agriculture statistics for England, and compiles data for the UK. Defra collects June Survey and December Survey data under the *Agricultural Statistics Act 1979*¹⁷. Defra collects the majority of its data using surveys although it is increasingly using administrative systems such as the Cattle Tracing System (CTS) and inventories required for disease prevention and control.

June Survey of Agriculture and Horticulture Statistics

2.2 The June Survey of Agriculture and Horticulture has taken place in England every year since 1866. Both the June Survey and December are run under EU regulations 1165/2008¹⁸ (cattle, pigs and sheep) and 543/2009¹⁹ (crops and land). The timing and contents of the June Survey and December Survey and data collection reflect the differences in farming practices, including the crops grown, in the summer and winter months. Every ten years the June Survey is called a 'census'²⁰ and run under the EU Farm Structure Surveys Regulation 1166/2008²¹. The survey collects detailed information on arable and horticultural cropping activities, land usage, livestock populations and labour force figures in summer. In 2010, a census year, the sample comprised farm holdings defined as having a commercial level²² of farming activity. In 2010, 127,000 commercial farms were sampled in England and 211,000 farmers in the UK as a whole. Releases covering statistics from the June Survey include:

- *Land Use and Livestock on Agricultural Holdings England - Crop Areas and Livestock Numbers (Provisional and Final Results)* and *Land Use and Livestock on Agricultural Holdings UK (Provisional and Final Results)* present information about arable and horticultural crops, livestock, and agricultural land use and ownership in England and the UK, respectively. The latest statistics are presented, along with some time series data, and a comparison with other EU countries. The releases follow similar formats; the UK release provides comparisons between UK countries and includes information on the methods used in producing the statistics in each country. Provisional results are published in September and final results in December.
- *Labour on Agricultural Holdings in England (Provisional and Final Results)* presents estimates of the number of people working on agricultural holdings in England. The release provides an estimate of the size of the agricultural workforce and provides estimates by type of worker – full-time, part-time and casual. A time series from 2000 is presented for total estimates and the

¹⁷ <http://www.legislation.gov.uk/ukpga/1979/13/introduction>

¹⁸ <http://www.europe.org.uk/europa/view/-/id/1386/>

¹⁹ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009R0543:EN:NOT>

²⁰ The survey is referred to as a census as it previously included all registered farms and holdings. To reduce burden, a sample is now surveyed. This is a larger sample than in non-census years.

²¹ See footnote 18

²² Commercial level is defined by EU Farm Structure Surveys Regulation EC 1166/2008 as any holding with more than 5 hectares of agricultural land, one hectare of orchards, 0.5 hectares of vegetables or 0.1 hectares of protected crops, or more than 10 cows, 50 pigs, 20 sheep, 20 goats or 1,000 poultry.

latest four years for more detailed tables. The data are used by Defra to calculate labour costs of the agricultural industry and to produce estimates of Total Income from Farming²³.

December Agricultural Survey Statistics

- 2.3 The December survey of agriculture has taken place in England every year since 1992 to monitor the size of the agricultural sector and the types of winter production. The survey collects detailed information on land usage and livestock populations in winter. In 2010, the response rate to the December agricultural survey for England was 82 per cent.
- *Land Use and Livestock Populations England Results* and *Land Use and Livestock Populations UK Results* present statistics from the December survey on winter crop areas and livestock numbers on agricultural holdings in England and the UK, respectively. The two releases follow similar formats; the UK release provides comparisons between UK countries and includes information methods used in producing the statistics in each country. Provisional results are published in January and final results in March. Defra compiles the UK release based on statistics provided from the Devolved Administrations. Data are collected using a variety of modes depending on the topic and country to which they relate: Welsh Government and Scottish Government use survey data only, whereas Defra and DARD also incorporate data from administrative sources.

Other Agricultural Statistics

- 2.4 The annual Farm Practices Survey (FPS) provides information about how farming practices are affected by current agricultural and environmental issues. The survey content can vary to ensure coverage of topical agricultural and environmental issues, and to meet EU requirements. The 2010 survey covered topics including: cultivation techniques; soil cover; livestock housing; and landscape features. Summary results from the survey are published annually in *Farm Practices Survey England* with detailed topic-specific results published separately. For example, in 2010 the survey assessed soil coverage during winter 2009/10 and results were published in *Winter Soil Cover, Farm Practices Survey 2010 – England*, in May. In 2010 – an agricultural census year – 16,500 commercial holdings were surveyed, with a response rate of 64 per cent.
- 2.5 *Cereals and Oilseed Rape Production Estimates Harvest UK (Provisional and Final Results)* presents estimates of the amount of cereals and oilseed rape harvested and the size of area planted to these crops. Data are published for the UK, its constituent countries, and regions of England. A provisional release is published in October and a final release in December. In England, estimates of cereal production are collected using the Cereal Production Survey, and the oilseed rape production estimates from the Oilseed Rape Production Survey. The Cereal Production Survey samples cereal growers across England, and in 2010 had a response rate of 83 per cent. The Oilseed Rape Production Survey samples oilseed rape growers, and in 2010 had a response rate of 88 per cent.

²³ <http://www.defra.gov.uk/statistics/2011/04/28/tiff-2010/>

Scottish Government and DARD provide provisional estimates based on discussions with industry experts; final estimates are based on survey data. Welsh Government does not conduct a survey for cereals and oilseed rape so estimates are imputed based on data from counties along the border with England.

- 2.6 *Cereal Stocks UK / England & Wales* presents statistics on the stock of cereals held on farms in England and Wales; UK data include the cereal stocks held by ports, co-operatives and merchants divided into cereal type and whether imported or home grown. The Cereals Stocks Survey collects data annually, on the stocks of cereals held on farms in England and Wales. In 2011, 1,750 farms were surveyed with an 80 per cent response rate. The Ports, Co-operatives and Merchants Survey is a twice-yearly survey of stocks of cereals held at ports, co-operatives and merchants in the UK. In March of each year all cereal storage facilities are sampled and in the subsequent June a smaller sample of storage facilities is contacted; response rates to the survey are typically over 95 per cent. The publication is released twice a year, in May and August.
- 2.7 *Organic Statistics UK* presents statistics on the organic farming sector, including information on: the number of producers; crop area; livestock areas; and crop type. Statistics are available for the UK and constituent countries, and regions of England. The statistics are compiled from data collected through annual inspections of organic farms by UK Certification Bodies²⁴. Data are collected at various points throughout the calendar year and sent to Defra on a standard form the following January for compilation. The list of organic producers and statistics are required under EU Regulations 834/2007²⁵ and 889/2008²⁶.
- 2.8 *Survey of Orchard Fruit England & Wales* presents statistics on the area of orchards within England and Wales that is used to produce apples, pears, plums and other fruit. Orchard fruit survey data are collected every 5 years under EU Directive 2001/109²⁷. Data were published annually between 2002 and 2004, and every two years since 2007. The survey uses the responses to the June Survey as its sampling frame, sampling those farms which indicated that they had commercial orchards. In 2009, 800 holdings were sampled with a response rate of 72 per cent.
- 2.9 *Mushroom Production Area England* presents statistics from the Mushroom Survey including the number of mushrooms growers, the area under production, production method, and the amount of compost used in production. Data are collected from producers that grow mushrooms under cover. In 2010, a 100 per cent response rate was achieved. Earlier statistics were published in 2004, 2005 and 2007.
- 2.10 *Basic Horticultural Statistics* presents annual statistics on the area, production and value of horticulture crops in the UK from 1985 and imports and exports of

²⁴ <http://archive.defra.gov.uk/foodfarm/growing/organic/standards/certbodies/approved.htm>

²⁵ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:189:0001:0023:EN:PDF>

²⁶ <http://eur-lex.europa.eu/JOHtml.do?uri=OJ:L:2008:250:SOM:EN:HTML>

²⁷ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32001L0109:EN:HTML>

horticulture crops from 1988. Around 55 of the main fruit and vegetable crops are covered separately in supplementary tables. Data are collected on behalf of Defra by ADAS²⁸ which uses a combination of industry contacts and market analysis to obtain estimates.

2.11 Defra's agriculture statistics are used for various purposes – for example:

- The European Commission produces short-term forecasts of agricultural production in the European Union;
- The milk and meat production industry produces forecasts of the supply of meat and milk, to determine the effect on prices;
- The cereals industry produces harvest estimates to monitor the availability of grain throughout the year.

2.12 Defra informed us that the estimated annual cost of producing these statistics is approximately £1m. This comprises £865,000 for the June Survey of Agriculture and £70,000 for the FPS in England. The remaining English surveys cost approximately £100,000. The December survey cost £20,000 in 2010 but this will reduce to £2,000 in future as the survey's sample is being reduced.

²⁸ <http://www.adas.co.uk/>

3 Assessment findings

Principle 1: Meeting user needs

The production, management and dissemination of official statistics should meet the requirements of informed decision-making by government, public services, business, researchers and the public.

- 3.1 The annual Agriculture in the UK seminar²⁹ is Defra's main way of engaging with users of agriculture statistics. The open seminar is attended by users within the farming industry, researchers and farming bodies. The producer team told us that engagement with users through this seminar has influenced many developments in the agriculture statistics in recent years.
- 3.2 Users are consulted to inform planning, in particular for the Farm Practices Survey (FPS). As topics change each year, users from Defra, other government departments and outside government are consulted to identify priorities for the forthcoming survey. Sector-specific stakeholder groups also meet regularly and provide feedback to the producer team. We were told that minutes of these meetings are taken but not published as the discussions are held in confidence. We suggest that Defra publish a summary of discussions held at stakeholder groups.
- 3.3 In 2010, Defra carried out a user consultation on agriculture statistics that asked users which outputs they used and why, to prioritise them and suggest future developments. Defra did not publicise the consultation or publish the consultation results on its website; this restricted the consultation to known users of agricultural statistics. As part of the designation as National Statistics, Defra should take steps to engage more widely with users of the statistics; publish the relevant information and assumptions and use them to better support the use of the statistics³⁰ (Requirement 1). We also suggest that Defra publish the responses and action plan from the 2010 user consultation.
- 3.4 The WINES group (Wales, Northern Ireland, England, Scotland) brings together statisticians, economists and researchers from Defra and the Devolved Administrations (DAs). The group reviews emerging policy issues and the analysis that will be required to support those issues, coordinates work and shares best practice.

²⁹ <http://www.defra.gov.uk/statistics/foodfarm/cross-cutting/auk/>

³⁰ In relation to Principle 1, Practice 2 of the *Code of Practice*

Principle 2: Impartiality and objectivity

Official statistics, and information about statistical processes, should be managed impartially and objectively.

- 3.5 Statistics are published according to a published release timetable³¹. They are released free of charge on Defra's website.
- 3.6 Defra has published a revisions policy³². Statistics which are currently subject to scheduled revisions are published on a provisional basis in order to meet users' needs for early estimates. Final figures are published once the data have been fully validated. Defra highlights which statistics are revised, for example, in the *Land Use and Livestock on Agricultural Holdings England* releases. The tables present the 2009 figures as originally published next to the revised figures so that users can assess the impact of revisions. However, the latest publication of *Cereals Stocks* provides a note stating that the stock of home-grown wheat held in ports has been revised; it does not explain the nature or the extent of the revision. As part of the designation as National Statistics, Defra should provide a statement of the nature and extent of revisions at the same time that the revised statistics are released³³ (Requirement 2).
- 3.7 A minor error was identified in *Land Use and Livestock on Agricultural Holdings UK Final Results 2010*. The statistical release was republished with the corrected figures clearly identified. However, there is no indication on the website that the release has been updated and we saw no evidence that stakeholders were alerted to the revisions. As part of the designation as National Statistics, Defra should alert key stakeholders promptly to the correction of errors³⁴ (Requirement 3).
- 3.8 The sample frame for the 2010 June Survey was restructured according to thresholds specified by the EU. The producer team told us that key users and data suppliers were made aware of the change through a presentation as part of a package of information about the survey. The presentation was published on the website but is no longer available. Detailed information about the changes was provided in the June Survey methodology document³⁵ and the impact of the changes investigated and presented within the statistical releases. Recently, farm typology classifications were changed. Defra published a document³⁶ reporting the results of an investigation into the effects of the changes on the 2009 statistics and informed users that the new typology would be used from the 2010 survey onwards.

³¹ <http://www.defra.gov.uk/statistics/foodfarm/latest-statistical-releases/>

³² <http://archive.defra.gov.uk/evidence/statistics/natstats/documents/defra-compliance.pdf>

³³ In relation to Principle 2, Practice 6 of the *Code of Practice*

³⁴ In relation to Principle 2, Practice 7 of the *Code of Practice*

³⁵ <http://www.defra.gov.uk/statistics/files/defra-stats-foodfarm-landuselivestock-june-results-methodology.pdf>

³⁶ <http://www.defra.gov.uk/statistics/files/defra-stats-foodfarm-landuselivestock-june-results-typology.pdf>

Principle 3: Integrity

At all stages in the production, management and dissemination of official statistics, the public interest should prevail over organisational, political or personal interests.

- 3.9 No incidents of political pressure, abuses of trust or complaints relating to professional integrity, quality or standards were reported to or identified by the Assessment team.

Principle 4: Sound methods and assured quality

Statistical methods should be consistent with scientific principles and internationally recognised best practices, and be fully documented. Quality should be monitored and assured taking account of internationally agreed practices.

- 3.10 Defra has published a comprehensive methodology document for the June Survey (see paragraph 3.8); further information detailing for example, new farm typology classifications, is provided. *Farm Practices Survey England* also provides detailed information about the survey methodology. However, only brief information on the methods of data collection is provided for other agriculture surveys. In particular, *Organic Statistics UK*, *Basic Horticultural Statistics* and *Survey of Orchard Fruit* would all benefit from more in-depth information about how the statistics are compiled. In addition, Defra produce *Cereals and Oilseed Rape Production Estimates UK* releases using statistics provided by the individual countries of the UK. The statistics published in the provisional release include crop yield estimates for Scotland and Northern Ireland which are produced using estimates compiled and agreed with trade bodies. Defra told us this approach was used as the information cannot be collected by a survey until the harvesting has been completed, which is after the October deadline for data submission to the EU. Final estimates for Scotland and Northern Ireland are produced using surveys taken after the harvest and are published in the final release in December. Defra contracts ADAS (see para 2.10), a provider of environmental consultancy, rural development services and policy advice, to collect data for publication in *Basic Horticultural Statistics*. ADAS collects, collates and interprets information on horticultural crops from its industry contacts which includes marketing companies, major retailers and producer groups, and produces estimates by broad crop type – field vegetables, fruit, and protected vegetable. These estimates are collated and may be adjusted using intelligence acquired by a network of crop specialists. Finally, estimates are sent to an ADAS Project Manager who agrees the estimates with the Horticultural Crop Intelligence Committee – which comprises industry experts, crop associations and representatives of Defra. This information is not published. As part of the designation as National Statistics, Defra should publish full details about the methods it uses to compile statistics on cereal harvest, cereals stocks, orchard fruit, organic produce, horticulture, and mushroom area, including explanations of why particular choices were made³⁷ (Requirement 4).
- 3.11 Most releases provide indicators of the quality of the estimates in the form of confidence intervals (CIs). The *Land Use and Livestock on Agricultural Holdings* releases provide CIs and a ‘tick’ system, from three ticks (good) to a cross (poor), relating to the Relative Standard Errors (RSEs). However, there is no explanation of RSEs or their relationship to the CIs. Other releases, such as *Survey of Orchard Fruit* and *Cereal Stocks* do not provide indicators of quality. None of the releases include much detail about sources of bias and other non-sampling errors, the latter issue being particularly relevant to statistics based on data from administrative sources, such as *Organic Statistics*. As part of the

³⁷ In relation to Principle 4, Practice 1 of the *Code of Practice*

designation as National Statistics, Defra should publish more comprehensive details about the quality and reliability of its agriculture statistics and ensure that users are informed of all main sources of error and bias³⁸ (Requirement 5).

- 3.12 Defra produces its agriculture statistics largely to comply with relevant EU regulations. Defra is responsible for providing UK statistics to the EU and we were told that this common framework means that all agriculture statistics are broadly comparable across UK countries and EU regions.

³⁸ In relation to Principle 4, Practice 2 of the *Code of Practice*

Principle 5: Confidentiality

Private information about individual persons (including bodies corporate) compiled in the production of official statistics is confidential, and should be used for statistical purposes only.

- 3.13 Defra collects June and December Survey data under the *Agricultural Statistics Act 1979*³⁹ which includes provisions for protecting confidentiality and restrictions on the use of respondents' data. The Act makes provision for the non-statistical use of disclosive data under certain circumstances, for example by the Agricultural Training Board and the Food Standards Agency. As part of the designation as National Statistics, Defra should seek authorisation from the National Statistician for an exemption to the principle of confidentiality for the circumstances described in the *Agricultural Statistics Act 1979*, and publish the details of this authorisation⁴⁰ (Requirement 6).
- 3.14 Respondents to the various agriculture surveys are informed about how their confidentiality will be protected in letters requesting their participation and on survey questionnaires. To maintain confidentiality, Defra does not publish any statistics which are based on fewer than five responses. The June Survey methodology document (see paragraph 3.8) provides details about the statistical disclosure control methods used.
- 3.15 Defra's *Statement of Compliance with the National Statistics Code of Practice and Protocols*⁴¹ – which relates to the previous *Code* – sets out Defra's arrangements to protect the confidentiality of data whilst maintaining the utility of the data. For example, to access farm-level data, users must sign a confidentiality statement which sets out the user's responsibility to preserve confidentiality; users must confirm that all data has been destroyed upon completion of the project. We suggest that Defra update its *Statement of Compliance* to refer to the current *Code of Practice for Official Statistics*.

³⁹ <http://www.legislation.gov.uk/ukpga/1979/13/introduction>

⁴⁰ In relation to Principle 5, Practice 5 of the *Code of Practice*

⁴¹ <http://archive.defra.gov.uk/evidence/statistics/natstats/documents/defra-compliance.pdf>

Principle 6: Proportionate burden

The cost burden on data suppliers should not be excessive and should be assessed relative to the benefits arising from the use of the statistics.

- 3.16 Defra publishes⁴² estimates of respondent burden in its forward plan. Defra's Survey Control Unit assess new surveys to establish whether the data are already available from administrative sources or collected elsewhere.
- 3.17 Since 2007 Defra has used data from the Cattle Tracing System⁴³ (CTS) to compile part of the statistics presented in the *Land Use and Livestock on Agricultural Holdings* and *Land Use and Livestock Populations* releases. We were told that this has reduced the burden on respondents to the June and December Surveys without diminishing the quality of the statistics. Defra has also started to use data from other administrative data sources to further minimise the burden on data suppliers. Data from the Sheep and Goat Annual Inventory⁴⁴ (SAG) were used in 2010 to replace some data items previously collected in the December Survey.

⁴² <http://archive.defra.gov.uk/evidence/statistics/natstats/documents/2010-14-forwardplan.pdf>

⁴³ <https://secure.services.defra.gov.uk/wps/portal/ctso>

⁴⁴ <http://www.nfuonline.com/News/Sheep-and-Goat-Annual-Inventory-2010/>

Principle 7: Resources

The resources made available for statistical activities should be sufficient to meet the requirements of this Code and should be used efficiently and effectively.

- 3.18 Defra told us that it has streamlined its outputs so that fewer resources are required to produce them. For example the Glasshouse Survey has ceased as this surveyed only registered horticulture farms. The statistics team told us that users agreed that there was duplication with *Basic Horticultural Statistics*, which had better coverage of the sector, and so were content for the survey to cease.

Principle 8: Frankness and accessibility

Official statistics, accompanied by full and frank commentary, should be readily accessible to all users.

- 3.19 The publications are clearly laid out and accessible, and include introductions and main findings. The commentary in some releases is good with contextual information that aids analysis and interpretation of the statistics. For example, the *Land Use and Livestock on Agricultural Holdings* releases discuss how planting conditions, stock levels and prices have affected cereals estimates, and how the weather and prices have affected livestock estimates. However, some releases, such as *Cereals Stocks*, *Survey of Orchard Fruit* and *Basic Horticultural Statistics* provide very little commentary beyond descriptions of increases and decreases. As part of the designation as National Statistics, Defra should improve the commentary in the releases so that it aids user interpretation of the statistics⁴⁵ (Requirement 7). We suggest that in meeting Defra should consider the points detailed in annex 2.
- 3.20 Confidence intervals and relative standard errors provide users with an objective measure of the accuracy of the estimates. However, the releases do not provide information about the strengths and limitations of the estimates in relation to the range of potential uses. As part of the designation as National Statistics, Defra should publish information on the strengths and limitations of the agriculture statistics in relation to particular uses⁴⁶ (Requirement 8).
- 3.21 Defra publishes statistics in Excel tables to supplement most releases; *Survey of Orchard Fruit* and *Mushroom Production Area England* do not have supplementary tables. As part of the designation as National Statistics, Defra should disseminate orchard fruit and mushroom production area statistics in forms that enable and encourage re-use⁴⁷ (Requirement 9).

⁴⁵ In relation to Principle 8, Practice 2 of the *Code of Practice*

⁴⁶ In relation to Principle 8, Practice 1 of the *Code of Practice*

⁴⁷ In relation to Principle 8, Practice 6 of the *Code of Practice*

Protocol 1: User engagement

Effective user engagement is fundamental both to trust in statistics and securing maximum public value. This Protocol draws together the relevant practices set out elsewhere in the Code and expands on the requirements in relation to consultation.

3.22 The requirements for this Protocol are covered elsewhere in this report.

Protocol 2: Release practices

Statistical reports should be released into the public domain in an orderly manner that promotes public confidence and gives equal access to all, subject to relevant legislation.

- 3.23 Pre-release access is granted for all *Land Use and Livestock on Agricultural Holdings Labour on Agricultural Holdings* releases, *Land Use and Livestock Populations*, and *Cereals and Oilseed Rape Production Estimates* releases.
- 3.24 Defra has published a forward timetable⁴⁸. Most of the releases are available through the National Statistics Publication Hub; *Survey of Orchard Fruit* is not. Furthermore, some of the titles on the Publication Hub do not correspond to releases. For example, the publication hub contains links to *Organic Statistics England*, but there is no such release. Also, the links to *Land Use and Livestock on Agricultural Holdings England*, *Land Use and Livestock on Agricultural Holdings UK* and *Labour on Agricultural Holdings in England* are all entitled June Survey of Agriculture and Horticulture, the survey they are derived from. As part of the designation as National Statistics, Defra should ensure that all agriculture statistical releases are available through the National Statistics Publication Hub⁴⁹ (Requirement 10). We also suggest that Defra review the titles given to the links on the Publication Hub to ensure that they refer to the relevant statistical release.
- 3.25 Each release provides contact details for the producer team, including a team email address and telephone number. However, the name of the responsible statistician is available only in *Cereals Stocks* and *Basic Horticultural Statistics*. As part of the designation as National Statistics, Defra should include the name of the responsible statistician in all releases⁵⁰ (Requirement 11).

⁴⁸ <http://www.defra.gov.uk/statistics/foodfarm/latest-statistical-releases/>

⁴⁹ In relation to Protocol 2, Practice 3 of the *Code of Practice*

⁵⁰ In relation to Protocol 2, Practice 6 of the *Code of Practice*

Protocol 3: The use of administrative sources for statistical purposes

Administrative sources should be fully exploited for statistical purposes, subject to adherence to appropriate safeguards.

- 3.26 Defra uses several sources of administrative data to produce its statistics, including the CTS, SAG and data from UK Certification Bodies. Defra uses other administrative sources including data from the Single Payment Scheme⁵¹ and the Rural Payments Agency⁵² to inform its studies and surveys. Defra told us that it is already exploiting or investigating the potential of the majority of agricultural administrative sources and the Assessment team considers this to be an example of good practice.
- 3.27 Defra has published a Statement of Administrative Sources⁵³ which includes information about data sources, access and collection. The volume and quality of information provided about the sources used in the compilation of the statistics differs widely: information provided⁵⁴ for the CTS is comprehensive whereas information about data from UK Certification Bodies is incomplete and there is no information about the SAG. As part of the designation as National Statistics, Defra should ensure that all administrative data sources are included in its Statement of Administrative Sources⁵⁵ (Requirement 12).

⁵¹ <http://www.defra.gov.uk/food-farm/farm-manage/single-pay/>

⁵² <http://rpa.defra.gov.uk/rpa/index.nsf/home>

⁵³ <http://www.defra.gov.uk/statistics/national-statistics/adminsources/>

⁵⁴ <http://www.defra.gov.uk/statistics/files/defra-stats-foodfarm-landuselivestock-june-results-BovineRegisters.pdf>

⁵⁵ In relation to Protocol 3, Practice 5 of the *Code of Practice*

Annex 1: Suggestions for improvement

A1.1 This annex includes some suggestions for improvement to Defra's Agriculture Statistics, in the interest of the public good. These are not formally required for designation, but the Assessment team considers that their implementation will improve public confidence in the production, management and dissemination of official statistics.

- | | |
|---------------------|---|
| Suggestion 1 | Publish a summary of discussions held at stakeholder groups (para 3.2). |
| Suggestion 2 | Publish the responses and action plan from the 2010 user consultation (para 3.3). |
| Suggestion 3 | Update its <i>Statement of Compliance</i> to refer to the <i>Code of Practice for Official Statistics</i> (para 3.15). |
| Suggestion 4 | Consider the points detailed in annex 2, in seeking to improve the statistical releases (para 3.19). |
| Suggestion 5 | Review the titles given to the links on the Publication Hub to ensure they refer to the relevant statistical release (para 3.24). |

Annex 2: Compliance with Standards for Statistical Releases

A2.1 In October 2010, the Statistics Authority issued a statement on *Standards for Statistical Releases*⁵⁶. Whilst this is not part of the *Code of Practice for Official Statistics*, the Authority regards it as advice that will promote both understanding and compliance with the *Code*. In relation to the statistical releases associated with Agriculture Statistics, this annex comments on compliance with the statement on standards.

A2.2 In implementing any Requirements of this report (at paragraph 1.5) which relate to the content of statistical releases, we encourage the producer body to apply the standards as fully as possible.

Appropriate identification of the statistics being released

A2.3 The majority of releases use titles that describe the coverage of the release and the period to which the release relates. However, there are instances where the title of the release does not fully describe the statistics, for example *Organic Statistics*. Releases use the standard headings, formatting and logos for National Statistics releases.

A2.4 With the exception of the *Cereals Stocks and Mushroom Production Area England*, the releases do not include statements about the frequency of publication. Accessibility would be increased – especially for some of the larger releases – if a contents page was included.

Include commentary that is helpful to the non-expert and presents the main messages in plain English

A2.5 Some releases include a summary which identifies the main messages, for example *Land Use and Livestock Populations England*. Releases are generally straightforward and easy to understand. However, the *Land Use and Livestock on Agricultural Holdings* releases use unexplained technical terminology when describing livestock. The releases provide concise factual descriptions of the key messages from the statistics but only some provide further contextual analysis. For example, *Cereals and Oilseed Rape Production Estimates* releases discuss how oilseed rape production has increased due to factors including, favourable weather conditions, and better disease control. However, the commentary in other releases, such as *Survey of Orchard Fruit* and *Organic Statistics* is limited to descriptions of increases and decreases.

Use language that is impartial, objective and professionally sound

A2.6 The text used in the releases is impartial and evidence based. The descriptions of proportions, changes and trends in the releases are appropriate and professionally sound. The releases provide little information about sampling variability; *Land Use and Livestock on Agricultural Holdings England* releases

⁵⁶ <http://www.statisticsauthority.gov.uk/news/standards-for-statistical-releases.html>

include information about sampling variability in graphical form, but there is no discussion of such variability within the text.

Include information about the context and likely uses

A2.7 Some releases provide a brief description of reasons for changes in the statistics, for example the *Cereals and Oilseed Rape Production Estimates* releases. Contextual information, for example, changes to agricultural policy and information on the economic conditions and changes in supply and demand are generally absent from releases. Explanations of why these statistics are important, to whom and for what they are likely to be used are absent from the majority of releases.

Include, or link to, appropriate metadata

A2.8 All releases include a section on methods, describing the production of the statistics. The UK releases include a description of the methods used by each country in the production of their statistics. The releases do not describe the comparability of the estimates between the countries. Some releases, for example, the *Land Use and Livestock on Agricultural Holdings* releases include comparisons with other EU countries. Where statistics have changed due to changes in methods, the statistics are provided on a comparable basis for the previous year and a comparison of the previously published and revised figures published. Estimates from some releases are published in provisional form with final results released later. Provisional results are clearly marked within the title of the release.

Annex 3: Summary of assessment process and users' views

A3.1 This assessment was conducted from April to October 2011.

A3.2 The Assessment team – Gary Wainman and Rachel Beardsmore – agreed the scope of and timetable for this assessment with representatives of Defra in April. The Written Evidence for Assessment was provided on 2 June. The Assessment team subsequently met Defra during July to review compliance with the *Code of Practice*, taking account of the written evidence provided and other relevant sources of evidence.

Summary of users contacted, and issues raised

A3.3 Part of the assessment process involves our consideration of the views of users. We approach some known and potential users of the set of statistics, and we invite comments via an open note on the Authority's website. This process is not a statistical survey, but it enables us to gain some insights about the extent to which the statistics meet users' needs and the extent to which users feel that the producers of those statistics engage with them. We are aware that responses from users may not be representative of wider views, and we take account of this in the way that we prepare assessment reports.

A3.4 The Assessment team received 9 responses from the user consultation. The respondents were grouped as follows:

European Union	2
Defra	1
Devolved Administrations	2
Other public sector	3
Private sector	1

A3.5 The uses made of the statistics are diverse, including: comparisons between EU countries; policy analysis and monitoring; and modelling and forecasting variables such as the production of agricultural businesses. Users told us they would like statistics for more detailed geographies and an extended time series. Users were complimentary about the producer team, its communication and expertise. Users reported difficulty in accessing the statistics.

Key documents/links provided

Written Evidence for Assessment document

